REPORT

Evidences for use in the improvement of the treatment and quality of life of persons with a severe and persistent mental illness

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Marie-Christine Hardy-Baylé

Review committee: Nicolas Franck, L. Morin, B. Pachoud, C. Passerieux, P. Roux, M. Urbach, N. Younes

177, rue de Versailles - 78 150 le Chesnay
Tel: +33 1 39 63 95 35
E-mail: centredepreuves@ch-versailles.fr
Website: http://cdppsm.fr
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I. Methodological precautions, drafting principles and working method
I.1. Drafting principles and methodological precautions

The commission directing every proof centers has set the following primary principles:

- define the state of the art, based on the analysis of the data from the literature (define a hierarchical state of the art including all the necessary data to improve practices)
- interpret these data in the light of clinical relevancy
- confront these data with current practices
- ensure this up-to-date knowledge is widely shared

_In other words, the missions of the Centre de Preuves (Proof Center) are to: keep up to date with knowledge and share “alerts” related to ways of improvement supported by the data, help professionals use up-to-date knowledge and potential ways of improvement, support the implementation and assessment of the improvement methods chosen by regional actors, design assessment research and impact measures protocols._

Therefore, The “Centre de Preuves” system follows the international movement of building “Technical Assistance Centers” (Excellence Centers, Training Centers, Assessment Centers and Watch Centers), managed by professionals, with missions encompassing those of the French “Centre de Preuves en psychiatrie et santé mentale” (Proof Center in psychiatry and mental health, hereafter called “Centre de Preuves”), including the efficient implementation of sharing with professionals the knowledge useful for quality improvement, and the “watch” over the quality of mental health systems (guided by evidences). Proofs of its efficiency begin to be received.

The work done on the care pathway and the quality of life of persons with a severe and persistent mental illness (SPMI) follows these specifications.

In this thematic, the choice to target only to the persons with a severe and persistent mental illness was taken in the light of the vast amount of recent data related to this population and the possible improvements which may be expected.

The framework of this project was limited to the health pathway of persons with a severe and persistent mental illness after the diagnosis was established. We will not discuss the problematic of prevention nor the matter of early screening, so we may focus on the treatment and social integration after the diagnosis.

This report was drafted considering the questions raised by the guidelines issued by the ANESM in 2014. We will analyze the answers offered to this questions in the last chapter of this report. We will mention if some of these questions have not been subjected to clinical trial since the Centre de Preuves is not authorized to give answers where evidences are missing or insufficient. In this eventuality, improvement suggestions may only be agreed between parties and decisions are therefore taken more on a political than scientific basis and require a large consensus.
Adapting to the thematic the objectives set at the Centre de Preuves calls for several explanations that we will offer by taking into account each of the first defined objectives.

1. **Defining a state of the art, including every data useful for the improvement of practices and organizations, and interpreting these data in the light of their clinical relevancy**

The critical analysis of the data from the literature needs to follow a method where the clinical relevancy of data is the utmost requirement, after the methodological quality of data collection and analysis has been defined.

This focus is all the more relevant for this report subject since evidences of high scientific level are scarce when evaluating the complex interventions making up most of the data useful to identify ways of improvement.

The search on the Cochrane database with the terms “severe mental illness” resulted in 52 publications and the search with “schizophrenia AND disability” offered 12 results.

Very few data of high level of evidences are available and Cochrane reveals that most of our topic’s subjects lack relevant conclusions. This observation may obscure the importance of the collected data of interest. The group thus relied on data carrying by themselves a sufficient demonstration value (Grade B data), and which were often reinforced when cross-checked with other data.

Regarding the guidelines published by NICE and the APA, they are not always converging, are heavily influenced by the local political situation and may hardly be applicable to another context, except for the most technical aspects. However, when taking these limits into account, these guidelines, particularly the evidences they carry, are of high interest.

The recommendation from the World Federation of Societies of Biological Psychiatry (WFSBP) provides, on pharmacological aspects, a comprehensive and very recent summary of current data, i.e. collects every document that deals with this matter. Such recommendation was selected as reference for this specific topic.

On some topics, articles recently drafted with the same comprehensiveness requirements were selected as reference.

However, regarding numerous key points in the health pathway of persons with a severe and persistent mental illness (called, in France, persons with a psychic disability underlaid by a schizophrenic disorder), such syntheses were not available and we had to review and analyze a large amount of literature to ensure some fields of the literature, which may contain data with a potentially immediate impact on the quality and safety of the health pathway in this population, were not neglected.

Considering the scale of the bibliography to be covered, the review committee had to make a choice: reduce the field of research to two or three sub-topics of interest (e.g. which evidences improve access to care, emergency situations and crisis management, access to housing and improper use of hospitalization, access to somatic cares, housing and integration programs, etc.) or collect the largest amount of evidences on the pathway of persons with a schizophrenic disorder, who have a psychic disability or may have one in the future. The committee chose the latter one, aware that, by slicing up the research in “critical points”, the risk was high that answers would be compartmented, closeted to said points rather than offering an overall answer. In this context, the target could have switched from the treatment and its necessary fluidity to its breaking points, whereas an oversight could have provided us with improvement perspectives, which may have solved several breaking points at the same time. For instance, responding to crisis situations requires to deal with the matter of emergency hospitalization, which in turn questions the overall treatment organization (if hospitalization is not a solution, what other solution is there?). Therefore, the question is: how to
design the overall treatment organization so that it includes, besides other requirements, the solution to crisis situations and the conditions of emergency hospitalization?

The other selected item was the entry points (keyword) in the literature, which did not follow the same “critical or breaking point” logic. Ways of improvement to offer for these breaking points thus had to be extracted from a literature that was not necessarily dealing directly with said breaking points. It appeared that reducing the analysis of published data only to the publications explicitly referring to breaking points would miss a certain amount of data.

Choosing to work on the entire duration of the treatment led, as expected, to explore a huge amount of publications from diverse fields of study. For instance, the numerous publications only dealing with the quality of treatment techniques do not overlap with those studying the treatment organization. In the same way, the literature devoted to social integration does not overlap the literature related to cares nor totally the one related to housing. Also, the founding paradigms of modern mental health (such as the recovery paradigm) are subjected to specific publications, which do not overlap other fields of publications. Furthermore, research data on the treatment offer do not entirely match the reality of the treatment offer in the involved countries, and this gap leads us to look for sources other than scientific publications. Last but not least, including large amounts of evidences, more or less related to the topic, did not help cross-check the produced data to ensure a wider visibility.

In France, this kind of literature is sorely lacking and data we have are mostly epidemiological and do not allow us, without clinical data, to analyze the effects of organizations on the patients themselves.

Lacking these data in France, we frequently only describe “exemplary” practices or organizations to know what really happens on the field. Yet these on-site experiments do not always include assessment data on their real impact and the adjustment to objectives they were set to.

But, as P. Tyrer (2013) points out, it is common, at least shortly after the implementation of a new program, that the impact seems high and that the program seems to better answer the needs it is supposed to address, compared to existing programs. He warned observers not to interpret the apparent benefit of the new program as a sustained reality, and to take into account that it is often due to the stronger motivation and commitment of the new team. This observation reinforce the importance of objectively assessing the observed effect (Tyrer, 2013).

2. Confronting these data with current practices

This requirement defines the expected use of these states of the art. Ways of improvement, identified during the critical analysis of the literature, need to be implemented through an assessed and analyzed process.

Implementing improvement actions has been the subject of numerous articles. It is universally known that it is not enough to share recommendations to have organizations or practices with proven effectiveness implemented (Lasalvia, 2013).

To make this implementation easier, a longer process needs to be conducted. This process is structured around two success factors: flexibility, and the support of the process with an assessment approach.

Flexibility

A consensus exists in the literature to highlight the importance of adapting improvement actions to the reality on the ground. The top-down logic consisting in drafting quality standards (“what to do”)
and modality standards to implement them (“how to do it”), spreading these standards and supervising their implementation, fails to ensure implementation. It is all the more true that the recommended interventions are complex.

In the past 20 years, many researches have been undertaken to identify improvements in psychiatric treatments and mental health care. This whole movement relies on the postulate that “by describing what happens on site, we will understand which interventions are the real improvements”. This report is consistent with the now shared obvious idea that flexibility is important when implementing improvement actions - which, for a common improvement objective, may vary depending on the resource of a territory - and that it is necessary to assess the impact of these actions to ensure their relevancy.

To show the impossibility to set a unique organizational and treatment standard, the Balance Care Model (BCM), by Thornicroft and Tansela, which is a reference, defines an optimum organization in a given territory depending on two types of balance: the balance between inpatient and outpatient cares, and the balance between organization and allocated resources (G. Thornicroft & Tansella, 2004). It sets three levels of organization depending on the level of resources (G. Thornicroft & Tansella, 2013).

The importance given to flexibility implies that depending on the health care territory, improvement priorities and types of implementation modalities vary. They will depend on an assessment of the territory’s needs (needs not covered yet urgent) and on existing resources (to preserve functioning organizations) or mobilizable resources. This quality approach may only be executed on the entire territory.

Set in this flexibility principle, the Centre de Preuves aims at identifying these “ways of improvement” (“what to do and how to do it”) from the collected data, and making them available to territories so they use and adapt those they deem useful to implement. Implementation modalities may be different from a territory to another, and although the report provides implementation tools for the offered improvements, they should not be considered “standards” on “how” to improve. This report does not impose strict standards to follow but suggest what is good to promote. It does not either set modalities to implement the expected improvements but provides tools for those who wish to receive help in implementing improvement actions.

To sum up, the goal is to improve the mental health of patients in each territory, thanks to the acquired and up-to-date knowledge in the various fields related to the health and life pathway of persons with a psychic disability.

As M. Ruggeri, G. Thornicroft and D. Goldberg point out, even if the “why improving mental health is an international challenge” is obvious, the “what should we do?” and the “How may we implement and assess it?” remain open questions, although many leads have already been evaluated (Ruggeri, 2013).

To this day, no set organization can be considered standard, nor is designed from a high level of scientific proofs, which leaves the health care community and the civil society with a large margin of creativity and innovation.

However, a new model is taking over to rethink the quality of the health and life pathway in mental health, the organization and the practices in care and social integration, and depends on a review based on recovery. This review sets new goals to mental health and provides organizations designed to meet these goals.

Furthermore, an overall orientation of organization in a collaborative way is now consensually targeted.
In the “new world” of mental health taken as a whole, which includes the entirety of the health and life pathway of the persons with a psychic disability, a great proportion of this pathway is managed by non-specialists. There is a consensus on the idea that psychiatrists need to be available to train and supervise non-specialists and the quality of treatment programs. This training cannot be academical but is now essential as part of a partnered organization of the treatment offer where everyone plays a specific role.

**Assessment approach**

Acknowledging the requirement for flexibility may only be possible if it is associated with an assessment approach. A flexible approach demands a rigorous assessment of the effects of the implemented improvement action. Designing a standard does not require this assessment since it only demands that the application be checked.

The assessment also helps to constantly adapt the implemented improvement actions to expected objectives.

The assessment is necessary before any improvement action, as soon as quality objectives are set. This is why Proof Centers are expected to offer an assessment schema designed to describe, in a rigorous and objective way, the reality of practices.

Depending on the selected topic, the assessment needs to be conducted on the health and life pathway of the persons with a psychic disability rather than on a specific program. The subject of this study is really the health pathway.

This report provides an example of assessing the reality of health pathways in a given territory but each territory is allowed to modify the provided schema to adapt the study to where it will be used.

However, the provided assessment schema aims at homogeneously collecting a sufficient amount of data over the whole French territory in order to compare territories, which may provide with a sizable amount of useful information.

The type of offered research includes the evaluation principles of the research on mental health undertaken in Anglo-Saxon countries. These researches mix clinical study and public health study, data collected from patients and data collected in a more static and global way.

The first assessment helps follow (by defining impact indexes) the effects of the implemented improvement action in a “before - after” schema, often used in the literature as part of this type of objective.

Here is highlighted the importance, for the development of an innovative approach of mental health services, including interventions in the health sector and the social and medico-social sectors, to adapt the organization to each territory’s particularities, and assess it on a strong empirical basis to ensure their feasibility and effectiveness.

**I.2. Working method**

To meet the objectives of this report and ensure a short production time and a low cost, the Centre de Preuves implemented:
- **A review and steering committee**, in charge of the critical analysis of the data from the literature and, from those, the drafting of a first suggestion of research design aimed at assessing the reality of the health pathway of the targeted population in the report in France. This review committee consists of medical professionals and held its first meeting in August 2014. Each participant had to study, alone or in a group of two, one or more sub-topics. The production of each professional was shared with the whole group and, to ensure the cross-checking of data and the consistency of the whole, the committee gathered five times, in work meetings always set from 10:00 to 17:00.

- An expert was called in to study the topic specific of addiction - severe mental illness co-morbidity.

- The review committee also auditioned experts on the topic to widen its knowledge of the field and collect “experience data”.

- **A supervision commission**, consisting of medical professionals, medico-social professionals and representatives of patient associations, in charge of the assessment of the clinical relevancy and the applicability of the improvement identified by the review committee, and contributing to the design of the assessment research.

- The first meeting of the supervision commission was held on the 2nd February 2015, from 10:00 to 18:00.

The coordination of the organization and the drafting of the report were conducted by the scientific head of the Centre de Preuves.

The names of the contributors are in appendix.
II. The paradigms of change: Acknowledging the psychic disability. From coordination to health pathway. Recovery.
II.1. Psychic disability and the 2005 Act

The France-specific concept of psychic disability, as defined by the bill voted on 11th February 2005, is consistent with the bio-psycho-social approach. The bio-psycho-social approach is both a theoretical model and a clinical tool. “On the theoretical side, it is a representation of the human being in which biological, psychological and social factors simultaneously participate to a good health or to the progression of the disease. None of these three categories of health factors can be preemptively granted more weight even if their relative importance may vary” (Berquin, 2010).

However, several approaches to disability replaced one another since the 1970s, and their influence remains today. It is mostly seen in District Houses for Persons with a Disability (MDPH: Maisons Départementales des Personnes Handicapées), in the way they assess the persons’ situations, rights and support needs. In a way, two models are confronted: a medical model and a systemic model, that match both classifications published by the WHO: The ICIDH (International Classification of Impairments, Disabilities, and Handicaps (OMS, 1988)) in 1980 and the ICF (International Classification of Functioning, Disability and Health (OMS, 2001b)) in 2001.

The ICIDH, created on the medical model of functional rehabilitation (Wood’s model), differentiate three levels of disability in a strictly linear schema: the disease is characterized by deficiencies (i.e. clinical symptoms, disorders observed on the organ) that cause inabilities (secondary functional expressions of the disease, after the deficiencies), which in turn lead to a disadvantage, the social consequence of these inabilities. In this model, deficiencies and inabilities are treated with reeducation, and disadvantage is subject to readaptation and compensation measures.

From the first day of publication, the ICIDH received many critics from diverse social groups, the first one being the disabled people themselves, who argued that the ICIDH focused the disability only on the person, seldom acknowledged the importance of environmental factors (physical, cultural and social) in the creation of the disability and used a negative and demeaning terminology. Several alternative models were suggested, such as the social model of disability designed by the “Disability Movement”, aiming at changing the society rather than adapting individuals. A second alternative model was suggested by Quebec researchers: the “Disability Creation Process”, published in 1991 and which was later used to draft the ICF. This model highlights the idea that the social norm is relative to an interaction, and normality (or deviation from normality) is constructed in this interaction. To reduce the creation of a disability, it is necessary to adapt the person, but also work on behaviors, environment, interactions and the underlying norms (Fougeyrollas, 1998).

In the 1990s, a revision process of the ICIDH started and led to the International Classification of Functioning, Disability and Health (ICF) in 2001. The ICF is a major paradigm shift, taking a distance from a classification of the disease consequences, to become a classification of health components. Health is defined in terms of functioning in its positive and negative (disability) aspects. Therefore, disability is conceptualized as a dimension of human health and as a modality specific of human functioning, when this functioning is impaired. The disease is not written off of the model, but is not used as a reference point anymore to define the disability, which is then the result of an interaction, to be characterized, between a health problem and personal and environmental factors (WHO, 2001a, 2001b).

The bill passed on 11th February 2005, focused on reorganizing the social protection of persons with a disability, sets a few principles for social action and implement new organizations (Loi 11 Février 2005, 2005).

It acknowledges the right of disabled persons to receive compensation: “The persons with a disability have a right to receive compensation for the consequences of their disability, regardless of the origin and nature of the deficiency, their age and their way of life” (article L 114-1-1 of the Social Action
and Family Act). The objective was to encourage the autonomy and protection of persons, social cohesion and citizenship, to prevent exclusion and to correct its effects. Few major principles guide the implementation of this action: the notion of life pathway (the disabled persons need to be supported all along their life), the primary importance of common law (access of all to common law must be prioritized) and the importance of listening to what people have to say. Finally, assessment is highlighted: “This action relies on a constant assessment of the needs and expectations of the members of every social groups, particularly the disabled persons”.

It defines the disability by adapting the ICF model: “every limitation in activity or restriction in participating to the life in society, suffered by a person in their environment, and caused by a substantial, durable or definitive alteration of one or more physical, sensory, mental, cognitive or psychic functions, by multiple disabilities or by a disabling health disorder”.

To implement and coordinate these various actions, the law created the District Houses for Persons with a Disability (MDPH: Maisons Départementales des Personnes Handicapées), one of their responsibilities being the management of every requests for benefits and support (pensions, work insertion, housing, help with social life) filled by the persons with a disability.

II.2. From coordination to health pathway

We will focus on the issue of coordination, which is decisive for the pathway of persons with a chronic disease. The concept of “health pathway” is the most recent attempt to find a solution.

Coordination issues are all the more severe that several participants, structures and institutions interact at the same time in a person’s health pathway.

Diverse solutions were suggested in related fields of interest (such as aging people) to improve the coordination of medical, social and medico-social actors.

Despite these experimentations, this coordination issue remains complicated.

Psychiatry is also victim of this issue but, due to the sector’s policy, psychiatry has an original mode of coordination, under the medical sector, which is from the start focusing on a long-term solution outside the hospital, by developing social and medico-social actions.

We will rely on the recent book written by Marie-Aline Bloch and Léonie Hénaut (“coordination et parcours: la dynamique du monde sanitaire, social et médico-social”, 2014) to introduce the notion of health pathway and its recent developments (Bloch, 2014).

II.2.1. The notion of health pathway

The notion of “health pathway”, or “care pathway/life pathway” indicates a “paradigm shift” in the solution to coordination issues, as M.A. Bloch and L. Hénaut point out (Bloch, 2014). It is a shift in the attribution of this coordination function from dedicated structures (coordination structures, sectors or meta-networks) to local actors, effectively taking care of the patient. It is a switchover from a coordination managed by structures to a “pathway” coordination, as close as possible to the patient.

The notion of pathway is concomitant with its objective: meet the persons’ needs, knowing that they may, and sometimes often, change form during the pathway.
To sum it up, the notion of pathway requires a real coordination policy and aims at:

- personalizing the assessment of needs and treatments, best executed by professionals in charge of the follow-up,
- taking into account the multiple dimensions implicated in the quality of life of disabled persons, such as their health status (cure), but also their environment (care)
- long-term support.

The notion of recovery reaffirm that the disabled persons need to be “actors” in their own pathway. Therapeutic education (self-management) adapts this injunction in the treatment and introduce the patient’s preference when a choice between different interventions is possible.

To follow the idea of bringing the coordination function closer to the patients’ follow-up, the argument being the proximity with the person and the deep knowledge of the situation, various embodiments of coordinators have appeared: the general practitioner, the specialized coordinator and the case manager.

M.A. Bloch and L. Hénaut highlight the interest and limits of these various candidates to the role of “pathway coordinator”.

Regarding general practitioners, whereas they are now considered as the legitimate care pathway coordinators, it is more difficult for them to coordinate the life pathway of their patients and request the many social and medico-social help they may need. We will later see that the recent report (December 2014) of the IGAS (Inspection générale des affaires sociales, General inspectorate of social affairs), on the assessment of the coordination in the care pathway, acknowledge their ability to coordinate not only the care pathway but also the life pathway (Blanchard, 2014). This is the choice reaffirmed by Marisol Touraine (Minister of Health) in her address on the 22nd March 2013, during the 2nd national meeting of the CLSMs (Conseils locaux en santé mentale, Local committees on mental health), when she suggested to apply this logic to mental health. She states that “the general practitioner plays a central role in detecting, orienting and coordinating the management of persons. In mental health, we also need to encourage a pathway logic. A person should have the opportunity to be oriented by their general practitioner to a psychiatrist for a specialized management, to a psychiatric hospital if necessary, or to a medico-social center”.

The specialized coordinator and the case manager, as defined in France, aim to avoid, in the pathway coordination, being “judge and party”, situation in which the professional who provides a treatment also supports social and medico-social interventions. Their position thus needs to be different from the actors taking charge of the follow-up. This organization has shown its limitations, partly due to the fact that these case managers lack the legitimacy to define the pathway without being implicated in it. This function, seen as a “person giving orders”, led an evolution of the model to give a follow-up actor position to these professionals, filling the “gaps” left by the professionals naturally in charge of the follow-up. The authors give the example of the PRISMA model, in which the case managers share their time between assessment (around 30%), coordination (35%) and intervention in their professional field (35%). In other countries, the independent practice of some case managers, not related to follow-up teams, drive them more toward a support activity (protection) of the patients and their family (advocacy) (Bloch, 2014).

Addressing the more difficult question of coordination in the medical sector in one hand and the social and medico-social sectors in the other hand, the authors describe, in a compelling way, the lines still confronting a medical logic and a social and medico-social logic to resolve the coordination issue.

In the medical sector, a reflection is in progress to redefine health pathways that the persons will have to follow. Scientific knowledge and economic restrictions support this innovation. This structuring of the care pathway relies on a postulate that the development of the psychic disability is linear and, in many ways, catches up with the medical model of disability. According to this model,
the disease causes inabilities in everyday life (the disability) and the social or medico-social intervention is useful only if the somatic treatment reached its limitations.

The recovery model, fiercely supported by the patients, choose another model stating that the patients may recover without the disease being cured, as long as the environment conditions help the recovery.

Representatives of the social and medico-social sectors agree with this model, insisting on the impact of environmental factors in the quality of life and the recovery of persons with a disability. This stance supports the non-linearity of the life pathway. In view of this, it is necessary that the health and life pathway be supported in an adaptive and personalized way.

As M.A. Bloch points out, “implementing the cooperation between actors of the medical sector and the medico-social sector, implies that two different, even concurrent logics need to be reconciled”.

### Is the notion of “care pathway” adapted to persons with schizophrenia?

**Introduction**

The development of health pathways takes its roots in the 1980s in the USA, and initially concerned frequent or severe diseases that required time-limited, easily identifiable interventions, as it is often the case in surgery (Evans-Lacko, Jarrett, McCrone, & Thornicroft, 2008). UK’s National Institute of Health defines the care pathway as a tool bringing into the everyday life of the patient, the guidelines, protocols and recommendations of good practices, based on proofs and centered on the patient (Whittle, 2007). The care pathway identifies the types of services and interventions needed and when to implement them. The implementation of a care pathway has several objectives, such as reducing the duration of hospitalization, improving multidisciplinary collaborations, spreading evidence-based practices, managing costs and increasing the capabilities of the patients. In surgery, implementing health pathways only showed limited effectiveness to reduce the duration of hospitalization and improve the quality of the treatments (Dy et al., 2005). But what about the health pathways for severe mental illnesses such as schizophrenia?

**Health pathways in hospital**

The first trial was conducted in the late 1990s in a psychiatry ward in London (A. Jones, 2000). It focused on patients with schizophrenia, and the implemented care pathway consisted of eight intervention categories divided in 279 components. A case manager made sure that the interventions of every professional in the hospital followed the recommendations of the care pathway. The action research methodology was used. Data were collected from 29 intensive interviews and from patient observations over 12 months, with 15 work group meetings, to identify problems, interventions and evolution of patients with schizophrenia, in order to implement changes in the care pathway. Results showed an extremely difficult implementation of this care pathway. First, many nurses left the team after the implementation, with a 60% turnover rate in the nursing team. However, it was not possible, in this trial, to discriminate an instability of the care team before implementation from an intrinsic effect of this implementation. Professionals reported numerous limitations to the implementation of the care pathway, such as the excessive simplicity of the pathway, which did not effectively cover the treatment complexity, the lack of work model underlying the management of patients with schizophrenia and the lack of implication of the professionals during the implementation phase. Many professionals left the trial before its completion and several community workers refused to commit to the project, leading to a blockage of the care pathway. These difficulties that emerged during implementation contrasted with an initially high level of enthusiasm in the team. The care pathway was criticized for providing with only few detailed information on the practical modalities of its implementation, offering a care guided by diagnosis rather than the patient’s needs, put the professionals in a dependent position toward the
case manager and finally leading to a reduction of the actual care provided to the patients. This reduction in the quality and safety of cares provided to the patients, due to the necessity of collecting a large amount of information, led to an early withdrawal of the care pathway. Therefore, only seven patients benefited from the implementation of the care pathway, which was only completed at 31%.

A second trial tested the effects of the implementation of the care pathway for patients hospitalized for an acute state of any psychiatric disorder (except eating disorders) between 2001 and 2004 in Australia (Emmerson et al., 2006). This trial was designed from the observed disparity in the treatment of patients with a disorder of comparable severity, and was aimed at assessing the effectiveness of an attempted standardization of care pathways. This implementation was first tested over a 6-month period: after this assessment, the teams reported that the care pathway was too complicated and led to an increased amount of administrative work, particularly due to the necessity to fill the same document twice aside from the usual medical file. On top of this, early results showed that the care pathway caused an increase period of hospitalization. The pathway was thus streamlined and its effectiveness was assessed after 12 months through a set of indexes such as the period of hospitalization, the number of unscheduled readmissions, runaways and autolysis attempts. The pathway completion rate was high when the coordinator was on site (81%) but low when he was not (50%). Implementation of the care pathway did not have any significant impact on the studied improvement indexes, and was therefore interrupted due to the excessive cost of adding a coordinator position with the care pathway.

A trial was conducted in Germany between 2003 and 2005 on 114 patients with schizophrenia hospitalized for over a week in two open general psychiatry wards (Steinacher, Mausolff, & Gussy, 2012). The care pathway was designed by a multidisciplinary work group and complied with national and international recommendations related to the psychopharmacological treatment of schizophrenia. The care pathway consists of a specification of diagnosis procedures, modalities of the psychopharmacological and psychotherapeutic treatment and a psychosocial follow-up, all of which was presented in an organization chart. Two intensive implementation methods of the care pathway were tested. The first method was a passive distribution based on training sessions, information meetings, an access to the care pathway on the computer network and on printed media and the presence of a pathway referee in every team. The second method was an active distribution, with the same tools as the first methods, with a complementary verification session of the implementation, followed by feedbacks to the teams. The effectiveness of the care pathway was assessed on two types of variables, one year before and one year after the implementation. The first group of variables concerned the respect of the recommendations related to diagnosis (brain imagery in case of first psychotic episode, a β HCG before beginning the drug treatment, an ECG at least every 15 days) and psychopharmacological treatment (monitoring the various treatment prescribed for more than 35 days, antipsychotic single agent therapy, dosage between 300 and 1 000 mg of chlorpromazine equivalent with a starting dose lower than 500 mg of chlorpromazine equivalent). The second group of variables consisted of self- and hetero-assessment scales of clinical improvement. After implementation, some variables in the first group significantly improved (increase in the number of pregnancy tests, increase in monitoring drug treatments, higher number of starting dose lower than 500 mg of chlorpromazine equivalent, reduced number of patients receiving an under-dosed treatment) whereas variables related to the patients' clinical condition significantly decreased, thus showing a lower effectiveness of the received treatment. The authors do not provide any interpretation of the clinically deleterious effect of the implementation of the care pathway.

Outpatient care pathway

Now that we have introduced trials assessing the implementation of the care pathway during hospitalizations, let’s have a look at the outpatient care pathways. It is important to remind that the
compliance rate between the good practices recommendations and the outpatient follow-up of persons with schizophrenia is low, often lower than 50% (L. Dixon et al., 1997; Anthony F Lehman & Steinwachs, 1998). A first trial attempted to develop a care pathway to reduce this mismatch rate (Janssen et al., 2010). This care pathway consisted in implementing an electronic guideline of clinical good practices to make its use easier in everyday practice. Between 2000 and 2002, four networks of outpatient follow-up were created, with 55 private psychiatrists. The first 10 patients with schizophrenia were included for each psychiatrist. In the first network, psychiatrists benefited from a computer assistance to help them in decision-making through an electronic documentation module linked with algorithms designed by the Düsseldorf university psychiatry ward based on national recommendations. Three control groups were also created: in the first control group, psychiatrists provided standard care, without using any module; in the second group, psychiatrists were involved in a quality control circle and used a printed documentation module; in the last group, psychiatrists used the same electronic documentation module as the tested group, but without an associated decision-making algorithm. The groups of patients followed by psychiatrists who used the electronic documentation module showed a higher and faster clinical improvement, a lower rehospitalization rate, higher psychotherapeutic and psychoeducative treatment rates and a higher treatment compliance than groups without decision-making algorithm or with a printed documentation. The beneficial effect of using an electronic documentation module was higher when it was associated with electronic decision-making algorithms.

More ambitious trials are in progress in Germany. This country is characterized by the fact that the persons with schizophrenia are mostly followed by private psychiatrists outside of hospitals, usually for short periods and essentially for a psychopharmacological treatment. Furthermore, there is only few community teams for mental health in Germany: although non-psychopharmacological treatments (psychoeducation, social work, rehabilitation) exist, there is no coordination mechanisms for all the treatments available for schizophrenia. Finally, there is a large disparity of treatments available for the persons with schizophrenia between each state. In this context, a reform of the mental health funding system was implemented in Germany: insurance companies were allowed to make contracts with psychiatrists to try implementing integrated mental health treatments. A first trial will attempt to assess the effectiveness of the implementation of an integrated treatment network for schizophrenia in Lower Saxony (Kerkemeyer et al., 2014). It is a prospective, controlled observational trial intended to compare the clinical progression of a group of persons with schizophrenia receiving an integrated treatment characterized by a coordination between the nursing team, the private psychiatrist, the community mental health service and the hospital ward regarding a group of patients receiving standard cares centered around the psychiatrist in a private practice. The primary assessment criterion will be the number of days in hospital after a 12-month treatment and the secondary assessment criteria will be the number of rehospitalizations, the symptoms severity, the remission rate and the quality of life after the same treatment period. Administrative data provided by the social health insurance fund will also be used. The trial aims at recruiting 500 patients. Another multicenter, prospective, controlled observational trial comparing integrated treatments and standard cares for persons with schizophrenia is also ongoing in five other German states (Stierlin et al., 2014): the evaluation criteria measured after 18 months will be the increase in what patients can do and their quality of life. The trial aims at recruiting 500 patients in each arm and 250 of their parents.

Conclusions

The implementation of care pathways for severe mental illnesses such as schizophrenia is still taking its first steps. Until now, already conducted experiments have highlighted how difficult this implementation is, and linked it with the difficulty to decide the start and the end of a treatment sequence for severe and persistent mental illnesses characterized by a large amount of relapses and
remissions. The difficulty to standardize the interventions and the high levels of individual variation in reaction with these interventions are the other obstacles to implement care pathways in schizophrenia. The care pathways seem to be highly influenced by socioeconomic and medical contexts and by the level of commitment from the clinicians in these pathways. The review of the literature, described above, shows that most trials conducted until now harbor large methodological flaws such as a low number of patients or the lack of control group. Before drawing clear conclusions, it will be necessary to wait for the results of ongoing trials with more convincing methods. Two directions seem to be rather relevant for the development of care pathways in schizophrenia. The first direction consists in developing integrated treatments for mental health and addiction for persons with a severe mental illness concomitant with substance addiction, considering the observed very small collaboration between mental health and addiction care services in Europe (Baldacchino et al., 2011). The second direction tends to favor individual life and recovery pathways rather than care pathways. Recovery pathways focus on the persons’ strengths and interests rather than their disease, and aim at meeting the objectives set by the patients themselves. These recovery pathways would be based on the creation of an individualized service plan to support the patient’s personal, professional and health projects. The individualized service plan is a mutual agreement between the person and the various service providers over the person’s needs, the treatment objectives, the services to provide and their intensity. Individualized service plans are still seldom used in mental health and received only few evaluations.

II.2.2. Health pathway assessment

The IGAS’ recent report on the “assessment of the care support coordination” (December 2014) is based on the observation by M.A. Bloch and L. Hénaut and goes further by making it an innovative organization to solve the “coordination deadlock” (Blanchard, 2014).

Although the report title seems to be limited to the care pathway, the life pathway has not been left aside. The authors view that there is a sanitary entry point in the pathway. However, they consider that the care pathway will cross path with the life pathway, which will require other professionals and decision makers to intervene to optimally adapt the pathway.

The authors remind that as part of the implementation of the National Health Strategy, “the notion of health pathway, being part of all ongoing considerations, introduce the necessity to call for a coordinated action of all professionals in the medical, social and medico-social sectors”.

II.2.2.1. Observations

The main observation the authors made is the failure to have a quality coordination between the medical and medico-social sectors despite the current coordination structures. This is why the MAİAs (action methods for the integration of support and care services), “supposed to be medical, social and medico-social sectors methods”, have not been accepted by medical professionals and remained in the social and medico-social sectors, as what happened to the MDPHs, in which “the medico-social methods are the most developed”.

Even if chronic diseases encouraged coordinated organizations, such as in cancerology, they remain clinical coordinations, i.e. limited to medical professionals.

But in the aging patients sector, many organizations (networks, local information and coordination centers, MAİA, etc.) attempted to coordinate medical, social and medico-social sectors. But medical professionals are not really included in these organization. They conclude that “the way these
coordinations are structured hardly meets the needs of patients in terms of availability, and of clinicians who are seldom informed and implicated by existing coordinations, unless when they are integrated with their practice, such as some care shelters”.

Regarding the coordination relying on the creation of new structures, the authors conclude: “The difficulty to organize an overall and multidisciplinary management leads to multiply structures, to the risk of making them redundant and still without implicating medical professionals. This situation causes to organize a coordination of the coordination, in a headlong rush harming the effectiveness and readability for the people involved”.

It may be stressed out that the failure of a structure coordination, guided by essentially economic objectives, led today, by pursuing the same motives, to coordinated care pathways (sector-based coordination). Standardizing a “model care pathway” would make implementation easier. New embodiments of this new mode of coordination “by coordinated pathway” is emerging in many countries using various names such as “clinical pathway”, “integrated care pathway”, etc.

At the other hand of the spectrum, rather than a “structure” or “pathway-type” solution to coordination issues, the authors reminds that care networks aimed at providing a coordination to support professionals and help them access more adapted modes of management, and also to help families access resources to bring their relatives back home, by developing collaborations with existing territorial resources.

But, based on questionnaires sent to regional health authorities (ARS, Agence Régionale de Santé), the authors showed that even if 50% of coordinations are networks, these structures manage less than 300 patients. The solution concerns only a small number of patients and also, the strong heterogeneity of patients makes this coordination method impossible to generalize.

These two approaches, the “bottom up” approach supported by professionals, and “top down” approach, imposed by central administrations, embodied, during coordination attempts, the opposition between the “network” and the “sector” formats or solutions favored by dedicated platforms, proximity supra-actors, filling the gaps left by professionals in the coordination.

The authors will adopt a functional logic (defined by its functions) rather than a structural one.

Therefore, they offer a functioning model closer to the network functioning (at least in its spirit and intentions) than the multiplication of structures or the monitoring of the implementation of a pre-coordinated care pathway, choosing a more flexible “bottom up” solution, rather than a “top down” solution guided by economic goals.

One of the arguments supporting this choice is economic. Indeed, it highlights the high cost of supporting coordination structures with poor effectiveness.

Among other observations, the mission reports two key points. The first one relates to the “partition and competition between national, local and social administrations, adding to the confusion”. The second one is the territorial division: “The way the territories are named, depending on each public policies implemented, reinforce the complexity and the confusion in the management organization”. They point out that several regions choose an infra-district division (3 out of 26 regions kept the pre-existing district division) […] and that “social services and structures under the district administrations have their own mapping”.

II.2.2. Suggestions

The main suggestion relates to the coordination role the general practitioner should have. This proposal brings the coordination function and the treatment management function closer to each other.
As a mean to create a support coordination, the authors start with the needs of general practitioners, following a “bottom up” logic. These practitioners are designated as pivots in the pathway, to think about what could be useful to “improve the quality of treatments”, which are not taken into account in the numerous attempts to improve coordination. They distinguish two support levels: functions to be mobilized for a coordinated patient management (treatment support coordination) and “functions to organize on a regional scale and making this coordination easier”.

They remind that: “according to many trials, an effective support coordination to practitioners helps improve the treatment quality, in a complex and fractionated health system. This support needs to allow health professionals to do their work without offloading the most time-consuming patients on emergency care units and over-specialized networks, and to provide them with a logistic support or help in the social and medico-social aspect of the patient management”.

II.2.2.2.1. The two support levels for the pivot practitioner

- Treatment support coordination

The authors therefore recommend to “add (to the article L1411-1 of the public health act) the organization of the coordination of all professionals treating the patients in a way that it contributes to the treatment”. They stress that “giving this responsibility to others would affect its effectiveness” and the patients may not themselves be coordinating since “they would be deciding the definition of the services they receive”. Further down, they add that “these are the reasons explaining why the mission did not keep a scenario in which a single territorial support platform would have received the coordination functions described above. This platform, if assigned with the mission of orienting the patients to professionals or directly treating the request, would have been too far away from the patient and practitioner needs, considering the mission’s objectives. Also, it would certainly be too expensive”.

In the perspective adopted by the authors, the primary care physician, who has a pivot role in the treatment, “should be the one to decide the coordination”.

The authors rely on the works conducted by the HAS (Haute Autorité de Santé, National Health Authority), which defines this level of coordination as “the set of activities required to organize pathways but not directly performable by primary care professionals”, either “because they require the mobilization of territorially-shared resources due to an excessively low number of patients, or because they provide patients with technical, social and support skills that medical professionals cannot offer, or because in their current organization state, medical professionals do not have the resources to perform them”.

“Coordination is organized as close as possible to primary care physicians so they can use it in their practice”. “Either way, the coordination function may be conducted by the care team, as long as it can include social professionals”. “It would thus be possible for the physician to leave the coordination to a social or medical professional by including them in the care team”.

Among the functions that may be held by proximity teams, with a support coordination, the authors give some examples: assessment of the patient’s needs and elaboration of a treatment, patient support and intervention follow-up (“regular updates to the managing physician”) “which may result in a re-assessment of the treatments”.

In the health law project, the care team is defined as “a team of professionals who directly participate to the treatment of the same patient to perform actions such as a diagnosis, a therapy to compensate the disability or prevent autonomy loss, or who participate to actions necessary for the coordination of said actions”. One of the objectives of the team is to “identify the coordinator
designated by the primary care physician, after discussion with the patient if necessary”. The authors define the functions of the coordination this way: “these functions add to the cares received by the patients, help them, grant them or support them. Related to care, they may be used in specific or combined ways, on occasion or over long periods depending on needs. They exclude emergency”. The “orientation in the care system and the medico-social sector” is one of these missions.

For more flexibility, the authors stress out the necessity to “avoid a coordination offer based on a single model, disregarding its diversity on various territories and without any action margin of the physician on the organization”. The support coordination should be “territorialized”, i.e. adapted to the region’s reality and needs”. However, a quality assessment must always be performed: “The service offered by the physician will be assessed in its entirety, including the coordination, by the patients themselves, for example through satisfaction surveys, distinct from the assessment conducted by the administration among its usual missions”.

- Functions to be organized on the regional scale and making coordination easier to perform

The authors give the following function examples:

- transversal organization functions: “creating a protocol of hospital admission and discharge and access to medico-social services”, “accurately describing communication modalities (information system) and organize the dialog between territorial collectivities. Finally, “all the investors of social funding in the territory (ARS, district administration, city social action centers, social security, complementary organizations) need to sign a protocol to identify existing social funding and work together to improve the use of social funding and how they are used”. Further down the report, the authors recommend to “always have a “support coordination” topic during discussion with territorial collectivities, according to the territorial health contracts as stipulated in the new article L1434-13 of the public health act of the health law project”.

- technical and economical functions: update health, social and medico-social resource inventories (available to the general practitioner); “support professionals in choosing, implementing and effectively using information technologies, support to funding projects that would help coordination. This latter function being shared by territorial collectivities, it would be wise to offer a mediation to deadlock or conflict situations”.

- later, they highlight that “the ARS alone is liable to ensure a sufficient offer”

The authors distinguish this level of administrative support from care support coordination, deployed closer to the patients. They think that the ARS “is responsible for the organization of the coordination offer, by defining a support coordination development strategy in the regions, and by linking this development to a service offer in terms of information to physicians or measures encouraging coordination”.

II.2.2.2 Overall system organization

In conclusion, the IGAS mission offers the following definition of territorial support coordination: “it regroups every actor (be it medical professionals or social or medico-social professionals) whose coordination helps offer a comprehensive management to the patients without interrupting the care they receive. Coordination is a complement to clinical cares and supports them to improve the overall health condition, as defined by the WHO. Depending on health needs, coordination may be a temporary or long-term solution. It is a transversal solution when it manages the patients regardless of their age or disease”.

The authors stress out that it is not certain that the development of effective coordinations leads to cost savings. They highlight that “coordination may be expensive, at least at the beginning” but that a
better medical prevention and the identification of medico-social risks through high quality multidisciplinary assessments may cause additional costs”. But they add that “even if coordination alone does not ensure cost savings, the collective action, naturally including the coordination, seems to save costs when this action is performed by delegating tasks”.

The authors rely on the Kaiser pyramid, which distinguish four levels of situation and population complexity (Kaiser, 2009): (1) health prevention and promotion (the entire population), (2) patients at low risk of complications, who only need to manage the disease, (3) patients at a high risk of complications, who need a multidisciplinary service coordination and (4) patients at a very high risk of complications, who have complex needs and require an intensive case management.

Regarding financing, the authors suggest that “regardless of the chosen method, the coordination funding should be based on the funding of the managed case rather than offering subventions to structures responsible for ensuring the action and the answer to the needs assessed by the physician, or funding the structure, which is often repetitive and lack a proper assessment”. They conclude that it is necessary to “rely on both the DGOS (Direction Générale de l’Offre de Soins, general management for care programs) and the DGCS (Direction Générale de la Cohésion Sociale, general management for social cohesion) to define two or three fee rates for the coordination service”.

A chapter is devoted to information exchange, the keystone of an effective coordination, and another chapter to the need to define “a professional skill/knowledge basis for coordinators, which may have to complete an initial course, be it in the social or medical sector”. Another suggestion would be that any professional working in the medical or social sector would have the opportunity to be trained to the requirements of an effective coordination when supporting the health pathway of a person with a chronic disease.

II.3. Recovery: a new orientation for medical and social practices

The notion of recovery points to a new paradigm, which is different from and complement the traditional medical paradigm. Whereas the medical approach aims at the disorders reduction, the clinical remission, and is thus centered on the disease it is supposed to steer the evolution, the recovery is the future of the person; its determinants are not only medical, but rely on the person’s capabilities to regain control over their life despite the chronic disease, and environmental factors which may encourage or undermine this reengagement in active life (Amering, 2009; L. Davidson, Rakfeldt, J., Strauss, J., 2009).

Although the medical approach, aiming at clinical remission and relapse prevention, relies essentially on a treatment prescription, especially an adapted medicated treatment, i.e. a rather external remedy, leaving the persons in a passive posture (“patient” posture), the recovery approach requires that the persons regain an active posture to reengage in active and social life. The idea is to feel that they regain control over their life, which is both the goal and the method to promote to reach this goal. Therefore it relies on a support method encouraging the persons’ self-determination, empowerment (regaining the power to decide and act) and autonomization (Greacen, 2012).

This is why recovery requires a new orientation of practices (and thus structures) if they wish to give priority to this approach.

Recovery is less a goal to reach than a process “during which the person learns, by trials and errors, to live a satisfying life, open to the future, despite the limitations caused by the disease” (H. L. Provencher, 2002). Identified factors contributing to this process are hope, an individualized support, centered on the person, peer support, and encouraging self-determination and action power. This
implies a type of support inspired by these values, a partnership rather than a support, to encourage further responsibilization down to the treatment (training to medication self-management). As part of the organization of services, peers are also asked to participate and work in decision-making structures as peer helpers. In a recovery logic, a relapse or rehospitalization should not be perceived as a failure, but as an experience for the person to learn and build on (Forest, 2008). Also, recovery does not imply an absence of disease. It may be considered that a person has recovered even if they still take medications or if they show residual symptoms (H. Provencher, 2008). Contrary to the traditional medical view that recovery is a very exceptional phenomenon, it is actually very common. According to the UK’s National Advisory Mental Health Council, the recovery rate, in the sense of the ability to live a positive life despite the limitations due to the disease, is 60% for schizophrenia in most follow-up studies (College, 2007). The social environment plays an important role in the recovery, hence the necessity to provide life conditions that are satisfying and encouraging the persons’ recovery (H. Provencher, 2008).

As M.J. Fleury reminds: “In the United States, several states reorganized their mental health services so they may encourage the patients’ recovery. The model is also in the center of reforms of the mental health systems in New Zealand, UK and Australia. In Canada, the Kirby and Keon report in 2006 placed recovery at the center of orientations to implement in mental health and determined three key values to design recovery-oriented services: 1) offer the persons the freedom to choose, among a range of available services, those more likely to help them recover; 2) give priority to intervention in the persons’ life environment; 3) offer a comprehensive and integrated range of services, adaptable to the changes the persons will experience during their recovery” (M. J. G. Fleury, G., 2012).

Although there are still no guidelines on this matter, a set of practices have been developed based on an analysis of a large number of documents from several countries. The concept of recovery has become an objective for the scientific approach and empirical evaluation, following the EBM method. Its implementation on the field was assessed and proved effective to improve the satisfaction level of patients and their level of commitment in the medical and social rehabilitation process.

Furthermore, all the efficacy studies of health programs and care practices now include the targets of recovery and the patient (and their families) satisfaction in the assessment design.

Two major team factors for change are highlighted by the authors: designing a discussed and traceable, personalized intervention project setting the recovery steps and the means to reach them by adapting the team and the patient; and the work on the therapeutic relationship (Tyrer, 2013). This approach should be respected by every team member, hence the importance of team round-ups.

The latter point is the topic of many trials on the continuity of the follow-up, all converging toward the importance to define a case manager to ensure this continuity. This is a major point since it strongly impacts the organizations to promote.

More practically, some supports to this “recovery-oriented” approach have been suggested:

- Importance of the informed choice and thus the quality of the provided information

- Overall approach on health, requiring to take into account other targets than the sole clinical targets, and discussed focus on health objectives such as a contract discussed with the patients to set the objectives and the means to reach them (adaptation of the personalized follow-up concept). Various authors highlighted the interest in routine care to use measure instruments to monitor, with the patients and in an objective way (i.e. out of the sole professional or family perspective), the evolution of their condition depending on their health objectives (M. J. G. Fleury, G., 2012). Advanced treatment guidelines follow the same idea by formalizing, in the framework of an intervention contract discussed and signed
between the patients, their families or a trusted person, the managing team and a mediator, the nature of the interventions to implement if a crisis occurs (Campbell & Kisely, 2009).

- Continuous assessment of the support required by the patient, with the objective of the least support possible, rather than the most, so the patients mobilize their autonomy skills

But the main indicator of practice’s change toward a “recovery” posture remains the traceability of the personalized intervention project, discussed, or even signed by the patient, in the framework of a negotiated contract between all the parties, according to the advanced treatment guidelines. Beyond this, using measure instruments shared with the patients to follow and adapt the intervention project to the evolution of their condition helps, as studies have shown, the best commitment of the patient in the recovery process. Rather than using all the instruments required in research, it is best to choose a few, easy-to-use instruments, which match the patient’s view.
III. Critical analysis of the data from the literature
III.1. General data

Lifetime prevalence of schizophrenia is 1%. The one-year prevalence is slightly higher for men who suffer more often from chronic schizophrenia (McGrath & Susser, 2009).

Progression varies. Clinical remission rate is estimated between 17% and 78% after a first episode and between 16% to 62% after several episodes (AlAqeeq & Margolese, 2012). 1/3 of symptom remission, 1/3 of light disability and 1/3 of strong disability are reported. Functional remission is not as common (Novick, Haro, Suarez, Vieta, & Naber, 2009). It is now one of the main treatment goals, hence the concept of recovery.

In the long term (10 to 16 years), after hospitalization for a first episode of schizophrenic disorder, 15% of patients live well enough without care and 25% do not use any psychotropic medication. The life expectancy loss is high, estimated to 18.7 years for men and 16.3 years for women. The main causes of death are suicide, and cardiovascular disease for somatic pathologies (Laursen, 2011).

In France

The most recent data, soon to be published, come from the work of Magali Coldefy (IRDES), and were showed to the group when she was auditioned on the 26th January.

The number of persons with schizophrenia is estimated between 300 000 and 400 000 (Limosin, 2000). 2012 prevalence of schizophrenic in or outpatients treated in these health structures is 145 700 (RIM-P 2012 data). ALD data for the same year gives an estimate of 132 000 persons diagnosed with a schizophrenic disorder, when taking into account the main health insurances (CNAM, RSI, MSA). These data do not include persons treated in liberal practices or outside the ALD.

Health spending is between 1.5% and 2.5% of the overall health costs (Rossler, 2011).

What do we know about these persons’ care pathway in France?

In terms of access to treatments, the treatment absence rate is 32% in the world and 18% in the developed countries (Kohn, Saxena, Levav, & Saraceno, 2004). Access to treatment improves along with the disease severity (Helgason, 1964).

The 2011 hospital data from RIM-P (Magali Coldefy 2015, communication for the Centre de Preuves) help identify 137 000 persons treated for schizophrenia, which represents 9% of all treated persons in mental health structures, 14% of full-time inpatients and 24% of hospitalization days (28% in public structures, 25% in ESPIC and 12% in private structures).

The follow-up is at 83% performed in public structures (specialized or general). ESPIC (Établissement de santé privé à intérêt collectif, Private health structures with public interest) and private structures perform respectively 12% and 5% of the follow-up. These outpatient cares represent the main activity of psychiatric sectors (in terms of resources used). The principles of sectorization rely on the follow-up of schizophrenic patients.

2/3 of patients are middle-aged men around 44 years old and male patients require earlier treatment (31 to 35 years old at the latest) compared with female patients (46 to 50).

Patients are distributed between the various follow-up modalities with 49% outpatients only, 16% full-time inpatients, 3% part-time inpatients and 32% mixed in and outpatients. This distribution
makes schizophrenic patients the most hospitalized category of patients, with a mean period of hospitalization of 83 days. Also 30% of patients are admitted on their own will and 13% are forced.

Regarding outpatient treatments, medical consultation remains the most common modality since almost 2/3 of patients use it, with around six consultations per year. Consultations with treatment, performed by nurses and psychologists, are used by 36% of patients, with around 14 consultations per year. Social situation follow-up is also a widely used treatment modality. Almost a third of patients use it with around seven consultations per year. Finally, 17% of schizophrenic patients receive home care and 15% also join group treatments.

Further studying these treatments descriptions, Magali Coldefi conducted a statistical analysis (hierarchically ascending classification analysis from the results of a primary component analysis) of clinical and treatment data on 124 000 patients followed by a mental health structure for a 12-month period between 2010 and 2011. Three main treatment groups can be described.

The first one, gathering 54% of patients, consists of mainly outpatient continuous cares, of which:

- 27% are patients over 40 with a stabilized disorder (simple or residual schizophrenia) without comorbidity, and receiving outpatient continuous cares of moderate intensity and variety, mainly through medical consultations (six per year) provided by public structures. Hospitalizations are rare.

- 18% are patients between 30 and 45, with a diagnosed undifferentiated schizophrenia, without comorbidity, and receiving continuous and diversified outpatient cares, of moderate to high intensity, provided by public structure at 90%. Hospitalizations are rare.

- 8% are patients between 26 and 40 with negative socio-economic factors or a comorbid addiction, who receive continuous, varied and intensive cares, with medical consultations and a very high number of non-medical and social interventions, group treatments, home cares, inpatient treatments (around 20 days/year).

- 1% are patients over 46, who receive intensive home treatments and support, many non-medical, individual and group treatments, and emergency cares.

The second group gathers 32% of patients, who receive more in or outpatient short treatments:

- 19% are non-continuous, low frequency and low intensity cares in day center or institutions.

- 12% are patients between 20 and 35, hospitalized for a short time with open treatment, received in emergency or somatic care, or transferred to different structures.

The last group consists of 14% of patients, who receive more intensive cares with more frequent and longer hospitalizations.

- 2% are patients between 20 and 30, with socio-economic, somatic or addiction issues, who receive inpatient intensive cares with frequent admissions (166 days in hospital and 8 admissions per year), compulsive admissions and few outpatient cares. Theses cares are most often provided in private structures (32%) and general hospitals (37%)

- 2% are male patients (78%) between 16 and 40, with socio-economic, somatic or addiction issues, and whose cares consist of compulsive hospitalizations (227 days per year), with periods of therapeutic isolation (16 days versus 0.6) and very few outpatient cares.

- 4% are rather male patients (70%) over 40, who receive inpatient intensive cares (139 days), alternative full-time cares (55 versus 3), with frequent admissions (8 versus 1) and group treatments (33 versus 7)
- 5% are patients over 50, with socio-economic, somatic or addiction issues, hospitalized for long periods (240 days per year)

As M. Coldefy points out, the scope of these results is limited by a number of factors, such as the lack of data comprehensiveness, and the impossibility to follow patients when they go to a different structure. Furthermore, for a chronic disease such as schizophrenia, it may be preferable to widen the observation window to a more relevant 2-to-3-year period. Finally, and most importantly, these results would be improved with more qualitative data such as the clinical symptoms intensity, environmental and social factors, the level of treatment observance and the patient satisfaction.

Regarding somatic treatment, there is a lack of French data on the relationships between general practitioners (GP) and psychiatrists for this population, and on the follow-up of schizophrenic patients by GPs.

In other countries, schizophrenic persons consult their GP. A large Australian study concluded that schizophrenic patients are among the persons who consult general practitioners the most, after alcohol and drug users (Mai, Holman, Sanfilippo, Emery, & Stewart, 2010). In the Netherlands, a survey with general practitioners showed that 3/4 of 96 schizophrenic patients recently discharged from hospital see their GP the following year.

What do we know about the health pathway of the persons with a schizophrenic disorder?

11.5% of the persons with a schizophrenic disorder have access to a paid job, versus 62.2% in the general population, although 55% to 70% of them state they wish to work (Holley, Hodges, & Jeffers, 1998). 25% are in a relationship, whereas 75% are single, separated of divorced (Marwaha et al., 2007). The main area of dissatisfaction for these persons are their love life and financial comfort (Kovess-Masfety et al., 2006).

In terms of social support, only few data are available in France. In 2005-2006, 11% of the 330 000 persons who received an AAH (Allocation aux adultes handicapés, Allowance for disabled adults) had a schizophrenic disorder (DREES, 2008 (June)). Overall, the social needs of the persons with a schizophrenic disorder are significant and insufficiently taken into account. The study of a Canadian cohort over 16 years shows a clinical remission which is more frequent than functional, and a steady decrease of the autonomy of inpatients after a first episode of schizophrenia (Abdel-Baki et al., 2011).

In Quebec, the unmatched psycho-social and rehabilitation needs and services have been highlighted. The year following hospitalization, the needs are significant for 76% of patients, but only 23% receive support. The gap seems related to the unavailability of services and the lack of commitment from patients and/or caregivers (Cormier, Pinard, Leff, & Lessard, 1986).

The whole international community has made the psychic disability a priority and a challenge for the future (Ruggeri, 2013).

Surprisingly, the whole international literature agrees on the nature of the challenges, particularly for the persons with a severe mental illness, such as a schizophrenic disorder.

To better understand this, it is necessary to consider the evolution of health systems and its main factors.

Although traditionally, the objectives of the “best care” (led by professionals but especially by the patients) “at the best price” (led by investors) have largely driven the reorganization of health systems, it is the recovery paradigm (presented in the previous chapter) that has become the guide of this reorganization in the developed countries.

In order to show how these key factors of change impacted the evolution of health systems organizations, we will crudely draw the “directions” taken by all the countries to reach the challenges
set today by the international community. We will take a particular look at the evolution of countries with a history and organization of the mental health treatment offer which is closer to ours and which, contrary to France, largely evaluated the impact of such changes, i.e. Canada and the UK, the latest considered a benchmark by the WHO.
III.2. Evolution of health systems in other countries

The evolution of health systems has been strongly impacted by three requirements: best practice, best organization and lowest cost.

We will show the data on the organization of the health offer from a historical perspective.

From this perspective, we may describe the steps in the creation of the offer as it is today:

- The deinstitutionalization step, started by France (sector policy) and followed by other foreign countries since the 1970s
- The outpatient offer's structuring step, involving the medical and social sectors
- The creation, as part of the recovery model, of a policy entirely oriented toward the autonomy of persons with a severe and persistent mental illness (the concept of psychic disability doesn’t exist in other countries, mirroring the absence of a medico-social sector)

The deinstitutionalization, more or less radical depending on the countries, imposed an assessment of patients who were, sometimes brutally, “put out of asylums”. We will see that data converged regarding the absence of symptom worsening in patients, and the improvement in their social functioning and satisfaction. This deinstitutionalization was made possible by the parallel development of places, for these patients, in housing structures (sheltered housing). Limits to this deinstitutionalization were of three kinds: a phenomenon called “trans-institutionalization” meaning that patients were transferred from hospital to other structures, mainly housing structures; increased stays in prison for these patients who became homeless; and the observation that 10% of them needed a long-term stay in a medical structure.

The period during which the outpatient treatment offer got structured concerned primarily the medical sector, but also the social sector.

On a medical level, although reorganization was adapted differently depending on the country, a consensus was reached over the necessity to develop territorial community teams. Two main characteristics of an effective structuring of the treatment offer, for which evidences were converging, were also retained by all the countries: the case management and the so-called intensive follow-up programs.

This step objective was triple:

- Develop a territorial treatment offer, each territory being under the responsibility of a dedicated medical team: the community medical team.
- Avoid hospitalizations even for the most severe patients. The “intensive follow-up” programs became the main lever to structure the outpatient treatment offer.
- Delegate the treatment follow-up of clinically stable patients with the most moderate symptoms to primary cares (general practitioners), and the social follow-up to social workers.

To have a solution for every situation that may occur along the care pathway, “in-between” programs, designed to fill the moments when community teams (when they existed) did not intervene, were proposed and assessed.

On the social level, delegating an important part of the follow-up (the social case management) to social workers and developing structures and services necessary to keep patients with a severe and persistent mental illness out of hospital were the two notable evolutions in this step.
The organization of this treatment offer, structured around basic characteristics (medical and social case management, medical follow-up centered on the most severe patients as part of “intensive follow-up” programs, part of the pathway delegated to primary care and social workers, development, under the responsibility of the social sector, of housing and reinsertion services), was adapted very differently in each country, depending on the coordination modalities, chosen by the countries, between all their actors.

The development of new services and the increase in participants led to make coordination the goal of this step. As we have seen, the notion of “health pathway” now interprets it through a new paradigm.

The last step asks the organizations offering treatment to restructure to meet a new objective, fiercely driven by the patients: get out of the hospital-centered, biomedical model which, on the social dimension, is developed in a sheltered environment, to replace it with an offer organized in an ordinary environment, to answer the autonomy and self-determination rights of persons with severe mental illnesses.

We will summarize the evidences that were gathered to guide, at each step, the evolutions of the treatment offer. We will give two examples of the overall organization of the treatment offer: Canada and the United Kingdom. These two countries were chosen due to the similarities with France in the historical development of their organizations, and the great difference in adaptation despite similar health objectives and prerequisites (main components of the offer structuring).

### III.2.1 A deinstitutionalization more or less complete depending on the countries

The deinstitutionalization is a global movement which occurred in the 1950-90s, after the “chlorpromazine revolution”, made available in the late 1950s, and more widely the development of antipsychotics, which radically improved the prognosis of schizophrenic disorders, in terms of symptom stability and social functioning. Another cause is the critics over the quality of cares in psychiatric institutions and their effects on patients. Hospital cares in “asylum” provided in old psychiatric hospitals were replaced by community cares (Kunitoh, 2013).

- In Europe: Italy (Ferrannini et al., 2014), UK (Kunitoh, 2013), Central Europe (Haug & Rossler, 1999), Western Europe (T. Becker & Kilian, 2006) and France (Verdoux, 2007, Roellandt, 2010)
- In North America (Manderscheid, Atay, & Crider, 2009), Canada (Sealy & Whitehead, 2004) and Australia (Rosen, 2006)

More recent deinstitutionalization experiments were reported in Asian countries and in India (Ito, Setoya, & Suzuki, 2012).

The intensity of the deinstitutionalization varied depending on the countries. The most extreme stance was held by Italy where the 180 Act in 1978 forbid any new admission in the old psychiatric hospitals (Ferrannini et al., 2014). In the UK, some of the most famous hospitals, such as the Friern and Claybury hospitals in the North of London (Leff & Trieman, 2000) and Netherne hospital (Wykes, 1994) were closed. Deinstitutionalization was generally seen as a progress, as in Canada (Sealy & Whitehead, 2004). It was described as incomplete in some countries (Haug & Rossler, 1999).

Apart from the historical and global convergence arguments, there are evidences supporting deinstitutionalization:
In the UK, an assessment team called “TAPS” (Team for the Assessment of Psychiatric Services) observed the historical closing of the Friern and Claybury hospitals in North London (started in 1985 and completed in 1997) (Leff, O'Driscoll, Dayson, Wills, & Anderson, 1990; Leff, Thornicroft, Coxhead, & Crawford, 1994; Leff & Trieman, 2000). The team started by analyzing, 1 and 5 years after the closing, the clinical and functional evolution of a cohort of N=670 patients hospitalized for long periods (over 6 months), with a mean age of 54 (19 to 97), and a schizophrenic disorder for 80% of them.

Results show that 5 years after the psychiatric hospital closed, the level of psychiatric symptoms didn’t change (as reported by the total score and sub-scores of the Present State Examination) but an improvement in the patients’ social functioning was observed (in terms of social skills, household skills and an increased number of friends and significant others). 10% were readmitted in hospital for long periods, a percentage of “requesting” patients matching others studies (Uggerby, Nielsen, Correll, & Nielsen, 2011). 80% were housed in a sheltered environment and 2/3 of them stayed there after 5 years. No increase in suicide or death rates was reported. The patients’ satisfaction was clearly improved.

- A recent review of the literature looked after the deinstitutionalization effect on long-stay patients (> 6 months), and concluded that it had a positive effect, whether the patients were in hospital during the deinstitutionalization (“old long-stay patients”) or were hospitalized after (“new long-stay patients”). It is based on 12 trials from various countries all over the world (none in France) with populations consisting mainly of persons with a schizophrenic disorder. 11 trials studied the evolution of social functioning; 8 reported an improvement, 2 a stability and 1 a deterioration. 9 studies measured the evolution of psychiatric symptoms: 5 showed a symptom stabilization, and 4 an improvement (none reported a deterioration). Two third of the trials reported a quality of life improvement. Behaviors toward the environment significantly improved in 2 studies and moderately in 2 others (Kunitoh, 2013).

- The preferences of persons with a schizophrenic disorder are clearly leaning toward community cares, offering “freedom, choice, autonomy, mobility, intimacy, safety and proximity with family, friends and community”. (L. Davidson, Tebes, Rakfeldt, & Sledge, 1996) (Davidson et al., 1995). Meanwhile, a large Australian trial on persons treated in these community care centers over four urban area reported a high level of social isolation and difficulties in everyday and social life (Jablensky et al., 2000).

Negative points on deinstitutionalization were also made in the literature (Munk-Jorgensen, 1999; Priebe et al., 2005).

Deinstitutionalization seemed to have been followed by an high increase in treatments without consent between 1998 and 2012 in the UK (B. H. Green & Griffiths, 2014), and in other countries (Germany, Denmark, USA, etc.). These rates decreased in some countries (Italy, Spain, Sweden).

A trans-institutionalization or re-institutionalization was also described, with a large number of persons with a schizophrenic disorder being in prison or in residential structures (Fakhoury, Murray, Shepherd, & Priebe, 2002; Fakhoury, Priebe, & Quraishi, 2005). An increased number of homeless persons was also noted but cannot be attributed only to the closing of psychiatric hospitals (Leff, 2001).

### III.2.2. The structuring of the outpatient treatment offer

#### A. Medical offer
1. Community cares

Community cares, adapted differently in each country, are the model supported by the WHO for schizophrenic disorders (Santos, Henggeler, Burns, Arana, & Meisler, 1995).

The WHO lists the common characteristics of these services:

- offered over time for a population in a set geographical area,
- individualized project adapted to each person’s need, using their own skills to empower them,
- services primarily targeting the most severe and handicapped patients,
- continuity over time and treatment areas,
- outpatient orientation, available as long as needed, preferably in the patient’s social environment,
- least restrictive treatments possible, avoiding long-term hospitalization as much as possible,
- these services are part of the treatments and closely linked with primary cares,
- social rehabilitation is provided in the natural environment,
- these services are intended to the patients and supervised to ensure the treatment quality and that they match the patients’ need,
- The patients and caregivers are involved in the planning, implementation and assessment of services,
- The services include several components (CMHC: Community Mental Health Centers): patient identification, crisis intervention and severe hospital admission, housing facilities, diverse interventions, medical assistance, housing/financial help, family support, professional support, leisure, everyday life, environmental changes, defense of their rights.

These principles are found in the reform processes in Europe, which led to the current care systems (T. Becker & Killian, 2006).

The question is not whether community mental health care teams are relevant, since the data supporting them show a high level of evidence, but how far their mission goes and whether distinct health care teams should be created depending on the various populations (e.g. teenagers) or the moment in the pathway (e.g. crisis or emergency situations).

Furthermore, economic limitations and the contribution of actors from different sectors, with their distinct skills, led to change the mission of the specialized sector, traditionally managing the whole health pathway, and delegated part of this mission to general practitioners and social workers.

2. Health care missions and the program implemented to conduct them

The designed organizations had two objectives: avoid hospitalizations as much as possible, even for the most severe patients, and entrust professionals outside the specialized sectors with everything they could do without risk. The specialized follow-up thus naturally refocused on the patient with the most severe symptoms.

The severity characteristic used to define these moments in the pathway was a high degree of hospitalization (4 days/month in the two previous years).

In these moments, “intensive follow-up” programs were offered. They all included the case management as a key functioning principle. These two components (case management and intensive follow-up program) show the highest number of evidences.
2.1. Case management

First performed by a “case manager”, independent from the patient’s follow-up and offering their services individually, the case management was included in the patient’s follow-up and conducted collectively by a team (Scott & Dixon, 1995).

The case management:

- **Its missions:**
  - Ensure treatment quality, life in the community and quality of life. It aims at developing individual skills, autonomy and self-determination,
  - Ensure an individualized intervention: each patient gets a case manager, whose mission is to assess needs, prepare a treatment program, coordinate appointments with other caregivers, ensure compliance with the treatment program and keep contact with the patient,
  - Maintain the connection with peer helpers.

- **Its functioning:** its intervention varies in intensity and may be intensive (24/7 services by a multidisciplinary team).

- **Evidence arguments:**
  - It helps reduce the number of hospitalizations and emergencies, encourages patients to reinsert in the community and improves their quality of life.
  - It improves treatment compliance, symptom and housing stability, vocational outcomes, and reduce the risks of being homeless, ending in prison or getting addicted to drugs.

2.2. Intensive follow-up programs

According to Cochrane data, the intensive follow-up (assertive community treatment (ACT) and case management) reduces hospitalization and improves the treatment compliance, compared to standard care. It also improves the overall social functioning. However, it was not clearly demonstrated whether intensive follow-up (< 20 patients) yields more benefits than a less formal non-intensive follow-up (> 20 patients) (Dieterich, Irving, Park, & Marshall, 2010).

The PACT program appeared to be the best intensive follow-up model. It was the most assessed and gathered the most evidences.

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**What is PACT?**

PACT (Program of Assertive Community Treatment) is a service provider model, to offer an integrated and local treatment to persons with severe and persistent mental illnesses. Contrary to other community programs, PACT is not a linkage or brokerage-type of case management that connects patients with mental health structures, housing solutions or rehabilitation services. The objective is rather to provide patients with highly individualized services. People who benefit from PACT receive professionals from a 24/7 multidisciplinary psychiatric team, but in the comfort of their own home and community. To acquire the skills and abilities necessary to manage the patients’ multiple treatments, rehabilitation and support needs, the PACT team members are trained in psychiatry, social work, nursing care, addictive substances and vocational rehabilitation. The PACT team provides these essential services 24/7, every day of the year.

**How did PACT start?**

The PACT model is an evolution of the work done by Dr A. Marx, Dr L. Stein and Dr M.A. Test at the hospital research unit at Mendota State Hospital in Madison, WI, in the late 1960s. Aware that progress achieved by patients in hospital were often lost when they were back in the community, they suggested that 24/7 hospital cares help reduce the patients’ symptoms and that continuous treatments were as important, or even more important, after they were discharged. In 1972, researchers transferred care staff from hospital to community services to try the hypothesis and thus created PACT.
What are the main PACT objectives?

PACT does everything possible to reduce or get rid of the disabling symptoms of the mental disease every patient experiences, and to minimize or prevent recurring acute episode of the disease, anticipate essential needs, improve the quality of life, improve functioning in social and professional environments, improve autonomy to live in the community, and reduce the weight on the family who provides cares.

What are the main PACT characteristics?

The treatment.
- The psychopharmacological treatment, including atypical antipsychotics and antidepressants.
- Individual support psychotherapy.
- Mobile crisis interventions.
- Hospitalization.
- Substance addiction treatment, including group therapy (for patients with a double diagnosis of substance abuse and mental disease).

Rehabilitation
- Learning behavior skills (support therapy and cognitive-behavioral therapy), including time management and everyday life activities.
- Paid or volunteer supported employment.
- Supported studies.

Support services
- Support, education and skills training for families.
- Collaborating with families, and assistance to patients with children.
- Direct support to help patients get legal aid, financial support, housing help, financial management services, transportation.

Who may benefit from PACT?

PACT is indicated for persons from the teenage until old age, with a severe and persistent mental disease causing symptoms and impairments responsible for a major suffering and disability in the functioning when adults (e.g. employment, hygiene, social and interpersonal relationships). PACT participants are usually persons with a schizophrenia, other psychotic disorders (e.g. schizo-affective disorders) and bipolar disorder; persons with a significant disability caused by other mental illnesses and who are not helped by traditional outpatient models; persons who have difficulties to get an appointment by themselves such as in the traditional case management model; persons who have adverse experiences with the traditional system; or persons who have a limited understanding of their assistance needs.

What is the difference between PACT and traditional care?

Most people with a severe mental illness under treatment are involved in a linkage or brokerage-type case management program that connects them with services offered by many mental health, housing or rehabilitation organizations, or programs in their community. In a traditional care system, a person with a mental disease is treated by a group of individual case managers who work as part of a case management program and are responsible only for their own cases. The multidisciplinary PACT team, however, works together. The PACT team works in collaboration to provide most of the treatments, rehabilitation and support services necessary for each patient to live in the community. A psychiatrist is a member of the team, and not its consultant. The consumer is a patient of this team, and not one of its staff member. Usually, persons with the most severe mental diseases do not benefit from adequate treatment from the traditional outpatient model, which redirects them toward diverse services they need to contact themselves. PACT reaches to the patients, whenever and wherever they need it. The patients are not asked to adapt or follow rules set by care programs.

Is there a difference between PACT and ACT?

There is no difference between the PACT (Program of Assertive Community Treatment) and ACT (Assertive Community Treatment) models. Not only NAMI uses PACT and ACT indifferently, but PACT and ACT are also known under different names in the USA. For example, in Wisconsin, ACT programs are called Community Support Programs (CSP). They are named FACT (Florida Assertive Community Treatment) in Florida, Mobile Treatment Teams (MTT) in Rhode Island and Delaware, but Virginia uses PACT for its teams. Although the official name of ACT in a state, a county or a city greatly varies, there is only one set of standards established by NAMI for all ACT programs.

How to compare PACT patients with inpatients?

PACT patients spends significantly less time in hospital and more time in their independent life, have shorter period of unemployment, better salaries in a competitive employment and better social relationships. They also state that they are more satisfied with their lives and have less symptoms. A study showed that only 18% of PACT patients were hospitalized during the first year of treatment, compared with 89% for the non-PACT treatment group. For hospitalized patients, their stay was significantly shorter than for the non-PACT group. PACT patients also spend more time in the community, which is a lesser burden for the family. Furthermore, the PACT model also showed a slight economic advantage compared to

institutionalized managements. However, these results do not take into account the great costs due to a lack of access to adequate treatment (i.e. hospitalization, suicide, unemployment, prison, housing deprivation, etc.)

Are PACT programs available?
Despite the established success of PACT, only a fraction of the persons who need it have access to this particularly effective program. Only six states (Delaware, Florida, Michigan, New Jersey, Rhode Island and Texas) and the Columbia district have currently access to state-wide PACT programs. In the USA, adults with rare and persistent diseases represent 0.5% to 1% of the adult population. It is estimated that 10% to 20% of this group could be helped from the PACT model if it was available.

Funding
Between 800 000 and one million dollars per team and per year, depending on the team salaries, were necessary in 2002 for:
- a starting grant for 2 to 3 months, covering hiring costs or staff reallocation before reimbursements progressively start to cover the new team program;
- starting funds between $25 000 and $50 000, covering the consultation to design the program, the training for the staff and the mental health professional who will supervise teams; and
- Medicaid, Medicare and state (or county) funds. (Page 109 in sample cost manual lists for salaries, transportation, insurance, customer service agent, etc.)

The team
The team will need at least 16 h in psychiatric time for 50 patients, a team leader who supervises the program with the patients and staffs, at least 3 nurses, mental health professionals who provide specialized services (treatment of substance abuse, peer helpers, professional services), and a staff/patient rate of 1/10.

Standards
The mental health authority will need to put down standards that match the practices, staffs and organization described in the appendix 8 of the PACT manual. Among other things, standards:
- ensure a direct service provided by the treatment, rehabilitation and support team, based on proximity work,
- include daily organization meetings of multidisciplinary team, and
- encourage family involvement.

Consultations and training
A successful start requires a consultation on planning and development, and a consultation on the state/county of the regional health authority that supervises the ACT initiatives. A continuous training and a support are recommended for new teams for the first two years of operation. A continuous support should be available for the state/county’s supervising staff, consultants and, if possible, more experienced teams in the state.

Assessment
Assessments and results will need to be made available for the public. Measure results should consist of measure of both clinical condition and quality of life, including housing, employment, education, substance abuse, the treatments’ adverse effects, suicide rate, rehospitalizations, premature death and issues with criminal justice.

State supervision
The state’s (or county’s) mental health authority should supervise teams to make sure they comply with the state’s ACT standards. The staff from the state/county’s mental health authority should assess the performance from the results (see above), on-site visitation, meetings with patients and family members, and meetings with the ACT program’s consultation group. The state should provide or offer additional trainings and consultations to teams, to solve problems and improve performance. If the state has consumer satisfaction assessment teams, they should offer their services to ACT programs (Massachusetts, Ohio, Michigan and Pennsylvania develop or have developed them, Alabama, Georgia, Washington and Wisconsin use them in some area of their public mental health system). Standards should include a disposition from the mental health authority to adapt some requirements to local conditions on a case-by-case basis, when adjustments do not match the patient results.

Consultation group
A consultation group, consisting of patients, family members, professionals and other supporters, defend the program and encourage the continuous quality improvement.
The lack of difference, reported by Dietrich, seems to be caused, according to Tyrer, by the fact that data supporting the intensive follow-up program (PACT) were particularly convincing in countries where there is no community organization (USA). In countries with a community organization (UK), differences in terms of benefits were not this obvious (Tyrer, 2013).

2.3. Programs dedicated to mid-step solutions and not provided by community health teams

A management in a community mental health team (CMHT) consists of a specific community management, but without 24/7 cares.

To meet the requirement of a 24/7 response, particularly in emergency or crisis situations, and to avoid "compulsive" hospitalization (i.e. not programmed), programs dedicated to these crisis situations were suggested and evaluated.

Hospitalizations are required in three situations: during acute episode if no mobile unit is available, for long-term hospitalization (for requesting patients) and to provide cares without consent.

More recently, "crisis accommodations" or early care programs were suggested, showing the limits of mobile crisis teams in avoiding hospitalizations, suicides and redundancy (therefore costs) when, on the same intervention sector, emergency hospital solutions were organized.

They are more effective in encouraging a better treatment compliance and to reduce hospitalization and avoid suicides. But "evidences are insufficient, considering the huge impact of community care development on patients, clinicians and the society as a whole." It would therefore seem that this review could be put away with the ones that do not provide clear conclusions (Malone, Newron-Howes, Simmonds, Marriot, & Tyrer, 2007).

Day hospitals gave rise to only few reviews.

3. Recent developments: from PACT to FACT and RACT

More recently, new organizations were promoted with the objective of overcoming the limits encountered with “Assertive Community Treatment”-type (intensive follow-up) organizations. Their main limit is that they do not intervene but in the most severe conditions (unstable patients at high risk of unplanned hospitalization or institutionalization) and do not cover the stable moments, which are delegated to another team.

These new organizations aim at considering a continuity in the follow-up, whether the patients are “currently stable” or “currently unstable”. The same multidisciplinary team manage both these moments in the pathway.

These organizations rely on the same basis than those governing the creation of intensive follow-up teams and for which evidences are strong: case management, multidisciplinarity (medical and social co-responsibility) and outpatient follow-up (close to the patient’s living location).

The “Flexible Assertive Community Treatment”, or FACT, manages every moment in the health pathway and ensures the intensive follow-up and standard follow-up.

The FACT was described for the first time in Van Veldhuizen’s 2007 article (van Veldhuizen, 2007). It consists of cares delivered by a single multidisciplinary team, which offers flexible cares depending on the needed care intensity, i.e. an individual case management for currently stable and unstable patients. For the latter, an intensive follow-up is offered. Whereas the previous organization (ACT -
intensive follow-up) concerned only 20% of patients with a severe and persistent mental illness (the most severe), this new organization helps every patient with such disorder. Reduced admissions and reduced number of disappearing patients are among the main objectives of this organization.

Every patient is followed by a case manager, who ensures a continuity in the follow-up, visits “currently stable” patients at home for “extensive” cares and provide and intensive follow-up for patients who currently have greater needs. In this latter situation, cares include daily team meetings.

The team also manages the cares of hospitalized patients or patients living in the community. They decide if a patient can be admitted in or discharged from hospital. All these measures aim at ensuring a follow-up continuity.

Concretely, in the “currently stable” group of patients, the case manager visits the patients 2 to 4 times per month and establishes once per year a personalized treatment plan that is understood by the patients and their families. Regular visits are organized with the psychiatrist (medication management, assessment) and the psychologist (psychoeducation, cognitive-behavioral therapy) at the center providing the FACT. Family interventions and sheltered employment measures may be added to the treatment plan.

In the “currently unstable” group of patients, cares are organized around the team’s white board. If patients are relapsing or at risk of relapse, their name is written on the white board and they are offered an intensive follow-up. The case manager informs the patients that more intensive cares will be organized with FACT colleagues to avoid hospitalization and reduce the crisis duration. The patients then meet the psychiatrist in the next 2 days and various cares may be discussed (home visits).

This model was immediately picked up by British authors who saw a way to overcome the limits of ACT: difficult application in rural areas with continuity issues, and the fact that it does not provide care to stable patients (Bond & Drake, 2007).

Five empirical assessment trials of FACT were conducted (4 in the Netherlands and 1 in the United Kingdom, gathering 750 patients) and put together in a September 2014 article, but they could not provide any convincing conclusion, considering the severe methodological limitations of these studies following a “before/after” design (Norden & Norlander, 2014).

Since this article, a more recent publication described a “before/after” assessment of the implementation of FACT by a Dutch team (Nugter, Engelsbel, Bahler, Keet, & van Veldhuizen, 2015). 3 teams recruited 372 patients, and collected data 1 and 2 years after intervention. Results show a great variation in the number and duration of intensive follow-up (ACT).

Data show:
- significantly increased treatment observance, unmet care needs and quality of life,
- a 9% increase in remission rate,
- that the number of admission, days in hospital and contacts with care providers distinguishes patients who receive intensive follow-up from those who do not (but they globally decrease).

The authors therefore conclude that the FACT actually provide flexible cares that meet the patients’ needs. But this single trial is still not sufficient to offer enough evidences to confirm or deny the FACT usefulness in the cares of patients with a schizophrenic disorder.

The “Resource-group Assertive Community Treatment”, or RACT, is a variant focusing on the patient’ recovery and rehabilitation.
At the center is the patient, surrounded by his psychiatrist, the case manager and 3 or 4 persons chosen by the patient (often among their family or friends). The approach, resolutely focused on the patients, their ability to decide (“empowerment”) and recovery, was presented in 1999 by the New Zealand researcher Ian Falloon (Falloon, 1999).

He described a therapeutic approach relying on evidence-based treatment strategies, and derived from an international research project (more than 80 centers in more than 20 countries), called Optimal Treatment Project or Integrated Mental Health Care.

5 strategies are listed: a) the minimum effective antipsychotic medication dosage to reduce symptoms, b) teaching stress management methods to patients and their relatives, c) bring care facilities closer to the patients (assertive case management), d) social, occupational and supported employment-oriented actions, and e) medicated and psychological strategies to fight newly-appearing symptoms and beginning relapses.

This approach was accurately described in 2012 based on a phenomenological methodology, to consider the patient, the case manager, the resource group and the relatives’ point of view (Norden, Eriksson, Kjellgren, & Norlander, 2012). Training programs and assessment and quality control methods were suggested. A key point is that the patients themselves define the treatment goals; they will decide who is going to join the resource group. Resource group meetings are held at least 4 times a year (more if necessary). The resource group is a small follow-up team. Between group meetings, group members may gather around specific tasks (e.g. the patient and a friend may work on a specific social skill, the patient and the case manager may work on stress management, etc.) or with targeted experts who are consulted (e.g. an addiction expert, or a sheltered employment expert).

Evidences exist in favor of RACT. The authors rely on 2 meta-analyses (Falloon et al., 2004; Norden, Malm, & Norlander, 2012).

The last reported meta-analysis (in 2012) gathered 2,263 patients (1,955 of them with a psychosis diagnosis) in 17 trials: 6 randomized controlled trials and 11 here/there and before/after observational studies. Intervention delay was 12 months (5 studies), 24 months (10 studies), 48 months (1 study) and 60 months (1 study).

The meta-analysis results clearly show a significant benefit on symptoms (mean size effect of 0.5 for controlled trials and 0.66 for observational studies), on functioning (high size effect of respectively 0.93 and 0.89) and on well-being (high size effect in controlled trials: 1.16 and more moderate in observational studies: 0.57). The combined size effect for all 17 studies and all 3 studied variables of interest is high (d = .08) (Falloon et al., 2004; Norden, Malm, et al., 2012).

The small format of the team centered on the patient, who decides the treatment objectives, showed its interest in terms of flexibility and integration.

4. Delegating to primary care the somatic follow-up, and how to organize the coordination with the psychiatric sector

Many data show a positive impact of such a delegation: better somatic follow-up, improved destigmatization, reduced management cost.

This delegation mainly involved patients with a frequent mental distress who could be helped by primary care providers.

For severe and persistent mental illnesses, the problem is different since primary care providers think that they lack the training and need to partner with specialized physicians at every moment in the pathway.
A recent review of the literature analyzed 738 articles on this topic. We will summarize the main “recommendations” offered by the authors (De Hert et al., 2011).

Somatic disorders are more frequent in patients with a severe mental illness (SMI) than in the general population. This mortality and morbidity rate is mainly due to highly adjustable lifestyle factors, but also to a somatic health assessment that remains insufficient in this population.

Psychiatrists play a pivot role in improving the physical health of patients by first monitoring and treating some vital physical parameters on top of psychiatric cares, and also by ensuring a partnership and training of general practitioners and specialists to conduct the somatic follow-up they cannot do themselves. Psychiatrists know best the adverse effects of the medications they prescribe, the most frequent comorbidities or rare diseases that could occur frequently in these patients. This task delegation encourages destigmatization. General practitioners who receive these patients must be particularly caring and need to be supported in managing these fragile persons’ therapeutic relationship.

The issue of the comorbidity between schizophrenia and disorders related to the intake of psychoactive drugs

1. Context

Studies show a great frequency of psychoactive drug consumption in patients with schizophrenia or psychosis. Furthermore, many schizophrenic and psychotic patients experience disorders related to the consumption of at least one psychoactive drug during their life.

Depending on studies, populations and drugs examined, the comorbidity prevalence varies from 39% to 66%. The last estimates performed in France (European Schizophrenia Cohort) on schizophrenic patients treated in Lyon, Lille and Marseille showed an addiction comorbidity in 19% of persons during their life time, 14% with alcohol and 7% with drugs; addiction in the previous 12 months was about half (Carra et al., 2012). Considering the severity of both these pathologies, it is important to understand that among a large population with a comorbidity diagnosis: 8.2% of this population have a mild-level pathology both on the psychiatric and addiction side, 19.4% have a more severe pathology on the psychiatric side than on addiction, 19.8% have more severe addictive disorders and 52.5% have severe comorbidity both on addictive behaviors and psychiatric symptoms (McGovern, Clark, & Samnaliev, 2007). Also, when a person has a severe psychiatric disease, the probability is high that they are in contact with at least one emergency unit or are hospitalized.

Usually, patients with comorbidities have low treatment observance and easily stop their psychiatric follow-up and their antipsychotic drug treatment. As for the disease progression, patients often have a hard time keeping a balance, having many relapses often requiring hospitalization. The disease expression is often associated with impulsiveness and self- and hetero-aggressiveness. Some substances such as heroin or cocaine, taken through IV or in the nose, are associated with infectious complications (HIV, HCV and endocarditis) and other somatic complications such as cirrhosis, obesity and diabetes.

Finally, some interactions between psychoactive substances and antipsychotic medications make balancing the treatment harder. Variable frequency and dose of psychoactive intake is another factor complicating this task. It may not only change treatment metabolism and therefore their pharmacokinetics, but also change the disease symptoms.

2. The patients’ perspective

Patients may have several issues when it comes to start a treatment or trust care teams. Psychosis and addictive disorders are diseases with a certain level of social, even medical,
stigmatization. Patients may fear a moral judgment, or legal and social outcomes of illegal substance consumption (legal proceedings, losing child custody, etc.) They may fear the diagnosis, the outcomes of a severe illness such as schizophrenia, adverse effects of medications and a difficult, long-lasting follow-up in such a peculiar environment that is psychiatry. Losing their mental health and mourn “normality” are steps that are hard to accept, and they may negotiate by taking substances to “treat” the symptoms.

3. The psychiatrists’ perspective

Psychiatrists may hesitate before managing comorbid patients, seen as hard to balance, and creating a real therapeutic relationship and then keeping them in a long-term follow-up. Currently, psychiatrists may also hesitate due to a lack of confidence in the own skills regarding the treatment of disorders related to the consumption of psychoactive substances, and may sometimes send these patients to an addiction therapeutic service and wait until their drug intake level is balanced before treating their psychiatric disorders. Psychiatrists may fear harmful, even deadly interactions between the medications they prescribe and the substances patients take without being totally honest about what and how much they take. Psychiatrists may have the opposite approach, prescribing high doses of medications to fight the symptoms and avoid potential harmful behaviors. These treatments will sedate patients and control their symptoms, but at high doses, they will induce significant adverse effects which may cause the patients to stop the treatment and the whole relationship with the psychiatrist. Some patients talk about a feeling of “loosing themselves” and hardship in talking or thinking. Finally, it is difficult for psychiatrists to create long-lasting relationships with addictology specialists and it is often complicated to coordinate treatments and adequately communicate between colleagues and structures.

4. The addictology perspective

Even though addictology specialists have the skills required to treat patients with addictive behaviors, the psychiatric side may be hard to manage. Some doctors rather have a more somatic-oriented training and less knowledge on psychiatric issues and the treatments and medications available. Differences in the treatment of symptoms such as anxiety and insomnia remain and may cause tensions between addictology and psychiatry. A classic example is the prescription of benzodiazepine and Z-drugs (zolpidem, zopiclone). Patients treated in psychiatry may receive benzodiazepine and Z-drugs for weeks or months, and also hypnotics. In addictology, such medications are scarcely prescribed due to their addictiveness. The dialog may be tense, not only between professionals, but also between the patients and their physician; everyone has a different opinion regarding medications.

Addictology specialists often have the same difficulties than psychiatrists to coordinate treatments and keep easy contacts with their psychiatrist counterparts.

5. Management modalities

Several questions remain regarding the treatment of schizophrenic/psychotic comorbid patients with disorders associated with psychoactive substances consumption. First, when is the best time to intervene? Who should intervene first? Should we take risks when initiating a complex interdisciplinary management? Are patients able to follow a parallel treatment or will they lose motivation in their cares due to their complexity? Finally, what is the most effective treatment approach for comorbid patients?

Three therapeutic modalities are now used:

1. Parallel management: diseases are treated at the same time, in different centers or services.
2. Sequential management: one of the diseases treatment follow the other.

3. Integrated management: addiction and psychiatric disease treatments are undertaken within the same service with the same team.

Studies in the USA and the UK showed that integrated managements help reduce mortality rate, relapse rate and substance abuse rate while improving social integration, quality of life and overall treatment satisfaction (National Collaborating Centre for Mental, 2011). The ACT (Assertive Community Treatment) program includes motivational interviews, individual therapeutic sessions regarding addictive behaviors and group sessions on comorbid diseases. Cares are provided by a multidisciplinary team with addiction specialists. The meta-analysis performed regarding the other management modalities did not highlight any significant difference between the sequential and parallel approaches in the management of psychosis and schizophrenia. It is important to follow this conclusion by stating that this research area has a lot of resources and the studies are overall of poor quality.

Therefore, NICE guidelines recommend the use of a step-by-step approach where interventions intensity increases regularly depending on the management failures. In the USA, the integrated approach seems to be more frequently used.

6. Expert recommendations

In terms of practical management, it seems preferable to support an “open-door” policy. In other words, the patients will open the door to where they will receive cares that match their disorders. It is important at first to respect the patients’ choice and offer them a management within the service they reach, even if it may be better to later refer them to another place (Torrey & Drake, 2010). To reinforce therapeutic alliance, it is important to involve the patients in the treatment project and let them choose between available therapeutic options with proven effectiveness.

Studies have yet to be conducted regarding the management of comorbid patients in external consultation with their general practitioner. Since patients with associated somatic comorbidity are difficult to manage, it seems preferable to quickly refer them to a specialized care center, either psychiatric, addictologist, or one that does both.

In the absence of evidence and considering an economical care management, it is preferable to use a step-by-step approach, i.e. an either sequential or parallel approach, depending on the location the patient comes or is referred to. It is important in this approach to designate a treatment coordinator, either a psychiatrist or an addiction specialist, who will ensure a clear communication between protagonists and the patients’ observance in their offered care project. If it fails, an integrated approach should be considered.

Treatment program in addictology

The most frequent treatments in addictology consist mostly of interviews and psychotherapies. For example:

- motivational interview
- cognitive-behavioral therapies
- mutual aid groups
- information groups
- individual assessment and strategic planning interviews
- withdrawal cares (in and outpatients)

They are all accessible to patients with disorders associated with psychoactive substance consumption. Some need to be adapted to patients with schizophrenia or psychosis.
Addiction treatments indicated in maintaining abstinence, such as naltrexone and acamprosate, may be offered to comorbid patients. They do not interact with most medications frequently used in psychiatry. There is a major contraindication when prescribing naltrexone: concomitant use of an opioid treatment.

**Treatment program in psychiatry**

Psychiatric treatments include not only drug therapies, but also psychotherapies and a therapeutic education.

- cognitive-behavioral therapies
- mutual aid groups
- Information groups on psychiatric disorders
- therapeutic education

An adequate drug therapy, regularly reevaluated depending on the patients’ clinical state should be organized. In this context, it is important to avoid as much as possible prescribing potentially addictive medications such as benzodiazepines and benzodiazepine-like hypnotics (zolpidem, zopiclone).
Patient showing up for primary care

Psychiatric decompensation?

Yes

Psychiatric treatment

Psychiatric disorder screening

Addiction screening

No

Addiction decompensation?

Yes

Addiction treatment

No

Medical orientation

Addiction treatment

Parallel psychiatric advice/treatment

Parallel addiction advice/treatment

Psychiatric and addiction stabilization

Yes

Parallel treatment continuation

No

Integrated treatment
Success criteria

Success assessment criteria are psychiatric disorder stabilization, reduced disorders associated with psychoactive substance consumption and vocational and social integration (employment, leisure, friend and family relationships, housing). Treatment programs should provide the patient with a social follow-up and the possibility to go back to work. It would be preferable to include quality of life criteria and social integration in the assessment (R. E. Drake et al., 2013).

When the patients’ disorders are stabilized, their treatment may be lightened so they can meet either the coordinating physician, or a designated addiction specialist and a psychiatrist.

It is important that the patient have facilitated access to emergency cares may decompensation occur. Now, comorbid patients facing a psychotic decompensation hardly find any place to get treated. Furthermore, it seems sometimes difficult to get a specialized opinion in case of acute withdrawal syndrome when the patient is in psychiatry. In the light of these challenges, it seems necessary to think about how to make the exchange easier between specialized services in the context of an emergency treatment.

7. What next?

Finally, it is necessary to improve the practitioners’ training both in psychiatry and in addictology. Basic addiction knowledge needs to be included in psychiatric training programs and basic psychiatric knowledge needs to be included in addiction training programs. Comorbid diseases may show particular symptoms, making diagnosis more difficult; therefore it will be of the utmost importance to pursue the issue of expert comorbidity centers, and the resources necessary to assess the quality of provided cares (Gotham, Brown, Comaty, McGovern, & Claus, 2013).

Many questions remain unanswered regarding the effectiveness of parallel and integrated managements. It is also necessary to determine the treatment costs and their social and medical benefits. Therefore, it is necessary to allocate efforts and resources to find the answer to these questions.

B. SOCIAL OFFER AND THE COORDINATION ISSUE

The delegation of competences to social workers was more or less radical depending on countries and raised coordination issues, to which said countries reacted in a different way depending on the preexisting health organization.

Beside the issue of coordinating these actors, there is no evidence supporting this or that “coordinating” organization, but examples with more or less success between countries. However, two orientations appear: the constitution of an integrated service model (following integrative programs) and the shared treatment or intervention model, which is a functional collaboration modality, closer to what health networks promoted.

In summary: Anglo-Saxon countries prefer to develop outpatient services, whether they are medical, social (competitive work, ordinary housing, support to “normal” activities, in locations decided by the patient) or integrated to the person. Continuity in medical and social support is essential (case management). Outpatients programs designed to support the patient’s autonomy are variably present around the patients depending on their needs and the moment in the pathway.
Delegation of competence to GPs, for this population, needs to be highly supported by the specialized sector.

Psychiatric support all along the patients’ pathway ensure treatment continuity and the training of non-specialist professionals. This support may be offered in a variety of ways, mirroring what is offered to GPs (including a shard support on a given territory - the “responding psychiatrist” in Canada). Integrating a professional from a different sector in a team - psychiatrist in a social structure or social worker in a medical team - is not recommended (Tyrer, 2013).

Peer helpers are integrated in the recovery project. Peer helpers are the proof that it is possible to recover and find their place in society despite the mental disorder; they support the process of regaining control of their life, reduce stigmatization and support the access to treatments and services. Their intervention may occur in mutual help groups, social or medico-social organisms dedicated to mental health, or in medical teams.

Various evidences support that:

1. peer helpers encourage a better use of mental health services,
2. they reduce costs related to the use of mental health services,
3. providing support to peers offer more benefits than receiving support, especially when hired by a mental health team.

We will briefly present the overall organization of the health program in the UK and Canada.

**Mental health treatments for persons with a schizophrenic disorder in the United Kingdom**

The following description is from Gyles Glover’s 2007 article (Glover, 2007), and Andrew Modolynski and Tom Burns article (Molodynski, 2008). Discussion have also been conducted with Dr Shulamit Ramon (Research Lead, Centre for Mental Health Recovery, School of Nursing, Midwifery and Social Work, University of Hertfordshire, Hatfield, UK) and Dr Phil Anthony (Senior Lecturer, University of Hertfordshire, Dept of Health and Social Work, College Lane Campus, Hatfield, UK) to check if they are still up to date.

**1. Structural organization**

Mental health, like health as a whole, is organized by the National Health Service (NHS), and supervised by the Department of Health in London (Glover, 2007). This largely public system provides all the territories in a relatively homogeneous way (Roellandt, 2010). It is the most centralized administration and funding system in the world but there is autonomy in every unit, called “trust”. Local commissions, known as Primary Care Trusts (PCTs), in charge of a specific geographical area, set the trusts annual budget. The mental health budget is as high as 14% of the country’s overall health budget (11.5% in France) (Roellandt, 2010). Social cares are distinguished from medical cares in terms of organization, funding and missions.

**2. History**
According to Glover (Glover, 2007), mental health cares have slowly and steadily changed since the late 1940s, with an apparent reduction in long-term hospitalizations in asylum in the 1950s and works in the 1960s to move mental health cares from asylum to the community. In 1962, the NHS hospital program moved acute hospital cares to general hospitals. In 1975, the book “Better Services for the Mentally Ill” described an approach entirely based on community services. According to Glover, the approach described in the book could not be fully implemented due to an economic recession period. Psychiatric hospitals were closed (112 out of 126, according to J.L. Roellandt) in the 1980s and 1990s (Roellandt, 2010): for example, in 1983, regional authority in North East Thames decided to definitely close Friern and Claybury hospitals. This closing made necessary an assessment by the Team for the Assessment of Psychiatric Services (TAPS). These closings were followed by a re-definition of clinical practices (particularly as part of the Care Programme Approach) aimed at the persons with chronic diseases and leaving in the community.

With the new government in 1997, health funding increased. Services then reorganized around Local Implementation Teams (LIT, 174 in 2003 for an average population of 230,000 inhabitants) and the creation of Care Trusts, hybrid territorial organizations putting together social and health teams, and created by the agreement 75 of the 2006 NHS Act.

The 1959 Mental Health Act was revised in 1982 and 1995, to emphasize that cares must be provided with the patient’s consent. This is what happens in most situations. Cares under duress may also be provided with the opinion from two practitioners (except in an emergency) who must not work in the same organization, and one social worker.

Social workers are official members of social care services, assigned to mental health services (that pay for this task). Recently (2011-2012), some social care services have recalled their social workers due to a lack of funding.

3. Mental health services

Outpatients cares are the priority, with a will to provide an alternative to hospitalization and offer cares to help the persons with a persistent mental disorder live in the community and maintain their well-being. There is a continuity in cares and rehabilitation (T. Becker & Kilian, 2006).

There are 12.7 psychiatrists for 100,000 inhabitants (22 in France), 23 beds (95.2 in France) and 288 admissions (1,000 in France). But the most important is the number of nurses, being the most represented group in mental health teams. Suicide rate is 6.38 (12 in France) (Roellandt, 2010).

A significant evolution in community psychiatric cares has been reported in recent years: “the shift from a single team providing endless cares (outdated “Community Mental Health Teams”) to specialized teams providing specific interventions limited in time”. For the authors, there is a shift from a traditional geographical system to a functional system. The values of specialized cares, social inclusion and recovery are central to this system (Khandaker et al., 2013).

1) CMHCs

Community Mental Health Centers (CMHC) are the base services in the UK. Every LITs have at least one and 14% specialize in severe mental illnesses.

The Community Mental Health Team (CMHT) is a multidisciplinary team with an average of 14.5 full-time equivalent (spread from 10.7 to 19.4), including 43% of nurses, 13% of psychiatrists, 23% of social workers and also psychologists, occupational therapists and peer helpers. 94% of CMHCs report their activity, with 25.6 patients per team member for general teams, and 22 patients for teams centered on patients with severe mental disorders.
This team receives patients referred by general practitioners, social workers, or other professional, and persons who seek help.

Newly referred persons are received by an adequate team member for assessment and treatment. If necessary, after a team consultation, other professionals may be involved. The majority of cares is provided as individual consultations in the center. Occasionally, home visits may take place with a precise goal.

The “Care Programme Approach” (British term used to designate the medical case management) is the tool used to plan and organize interventions for persons who have high needs. Psychiatrists are responsible for the care program which is adapted by other professionals (particularly nurses and social workers). A manager is designated later on for each patient.

Three functionally-specialized teams are individualized. These teams put together diverse professionals and a good coordination is necessary. Some psychiatrists work in several teams (they rarely have a full-time position in a team, since they represent a high cost as experienced professionals).

A. Crisis resolution teams or Acute home treatment teams

These teams have been implemented for situations in which patients would otherwise have been hospitalized before, and aim at reducing admissions. 52% of LITs in the UK have one.

They work 24/7, with the possibility to intervene in an intensive way (up to twice a day) for acute situations.

The average team size is 11 full-time equivalents (under 10, it seems impossible to have two persons at any time to look at a situation), with 73% nurses, 10% social workers and 4% practitioners. The average activity is 1.6 situations per team member with 31.6 referral for 100,000 inhabitants.

Their intervention is limited to 6 weeks.

These teams have been brought nearer to housing services which were recently implemented by non-governmental organizations. The persons may be hosted in these services for up to three weeks, instead of being hospitalized.

Australia was the first to implement them (Molodynski, 2008).

B. Assertive Outreach Community treatment or its equivalents

Almost all LITs offer Assertive Outreach Community (AOC) treatments.

87% of these treatments are in ACT teams’ LIT (230 teams). They are intended to the long-term treatment of a small number of complicated patients whose situation shows both a personal disorganization and issues to get involved in their treatment; they aim at giving them a greater social stability and better involving them in the treatment.

Teams mainly consist of nurses, with a high professionals/patients ratio of 1/10. They are multidisciplinary, with 9 to 15 persons (50% nurses, 18% social workers, 16% professionals for social cares) from various sectors such as mental health, psychiatry, job coaching and specialists in integrated treatment for alcohol/drug comorbidities.

They provide long-term treatments (over several years).
AOCs are adapted from ACTs developed in the USA (Molodynski, 2008).

AOC equivalents are developed by rehabilitation teams or CMHCs specialized in severe patients (24% of LITs). Some LITs have several teams (ex-ACT and rehabilitation for 26% of LITs).

Some teams stopped Assertive Outreach Services, arguing that these services were not effective enough but evidences to support this claim are insufficient to this day.

C. Teams dedicated to early interventions in schizophrenia

A fourth of LITs have those. They are not detailed here since they are intended to young adults (18-30 years old), adapted from the Australian model developed by P. McGorry in the 1990s (Molodynski, 2008). They conduct an intensive and flexible task with the young adults and their families, focusing on the best medication (to avoid overmedicalization) and rehabilitation (psychoeducation, training, job coaching, leisure).

D. Day hospitals and day centers

Theoretically, day hospitals are funded by the NHS for a medical use, and day centers have a more social function and are funded by local administrations. Practice on the field is not that obvious.

102 out of 174 LITs depend on day hospitals (242), some being specialized (ex-TCA).

707 day centers are listed, 92% of which stating that they provide counseling and information, 86% occupational activities and 70% support groups. 59% are funded by non-profit organizations.

The current trend is to not open more day centers and to not encourage chronicity by offering part-time activities.

E. Other services: advocacy, recovery services, supported employment

F. Social cares

A senior social worker is designated as case manager. Currently, in the vast majority of mental health teams, social workers are included to the team and do not take part in a distinct team. This point could be reconsidered if social workers were recalled from mental health services.

2) Hospital cares

A. Beds for acute disorders

The number of beds is estimated at 21,220 (4.3 for 100,000 inhabitants), considering that a fourth are located in general hospitals, 70% in psychiatric hospitals and the remaining beds in units located in the community (initiatives to offer alternatives to traditional hospitalization, especially for women: crisis house).

Secured units have been created in the public and private sectors, for persons with a high risk of self- or hetero-aggressiveness. Three hospitals have specialized in these units: Ashworth, Broadmoor and Rampton.

B. Long-term beds or housing structures

Distinction between “medical” and “social” makes the bed count more difficult. In late 1980s and early 1990s, the number has decreased, with a political will to privatize these cares. Patients have
been transferred in independent structures with few or no supervision continuity by the psychiatric team of their previous territory and many patients have been “lost from services”. Later on, a backward policy has been implemented, with a funding by local administrations. It may be imagined that they did not need it anymore.

Various structures are distinguished: structures with high support (24/7 nursing team) with an estimated 21 280 beds (4.3 for 100 000 inhabitants) and structures with low support (without a 24/7 presence) with an estimated 41 330 beds (8.3 for 100 000 inhabitants).

If patients are admitted in these structures, their managing team (CMHT) remains the same. Patients will often consult with this team in the previous center, and sometimes the team will visit their patient in their new structure.

Mental health care for persons with a schizophrenic disorder in Canada

We will rely on M.J. Fleury’s report (M. J. G. Fleury, G., 2012) and the exchanges we had with this author to briefly describe the solution offered by Canada.

Coordination is considered one of the goals to reach. This goal is the result of a number of evolutions focused on the delegation of a large part of the mental health pathways to primary care professional and social workers, which we will detail to conclude on the limits reached by this delegation policy.

The 2005-2010 Action Plan implemented in Canada followed the principles of population responsibility and service ranking, and rules over both the health care system and social services.

The whole mental health cares and services are ranked depending on service lines:

first intention services are offered, on the medical level, by GPs, private psychologists and CSSSs and, on the social level, mainly by community organizations. The latter play a key role, especially for persons with a severe mental disorder. Access mechanisms are implemented in CSSSs. Their missions are to rationalize care pathways and make access to various services easier, especially as secondary intention. Some also provide minimal cares to waiting patients. The mean waiting time to receive a treatment in mental health was up to 31 days in 2010-2011.

Second intention services (specialized) are mainly available in hospitals with a psychiatry ward. They offer assessment, diagnosis, emergency care, readaptation, intensive follow-up and support of variable intensity, external clinics and crisis centers. They also offer support to first intention physicians (depending on various modalities: responding psychiatrist or assessment-connection module). The number of hospital beds and the period of hospitalization are steadily decreasing since the 1960s. The number of days in hospital have been reduced by 38% between 1985-1986 and 1998-1999. It is important to remind that there is no consensus over the number of beds a country should have (G. Thornicroft & Tansella, 2004); this number depends on the existing complementary and community care services and the implemented care models. The targeted ratio in Canada is 0.4 beds for 1 000 inhabitants.

Third intentions services (overspecialized) are offered mainly in psychiatry wards in University Hospitals or affiliated structures. They cover precise areas (anxiety and depressive disorders, psychotic disorders, eating disorders and forensic psychiatry).

Relying on the principle of service ranking, “sector”-like organizations were developed.

Regarding access mechanisms, leading to cares, observations are mixed: “They would have weakened and compromised the network that already existed between CSSSs and their partners,
particularly GPs and psychiatrists (Aubé and Poirier 2010, Fleury, Latimer and Vallée 2010a, quoted by M.J. Fleury (M. J. G. Fleury, G., 2012)). “Some GPs seem to keep ignoring access mechanisms and reach psychiatrists and pedopsychiatrists directly”. The waiting time to receive a specialized opinion is also an element weakening the system. Furthermore, the difference between territories served by psychiatry wards and CSSSs is highlighted as an obstacle to a quality partnership. Finally, access mechanisms slow the access to second intention mental health cares for persons with comorbidities (e.g. when there is an associated addiction).

In the end, as Théoret (2010) points out, quoted by M.J. Fleury (M. J. G. Fleury, G., 2012), “service ranking weakened existing partnerships and rather encouraged subsidiarity relationships between professionals when providing cares”.

According to this ranked organization, and taking the pathway of patients with a severe mental illness as example, patients who need an intensive follow-up are managed by psychiatric teams for the period of time necessary to reach a state of psychiatric stability. When the patients are stable and their disorders are considered moderate, they are managed by a team, often a “community organization” (social et non-medical), which provides a follow-up with variable intensity in their environment. In this context, the medical follow-up is, in theory, provided by first intention centers. In practice, the psychiatric team keeps managing, as much as possible, the continuity of the medical follow-up. The number of patients attributed to these intensive follow-up teams and community organizations being limited, a difficulty arises when a patient’s state deteriorates and there is no place available for an intensive follow-up.

The policy to massively develop first intention cares and delegate a large part of integration actions to social workers was a strong-willed policy: “It is therefore defined that 60% of the budget allocated to mental health need to be invested into community services and 40% in hospitalization (in 1998, the trend was the other way around)”. It was followed by a reduced role of the psychiatric community, even though the number of psychiatrists did not decrease. The sectorization led to a functioning “in silo” and, particularly, to a lack of coordination between first intention cares and social workers in one hand, and specialists in the other hand, and to very long waiting periods to get a psychiatric consultation. To balance this difficulty, “a better integration of the care services through an enhanced support of mental health specialists, particularly psychiatrists” was initiated. In this condition, psychiatry was entrusted with a new mission; they were called “responding psychiatrists”, to support the primary care organization.

Nevertheless, among the limits pointed out by M.J. Fleury in the health care organization in Canada, coordination is in the foreground.

We are quoting the issues related to coordination, that need to be addressed by the mental health policy in Canada, as defined by M.J. Fleury:

“The difficult access to general medical and psychiatric services (long waiting lists and coordination issues between services) - we should however highlight the various key initiatives in the previous years, including [...] the definition of goals, particularly regarding the access to psychiatric services and the designation of responding psychiatrists;

the lack of support from second intention care services to first intention cares, particularly the under-development of the responding psychiatrist function;

the overspecialization of psychiatric wards - aside from the responding psychiatrist function and intensive follow-up programs, implemented the last few years, which encourage an overall and integrated view of the management of mental disorders;

Waiting times for CSSS services and psychiatry - for common psychosocial services, mental health teams and psychiatric services, the waiting period may extend to several weeks, if the situation is not urgent;
the significant lack of service integration at the community level and the inadequate mental health care and service ranking - since efforts mostly targeted the consolidation of CSSS cares and the deployment of shared or collaborative cares, a lot remains to be developed”.

To answer these coordination issues, Canada seems to prefer the notion of shared or collaborative cares (“Shared or collaborative cares require the collaboration of GPs, psychiatrists and psychosocial resources in mental health” M.J. Fleury) more than integrated service networks.

### III.3. New care practices

The functional prognosis of schizophrenia remains poor, only 1 out of 7 patients recovering after a first episode (Jaaskelainen et al., 2013). Some factors are thought to be involved in this adverse progression, causing the psychic disability: poor access to treatments, lack of treatment observance, bad reaction to treatment, drug consumption, associated psychiatric and cognitive disorders (Zipursky, 2014). Whereas some factors are managed by the care organization (access to treatment should be facilitated by a sector-type organization), other factors, such as poor treatment observance, addictions and associated psychiatric and cognitive disorders, require a specific management.

Therapeutic effects of psychotherapies and psychopharmacological treatments help prevent and reduce the psychic disability, which is secondary to the psychiatric symptoms. However, these therapies have no direct effect on disorders associated to psychic disabilities and, particularly, on cognitive disorders (Vidailhet, 2013), which together contribute to the disability. The need to develop rehabilitation treatments, which rely on the use of specific therapeutic tools, stems from the observation that cognitive impairments, insight disorders, social skills impairment and interaction disorders (and the underlying social isolation) are not well treated with conventional therapies (Goyet, 2013). Therefore, cognitive remediation was developed to reduce the impact of cognitive impairments, therapeutic education to treat insight disorders, and social skills training followed by social cognitive remediation to fight interaction disorders.

#### III.3.1. Factors of psychic disability

Many authors helped identify possible factors of psychic disability. These factors are an important part of the psychic disability, and have been recently identified as therapeutic targets of cognitive remediation.

**Cognitive disorders**

Since the 1970s, many studies in schizophrenia were focused on neurocognitive processes. Several meta-analyses (Heinrichs & Zakzanis, 1998; Mesholam-Gately, Giuliano, Goff, Faraoe, & Seidman, 2009) concretely showed that many neurocognitive functions are moderately to severely impaired since the onset of the disease. Working memory and long-term memory, executive performance, visuospatial performance, verbal fluency and processing speed are reduced in about 80% of patients with schizophrenia (Heinrichs & Zakzanis, 1998).

Neurocognitive disorders (Best, Gupta, Bowie, & Harvey, 2014) (M. F. Green, 2006) and social cognitive disorders (Lepage, Bodnar, & Bowie, 2014; Schmidt, Mueller, & Roder, 2011) have a great impact on the patients’ social and professional functioning (N. Franck, 2012; Prouteau, 2011). Cognitive disorders directly impact everyday functioning, but also indirectly by worsening the
symptoms. Clinical outcome, usually assessed in trials by the progression of the symptoms intensity (a 20% to 50% reduction being seen as an improvement), is linked to verbal memory and social cognition (Lepage et al., 2014). Functional outcome (somatic comorbidities, ability to take care of themselves, everyday autonomy, treatment and disease management, social functioning, ability to get and keep a clean home, daily task management, ability to engage in leisure activities, ability to get and keep a job) is clearly conditioned by cognitive performance (Lepage et al., 2014). More precisely, an altered working memory and executive functioning significantly limits the ability to learn, maintain or recover skills that are necessary for everyday functioning, particularly to create social relationships or get a job. Everyday problem-solving is linked to processing speed, verbal memory and working memory (Lepage et al., 2014). External factors (lack of opportunities, reduced social network, insufficient financial resources) temper the cognition’s functional outcome, which is partly mediated by skills acquired before the onset of psychotic disorders (Bowie et al., 2010).

Data from the literature show that neurocognitive disorders are present in 4 out of 5 patients with schizophrenia and 1 out of 3 patients with a bipolar disorder (outside of psychotic episodes). These disorders add to the patients’ everyday difficulties.

Other factors

Neurocognitive disorders are responsible for a 35% to 50% variance in functional outcome (Bowie et al., 2010). Other factors contribute to limit the participation in everyday activities; such factors are an impaired social cognition2 (Lepage et al., 2014; Schmidt et al., 2011), negative symptoms (McGurk & Meltzer, 2000), the ignorance of their disorders and treatments (Lysaker, Bryson, & Bell, 2002), the lack of motivation (Schmidt et al., 2011), metacognition impairment (Lysaker et al., 2010), a lower self-esteem and insight disorder. Acquired skills (Bowie et al., 2010) and the academic level before the disease onset (related to the personal efficiency feeling, self-esteem and self-confidence) are rather protective factors (B. Pachoud, 2012). It is thus necessary to acknowledge all these factors and take into account the relationship the persons have created with their everyday lives (B. Pachoud, 2012).

III.3.2. Rehabilitation steps in psychiatry

Psychosocial treatments, caretaker support and every other measures that may improve the treatment continuity meet one of the 2011-2015 recommendations of the mental health plan. Indeed, personal resource reinforcement, involvement in the treatments and social interactions help prevent or reduce interruptions in the care pathway, and improve social or professional insertion. Assessment methods and rehabilitation treatment tools are adapted to the persons’ own characteristics and desires. Rehabilitation starts with an integrative functional assessment that takes into account the persons’ expressed needs, the needs declared by their relatives and the professionals, premorbid adaptive skills, stress factors and personal and environmental resources. This integrative assessment may lead if necessary to a treatment offer and a plan to help the persons succeed in their projects. To consider the psychic disability as a whole, or more widely the functional outcome of chronic psychic disorders, it is necessary to take into account the interactions between the patients and their environment. Furthermore, negative social representations of “madness” lead

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2 Patients with social cognitive disorders often have difficulties to attribute relevant mental states to their interlocutors, which lead to distrust and social withdrawal, or even the creation of delusion beliefs.
to a stigmatization of psychiatric diseases, which reinforces their marginalization, even their exclusion. This consideration encourages a wide-scale information development toward the general public. Also, a better identification of the role of environmental factors helps better understand the difficulties to reinsert in the city.

III.3.3. Therapeutic tools

III.3.3.1 Medication therapies

Data from the international literature show the effectiveness of antipsychotics in treating schizophrenia (N. F. Franck, F.; Thibaut, F., 2015). Antipsychotics, particularly second generation antipsychotics (SGA), help reduce positive and secondary negative symptoms of schizophrenia. However, the medications’ effectiveness on primary negative symptoms and cognitive disorders is not confirmed. Overall, neurological tolerance (assessed not only on the short term, but also in the long term with a risk of tardive dyskinesia) to SGAs is higher than the tolerance to first generation antipsychotics (FGA) if mean doses are prescribed, which contributes to a better treatment observance. It is one of the main arguments to justify the use of SGAs in the first intention treatment of the first psychotic episodes in schizophrenia.

Whereas SGA are not different in terms of effectiveness, adverse effects are considerably different between the diverse molecules. The antipsychotic treatment needs to be adapted to the disease phases (N. F. Franck, F.; Thibaut, F., 2015). Treating a psychotic episode often requires more important doses and medication combinations. After the episode, the psychiatrist needs to reduce the dosage, aim to a monotherapy and prevent the apparition of adverse effects, or reduce their consequences, through a close monitoring.

The use of antipsychotics in patients with schizophrenia is usually not based on the data from the literature. This practice is not really a problem if we think about a patient at a given time. However, on the population scale, it may cause the apparition of uncommon risks. Furthermore, on the individual scale, it does not always encourage the best compromise between therapeutic benefits and the risk of adverse effects, since it favors the effects on psychotic symptoms over later risks (particularly tardive dyskinesia, cardiovascular or metabolic complications). It is not obvious at first look to base practices upon studies with high evidence level, but it is on the long term, or over a large sample. This practice should however not lead to offer stereotyped treatments: it must not be forgotten that a patient’s treatment is about a single person. However, a practice using current scientific data to guide antipsychotic choice and dosage may help rationalize prescriptions due to a better benefit/risk ratio.

The treatment of schizophrenia must meet three main objectives:

• reduce symptoms to limit the patients’ suffering, their likelihood of being dangerous (risks of suicides and hetero-aggressiveness) and a progression toward chronicity;
• improve quality of life, by encouraging a better social and professional integration;
• not harm with provided treatments.

A treatment prescription (be it a medicated treatment, a psychotherapy or a sociotherapy) needs first to meet one of the general objectives; then accurate targets need to be chosen: action on a specific symptom, suicide prevention, social support, etc. Antipsychotics have a crucial and inescapable role in the treatment since they help control positive symptoms and may sometimes reduce negative symptoms.
Recommendations from a consensus of the American Psychiatric Association regarding the treatment of schizophrenia (A. F. Lehman, Lieberman, et al., 2004) offer detailed indications to use antipsychotics and their necessary monitoring. The American Psychiatric Association did not publish new recommendations since 2004. Only a guideline watch conducted using the data from meta-analyses and controlled studies published between 2002 and 2008 has been published since then (L. P. Dixon, D.; Calmes, C., 2010), but it is not an official recommendation update. Essentially, this update is a summary of the results from various clinical trials, the CATIE, CUTLASS or EFEST, which we mentioned earlier. It highlights how little clinical changes there are between SGAs and FGAs. American recommendations cannot be considered as the expression of the current practices, but they are worth a detailed explanation. We can also mention the consensus conference on early schizophrenias which took place in Paris in 2003. It recommended a treatment duration of 1 to 2 years for a first psychotic episode and an extended treatment after a relapse or repetition. It also recommended the use of second generation antipsychotics in first intention treatment, as did already the expert recommendations published in the USA in 1999.

The recommendations of the American Psychiatric Association (APA) for the treatment continuation

The APA (A. F. Lehman, Lieberman, et al., 2004) recommends to start the medication therapy as soon as possible, but in a way in which it does not interfere with the diagnosis. The treatment’s benefits and risks need to be explained to the patients, as soon as their condition makes it possible. The choice of antipsychotics relies on the therapeutic and adverse effects of antipsychotics previously used by the patients, their personal preference, the presence of a related disease forbidding the use of specific antipsychotics and the risk to interact with other medications received by the patients. The APA recommends to use SGAs as first intention treatment during the acute phase of schizophrenia, due to their better neurological tolerance, except for patients who have previously been treated with FGA or who prefer these drugs. The choice of a SGA does not depend on effectiveness (except for clozapine, which is prescribed specifically to patients who did not respond to two antipsychotics or who have suicidal thoughts or behaviors that were not alleviated by other treatments), but on the adverse effects of the various medications. For example, a patient with extrapyramidal symptoms should not be treated with high doses of risperidone. This medication is also not recommended if the patients previously had hyperprolactinemia. If the patients took weight, had hyperglycemia or hyperlipidaemia, they need to be prescribed aripiprazole or ziprasidone. The choice of antipsychotic also depends on the effectiveness of previously received antipsychotics if it is not the first psychotic episode. Extended-release medications should be offered solely to patients with low or no treatment observance, or those who prefer this approach.

Specific recommendations have been established for the first psychotic episode. Clozapine should not be prescribed as first intention treatment. The maximum recommended limit of antipsychotic dosage to be used is reduced by half. A progressive interruption of the antipsychotic treatment may be considered after a two-year antipsychotic treatment after a first episode, for remitting, cooperating patients with good family support (Gaebel et al., 2002). The antipsychotic treatment needs to be resumed as soon as relapse prodromes appear, without waiting for the full relapse.

The stabilization phase of the treatment relies on the continuation for at least 1 year of the antipsychotic that has been used during the acute phase, associated with a close monitoring. It is not recommended to stop it, or even to reduce the dosage when it comes to second generation antipsychotics, since it would put the patients at risk of relapse. This phase is intended to help the patients go on with the consolidation process and reinsert into the social environment.

In terms of maintenance treatment, the APA recommends to use an antipsychotic in the long term in patients who have already been through many psychotic episodes, or two episodes in five years.
There is no reliable criterion to predict whether a patient who stop the treatment will relapse. Since patients with schizophrenia (or a chronic psychotic disorder in general) have a very high relapse rate (approximately 90% in the next two years with no treatment), continuing an antipsychotic treatment for an indefinite period of time is necessary to reduce the relapse rate and prevent the symptoms apparition or worsening. However, if the decision to stop the treatment is taken, it is preferable that it is taken at least one year after a total remission or optimum reaction to treatment and a medical monitoring is necessary. Finally, it is necessary to make sure that the patients (or their relatives) learned how to identify the early relapse signs. Using an intermittent therapy is not recommended in the current state of knowledge, unless the antipsychotic treatment is very badly tolerated (A. F. Lehman, Kreyenbuhl, et al., 2004).

Recommendations of the World Federation Societies of Biological Psychiatry (Hansan et al., 2013)

The World Federation of Societies of Biological Psychiatry (WFSBP) recommends, for a first acute episode of schizophrenia, to carefully introduce the lowest possible effective dose of antipsychotics and to monitor the apparition of extrapyramidal adverse effects (For more information: (Hasan et al., 2013; Leucht et al., 2013); www.wfsbp.org). FGAs and SGAs may be prescribed as first intention treatment. During a first psychotic episode, patients seem to answer faster to antipsychotics and to be more sensitive to adverse effects compared to chronic patients. Increasing the dosage should therefore be progressive. The antipsychotic is chosen depending on the patients, their mental and physical state, with an extra attention to adverse effects, particularly extrapyramidal symptoms (acute dystonia, Parkinson syndrome, akathisia) early in the treatment, and to tardive dyskinesia all along the treatment, particularly if a first generation antipsychotic is used. SGAs are better tolerated in terms of extrapyramidal symptoms and are recommended as first intention treatment by the WFSBP. However, only risperidone, olanzapine and quetiapine are the preferred first intention treatments. Haloperidol, with a dose lower than 5 mg/d is the recommended first intention FGA, since it is the FGA that has proved to be the most effective. Along with the APA, the WFSBP does not recommend using clozapine in first intention due to its adverse effects. Amisulpride, aripiprazole and ziprasidone are recommended only as second intention treatments, since they have been subjected to less effectiveness trials.

When the patients went through many acute episodes, the choice of antipsychotic is led by their treatment history, observed adverse effects, the appropriate administration approach and the patients’ preference for a specific medication. The dosage may be increased up to the targeted therapeutic dose as fast as it is tolerated. However, rapidly increasing the dosage, and doses over the recommended limit, do not improve effectiveness, but are associated with increased adverse effects. The most frequent relapse causes are treatment non-observance, drug consumption and stressful life events. Some data show the better effectiveness of SGAs in terms of treatment observance and relapse prevention in chronic patients. Hence, even if FGAs may still take part in the treatment of acute episodes, SGAs are recommended as first intention treatments. Considering their effectiveness and the benefit/risk ratio, first intention SGAs recommended by the WFSBP are amisulpride, aripiprazole, olanzapine, quetiapine, risperidone and ziprasidone.

Schizophrenia is considered resistant if positive symptoms have not improved or have been insufficiently reduced after two antipsychotic treatments at sufficient doses for at least 6 to 8 weeks. The treatment use needs to be checked using blood tests, since almost half the patients with schizophrenia or a schizo-affective disorder only take 70% of the prescribed dosage. A bad treatment observance is encouraged by the lack of insight, adverse effects, a disorganized behavior, the disease stigmatization and the feeling they do not need a treatment after symptom remission. Clozapine is the first intention treatment in resistant schizophrenia. For catatonic schizophrenia, electroconvulsive therapy (ECT) should rapidly be considered if benzodiazepines are ineffective.
A continuous treatment is necessary to prevent schizophrenic relapses. According to the 2012 Cochrane review (Leucht et al., 2012), antipsychotics are more effective in terms of relapse prevention to 7 to 12 months, number of hospitalizations and quality of life. The antipsychotic treatment should be pursued for 1 to 2 years after a first acute episode, 2 to 5 years after a second episode and over 5 years, even forever, in patients with many episodes. The choice of antipsychotic should involve the patients, taking into account their past experience and, particularly, the adverse effects. Monotherapy is preferable. FGAs and SGAs did not show any difference in reducing symptoms in the long term. Only few studies showed the greater effectiveness of SGAs in reducing the risk of the patients stopping the treatment and in preventing relapses. SGAs are associated with a lower risk of causing motor adverse effects, particularly tardive dyskinesia. Tardive dyskinesia and metabolic adverse effects, which have the greatest impact on the patients’ well-being and health, need to be monitored all along the treatment. The antipsychotic which have been the most effective and caused the less adverse effects during the previous acute episode will be continued for the maintenance treatment.

The main functions to monitor when prescribing an antipsychotic treatment are as follows (N. F. Franck, F.; Thibaut, F., 2015):

- Vital signs: heart rate, blood pressure and temperature during the first days of treatment; same measures if there is a dosage change; it is recommended to check blood pressure after 3 months of treatment and then once a year
- Early extrapyramidal signs (acute dyskinesia, akathisia, Parkinson syndrome): clinical assessment before the start of the treatment and then once a year
- Late extrapyramidal signs: clinical assessment of abnormal movements before starting the treatment, and then once a year
- Weight: measure of weight and size and BMI calculation ($BMI = \text{weight (kg)}/(\text{size (m)})^2$), weight monitoring every two weeks for the first two months, weight measure and BMI calculation after one and three months of treatment, then every trimester (more frequent monitoring for a dibenzodiazepine treatment)
- Diabetes: fasting glycemia and search for diabetes risk factors; fasting glycemia after three and twelve months of treatment, then once a year (glycated hemoglobin if necessary); clinical condition, family history and starting glucose level may lead to more frequent assays; if the weight increases by over 7%, a diabetes need to be searched for
- Hyperlipidaemia: cholesterolaemia (total, HDL and LDL) and triglyceride; antipsychotics with low lipogenic risk + undisturbed initial assessment: cholesterolaemia (total, HDL and LDL) and triglyceride once a year; antipsychotics with low lipogenic risk or undisturbed initial assessment: monitoring every three to six months
- Liver, kidney and blood monitoring: transaminase and creatinine assays, ionogram and complete blood count; transaminase and creatinine assays once a year; complete blood count once a year, except for patients treated with clozapine (special protocol); ionogram if necessary
- Pregnancy: search for β-HCG in women of reproductive capacity; ensure an efficient contraception
- Cardiac conduction: QTc measure on the ECG, particularly if antipsychotic with cardiac risks are used, or if there are personal or familial cardiac history, or when associated with medications that may cause a QT increase; regular ECG, particularly in at-risk patients
- Hyperprolactinaemia: search for hyperprolactinaemia symptoms, blood assay if necessary
• Cataract: search for visual disturbances through questioning; ophthalmological examination once a year for patients over 40, particularly if they are treated with an antipsychotic with a risk for the eyes

• Anticholinergic effects: search for narrow-angle glaucoma or prostatomegaly; dental monitoring, search for constipation (particularly for patients treated with clozapine), dry eyes, urinary disorder

• Skin effects: avoid direct sun exposure. Solar cream index > 20

• Cognitive functions: neuropsychological assessment, social cognitive assessment and impairment outcome assessment after clinical stabilization, and treatment reduction to minimum effective dose; reassessment of functions and impairment outcome after therapeutic interventions intended to improve functioning

The monitoring during the maintenance phase also help identify possible negative and cognitive symptoms (which may be related to a reduction in social functioning), remaining from symptoms associated with a Parkinson or depressive syndrome, and which require a specific intervention. During this maintenance phase, various medications may be used, such as antidepressant to treat depressive or obsessive symptoms, mood stabilizers (particularly in patients with a schizo-affective disorder) and benzodiazepines to treat insomnia and anxiety. Anticholinergics are not necessary if SGAs are used to the recommended doses. With FGAs, anticholinergics are not systematic in first intention; if necessary and possible, their use is limited in time, and reduced to the minimum effective dose. The prescriber needs to look closely at the likelihood of misuse, abuse or physical addiction to anticholinergics (AFSSAPS, 2012)

The APA’s recommendations (A. F. Lehman, Lieberman, et al., 2004) regarding the monitoring of antipsychotic treatments are rather sparing. Some authors recommend an even closer monitoring regarding the metabolic and cardiac effects of antipsychotics (see below).

The choice of an antipsychotic needs to take into account the contraindications related to some neurological disorders (Parkinson disease), heart diseases (conduction defect or disordered cardiac rhythm) or urinary disorders (dysuria), and the long-term cardio-vascular risks caused by some antipsychotics’ metabolic effects (weight gain, hyperglycemia and hyperlipidaemia). This risk makes a close metabolic monitoring indispensable in patients treated with dibenzodiazepines; therefore, it is preferable to avoid these products and use them only in second intention if the monitoring is not possible. The relevance of keeping these medications in the maintenance treatment could be further discussed. It was not proved whether the antipsychotic used to treat the crisis is more effective to prevent relapses than any other antipsychotic.

Recommendations regarding the long-term prescription of antipsychotics are sometimes difficult to follow in the current practice. Patients often stop the treatment by themselves due to a lack of insight, a lack of motivation, the disease severity, the insufficient quality of the doctor-patient relationship or because they cannot handle the antipsychotics’ adverse effects. One out of two patients appears to stop their treatment early in controlled trials (Hogarty, Goldberg, Schooler, & Ulrich, 1974). By encouraging a more active involvement in the treatment, psychoeducation improve observance (Xia, Merinder, & Belgamwar, 2011a, 2011b). Various strategies have been used to limit the neurological adverse effects of FGAs. Prescription of minimum dosages (sometimes divided by 10 compared to initial dosage) have been recommended. But even if they are likely to considerably improve FGA tolerance, dosages this low put the patients at a higher risk of relapse (Marder et al., 1987). Intermittent administration of antipsychotics was also suggested: after the acute episode, the antipsychotic is progressively interrupted, and then prescribed again - ideally after 48 hours - if non-specific relapse prodromes reappear (anxiety, mood lability, depressive symptoms, attention and concentration deficit, memory impairment, sleep disorder, slight changes in the perception of reality,
et al.). This type of practice may increase the risk of tardive dyskinesia and its preventive effectiveness seems to be lower than a continuous treatment (relapse risk after 2 years is twice as high). Another way to improve treatment observance relies on extended-release antipsychotics. Intramuscular use antipsychotics not only improve observance, they also avoid absorption issues and the liver first pass effect. In the late 1990s, 30% of British outpatients received extended-release antipsychotics (Foster, 1996).

Davis et al. meta-analysis, which compared oral antipsychotics with extended-release antipsychotics, showed that the latter was more effective on relapse prevention (Davis, Chen, & Glick, 2003). Furthermore, extended-release antipsychotics provide a more stable plasma concentration of the product and require lesser total doses, which contributes to limit adverse effects. Regarding FGAs, a meta-analysis showed a slightly better effectiveness of extended-release antipsychotics compared to oral administration, and the effectiveness does not vary between extended-release medications (Adams, Fenton, Quraishi, & David, 2001). Regarding SGAs, the results look the same: overall, extended-release antipsychotics do not give any notable advantage over oral medication; only less methodologically rigorous clinical trials were favorable to extended-release antipsychotics in terms of remission maintenance, relapse prevention and hospitalization reduction (Manchanda et al., 2013).

Prescribing antipsychotics in current practice

The following text gather the treatment therapeutic and monitoring principles, and prescription suggestions (see also Demily, 2014 (Demily, 2014)).

General principles

- The antipsychotic treatment goal is not only to reduce the symptoms causing the patient's suffering, but also to improve their quality of life and their social and/or professional integration.
- A long-term antipsychotic treatment helps maintain clinical remission and improve recovery.
- The antipsychotic used to treat the psychotic episode is kept as background treatment, by looking for the minimum effective dose and removing associated psychotropic drugs if possible (monotherapy should be the rule and the psychotropic treatment should be adapted to the various disease phases).
- If adverse effects appear, the dosage should be reconsidered, or the antipsychotic should be changed, unless the benefits/adverse effects ratio remain positive.
- Only if the patients are dangerous for themselves or other people, the benefits/adverse effects ratio may be deemed negative.
- The medical therapy should always be associated with non-medicated measures:
  - therapeutic education to improve insight and the patients’ involvement in their treatment,
  - cognitive remediation to make use of preserved cognitive resources, according to the results of the neuropsychological assessment, and if there are functional outcomes),
  - support psychotherapy.

Life hygiene

- No cannabis consumption (symptom-inducing factor).
- Tobacco and alcohol highly discouraged.
- Regular physical activity.
- Balanced diet (limiting food high in fat; no snack or sweet drinks).
- Regular life rhythm - including sleep (no naps, fixed get-up time).
Before prescription

- Search for contraindication, particularly a congenital long-QT syndrome using an ECG with QTc reading.
- Search for a risk factor, particularly an obesity, a dyslipemia or a diabetes (which may cause a metabolic syndrome) by measuring weight, waist circumference, blood lipid and glucose levels.
- Prevent inadvisable medication associations, by particularly searching for other substances that extend QT.
- Search for substances that may cause medication interactions, particularly pro-dopaminergic antiparkinsonians, lithium, carbamazepine, benzodiazepine, alcohol, grapefruit juice and every depressant of the central nervous system.
- Search for other medications which may reduce cognition (particularly anticholinergics and benzodiazepines) or impact the nigrostriatal tract (such as antiemetics, related to antipsychotics)
- If it is not a first prescription, list the previously used antipsychotics, detailing their effectiveness and tolerance.

Observance


Medication observance is a key treatment aspect. The term is far from ideal but common to describe the interaction between patients and clinicians in the aim of prescribing a treatment.

It is necessary to develop more adapted methods to destigmatize the use of prescribed medication and create a better education, shared decision and responsibility environment in the management of the disease.

Medication intake during the acute phase is often helped by medical professionals around the patients, which overly increases the clinicians’ confidence in the fact that observance will go on after the acute phase. However, the treatment of chronic diseases is characterized by a huge issue regarding the medication observance, cause emergencies or hospitalizations that could have been otherwise avoided, and sub-optimal clinical outcomes.

It is estimated that 50% of patients with a chronic disease do not take the medication as prescribed after six months.

Both clinicians and patients overestimate the amount of medications that are taken and clinicians usually do not take enough time to discuss it with the patient, although it is crucial for a successful treatment.

Definitions and measurements

They vary. Ideally, an observing patient takes every medication as prescribed. However, observance is considered good and the patients observant if they take at least 70% to 80% of the treatment. A total observance, a partial observance and no observance have been distinguished. Sometimes, not taking 20% to 30% of the treatment have a high clinical impact; sometimes it does not. Many factors intervene.

Our capacity to measure the exact observance level is limited and there is no universal measurement standard.
It seems widely established that a large proportion of non-observance among non-observant persons, such as in psychiatric or cognitive disorders, is not due to a willful conscious refusal to take a medication, and that all the measures that might help the patients and reinforce their willpower would improve observance.

Epidemiology
Studies show high non-observance or low observance rates in patients with schizophrenia (varies greatly depending on the definitions, populations and measures).

Factors of non-observance
The following factors may be associated: patients, disease, medications, therapeutic relationship, care system, relatives and friends, stigmatization level, etc. (see Table 4)

Interventions to improve or maintain observance
Traditionally, psychoeducation was the main strategy. New psychosocial approaches have been suggested (CBTs and motivational interviews) and interventions with a combination of several approaches are preferred. Optimization of the medical treatment is also inevitable.
III.3.3.2. Somatic follow-up

Somatic diseases are more common in persons with a severe mental illness compared to the general population. Mortality, for any reason, is significantly higher (minus 15 years in terms of life expectancy, due to suicide for 40% and to preventable risk factors for 60%) (Planner, Gask, & Reilly, 2014). Even if this higher mortality and morbidity is mainly due to a way of life that could be improved, the somatic follow-up for these patients remains insufficient in developed countries. Furthermore, since the psychiatric disease predominates, patients themselves, their helpers and the psychotropic medications are an obstacle to acknowledge and treat somatic diseases.

Routine monitoring needs to focus on weight, blood pressure, eating behavior and dietary advice, physical activity, tobacco, alcohol and other substances, blood glucose level, lipid profile, prolactinaemia in the event of sexual issues, cardiovascular risks and control ECG, dental health, liver function and thyroid function. Blood count and ionogram are conducted depending on call signs. The risk factor assessment is done through a medical interview (personal and family history). Young non-Caucasian patients, without previous treatment, who have personal or family history of metabolic disease are particularly at risk. 51% of patients treated with SGAs had a metabolic disease, according
to a British study (Planner et al., 2014). 40% were not aware of these risks. The main
death causes are cardiovascular or related to a type-2 diabetes.

Regarding tobacco (Planner et al., 2014), patients with a severe mental illness smoke more than the
general population (90% versus 16%) and are more dependent than smokers who do not have this
kind of disorder. However, interventions to stop smoking seem as effective as in the general
population and clinically stable patients who quit smoking do not see their condition worsen,
contrary to a widespread idea.

Furthermore, out of 23 studies (reported by C. Planner et al. (Planner et al., 2014)) including, in their
management, systematic incentives to get non-medicated intervention (targeting diet and weight),
only one does not show any physical health improvement.

On the institutional and organizational levels, the required actions in terms of treatment safety and
somatic vigilance are not easy to conduct. The place taken by the primary care physician in health
care, including mental health care, as part of the treatment offer, made the organization of the
somatic follow-up more problematic for patients with a severe mental illness.

The primary care physician largely helps destigmatization, according to the authors (Planner et al.,
2014). However, consultations with these patients are often more difficult and takes a lot more time
than the consultations the practitioners may offer (Planner et al., 2014). But even when the patients
receive a somatic follow-up by a general practitioner, the follow-up does not meet the quality
required by this population. Finally, the lack of collaboration between psychiatric teams and general
practitioners may cause tensions and make them take different positions that may harm the
patients.

Many evidences merge to highlight how this collaboration could be used to treat patients with a
depressive disorder, but data are not that obvious for persons with a severe and persistent mental
illness. For this population, a psychiatric follow-up and a close collaboration between the psychiatric
team and the general practitioner seems inevitable. General practitioners may handle the follow-up
if they receive support from specialized services. This collaboration also helps reduce the wrongful
representation of these patients that GPs convey. The authors see in the same way the necessity to
develop relationships with specialized somatic services, first of all endocrinology, diabetology,
cardiology or dentistry.

Even if only little doubt subsists on the importance to include general practitioners in the follow-up
of patients with a severe mental illness, evidences are still lacking to support a specific collaboration
modality.

It is widely considered that a quality collaboration needs to be comprehensive, coordinated and
pursued all along the pathway between services. The importance to define everyone’s role in the
follow-up is largely highlighted. The “shared treatment” systems, that some French psychiatric teams
have developed, aim that way. These professionals are expected to collaborate using mail or
personal contact.

Above and beyond, everyone’s role is questioned. In an exhaustive review of the literature, M. De
Hert et al. argue over the role of psychiatrists in the somatic follow-up of patients (De Hert et al.,
2011).

Patients more often than not have access to somatic treatments only through intermediary
psychiatric teams. These patients are less capable to interpret physical symptoms, solve them and
take care of their health. Furthermore, stigmatization, wrongful health-related beliefs and negative
behaviors need to be discussed for a better access to somatic cares. These data make mental health
professionals responsible for the patients’ physical health. But, despite two consensus conferences (2004, 2008), many psychiatrists still consider that their sole function is to treat psychiatric issues.

Contrary to a common belief, it is not difficult to motivate patients. These patients, more often than not, do not know that they need to change their lifestyle. Psychiatric professionals need to inform patients and their families on this point (which cannot involve specialists such as dieticians), which does not require a specific training.

The partnership between general practitioner and psychiatrist therefore cannot be reduced to the total delegation of the patients’ somatic follow-up to GPs. Psychiatrists need to guide the general practitioners in monitoring specific somatic areas at risk and in iatrogeny due to psychotropics, and motivate patients to improve their lifestyle, particularly in terms of tobacco consumption, eating behavior and lack of physical exercise. Furthermore, they need to assist the general practitioners in the relationship modalities to develop with their patients.

To sum it up, for the authors, psychiatrists need to play a pivot role in improving the patients’ physical health by taking the direct responsibility of monitoring and treating some key physical parameters. Monitoring and treatment of risk factors specific to this population should be an integral part of the psychiatrists’ routine care. Already, in France, the follow-up of metabolic disease that may arise from SGAs is commonly conducted by psychiatric teams.

### III.3.3.3 Psychosocial interventions

Elaborating an integration project, through rehabilitation, helps the patients be actors in their own pathway. Thus they make the most of their social skills, cognitive performance, motivation and adaptation skills to overcome or circumvent their psychic disability or disabilities. Better understanding the impact of these factors helped develop new therapeutic approaches to improve the patients’ preserved skills: psychoeducation, cognitive remediation, social skills training and the transfer of what has been learned to everyday life. Considering the many factors of functional outcome, each patient’s treatment combines several of these treatment tools.

The psychosocial interventions with proven effectiveness that are the most described in the literature are cognitive remediation, psychoeducation, cognitive behavioral therapy and social skills training, which are successively considered. These evidence-based practices (Chien, Leung, Yeung, & Wong, 2013) all aim at developing the persons’ skills, so they overcome their illness, its symptoms and its consequences.

### III.3.3.3.1 Cognitive remediation

The objective of cognitive remediation is to limit the impact of cognitive disorders (N. Franck, 2014; Kurtz & Richardson, 2012). Such disorders are often associated to schizophrenia. They are characterized by their heterogeneity, each patient showing a unique skill degradation and conservation profile. They may impact neurocognitive and metacognitive processes, and social cognition. Regarding neurocognition, approximately 4 out of 5 patients show altered performance according to the norms established for the general population (Heinrichs & Zakzanis, 1998); patients who remain over the normality threshold usually show a loss compared to their premorbid functioning. Being non-specific, neurocognitive impairments are not taken into account for the diagnosis. They however need to be identified and quantified since they greatly impact the functional outcomes. Other common anomalies that impact the two other areas - some of which are specific to
them - contribute to the disease symptoms. Thus, they need to be systematically searched for. Therefore, the neuropsychological assessment (used to explore neurocognition) needs to be conducted with tasks assessing metacognition and social cognition, as soon as clinical stability is achieved and the medical therapy is reduced to the minimum effective dose.

Experts who gathered at Florence (Italy) in April 2010 for the second Schizophrenia International Research Society Conference, have defined cognitive remediation as “a therapeutic intervention involving a training, intended to improve cognitive processes (attention, memory, executive functions, social cognition and metacognition), so the benefits are preserved over time and generalized” (Kurtz & Richardson, 2012).

Cognitive disorders associated to schizophrenia are heterogeneous. They may impact neurocognition (set of processes involved in the non-specific treatment of information the persons have to deal with, including memory, attention and executive functions), metacognition (process used to acknowledge our own cognitive functioning) and social cognition (process used to understand other people’s cognitive functioning and emotions) (Kurtz & Richardson, 2012). Metacognitive and social cognitive disorders play a role in the onset of schizophrenic symptoms; some neurocognitive disorders may also contribute. They all greatly degrade autonomy and impact the functional outcomes. Social relationships, professional integration and leisure are satisfying only if cognitive functioning is preserved, minimally affected, or if impairments have been compensated. But these disorders, which may affect the ability to remember instructions, to efficiently interact with an interlocutor, to efficiently orient or to organize behavior toward a goal by taking the context into account, are observed since the first psychotic episode (Addington & Addington, 2008). It is therefore crucial to identify these disorders as soon as possible, quantify them and help patients getting aware of them so they may deal with them by relying on preserved processes.

Several studies tried to link the nature of the cognitive impairment with the underlying type of functional inability. Attention and working memory impairments seem to play a role in altering professional functioning. Executive functions impairments seem to have harmful consequences on the relational behavior. The quality of social exchanges is thought to be linked to attention, processing speed and working memory. The impact of neurocognitive impairment on functional outcomes seems to depend on metacognitive and social cognitive performance, and the practical ability of the patients in managing their everyday life, overall social skills, symptoms and intrinsic motivation (Bowie et al., 2010).

Antipsychotics do not really improve primary cognitive impairments (Stip, 2006). But they help reducing or eliminate secondary cognitive impairments caused by symptoms (such as an attention deficit due to intense hallucinations). Iatrogenic cognitive impairments (due to some antipsychotics, Parkinson correctors, benzodiazepine anxiolitics; these medications have harmful effects on attention and, consequently, on memory, due to their antihistaminic, anticholinergic and/or GABAergic action) are reduced with minimum effective dose of antipsychotics if no corrector or benzodiazepine (unless exception) are used in the long term.

The objective of cognitive remediation is to reduce the impact of cognitive impairments on the patients’ everyday functioning. This reduction involves either the direct impairment reduction by training the related functions, or more commonly their compensation by developing alternate skills using preserved processes. Cognitive remediation uses reeducational tools systematically aiming at clear objectives that are directly useful to patients. These tools may involve leisure or the social or professional life. The expected cognitive performance improvement is only an intermediary variable to help reach these concrete objectives. For a given patient, it is however necessary to define cognitive targets - whether it is involved in attention, memory, language, visuospatial processes, executive functions, metacognition or social cognition - to choose a cognitive remediation program,
and then the adequate exercises within the program, adapted to the patient’s specific cognitive profile.

Cognitive remediation is generally implemented in the larger context of rehabilitation, aiming at the patients’ recovery (Martin, 2013). These treatments are based on a multidisciplinary integrative assessment used to identify a specific problem in each situation and then to define a therapeutic indication actively involving the patients. Effectiveness of cognitive remediation is greater if it is associated with therapeutic education (Kurtz & Richardson, 2012). Rehabilitation is used in complement to the usual treatment of schizophrenia, which relies on the antipsychotic-psychotherapy association.

The improved cognitive functioning offered by cognitive remediation involves either an altered processes training, or a reinforcement of preserved processes to compensate impairments (Kurtz & Richardson, 2012; Medalia & Choi, 2009) (N. Franck, 2014). The expression cognitive remediation usually relates to the latter option, i.e. a restorative approach of neuropsychological rehabilitation, also known as cognitive rehabilitation, and distinct from cognitive stimulation (involvement in non-specific activities generating an overall improvement of cognitive and social functioning) and cognitive training (offering exercises to train altered functions) (Clare, Wilson, Carter, Roth, & Hodges, 2004). All in all, the objective is to cope with these impairments to reduce their impact and help the patients deal in the best way they can with situations they’re facing, despite their impairments.

Cognitive remediation is primarily useful to clinically stable patients, whose medical therapy is prescribed at the minimum effective dose (N. Franck, 2014), to avoid treating secondary cognitive impairments due to the symptoms or iatrogenic cognitive impairments. Nonetheless, patients with many symptoms or iatrogenic cognitive impairments may also receive cognitive remediation, if the best medication’s benefits/adverse effects ratio has been found, if clear objectives have been defined and if the patients may be involved in their treatment. Metacognitive and social cognitive remediation is particularly indicated in patients with obvious symptoms since this type of treatment aims at reducing such symptoms.

Quantifying the impairment intensity and impact is very important. This approach particularly helps identify, not only altered skills, but also the preserved skills the patients may work on. The assessment relies on a subjective analysis associated with standardized tests to quantify performances, monitor the progress and clearly inform the patients. But the assessment cannot be reduced to taking tests, which can only provide a complement to the subjective part. Tests used during the neuropsychological assessment put patients in situations in which they need to use specific, well-defined processes to give the best answer. Performance related to these processes may also be quantified.

After the integrative, multidisciplinary assessment, results are delivered to the patients, so they may acknowledge them. It is important that they are aware of their preserved skills, and the areas where they have difficulties, so they may take it into account to best consider their abilities and develop their projects. Cognitive remediation aims at limiting the impact of highlighted impairments. For example, reduced working memory performance that may impair the patients in their work (e.g. inability to take into account instructions regularly sent by e-mail) and activities (e.g. they stop reading novel, which was a daily pleasure) may lead to use cognitive remediation to compensate this deficit, by acquiring specific strategies.

Possible impairments in neurocognition, metacognition and social cognition, together with symptoms and iatrogeny, are taken into account in terms of functional outcome and its importance in the overall understanding of the patient’s difficulties. Considering these various parameters helps,
if necessary, to suggest cognitive remediation, to which the patient is associated. The choice of program(s) to be used derives from this detailed and integrative analysis.

Cognitive remediation relies on the use of specific techniques. It may involve (1) the use of a repetitive training of altered functions (restorative approach), (2) a cognitive stimulation relying on the use and reinforcement of preserved skills, (3) a cognitive training intended to implement new strategies to compensate deficits, and (4) a compensation relying on the use of palliative strategies (cognitive orthosis) (Sablier, 2009). Regardless of the cognitive targets of the assessment and the used remediation tools, conducting sessions and harvesting concrete benefits rely on the implementation of common principles. During the pre-treatment phase, concrete objectives are defined by the therapist and the patient (Vianin, 2012). They derive directly from the patient’s projects or everyday needs.

Wide-scale studies and meta-analyses (see Table 1) confirmed the effectiveness of cognitive remediation in the treatment of neurocognitive disorders (Medalia & Choi, 2009). The results from a first meta-analysis, taking into account computerized and pen-and-paper exercises, suggest that cognitive remediation has a significant effect of moderate intensity on cognition (effect size=0.41) and social cognition (ES=0.36), and an effect of small intensity on psychiatric symptoms (ES=0.28). The effect of cognitive remediation is however rather homogeneous, regardless of the program used, the program length and the patient’s age (McGurk, Twamley, Sitzer, McHugo, & Mueser, 2007).

A more recent meta-analysis (Wykes, Huddy, Cellard, McGurk, & Czobor, 2011) confirmed these results. It highlighted an overall effect size of 0.45 on cognitive performance, and positive effects on social functioning (reduced functional outcomes). The lesser the symptoms are, the greater are the benefits. However, even patients with strong symptoms may benefit from cognitive improvement. According to this study, the impact of cognitive remediation, particularly in terms of social functioning, is all the more significant if it is associated with other rehabilitation techniques (Bowie, McGurk, Mausbach, Patterson, & Harvey, 2012; McGurk, Twamley, et al., 2007; Medalia & Saperstein, 2013).

According to a trial in which 107 patients were randomly distributed in 3 study arms (cognitive remediation alone, functional skills training alone or an association of both), cognitive remediation alone did not improve neither the success of home or outdoor activities, or professional skills, whereas these skills were significantly improved with durable effects when cognitive remediation was associated with functional skills training (Bowie et al., 2012; Medalia & Saperstein, 2013).

Several studies also showed that cognitive remediation have a positive effect on the professional skills in terms of number of hours worked and the ability to keep the job (Wexler & Bell, 2005).
Table 1: meta-analyses on the effects of cognitive remediation

<table>
<thead>
<tr>
<th>Authors (year)</th>
<th>Objective</th>
<th>Number of patients</th>
<th>Method</th>
<th>Main results</th>
<th>Main conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>McGurk et al (2007)</td>
<td>Assess the effects of cognitive remediation on cognitive functions, symptoms, and the functional outcomes. Parameters of cognitive remediation were also studied (number of hours)</td>
<td>1 151 patients</td>
<td>26 CRT with interventions targeting cognitive functions, group / individual CR, non-computerized / computerized, DAP / DAP+strategies</td>
<td>Improved overall cognitive functioning (ES=0.41) on 6 out of 7 cognitive areas, reduced global symptom severity to a low level (ES=0.28), improved psychosocial functioning (ES=0.35) from low to moderate</td>
<td>The impact of cognitive remediation is greater if it is associated with other rehabilitation interventions, suggesting that these approaches are complementary. Repetition techniques seem to be more effective than learning strategies on cognitive functions, but this ratio reverses when we look into functioning.</td>
</tr>
<tr>
<td>Wykes et al (2011)</td>
<td>Assess the effects of cognitive remediation on cognitive functions, symptoms, and functioning in everyday life.</td>
<td>2 104 patients</td>
<td>40 CRT with trials targeting cognitive functions, group / individual CR, non-computerized / computerized, DAP / DAP+strategies</td>
<td>Improved overall cognitive performance (ES=0.45), improved overall functioning (ES=0.42), reduced symptom severity (ES=0.18). Improvement still significant during follow-up, except symptom improvement</td>
<td>Few conclusions on age but studies seem to show that an older age is a predictor of a less effective response. Patients yield more benefits from CR if they have less symptoms. Greater effectiveness on functioning if CR is associated to another rehabilitation intervention, even greater if CR includes strategy learning, which is likely to encourage transfer.</td>
</tr>
</tbody>
</table>

ES=Effect Size, DAP=Drill-And-Practice

Wykes et al’s meta-analysis (2011) (Wykes et al., 2011) showed that associating cognitive remediation with other rehabilitation techniques yields greater benefits on psychosocial functioning. In the context of rehabilitation, strategy learning (involving executive functions and memory, through a better information organization) associated with Drill-And-Practice is more effective than Drill-And-Practice alone. Cognitive functioning of older patients improves more, on average, than the functioning of younger patients (Wykes et al., 2011).

Patients with greater memory impairments better improve (Pillet et al., 2014). It is not showed if a computerized training with strategy learning is more effective than a pen-and-paper training with strategy learning (N. Franck et al., 2013). Overall, according to a meta-analysis of 16 randomized studies, a computer-assisted remediation yields more significant benefits on cognition (Grynspan et al., 2011) but a study showed that not adapting the level of computerized exercises to the patients’ cognitive performance is a factor of remediation failure (Scheu et al., 2013). All in all, it is necessary to conduct more studies to compare the benefits of computerized remediation with strategy learning and computerized remediation using Drill-And-Practice.

A review of the literature confirmed the necessity to associate cognitive remediation with other rehabilitation measures (such as psychoeducation and employment support - see Table 2) and showed how important it is to encourage the transfer of benefits using real-life simulations (Medalia & Saperstein, 2013). Regarding the number of sessions to implement, it is not standardized, but specific to each program (Medalia & Choi, 2009).
Table 2: cognitive remediation and employment support (Franck, 2014 (N. Franck, 2014))

<table>
<thead>
<tr>
<th>Study authors (journal and year of publication)</th>
<th>Number of included subjects</th>
<th>Measures offered to the cognitive remediation group</th>
<th>Measures offered to the control group</th>
<th>Assessed professional parameters</th>
<th>Result of the statistical comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>McGurk et al. (Schizophrenia Bulletin, 2005)</td>
<td>44</td>
<td>Computerized cognitive remediation (Cogpack) + supported employment</td>
<td>Supported employment</td>
<td>Employment rate, number of hours worked and salary 1 year after cognitive remediation</td>
<td>Significant</td>
</tr>
<tr>
<td>Vauth et al. (Schizophrenia Bulletin, 2005)</td>
<td>138</td>
<td>Computerized cognitive remediation + supported employment</td>
<td>Self-management skill training (CBT) + supported employment</td>
<td>Paid employment rate after 1 year</td>
<td>Significant</td>
</tr>
<tr>
<td>McGurk et al. (American Journal of Psychiatry, 2007)</td>
<td>44</td>
<td>Computerized cognitive remediation (Cogpack) + supported employment</td>
<td>Supported employment</td>
<td>Job maintenance, number of hours worked and salary 2 to 3 years after cognitive remediation</td>
<td>Significant</td>
</tr>
<tr>
<td>Bell et al. (Schizophrenia Research, 2008)</td>
<td>72</td>
<td>Neurocognitive enhancement therapy (NET) + traditional vocational rehabilitation</td>
<td>Traditional vocational rehabilitation</td>
<td>Number of hours worked 1 year after cognitive remediation and job maintenance</td>
<td>Significant</td>
</tr>
<tr>
<td>McGurk et al. (Schizophrenia Bulletin, 2009)</td>
<td>34</td>
<td>Computerized cognitive remediation (Cogpack) + internship ± supported employment</td>
<td>Internship ± supported employment</td>
<td>Number of hours worked and salary 2 years after cognitive remediation</td>
<td>Significant</td>
</tr>
<tr>
<td>Kern et al. (Schizophrenia Bulletin, 2011)</td>
<td>45</td>
<td>Errorless learning + IPS</td>
<td>IPS</td>
<td>Employment rate and job maintenance</td>
<td>Not significant</td>
</tr>
<tr>
<td>Lee (Asia Pacific Psychiatry, 2013)</td>
<td>60</td>
<td>Computerized cognitive remediation (Cogtrainer) + standard rehabilitation</td>
<td>Standard rehabilitation</td>
<td>Work quality (according to a Work Behavior Inventory subscale) and cognitive variables</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The levels of evidence for the effectiveness of cognitive remediation programs presented in this section are very heterogeneous.

The Table 3 describes the nature of studies conducted on programs available in French.
<table>
<thead>
<tr>
<th>Program name</th>
<th>Targeted process(es)</th>
<th>Session number and duration</th>
<th>Studies on program effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECONS</td>
<td>Neurocognition: working memory, verbal memory, selective attention, executive functions, visuospatial functions and processing speed</td>
<td>28 one-hour sessions (exercises adapted to the patient’s level) + home exercises</td>
<td>1 randomized clinical trial (Franck et al, 2013)</td>
</tr>
<tr>
<td>CRT</td>
<td>Neurocognition: cognitive flexibility, memory and planning</td>
<td>28 one-hour sessions + home exercises</td>
<td>Several randomized clinical trials (Wykes et al, 2007)</td>
</tr>
<tr>
<td>REHA-COM</td>
<td>Neurocognition: attention / focus, working memory, logic and executive functions</td>
<td>14 two-hour sessions</td>
<td>1 randomized clinical trial (d’Amato et al, 2011)</td>
</tr>
<tr>
<td>IPT</td>
<td>Neurocognition and social cognition: attention, verbal memory, cognitive flexibility, concept formation, visuospatial perception, facial emotion, theory of mind, language, emotional expression and problem solving</td>
<td>50 to 60 one-hour-and-half sessions</td>
<td>1 meta-analysis (Briand et al, 2006; Roder et al, 2006)</td>
</tr>
<tr>
<td>ToMRemed</td>
<td>Social cognition: theory of mind and understanding of implicit intentions</td>
<td>12 two-hour sessions</td>
<td>1 open clinical trial (Bazin et al, 2012)</td>
</tr>
<tr>
<td>SCIT</td>
<td>Social cognition and metacognition: theory of mind, facial emotion, jumping to conclusion and attributional style</td>
<td>20 to 24 one-hour-and-half sessions</td>
<td>Several randomized clinical trials (Franck and Penn, 2014; Robert et al, 2009)</td>
</tr>
<tr>
<td>Gaia</td>
<td>Social cognition: facial emotions</td>
<td>20 one-hour sessions + home exercises</td>
<td>Ongoing randomized clinical trial</td>
</tr>
<tr>
<td>RC2S</td>
<td>Social cognition: theory of mind, attributional style, perception and social knowledge</td>
<td>10 one-hour-and-half sessions + home exercises</td>
<td>Ongoing case studies (Peyroux and Franck, 2014)</td>
</tr>
<tr>
<td>MCT</td>
<td>Metacognition: attributional style, jumping to conclusion, theory of mind</td>
<td>10 one-hour-and-half sessions</td>
<td>Several randomized clinical trials (Favrod et al, 2014; Moritz et al, 2011)</td>
</tr>
</tbody>
</table>
Overall, data from the literature show that cognitive remediation is effective to reduce the impact of cognitive impairments on everyday functioning. More studies need to be conducted to identify the specific effects of the various programs used in clinical practice and their role in the overall care system. Current data encourage the use of cognitive remediation in schizophrenia. Studies combining cognitive remediation and the integration of patients to an ESAT are ongoing and aim at precisely identifying the impact of cognitive remediation on professional integration. It is interesting that such studies be conducted in a French context.

IMPORTANT POINTS REGARDING COGNITIVE REMEDIATION

• Cognitive remediation is defined as “a therapeutic intervention involving a training, intended to improve cognitive processes (attention, memory, executive functions, social cognition and metacognition), in a way that benefits are retained in the long term and transfer to everyday life.

• Cognitive remediation starts with a clinical, cognitive and functional assessment, conducted in collaboration with a psychiatrist, a psychologist/neuropsychologist, a nurse and socio-educative professionals. This assessment includes at least clinical (clinical disability) and functional elements. A comorbidity assessment may involve other specialists.

• The improved cognitive functioning offered by cognitive remediation involves either a training of impaired functions, or a reinforcement of preserved functions to compensate the impairments.

• Cognitive remediation needs to be offered mainly to clinically stable patients with a medicated therapy at the minimum effective dose.

• Studies on CR suggest that it has a significant effect of moderate intensity on cognition and social functioning, and an effect of low intensity on psychiatric symptoms. However, the effect of cognitive remediation is overall homogeneous, regardless of the program used, the program duration and the patient’s age.

• The impact of cognitive remediation, particularly in terms of social functioning, is all the more significant if it is associated to other rehabilitation techniques (such as psychoeducation, social skills training and employment support).
III.3.3.2 Psychoeducation

Low treatment observance is a major relapse cause in patients with schizophrenia. Three out of four patients stop their treatment in the two years after the first psychotic episode (Yamada et al., 2006). Only a fourth are observant patients. Lack of observance is responsible for an increased number of hospitalizations, and increases morbidity and mortality (DiMatteo, 2004; Prasko, Vrbova, Latalova, & Mainerova, 2011). Several factors are involved in the patients’ lack of observance, among which the treatments’ adverse effects, the disease severity and the lack of insight are the most common (Chabannes, 2009). Psychoeducative interventions have been developed to improve the patients’ observance and help them identify possible relapse signs. They exist in several modalities. They may be offered to patients in individualized or group sessions, and also to families.

Patient psychoeducation

Psychoeducation is the psychiatric pendant of therapeutic education, defined by the “HPST” (“Hôpital, patients, santé et territoire”: Hospital, patients, health and territory) act #2009-879. According to the article L1161-1 of the Health Law: “Therapeutic education is part of the patient’s care pathway. Its objective is to improve the patients’ autonomy by helping them observe the prescribed treatment and improve their quality of life”. This definition highlights the necessity to systematically offer this intervention to patients. But therapeutic education is still under-developed in psychiatry.

This definition does not describe how to implement therapeutic education. Also, should therapeutic education be offered:

1. during medical consultations (as information) of in specific meetings dedicated to education?
2. in group or individual sessions?
3. from the start of the care pathway or later?

Therapeutic education is not only confined to psychiatry. It has a legitimate role in the treatment of any chronic disease, regardless of medical specialty (it is, for instance, relevant for diabetes in endocrinology, and for asthma in pneumology). It has been used first in these chronic diseases and slowly spread to mental diseases such as schizophrenia, and more recently to bipolar disorders. The term “psychoeducation” was used for the first time to characterize an intervention intended to the families of persons with schizophrenia (Anderson et al., 1980).

According to the Health Authority (2007), a quality therapeutic education needs to:

- be centered on the patient: interest shown to the person as a whole, shared decision-taking, respect for preferences;
- be scientifically proven (professional recommendations, relevant scientific literature, professional consensus) and expanded with the experience feedbacks from patients and their relatives regarding the content and educative resources;
- be entirely integrated in the treatment and follow-up;
- relate to the patients’ everyday life and social, psychological and environmental factors;
- be an ongoing process, adapted to the disease progression and the patients’ lifestyle; it is part of the long-term follow-up;
- be conducted by health professionals trained to the patients’ therapeutic approach and educational techniques, and committed to a team work in action coordination;
- rely on an assessment of the patients’ needs and environment (educative diagnosis) and be
built on the learning priorities perceived by the patients and health professionals;
• be built with the patients and imply their relatives as much as possible;
• adapt to the patients’ educative and cultural profile, respect their learning preferences, style and rhythm;
• be defined in terms of activities and content, organized in time, conducted with various educative tools:
  • use communication techniques centered around the patient,
  • be provided in group or individual sessions, or a combination of both, built on the adult (or children) learning principles,
• be accessible to a variety of people, taking into account their culture, origin, disability situation, geographical distance, local resources and the phase of the disease,
• use varied educational techniques to involve the patients in an active learning process, and use program content that the patient can relate to.
• be multiprofessional, multidisciplinary and multisector, in a network-like collaboration;
• include an individual assessment of therapeutic education in the program progress.

Psychoeducation in literature is defined as the education of persons with a psychiatric disease (and/or their family), in areas used for treatment and rehabilitation (Pekkala & Merinder, 2000). It is a gradual process by which a person learns a knowledge and an understanding by learning tools to change their behavior and/or representations. Therefore, psychoeducation cannot simply be understood as a transfer of information: provided information are neither neutral or trivial and their assimilation does not always bring change (J. Favrod, Bonsack, C., 2008).

The psychoeducative work has three technical dimensions:
1. the educational dimension focuses on the nature of information (“what to say and how to say it”),
2. the psychological dimension involves divulging the diagnosis and help the grieving process,
3. the behavioral and cognitive dimension helps restore skills and mobilize resources in everyday functioning (for example in the treatment management).

The psychoeducation approach “is not to replace traditional approaches but to complement them” (Billiet, 2009; Petitjean, 2014).

The objective of this therapeutic education is “to give the patient with schizophrenia a central role and give them the ability to overcome their powerlessness feeling when facing phenomenons they do not control or understand” (Petitjean, 2014). The patients may learn how to control and manage their disease and treatments.

There are many psychoeducation programs that vary in terms of contents but which, in general, provide important elements on the nature and treatments of schizophrenia:
1. biological factors,
2. symptoms and alert signs,
3. treatments,
4. impacts of toxic substance consumption.

These programs also deal with the management of behavioral issues, available resources, and coping skills training (Prasko et al., 2011).
Without comprehensiveness, the most famous programs in France are PACT® ("Psychose Aider Traiter") on an audiovisual media, Schiz’ose dire® on booklets, and Soléduc® on transparent media. These three programs, developed with a funding from the pharmaceutical industry, have been subjected to only few studies, and their effectiveness was not confirmed by enough randomized controlled trials. Only Soléduc® has been subjected to an open randomized trial on over 200 patients (Chabannes, 2009). Another psychoeducative program developed independently by P. Conus’ team in Lausanne (J. C. Favrod, S.; Faust, J.M.; Polari, A.; Bonsack, C.; Conus, P., 2011) is also being implemented in France, but randomized controlled trials are, here again, needed to prove its effectiveness.

Implementation modalities of psychoeducation are yet to be specified, particularly in terms of delay after the onset of the disease. This technique appears to be more preferable if it is offered after several years of disease progression and if it is available for the majority of patients with schizophrenia (Feldmann, Hornung et al. 2002). Patients who lack disease insight and those who tend to get stuck in the diseased identity seem to need the most to work on their symptoms. Patients with addictive behaviors work first and foremost on risky behaviors. Finally, it is necessary to work on treatments for patients who lack observance.

Psychoeducation may be conducted individually or in groups. Group psychoeducation is usually coordinated by two caregivers (nurse, psychiatrist or psychologist). Groups consist of 6 to 10 participants, with variable durations, between two and six months, depending on the programs. It is necessary to create an open, participative and egalitarian atmosphere during sessions, to encourage experience-sharing between participants (J. M. Favrod, A., 2012).

Psychoeducative interventions take place in the context of a developing relationship, implying that a shared space in understanding the disease need to be found between the caregivers and the patients (Pitschel-Walz et al., 2006). The caregivers’ role is to help the persons find a signification to their disease, so they may adapt in a constructive way to the psychotic experience. Psychoeducation should convey realistic and hopeful expectations, such as remission and recovery, or it may be counter-productive. The clinician should get close to the patients’ experience and avoid using a language that is too technical (J. C. Favrod, S.; Faust, J.M.; Polari, A.; Bonsack, C.; Conus, P., 2011). Many studies have been published on the effect of psychoeducation. The main criteria selected to evaluate its effectiveness are the relapse rate, the effect on symptoms, treatment observance, disease insight and the functioning in the community. Table 4 reviews wide-scale studies conducted on psychoeducation; for most of them, the only drawback is that they do not differentiate family and patient psychoeducations.

A first meta-analysis (Lincoln, Wilhelm, & Nestoriuc, 2007), taking into account 18 studies, showed the benefits of psychoeducation in terms of relapse after 12 months (moderate effect size) and disease insight (small effect size). However, it did not show any effect on symptoms or functioning. A more recent meta-analysis (Xia et al., 2011a) on over 5 000 patients, outpatients for most of them, and with only randomized controlled trials (n=44), has been published on the Cochrane database. This meta-analysis showed that psychoeducation improves medication observance compared to the standard care, and reduces relapse and rehospitalization rate on the short term (6-month period). Social functioning and quality of life are also improved with moderate intensity. The Merinder review (2000), taking into account seven studies, confirmed the improvement in the patients’ knowledge, but effects on observance and relapse rate was lower in this study (Merinder, 2000). A prospective randomized study on 191 patients showed that psychoeducation yields more benefits on rehospitalization rate after 5 years in patients with an average disease progression rate, i.e. between 4 and 7-year progression in this study (Feldmann, Hornung et al. 2002). Existing programs are not adapted to every phase of the disease; they are rather intended to persons with chronic disorders (J. C. Favrod, S.; Faust, J.M.; Polari, A.; Bonsack, C.; Conus, P., 2011). The content of psychoeducation therefore needs to be adapted to the various phases of the disease. The more the used tools refer to
the patients’ experience, the more likely they are adapted to the first phases of the
disease. In this context, an intervention as earliest as possible is preferable (J. C. Favrod,
S.; Faust, J.M.; Polari, A.; Bonsack, C.; Conus, P., 2011). However, no clinical trial result confirms this
hypothesis. Another non-randomized study highlighted the fact that a psychoeducative program is
likely to reduce self-stigmatization and improve insight scores (Uchino, Maeda, & Uchimura, 2012).

These studies confirm that the patient psychoeducative approach is relevant for several reasons,
such as the relapse rate and therapeutic observance. Data show that it is more effective in group
than individually (Lincoln et al., 2007). A qualitative study from Siblitz et al (2007) on 131 patients
highlighted the necessity to combine the learning of knowledge on the disease and behavioral
interventions to develop new skills. More trials therefore need to be conducted to expand our
knowledge on this therapy (particularly indication and effectiveness) by including more subjective
aspects such as the impact on the patients’ quality of life and insight (Sibitz, Amering, Gossler, Unger,
& Katschnig, 2007).
### Table 4: meta-analyses dedicated to psychoeducation (patient + family)

<table>
<thead>
<tr>
<th>Authors and date</th>
<th>Study objective</th>
<th>Number of patients</th>
<th>Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xia et al. (2011)</td>
<td>Assess the effectiveness of psychoeducative interventions (to patients and relatives) individually or in group, compared to standard cares</td>
<td>122 patients (mostly outpatients)</td>
<td>44 randomized controlled trials</td>
<td>Psychoeducative programs seem to improve treatment observance, social functioning, reduce relapse rate and rehospitalization, compared to standard cares</td>
</tr>
<tr>
<td>Lincoln et al (2007)</td>
<td>Assess the short-term and long-term impact of psychoeducation whether families are included or not. 5 studied factors: relapses, symptom reduction, disease insight, treatment observance and functioning.</td>
<td>1534 patients in several countries</td>
<td>18 randomized controlled trials, comparing psychoeducation to standard care, waiting list, non-specific intervention</td>
<td>1. Regardless of the presence of the family, moderate effect (effect size=0.53) on relapse and rehospitalization (significant up to 12 months); moderate effect (ES=0.48) on disease insight at the end of treatment. 2. With family: more effective on symptom reduction at the end of treatment and on relapses after 7 to 12 months (ES=0.48). 3. Individual PE: effect not significant</td>
</tr>
</tbody>
</table>

### Family psychoeducation

For a long time, clinicians did not show much interest to family, wrongfully regarded as being responsible for their relatives’ severe mental illnesses. The paradigm shifted in the 1980s, particularly thanks to Hogarty’s works. Family is today seen as an important ally in the treatment. In such, most guidelines recommend family interventions (American Psychiatric Association, 2004 (A. F. Lehman, Lieberman, et al., 2004); National Institute for Clinical Excellence, 2009 (NICE, 2009)). Severe mental illnesses, such as schizophrenia, usually appear in late teens or early adulthood. Relatives (family, friends, spouse, etc.) of the young adult are often directly impacted by the psychotic experience.

Families, being confronted to their relatives’ disease, invest a lot in terms of affective, cognitive and material effort. Without support, they may rapidly be overloaded. This is often expressed as the “family burden” (T. L. Lecomte, C., 2012). Acknowledging this factor generates a growing interest to better understand the families’ needs and develop programs to help them.

Researches on expressed emotions (i.e. how the relative interacts with the psychotic person) also added to the new popularity of family interventions. Overprotective emotions, negative and hostile criticisms significantly predict relapse rate (Hooley, 2007). These expressed emotions, particularly the most deleterious ones, are targeted by family interventions.

Family psychoeducation deals with family, to teach them how to better use their resources, lighten their burden and collaborate more with the diseased person (Lucksted, McFarlane, Downing, & Dixon, 2012). Family interventions share some common ground with patient psychoeducation. Indeed, it informs family and friends on the disease nature, symptoms and diagnosis, so they may identify behaviors associated with the disease. This intervention highlights the fact that psychosis...
may be exacerbated by stress of substance consumption. The effect of various pharmacological and psychosocial treatments is also addressed. Programs intended to families also cover the identification of “signal” symptoms - the relapse precursors - and the intervention strategies useful for relatives. To reduce the impact of expressed negative emotions, adaptation strategies, communication and problem-solving trainings are also offered.

For family psychoeducation, several modalities are possible:

1. single family: only one family, including close friends, with or without the person with a mental illness,
2. multifamily: several families, including close friends, with or without the person with a mental illness.

The multifamily format has an obvious advantage, with the possibility to share skills and support between peers (T. L. Lecomte, C., 2012).

In France, the pharmaceutical industry offers several programs, such as Prelapse®, which is useful for group education. It is organized in 10 ninety-minute sessions and its equipment may be used with families or patients. The Profamille program is the most widely used in French-speaking countries; it was elaborated by a team at the Institut Universitaire en Santé Mental in Québec. This psychoeducative program is designed for families of persons with schizophrenia. It consists of an introduction session, a 14-session basic-training module with a well-structured content and an 8-session enhancement and consolidation module (Y. Hodé, 2013). Preliminary results show a reduced number of days in hospital for patients during the year following the program, compared to the previous year, and an improved family mood (Y. K. Hodé, R.; Beck, N.; Vonthron, R.; Rouyère, N.; Huentz, M.; et al., 2008). Randomized controlled trials are necessary to demonstrate the specific effectiveness of the Profamille program. The AVEC program (“Accompagner, Valider, Échanger, Comprendre”), developed in Montréal by Tania Lecomte and Claude Leclerc, and taking into account the relatives’ concrete needs (strategies that may be used on practical situations, beyond psychoeducation and support), was subjected to a preliminary study that showed promising results (satisfaction, better relationships with the person with psychic disorders, feeling of better controlling their existence and improved social support) (T. L. Lecomte, C., 2012).

In the rehabilitation approach, family support is a key issue. Family psychoeducation is one of its modalities. As such, we may gather under the same name other approaches relying on professional interventions from various theoretical areas (systemic, psychodynamic, etc.). Family is a precious partner, and thus an important lever of change.

A large controlled follow-up study (Pitschel-Walz et al., 2006) helped assess the long-term effectiveness of psychoeducation (with combined family and individual approach) on a cohort of 236 patients. Hospitalization rate was significantly reduced in the psychoeducation group and treatment observance improved. On the long term (7 years), rehospitalization rate is 54% for the psychoeducation group versus 88% for the control group (p<0.05).

Several wide-scale studies also confirmed the effectiveness of the family psychoeducation approach (McFarlane, Dixon, Lukens, & Lucksted, 2003; Pitschel-Walz, Leucht, Bauml, Kissling, & Engel, 2001). They showed that these interventions led to a 20% reduction in relapse rate. A recent review confirmed the effectiveness of working with families. From the study of 50 randomized controlled trials, they highlighted the effectiveness of this therapy at various levels (Pharoah, Mari, Rathbone, & Wong, 2010):

1. disease knowledge of the family,
2. reduced relapse rate after two years,
3. improved treatment observance. Furthermore, psychoeducation seems to help alleviate the “family burden” and improve strategies to cope with a relative’s illness (J. M. Favrod, A., 2012).

Table 5: meta-analyses on family psychoeducation

<table>
<thead>
<tr>
<th>Study Description</th>
<th>Effectiveness</th>
<th>Sample Size</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharaoah et al. (2010)</td>
<td>Assess the effectiveness of family psychoeducative interventions compared to standard care</td>
<td>&gt;4,800 patients</td>
<td>53 randomized controlled trials studying various modes of family interventions (psychoeducative program, family behavioral management)</td>
<td>Family interventions reduce relapse rate for up to 2 years and the number of hospitalizations. They improve treatment observance, disease insight in the family, reduce family burden and improve social skills</td>
</tr>
<tr>
<td>Pitschel-Walz et al. (2001)</td>
<td>Assess the effectiveness on relapse rate of including families in psychoeducative treatments</td>
<td>25 trials (23 to 418 patients per trial)</td>
<td>Randomized controlled trials (family vs standard care, family + patient vs standard care)</td>
<td>Relapse rate reduced by 20% if families are included. A duration over one year seems necessary to see an effect on the patient (minimum 3 months)</td>
</tr>
</tbody>
</table>

It was also shown that two criteria were determinant to make these programs effective: the number of sessions and the treatment duration. A program with at least ten sessions and lasting over three months seems to be more effective and yield longer effects (over two years) on relapse prevention (Chien & Wong, 2007).

Family psychoeducation is a particularly effective intervention: the intensity of its effect on relapse prevention is close to medicated treatments. It benefits from high evidence levels and proven cost-effectiveness (Mino, Shimodera, Inoue, Fujita, & Fukuzawa, 2007). But it is still under-developed in France (Y. Hodé, 2013).

One of the major risks of psychoeducation is if patients, who do not see themselves as ill, are forced onto a medical model, which may lead to break the therapeutic alliance. It is important to not overshadow the patients’ will with medical knowledge.

IMPORTANT POINTS REGARDING PSYCHOEDUCATION

- Psychoeducation is a non-medicated treatment defined as a structured intervention providing didactic information on the disease, its treatments but also emotional aspects to help participants (patients or families) cope with the disease.
- Psychoeducation should be systematically offered to every patient in their care pathway as a basic care.
- Data from meta-analyses show that psychoeducative interventions for patients and families may reduce relapse rate and yield positive effects on other aspects, such as an improved treatment observance and a reduced family burden.
- Psychoeducation needs to provide:
  - information to know and understand the disease,
  - explanations on biopsychosocial cares and treatments,
  - help to develop skills associated with relapse prevention,
• information provided in a non-menacing way, using terms as positive as possible (vulnerability and recovery).
• Interventions need to last over three months for better effectiveness, and to consist of at least ten sessions.
• Psychoeducation can benefit to stabilized in or outpatients, and may thus be offered in hospital or in the framework of a medico-psychological center.
• The content of the psychoeducation offered to the patients need to be adapted to the disease phase; it is more effective in patients with a disease progression lasting for 4 to 7 years.
• Family psychoeducation need to be systematically offered, considering the high level of effectiveness, particularly on relapse rate and the reduced number of days in hospital.

Psychoeducation is an educative intervention technique providing disease, symptoms and treatment information to patients and/or their relatives. It is not only a transfer of information. An educational, psychological and behavioral work needs to support it.

There are less studies on the psychoeducation focused on the patient compared to family psychoeducation. Psychoeducation intended to families and/or patients is effective on relapse prevention and treatment observance. Interventions with the highest evidence level involve relatives: psychoeducation for patients only proved to be effective but with a lower evidence level than a combined patient-family psychoeducation (Lincoln et al., 2007). This difference may be explained by a lesser number of randomized controlled trials for patient psychoeducation (Y. Hodé, 2013; Lincoln et al., 2007). It is necessary to conduct new controlled trials for this psychoeducative modality.

III.3.3.3.3 Social skills training

Social skills training exists since the 1980s. It was originally developed by Liberman’s team (Liberman, 1982) and followed the apparition of techniques such as “token economy”. These techniques aimed at treating institutionalized patients according to the operant conditioning principle, i.e. a learning situation implying the (positive or negative) consequences on one’s actions. In practice, patients were awarded when they acted in an adapted way, and received negative reinforcement when the action was not adapted. This technique, which seemed to involve regressed patients, lost its appeal with the lack of convincing results: thus social skills training (SST) appeared.

Social skills may be defined as “the verbal and non-verbal behaviors resulting from cognitive and affective processes to adapt to the community life”. It is the sum of “specific skills to help us respond efficiently to a social situation” (J. B. Favrod, L., 1993). Today, social skills are conceptualized as an information treatment model in 3 areas:
1. receptive skills,
2. decision-making skills,
3. behavioral skills.

Receptive skills are the ability to identify and understand important parameters in a social situation. Decision-making skills are the ability to choose the appropriate answer to the social situation, the ability to adapt. Behavioral skills are the various verbal and non-verbal elements in the chosen response: posture, facial expressions, voice tone or volume, and response content (J. M. Favrod, A., 2012).

Patients with schizophrenia often have social skills impairments, baring their integration and functioning in the community. These impairments make patients uncomfortable in a conversation, and unable to create or maintain relationships. These impairments are often present since the onset
of the disease and remain in time if no adapted psychosocial treatment is provided (Addington, Saeedi, & Addington, 2006). The work on social skills is intended to reinforce the ability to adapt to stress (according to the stress-vulnerability model) and thus to compensate part of the vulnerability specific to schizophrenic patients.

The objective of social skills training is to give to patients the possibility to have fruitful and adapted social exchanges again. SST offers patients to learn how to cope with interpersonal situations in everyday life (request, rejection, criticism, conversations) and avoid isolation by acquiring the required tools to create social relationships. SST aims at reducing their lack of social know-how, self-confidence and awareness in some social consequences of their behavior (Kopelowicz, Liberman, & Zarate, 2006). This training is rather a group behavioral technique (6 to 12 patients) and is often provided in a room with a video system, to help compensate attention impairments.

SST techniques are validated in many countries to treat schizophrenia. More than 23 controlled trials on social skills training were conducted and several reviews of the literature were published on this topic. This studies showed that patients with schizophrenia are able to learn a variety of skills (conversational strategies, self-assertion, interpersonal problem-solving), and that these skills are still present after two years (maximum duration of conducted studies) (T. L. Lecomte, C., 2012).

Several meta-analyses confirm the effectiveness of SST. One meta-analysis (Pfammatter, Junghan, & Brenner, 2006) studied 19 controlled trials and found positive effects of SST on the social skills acquisition and social functioning. Another meta-analysis (Mueser et al., 2004) found a positive effect (ES=0.52) on social and everyday skills, functioning in the community and negative symptoms. They also found a small effect (d=0.23) on relapses. Kurtz et al. studied 22 randomized controlled trials on 1,521 patients (Kurtz & Mueser, 2008). Results highlight SST effectiveness (ES=1.20 for the therapeutic effects on social skills and everyday autonomy; ES=0.52 for the effect on psychosocial functioning and ES=0.40 for the effect on negative symptoms).

Despite these encouraging studies, a number of results show that it is still difficult to transfer these skills trained in sessions to everyday life (Chien & Yip, 2013). To achieve this, transfer techniques need to be used more frequently and emphasize the importance of home exercises, and provide a way to work in a context simulating real situations.
<table>
<thead>
<tr>
<th>Authors and date</th>
<th>Study objective</th>
<th>Number of patients</th>
<th>Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilling et al. (2002)</td>
<td>Assess the SST effectiveness on various measures in schizophrenia.</td>
<td>N/A</td>
<td>&lt;15 randomized controlled trials</td>
<td>small effect on social functioning, relapse rate, treatment observance and quality of life.</td>
</tr>
<tr>
<td>(Pilling et al., 2002)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pfammater et al. (2006)</td>
<td>Assess the effectiveness of various psychosocial therapies, including SST, in schizophrenia.</td>
<td>Over 690 patients with schizophrenia</td>
<td>19 randomized controlled trials</td>
<td>1. Effectiveness on social skills acquisition (d=0.77), general symptoms (d=0.23) and social functioning (d=0.39).</td>
</tr>
<tr>
<td>(Pfammatter et al., 2006)</td>
<td></td>
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</tr>
<tr>
<td>Kurtz et al. (2008)</td>
<td>Assess the SST effectiveness on various measures in schizophrenia.</td>
<td>1,521 patients included</td>
<td>23 randomized controlled trials</td>
<td>Positive effect (d=0.52) on social and everyday skills, functioning in the community and negative symptoms. They also show a small effect (d=0.23) on relapse after a 1-year follow-up.</td>
</tr>
<tr>
<td>(Kurtz &amp; Mueser, 2008)</td>
<td></td>
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</tr>
<tr>
<td>Tungpunkom et al. (2012)</td>
<td>Assess the effects of skill acquisition programs compared to standard cares or other comparable therapies in patients with chronic mental disorders.</td>
<td>483 patients</td>
<td>7 randomized controlled trials</td>
<td>Small effect on social functioning. Overall, the review authors conclude that there is no significant difference between persons trained on skills necessary to everyday life, an occupational therapy, mutual aid and standard care.</td>
</tr>
<tr>
<td>(Tungpunkom, Maayan, &amp; Soares-Weiser, 2012)</td>
<td></td>
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</tbody>
</table>
IMPORTANT POINTS REGARDING SOCIAL SKILLS TRAINING

- SST is based on two renown models, the Bandura model of self-efficacy, in which a person’s efficacy is acquired by repetition and positive reinforcement, and the stress-vulnerability-competence model, suggesting that good social skills may help the persons prevent relapses.
- SST should be offered after an assessment highlighting impairments in social relationships and interactions.
- SST is a group therapy dealing with verbal and non-verbal behavioral aspects that help respond effectively to a social situation; this training thus helps social interaction and the use of new social behaviors.
- SST showed its effectiveness on various aspects of social skills, the functioning in the community and most of all the negative symptoms with durable effects (approximately two years).
- SST may be provided to in or outpatients, the content and trained skills being adapted to the context.
- SST should be as ecological as possible to offer the best effectiveness; it should thus be used in the context of rehabilitating the patient, and associated with cognitive remediation or supported employment.

According to the data from the literature, SST showed its effectiveness on various aspects of social skills, functioning in the community and negative symptoms with durable effects (approximately two years); however, generalization of effects into everyday life has yet to prove effective.

Data from large-scale studies encourage the use of this intervention, which has the particular interest of yielding positive effects on negative symptoms. Furthermore, associating social skills training with other psychosocial treatments such as cognitive remediation proved effective (Mueser, Deavers, Penn, & Cassisi, 2013) and several cognitive remediation programs (IPT and SCIT in particular) include a social skills training.

III.3.3.4. Cognitive behavioral therapy

Cognitive behavioral therapy (CBT) was developed in the 1950. It has since proved effective in treating mood disorders, anxiety disorders and personality disorders (T. L. Lecomte, C., 2012). However, its use in treating psychotic disorders, particularly schizophrenia, only started about twenty year ago.

CBT was developed in psychosis as a complementary treatment for medicated therapy, since a large number of patients (30% to 40%) only partially recover, with lasting psychotic symptoms. CBT, through structured techniques, helps patients with schizophrenia cope with the psychotic symptoms they cannot control with medication (Haddock et al., 1999). It is intended to reduce the symptoms intensity and severity.

In psychosis, CBT relies on various cognitive models. They explain how psychotic symptoms may be encouraged by psychological mechanisms. Indeed, the creation of delusional beliefs may be encouraged, according to the literature, by various cognitive biases, such as: jumping to conclusions, over-assigning negative events to foreign causes and seeing a threat in neutral contexts (Freeman, 2007). These biases may be modified through a psychotherapeutic approach. Beliefs that generate “pain” are often associated with psychotic symptoms. Cognitive therapy tries to modify them by helping the patients understand the behavioral and emotional consequences they may have. It uses a non-confronting questioning (“socratic questioning”) to bring the patients to provide alternate hypothesis.
The therapeutic work is based on collaboration. The patient has a central role in the intervention. The therapist needs to respect and use the patient’s experience. The therapeutic work is organized in several steps. The first one is a therapeutic alliance as strong as possible between the patient and the therapist: it is a key condition for success. The next step is a functional assessment period to identify symptoms and define the therapy objectives. Finally, they work on hallucinations, delusional ideas and associated beliefs (Rector & Beck, 2002a, 2002b).

Various cognitive techniques are used in this type of treatment and may be very useful (Garety, Fowler, & Kuipers, 2000):

1. therapeutic education on the disease,
2. psychotic symptoms normalization,
3. techniques learning to manage the symptoms,
4. reconsidering the evidences underlying beliefs,
5. involvement in reality tests.

These cognitive techniques provide educational and normalization strategies to explain to the patients that psychotic phenomenons are set on a normal-pathological continuum and that, in some natural conditions such as sleep deprivation or altitude, psychotic symptoms may be triggered. The therapist then explains that, in schizophrenia, normal stress conditions may trigger psychotic symptoms due to an increased vulnerability. Understanding these elements help patients talk more freely about their symptoms. The therapist also offer the patients the tools to cope with symptoms, such as focusing techniques to reduce the anxiety related to these phenomenons (J. M. Favrod, A., 2012). This type of work may only be conducted if strong collaboration and therapeutic alliance have been created (Turkington, Dudley, Warman, & Beck, 2004).

Individual cognitive behavioral therapy is usually conducted on an average period of 4 to 6 months with around twenty sessions. They are usually offered to patients with residual symptoms. There are also group CBT modules that have been created to help normalization and sharing of adaptation strategies between participants. The group approach does not provide the same level of personalization but has several advantages, such as breaking the isolation of persons with psychosis and the impression that they live unique experiences (Wykes, Parr, & Landau, 1999). Others group approaches exist and may focus on self-esteem.

In the late 1980s, English researchers conducted studies on CBT, first with small samples, and then larger samples in randomized controlled trials. In these studies, CBT is compared to non-specific support therapies (Turkington et al., 2004). More than 40 controlled trials have been conducted on CBT for psychosis. The majority of these works draw the same conclusions: CBT is effective in reducing positive symptoms and improving social functioning (Sensky, 2005). Several studies (Gould et al., 2001, Rathod and Turkington, 2005, Zimmermann et al., 2005) added that these therapies have a moderate effect size on positive symptoms, and that the effects are long-lasting (>1 year).

A meta-analysis on a larger number of studies (n=33 studies; (Wykes, Steel, Everitt, & Tarrier, 2008)) confirmed the CBT’s positive effects on positive symptoms with a moderate effect size (ES=0.37), but also showed the effectiveness on negative symptoms (ES=0.44) and social functioning (ES=0.38).

Granholm et al. (2009) confirmed these results by studying 18 randomized controlled trials, which included measures of social functioning. They showed that two thirds of these trials reported significant improvement in these measures (Granholm et al., 2009). Despite these very interesting results, two other published meta-analysis drew less favorable conclusions (Lynch et al., 2010, Jones et al., 2012a). They showed a small effect size on positive symptoms and very little effect on relapse rate. The study from Lynch et al. (2010) was criticized for selecting trials which did not inform about
their inclusion criteria and did not do any effect follow-up on the selected trials. These two meta-analyses are also questionable regarding their sample sizes (around 600 patients) (Kingdon, 2010).

Several studies in 2014 seem to confirm CBT effectiveness in reducing positive symptoms, with moderate size effect overall. Older studies found greater effect sizes, but tended to over-evaluate them because of a lack of scientific rigor in some selected trials (Wykes et al., 2008). CBT effectiveness on negative symptoms seems also to have been over-evaluated and in the end is negligible (Velthorst et al., 2014).

Table 7: meta-analyses dedicated to cognitive behavioral therapy

<table>
<thead>
<tr>
<th>Authors and date</th>
<th>Study objective</th>
<th>Number of patients</th>
<th>Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velthorst et al. (2014)</td>
<td>Assess CBT effectiveness on negative symptoms in patients with schizophrenia.</td>
<td>2312 patients</td>
<td>30 randomized controlled trials</td>
<td>CBT has a small effect size on negative symptoms (ES=0.093) and trial results are very heterogeneous. Results are relatively the same, whether negative symptoms are a primary or secondary criterion.</td>
</tr>
<tr>
<td>Burns et al. (2014)</td>
<td>Assess CBT effectiveness in outpatients with schizophrenia showing residual symptoms</td>
<td>639 patients</td>
<td>12 randomized controlled trials</td>
<td>CBT is effective in post-treatment on positive symptoms (ES=0.47) and general symptoms (ES=0.52). The effects slightly decrease but are maintained in follow-up (6 months). CBT may be interesting in complement to medication in resisting patients.</td>
</tr>
<tr>
<td>Van der Gaag et al. (2014)</td>
<td>Assess the effects of “tailored” CBT on delusional beliefs and auditory hallucinations (separately) after the treatment (no follow-up period)</td>
<td>1418 patients</td>
<td>18 randomized controlled trials</td>
<td>“Tailored” CBT effective on delusional beliefs (ES=0.36) and hallucinations (ES=0.44); compared to active treatment, TCC not significant on delusional beliefs, but still significant on hallucinations.</td>
</tr>
<tr>
<td>Study</td>
<td>Design</td>
<td>Participants</td>
<td>Trials</td>
<td>Key Findings</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------</td>
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</tbody>
</table>
| **Turner et al.**| Compare the effectiveness of psychological interventions (CBT, CR, SST, etc.) in psychosis | 3,295 patients with psychotic disorders (mainly schizophrenic and schizoaffective disorders) | 48     | 1. CBT shows moderate but durable effects in reducing negative symptoms, compared to all other therapies ($ES=0.16$).  
2. SST shows the best effectiveness in reducing negative symptoms ($ES=0.27$). |
| **Jones et al.** | Assess CBT effectiveness in patients with schizophrenia compared to other psychosocial therapies (psychoeducation, family intervention, support therapy) | Patients at different phases in the disease (decompensation, chronic phase) | 20     | 1. No effectiveness of CBT on general symptoms compared to psychosocial therapies.  
2. No effectiveness on rehospitalization and relapse rates.  
| **Sarin F. et al.** | Assess CBT effectiveness (symptom and relapse reduction, medication use, etc.) after treatment and follow-up, compared to standard care or other psychosocial treatments (psychoeducation, family intervention, support therapy) | 2,469 patients, mainly outpatients | 22     | 1. CBT effective on positive, negative and general symptoms (follow-up; $p<0.05$), tendency but not significant after treatment compared to psychosocial interventions; effective but not significant compared to standard care.  
2. Medication use: dose reduction after treatment but not after follow-up (heterogeneous trials)  
3. No effectiveness on relapses, regardless of the comparison.  
4. Therapies with at least 20 sessions. |
<table>
<thead>
<tr>
<th>Study</th>
<th>Title</th>
<th>Methods</th>
<th>Participants</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynch et al. (2010)</td>
<td>Assess CBT’s lack of effectiveness on symptoms in schizophrenia, depression and bipolar disorder</td>
<td>601 patients</td>
<td>9 randomized controlled trials with at least 60% of patients with schizophrenia. Control group: support therapy, psychoeducation group, occupational activity</td>
<td>CBT is not more effective than control therapies on symptoms and relapse rate</td>
</tr>
<tr>
<td>Wykes et al. (2008)</td>
<td>Assess effect sizes of CBT targeting a symptom (positive, negative, depressive symptoms, anxiety, etc.) or more generally, action modalities and the effect or scientific rigor</td>
<td>1,964 patients (chronic and in active phase)</td>
<td>34 randomized controlled trials, group and individual CBT.</td>
<td>1. CBT effective on positive symptoms but with moderate effect size (ES=0.35). 2. May be effective on other areas such as negative symptoms, anxiety, depression, social functioning (ES=0.38) even if they are not targeted. 3. Methodological rigor impacts the results, especially when the assessors know the group distribution, tendency to over-evaluate effect size</td>
</tr>
<tr>
<td>Zimmerman et al. (2005)</td>
<td>Assess CBT effectiveness on positive symptoms in schizophrenia depending on the patient’s state (chronic, decompensating) and control group</td>
<td>1,484 chronic and acute patients</td>
<td>14 studies (13 CRT + 1 CT)</td>
<td>CBT effective on positive symptoms (ES=0.37). Effects seem more significant on patients in active phase than chronic patients (not significant). Results are maintained after 12 months. Effect size larger if compared to standard care rather than non-specific treatment.</td>
</tr>
</tbody>
</table>
| **Gould et al. (2001)**
(Gould, Mueser, Bolton, Mays, & Goff, 2001) | Assess CBT effectiveness in schizophrenia on psychotic symptoms and effect size | 340 patients with schizophrenia, schizoaffective disorder or chronic delusional disorders | 7 controlled trials with control groups such as waiting list, standard care or placebo. |
| | | ES=0.65 on positive symptoms. 2 ES=0.93 after 6-month follow-up. |
IMPORTANT POINTS REGARDING COGNITIVE BEHAVIORAL THERAPY

- CBT aims at modifying ideas and beliefs not adapted to reality, by teaching patients the links between perceptions, beliefs and the associated responses, be it emotional or behavioral.
- CBT should be offered after a functional assessment of symptoms, to identify the therapy’s objectives.
- CBT may be offered in group or individually. Results are convincing, regardless of the treatment modality.
- CBT is effective in reducing positive symptoms (seemingly more effective on hallucinations than delusional beliefs in individual therapy) and improving social functioning; effects are durable (>1 year).
- CBT may be offered to patients in acute phase but also to patient with residual symptoms.
- CBT may be offered to young patients in early psychosis, or as a prevention method to persons at risk to develop psychosis.
- CBT needs to be conducted over at least 20 sessions, by specifically trained professionals, which may be an obstacle to spread the techniques.
CBT aims at modifying biased or inadapted ways of thinking in persons with schizophrenia, by establishing with them a relationship based on trust and an empirical collaboration. CBT is recommended for positive symptom reduction, to complement medicated therapy for example. Effects appear to be durable after 1 year (Zimmermann et al., 2005, Burns, 2014). Patients should participate in at least 20 sessions for best effectiveness (Sarin et al., 2011).

Various studies also showed the effectiveness limit of CBT on negative symptoms (Velthorst et al., 2014) and social functioning. Evidences supporting relapse rate reduction are also weak.

**Conclusion**

Since cognitive remediation and therapeutic education improve the use of the patients’ own skills, their social relationships and their involvement in the treatment, they should help prevent and reduce the risk of interruption in the care pathway (recommendation of the mental health plan 2011-2015). Epidemiological studies need to be conducted in the French psychiatric population to confirm this hypothesis. However, clinical trials and meta-analyses mentioned earlier already show that it is relevant to more widely implement the therapeutic tools of rehabilitation (cognitive remediation, therapeutic education, social skills training, cognitive behavioral therapy). These diverse tools effectively impact various aspects of the psychic disability in the context of the optimization of the therapeutic effects/adverse effects balance of the psychotropic treatment. They offer the following benefits: reduced impact of cognitive disorders with cognitive remediation, reduced negative symptoms by social skills training, better observance and reduced relapse rate by psychoeducation, and reduced positive symptoms by cognitive behavioral therapy.
III.4. Actions for the integration in social life: Professional integration and housing

Every foreign country highlights the positive impact of developing housing and professional integration resources to improve autonomy and support toward competitive employment. Furthermore, they stress the important of the access to a wide panel of actions to meet the patients’ needs at different moments in their pathway.

In terms of housing, there are not as many evidences as for integration.

Thus we will first discuss studies on integration. We will then see that the housing sector is rather similar than the progress made in terms of integration, even if evidences are not as plentiful.

III.4.1. Professional integration: Major factor of the persons’ recovery and social integration

III.4.1.1 Employment as a recovery factor

It is widely agreed that having a professional activity is one of the factors the most effectively encouraging recovery in persons with a psychic disability (J. Boardman, Grove, Perkins, & Shepherd, 2003; Waghorn, 2008). It is still possible to recover without having a job, by undertaking other types of activities and self-fulfillment, but having a job remains one of the most effective ways - through the integration and social recognition it offers - to recover.

Having a job is listed among the objective recovery criteria, but is one of the preferred ways for a variety of reasons.

- First, the job offers a social identity as a professional, which helps the persons get rid of the stigmatizing “mentally ill” identity, and helps the redefinition process of the self, which is necessary after an illness that interrupted a biographical trajectory, and is the base of the recovery process (Amering, 2009; Anthony, 1993).
- Second, a paid job provides social recognition, helping the feeling of social inclusion and belonging in a group, more specifically to be recognized for their skills, abilities and contribution to collective tasks; the recognition is the base of self-esteem (Honneth, 2000).
- Finally, a professional activity helps to feel efficient (in professional tasks, to meet the job’s requirements), which contributes to restore self-esteem and the feeling of getting back control over their life and even their future (Bandura, 1997, Trad.fr (2003); M. Corbière, Mercier, C., Lesage, A., 2004).
- Since it is perceived as an empowerment or emancipation tool, work helps recovery, self-esteem and the feeling of having an independent identity (H. L. Provencher, Gregg, Mead, & Mueser, 2002).

We will discuss later what researchers call “extra-professional benefits of work” (§1.3), but we can already mention that, because they seem obvious, they are often overlooked or under-estimated. As Waghorn (2007) points out, “having a reason to get up in the morning and something to do during
the day is crucial to feel well” (Waghorn, 2008). Furthermore, it is clear that work provides the opportunity to fill and structure their days, and have social contacts and maybe create new relationships. Having an activity may also help satisfaction, or self-fulfillment, linked particularly to the feeling of participating in social life.

### III.4.1.1.1 As a preferred tool in the recovery process, professional integration is a primary objective

We will discuss here the professional integration of persons with a psychic disability in the framework of a wider treatment - and support practices - directed toward personal and social recovery. This means a priority shift, compared to the traditional medical approach aiming at clinical remission. Indeed, if the explicit objective of these persons’ treatment and support is not only the disorder stabilization, but also social integration and recovery, therefore professional integration is a major challenge, being a key factor of social inclusion and recovery.

In the traditional approach, focusing on clinical remission or stabilization and relapse prevention, getting a new job is considered as a possibility; it is desirable, gladly seen as the ideal complement of stabilization, but is still considered as optional and with caution, for the patients’ sake. The underlying risk is also considered; first the risk of failing to find a job, then failing at keeping it, the risk related to stress at work, difficulty to be integrated in the work group, difficulty to adapt to managing requirement, etc... which contributes to hesitate (and sometimes refuse) a project to go back to work, and the tendency to prefer sheltered employment. Protection is the first priority in this approach.

It is different if the objective is not only to prevent a relapse or maintain the clinical stabilization, but also to involve the patients in an active and social life and build a life project: a professional activity then appears as a preferred way to proceed. It is not merely an optional addition to clinical stabilization; stabilization is not the objective anymore, but a tool in the wider objective of recovery, i.e. to regain an active and social life.

It is the reason why, in most developed countries, durable professional integration of persons with a psychic disability has become an important axis in mental health policies. It is reflected by a diversification of support practices to help these persons have a job, and by developing research activity to rationalize and improve these practices.

### III.4.1.1.2 The more the professional integration of this population is seen as possible, the more it becomes a strong and legitimate request

#### III.4.1.1.2.1. Job access for persons with a psychic disability has become a legitimate possibility to consider

A variety of reasons support this situation.

- **Therapeutic progress**, particularly improved psychotropic treatments more respectful of cognitive functions, have laid ground for a new professional activity, after the treatment of acute episodes.
- **Shorter hospital stays** help rapidly bring back the persons in the social environment, which involves keeping or getting an activity, if possible a paid job. Also, shorter durations between job interruptions, due to the disease, and a return to work is an integration-helping factor.
- We can add to the improved treatments, **specific interventions to reduce functional limitations** due to the disease, particularly through **cognitive remediation** and cognitive behavioral therapy.
III.4.1.2.2. \textbf{With an appropriate support, job access is possible for most people with a psychic disability}

One of the main results of the research we are about to present (see §2.2) is that most people with a severe mental illness, and thus a psychic disability, may access to competitive employment, when they receive an IPS-type individual support (Bond et al., 2001; Bond, Drake, & Becker, 2008).

New practices in social integration support bring new expectations and a new perspective on these persons’ future. Their wish to find a new job cannot be disqualified as an unrealistic project, and requires an adapted response, since it is one of the rights of disabled persons.

III.4.1.2.3. \textbf{The majority of persons with a severe mental illness wish to have a professional activity.}

Many studies agree to say that the vast majority of persons with a severe mental illness wish to have a job (R. E. Drake, Green, Mueser, & Goldman, 2003; Mueser, Salyers, & Mueser, 2001; Secker, 2001), despite doubting they may actually get one; those who do not express this wish, usually fear that they will be prejudiced by the loss of resources due to their disabled person status. Every reason mentioned earlier supports this wish to get a job, and it has been shown in this population that persons who work in a competitive employment have a better quality of life and satisfaction of their situation, compared to the persons who have a different, unpaid activity (Eklund, Hansson, & Ahlqvist, 2004). This wish to work from persons with a psychic disability tend to be under-estimated or unknown, when it is not disqualified due to stigmatization.

III.4.1.3. \textbf{Work rights of the persons with a disability.}

As J. Boardman pointed out in 2003 (J. Boardman, 2003), it is important to remind that the right to work is mentioned in the article 23 of the \textit{Universal Declaration of Human Rights} (UN, 1948). Regarding the persons with a disability, who suffer very high unemployment rates when it comes to psychic disability, these rights are recalled by the United Nations \textit{Convention on the Right of Persons with Disabilities} (UN, 2006), which relies, in its general principles, on non-discrimination (second principle) and full and effective participation and inclusion in society (third principle) (UN., 2006). The objective of the professional integration of these persons is no more than to satisfy these rights and principles.

This is the issue that is responsible for the laws regarding the persons with disabilities, particularly in France, with the 11 February 2005 act “for the equality of rights and opportunities, the participation and the citizenship of disabled persons”.

It is the spirit of the 2005 Act, as of the aforementioned UN convention, to prefer a support in competitive employment, rather than a sheltered employment. This right is reminded in the first paragraph of Le Houérou’s report (2014), but it is readily observed that “this right to competitive employment is far from being granted” (Le Houerou, 2014).
It is important to mention that these integration supports, seen today as reference, due to their effectiveness (see §2.2), were initially designed, not as much for their effectiveness than to satisfy these rights and ethical principles (as it is reminded in the presentation of “supported employment” on the European association EUSE’s website) 3.

III.4.1.1.4. Extra-professional work benefits.

Salaries received in the job are rarely the main or only motivation factor to work of disabled persons, especially if the gap between salaries and pension or social benefits is small (if the job does not require qualification, which is usually the case, salaries and benefits are not cumulative).

But there are other benefits that help motivation, as disabled people spontaneously agree on.

- Having a job helps structure time and days, in a way that complies with most social habits, thus helping the feeling of inclusion in social and professional life, “like everyone else”.
- Work also gives opportunities to have social relationships, outside of family or friends, and most of all, it helps get recognition from colleagues, whether it is related to professional skills or the contribution to the collective work, of which the importance is now recognized, particularly as the main factor of self-esteem (Honneth, 2000).
- Social and/or professional identity that work may offer is also crucial to help these persons to build or internalize a social identity, different from the “mentally ill” identity. This progressive release from stigmatization, restoration of confidence in their professional and adaptation skills, and therefore the hope for improvement are among the main ingredients of the recovery process.
- More precisely, adaptation, or success, in a professional activity helps restore a feeling of effectiveness for a number of tasks or to overcome certain difficulties (M. Corbière, Mercier, C., Lesage, A., 2004), which contributes to the feeling of regaining control over their life and to achieve fulfillment, thanks to empowerment. All these are indicators of recovery (Amering, 2009). On the social level, feeling useful through work is important for some, so they legitimately feel socially included, and find a new meaning in their life.

III.4.1.1.5. Summary: acknowledging the possibility to go in competitive employment and implementing effective support practices: mutual dependence

The real possibility for persons with a psychic disability to work in a competitive employment, which reinforces the legitimacy of this expectation, should be considered as an important result of research conducted in this area and its influence on practices.

There is a reinforcement cycle between the acknowledgment of this possibility, and the implementation of practices to effectively reach this objective. Conversely, doubting that persons with a psychic disability may be employable is a well-known obstacle (M. Corbière, 2012; Mueser et al., 2014), not only to the implementation of effective integration practices, but also to their quality.

The improvement of support practices in professional integration need to rely on the acknowledgment that this integration in competitive employment is possible in most cases, and that it is necessary to implement practices to reach this objective.

3 http://www.euse.org/content/supported-employment-toolkit/EUSE-Toolkit-2010.pdf
We may offer the hypothesis that the delay in implementing employment support in France, compared to its Europeans and Anglo-Saxon neighbors, is partly due to the persisting prejudice in which people doubt the professional adaptation skills of persons with a psychic disability.

### III.4.1.2. Evidences and research results in terms of professional integration of persons with a psychic disability

The importance now conferred to professional integration of persons with schizophrenia is confirmed by the many published researches it has been subjected to in the past twenty years, particularly in the most renown psychiatric and medical journals (*American Journal of Psychiatry, Schizophrenia Bulletin, British Journal of Psychiatry, The Lancet*) and a number of journals specialized in this topic (*Journal of vocational rehabilitation, Journal of Career Assessment, Journal of occupational rehabilitation, Psychiatric Rehabilitation Journal, Work: a journal or prevention, assessment and rehabilitation*).

The improvement of the professional integration offers, made possible by these works, reinforces this topic's relevancy and justify its current development.

It is necessary to highlight how new and unprecedented this situation is. Practices to support the professional integration of this population, through sheltered employment for example, have been used for a long time. What is new, particularly in France, where these data were not really considered, is that these social and medico-social practices are now subjected to rigorous empirical researches, of which the results suggest a progression, and sometimes a transformation of practices.

We focus here on the data suggesting a transformation of practices.

#### III.4.1.2.1. A variety of research axes in terms of professional integration, but only the research on support modes provides evidences.

We can summarize the variety of researches on the professional integration of this population in the four following topics.

1. Personal factors (clinical, cognitive, work-related) to get and keep a job.
2. Comparative study of support modes to professional integration, which shows the superiority of the “Place and Train” model.
3. Psychosocial interventions (such as cognitive remediation and group CBT) to help get and keep a job.
4. The issue of reasonable adaptation at work to help integration, but more importantly to keep the persons with a psychic disability at work.

First, we need to remind that among these topics, only the second one provided evidences (R. E. Crowther, M. Marshall, G. R. Bond, & P. Huxley, 2001; Kinoshita et al., 2013). These evidences unquestionably demonstrated the greater effectiveness, in terms of access to competitive employment, of *supported employment* practices, also called “*job coaching*”.

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This is the reason why we will focus this presentation of research data on this obvious result, now widely known, which appears as a major optimization factor of integration practices and suggests a reorientation/reorganization of practices. We will then rapidly go over the other research results.

III.4.1.2.2. Supported employment is accepted as the employment support practice based on convincing data.

A vast amount of studies compared the various employment support methods and practices, showing that it is a key factor of professional integration for this population. The practice called “supported employment” is now accepted as the most effective: every comparative studies (randomized controlled trials) show that its integration rate in competitive employment is twice as high as traditional integration support for these persons (Bond et al., 2001; Bond et al., 2008; R. E. Drake & Bond, 2008a, 2008b).

Two Cochrane review articles also point out the greater effectiveness of supported employment. Crowther et al. (2001) studied 18 randomized controlled trials to confirm that supported employment offer better integration rates after a 18-month follow-up (34% versus 12% for preparation practices to go back to work) (R. E. Crowther et al., 2001). Kinoshita et al. (2013) analyzed 14 randomized controlled trials comparing supported employment with other integration support practices. They also confirmed that supported employment offer a better employment access rate after a one-year follow-up, and that the duration of job maintenance is also increased. The authors however highlighted some methodological weakness in the researches, such as the duration of job maintenance, and suggested to conduct more studies with longer follow-up periods (Kinoshita et al., 2013).

III.4.1.2.2.1. Supported employment characteristics

This practice was designed in the late 1970s in the United States, for persons with a mental deficiency, since sheltered employment created a form of segregation and thus social exclusion. To help professional integration for these persons, and therefore their social inclusion, an audacious model of direct integration in competitive employment was tested, relying on a long-term, individualized support after employment. The effectiveness shown by this practice led to adapt it for different types of disabilities, such as psychic disabilities.

These “supported employment” programs are opposed on various aspects to traditional integration practices, such as preparation activities to work. Whereas the latter relies on progression and a training prior to integration in competitive employment, which is called “Train and Place”, the alternative approach relies on the inversion of this principle, which becomes “Place and Train”: integrate first, and then train and support in the work activity. The objective is to integrate the persons as soon as possible in competitive employment, without preparation that tend to delay the effective professional integration forever, and then offer, over a long period of time, an effective support in the work activity. It is preferable that the support be provided on location, which implies that the employer and colleagues need to be informed at some extend on the disability and the implemented support. A single person, called a “job coach”, manage the tasks that are the support in looking for and getting a job, and then keeping this activity in the best conditions possible. We will see that the support customization, which helps the treatment continuity, flexibility and reactivity depending on the persons’ needs, and the creation of a working alliance, are among the effectiveness factors of this practice.
But there are a number of ways to implement this practice, as Marc Corbière pointed out in his comparative study of the implementation of this practice in 23 different structures spread in Canada’s states, over 52 sites (Corbière et al., 2010). For the psychic disability, the IPS (Individual Placement and Support) model, designed for this population in the early 1990s by Bob Drake and Deborah Becker to comply with the principles of the “Place and Train” model, became accepted as reference model, due to its great effectiveness (Bond et al., 2008; R. E. Drake & Becker, 2011; R. E. B. Drake, G. R.; Becker, D. R., 2012; Latimer et al., 2006).

**III.4.1.2.2.2. IPS (Individual Placement and Support) program: the reference model in supported employment**

A meta-analysis on the IPS program for the “professional integration with individualized support” reported a mean integration rate in competitive employment of approximately 60% after an 18-month follow-up, whereas it is only 23% with other support methods (Bond et al., 2008).

The IPS model is the most standardized, the most studied and reportedly the most effective supported employment program for persons with a mental illness. It was designed in 1993 by Becker and Drake, and is defined by 8 principles to guide its implementation (D. Becker, Drake, RE., 2003; R. E. B. Drake, G. R.; Becker, D. R., 2012; Mueser & McGurk, 2014).

1. **The no-exclusion principle.** This means that the only admission prerequisite is the wish of the person with the mental illness to get a job in competitive employment. There is no other criterion, which shows the high level of ethical requirement in this approach, intended to encourage social inclusion. This does not mean that every candidate has the same likelihood of succeeding in their professional integration, but they are all allowed to try.

2. **The objective is getting a job in competitive employment.**

3. **Job hunting starts early,** in the first month after being admitted in the program.

4. **The job coach needs to be very close to the medical team.** Since job coaches are not clinicians, they need to be well coordinated by caregivers.

5. **The preferences of the job seekers,** in terms of type of activities, are taken into account.

6. A **job development** effort needs to be performed, depending on the person’s skills, and in relationship with the employer to optimize the match between the job offered and the person’s skills.

7. **Employment support is continuous and never-ending** (no limit in time). This support continuity and reactivity are among the effectiveness factors of this practice, and the fact that it never ends helps reassuring both the worker and the employer.

8. Counseling and support are offered to the persons in terms of social benefits. Getting a job in competitive employment implies that they stop receiving a pension, which is a risk for the persons. They need to understand it and count on the support to get their social benefits back if professional integration fails.

**III.4.1.2.2.3. Effectiveness factors of supported employment programs**

Among the “supported employment” programs, integration rate in competitive employment, though it is 60% on average (according to the most quoted meta-analysis (Bond et al., 2008)), actually varies considerably (27% to 78%) depending on the contexts and implementation modalities. A debate and specific researches have been initiated to look for the factors responsible for these variations.

A first hypothesis is the level of compliance to the 8 principles of the reference IPS model. We will see that other variables change the results of this practice. Since the practice relies only on one
person (other than the job seeker), the job coach, it is obvious that their skills and the quality of their interventions affect the practice performance. We will see that the quality of this support also depends on the organization of services, which need to give the job coach the autonomy and flexibility to conduct their mission and support them.

a) Compliance to the principles of the IPS model

The assessment of supported employment practices partly relies on the measure of compliance in the principles of the IPS model. But it is established that among these principles, some are more predictive than others of employment integration rate. According to G. Bond’s review of the literature (2004) (Bond, 2004), the principles that are the most related to integration rates are the first three (no exclusion, job in competitive employment, job hunting as soon as possible) and job development. The other principles also have a positive effect on integration rate, but with less evidence. Other researches tried to identify other factors affecting integration rate, such as the employer involvement in the work integration process (Evans & Bond, 2008).

b) Job coaches’ skills

Several studies show that these result variations mainly depend on the support quality, and more specifically on certain skills and behaviors of the job coaches (R. E. Drake, Bond, & Rapp, 2006). This is why new researches were conducted on these professionals’ skills and behaviors (M. Corbière, Lanctôt, N., 2011; Corbiere, Villotti, Toth, & Waghorn, 2014). These skills, behaviors and knowledges are numerous; Corbière lists 90 of them in his last assessment scale of these skills, behaviors and knowledges (Corbiere et al., 2014). Some are seemingly more directly related to employment access rate and others are important to help keep a job (R. E. B. Drake, G. R.; Becker, D. R., 2012). To help job integration, it is important for the job coach to effectively create a trust and collaborative relationship between the company actors (employer, supervisor), or to know how to negotiate to better adapt the offered employment to the skills of the candidate (job development). To encourage job maintenance, the key skill for a job coach is to establish a quality relationship with the worker’s immediate supervisor, to help adapt the work if necessary. The follow-up continuity and reactivity are also factors helping job maintenance, with a good knowledge of the company’s culture by the job coach to better help the worker adapt (Corbiere et al., 2014). Finally, many studies insist that the job coaches’ performance depends on their involvement in this practice and in the “supported employment” spirit, and their compliance to the model, and particularly its basic premise, which states that professional integration is possible (Mueser & McGurk, 2014).

It is important to note that job coaches are not hired among clinicians (psychologists and nurses) but come from the corporate world, and know its culture, limits and resources.

This new “job coach” position perfectly illustrate how the medico-social sector changed its “philosophy” or orientation to match the contemporary approaches. It switches from a protection and assistance culture, in which professionals are still highly influenced by a medical culture, aimed at protecting (without taking a risk), to an empowerment and social inclusion culture, in which professionals support the persons in the ordinary society (and competitive employment), where they need to be themselves perfectly integrated (the work of the job coach is essentially conducted in the company, rather than in medical-social structures). But these practices cannot be effective without accepting a positive risk taking, on which the person’s progress depends.

The individualized support offered by the “supported employment” model may also be considered as a concrete illustration of a paradigm - or register - shift caused by a practice “focused on personal recovery”:
- change from a mainly medical objective (disorder remission) to a social (integration, inclusion) and existential (new involvement in a chosen active life) objective,
- i.e. switch from an approach focused on the disease to an approach focused on the persons and their future,
- i.e. switch from “cure” to “care”.

It is striking to notice that this individualized, customized, “tailored” support requires the specific qualities of care, as they were defined in the recent years in moral philosophy, by the care theories and ethics. The following traits may be mentioned: the care should not be only taken as an intervention, but first as a sensitivity, a perceptive and attentional measure to help others and their specific needs; the care implies to be attentive to the situation uniqueness, to concrete details of the everyday life, to the ordinary (Laugier, 2006); the care is also telling about what we care about, i.e. the unique values of the person (Frankfurt, 1988). Also, the care shows us how vulnerable and interdependent we are, on which we may build some kind of autonomy (particularly through self-care capability) (Molinier, 2009). Finally, if we consider that primary maternal care for babies are a caring model, it is important to remind that the objective is to support an autonomy process and, more precisely, as it is reminded by Worms (2012), who quotes Winnicott (1971), “to create a space where, feeling confident, the child may creatively play”; this objective still stands for every care relationship. The objective is “to build a world to explore, where we may act, play and create, and that we need to care about”, i.e. it is by taking care of a common or shared world that an autonomy process may be supported and made possible (Worms, 2012).

c) Organizational differences between IPS-type supported employment and traditional work preparation/readaptation assessments.

We may expect that effectiveness differences between supported employment and traditional practices are linked to what basically distinguishes both practices. But what makes them differ is only a strategy difference over the assessment place and role. The traditional model focuses on a prior assessment, used to guide a progressive work readaptation strategy and prepare to go back to work, whereas the supported employment model, in its principles, renounces to these prerequisites, and prefers a support in an actual work situation. However, we could object that the difference is not that high, and that there is an assessment in supported employment, but instead of being performed prior to getting a job, it is conducted in a work situation, on the long-term, and never ends, which is actually recognized as the most relevant assessment method (Busnel, 2009).

A deeper difference between these models lies in the support organization. The traditional model of progressive work readaptation involves diverse professionals, experts in a number of assessment and readaptation tasks (clinicians, neuropsychologists, professional orientation assessment managers and then work training and cognitive remediation clinicians). The division of tasks requires a hierarchical organization, to ensure the coordination of these professionals and supervise the complex organization of this care. It is therefore necessary to define assessment and management protocols, implement training or remediation modules, and then put together and coordinate groups who may benefit from these trainings. The difficulty, in these conditions, is to ensure a management continuity, and work preparation/readaptation programs really adapted to each person’s specific needs.

Opposed to this, in the alternate supported employment model, support relies on only one professional, the job coach, who intervenes since the initial request for integration support, until the employment situation in which the job coaches still conduct their continuous support mission. What these unique actors, coming from the corporate instead of the medical world, lose in expertise (in terms of clinical or cognitive assessment), they earn it in the follow-up continuity, the proximity of
the support relationship, the possibility to create a work alliance (both with the disabled person and the company), and especially the autonomy and the initiative power they have to adapt interventions depending on the needs specific to the various phases, the persons’ uniqueness and theirs problems. The job coaches are not only free from the coordination limits other integration/readaptation actors have, but they also play a pivot role in coordinating the supported worker, the hiring company, the medical team and social professionals.

The gaping organizational difference, reflecting a gaping difference in support design and policy, is closely linked to the empowerment notion. Through this notion, stemming from the political vocabulary of the fight of minorities for their civil rights, picked up by economic and political models of development and fight against poverty, we insist on the priority to restore the power to decide and act of the people we want to help. Many authors observed that this empowerment of the recipients assumes that the supporters themselves have the same freedom to take initiatives, the same degree of latitude, the same power to “trust” and take (measured) risks, which is indispensable to encourage autonomy of the supported persons (de Pierrefeu & Charbonneau, 2014). Therefore, the empowerment of supporters appears to be a condition to the empowerment of the supported persons (in getting a job)

Encouraging empowerment involves a shift in power balance, not only in the support relationship, but also in the directing mode of structures implementing this support: with a participative management, short hierarchies, participation of recipients or former recipients in the decision-taking of these structures. Conversely, the drawback of expert interventions is to keep an asymmetrical support relationship, with the risk to reinforce a passive posture in the recipients. Finally, hierarchical structures, with strong organizational limitations, can only plan top-down support modes, and therefore the recipients’ programs in the same way, with protocols which, basically, contradict the requirements of autonomy, initiative, inventiveness and thus the empowerment of supporters as well as supported persons. These requirements match the qualities of professionals, as they were identified in research as factors of effectiveness (Corbiere et al., 2014; R. E. Drake et al., 2006).

III.4.1.2.3. Main conclusion to draw from these evidences: a change of perspective in the employment possibilities of persons with a psychic disability.

(1) Contrary to a still dominant belief, which tends to infer from the current situation of low employment in persons with a psychic disability, that only a minority of these persons can get a job in competitive employment, it appears that the majority (60%) of them may get a job in less than 18 months (in most cases in less than 6 months) (Bond et al., 2008), providing they receive an appropriate support to get and keep a job. These data should be enough to make us reconsider our practices in integration support, our often pessimist beliefs in the likelihood of success in this population’s professional integration, particularly because these beliefs have self-fulfilling effects and are a major obstacle to get a job for this population.

(2) Another notable result of these works shows that it is not, as it is usually assumed, the characteristics of the persons with a disability (their limitations, and possibly their resources) that are the most important for the success of the professional integration, but the support mode and the policy implemented to help inclusion in the corporate world (M. Corbière, Lanctôt, N., 2011).

(3) What characterizes the most specifically the integration practices that proved effective, the “supported employment” type, is that it relies on the empowerment of the supporters, who commit to a helping and encouraging relationship with the persons they support in the recovery and professional integration process. This relative autonomy (freedom of action) of job coaches, which
conditions their practice’s success, assumes that the medico-social structures agree with this type of support, as illustrated in the IPS model.

It is important to note that this change of orientation in the medico-social practices exactly matches the recommendations to encourage practices focused on recovery: the key factor is a personalized support, conducted by a person who commits, which implies a change in support style, and in the culture that directs these practices (Anthony, 1993; Farkas, 2007; Farkas, Gagné, Anthony, & Chamberlin, 2005).

(4) Implementation of intermittent interventions to complement the supported employment may counter some difficulties of cognitive deficits of persons with a psychiatric disability who wish to get a job. Cognitive remediation is one of the interventions that proved effective to help get and keep a job (McGurk & Mueser, 2003; McGurk et al., 2013; McGurk, Mueser, et al., 2007).

III.4.1.3. Other research axis in terms of professional integration

III.4.1.3.1. Personal factors of professional integration

- Even if symptom reduction and stabilization is preferable to go back to work, it is now established that symptom progression is only moderately correlated to work skills. In schizophrenia, for example, there is almost no correlation between positive symptoms and work performance; however, negative symptoms have an impact on work skills (Addington, Addington, & Maticka-Tyndale, 1991; Bowie et al., 2010).
- Altered cognitive performance, particularly memory, attention and executive functions impairments in schizophrenia, also impact work skills, but they are not enough, neither they are the main factor to get a job; they play a slightly more important role to keep a job (Bowie & Harvey, 2006).
- Many other factors need to be considered. Among them, it is necessary to distinguish personal factors and factors related to the patient’s environment. The first factors are related to work, e.g. work experience before the disease onset, or more generally the relationship the patients have with work (how important is work in their life), but also the relationship skills necessary to get into the work group, and motivational factors, or the “efficiency feeling” to cope with the job requirements and overcome integration obstacle (M. Corbière, Mercier, C., Lesage, A., 2004; B. L. Pachoud, A.; Plagnol, A., 2010).
- Next to these individual factors, there are environmental factors, such as the support provided by the persons’ relatives to their integration process, or more specifically the quality of the medico-social support, or the adaptive measures available in the workplace, which play a key role to find a job and even more to keep it (Bond et al., 2008; Corbiere et al., 2014; Villotti, 2012).

III.4.1.3.2. Psychosocial interventions supporting professional integration.

As we mentioned, altered cognitive performance and altered social skills are factors with a proven negative impact on the likelihood of professional integration of persons with schizophrenia (Bowie et al., 2010; Nuechterlein et al., 2011); it is therefore easy to understand that cognitive remediation and social skills training help significantly improve the likelihood to get and keep a job. This is confirmed by a number of studies that proved the interest of these interventions. In his summary article, Franck (2014) listed 7 controlled trials comparing professional integration support practices for this
population, with or without cognitive remediation; 6 out of 7 trials show a significant interest in cognitive remediation either on job access, or in duration of job maintenance (Bell, Zito, Greig, & Wexler, 2008; N. Franck, 2014; McGurk, Mueser, et al., 2007). Some studies show that cognitive remediation rather helps to get a job, whereas social skills training has a more specific impact on job maintenance (Boycott, Schneider, & McMurran, 2012). This study also shows that associating both interventions optimizes the effects on professional integration, and seems preferable.

As Franck points out (N. Franck, 2014), it is important to adapt these remediation practices to the needs of the supported persons, taking into account the performance profile in terms of cognition and social cognition, but also the requirement of the professional activity orientation they wish to take.

We will not develop cognitive remediation and social skills training any further, since they have been detailed in the previous part of this report.

III.4.1.3.3. Company interventions and reasonable adaptations

A more recent set of studies focused on supports to provide to this population in the company, and reasonable adaptation at work to help job maintenance (Gates, 2011; Schultz, 2011). A summary article on this topic have been published in French (Corbiere et al., 2014).

It is an important improvement lever for long-lasting integration possibilities at work for these persons. But first, it is necessary to remind (see Corbière et al., 2014 (Corbiere et al., 2014)) that, to make such specific interventions at work possible, the hierarchy needs to know, on some measure, the worker’s disability; this is a sensitive topic, subjected to researches from which emerge some recommendations on the right way to choose the relevant information and share it with the right person in the company (Waghorn, 2008). And then, in most situations considered in these studies, the persons with a psychic disability receive support from a job coach, who plays an important role in negotiating work adaptation. We will therefore not develop this topic, which relates to the job coaches’ tasks and skills in the context of supported employment, which we have already discussed earlier.

III.4.2. Housing

III.4.2.1. The importance of housing the persons with a schizophrenic disorder

Housing is a problem. Various studies on homeless persons showed that two third of them have psychiatric disorders or substance abuse (Henwood, Cabassa, Craig, & Padgett, 2013; Hwang et al., 2011). Beyond homelessness, other problems arise: the burden on families (Millier et al., 2014) and community integration, which appears linked to the housing characteristics (Aubry, Flynn, Virley, & Neri, 2013).
Community integration was broken down by T. Aubry and J. Myner in 3 dimensions (Aubry & Myner, 1996):

- physical integration: participation in outdoor activities or services
- social integration: interaction with the neighbors
- psychological integration: feeling of being part of a community.

Persons with a psychic disability report physical and psychological integration similar to their neighbors, but a lesser social integration (few neighbors greeting or talking to them on the street) (Aubry & Myner, 1996).

In terms of housing, most studies agree on the development support for a variety and continuum of housing resources that meet the needs and wishes of the persons, as long as they can access them (Piat et al., 2008, Dorvil, Morin and Robert, 2001, quoted by Fleury (M. J. G. Fleury, G., 2012)).

The characteristics of a quality housing, regardless of the type, are: its location in the community, the respect for the person’s intimacy, a limited number of residents, consideration for the choice and decision power of the residents and residential stability (Piat et al., 2006, quoted by Fleury (M. J. G. Fleury, G., 2012)).

### III.4.2.2. Historical evolution

After deinstitutionalization, housing was considered according to three approaches (Parkinson, Nelson, & Horgan, 1999; Sylvestre, Nelson, Sabloff, & Peddle, 2007):

a) A housing may be qualified as “captive”, generating life situations focused on the persons’ deficit, not encouraging autonomy (custodial housing)

b) In the late 1960s and in the 1970s, housings with continuous support (supporting housing) appeared (therapeutic apartments, collective houses, etc.). Patients are considered in the perspective of their impairments, even if the focus is set on their strengths and progression abilities. In this context, treatments and housing are provided on the same location, or close to each other.

c) In the 1990s, the concept of supported housing appeared in mental health. It is a concept of independent housing developed for persons with psychic or developmental disabilities. Once again we see the values of recovery and integration in the community, with an approach centered on the persons to guide housing, which appears to be a right for the persons with a psychic disability (Parkinson et al., 1999; Wong, Filoromo, & Tennille, 2007). In this context, the functions of treatments and housing may be separated. This is the type of housing that is today considered as an objective to reach.

In this historical evolution, as in integration, two radically different models exist. The first model (treatment first), the dominant model in mental health, aims at a progressive integration of the persons in housing, from the most sheltered to the less sheltered, depending on the persons’ abilities. It was showed that this model causes, paradoxically, the caregivers to spend a lot of time to find a housing adapted to the patient’s state, which is almost impossible. The other model (housing first) aims at providing the persons with the type of housing they want while helping them get the
skills necessary for autonomy (Henwood, Shinn, Tsemberis, & Padgett, 2013). As M.J. Fleury points out, “this second model takes for granted that skills are more easily learnable if patients are directly put in a learning situation (principles shared by others services such as supported employment)” (M. J. G. Fleury, G., 2012). Paradoxically, it was shown that in the second model, as soon as housing is found, caregivers may focus on other issues (such as the treatments).

Various “Housing first” programs were developed to go further in this supported housing approach.

The first programs were initially developed for the persons in a precarious situation, with a first experiment conducted in New York in 1992 by the non-profit organization “Pathway to Housing”, to help the residential stability of homeless persons with mental disorders (S. J. Tsemberis, Moran, Shinn, Asmussen, & Shern, 2003).

Several randomized controlled trials were conducted in the USA. There is also a Canadian randomized controlled research program which started in 2009-2011, conducted for 4 years over 5 sites, which is called “At Home/Chez soi”.

III.4.2.3. Housing measures in Canada

We will take as example the development of housing measures in Canada, while highlighting that it is a feedback from a foreign experiment. The choice of Canada is justified by the fact that this country has seen the developments that are the most similar with France. The evolution was marked by a delegation of competence of the housing mission to the community organisms and a determined orientation toward autonomous housing (“At Home/Chez soi” program). We will summarize the steps and current perspectives.

In Canada, we find the three historical housing categories, associated with intermediary categories (M. J. G. Fleury, G., 2012):

a) Transition housing, limited in time, with intensive support. As M.J. Fleury points out, “transition housing, limited in time and with intensive support, may be provided by a residential resource with continuous assistance, an intermediary resource or a community housing organism”.

b) Housing in accommodations with continuous support or monitored apartments. It may be provided by public network actors or a community organism (Montreal’s ASSS, 2009, quoted by M.J. Fleury).

c) Housing with light or moderate support. It may be provided by an intermediary or family resource.

d) Autonomous, supported housing (“At Home/Chez soi” program in Canada) is now considered the objective to reach.

This perspective is supported, as we have seen earlier, by the preference of a majority of persons for the most autonomous life possible (Piat et al., 2008b; Tansman, 1993, quoted by M.J. Fleury). Regardless of the offered housing type, it is necessary to also provide a continuous medical follow-up with an intensity adapted to the persons’ need, and a significant social support.
III.4.2.4. Evidences

A) Assessments of supported housing experiments have provided detailed data (particularly due to the work of the “Pathway to Housing” team, but also the “At Home/Chez soi” program which is starting to yield encouraging results on its impact).

Evidences supporting the effect of “housing first” measures are clear, with an effect demonstrated one to two years after entering the program (Stergiopoulos et al., 2014; S. Tsemberis, 2014).

Effects were reported on residential stability, functioning, quality of life and the reduced use of emergency and hospital cares, and reduced number of legal actions. Patients’ satisfaction is also reported. Others effects are disputed: increased alcohol and drug consumption, and cost (Aubry et al., 2015; Mares & Rosenheck, 2010; M. Patterson et al., 2013; M. L. Patterson, Moniruzzaman, & Somers, 2014; S. Tsemberis, Gulcur, & Nakae, 2004).

Progress remain to be realized in community integration. A study comparing a group of persons involved in a supported housing and another group living independently showed similar levels of psychological integration, but lower levels of physical, social and civic integration in the first group (Yanos, Stefancic, & Tsemberis, 2012).

B) Assessments works of housing with continuous support are still limited.

A Canadian study assessed homeless or vulnerable persons, by comparing, on an 18-month follow-up, the situation of persons who were involved in the program (n=46) with persons on the waiting list (n=66). Results do not show any significant difference on health, substance use, treatment use or residential stability between both groups. Some study-specific reasons are discussed and authors insist on an encouraging result: the high residential stability (for 95% of the patients in the program), despite a low physical and mental health (Hwang et al., 2011).

Questions remain on the effect of moving from a homelessness situation to a housing in terms of the perception of health and health behaviors, that may remain problematic (Henwood, Shinn, et al., 2013).
IV. Reminder on the organization of the health offer in France
It is constantly reminded that there is a lack of evidences in France in terms of medical, social and medico-social practices and their impact on the populations who need them. Although some quantitative, descriptive data are available, there is a total lack of data on the impact of the offered services on the persons. And even quantitative, descriptive data are sparse.

Furthermore, all the reports on mental health offer observations well known to everyone. We suggest the reader to take a look at these texts. Among the main, general reports, we may mention: Cour des Comptes (2000, and then 2011), IGAS (2001), Piel and Roelandt (2001), then Roelandt (2002), Clery-Melin (2003), Couty (2009), senator Milon (2009-2012), assemblyman Robillard (2014), the prior report on mental health 2005-2008 (Kovess, Pascal, Clery-Melin report) and the HCSP report on implementation.

This reminder only aims at considering the mental health sector in terms of actor coordination and the clarification of their missions, which appear to be the main structuring lever for an improved medical treatment in the care/life pathway of the persons with a psychic disability.

Psychiatry facing coordination and pathway issues

We will summarize here the historical context of mental health in terms of coordination, as offered by M.A. Bloch and L. Hénaut (Bloch, 2014).

Among these observations, France is considered as one of the last remaining countries that did not complete its deinstitutionalization process, although it was leading the movement with its 1960-1980s revolution of the sector. The outpatient shift that the French psychiatry followed since then did not go all the way to a medical support as close to the patient as possible, i.e. at home and in their environment. This development did not break with a hospital-centered model, characterized by extended (up to several years) hospital stays (full time or day hospital), the intra/extra-hospital resources ratio, still at the disadvantage of extra-hospital resources, or home visits which are yet to be fully promoted, although the funding model by means of allocation should help develop it.

The necessary coordination between psychiatry and the social sector, which has helped promote the deinstitutionalization movement everywhere, is slow to get organized in France. Competition has been and remains strong in mental health between the medical sector and the medico-social sector. One of the objectives of this coordination is that it is not limited to a medical approach (cure), but systematically includes from the start a support approach for social integration (care) for the persons with a psychic disability or at risk of developing one. The population targeted by this report (persons with a severe and persistent mental illness) meets these requirements. Every person with a schizophrenic disorder may develop a psychic disability. Furthermore, the disability intensity, and thus the response to provide, does not follow a linear logic and the persons may, depending on their situation, have more or less medical or social needs. It is therefore complicated to keep a binary reading of the disability (being disabled or not), as M.A. Bloch reminds it. If this binary logic has the advantage of easily identifying institutional and field responsibilities (medical on one hand and social on the other), it is not adapted when we consider the reality of the persons and their trajectory.

Very early, psychiatrists took into account the social impact of the disease and beyond that, acknowledged the necessity to provide, out of the hospitals, housing and integration chances in the
city. In 1945, a new treatment model appears, opposed to asylum psychiatry: community psychiatry. In the early 1950s, L’Élan Retrouvé and Croix-Marine associations experimented social and medico-social centers for the persons who can leave the hospital. They are the psychiatrists who largely contributed to the implementation of “psychiatric centers”, through the circular of the 15th March 1960.

As with every country which followed this deinstitutionalization policy, the first period was for a long time limited to the creation of medico-social centers providing housing and professional integration in sheltered employment, most often through the efforts of family associations (such as UNAFAM, created in 1963), who wanted to find solutions for “after the hospital” or after the parents’ death. Therefore, this medico-social movement of patient support into the city to offer treatment and social action was supported by caregivers and family associations. The sector policy aimed at implementing an overall coordination of the health pathway, including “prevention, treatment and integration”, and reminded the importance of the follow-up continuity. This organization relied on an involvement of the medical team to take a geopopulational responsibility.

“Each district was split in areas of around seventy thousand inhabitants and progressively provided with centers under four great “social spheres” (Velpy, 2008, quoted by A.M. Bloch (Bloch, 2014)): crisis management (hospitalization services and emergency units), housing (post-cure center, foster home, community life centers, therapeutic apartment), activities targeting social and professional integration (day hospital, part-time therapeutic activity center, therapeutic club, sheltered employment structures) and the treatment implementation and follow-up by the medico-psychological center (CMP)”. In this development, the sector has a double pivot role: “in one hand, a multidisciplinary team sorts and orients patients toward treatments and services best adapted to their needs; on the other hand, the sector is responsible for the organization of a diversified network of treatment structures from psychiatric hospitals and under the authority of head physicians”. The CMP is therefore an original coordination system, specific to psychiatry.

But, although the sector policy was an unprecedented evolution in the modeling of a real health pathway including care and life pathways, its defenders declare that it needs to be upgraded to be in phase with the health systems evolutions.

The upgrade is less about the sector’s ability to delegate to others (primary care or social workers) part of the actions required by the health pathway, and more about its ability to share the pathway responsibility with others. Its claim relies on the necessity to have a geopopulational responsibility of the health pathway and confirms that psychiatry is still the only organization to take this responsibility. To sustain what was earned from the sector policy, psychiatry considers that the responsibility of the medical and medico-social actors’ coordination should be given to the territory’s head physician.

This claim, legitimate in many ways, has many limitations not only related to costs. We saw that this organization did not help achieve a real deinstitutionalization. M.A. Bloch and L. Héraut remind that, “even if the number of beds decreased, the hospital-centered approach is still very present [...]”, and they go on quoting Biarez (2004), “we switched from asylum exclusion to a sort of exclusion in the city, despite the undeniable contribution of the sectorization” (Bloch, 2014).
They also mention that many readaptation programs, not related to the sectors’ medico-social activities, have been designed to fill the “gaps” in the pathway that are not covered by psychiatry but cause a fracture in the resource coordination.

And although the French psychiatry recently developed resolutely outpatient programs (mobile teams) or the so-called “expert” programs, particularly in rehabilitation, it has been done without a real partnership with sector teams. For many, these dedicated programs came to fill the medical gaps to which psychiatry did not entirely answer. Some programs took a mobile shape (intervention in the persons’ environment) that sector psychiatry was hardly providing: mobile crisis intervention teams, mobile precarity teams, mobile liaison teams, mobile psychogeriatric teams or dedicated hospital observation units. Other programs took the responsibility to develop innovative assessments and treatment techniques that sector psychiatry could not effectively manage: resource centers, reference centers or expert centers.

Furthermore, “debates over the redaction of the 1975 orientation law introduced a deep conflict between users representatives and psychiatrists, the latter refusing to consider their patients as disabled persons” (Henckes, 2009, 2011, quoted by A.M. Bloch and L. Héraut (Bloch, 2014)). This now outdated debate was a caricature of the opposition between the social cohesion sector and the medical sector.

Finally, the authors highlight the tendency of the sectorization to create a “captive population” phenomenon, the disabled persons being “captive” in the structure in which they are received as well as in its treatment logic (the understanding of their situation and their answer being left to the appreciation of each medical worker).

Historically, the ethical and political changes in terms of recovery were due to the user movement who opposed the medical establishment. In this context, clinical improvement is not a prerequisite to an integration in ordinary life. Social inclusion becomes a priority of the medico-social support, with a depsychiatrization of the health pathway.

Other limitations may be mentioned if the objective is to overcome them, as the fact that sector psychiatry missed the importance of focusing on its “core activities”, while leaving to other professionals from the social and medico-social sectors, the responsibility of dealing with the social dimension necessary for recovery. The recent ANAP (“Agence National d’Appui à la Performance”, French Agency to Support Performance) report insists on this refocusing on “core business”. The impact of the medical responsibility on actions taken by the various health professions should not be under-estimated. As an example, in terms of professional integration, we will see that evidence-backed practices rely on an individualized support by a job coach, who does not come from the medical sector but from the corporate world, and who need to be well coordinated with the medical team.

The delegation can only work if, first, a real responsibility is taken by social and medico-social actors, every day and in the patient’s environment and, second, if a quality partnership is preserved between medical professionals and social and medico-social actors, which can only rely on a shared responsibility. The “third-party” case manager, not being involved in the follow-up, as M.A. Bloch and L. Hénaut point out, showed its limitation due to its lack of legitimacy to give orders.
French psychiatry did not observe, contrary to other specialties, a vast development of dedicated coordination structures, apart from general health networks (territorialized mental health networks). The existence of a territorial mesh of public systems (psychiatry sectors) probably explains part of this observation, the sectors dealing with territorial coordination.

Several hypotheses were offered in the context of many reports dedicated to mental health: the report redacted by P. Cléry-Mélin, V. Kovess and J.C. Pascal suggested to create a territorial coordinating CMP and the report of E. Couty (2009 report) talked about local cooperation (or coordination) groups for mental health.

Further suggestions were made since the Cour des Comptes report in December 2011, recommending to study the case manager position in a logic of “Main pathway manager”. This suggestion is used in Milon’s report. In this report, “the coordination between the psychiatric treatment and the medico-social sector has become a public policy objective since the 2005 Act that acknowledged the existence of the psychic disability”. [...] It revives the idea of a case manager, not from the medical sector, who is responsible for the follow-up and the support of the persons in their various actions”.

On the field, many initiatives were conducted to build a more egalitarian coordination, i.e. a shared coordination between the medical, social and medico-social sectors, as well as mental health networks or resource centers for psychic disabilities (CReHPsy). More locally, concrete cooperative systems were implemented.

The 2005 Disability Act created MDPHs (District housings for disabled people) to meet the medico-social needs of the persons with a psychic disability by coordinating the entire medico-social offer on the implementation district. This creation marked the end of the psychiatry monopoly over the medico-social sector and gave an answer to the lack of coordination between structures and medico-social services. Their mission is to “receive, inform, support and advise disabled persons and their families, and alert the entire population on the disability”. The law created a rights commission for the autonomy of disabled persons, which “takes decisions related to all this person’s rights, particularly when assigning services and orientation”. It is also planned that “it will organize coordination actions with other medical and medico-social programs regarding disabled persons”.

There is a risk of substituting the necessary coordination “in the patient’s environment” of actors directly involved in the follow-up with an institutionalized coordination with a necessary distinct role. We can recall, to highlight this risk, what the Blanquart report (IGAS, 2014) said about the medical sector, which applies to the medico-social sector: “every structure with a mission of coordination, i.e., orienting its interlocutors to a third party, or directly managing the request, would stray too far, according to the mission, from both the patient’s and the clinician’s needs. It would also probably be expensive”; and, then, when talking about the “coordination in the patient’s environment”: “it contributes to the quality of the treatment, and giving away this responsibility would impair the system’s effectiveness, knowing that the patient cannot be a coordination actor, he would thus be responsible for the definition of the services he expects to receive”.

However, the MDPHs’ action helps initiate a change in mentalities in every professional, be it in the medical or medico-social sector.
But there remains the issue of an overall organization, effectively coordinated between the medical, social and medico-social sectors.
V. Ways of improvement in France?
V.1 Principles of redacting suggestions and support in implementing improvement actions

The framework of this project was limited to the health pathway of persons with a severe and persistent mental illness after the diagnosis was established. We have not discussed the issue of prevention and early screening to focus on treatment and integration after the diagnosis.

This report is a state of the art, including all the useful data to improve practices and organizations by interpreting these data in the light of their clinical relevancy. Its objective is to identify, in the French context, structuring ways of improvement to make health care evolve.

Furthermore, this critical analysis may help all the actors involved in a process of improving practices and organizations in their territory. Indeed, this is not an obvious task, which cannot be easily assigned to isolated teams to be performed with all the required rigor. Delegating this task to the Centre de Preuves lets actors on the field use these evidences to make the improvements they need.

Finally, the approach of the Centre de Preuves is not to create standards, but to offer, in a logic of flexibility, objectives which may be adapted differently in each territory depending on existing resources and initiatives.

Acknowledging the requirement for flexibility may only be possible if it is associated with an assessment approach. A flexible approach indeed requires a rigorous assessment of the effects of the implemented improvements. Designing a standard avoids this assessment since it only demands that the application be checked. This is why the report includes an “assessment of the care/life pathway of the persons with a psychic disability” that each territory may use by adapting the offered design.

The mission of the Centre de Preuves is thus to spread these updated knowledges and support actors on the field in implementing the improvement actions they have chosen to develop.
1. Critical data analysis

The critical analysis of data from the literature used a method where the clinical relevancy of data prevails, after the methodological quality of data selection and analyze has been set. This focus is all the more relevant for this report subject since proofs of high scientific level are scarce when evaluating the complex interventions making up most of the data useful to identify ways of improvement.

The search on the Cochrane database with the terms “severe mental illness” resulted in 52 publications and the search with “schizophrenia AND disability” offered 12 results. Very few data of high level of proofs are available and Cochrane reveals that most of our topic’s subjects lack relevant conclusions. This observation may obscure the importance of the collected data of interest. The review committee therefore relied on data with a sufficient demonstrating value by themselves (Grade B data), and which were reinforced by cross-checking them with other data.

The choice of working on the whole pathway led to explore a huge number of publications from various field studies. For instance, the numerous publications only dealing with the quality of treatment techniques do not overlap with those studying the treatment organization. In the same way, the literature devoted to social integration does not overlap the literature related to cares nor totally the one related to housing. Also, the founding paradigms of modern mental health (such as the recovery paradigm) are subjected to specific publications, which do not overlap other fields of publications. Furthermore, research data on the treatment offer do not entirely match the reality of the treatment offer in the countries involved, and this gap leads us to look for sources other than scientific publications.

In France, this kind of literature is sorely lacking and data we have are mostly epidemiological and do not let us, without clinical data, analyze the effects of organizations on the patients themselves. Lacking these data in France, we frequently only describe “exemplary” practices or organizations to know what really happens on the field. Yet these on-site experiments do not always include assessment data on their real impact and the adjustment to objectives they were set to. And as Tyrer (2013) points out, it usually happens that, at least shortly after implementing a new system, the impact seems high and that the new system appears to better meet the needs it is supposed to cover, compared to existing systems. Tyrer warns observers to not interpret the apparent benefits of this system as a long-term reality, and to consider the fact that this benefit often only relies on a greater motivation and involvement of the new team. This observation reinforce the importance of objectively assessing the observed effect (Tyrer, 2013).

This report relies on the analysis of evidences which, for most of them, were collected in foreign countries, since France did not develop this evidence culture much. We remind the risk of using models relying on evidences collected in organizations different from ours. Nevertheless, the conclusion convergence from evidences collected in countries with various organizations in their health care system, or from the confrontation of data from multiple thematic fields, offer strong arguments to support specific organization and practice principles. The vast bibliography analyzed by this report uncovers these convergence areas. Furthermore, after the methodological validity of
The ways of improvements offered in this document have been identified from:

- evidences from which a few great orientations emerge to improve the care/life pathway of persons with a severe and persistent mental illness,
- the confrontation of these evidences (or foreign experiments) with field practices in France and observations reported by many reports dedicated to this field,
- expert auditions,
- exchanges organized in the framework of the follow-up commission.

2. Implementing the improvements

Implementing improvements actions is subjected to many publications. Everyone agree that it is not enough to spread recommendations to implement organizations or practices with proven effectiveness.

To make this implementation easier, a longer process needs to be conducted. This process is structured around two success factors: flexibility, and the support of the process with an assessment approach.

The international consensus highlights the importance to adapt improvement actions to the reality on the field. The top-down logic consisting in drafting quality standards (“what to do”) and modality standards to implement them (“how to do it”), spreading these standards and supervising their implementation, fails to ensure implementation. It is all the more true that the recommended interventions are complex.

The importance given to flexibility implies that depending on the health care territory, improvement priorities and types of implementation modalities vary. They will depend on an assessment of the territory’s needs (needs not covered yet urgent) and on existing resources (to preserve functioning organizations) or mobilizable resources. This quality approach may only be executed on the entire territory.

Set in this flexibility principle, the Centre de Preuves aims at identifying these “ways of improvement” (“what to do and how to do it”) from the collected data, and making them available to territories so they use and adapt those they deem useful to implement. Implementation modalities may be different from a territory to another, and although the report provides implementation tools for the offered improvements, they should not be considered “standards” on “how” to improve. This report does not impose strict standards to follow but suggest what is good to promote. It does not either set modalities to implement the expected improvements but provides tools for those who wish to receive help in implementing improvement actions.
3. Assessment approach

The assessment is necessary before any improvement action, as soon as quality objectives are set. This is why Proof Centers are expected to offer an assessment schema designed to describe, in a rigorous and objective way, the reality of practices.

The assessment also helps to constantly adapt the implemented improvement actions to expected objectives.

Depending on the selected topic, the assessment needs to be conducted on the health and life pathway of the persons with a psychic disability rather than on a specific program.

This report provides an example of assessing the reality of health pathways in a given territory but each territory is allowed to modify the provided schema to adapt the study to the territory in which it will be used.

The type of suggested research includes the assessment principles of researches in public health conducted in Anglo-Saxon countries, and mixing clinical research (to measure the impact of the improvements on the patients themselves and their surrounding environment) and epidemiological research, data collected from patients and overall resource data. On the methodological side, the quantitative approach may not address the issues in terms of practice improvement. Qualitative methodologies take into account, while staying close to the lived experience, the representations and beliefs of patients, their families and medical professionals and help identify resistance areas (obstacles to recovery) and possible factors of success in the considered suggestions.

The first assessment helps follow (by defining impact indexes) the effects of the implemented improvement action in a “before - after” schema, often used in the literature as part of this type of objective.

What is highlighted here is the importance, for the development of an innovating approach of mental health services (including interventions in the medical, the social and the medico-social sectors), of adapting the organization to the territorial specificities, as assessed on an empirical basis to ensure their feasibility and effectiveness.
V.2. Suggestions to improve the “care/life pathway of persons with a severe and persistent mental illness”

France has many assets in terms of the organization of the mental health offer:

- There are existing resources. In the medical sector, community medical teams (psychiatric sectors) cover the whole national territory. In the medico-social sector, there are specialized associative structures and the medico-social housing infrastructure is being developed.
- The assessment approach is accepted, at least for new systems in the medical sector, and is being adapted in the social and medico-social sectors.
- Local mental health councils help involve cities.
- Actors of the medical sectors clearly show a will to improve and rethink their organization. The difficulty in making this change mainly stems from the difficulty to understand the “how?”:
  - How to adapt caring stances that come with the emergence of functional medicine and recovery without losing what was learned from other reviews?
  - How to implement therapeutic innovations without denaturing the traditional “care model”?
  - How to design a shared, outpatient medical organization without any guarantee over resource preservation?
  - How to design a medical organization using “over-specialized” tools (such as resource centers, reference centers or expert centers) without any guarantee over feedback quality and impact on the follow-up continuity?
  - How to build a partnership with social actors even though the psychiatric sector is the only one to take charge of a geopopulational responsibility and is therefore responsible over the entire care and life pathway?
- The will of the social sector to get involved in mental health, but requiring to organize the entire coordination with the medical sector and to learn new professional practices.

The ways of improvement offered here rely on the approach suggested by the Blanquart report (IGAS, December 2014). The authors of this report suggest to invert the usual declination or coordination in France, where coordination is conducted by professionals other than the one in charge of the follow-up (third-party case managers) and the top-down logic is forced upon these professionals. As this report points out, it is not recommended to expect from a single structure that it takes care of every aspects of a quality coordination. Any structure which would set to itself the coordination functions, i.e. orienting its “interlocutors toward a third-party or treat directly the request, would have been, according to the mission, straying too far from the patients and the physicians’ needs. Also, it would certainly be too expensive”.

The suggestion is to separate coordination in the patient's environments and institutional coordination (to mirror the distinction between proximity organization and territorial
The coordination “in the patient’s environments” is the first. It is under the responsibility of the professionals directly in charge of the follow-up. The institutional, territorial coordination aims at giving access and plan resources and tools that the actors of the coordination “in the patient’s environments” may mobilize depending on the patients’ needs.

Foreign experiments in the coordinated management of chronic diseases all proceed with the development of the functional modalities of coordination in the patient’s environment, by avoiding the multiplication of dedicated structures.

The standard that naturally emerged, for patients with a severe and persistent mental illness, in every reference foreign countries, is the one of a strong partnership, at any time and since the start of the pathway, between medical and social sector professionals. This “pathway” partnership requires both a medical case management AND a social case management.

Therefore, the suggested ways of improvement aim at answering a number of questions that may be understood as obstacles to overcome. Among these obstacles, we may mention:

- In the medico-social sector:
  - a late development of outpatient care and social case management with the same geopopulation responsibility than the medical team,
  - the difficulty to support the “shift toward competitive employment” and the ongoing development of structures in sheltered employment, partly due to the difficulty of the medico-social sector to get closer to the social rather than the medical sector, which is caused by the poor social financing and the lack of regard felt by the actors of the social sector compared to the medical sector.

- In the medical sector:
  - late appropriation of treatment techniques with proven effectiveness (such as psychoeducation, social skills training and cognitive remediation) and late implementation of functional assessment tools (deficits and preserved skills), which is an inescapable step in building a health project,
  - insufficient development of medical support in competitive employment,
  - insufficient delegation to social workers of the social dimension of the health pathway,

- a persistent divide between the medical and social sectors, and the risk of a response such as the designation of a single supervisor, who would “give orders”, rather than a project-type answer, with a co-responsibility, both institutional and from professionals on the field.

An evolution of the current organization is complicated if no solution to lift these obstacles is suggested.

In this context, it is important to remind the characteristics of the population in question, the persons with a severe and persistent mental illness.

This population is mainly distributed in the highest two complexity levels of the Kaiser pyramid: patients at a high risk of complication who need a multidisciplinary service coordination, and patients...
at a very high risk of complication and with complex needs, who require an intensive case management, even if it is acknowledged that over 50% of these patients may recover.

In terms of pathway, it is necessary to remember this population’s particularity (contrary to other populations of patients with a chronic disease): the non-linear pathway. This has three consequences:

- Even in the current experiments on “typical care pathways” that some countries try to adopt, this psychiatric population is regarded as not eligible to benefit from it, due to the variability of their pathway and the difficulty to anticipate the next steps. The risks of a strict use of “typical care pathways”, which may meet the expected monitoring and economic objectives, are that they may not meet, in real time, the very variable patients need. The flexibility perspective of the offer to meet the patients’ needs, largely supported by the authors, conflicts with the obligation of homogenizing programs and services.

- It is legitimate to accept that, in their “pathway”, patients may switch from one level of complexity to another, or even, when they recover, to step down to a lesser-complexity level. Rather than talking about “complex patients”, it is more appropriate to talk about “complex moments” in a non-linear pathway.

- The coordination of medical, social and medico-social skills and services is a major challenge for this population, and this coordination, in view of hardly predictable evolutions, need to be continuous. To make a case management work all along the pathway, it may only be medico-social, as it is in most foreign countries.

The organization of the health offer needs to take into account these particularities in this population’s pathway and the main difficulties known to this day. Four of these difficulties seem to be real obstacles to the improvement of the mental health offer: the lack of coordination between the medical, social and medico-social sectors, the lack of a clear functioning model between proximity team and the territorial offer, the insufficient implementation, in the medical sector, of treatment techniques with proven effectiveness, and the insufficient support in the outpatient and social shift that the medico-social sector must endorse.

V.2.1 Continuity of the proximity medico-social follow-up, cornerstone of a quality pathway

The need for a continuity in the proximity medico-social follow-up has been largely demonstrated. It involves a close coordination of medical and social actors to manage a quality, personalized care and life pathway.
V.2.1.1. Sector teams, pivot of the medical follow-up

Suggestions:

1. give psychiatric sectors the tools to offer a variable geometry outpatient follow-up, including, as much as possible, intensive follow-ups
2. give psychiatric sectors the tools to focus on their core business by delegating part of the medical responsibility to primary care physicians and the social responsibility to a proximity social team
3. make the implementation of innovating diagnosis and treatment techniques with proven effectiveness a medical priority, and provide psychiatric sectors with the tools to use these innovations
4. give psychiatry sectors access to all the tools, in their practice or shared with the health territory

Suggestion 1: An organization of variable geometry outpatient care, depending on the moment in the pathway, and focused on the patient’s ability to decide (“empowerment”)

The so-called community cares, adapted differently in each country, are an internationally-recognized organization model. These cares are provided over time to the population of a set geographical area. This organization is intended to the most severe and disabled patients and is under the supervision of the public service. The two objectives of these cares are to ensure the continuity of cares over time and the various locations (“case management”) and to offer outpatient care, preferably in these persons’ social environment. Teams in charge of these cares owe the patient the quality cares and relevant interventions they need. These so-called community cares have been the target of psychiatric cares in France.

Therefore, the question is not about the relevancy of community mental health teams with very high level of evidences anymore, but the organization modalities. Services offered to this population are the responsibility of the medical sector (crisis intervention, acute hospitalization, care offer including rehabilitation, continuous medical support, access to primary cares) and the social sector (social rehabilitation in the natural environment, home services, housing support, financial support, family support, occupational and entertainment support, adaptation to the environment, legal counseling).

The two objectives of the implemented organizations are to avoid hospitalization as much as possible, even for the most severe patients, and to delegate to professional outside of the specialized medical sectors, everything that can be delegated. The medical follow-up therefore focused on its “core business” and its interventions deployed toward patients with the most severe disorders.

The population targeted by this organization is a population at risk of disability and who may experience symptoms worsening, to which a response needs to be provided. In these moments, “intensive follow-up” programs were offered. To keep a follow-up continuity, intensive follow-ups have included the “case management” as a key functioning principle. These two components (case management and intensive follow-up program) show the highest number of evidences. First
conducted by a “case manager”, not included in the patients’ follow-up and providing services individually, the case management was integrated everywhere in the patients’ follow-up and collectively conducted in a team.

The proximity intensive follow-up reduces hospitalization and improves the treatment follow-up, compared to standard cares. It also improves social functioning.

The interest for the medical team to offer an outpatient intensive follow-up to the populations they are responsible for is supported by numerous evidences. Intensive follow-up helps avoid hospitalization, which creates a high risk of chronicity in this very vulnerable population. The characteristics used to define this particular moment in the pathway, that any person with a severe and persistent mental illness may experience at any moment in their pathway, are: a “revolving door syndrome” (frequent use of emergency cares and/or frequent compulsive hospitalizations), social instability and low treatment observance.

Evidences supporting outpatient intensive follow-up are strong, but they also show their limits. Hospitalizations are necessary in three situations: during acute episodes if there is no 24/7 medical assistance or mobile team, for long-term hospitalization (for requiring patients) and for cares without consent.

The PACT program is the most assessed intensive care model, with the greatest evidences. The intensive follow-up is part of a care offer which provides an integrated (set of medical and social services) and local follow-up when the disorders are the most severe.

More recently, new organizations were given the mission to overcome the limit met by the PACT organization, which only treats the most severe patients (20% of the targeted population, mostly unstable patients at a high risk of unscheduled, emergency hospitalization or institutionalization) and does not include stabilized moments, which are delegated to another team. These organizations rely on the same bases than the ones that directed the creation of intensive follow-up teams and for which evidences are high: case management, multidisciplinarity (medical and social co-responsibility) and outpatient follow-up (close to the patient’s environment). It consists of services offered in a single multidisciplinary team, which provides flexible interventions depending on the patients’ needs, i.e. an individualized case management for currently stable and unstable patients. For the latter, an intensive follow-up is offered. The team is also in charge of hospitalized patients or patients who live in the community. All these measures aim at ensuring a follow-up continuity. The data show that this organization significantly improve observance, reduce unmet treatment needs and improve quality of life. Remission rate increases by 9% and the number of hospitalization decreases due to the intensive follow-up.

If, as we have mentioned earlier, every local team needs the tools to offer an intensive follow up to the persons under its responsibility, it is important to remind that, as the whole literature does, it is necessary to have a professional/patient ratio adapted to this period, with 1 medical professional for 12 patients in the best-case scenario and at least 1 professional for 20 patients.

If the team cannot provide intensive follow-up, a “crisis” outpatient team may be requested, to possibly intervene 24/7 in several geographically-close territories. If such team is not available, the patients may be received in an emergency hospital ward. The latter may be necessary if there are
risks (particularly suicides) specific to crisis situations. This hospitalization should be as short as possible in time (48-72 hours) and aim at managing the crisis and quickly organizing an intensive follow-up with the coordination team.

Regarding the use of dedicated teams, different from the medical follow-up team, it is important to remind that the current international movement prefers a single “variable geometry” team to distinct teams intervening at different moments in the pathway. In other words, the team responsible for the proximity medical follow-up should receive all the tools to conduct most of its missions in a flexible intervention model.

Elements supporting this change are plenty:

- The preference for a follow-up continuity by a pathway “pivot” team and the risk to impair this continuity due to the intervention of too many different teams at various times in the pathway.

- The risk of redundant services. This is one of Tyrer’s argument to temper the effectiveness of a team dedicated to emergency situations when the territory already has an emergency hospital ward.

- The cost of multiplying dedicated teams.

Therefore, even if various scenarios are possible to describe the missions’ perimeter and the size of the teams responsible for the medical follow-up, depending on the resources available on the territory and the systems already in place, it is necessary to follow two bases: focus, as much as possible, on the follow-up continuity (case management) and provide the tools necessary to ensure an outpatient intensive follow-up by the teams themselves or delegated to dedicated teams. If there are no such possibilities, there is a risk to hospitalize the disabled person and, due to the socio-medical severity of the situation, to initiate an “institutional chronicity”.

In this objective of providing outpatient cares in the patients’ environment rather than in hospital, the relevancy of day centers was put back on the table. In the UK, services provided by the 707 day centers are for 92% advises and information, 86% occupational activities and 70% group support. The trend in the UK is to not develop hospitals or day centers due to the chronicity it creates but rather to offer part-time activities. This attitude was reinforced by studies conducted on the occupational activities offered in medical centers, showing that they do not have any impact on the patients’ state and do not encourage social inclusion. However, when these occupational activities are organized in association with social skills training or remediation programs, they help improve the patients’ clinical symptoms and recovery.

Another factor for the best care organization that is now emerging, is to focus on the patients’ ability to decide (“empowerment”) and support their recovery. For each patient, there is a team (called resource group) that consists of the patients themselves, the psychiatrist, the social “case manager” and 3 or 4 persons chosen by the patients (often among family or friends). The key point is that the patients themselves define the treatment goals. Resource group meetings are held at least 4 times a year and more often if necessary. The resource group is therefore a small follow-up team. This group may request, for specific services, experts or targeted systems (e.g. an addiction expert, another expert in sheltered employment, etc.). Evidences exist to support such organization. It improves symptoms, the quality of the functioning and the well-being of the person.
The small team size, centered on the patient who decides the objectives of the provided interventions has already proved its effectiveness in terms of flexibility and integration.

The operating modalities of the proximity socio-medical team, of which the creation is suggested in this report, adopt this new organization principle based on empowerment.

**Suggestion 2: delegating to other professionals the missions that may be delegated, in the objective of improving interventions**

The quality of the overall organization of the health offer now relies on several factors: first it includes the medical and the social sides in its objectives, and second, it is responsible for the delegation of competences to the professionals more equipped to meet specific objectives: specialized medical team, primary care physician and social sector professionals.

1. **Delegation of competences to primary care physicians**

Data supporting the positive impact of delegating the somatic follow-up to primary care physicians are plenty: improved somatic follow-up, destigmatization tool, reduced treatment cost.

However, this delegation mainly affected patients with a frequent mental disorder, for which primary care teams felt qualified.

For severe and persistent mental illnesses, the situation is different, since primary care teams most often feel under-qualified; therefore, the partnership with psychiatry is crucial at every moment in the pathway. A recent review of the literature concludes that psychiatrists need to play a pivot role in the improvement of the physical health of these patients by improving the monitoring and management of some key physical parameters and by partnering with GPs and somatic specialists, and training them on the somatic follow-up that specialized psychiatric teams cannot perform themselves.

General practitioners who receive these patients must be particularly caring and need to be supported in managing these fragile persons’ therapeutic relationship. Partnership modalities may differ, particularly between outpatients and long-term inpatients, but all aim at respecting these principles.

2. **The role of peer helpers** is part of the movement aiming for recovery. They are the proof that it is possible to recover and play a role in the society despite the mental disorder, and are examples of a movement supporting the process of taking back the control of one’s life, reducing stigmatization and supporting the access to cares and services. Peer helpers may intervene in mutual help groups, social or medico-social organisms dedicated to mental health or in medical teams (even though, in this situation, the effectiveness on the patients is not this convincing).

Various evidences support that:

- peer helpers encourage a better use of mental health services,
they reduce costs related to the use of mental health services,
however, providing support to peers seems to be more beneficial than receiving, especially when getting hired in a medical team.

3. **Delegation of competence to social sector professionals (and, for France, social and medico-social sectors).**

The delegation of competence to professionals of the social sector was more or less forcibly executed depending on countries and raised coordination issues to which the countries reacted in a different way, depending on the overall existing health organization.

The delegation of the social side of the pathway to professionals of the social and medico-social sectors, considering the concomitant obligation of the medical sector to ensure the continuity of the outpatient medical follow-up for the most severe patients and to implement the whole set of cares targeting the disability factors, cannot be followed by a reduction of the resource allocated to the medical sector; this allocation needs to be sustained. If only the costs are considered, the outpatient development, according to the principles that are the reference on a global scale, is a costly exercise, especially if it includes an intensive follow-up. The observation of funding cuts for teams who switched to outpatient care - by removing beds, for example - and the deleterious effects of these cuts were largely criticized in the international literature.

Finally, considering the competences learned by some social sector professionals in designing and implementing medico-social projects, a real delegation of these missions to professionals needs to be pursued, even if it is already completed in France, especially due to specialized, medico-social associative structures. This “competence-learning” of the social and medico-social sectors, that only recently included the psychic disability, is a necessary step to a real delegation. In countries that have developed a socio-medical coordination, the social workers’ competence was developed in the field of intervention, very different from the medical professionals.

Besides the challenge represented by the coordination of these actors, there is no evidence supporting a specific “coordinating” organization, but only examples with more or less success depending on the countries on which we will rely to make suggestions. However, two principles stand out: the constitution of an integrated service model (socio-medical project supported by socio-medical teams) and the shared-interventions model, a functional collaboration modality closer to what health networks encouraged.

We will present, in the next chapter, the suggestion to create a proximity social team, working with the local medical team in shared socio-medical projects.

**Suggestions 3 and 4: make the implementation of innovating diagnoses and treatment techniques with proven effectiveness a medical priority, and give psychiatric sectors the resources to use all the care tools, in their practice or shared in the health territory**
If cares and interventions are shared with other professionals, and the treatment is coordinated, the medical team is required to provide the whole specialized treatment tools, particularly those with proven effectiveness, to the patients they are responsible for.

**Innovating diagnoses: See differently to act differently**

If we consider that sharing tasks between medical and social actors implies a common way to look at a situation, the objective is to let the medical actors “see differently to act differently” by including in their practices the disability and the recovery. The point is therefore to “bring the 2005 Act to life”, by letting the medical sector adapt it in their own field of intervention.

The concept of psychic disability, as we have seen, requires clinicians to adapt to new functional clinical tools, based on data acquired from the factors of the psychic disability. Assessing the functional limitations of patients is crucial to design personalized care and rehabilitation projects.

The functional assessment conducted by various specialized teams (such as expert centers, resource centers or rehabilitation reference center like CReHPsy) usually includes the following dimensions: residual symptoms and outcomes, neuropsychological and functional assessment of the various disability factors (cognitive skills, social cognitive skills, motivation and metacognition), somatic assessment (comorbidities and adverse effects of psychotropic treatments), comorbidities (anxiety, depression and addictions), knowledge of the disorder and treatments (and observance), psychological assessment (personal resources, subjective position and recovery phase), functioning in everyday life, assessment of expressed needs (and possibly documented by simulations), network and social participation, subjective quality of life. This assessment aims at jointly identifying the relevant therapeutic targets (to reduce the disability) and the relevant support actions preferred by the persons and their relatives.

All the sector’s teams should be sensitized to this new diagnosis, more adapted to the long-term follow-up of these patients and to the identification of their functional limitations compared to symptom diagnosis.

Some clinical assessment tools could be used by the sector’s teams as training tools to identify the clinical signs of the psychic disability. This training use of the tool is already implemented in some areas in France.

In the same training perspective, recovery scales may help the teams to take a new stand in their daily practice, with this new orientation.

**Therapeutic innovations: how to support their use?**

The set of tools available to the persons with a psychic disability or at risk of a severe and persistent mental illness was considerably improved.

The first objective of the treatment is to develop the therapeutic alliance, which is one of the main factors of treatment observance. The therapeutic alliance is only rarely immediately acquired. It is
often a long process. The medical case management and the importance given to the follow-up continuity are meant to develop this alliance, which grows over time. Follow-up at home reinforces alliance, since the patients keep control over the space in which the treatment will take place.

Medicated and non-medicated treatments are available today to patients with a severe and persistent mental illness. They have been thoroughly described earlier.

We prefer to insist over the fact that using new treatment techniques - besides improving the medication - is not obvious, as the entire international literature points out.

Many researches demonstrate that even pharmacological or psychosocial interventions that have proven their effectiveness in improving the life of persons with a severe mental illness are not implemented in the routine care of psychiatric wards. This phenomenon is called a “gap” between the evidence and the practice, and needs to be reduced. The problem of the poor access to evidence-based practices for patients with a severe mental illness was highlighted by many reviews of the literature.

A recent Italian study (2008) evaluated this gap in 19 community psychiatric wards in patients with schizophrenia (quoted in Tyrer, 2013). 103 indicators were assessed by a group of experts.

The teams rapidly intervene and were very reactive and ready to answer the request they received. Furthermore, interactions between community actors and social workers were of high quality. Also psychotropic use followed quality standards.

The main gaps between evidences and practices were in treatment behaviors:

- The lack of a structured care project that may become a guide for team interventions and be written down in the patient’s file.
- An underestimated importance of the information provided to the patients in terms of diagnosis, the treatments and their expected results.
- A tendency to not implement the various specific and structured interventions required by the situation, and by analyzing the results.
- The difficulty to involve family members in the treatment.

One of the main objectives is therefore to help the use in routine care of evidence-based practices to let patients receive interventions with proven effectiveness. It is not excessive to state that this objective is dictated by medical ethics.

Therefore, in France, concluding that there is an ideological resistance to change care teams, would show a misunderstanding of the practical difficulty to accept new treatment techniques. The fear that new treatment techniques may question a more traditional model is far from being justified. As PetitJean et al. pointed out in 2004: “new approaches are not supposed to replace the traditional approaches, but to complement them”. This is made easier by the fact that innovating techniques work on psychological or neuropsychological symptoms, i.e. have specific targets, and do not question the patients’ overall medical support model. This is also the reason why a territorial pooling of these techniques is possible. In this situation, the follow-up team delegates, to the team developing this treatment technique, a therapeutic sequence associated with a specific target. The
success of a delegated specific treatment relies on the fact that the pivot team keeps coordinating the overall follow-up. In this context, information sharing must be adapted to the pivot team’s needs and their feedbacks to the “technical” team need to help adapting the given specific treatment.

Knowing how to identify therapeutic targets, and how to implement the appropriate treatments are skills hard to learn. Indeed, if the daily practice relies on clinical signs and treatments used in the team for a long time, it is difficult to change them. The international literature provides several suggestions, such as making the pivot team assess the technique using the same procedures used to scientifically validate it. This seems however complicated to conduct. Most often, new techniques get used by teams when hiring new experts in the required field, or when two or three team members get trained to this technique and are backed by the training staff all along the implementation process. Some structures chose to share human resources (particularly psychiatrists, nurses and neuropsychologists) to create transversal assessment structures (see website http://wiki-afrc.org).

Anyhow, it is necessary to keep in mind that an adaptation process of these new treatment techniques cannot be limited to academic trainings but need to be supported by the possibility to share them between teams, new hires, and training that are closer to learning techniques, i.e. supporting teams in the effective implementation of new treatment techniques.

To sum it up:

The main missions of the team responsible for the continuity of the proximity medical follow-up may be summarized as follows:

- Accept their mission as responsible for the continuity of the medical follow-up for patients with a severe and persistent mental illness, at a high risk of psychic disability, from the start and all along the pathway
- Conduct the patient’s clinical and functional assessment, on a regular basis, in a practice or mutualized
- Make available to patients the whole set of treatments techniques, in a practice or mutualized
- Adopt a behavior compatible with recovery, by elaborating, with the team responsible for the social follow-up continuity, the patients and their family, a negotiated intervention contract and conduct the project follow-up (see infra)
- Make sure a general practitioner is available for somatic prevention actions and somatic follow-up
- Ensure a quality coordination with a proximity social team sent to them to conduct the social follow-up continuity (see infra)
V.2.1.2. Social follow-up continuity, the cornerstone of a quality life pathway

Suggestions:

1. Make the creation of a proximity social follow-up team, coordinated with the proximity medical follow-up team, a priority of the medico-social sector: for a territorial platform of social teams responsible for a proximity territory in cooperation with medical teams to ensure the social follow-up continuity
2. Encourage the logic of recovery and care ethics in the social and medico-social support of persons with a psychic disability
3. Provide the proximity social follow-up team with all the resources, in terms of housing, social life support and professional integration, developed in the framework of the health territory

In France, only the psychiatric sector may consider itself being responsible for the health pathway of persons with a severe and persistent mental illness. It is indeed the only sector that has a geopopulational responsibility over this population of patients whose treatments most exclusively relies, as in all foreign countries, on the public service. Whereas many partnerships between the medical and the medico-social sectors have led to many successes in terms of housing and integration, on a daily basis, the follow-up continuity is conducted by psychiatric sectors.

This organization is unique since, in similar countries in Europe and North America, the partnership between medical and social professionals is made possible to ensure the follow-up continuity on a daily basis. There is a social case management, as there is a medical case management.

The team responsible for the social follow-up continuity uses the same “variable geometry” intervention modality than the medical team, so it is adapted to the patients’ needs. Furthermore, as the medical team, the social team may request social and medico-social third parties from the territory to conduct the missions it cannot conduct itself.

The social team has extended missions, from the help in administrative procedures to support in enjoying ordinary leisure, in locations decided by the person, help in budget management, support in organizing daily life and in seeking a job. It also provides support to get specialized or primary cares. The social follow-up managers provide above all a daily support to the persons’ recovery. Their missions are similar to the ones of a hotline specialized in psychic disability. We will come back to that later.

Therefore, the team responsible for the social follow-up continuity has a real populational responsibility in managing the social dimension consubstantial to the definition of the “psychic disability” and conduct a real “social case management”. As the literature on integration points out, the social workers required for this mission should not come from the medical sector (neither a clinician, a nurse or a psychologist) and should have a real knowledge of the corporate world, housing and more generally of social inclusion. The goal is to make possible a real “task sharing” between professionals from different cultures and with different skills, to help the patients.

In the UK, social workers, who graduate from college, are assigned to a mental health team while staying attached to their department of origin. Staying attached to their department of origin gives
them a legitimacy in their mission (identifying social needs and conducting specific social interventions). The socio-medical project is “co-coordinated” by professionals with well differentiated skills.

A partnership between medical and social teams may only work if their roles are really distinct, which can only be based on different knowledges underlaid by different readings (then shared) and distinct interventions (depending on the patients’ needs).

It is therefore necessary to create a “social case management” position in France. This function covers a specific exercise, different from the one now undertaken with social workers, and requires specialized skills in the social follow-up of persons with a psychic disability whose social particularities, as we know, put them apart from persons with a different disability.

This suggestion of a territorial platform for social teams responsible for a proximity social follow-up in cooperation with medical sectors (same geopopulational responsibility), on which the whole world agrees, raises issues: who will be responsible for this platform? Who will fund it? How will the coordination of partners already working on the social support of persons with a psychic disability be conducted? How will they be trained?

Evidences, as expected, may only give answers to the issues over the missions. We summarized the main aspects. We will cover in the next paragraph the coordination modalities between this team the team responsible for the proximity medical follow-up.

The authors of this report met various professionals to help raise observations on the possibility to implement this type of organization in France. These observations, to be generalized, would be worth being confirmed on a larger scale as part of a specific evaluative research. It is likely that they do not take into account the heterogeneity of evolutions conducted in each French territory.

We will summarize some of these observations to highlight the obstacles that the actors who want to adapt this suggestion on the field may encounter.

Assigning a social workers team to the territory’s medical team would probably work as a strong lever to pursue the deinstitutionalization aimed at in the framework of the sector’s policy. This would help the proximity psychiatric team refocus on its core business. The recovery logic requires a socio-medical co-responsibility, as long as all the actors treating the patients have this recovery objective as a common goal.

In this movement, it is important to keep in mind the three principles adopted by the countries that completed the deinstitutionalization: funding the new organization, the importance of a medical follow-up, that may be intensive at times, so a real social support may be possible, and the skills social teams need to provide, for this specific population, a support on social life, self-control and autonomy.

The development of the medico-social sector stems from the idea of a handover of responsibility from the medical sector to the social sector for patients who did not need a medical treatment anymore. Regarding the persons with a severe and persistent mental illness, all the data converge toward a permanent necessity for a medical follow-up, at any time in the pathway, particularly since treatments have been developed to target functional impairments underlying a psychic disability and
to reduce them over time. Also the disease progression is non-linear and requires a continuous medical follow-up of variable intensity depending on the persons’ needs.

Furthermore, social inclusion, in terms of housing and professional integration, is only possible with the permanent support of the team responsible for the medical follow-up continuity, as it is reminded by the literature on professional integration.

The objective, in France, is to switch from a logic of single responsibility (whether it is medical or medico-social) to a “co-responsibility” logic, at every moment in the pathway and every decisional level.

The creation of proximity socio-medical teams, consisting of professionals for the medical sector and social workers attached to their department of origin, all working together, for the same population in the same geographical area, would help achieve this necessary role and skill sharing, in the framework of shared socio-medical projects, in the persons’ environment and would be a powerful structuring lever to implement the necessary institutional co-responsibility.

The difficulties territories may encounter in creating such platforms are plenty and may be different in each territory:

1. **The issue of the sharing boundaries between medico-social systems for outpatient follow-up and social life support to patient (SAVS and SAMSAH), and the proximity social team.**

   Even if the complementarity of the proximity social team with medico-social housing centers or professional integration systems (very specialized) does not seem problematic, it is with systems dedicated to the outpatient follow-up and the social life support. We may mention some of these difficulties.

   o As we mentioned, a proximity social team should need to support the persons with a severe and persistent mental illness since the start of the pathway, even if there is no characterized psychic disorder that opens for benefits. This is a logic of disability prevention that needs to develop to not only limit to a medical follow-up in first intention, the medico-social follow-up only being provided after a disability has been identified. But access to a SAVS may only be possible after MDPH decision, and thus only after a psychic disability has been identified. Furthermore, an SAVS team cannot provide the social follow-up continuity for the whole duration of the pathway. The territorial platform should help create, around these patients at a high risk of disability, since the start of the pathway, a variable geometry social support, depending on the moments in the pathway.

   o The independence of this proximity social team from the MDPH is completed with the responsibility to keep strong links and work in a close partnership with the actors responsible for the social housing offer or the housing in an ordinary environment to provide the population it is responsible for an access to the whole housing offer. This team is supposed to open the yet insufficient access to medico-social and social actors. For example, we may think that a person with a psychic disability may prefer
to be oriented to a social housing dedicated to persons in a precarious and exclusion situation rather than a medico-social housing for disabled persons. If the socio-medical follow-up is conducted, this orientation is possible, and the social team is then in charge of helping the actors of the social housing receive this population.

- The proximity social team has the mission of “provider” between the various housing possibilities, be it social or medico-social, a mission that the MDPH or its affiliates cannot conduct since their orientation may only be done in the set of medico-social structures they own. This point reminds the often raised issue of the conflicts of interest between the assessor requested to provide the elements useful for orientation and the systems toward which the orientation is possible (see the book from A.M. Bloch). The proximity social team suggested here should not have any conflict of interest with the medical sector nor the medico-social sector (independence of the social team and the medical team).

- The proximity social team is responsible for the social follow-up continuity all along the patient’s pathway. But SAVS and SAMSAM cannot commit to provide their services on such long periods of time.

- A subsidiary issue that may be raised by the suggestion of a proximity social team working in partnership with the proximity medical team is the added value of the organization suggested by the SAMSAMs and the partnership to build between these two system types, as long as a real proximity socio-medical coordination is conducted for every person with a severe and persistent mental illness at a high risk of psychic disability, and should be part of the outpatient follow-up with the objective of recovery and autonomy. A possible way would be to include in the territorial social follow-up platform the systems with a similar objective, such as SAVS and SAMSAM, even though their mission and operation are not really comparable.

2. The issue of funding

- The funding of this territorial platform still raises issues. The idea of a multiple funding by the organizations responsible for the psychic disability (ARS, CG, cities, etc.) cannot be declared, even if, in a project logic, it is justified. The cost of this platform needs to be precisely evaluated, considering that the missions assigned to the proximity social team would be to cover the same population of persons with a severe and persistent mental illness treated by the proximity medical team, and to provide “variable geometry” interventions that could be intensive when necessary. The number of social workers to be assigned to medical teams can only be estimated by the number of patients treated by the psychiatric service in charge of this disorder category.
3. The issue of task sharing between social workers working in a medical structure and the proximity medical team. Social workers assigned to psychiatric teams are not supposed to systematically develop their support in the ordinary environment of the patient or to provide intensive social follow-up when necessary. They do not have the same missions than the one expected from proximity social teams, even though they have the skills to conduct them, and resources in social workers allocated to medical structures are not sufficient to consider giving them this mission.

4. Regarding training, it is necessary to make the distinction with the widely established partnership with the medical teams in most medico-social structures in France. The territorial social worker platform could be a training center for these social workers assigned to proximity medical teams. This training “between peers” could rely on already specialized social workers in France, put together in associative structures. As we have seen in the British example, a range of specific knowledge, based on research and internationally spread in the social sector, would structure this professional sector. The training, organized under the responsibility of specialized medico-social actors, could request other professionals to intervene, such as the medical professionals.

Other issues will probably be raised but each territory will have to evaluate the specific difficulties they may encounter before implementing this suggestion the way the territory will deem the most adapted, and watching the effects. Only the assessment of the effects of this organization on the real pathway of these persons will help adjust the format.

Suggestion 2: Encourage the development of care ethics and recovery logic in the social and medico-social support of persons with a psychic disability

It is an individualized support in two ways: it is primarily conducted by a single person “committed” to their activity, and is focused on the specific expectations and needs of the supported person, who needs tailored solutions. We may also characterize this individualized support as a practice based on the “care” dimension, not only because it is about “taking care”, which is not part of the “cure” (curative treatment), but also because these care practices require qualities that are precisely described, in the contemporary ethical philosophy, by care theories and care ethics. Some of the traits are as follows: the care should not be only considered as an intervention, but most importantly as a sensitiveness, a perceptual and attentional disposition toward others and their specific needs; the care requires to pay attention to the situation’s uniqueness, to concrete details of the daily, ordinary life (Laugier, 2006); the care is also revealing of “what we care about”, i.e. the unique values of the person (Frankfurt, 1988). Also, the care shows us how vulnerable and interdependent we are, on which we may build some kind of autonomy (particularly through self-care capability) (Molinier, 2009).

Furthermore, as it was pointed out by disability studies and the proponents of the social model of disability, the risk of care and support practices is to see the receiving person get subjected to it. It is by denouncing this risk that practices principles encouraging empowerment and recovery were
established. The objective is to let the persons with a disability decide by and for themselves and take back control over their life: “Nothing about us without us”.

These two points put two distinct perspectives face to face: the care ethics perspective insists on the position of the care provider (developed skills and values) and the disability studies perspective focuses on the position of the care receiver, and the subjection to which the care relationship may lead them.

After being opposed, these two perspectives are now getting closer in the common goal of empowering and changing the status of the involved persons, be it the care providers or receivers. The objective is to participate in the study, largely developed over the world, of the compatibility between empowerment and care, the tension between concern and autonomy, protection and risk required for autonomization, the compatibility between care and limitations. It is also to develop concrete services and practices to increase the persons’ ability to decide and act for themselves.

Finally, it aims at describing the characteristics of these practices and assess their impact in assessment research to provide evidences and help spread them. A concrete example of these practices is the personalized intervention project created by the proximity team, described below, of which the main actors are the persons with a disability themselves (Keyesa, 2015).

**Suggestion 3: a proximity social follow-up team connected to the whole set of resources in terms of housing, professional integration and social life support, developed in the health territory**

The autonomy objective supported by the recovery movement cannot match the goal of every person with a psychic disability at every moment in their pathway.

The whole literature agrees on the necessity to have a set of resources that make possible the adjustment of the housing and professional integration framework for the persons at any moment in the pathway, as we will see later.

The issue is the fluidity required to switch from a structure to another. The objective is to prevent the risk of institutionalization of persons in a given structure.

It is crucial to regularly reopen the discussion over the adaptation of the structure to the persons’ needs. It is the socio-medical team responsible for the proximity follow-up continuity all along the pathway that may provide regular assessments of the adjustments to the persons’ needs of the treatments provided by the structure: they have no conflict of interest with the housing or integration structure, and they know and work with the whole territorial resources in terms of (social and medico-social) housing and integration. This proximity socio-medical team may therefore help streamline the pathway, provided that they stay in contact with the persons regardless of their housing and/or integration location.

**At any rate, the objective of this support is the home stability of the persons in an ordinary environment. The current model, “supported housing”, aims at providing the person, in first intention, with the type of housing they wish while supporting the learning of skills necessary for their autonomy. This model helps prevent a chronicity in a medico-social housing and what we**
may call the “revolving-door syndrome” in terms of housing, i.e. the multiplication of switches between two structures.

The proximity social follow-up team may also be a powerful agent of medico-social de-chronicization. The chronicity risks in housing structures have been largely documented. The proximity social team is there to help the accommodated person keep the project dynamic by anticipating a change in housing location toward more autonomy as soon as the person’s abilities make it possible. The proximity social manager, whose mission will be to support the person outside of the structure, will be perfectly placed to conduct an assessment of autonomy skills, since the sole patient’s perspective inside the structure is not enough to have an overall perspective of the possibilities.

Finally, during the creation of the socio-medical project to which they will participate, for each patient, with the proximity medical team, this social follow-up team will not only have to stay informed of territorial resources in terms of housing, professional integration or social life support, but also know precisely how they work. The continuity of the social follow-up it will be responsible for, even when the persons are received in a housing structure, will help them learn about these structures.

To sum it up:

The missions of the team responsible for the proximity social follow-up continuity may be summarized as follows. They are to:

- be responsible for the social follow-up continuity for patients with severe and persistent mental illness, at a high risk of psychic disability, from the start and all along the pathway
- conduct the assessment of the patients’ autonomy skills and the compatibility of housing and integration conditions to these skills and the patients’ needs and wishes.
- support the patients in their everyday life, in the locations they wish, with the objective of recovery and by adopting a behavior relying on care ethics.
- support the treatment continuity.

V.2.1.3. The coordination between medical and social proximity teams for socio-medical projects adapted to each phase of the pathway and supporting a recovery logic

The objective is to make professional practices evolve toward coordinated practices, by encouraging the notion of shared interventions in the framework of a proximity geopopulational co-responsibility. Beyond the identification of targets for the progression of the pathway, it is necessary to be based on a recovery logic in which the persons and their immediate surrounding are included in the set objectives and their follow-up.

The socio-medical follow-up continuity requires an everyday commitment of medical and social teams since the start of the pathway.
Every person with a severe and persistent mental illness, such as schizophrenia, should have access, since the first psychotic episode, to a social or medico-social professional even if there is no obvious psychic disability. This professional, as we mentioned, needs to be independent from the medical team and be co-actor, with the medical team, of the health pathway of the persons. They will be responsible for the social follow-up and will be able to intervene at any moment necessary. The notion of psychic disability makes sometimes only consider the medico-social intervention when a specific, visible kind of chronicity is taking place. But **most of the improvement effort in our organizations needs to focus on the prevention of this chronicity**. Chronicity is a failure but not a fatality, since 60% of the persons with a severe and persistent mental illness recover. It is not acceptable to build an organization of the offer on failures even if the organization should be able to answer these failures.

Even in moments when an intensive medical follow-up is necessary, and to conduct it out of hospital, the social team will need to intervene with the medical team. As we mentioned, the characteristics defining this particular moment in the pathway, that any person with a severe and persistent mental illness may encounter at any moment in their pathway, are: a revolving-door syndrome (frequent use of emergency units and/or frequent compulsive hospitalizations), social instability and low treatment observance. It is important to take into account the social dimension since it is necessary to adapt the housing location to the moment in the pathway and provide environmental adjustments necessary to the aforementioned social instability. This is why, compared to the sequential follow-up provided in Canada (medical follow-up, then social follow-up after stability is reached), we prefer the joint socio-medical follow-up offered in the UK. The idea of shared treatments, yet advocated by Canada, aims in that direction.

To provide a real co-responsibility in the creation of the socio-medical project, various measures were suggested.

The first was adopted in cancer therapy when several care “operators” are brought about to set a treatment program. These are the multidisciplinary consultation meetings. Crossing perspectives and skills avoid that one’s position prevails over the others.

The second solution is more decidedly based on the recovery logic. In this logic, it takes into account the necessity that the patients themselves (besides self-harming situations) and their relatives participate in decisions regarding their pathway.

Many systems were suggested to make sure these various actors participate in decision-making. The creation of a personalized intervention project (or “shared socio-medical intervention projects”), more or less formalized but always laid out, is the best example. Anticipated treatment decisions operate in the same perspective: medical team, patient and a trusted person sign, before a mediator, a contract anticipating the measures to be taken if a crisis situation were to arise. This suggestion, supporting the redaction of a personalized intervention project, is very formalized and may be difficult to use in everyday practice. However, the traceability of the socio-medical project, in the framework of a written project shared between the social and medical teams, the patients and their relatives is crucial for everyone to follow the implementation of the project.

This **personalized and collaborative intervention project** converge with the notion of “shared treatments”, that is spreading in the medical sector (particularly to improve the cooperation
between primary care clinicians and specialists). It may be expanded to the partnership with the social and medico-social actors, as suggested by M.J. Fleury: “Shared or collaborative treatments involve the collaboration of GPs, psychiatrists and psychosocial resources in mental health” (M. J. G. Fleury, G., 2012).

This project relies on a **personalized collaborative assessment** of the needs and environment of the persons. This assessment is all the more relevant that it relies on a deepened knowledge of the situation, made possible by the follow-up conducted by the coordination team.

This assessment may be enriched, on the team’s request, with other professionals from reference or expert centers (for the psychopharmacological, somatic and especially functional assessment of the patient’s neurocognitive functions), or with dedicated social programs as part of a housing or integration project, more or less organized by the MDPH.

This assessment may be performed at set intervals, in the framework of the follow-up continuity, to best adapt the project to the progression of the disabled person.

**Programmed interventions** in the framework of a collaborative project should be with “**variable geometry**”, i.e. involving the medical and the social teams at variable intensity depending on the patient’s needs.

A socio-medical coordination is necessary when entering the care system and at any moment in the pathway.

**Social and medical co-responsibility** makes possible that professionals conduct their missions and avoid areas with conflicting roles. The social dimension being delegated to professional from the social sector (instead of medical), the medical team may focus on their own missions.

In its August 2014 release “medico-social support of adults with psychic disabilities”, the ANAP, from reconversion (mainly reconversion of medical beds in MAS) or creation feedbacks, aims in that direction. The authors highlight the importance that each sector (medical and medico-social) “may both:

- focus on their core business in a modernization logic with, in one hand, a better ability of the health infrastructures to provide treatments when they are or become predominant and, on the other hand, an adaptation of medico-social organizations when the educational and social coordination and support project becomes more important than the medical treatment, the latter remaining necessary, even if it’s not intensive,
- support the medical or medico-social partners every time they are facing situations beyond their skills: the medico-social sector is not supposed to offer intensive cares, whereas coordination, educational support and social and professional integration are the targets of the medico-social skills.”

This notion of “core business” is the notion necessary to a harmonious development of the partnership between medical, social and medico-social sectors. It is also crucial for each sector to take possession of the diagnosis and intervention innovations matching their abilities.

The existence of a specific medico-social sector in France does not help this necessary specification of the fields of intervention.
We should insist on the risk of conflicting roles, particularly around rehabilitation interventions. This conflict does not exist in foreign countries where there is no medico-social sector, and where rehabilitation treatments fall under the responsibility of the medical sector and the readaptation action under the social sector.

As the term of rehabilitation “treatments” (or psychosocial intervention) points out, it is a responsibility of the medical sector. This medical responsibility means that these treatments may only be adequately provided in an overall clinical logic. The choice of the “right technique” at the “right time” requires a deep clinical and technical understanding and a knowledge of the whole set of treatments available.

Among the medical team, a large part of the treatments is delegated to professionals other than psychiatrists (including nurses and psychologists), some of which come from the educational sector but learn, by being assigned to a medical team, a common language and intervention modalities matching more a medical than social perspective. Rehabilitation treatments fall, everywhere, under the responsibility of the medical team even if, under certain conditions, a delegation may be possible. As we have seen, to ensure a transfer of skills learned in a “semi-natural” environment (day hospital) to an ordinary environment, partnerships may develop between the medical and the medico-social sectors, under the supervision of the medical team. In the same way, it is by coupling assessments conducted by professionals of the medico-social sector, preferably in situation, with assessments conducted by professionals of the medical sector (cross-assessment), that the assessment will be the most accurate and effective and an alignment of everyone’s intervention will be possible.

Readaptation activities affect the support in an ordinary environment and aim at the person’s autonomy.

Rehabilitation treatments remain a blurred area in France and only bring more confusion. But confusions also exist when a medical team manages the social dimension of the pathway. This is why, in terms of integration, the required professionals should not come from the medical sector but should have the social skills necessary for their mission.

**The presence of a social pivot team with a geopopulation case management responsibility matching the medical team would be a prerequisite to a co-responsibility undertaken all along the health pathway of persons with a psychic disability.**

This shared responsibility exists, as we have seen, in most foreign countries. For Canada, M.J. Fleury defines it this way: “Populational responsibility means that professionals offering services to the population of a local territory will have to share a responsibility toward this population, by making available a set of service as comprehensive as possible, and by providing treatment and support for persons in the health and social services system, while encouraging the merging of efforts to maintain and improve the health and well-being of the population and communities it is made of.” (Montérégie’s ASSS, quoted by M.J. Fleury).

In the UK, assigning social workers to their district of origin, co-coordinating the health pathway of persons with a severe and persistent mental illness, and their very high skill level (related to the
academisation of their curriculum) give them the necessary independence to take this responsibility even though they belong to the same team, under psychiatric responsibility.

This way, putting social workers involved in a proximity social team under the responsibility of a social or medico-social team, while they have a geopopulational responsibility, seems to be a strong guarantee toward a shared responsibility all along the pathway.

A partnership between medical team and social team, since the start of the follow-up (usually the start of the treatment), is only possible if everyone’s roles are distinct, as we mentioned, but a close partnership requires to share identical intervention territories, in the framework of a **geopopulational co-responsibility**. The importance of a territory between a proximity social team and a medical team is often reminded. In England, the intervention of a single (medical and social) “hybrid” team on a given territory meets this requirement. In Canada, the “switch” of a population from the medical team to the social team is done through an organization in sectors.

It is complicated to set beforehand the proximity perimeter matching the perimeter covered by the pivot team, which coordinates the pathway. However, the international literature estimates these perimeters between 50 000 and 150 000 inhabitants.

With the new recovery logic and the orientation of treatments and social interventions toward the ordinary environment it encourages, every authors highlight the importance of involving the civil society in the pathway to facilitate the integration of persons with a psychic disability in the ordinary environment and encourage the de-stigmatization of this population. Strong links are to be tied with the immediate social environment (role of cities or inter-cities). Therefore, the new actors of the recovery are the social landlords (for the housing in ordinary environment), local companies (for integration in competitive employment) and the cities’ cultural centers (for leisure in ordinary environment). Local council in mental health aim at encouraging this city involvement.

This necessary rapprochement may feed the reflection on the perimeter of psychiatric sectors (even if many territories are already split in a way that a territory’s team may intervene in a city or between cities, other are not) and the districts to which proximity social teams are assigned; these teams may see an advantage to conduct their mission in cities or between cities.

**TO SUM IT UP:**

*For the population with a psychic disability underlaid by a severe and persistent mental illness, the project needs to be socio-medical, as the team responsible for the project. This is under this medical and social double responsibility that the “case management” is organized in foreign countries.*

This medical and social double responsibility is developed everywhere in the framework of a common intervention territory and as a “co-responsibility”, i.e. an independence of medical and social actors, each one under their own structure. In the perspective of recovery, the patients and their families are actors of the personalized intervention project as much as the socio-medical team and may request as many revisions of this project as necessary.
V.2.2 Make the mission sharing more obvious between the proximity socio-medical organization and the health territory organization

Suggestions:

1. Make a set of medical resources available to the proximity medical team in each health territory
   a. Make sure the proximity medical team has access to every medical resources, in their practice or mutualized
   b. Improve the partnership between the proximity medical team, pivot of the medical follow-up continuity, and dedicated medical organizations (improving information sharing)

2. Make available for the proximity social team, in each health territory, a set of resources in terms of professional integration, housing and participation to social life
   a. Include peer helpers in the design and operation of these organizations
   b. Develop a set of resources in terms of housing, in a sheltered or ordinary environment (social housing or not), to aim at autonomy and by making the switch seamless from one system to the other, depending on the real autonomy skills of the persons
   c. Develop a set of resources in terms of integration, in a sheltered or supported employment, and in competitive employment, to aim at competitive employment and by making the switch seamless from one system to the other, depending on the real integration skills of the persons
   d. Develop a set of resources in terms of support and participation in social life in an ordinary environment
   e. Build a partnership between the proximity social team, pivot of the social follow-up continuity, and organizations dedicated to housing, integration and participation in social life

The current health territory is a space used by proximity socio-medical teams to:

- implement intervention they cannot provide by themselves,
- be an arbitrator in dead-end situations, when an obstacle arises in the consensual creation of a socio-medical intervention project by the proximity socio-medical team,
- plan the organization of medical and medico-social systems and structures which form the necessary set of socio-medical systems and structures to offer the continuous quality and adjustment of interventions regarding the persons’ autonomy skills and medical needs.

The territorial, institutional coordination ensures a proximity socio-medical follow-up, guided by the key principles of a quality pathway:
- the continuity of the medical and social follow-up at any moment in the pathway,
- the non-subsidiarity and the roles and skills sharing, each professional being necessary in their own core business,
- the importance of a proximity socio-medical team to provide an assessment of the persons’ condition before any orientation decision, and their involvement in any decision taken for the projects implementation.

These principles cover the idea that a social follow-up is only possible if the medical follow-up continuity is provided, and that a medical follow-up is not enough to ensure the recovery of persons with a psychic disability, who require a specific social and medico-social proximity follow-up.

Institutional coordinators, as mentioned in the IGAS report, need to:

- Offer a sufficient and non-redundant set of territorial resources for any moment in the pathway, under the responsibility of the ARS. To make it possible, the ARS “organizes the consultation with territorial administrations”. Furthermore, “all the investors of social funding in the territory (ARS, district administration, city social action centers, social security, complementary organizations) need to sign a protocol to identify existing social funding and work together to improve the use of social funding and how it is used”.
- Maintain “lists” of all medical, social and medico-social resources, to make them available for every team responsible for the proximity socio-medical follow-up.
- Provide “Transversal organization functions” such as the creation of a list of the various available structures and the harmonization of the type of information that will help set up a collaborative exchange between the proximity team and the hosting structure.
- Be used if there is no designated proximity team or if there is a disagreement in the team over the project to offer. This function helps readmit in a pathway the persons who interrupted their treatment, by giving them access to a proximity team.

In any situation, calls for projects dedicated to specific organizations should include, as a selection criterion, the participation of proximity teams in their design to make sure they are used at their best capabilities by territorial actors: how to access these measures and quality of the information exchanged between this organization and the proximity teams.

The issue of assessing the persons’ state: gray area between proximity actors and institutional actors (MDPH)

The MDPHs’ mission is to assess the situation of the persons to calculate their benefits and orient them toward the medico-social program best adapted to the assessment results. They consist of a multidisciplinary assessment team brought together to meet this objective.

There is then the issue of the better suited actors to provide information useful to the disability assessment. The inappropriate nature of the information transmitted from medical teams is often pointed out by MDPHs. Should actions be implemented to improve the information transmitted by proximity actors or should the assessments be mainly conducted directly into the MDPHs?
This choice is not exempt of consequences. To decide, it is important to remind that the assessment has a value only if it is part of a continuous process of matching the offer with the patients’ needs at any moment of their pathway. As it is highlighted in the Piveteau report, **follow-up and assessment are closely linked**.

The assessment issue implies objectives that go way beyond its sole perimeter. The creation of MDPHs, as M.A. Bloch points out, “is a major step in the process of demedicalization of the disability sector and the assessment of the disabled persons’ needs”. MDPHs’ role is to “bring to life the 2005 Act”, which partly relies on the end of the “structural dominance” of clinicians in this field of activity (Freidson, 1970, quoted by M.A. Bloch). The assessment of needs also has a key objective, which is translating the definition of a person’s needs from their medical needs to their social and medico-social needs, which are usually only little taken into account by medical teams. It characterizes the shift from a biomedical model to a social model of the disability.

M.A. Bloch highlights the limits encountered by these structures (in the survey conducted by P.Y. Baudot et al. in 2013), such as the expertise quality: “The configuration of assessment teams does not only stem from expert logics consisting in choosing, to create assessment teams, the professionals who will give the most appropriate expertise to identify the patients’ compensation needs, but is also an answer to organizational limitations and political agendas”. Furthermore, she highlights the drawback of putting the assessor in a judge and party position, especially when part of the assessment is attributed to a SAMSAH. Indeed, the judge and party status shows the risk of taking decision not only based on the patients’ needs, but on other considerations as well (including to support some structures or orientation, not guided by needs, toward empty beds), despite the precaution in dissociating, inside MDPHs, the assessor role (attributed to the multidisciplinary team) and the decision role (to the CDAPH).

**The assessment is not only useful to orientation, but also to the overall follow-up of the patient: it strongly involves the teams responsible for the continuity of the medical follow-up and the social follow-up, which should be necessary to match this orientation with the persons’ expectations and real possibilities (by providing useful information to the MDPH) and ensure the success of this orientation. It is necessary to remind that the personalized plan is comprehensive and includes every dimensions of the pathway. The decision is a continuous process of matching the provided measures to the persons’ needs and expectations, based on their life project. It is however necessary to take into account the resources mobilizable on the territory and the lack, sometimes, of these resources, making it impossible to implement the expected measures. If the person is not admitted in treatments, the request to the MDPH may be an opportunity to facilitate the access to treatment since no housing or professional integration program is likely to succeed without a medical follow-up, as the literature on professional integration points out. An assessment in the MDPH by a team specialized in psychiatry helps reassert the importance of this follow-up to the person and supports the access to treatments. The specialized team, linked to territorial medical actors, should help the person reach for these treatments.**
Disability assessment

To assist multidisciplinary teams in MDPH in charge of assessing the situation of requesting persons, a set of tools has been designed, including the GEVA (Evaluation guide for the compensation needs of disabled persons). http://www.cnsa.fr/documentation/cahierpedagogique_geva_interieur-mai-2015-complet.pdf

The first assessment objective, to meet the requirements in terms of equality before the law, is to check whether the situation of the patient meets the eligibility criteria to access specific services (CASF article R. 146-28). The main tool is the scale, which sets a number of disability rates and is based on the International classification of functioning, disability and health (ICF) and on a medical logic. The goal is to identify characterized and listed impairments, evaluate their outcomes on functioning and participation to life in the society. On a technical perspective, the impairment list of psychiatric disorders matches a rather old identification, with only a partial compatibility with the current classification terminology, and does not always match the impairments considered as the most responsible for a disability.

The second assessment objective is to build a personalized compensation plan for which the eligibility criteria are insufficiently described or not adapted. Identifying the various assistance or intervention tools that may be useful to the persons requires an understanding of how the persons function in their everyday life, in their relationship with others, and to take their wishes into account. To conduct this task, multidisciplinary teams use the part 6 of the GEVA (Evaluation guide for the compensation needs of disabled persons), redacted based on the ICF. To take into account environmental factors, the GEVA explains the facilitator or obstacle role of various environmental dimensions (human or material) in performing activities. Diverse criticisms were formulated regarding its application to psychiatric disorders with an incompletely described functional outcome. In these situations, the difficulties regard complex abilities (such as motivation or social cognitive skills helping social relationships) and environmental factors are difficult to pinpoint since they are mainly factors related to relationship factors, human assistance and relationship skills of the relatives, rather than material factors. Finally, the importance of life habits in the expression of the psychic disability questions how the assessment may predict the relevancy of a change in lifestyle and environment. Works are in progress to offer complementary tools based on the same functional logic and therefore “GEVA-compatible”.

Since the 2005 Act was enacted, several researches were conducted, particularly by the initiative of the CNSA, on the issue of the assessment of the psychic disability and the relevant conditions of data collection, which led to recommendations and suggestions. The first conclusion is that there is no “ideal” and universal tool: the assessment and its tools need to adapt to the nature of the question(s) asked. The second conclusion is that it is impossible to conduct a correct and thorough evaluation quickly. The assessment duration needs to take into account the process of uncovering and identifying functional difficulties that may be concealed. Finally, every studies concluded that it was necessary to adopt a pragmatic approach in information collection, and cross-check various information sources, and not limiting only to the persons’ declarations. It is the assessment trio consisting of the persons, their relatives (family or professional helpers) and medical team. If contradictory data appear, the assessment must go on.

A first functioning assessment of MDPHs was conducted in the recent study “Cekoïa Conseil” (MDPH / High council in public health, September 2014), providing observations that were specifically related to these questions of assessing the situations of psychic disability. These situations are unanimously considered complex situations, over which professionals have the most difficulties to conduct needs assessments. These difficulties are probably expressed by some degree of variability between territories, depending on the variability of the assessment process. Therefore, without deciding on an ideal ratio, the rate of attributed disability among persons with a psychic disability...
(between 50% and 79%, or over 80%) was chosen by the ANAP as a performance indicator in its “Diagnostic territorial des parcours en psychiatrie-santé mentale” (Territorial diagnosis in psychiatry-mental health pathways), targeting breaking points in health pathways. Taking these difficulties into account, adjustment in the assessment process were implemented by MDPHs, such as: the creation of a multidisciplinary team dedicated to the situations of psychic disability, internship trainings, request for outside partners to transmit useful information or to conduct assessments. The quality of these outsourced assessments is deemed globally satisfying, especially when they are established and formalized using shared tools. MDPHs developed preferred relationships with diverse partners to conduct assessments: ESMS (Social and medico-social services infrastructures), self-employed professionals, medical sector structures, actors with specific abilities (professional integration, resource center or expert center). The quality in filling medical certificates is varying, despite a proximity work sometimes felt heavy and always needing adjustments. The partnership significantly helps improve the quality of the information collected to assess the situations (e.g. the tool developed in the Yvelines district on the psychic disability, in partnership with the UNAFAM), particularly when it relies on the use of formalized tools. Even though tools, complementing the GEVA, were developed to help collect the information necessary to assess the psychic disability, particularly in the framework of researches backed by the CNSA, their use in real situation in the assessment process of MDPHs needs to be expanded and their acceptance and usefulness need to be subjected to further studies. One of their impact could be the development of a common language and a shared knowledge of the functional outcome of the psychic disability.

Assessing the functional outcome of the psychic disability

The assessment of the functional skills of persons with a severe and persistent mental illness was subjected to many studies and countless tools were developed, some of which are available and validated in French. Several methods exist, each of them with their own advantage and drawbacks (T. L. Patterson & Mausbach, 2010): the direct observation of the persons in their everyday environment is relevant but rather demanding in terms of resources to allocate; self-report is simple but considered biased in persons with schizophrenia, due to a lack of insight regarding their limitations; the report by relatives/helpers may encounter difficulties, since there are not always close relatives, and when there are, they do not necessarily know about every areas of functioning; finally, the assessment may be based on performance observed directly in a specific environment (simulation). This method is very relevant but assessing the observed abilities in a structured and “ideal” environment is just not transferable to the everyday environment of the persons, where other factors may interfere (such as motivation).

Beyond the issue of measure validity, the professionals in psychosocial rehabilitation (D. Leguay and E. Giraud-Baro) consider that assessing the disability is not possible if the treatments that may reduce it are not included. The assessment itself may also be a factor of change, since for the disabled person, highlighting the current functioning involves getting aware of it and grieving lost abilities, and also because formulating requests in a personalized compensation project means that they have to take a stand on the subject and make choices. In this context, the assessment is an elaboration, in its purest sense, of a contract between the persons with a severe and persistent mental illness, their relatives and the medical and social teams who help them.

As we mentioned, all the recent initiatives in terms of housing and professional integration are aiming at:

- developing a set of services to cover the persons’ needs all along their pathway and encourage their social inclusion,
- an outpatient turn in services offering housing and professional integration support, “outside of hospital”, in an ordinary environment, rather than in institutionalized life or professional environment.

- This logic is revealed by new practices in professional integration support: the “Place and Train” model. These practices break free from the traditional approach, by skipping the long step consisting of a prior assessment of the persons’ skills and preparation, to directly offer a job in competitive employment. These practices are currently spreading in developed countries since they proved to be way more effective, and are therefore based on evidences. The similarity in housing and professional integration techniques is striking. The priority is social inclusion. It is made possible by an individualized, durable, reactive, flexible, adaptable and sometimes intensive support depending on the persons’ needs. They are mostly deinstitutionalized practices, based on the recovery values, which need to be adopted by support professionals and structures who hire and supervise them. The patients’ wish is a key element in the orientation choice. These evolutions involve a strong social support and a quality coordination with medical follow-up services to be implemented.

V.2.2.1. The set of medico-social housing structures

Housing is a central issue in the life pathway of the persons with a psychic disability. Beyond homelessness (that “housing first” program aim at reducing), other problems arise, such as the burden on the family. Furthermore, community integration appears to be closely linked to the housing characteristics.

The term of “set” means that the evolution of the persons’ needs in terms of housing support needs to be taken into account by providing a housing adapted to every moment in their pathway. This set needs to provide solutions from the most sheltered to the most autonomous, mobilizing the medico-social housing as much as the social housing programs. Even if the objective is a larger autonomy for the persons and thus a housing in an ordinary environment, it is unrealistic to adopt a logic of “everyone in an ordinary environment”. An international consensus exists on the necessity to offer diverse solutions without renouncing to autonomy.

The necessary continuity of the medical follow-up

The idea that a medico-social funding would provide an “all-in-one” solution to offer both a social and a medical service was never sufficient to meet the actual medical needs of persons with a severe and persistent mental illness. Indeed, these resources do not provide the persons with the whole set of appropriate treatments. Furthermore, we highlighted the risk caused by delegating all or part of the treatments to the medico-social team, particularly some treatment techniques of which the exclusive implementation would contradict the medical necessity to consider their relevancy depending on other therapeutic possibilities at every moment in the pathway.

This position causes large deleterious effects, such as an excessive use of hospitalization, largely linked, as shown by evidences, to an insufficient development of outpatient medical tools that need to be maintained even outside of periods with the most severe symptoms in this vulnerable population.
Furthermore, this position sometimes led medical teams to withdraw from the follow-up as soon as the patients entered a medico-social structure since a medical follow-up could be conducted there, or when patients were referred to structures far from their usual living environment. The recovery approach and the autonomy objective require, on the contrary, to prefer maintaining the person with a psychic disability in its usual environment, and ensuring the continuity of the socio-medical follow-up in proximity and in an outpatient approach under the responsibility of a coordination team all along the pathway.

**The types of housing structures**

France developed, in the medico-social sector, a large offer in terms of what Canadians call “residential facilities”. The population of persons with a psychic disability may be provided with all the offered housing possibilities, including social housing as long as the continuity of the medical follow-up is offered.

The characteristics of a quality housing (Piat et al., 2006), regardless of the type, are:

- its location in the community
- the respect of the persons’ intimacy
- to receive a limited number of residents (small, well integrated structures in town)
- to take into account the choice and decision power of the residents
- to ensure a residential stability

In the 1990s, the concept of supported housing appears. It is a concept of independent housing relying on the values of recovery and community integration. In this context, the functions of treatments and housing may be separated. This is the type of housing that is now considered as an objective to reach.

As in the field of professional integration, there was a real modality reversal in the support of the persons in terms of housing and employment, going from a continuum model aiming at a progressive integration of the persons in housing locations from the most sheltered to the most autonomous, depending on abilities, to a model offering to the persons, in first intention, the type of housing they wish while helping them acquire the skills necessary to their autonomy. If we adopt the logic already developed in professional integration, the housing support in an ordinary environment, as long as it is the wish of the persons, will develop as it does already in Anglo-Saxon countries.

Regardless of the offered housing type, it is necessary to also provide a continuous medical follow-up with an intensity adapted to the persons’ need, and a significant social support.

Other initiatives may be considered for this population depending on their specific support needs.

**The issue of structure diversity or specialization**

Asked this way, the question may not receive any satisfying answer. It is more about questioning the factors that match a housing structure with hosting persons with a psychic disability.
The question’s objective is to switch from the injunction “find something wherever it is” to “find a housing suited to the person’s capacities”.

The Canadian example is interesting since it provides housing for persons with a psychic disability depending on the persons’ state, i.e. the intensity of their disability (including their relationship and communication difficulties), the more or less unstable clinical state and their level of autonomy (i.e. how they organize their living space and plane tasks to function daily).

Therefore, the qualifications of the actors providing the social assistance in the hosting structure and the intensity of the medical assistance (assistance by a professional from the psychiatric sector and medical follow-up continuity provided by the coordination team from the psychiatric sector) will need to be adapted to the hosted population.

In France, not all medico-social professionals learned the skills to receive the persons with a psychic disability since these skills are not needed when assisting persons with a different type of disability.

To let these organizations, which do not yet receive persons with a psychic disability, reach this new population is an opportunity in terms of hosting capacity for this population but requires prior adjustments and different organizations depending on the hosted patients.

Opening to the diversity of medico-social structures therefore needs to be followed by a particular organization and cannot simply be declared. The psychic disability being expressed in relationships, hosting in a structure with no competence in this type of disability increases the risk of patient worsening and avoidable hospitalizations. Choosing a structure which does not have all the guarantees of a quality assistance may be an actual loss of opportunity for the hosted person.

Another issue is raised: the issue of the fluidity of the life pathway through different structures and the orientation to an ad hoc structure

The idea itself of a set of structures that meet the evolving needs of the persons all along their life pathway raises the issue of the switch from a structure to another depending on the level of autonomy acquired by the persons. The medico-social housing environment is a source of chronicity, as the closing of hospital demonstrated it, with studies showing the transfer of chronicity from the medical sector to the medico-social sector. Finally, the necessity to keep aiming at a housing in an ordinary environment, a powerful factor of recovery, requires to regularly reassess the suitability of the current housing with the autonomy skills of the hosted person.

The proximity social follow-up teams may act as a facilitator between two structures, since they have no conflict of interest with the structures and may observe the patients outside of their home.
V.2.2.2 The set of measures dedicated to professional integration

It is important to remind that having a professional activity is one of the factors that most effectively contribute to the recovery of the persons with a psychic disability (Boardman 2003, Waghorn 2007), even if it is possible to recover without professional activity. In most developed countries, durable professional integration of these persons has become an important axis in mental health policies. Therapeutic progress, particularly the specific interventions to reduce the functional limitations caused by the disease, through cognitive remediation and social skills training, now makes possible to consider the access to employment.

Here again, France provides many possibilities in terms of sheltered employment.

It only remains to develop mobile teams dedicated to the integration in competitive employment, for which evidences are strong.

If we deem important to improve the access to competitive employment to the persons with a psychic disability (relevancy demonstrated to help recovery) and if we wish to consider the evidences to improve our practices’ effectiveness, it is necessary to encourage individualized support practices of the “Place and Train” type, on the “IPS” or a comparable model.

This is why this type of practices is spreading in most developed countries, particularly in Europe.

To access employment, practices on the “Place and Train” model have yet to develop in France, due to a lack of public funding dedicated to these practices.

But it would be wrong to think that implementing this new practice would mean renouncing to rely on the existing ones, and start with this new one from scratch. On the contrary, it appears that many French structures, in the field of professional integration, with practices considered of high quality, are interested in experimenting this new practice (some already started the experimentation), without opposing it to the existing practices.

It requires, as we mentioned (§2.3), a specific organization mode - with a large autonomy and responsibility given to job coaches - which distinguishes this practice from the traditional ones. It would thus be preferable (although this suggestion is not validated by evidences) to create a new dynamic by initiating a new operating mode in terms of supported employment, rather than trying to make practices with different basis evolve.

It is the responsibility of the actors from the medico-social sector to create the conditions for a transition from the sheltered employment to the competitive employment. This transition is worth being explicitly encouraged, recognized as a strong indicator of good practices, and supported by incentive measures.

Identifying and fighting the obstacles to develop the social and professional inclusion of this population.

Many Anglo-Saxon studies and authors insist on the obstacles to social inclusion that are the stigmatizing social representations of schizophrenia, starting with stigmatizing prejudice over the medical environments. As Mueser et al. (2014) (Mueser & McGurk, 2014) point out, these prejudices
are clearly manifested in the skepticism toward the rapid integration of these persons in competitive employment.

If we acknowledge that France was late, compared to its European neighbors, to develop a practice such as the supported employment, the task of identifying the obstacles or reluctances to develop this approach is hardly avoidable.

A hypothesis is the reluctance of structures managing medico-social practices - but also, more surprisingly, the public administration - to accept and encourage a change in the social policy that we may call “deinstitutionalization of medico-social support practices”, giving more autonomy to helpers. An argument in favor of this hypothesis is the observation that this supported employment practice (or job coaching), late to be implemented by the associative sector, tends to now be offered to companies, as a liberal practice, by service providers, individually or grouped in agencies.

This type of liberal practice in social or professional support, looking for funding directly from companies, but also sometimes from the patients’ families - as it is developing in the context of autism - appears to be an orientation neither compliant with the principles of the 2005 Act for “the equality of rights and opportunities”, nor may encourage assessable and well-coordinated practices with the other actors of the pathway.

V.2.3. Developing assessment

Based on the flexibility of concrete improvement measures adopted by the Centre de Preuves, suggestions made in this report are objectives (where to go) but not stiff implementation directions (how to go there). Different modalities are possible in each territory to get the same result, depending on existing resources and local initiatives. This is defined by the territorial health project.

The choice of flexibility in organization improvements thus requires a rigorous assessment of met objectives and means used to meet them. Normativity doesn’t require assessment. But it does not give room to adjust the measures to the diversity of territories on which it will be implemented, contrary to the approach with assessment. It only verifies the implementation of an operating standard.

A lack of data in France, in terms of medical, social and medico-social practices and their impact on the population who receive them is often observed. Although some quantitative, descriptive data are available, there is a total lack of data on the impact of the offered services on the persons. And even quantitative, descriptive data are sparse.

According to the permanent improvement schema, the assessment helps, through the collection of ad hoc data, verify the impact of taken measures on variables of interest, and ensure an evolutive objectives adjustment. These variables of interest are related to objectives to be met (including the impact on patients themselves), common for every territory (everyone needs these targets), and not to measures undertaken to reach these objectives; it is necessary to find locally the implementation indicators for these measures.
In an optimum assessment schema, the pathways are assessed before and after improvement. In a minimalistic schema, some impact indicators may be chosen to assess improvement or a specific item in the pathway. The assessment needs to cover the whole geographical perimeter of the health territory, i.e. cover every resources put to the service of patients (and their socio-medical follow-up team) all along the pathway. The relevant scientific territory matches the territory of the socio-medical pathways of the affected persons. The assessment should provide quantitative data (number of places, structures, etc.) and clinical particulars (to measure the impact of improvements on the populations targeted by these improvements).
VI. Health pathway assessment of the persons with a schizophrenic disorder
VI - Protocol: example of the health pathway assessment of persons with a schizophrenic disorder living in the Yvelines district

This project is the product of a first work step conducted for the Centre de Preuves by the research team EA4047 (UVSQ). Its first objective is to create an assessment research design of actions implemented on a health territory to improve the health pathway of persons with a schizophrenic disorder. A second objective is to apply to a French territory the issues discussed in international research, regarding the factors of these health pathways. These issues do not need to be discussed in the framework of the first objective but response elements may contribute to narrow down the choice of useful variables in this type of research. In other words, one of the expected results of this project is to improve this first assessment model before/after implementing improvement actions, to help its implementation, its exportation and its adaptation to other health territories depending on the wishes of local actors (health and social professionals, MDPH, ARS).

In its current state, the project only follows a quantitative approach, based on the exploitation of a medico-administrative database (ALD files and medical insurance database) and a deepened clinical assessment of a representative sample of persons in this database. A second part, still being conceived, will aim at completing this approach with a qualitative methodology, to answer the questions regarding actors’ representations (patients, relatives, professionals), their expectations and main factors of resistance to change or, on the contrary, the levers that may make the reception and implementation of improvement actions easier.

1. The state of the issue and the research objectives

1.1 Marker elements of schizophrenic disorders and the health pathway of the persons with schizophrenia

According to the World Health Organization (WHO), mental health disorders will be, by 2030, the main cause of morbidity and disability in industrialized countries and the second one in developing countries (Mathers & Loncar, 2006). Among these disorders, schizophrenic disorders impact 1% of the population, with a slightly higher prevalence in male patients whose disorder is more chronic.

The progression of these disorders is variable, most often chronic, and functional remission is rarer than symptom remission (Novick et al., 2009). In the long term (10 to 16 years), after hospitalization for a first episode of schizophrenic disorder, 15% of patients live well enough without care and 25% do not use any psychotropic medication. Loss of life expectancy is high, estimated to approximately 19 years for men and 16 years for women. The main causes of death are suicide, and cardiovascular disease for somatic pathologies (Laursen, 2011). Due to their severity, schizophrenic disorders mobilize a very large amount of the socio-medical resources in mental health. Their impact on the quality of life of the affected persons, their de-socializing power and the complexity of treatment needs are a real challenge for our societies. This is this impact on functional skills and participation to social life that the law of the 5th February 2005 acknowledged, leading to the concept of psychic disability, specific to France, and reaffirming for affected persons the right to receive benefits (article L. 114-1-1 of the social action and family act).

1.2. Principles guiding the organization of needs and help measures towards the persons with a schizophrenic disorder in the main developed countries
In the past decades, all the developed countries conducted very important works to improve practices and socio-medical organization toward the persons with severe and persistent mental illnesses. These improvements were followed by a huge amount of literature regarding their relevancy.

The first of these improvements was the deinstitutionalization that aimed at limiting the use of hospitalization, and integrating the persons in the community (Graham Thornicroft & Tansella, 2006). The assessment of this movement of “getting out of asylums” showed that the symptoms of these persons did not worsen, and that their social functioning, their quality of life and their satisfaction improved (Bruffaerts et al., 2004, Leff and Trieman, 2000). This deinstitutionalization was followed by a reorganization of the response to these persons’ many needs (e.g. medical treatments, case management, housing and employment support, day activities) in the framework of a territorialized offer, under the responsibility of a dedicated team, the community health team (Bachrach, 1993, Thornicroft and Tansella, 2004).

The second principle relates to the mission of coordinating the various services. After experimenting various models, the option of a coordination “in the patient's environment” was generalized in the shape of the “case management”. After being provided by an independent professional, the case management is now included in the patients’ follow-up and collectively conducted by the community health team. Its missions are to provide treatment continuity, keep the patients in the community, and improve quality of life. A Cochrane review (Dieterich et al., 2010) demonstrated a high level of evidence regarding this practice’s benefits, particularly for the most severe patients: reduction in hospitalization and use of emergency services, improved integration in the community, improved quality of life, treatment observance, symptom stability and residential stability, improved employment, reduced risk of homelessness, criminal offenses and substance abuse.

Finally, the third major evolution was the generalized adoption of the recovery model. Whereas the medical approach aims at reducing the disorder and stays focused on the disease it aims at optimizing the evolution, the recovery relates to the persons’ future; the factors are not only medical, but also depends on the persons’ resources to get back the control over their life despite the chronic disease, and environmental factors that may help or hinder this new involvement in active life. Therefore, where the medical approach offers prescriptions, usually medicated treatments, leaving the persons in a relatively passive stance, the recovery approach requires the restoration of an active stance from the persons to go back in an active and social life. The objective is to get a new feeling of control over their life, hence a treatment and support model to encourage and support the persons’ self-assertion, empowerment (restoring the power to decide and act) and autonomy (Amering, 2009; College, 2007) (Amering, 2009; L. Davidson, Rakfeldt, J., Strauss, J., 2009).
1.3 Elements of knowledge on the French situation

France is one of the western countries where the various evolutions of the mental health system, described above, are still incomplete, starting with the deinstitutionalization that was partially and variably undertaken depending on territories. We also regret the lack of data regarding health pathways, the nature and orientation of offered services, the coordination modalities and the alignment of help to the needs of the persons with schizophrenia. This drawback is a significant obstacle to take decisions in terms of health policy, and to actions to improve the treatments and services quality.

The main data available in France come from the processing of the CNAM (Caisse Nationale d’Assurance Maladie, National Fund for Health Insurance) and PMSI (Programme de Médicalisation des Systèmes d’Information, Medicalization Program of Information Systems) databases. The number of persons with a schizophrenic disorder is estimated at 400 000 (Limosin, 2000) and the number of persons treated in hospital (in or outpatients) is estimated at 145 700 (RIM-P 2012 data). ALD (Affection longue durée, long-term disease) data for the same year estimate at 132 000 the number of persons diagnosed with a schizophrenic disorder, the main health insurance funds taken into account (CNAM, RSI, MSA). These data do not take into account the persons treated in liberal practice and without ALD. International data regarding the access to treatments report that the treatment absence rate is 18% in average in developed countries (Kohn et al., 2004) and that access to treatments increases along with disorder severity (Helgason, 1964).

Regarding the care pathways, M. Coldefy et al. (2015, presentation for the Centre de Preuves) processed the 2011 RIM-P hospital data on 137 000 persons treated for schizophrenia, which represents 9% of the population treated in mental health structures, 14% of full-time inpatients and 24% of hospital days. The follow-up is conducted at 83% in public structures (specialized or generalist) and outpatient cares are the main activity of psychiatric sectors (in terms of involved resources). Regarding the socio-demographic characteristics, 2/3 of these persons are men of a mean age of 44, with an earlier treatment need in men (maximum between 31 and 35) than in women (maximum between 46 and 50). The distribution of patients between the various follow-up modes is 49% for strictly outpatient treatments, 16% for full-time hospitalization, 3% for part-time hospitalization and 32% for mixed in and outpatient treatments. This distribution makes schizophrenic patients the group most likely to be hospitalized, with a mean hospitalization duration of 83 days per year, voluntary hospitalization for 30% of patients and forced hospitalization for 13% of patients. Outpatients most commonly use medical consultations, with two third of them using this follow-up, with 6 consultations per year on average. Then other follow-ups are, in decreasing order: nurse and psychological consultations for 36% of patients (14 consultations/year), social follow-up for 1/3 of patients (7 consultations/year), home visits (17%) and group therapies (15%).

Regarding somatic treatments, French data is sparse on the follow-up of schizophrenic patients by general practitioners and their links with psychiatrists. In other countries, schizophrenic patients often see their general practitioner. For example, a large Australian study showed that schizophrenic patients consult the most their GP, after alcohol and drug addicts (Mai et al., 2010).

In terms of lifestyle and social participation, European data show that 10% to 11% of the persons have a paid job (in competitive or sheltered employment), 25% are in a couple and 75% are single, separated or divorced (Marwaha & Johnson, 2004; Marwaha et al., 2007). Few data are available in France on compensation measures: in 2005-2006, 11% of the 330 000 persons who received an AAH (Allocation aux Adultes Handicapés, benefits for disabled adults) had a schizophrenic disorder (DREES, 2008 (Juin)). Overall and in all developed country, the social needs of persons with a schizophrenic disorder are significant and insufficiently taken into account. The study on a Canadian cohort shows that clinical remission is more frequent than functional remission, and that the person's autonomy progressively decreases for 16 years after a first schizophrenic episode (Abdel-
Baki et al., 2011). In Quebec, the lack of alignment between the needs and the measures offered by psycho-social and readaptation services has been pointed out. In the year following a hospitalization, needs are obvious for 76% of patients but only 23% receive support (Cormier et al., 1986).

1.4 Research objectives

This study has two objectives: first, analyze the current practices and health pathways of persons with a schizophrenic disorder on a given territory; second, give explanatory elements on the personal factors of these trajectories. We will particularly look into the respective responsibility of the various dimensions considered essential in the current literature: the severity of the disorders and comorbidities, the functioning and quality of life, the satisfaction and involvement in treatments, and the level of recovery.

The selected method consists in associating a medico-administrative approach based on the processing of the databases from the health insurance (ALD23) with a medical approach aiming at knowing precisely, for a representative sample of these persons, their use of the various services, their satisfaction in terms of needs met, and the factors of these measures and treatments’ use: symptom severity, level of functioning and quality of life, level of recovery.

Data from the health insurance files ALD30 will be subjected to a descriptive analysis to provide information on the use of treatments in this population (psychotropic use and observance, access to somatic treatments, types of pathway depending on treatment intensity).

The data obtained during this retrospective survey on the persons aim at answering hypotheses regarding the types of pathway and their factors.

Main hypothesis

Intensity of treatment and measure requests may be explained by four main factors with variable weight, depending on the type of pathway: need intensity, disorder severity (in terms of symptoms and functioning), satisfaction over treatments and measures and level of recovery.

Secondary hypotheses

1 - The persons who use treatments and measures the most are not exclusively the most severe patients (in terms of symptoms and functioning) but are also those with the highest satisfaction and lowest level of recovery.

2 - The persons with the most severe disorders receive treatments and measures of variable intensity. When this intensity is low, this insufficiency is linked to a low level of satisfaction and a high degree of empowerment.

2. Targeted population

2.1 Population description and justification to use the ALD database of the health insurance on the Yvelines territory

The sample is created from the ALD database.
The population targeted by this study consists of the persons with a schizophrenic disorder and living in the Yvelines. More precisely, they are the persons whose disease is declared, diagnosed, and who receive treatments and/or support, often on the long term. Although the vast majority of these persons are treated in public health structures, some have interrupted their treatment or are treated in liberal practices: the inclusion criterion “health structure” thus provides a risk of selection bias. To create a representative sample of these persons, we kept as inclusion criterion a treatment in ALD by the general regimen of the social security.

After a first work meeting with the regional board of the medical service of the health insurance, an extraction (on the Hippocrate database) conducted on persons who benefit from the general regimen of the social security (i.e. 85% to 90% of the population) in ALD 30 N°23 with the code CIM F20 (schizophrenic disorder), still active on the 1st January 2015, gives 33 734 beneficiaries in Ile-de-France region and 2 766 in the Yvelines district. By adding to this group the persons with the code CIM F25 (schizo-affective disorder), we may estimate the total sample size at 3 500 persons (i.e. a prevalence of approximately 0.25% of the Yvelines population).

Furthermore, socio-demographic characteristics of this sample match those expected for our population of interest: 1/3 are women, 2/3 are men, with a mean age of 45 (median age at 44), and a mean age 4 years younger for men than women (which is explained by the fact that schizophrenic disorders are more severe, more chronic and occur earlier in men compared to women).

Finally, the mean duration of the ALD request is 16 years, showing a delayed request between 5 and 10 years after the disorder onset. In conclusion, this sub-group shows the characteristics expected in persons treated for a chronic and invalidating schizophrenic disorder.

The selected territory is the Yvelines district.

It has been selected for the following reasons:

- Treatment and social action organization relies on district structures: district ARS, health structures, district council, MDPH.

- Beyond the identification of health pathways, this research objective is to gather all the actors involved in these pathways organization, and who are relevant for elaborating and implementing improvement suggestions.

- The size of the Yvelines district matches the reality of life pathways of the targeted persons (it has all the different types of treatment and support structures), and should also help apprehend the pathway diversity.

- The study feasibility will be increased by our close collaborative ties with medical partners, particularly in the framework of the Network for the Promotion of Mental Health in South Yvelines (Réseau pour la Promotion de la Santé Mentale dans les Yvelines Sud).

**2.2 Modalities for recruiting a subgroup for the purpose of the clinical trial**

To get accurate descriptions on their health condition, functioning, level of recovery and level of satisfaction in medical needs (use of services and measures, and satisfaction), a representative sample will be extracted from the ALD file to meet these persons.
They will be informed and recruited by their psychiatrists or GP, previously contacted by one of the study investigators. Inclusion of these persons in the study will be performed by one of the investigators, who will provide oral and written information on the study and will ask them to sign a written informed consent form. This way of taking contact is both compatible with the potential vulnerability of these persons (whom a less personalized contact may worry) and the study feasibility (a contact by mail may cause concern or incomprehension, or be seen as a negligence and the non-response rate may be extremely high). It will therefore be necessary, to facilitate contact with these persons, and first with their GP/psychiatrist, to extract from the health insurance files the useful information regarding their identity and the identity of their clinician.

The targeted number of persons is 150, and stratification criteria are: age, gender, and population density in the city where the patients live. By estimating that 50% of the persons will refuse or will not be accessible, the extraction will have to include a sample of 300 persons.

The persons participating in the study will receive a compensation of 40 euros (around 16 euros/hour of assessment).

3. Selected investigation method

3.1 Processing the health insurance databases

Data collected from the health insurance files will be:

- the patients’ name and address, the names of their clinicians,
- the socio-demographic characteristics (age, sex, address, whether they have the CMUC, the universal complementary health coverage),
- the diagnosis,
- the date of entry in ALD,
- treatment use over a period of 18 months before extraction date, and more precisely regarding outpatient treatments: antipsychotics prescriptions (names, quantities, and date of subscription), consultations (medical, with specialty), technical consultations (nurse, blood test), dental care; in terms of hospitalizations: duration, types and locations.

A descriptive analysis of these data will be used to define the types of pathway depending on treatment intensity.

Data from medication prescriptions and blood tests will provide elements on:

- treatment observance (continuity or discontinuity of prescription),
- prescription quality (a comparison with recommendations in good practices of psychotropic drugs will be performed),
- risk management of these prescriptions (comparison with recommended blood tests).
The somatic follow-up will be deduced from the use of medical consultations (GP),
dental cares and blood tests. This description will be refined by sorting by age group,
considering that somatic comorbidities are very common in this population and the frequency
increases with age.

The patient subgroup who benefits from the CMUC will be subjected to a complementary
independent analysis to describe the same characteristics on a sample that is particularly fragile in
socio-economic terms.

3.2 Retrospective survey on the representative sample of 150 persons

Data collection will be performed as a 2h30 interview (this duration was verified during a preliminary
study with a few patients in our service) and will use structured and validated assessment tools, as
much for the collection of objective information (such as functioning or resource use) than for
subjective information (such as quality of life or level of recovery). This interview will be conducted
by a mental health professional (a psychologist) previously trained to this type of interview at the
Centre Expert Schizophrénie in Versailles. The interview will be conducted in the usual treatment
location of the persons or in their home if they request it. Information regarding medical history and
treatments received in the past year will be informed from the patients’ medical file, with their
consent. Finally, at any time possible, a relative will be met or interviewed by phone to provide their
opinion on the patient’s situations, the alignment of the received treatments with the patient’s
needs, and their satisfaction regarding the way they are included in their relative’s support.

During the interview with the person, the following tools will be used:

- Needs assessment tools and whether these needs are met: Camberwell Assessment of
  Needs, CAN (Phelan et al., 1995).

Once the main socio-demographic information have been collected, this tool explores 26 areas of
everyday life: housing, diet, home care and personal hygiene, leisure and professional activities,
physical and psychic health, safety (for oneself and others), addictions, social and intimate
relationships, children education, financial resources and management, education and training, use
of communication tools (phone, Internet, transportation), social exclusion, stress-related behavior,
involvement in decisions regarding the treatment. For every area are explored: issues, the level of
help received from relatives and professionals, and the alignment with expectations, and the
perspective of the patient on what is appreciated and what may be improved. Solutions in case of
relapse will be the object of another question.

This tool was largely validated in Anglo-Saxon and French-speaking Québec studies by M.J. Fleury and
her team (M. J. Fleury, Grenier, Bamvita, Plat, & Tremblay, 2014; Tremblay, Bamvita, Grenier, &
Fleury, 2014). It will be adapted to the French situation during the pilot phase regarding the
description of modalities of treatments or measures accessible in France. The issue of the case
management will be raised for every area in the shape of whether there is an identified resource
person. A collaboration established with Marie-José Fleury will help validate the adaptation.
How to conduct the interview and encode the answer are described in the manual. The interview lasts approximately 1 hour 15.

- **Symptoms and functioning assessment:**
  - BPRS, 24 items version (Brief Psychiatric Rating Scale, general symptoms): hetero-report (Mouaffak et al., 2010)
  - SNS (Self-report Negative Symptoms) (Mach, 2015)
  - Medication observance: MARS (Medication Adherence Rating Scale) (Thompson, Kulkarni, & Sergejew, 2000).
  - Functioning assessment: PSP (Personal and Social Performance scale), hetero-report (any information source) (Nasrallah, Morosini, & Gagnon, 2008)
  - Self-report on quality of life: S-Qol (Auquier et al., 2003; Boyer et al., 2010)
  - Recovery self-report: RAS (Recovery Assessment Scale, Corrigan et al. 2004 (Corrigan, Salzer, Ralph, Sangster, & Keck, 2004); French version: Bisson et al. 2007 (Bisson, 2007))
  - Insight self-report: Birchwood Insight Scale (Birchwood et al., 1994)

This second part lasts around 1 hour.

Data regarding medical history and treatments received in the past year will be collected from the patients’ medical file:

- date of disease onset and progression duration,
- main diagnosis and comorbidities,
- CGI severity asked to the GP/psychiatrist,
- number, duration and type of hospitalization (volunteer treatment, requested by a third-party, by a State official),
- total duration of hospitalization (<3 months, between 3 months and a year, between 1 and 3 years, >3 years)
- number of years in follow-up, continuity or discontinuity of the follow-up, type (liberal, CMP, day hospital, CATTP),
- treatment in medico-social institution: yes/no, type, number of years,
- treatment type during the past year: medication, consultations, home visits, group therapy, full-time hospitalization or day hospital, psychotherapies,
- solution if relapse
- coordination with the GP: identified: yes/no; contact in the past year: yes/no,
- coordination between social and medical professionals: yes/no, type (meetings, phone, mail).

Relatives, if they exist, will be contacted to inform on:

- the disability level of the person (Assessment scale of the psychic disability process, entourage version, Passerieux et al. 2012 (Passerieux, 2012)),
- the felt burden (CaW-QLI, family version, Diaz et al. (Diaz, Mercier, Hachey, Caron, & Boyer, 1999)),
- the level of satisfaction regarding the various services their relative receives, and regarding the involvement of the person interviewed by the various services in terms of support to their relative (what is appreciated and what may be improved) (CaW-QLI, family version, Diaz et al. 1999 (Diaz et al., 1999)).
4. Research duration and organization modalities

June-July 2015: pilot study with volunteer patients treated in our sector.

A pilot study has been conducted to check the good acceptance of the study, finalize the elaboration of contact modalities with the persons, the choice of tools and the structured interview.

After receiving the regulatory authorizations (winter 2015-2016), the following steps will be performed for a 7-to-10-month period:

- creation of a representative sample,
- survey with the persons (patients/relatives/professionals), and
- analyses of the CPAM databases.

Data analysis, conclusion and publication redaction will be performed during the last quarter of 2016 and the first quarter of 2017.

5. Method of data analysis

5.1 Medico-administrative survey

5.1.1 Descriptive statistics

The data collected from the CNAM files (ALD23) will be subjected to a descriptive analysis relating to:

- care uses (mean number of dental cares and medical consultations depending on the clinician’s specialty)
- mean antipsychotics dosage (or chlorpromazine equivalent) and mean duration of interruption in prescription (to analyze observance)

5.1.2 Inferential statistics

To identify the various types of care pathways, we will analyze latent classes based on the following variables:

- number of days in hospital
- readmission rate after 15 days and 180 days after discharge
- number of psychiatric consultations
- number of GP consultations
- number of months without treatment
We hypothesize that we will replicate the 3 types obtained by M. Coldefy based on the PMSI database (predominant and continuous outpatient cares, mixed in and outpatient cares, and predominant inpatient intensive cares). The number of subjects necessary to a latent-class analysis with 5 items and 3 classes is estimated at 1,415 (Dziak, Lanza, & Tan, 2014), i.e. a way lower sample size than our sample of 3,500 patients extracted from the health insurance databases.

5.2 Clinical survey

5.2.1 Descriptive statistics

We will characterize the sample of 150 recruited patients (mean age, gender ratio, main diagnosis, comorbidities, housing modalities, means scores on the various clinical scale and mean values of received financial help, needs and the alignment of help with needs)

5.2.2 Inferential statistics

The analyses of factors of help alignment to needs will be conducted according to the work model presented below.
Depending variables are the type of pathway (determined by the medico-administrative study) and the level of treatment intensity (determined by an aggregated score of the various medical, social and medico-social services). The statistical analysis strategy will have two phases. Considering the high number of analyzed independent variables (105), it is indeed impossible to conduct a simultaneous multiple linear regression analysis with enough power: it is recommended to include 30 participants per variables to detect mean effect sizes (VanVoorhis & Morgan, 2007), which would imply a sample of 3,000 participants. We therefore prefer a stepwise linear regression analysis after eliminating the independent variables that are not associated with the dependent variable on
bivariate linear regression analyses. The stepwise regression technique will be the Backward Likelihood Ratio Elimination.

As mentioned in the project description, we hypothesize that the intensity of treatment use is associated with:

- a high number of needs
- a greater disorder severity (symptoms and functioning) and a higher number of comorbidities
- a higher level of satisfaction regarding treatments and helps
- a lower recovery score

Regarding the type of pathway, we offer the following hypotheses:

A predominant inpatient intensive care pathway is associated with:
- a high number of needs
- a greater disorder severity (symptoms and functioning) and a higher number of comorbidities
- a lower level of satisfaction regarding treatments and helps
- a lower recovery score

A predominant outpatient care pathway is associated with:
- a higher level of satisfaction regarding treatments and helps
- a higher recovery and empowerment score
- a lower number of needs
- a variable disorder intensity
VII. Do offered improvements answer the questions of the participants of the ANESM’s guideline note?
We first need to match the conditions of the questions asked by the ANESM group and the conditions of the answers offered by the literature (kept by the review committee and the follow-up commission).

Therefore, some questions related to different sections in the ANESM’S guideline note, may be put together and receive a common answer.

Two types of answer may be distinguished according to this matching: “a single answer may match several questions” or “no answer may be formulated since they require local agreements or political decisions (lack of evidences)”.

1. **Answers to grouped questions**

1.1. **Answer provided by the suggestion of a coordination in the patient’s environment**

- **Questions 1:** “How to facilitate the expression of the patients’ expectations regarding their life project? How to take into account a non-request?” / “How to support the persons who refuse treatment? How to reach them?” / “Which partnership between medical, social and medico-social actors and the family helpers may facilitate access to treatments?” / “How to reinforce the persons’ actor skills and autonomy in the implementation of medical treatments? How to help the disease insight by the persons, make them accept to leave with it? / “How to encourage the trusted person? anticipated directives?”

- **Answer 1:** the expression of the persons’ expectations is taken into account in the framework of a personalized intervention project designed by the patients themselves, their relatives - who may be the trusted person - and the socio-medical proximity team (we may talk about a reference team that includes all three). This joint design should take into account the patients’ non-request (if at least the family have the request). In this context, the personalized project will be negotiated as close as possible to the patients’ appropriation capabilities and will only be able to include the dispositions they accepted (distinction between the “ideal” and the doable project). The personalized intervention project may include “anticipated treatment directives”, mainly to provide an answer to emergency and crisis situations. The task on a joint project design is a treatment phase in itself, relying on a work at the patients and their relatives’ request.

- **Questions 2:** “How to continuously assess, with the persons, their support needs?” / “How to identify the evolution of the persons’ needs? How to react quickly? How to avoid interruptions due to the evolution of the persons’ needs? / How to help the persons with administrative paperwork? / “How to inform the patients and their helpers (particularly their family), all along the pathway, about this existence of support measures that may meet their needs and expectations?”

- **Answer 2:** the follow-up of the personalized intervention project is under the responsibility of the proximity team (consisting of the patients, their relatives and the proximity socio-medical team), as well as its design. The project revision is continuous and may be requested by either party. The proximity socio-medical team is supposed to
know every mechanisms and structures under its responsibility (medical or social). This information will be shared with the patients and their relatives when designing the personalized intervention project or its follow-up. The creation, by the institutional coordination, of a listing of structures and mechanisms will help the proximity social and medical teams know the state of available resources. The social case manager is in charge of helping the persons in their administrative paperwork.

- **Questions 3:** “How to help access to somatic, preventive and curative treatments?” / “How to develop health prevention action adapted to this population?” / “How to coordinate with psychiatrists and general practitioners? How to cooperate with addictology departments? What kind of partnership?”

- **Answer 3:** any person with a severe and persistent mental illness needs a primary care clinician, if they receive an outpatient treatment (the organization of a somatic follow-up is different for long-term inpatients). A comprehensive review of the literature highlights the importance of a specialized follow-up to make possible a primary care follow-up. This close collaboration helps provide the necessary support to the GP to have the best relationship possible with these sometimes complicated patients and to orient the GP to risk areas in terms of iatrogeny and somatic comorbidity. The proximity medical team is in charge of developing this partnership with the GP according to the quality criteria listed in the CNQSP - HAS recommendation “How to improve the cooperation between GPs and psychiatrists? The importance of mail communication”.

1.2. Answers provided by “good practices”

- **Questions 1:** “How to access psychiatric treatments? / “How to treat the psychic suffering caused by the disability or the disease? How to treat addictive behavior if needed?”

- **Answer 1:** the proximity medical team is supposed to provide patients under its responsibility with the whole set of treatments they may need (including the treatment techniques with proven effectiveness or the use of a specialized addictology department), at any time in the care pathway, whether it is provided in liberal practice or in a mutualized way in the whole territory.

- **Questions 2:** “How to support the persons in their relationships with their families and friends?” / “How to reinforce the persons’ self-esteem and self-assertion?” / “Which support for parenting to implement and how? Which partnership with childhood protection services? Which role for family helpers?”

- **Answer 2:** some psychosocial interventions (rehabilitation treatments) offer answers to these questions (psychoeducation that should be provided to patients AND families, cognitive behavioral therapies focused on self-esteem, family therapies, etc.). The role of the social team, trained to the “care” ethics, is also important to reinforce the self-esteem of persons with a disability (“empowerment” and “recovery” interventions). Parenting support requires a close partnership between the various services, at this specific moment in the pathway, and may be coordinated by the proximity team.
Questions 3: “How do the home services professionals help the persons maintain or access an independent housing?” / “What is the role of medical professionals?” / “How to facilitate the switch between adapted and ordinary environment?” / “How to help the persons get or keep a job matching their needs and skills?” / “How to adapt ESAT projects to the specific needs of persons with a psychic disability?” / “How to prevent job interruption, particularly interruptions associated with the disorders progression?”

Answer 3: the recovery paradigm requires that housing professionals aim at a housing in an ordinary environment. A double perspective helps, better than one, this evolution as soon as the persons’ autonomy skills are good enough. This double perspective is provided first by professionals of the “housing” mechanism (SAVS, SAMSAH, etc.), second by the reference team which still meets, regardless of the patient’s housing location, to provide a follow-up continuity in a pathway that does not end with a housing solution. The medical follow-up continuity is under the responsibility of the proximity medical team. The assessment of the person’s skills and resistances, at every moment in the pathway, is conducted by the proximity team.

Questions 4: How to support the persons in their everyday life (diet, hygiene, etc.)?” / “How to support them in everyday tasks (access to financial resources, budget management, etc.)?” / “How to adapt the support to evolving needs?” / “What is the role of proxy services? How to coordinate between professionals and family helpers?” / “How to help the persons maintain or create social links? How to prevent social isolation?” / “How to meet the various needs? How to coordinate with GEMs?” / “How to help the persons’ mobility (public transportation, etc.)?” / “How to help the persons access gratifying activities?” / “How to value the persons’ emotional, creative and intellectual potential?”

Answer 4: The proximity social team has the mission of supporting the persons in their everyday life, with their own means or in partnership with dedicated mechanisms (GEM, SAVS or SAMSAH teams if they are also requested). In the same way that a medical team may use specialized tools if a medical intervention is mutualized with other medical structures (if the medical team cannot provide the patients under their responsibility with the tools they need), the social team should have the possibility to mutualize social interventions with other partners (delegation to mechanisms dedicated to housing or integration, partnership with mechanisms to support social life, or with cultural, sportive or leisure centers offered in the cities). These questions show the diversity of social needs of the persons with a psychic disability, and the diversity of solutions they should have access to, without forgetting, to keep the life pathway consistent, the importance of a proximity social team which is responsible for the pathway continuity and the resources consistency at every moment in this pathway.

1.3. The answer provided by an institutional coordination

Questions 1: “How to conduct assessments “in simulation”?” / “How to facilitate visits and concrete simulations (internships, etc.)?”
- Answer 1: the proximity team may request from the institutional coordination that “simulations” may be made available, particularly in structures that the patients may accept to join. The assessment will therefore be under the double responsibility of the professionals from the structure requested for this simulation and the reference team.

- Question 2: “What partnership between medical, social and medico-social actors in this assessment? What role for the family helpers?”
- Answer 2: The institutional coordination (MDPH) is in charge of creating an assessment file by “putting together” (as the Piveteau report points out) the various sources of useful information (after informing professionals regarding useful information). The proximity team is the key source of these information. This assessment may be supplemented with a more thorough investigation, particularly of the neurocognitive functioning, with dedicated teams or if transmitted data are insufficient. A situation assessment by a dedicated psychiatric team helps ensure not only the assessment quality but also the link with medical teams for the assessment and the follow-up; it also helps, in case of request without follow-up, facilitate access to adapted treatments, since it is true that a medical follow-up is necessary to implement a social project.

- Question 3: “How to implement flexible admission procedures?”
- Answer 3: The institutional coordination is responsible for the territorial answer to this request since it sets the specifications of the various structures in its territory.

- Question 4: “How to offer a set of solutions?”
- Answer 4: the institutional coordination is responsible for the territorial schedule of solutions useful to the flexibility of the life pathway of the persons with a disability. It identifies, based on needs from feedbacks and regularly evaluated, the needs not covered and tries to diversify the set of useful solutions in its territory.

1.4. Answers relying on the double responsibility of proximity team and institutional (territorial) coordination

- Questions 1: “How to adapt collective housings to the specific needs of persons with a psychic disability? How to anticipate relationship difficulties?” / “How to adapt collective rhythms in collective housings?” / “How to ensure a continuity in housing and prevent interruptions?”
- Answer 1: these questions are answered by the proximity socio-medical team, which is in charge of the persons’ life pathway: it discusses and anticipates changes in housing location, particularly when a greater autonomy is reached and a housing in an ordinary environment is possible, it works with the persons to manage relationship difficulties encountered in sheltered or ordinary environment, if necessary by intervening in the hosting structure to make sure the person’s difficulties match the structure's requirements. The institutional coordination has the mission to provide the managing
team with a set of housing and integration resources to better help the person’s adjustment to the hosting structure, which is a key element to prevent interruptions.

2. Answers that cannot be answered since they require local agreements or political decisions (lack of evidences)

- Questions 1: “How to ensure psychiatric and somatic treatment continuity, particularly if the housing or support location change?” / “How to prevent the break of social relationship, particularly due to hospitalization and/or changes in living locations?”
  - Answer 1: These questions are not answered in the literature. It requires local agreements between proximity teams. If the follow-up continuity is ever interrupted, particularly due to a home change, a prior work between both proximity teams and with the patients and their relatives seems necessary and not limited to information transfer.

- Question 2: “How to train professionals to better understand psychic disorders, in relationship with research institutes?”
  - Answer 2: The Centre de Preuves is supposed to spread useful knowledge to professionals. Research institutes working on this topic are associated with the works of the Centre de Preuves.

- Questions 3: “How to adapt group activities in structures accepting a mixed public?” / “What activities may be offered to adapt to the diversity of publics?”
  - Answer 3: evidences are rare in terms of activities that may improve the social integration of persons with a severe and persistent mental illness. The international conference in November 2014, regarding the recommendations to promote for this population, highlights:
    - in terms of leisure: benefits of art therapy (activity recommended by NICE), sport and other physical activities (some evidences)
    - that evidences promoting occupational therapies in its restrictive understanding are relatively low, only showing moderate improvements, except when associated with psychosocial interventions in rehabilitation

3. Specific questions:

3.1. Answers to crisis situations.

A chapter of this report is dedicated to this problematic and is focused on the most effective organizations. Early care directives are an answer with yet few evidences. Training relatives to identify the first crisis symptoms is part of family psychoeducation. Training professionals is all
the more effective if it is part of a partnering organization of the health offer (with first, the joint work conducted in the framework of the proximity socio-medical team).

3.2. Answers to the training needs of medical and medico-social professionals, peer helpers and relatives

Peer helpers are considered, in the international literature, as an important “training” lever for recovery and should be included, as medical actors, in social and medico-social teams.

The training of professionals will be the topic of a specific chapter in the report. The Centre de Preuves has the mission to think about actions to spread knowledges and make professionals use these knowledges.
Appendices
IX. APPENDIX 1: Review of the Cochrane library

Data synthesis and conclusions of the work group

Selection of Cochrane publications

In July 2016, there were in total 721 references listed in “mental health” in the Cochrane library. Among them, 268 dealt with schizophrenia or psychosis. They were listed as follows:

- 70 on atypical antipsychotic medication,
- 18 on butyrophenones,
- 32 on phenothiazines,
- 15 on thioxanthenes,
- 21 on other antipsychotic medications,
- 32 on other medications,
- 16 on care organization (care package/setting of care),
- 9 on complementary and alternative therapies,
- 4 on diagnosis,
- 25 on management issues,
- 7 on “physical treatments” (ECT and various dyskinesia treatments),
- 35 on therapies.

Among these references, only 188 were actual publications, the others were protocols. To focus on the report topic, we excluded publications dealing with pharmacological prescriptions (antipsychotics, treatment delivery, complementary treatments) or “physical” prescriptions (ECT, rTMS), or those dealing with diagnosis issues.

Finally, we counted 58 studies on the care pathway of patients with actual schizophrenia.

Do these studies provide usable information on the topic?

These 58 Cochrane publications did not all seem useful.

16 did not provide enough data to draw any conclusion.

They were the ones covering:
The benefits of day centers
- The hospitalization on open general medical wards
- "As required" treatments
- The benefits of monetary incentives
- Collaborative cares
- Nidotherapy
- Brief CBTs versus standard duration
- Cognitive remediation
- The benefits of specific therapies targeting cannabis addiction comorbidity
- Skill learning programs
- Supported housing
- Cancer screenings
- Physical health care monitoring and advice
- Oral health advice
- Needs assessment
- Dietary advices

28 did not provide clear conclusion.

It is important to understand that the notion of "clear conclusion" means that in our opinion, on a clinical perspective, these studies did not show how to effectively modify patient cares. We do not judge their relevancy in terms of research protocols. They were the ones covering:

- Day hospitals
- Rehabilitation units

- Compliance therapies\textsuperscript{22}
- Token economy\textsuperscript{23}
- Training to recognize the early signs of recurrence in schizophrenia\textsuperscript{24}
- Advance treatment directives\textsuperscript{25}
- User-held personalized clinical information\textsuperscript{26}
- The benefits of information and communication technology in psychoeducation and support\textsuperscript{27} and in prompting treatment compliance\textsuperscript{28}
- The use of virtual reality to encourage treatment compliance\textsuperscript{29}
- Art therapy, drama therapy, dance therapy and horticultural therapy\textsuperscript{30,31,32,33}
- Morita therapy\textsuperscript{34}
- Hypnosis\textsuperscript{35}
- Supportive therapies\textsuperscript{36} (yet with the idea that other psychological therapies are more effective than supportive therapy)
- Problem-solving therapies\textsuperscript{37}
- Social skills programs\textsuperscript{38}
- Relevancy of brief family therapies (less than three months, 5 sessions or less) versus standard family therapies\textsuperscript{39}
- Supported employment programs\textsuperscript{40}
- Weight loss\textsuperscript{41}
- Comparisons of the various psychosocial interventions to help patients continue their treatment, reduce their use of substances, or to improve the mental health of patients with severe mental illness\textsuperscript{42}
- General physical health advice\textsuperscript{43}

\textsuperscript{24} Morrist R, Vinjamuri I, Faizal MA, Bolton CA, McCarthy JP. Training to recognise the early signs of recurrence in schizophrenia. Cochrane Database Syst Rev. 2013 Feb 26;2:CD005147.
\textsuperscript{35} Xia J, Li C. Problem solving skills for schizophrenia. Cochrane Database Syst Rev. 2007 Apr 18;(2):CD006365.
\textsuperscript{40} Hunt GE, Siegfried N, Morley K, Sitharanth T, Cleary M. Psychosocial interventions for people with both severe mental illness and substance misuse. Cochrane Database Syst Rev. 2013 Oct 3;10:CD001088.
Traditional medicines (acupuncture, Chinese herbal medicine, ayurvedic medicine)\textsuperscript{44, 45, 46}

Yoga\textsuperscript{47}

What information can we keep from the 14 informative publications?

To avoid crisis hospitalizations

Management by community mental health teams\textsuperscript{48}

The management in a community mental health team (CMHT) is a UK-specific community management, without 24/7 cares. “Community mental health team management is not inferior to non-team standard care in any important respects and is superior in promoting greater acceptance of treatment. It may also be superior in reducing hospital admission and avoiding death by suicide. The evidence for CMHT based care is insubstantial considering the massive impact the drive toward community care has on patients, carers, clinicians and the community at large.”

It would therefore seem that this publication could be put away with the ones that do not provide clear conclusions.

Crisis day hospitals\textsuperscript{49}

Management in crisis day hospitals is as effective as inpatient management to treat acute psychiatric disorders. However, further data are needed regarding the cost efficiency of day hospitals.

We should stress out that France did not participate in any study included in this publication. Furthermore, structures, staffs and practices in crisis day hospitals were different in each country, sometimes even in the same country. The conclusions of this publication therefore depend on the local care organization.

Crisis interventions\textsuperscript{50}

Cares based on the principles of interventions in crisis situations, with or without permanent home care, seem to be a reliable and acceptable method to treat persons with a severe mental illness. Nevertheless, the authors add that this approach must be widely implemented, and further studies will need to be conducted.


Outpatient treatment organization

Treatments without consent\textsuperscript{51}

Treatments without consent do not show any significant difference in service use, social functioning or quality of life when compared with standard voluntary treatments. However, the persons receiving forced treatments were less likely to be victims of violent or non-violent crimes. But the authors add that it is hard to know if the benefit was due to the intensity of the treatment or because it is mandatory.

Intensive management (assertive community treatment ACT and case management)\textsuperscript{52}

Intensive management adds assertive community treatment (ACT) and case management to standard cares. It reduces hospitalization and increase the follow-up. It also improves social functioning. It benefits at least the persons with a severe mental illness who are in the subgroup of patients with a high level of hospitalization (4 days/month in average for the past two years). It is recommended that the intervention be similar to the original model. However, the benefit of an “intensive” management (less than 20 patients by care giver) compared to a “non-intensive” management (more than 20 patients) has not been clearly demonstrated.

Intermittent treatment\textsuperscript{53}

Intermittent antipsychotic treatment is not as effective as a continuous treatment to prevent schizophrenia relapse.

Appointment prompts\textsuperscript{54}

Data indicate that a simple prompt close to the appointment date may encourage patients to come to the consultation, and that a simple orientation letter may be more effective than a phone call. We however highlight that this publication dates from 2001 and gather the results of studies conducted at a time when phone and Internet use was not as developed as it is today.

Psychotherapeutic techniques

Inside hospitals

Psychoeducation\textsuperscript{55} seems effective, but is tested inside hospitals and most studies are conducted in China, which may imply that the approaches are not comparable to the studies conducted in France.

Analytical approach\textsuperscript{56} is not recommended.

\textsuperscript{51} Kisely SR, Campbell LA. Compulsory community and involuntary outpatient treatment for people with severe mental disorders. Cochrane Database Syst Rev. 2014;(12):CD004408
\textsuperscript{56} Malmberg L, Fenton M. Individual psychodynamic psychotherapy and psychoanalysis for schizophrenia and severe mental illness. Cochrane Database Syst Rev. 2001;(3):CD001360.
Music therapy\textsuperscript{57}, associated with standard cares, helps the patients with schizophrenia improve their overall health and mental health (including negative symptoms), and their social functioning if a sufficient number of sessions is offered by qualified therapists.

**Outside of hospitals**

Family interventions\textsuperscript{58} may reduce relapse rate. Family interventions may also reduce hospital admissions and encourage treatment compliance, but they do not obviously modify the tendency of patients and family to interrupt the therapy. Family interventions also seem to improve general social difficulties and the level of emotions expressed by the family. No data was found to suggest that family interventions prevent or worsen the risk of suicide.

**Inside and outside of hospitals**

Therapeutic programs based on physical exercise\textsuperscript{59} may produce beneficial effects for physical and mental health, and for the well-being of persons with schizophrenia.

Studies do not show any clear and convincing advantage of CBTs\textsuperscript{60} compared with other therapies, sometimes less sophisticated, for patients with schizophrenia.

**Employment**

Supported employment\textsuperscript{61} is more effective than professional training to help patients with severe mental illnesses access competitive employment. There is no concrete evidence of the effectiveness of professional training.

**In conclusion**

We can see that the Cochrane library provides only few information we may use to make practical recommendations in terms of the care pathway of the persons with a severe psychic disability.

Among the relevant Cochrane publications, most do not provide any conclusion. It is often due to the highly rigorous principles of statistical analysis they are based on, which may lead to conclude that there is no reliable data despite the number of analyzed articles.

Publications with clear conclusions are not always applicable as is. They often gather studies in which the countries, methods and medical resources are not comparable between them, nor comparable with the French situation. Furthermore, they may include older studies which do not always seem to be relevant today. A striking example is the publication from Macpherson (2009), dealing with a treatment that is not available anymore.

If the interest in the Cochrane review is indisputable, it is however not a sufficient source to draw practical conclusions in terms of care pathway.

\textsuperscript{57} Mössler K, Chen X, Heldal TO, Gold C. Music therapy for people with schizophrenia and schizophrenia-like disorders. Cochrane Database Syst Rev. 2011 Dec 7;(12):CD004025.
\textsuperscript{60} Jones C, Hacker D, Cormac J, Meaden A, Irving CB. Cognitive behaviour therapy versus other psychosocial treatments for schizophrenia. Cochrane Database Syst Rev. 2012 Apr 18;4:CD008712
Studies summaries

This part of the document is intended to give an idea of the publications quoted above. References are showed here in alphabetical order to be found more easily. We have gathered quotes from abstracts and articles extracts that we found relevant to our research.


Background: Ayurvedic medicine has been used to treat mental health problems since 1000 BC.

“Main results: From the three small (total n=250) short included studies, we were unable to extract any data on many broad clinically important outcomes such as global state, use of services, and satisfaction with treatment. When Ayurvedic herbs were compared with placebo, about 20% of people left the studies early (n=120, 2 RCTs, RR 0.77 CI 0.37 to 1.62). Mental state ratings were mostly equivocal with the exception of the brahmyadiyoga group using Ayurvedic assessment (n=68, 1 RCT, RR not improved 0.56 CI 0.36 to 0.88, NNT 4 CI 3 to 12). Behaviour seemed unchanged (n=43, 1 RCT, WMD Fergus Falls Behaviour Rating 1.14 CI -1.63 to 3.91). Nausea and vomiting were common in the brahmyadiyoga group (n=43, RR 13.13 CI 0.80 to 216.30). When the Ayurvedic herbs were compared with antipsychotic drugs (chlorpromazine), again, equal numbers left the study early (n=120, 2 RCTs, RR for brahmyadiyoga 0.91 CI 0.42 to 1.97) but people allocated herbs were at greater risk of no improvement in mental state compared to those allocated chlorpromazine (n=45, RR 1.82 CI 1.11 to 2.98). Again, nausea and vomiting were found with use of brahmyadiyoga (n=45, 1 RCT, RR 20.45 CI 1.09 to 383.97, NNH 2 CI 2 to 38). Finally, when Ayurvedic treatment, in this case a complex mixture of many herbs, is compared with chlorpromazine in acutely ill people with schizophrenia, it is equally (~10% attrition, n=36, RR 0.67 CI 0.13 to 3.53), but skewed data does seem to favour the chlorpromazine group.”

“Authors’ conclusions: Ayurvedic medication may have some effects for treatment of schizophrenia, but has been evaluated only in a few small pioneering trials.”


“Main results
We included 13 randomised trials (975 participants). These evaluated social skills programmes versus standard care, or discussion group. We found evidence in favour of social skills programmes compared to standard care on all measures of social functioning. We also found that rates of relapse and rehospitalisation were lower for social skills compared to standard care (relapse: 2 RCTs, n = 263, RR 0.52 CI 0.34 to 0.79, very low quality evidence), (rehospitalisation: 1 RCT, n = 143, RR 0.53 CI 0.30 to 0.93, very low quality evidence) and participants’ mental state results (1 RCT, n = 91, MD -4.01 CI -7.52 to -0.50, very low quality evidence) were better in the group receiving social skill programmes. Global state was measured in one trial by numbers not experiencing a clinical improvement, results favoured social skills (1 RCT, n = 67, RR 0.29 CI 0.12 to 0.68, very low quality evidence). Quality of life was also improved in the social skills programme compared to standard care (1 RCT, n = 112, MD -7.60 CI -12.18 to -3.02, very low quality evidence). However, when social skills programmes were compared to a discussion group control, we found no significant differences in the participants social...
functioning, relapse rates, mental state or quality of life, again the quality of evidence for these outcomes was very low.

Authors' conclusions

Compared to standard care, social skills training may improve the social skills of people with schizophrenia and reduce relapse rates, but at present, the evidence is very limited with data rated as very low quality. When social skills training was compared to discussion there was no difference on patients outcomes. Cultural differences might limit the applicability of the current results, as most reported studies were conducted in China. Whether social skills training can improve social functioning of people with schizophrenia in different settings remains unclear and should be investigated in a large multi-centre randomised controlled trial.”


“A comprehensive search showed that currently there is no trial evidence for any method of encouraging uptake of cancer screening for people with mental illness. No specific approach can therefore be recommended. Early detection of cancer through screening is effective in improving patient outcomes, including death. Given that people with mental illness are at greater risk of cancer but less likely than others to take up available screening, better approaches that encourage uptake of cancer screening are needed urgently. Further research is required to ensure that people with mental illness do not miss out on cancer screening.”


“Main results

We included eight studies in the review. All outcomes were short term (less than six months). There were clear differences in a number of outcomes in favour of the yoga group, although these were based on one study each, with the exception of leaving the study early. These included mental state (improvement in Positive and Negative Syndrome Scale, 1 RCT, n = 83, RR 0.70 CI 0.55 to 0.88, medium-quality evidence), social functioning (improvement in Social Occupational Functioning Scale, 1 RCT, n = 83, RR 0.88 CI 0.77 to 1, medium-quality evidence), quality of life (average change 36-Item Short Form Survey (SF-36) quality-of-life subscale, 1 RCT, n = 60, MD 15.50, 95% CI 4.27 to 26.73, low-quality evidence), and leaving the study early (8 RCTs, n = 457, RR 0.91 CI 0.6 to 1.37, medium-quality evidence). For the outcome of physical health, there was not a clear difference between groups (average change SF-36 physical-health subscale, 1 RCT, n = 60, MD 6.60, 95% CI -2.44 to 15.64, low-quality evidence). Only one study reported adverse effects, finding no incidence of adverse events in either treatment group. This review was subject to a considerable number of missing outcomes, which included global state, change in cognition, costs of care, effect on standard care, service intervention, disability, and activities of daily living.

Authors' conclusions

Even though we found some positive evidence in favour of yoga over standard-care control, this should be interpreted cautiously in view of outcomes largely based each on one study with limited
sample sizes and short-term follow-up. Overall, many outcomes were not reported and evidence presented in this review is of low to moderate quality - too weak to indicate that yoga is superior to standard-care control for the management of schizophrenia.”


“Main results

Four new trials were added after the 2012 search. The review now includes 24 relevant studies, with 2126 participants. Overall, the evidence was very low quality.

We found no significant differences in the primary outcomes of relapse, hospitalisation and general functioning between supportive therapy and standard care.

There were, however, significant differences favouring other psychological or psychosocial treatments over supportive therapy. These included hospitalisation rates (4 RCTs, n = 306, RR 1.82 CI 1.11 to 2.99, very low quality of evidence), clinical improvement in mental state (3 RCTs, n = 194, RR 1.27 CI 1.04 to 1.54, very low quality of evidence) and satisfaction of treatment for the recipient of care (1 RCT, n = 45, RR 3.19 CI 1.01 to 10.7, very low quality of evidence). For this comparison, we found no evidence of significant differences for rate of relapse, leaving the study early and quality of life.

When we compared supportive therapy to cognitive behavioural therapy (CBT), we again found no significant differences in primary outcomes. There were very limited data to compare supportive therapy with family therapy and psychoeducation, and no studies provided data regarding clinically important change in general functioning, one of our primary outcomes of interest.

Authors’ conclusions

There are insufficient data to identify a difference in outcome between supportive therapy and standard care. There are several outcomes, including hospitalisation and general mental state, indicating advantages for other psychological therapies over supportive therapy but these findings are based on a few small studies where we graded the evidence as very low quality. Future research would benefit from larger trials that use supportive therapy as the main treatment arm rather than the comparator.”


“An advance treatment directive is a document that specifies a person’s future preferences for treatment, should he or she lose the mental ability to make treatment decisions (lose capacity). They have traditionally been used to stipulate treatment in end-of-life situations. However, people with mental health problems can also have periods where they are unable to make treatment decisions, and an advance statement could help with choosing suitable medication, saying who should look after children and specifying choices in other areas of their life and treatment.”

“We were able to include two trials involving 321 people with severe mental illnesses.”

“Settings: Henderson 2004 a took place within community mental health teams in South London and Kent. Papageorgiou 2002 was also based in London but within inner city acute psychiatric services.”

“Participants: Both trials included participants with severe mental illness. Overall, there were more men (58%) than women randomised. The mean age of participants was mid to late thirties. Henderson 2004 a used the (OPCRIT) criteria to classify the participants’ mental illness. No operationally defined criteria were reported by the Papageorgiou 2002 study.”

“Interventions: Henderson 2004 a employed a joint crisis plan formulated by the patient, care coordinator, psychiatrist and project worker. The plan contained contact information, details of mental and physical illnesses, treatments, indicators for relapse, and advance statements of preferences for care in the event of future relapse. The directives were formulated by patients along with carers, friends, or advocates in conjunction with their mental health care providers. Participants in the (Papageorgiou 2002) study were provided with a booklet entitled “Preferences for care”, in which participants were encouraged to complete seven statements outlining future preferences for treatment. Participants could complete and sign the statements themselves, or dictate their wishes to a researcher.”

“There was no significant difference in hospital admission (n=160, 1 RCT, RR 0.69 0.5 to 1.0), or number of psychiatric outpatient attendances between participants given advanced treatment directives or usual care. Similarly, no significant differences were found for compliance with treatment, self harm or number of arrests. Participants given advanced treatment directives needed less use of social workers time (n=160, 1 RCT, WMD -106.00 CI -156.2 to -55.8) than the usual care group, and violent acts were also lower in the advanced directives group (n=160, 1 RCT, RR 0.27 CI 0.1 to 0.9, NNT 8 CI 6 to 92). The number of people leaving the study early were not different between groups (n=321, 2 RCTs, RR 0.92 CI 0.6 to 1.6). The addition of 11 studies to awaiting classification section of the review may alter the conclusions of the review once assessed.

“Authors’ conclusions: There are too few data available to make definitive recommendations. More intensive forms of advance directive appear to show promise, but currently practice must be guided by evidence other than that derived from randomised trials. More trials are indicated to determine whether higher intensity interventions, such as joint crisis planning, have an effect on outcomes of clinical relevance.”


“Main results: Electronic searches identified over 300 citations but none were relevant to this review. We found no trials of non-medical day centres.”


“Background: Nidotherapy is a therapeutic method that principally aims to modify the environment of people with schizophrenia and other serious mental illnesses, whilst working in conjunction with, or alongside other treatments. Rather than focusing on direct treatments or interventions, the aims to help the individual identify the need for, and work to effect environmental change with the aim of minimising the impact of any form of mental disorder on the individual and society.”

“Main results: We included only one study that compared nidotherapy-enhanced standard care with standard care alone (total 52 participants); this study was classified by its authors as a ‘pilot study’. The duration of the included study was 18 months in total. The single study examined the short-term (up to six months) and medium-term (between six and 12 months) effects of nidotherapy-enhanced standard care versus standard care.” Nidotherapy-enhanced standard care was favoured over standard care for social functioning in both the short term (n = 50, 1 RCT, MD -2.10, 95% CI -4.66 to 0.46) and medium term (n = 37, 1 RCT, MD -1.70, 95% CI -4.60 to 1.20, Very low quality); however, these results did not reach statistical significance. Results concerning engagement with non-inpatient services favoured the intervention group in both the short term (n = 50, 1 RCT, MD 2.00, 95% CI 0.13 to 3.87) and medium term (n = 37, 1 RCT, MD 1.70, 95% CI 0.09 to 3.49), with statistical significance evident in the short term, but not in the medium term. Results of people leaving the study early favoured the intervention in the short term (n = 52, 1 RCT, RR 0.86, 95% CI 0.06 to 12.98), with slight favour of the control group at medium term (n = 50, 1 RCT, RR 0.99, 95% CI 0.39 to 2.54); again, these results did not reach statistical significance. Results for the adverse effects/events of death (measured by 12 months) favoured the intervention (n = 52, 1 RCT, RR 0.29, 95% CI 0.01 to 6.74, Very low quality) but with no statistical significance. Skewed results were available for mental state, service use, and economic outcomes, and present a mixed picture of the benefits of nidotherapy.

“Authors’ conclusions: Further research is needed into the possible benefits or harms of this newly-formulated therapy. Until such research is available, patients, clinicians, managers and policymakers should consider it an experimental approach.”


“Background: There has been a significant reduction in the number of people with severe mental illness who spend extended periods in long-stay hospitals. District health authorities, local authorities, housing associations and voluntary organisations are jointly expected to provide support for people with severe mental disorder/s. This ‘support’ may well involve some kind of special housing”

“Main results: Although 139 citations were acquired from the searches, no study met the inclusion criteria”


“Objectives: to assess the effects of Pre-vocational Training and Supported Employment (for people with severe mental illness) against each other and against standard care (in hospital or community). In addition, to assess the effects of: (a) special varieties of Pre-vocational Training (Clubhouse model) and Supported Employment (Individual Placement and Support model); and (b) techniques for enhancing either approach, for example payment or psychological intervention.”

“Main results: Eighteen randomised controlled trials of reasonable quality were identified. Themain finding was that on the primary outcome (number in competitive employment) Supported Employment was significantly more effective than Pre-vocational Training; for example, at 18 months 34% of people in Supported Employment were employed versus 12% in Pre-vocational Training (RR random effects (unemployment) 0.76 95% CI 0.64 to 0.89, NNT 4.5). Clients in Supported Employment also earned more and worked more hours per month than those in Pre-vocational
Training. There was no evidence that Pre-vocational Training was more effective in helping clients to obtain competitive employment than standard community care.

Authors’ conclusions: Supported employment is more effective than Pre-vocational Training in helping severely mentally ill people to obtain competitive employment. There is no clear evidence that Pre-vocational Training is effective.”


“Background: Intensive Case Management (ICM) is a community based package of care, aiming to provide long term care for severely mentally ill people who do not require immediate admission. ICM evolved from two original community models of care, Assertive Community Treatment (ACT) and Case Management (CM), where ICM emphasises the importance of small caseload (less than 20) and high intensity input.”

“Description of the intervention: Since the 1960s there has been an almost worldwide trend towards the closure of institutions for the mentally ill. Coupled with these closures, many government policies have focused on reducing the number of hospital beds for people with severe mental illness in favour of providing care in a variety of non-hospital settings – outpatient clinics, day centres or community mental health centres. These changes were consistent with the increasing shift from hospital-based care in favour of a more community-focused approach (Malone 2007). A major thrust towards community care has been the development of community mental health teams (Bouras 1986; Bennett 1991). Over the last 20 years various types of approaches to working within community mental health teams have evolved. These approaches fall into two main categories: i. services with well-delimited aims, such as crisis resolution and home treatments teams, vocational rehabilitation and early intervention service; and ii. Services aimed at meeting a wide range of patient needs, such as Assertive Community Treatment (ACT) and Case Management (CM) (Ruggeri 2008).

Assertive Community Treatment and Case Management are community-based packages of care, developed in the in the early 1970s. These packages of care were initially conceived to co-ordinate the care of severely mentally ill people discharged from closing mental hospitals. They were, however, soon more widely applied as a means of caring for severely mentally ill patients who did not require immediate admission (Thompson 1990).

Assertive Community Treatment and Case Management do share common goals such as maintaining contact, reducing hospitalisation (and hence cost) and improving outcome.”

“1. Case management (CM)

The key principle of case management is that a single person - the ‘case manager’ - takes primary responsibility for a defined group of patients in the community. The case manager is responsible for (Holloway 1991):

i. Assessing the patient’s needs
ii. Developing a care plan
iii. Arranging suitable care from community services
iv. Keeping contact with the patient

Initially, in its simplest form (referred to as ‘brokerage’), case managers were not mental health professionals, did not provide any direct care and worked independently.

2. Assertive community treatment (ACT)
Assertive community treatment intervention (Stein 1980) should be practiced according to a defined and validated model, based on the consensus of an international panel of ACT experts (McGrew 1994, McGrew 1995). A key aspect of this model is that ACT is a team-based approach, characteristically a multi-disciplinary team, including social workers, nurses and psychiatrists, caring exclusively for a defined group of patients (McGrew 1995, Olfson 1990). Team members share responsibility for their clients, so it is common for several members to work together with the same person. Other characteristics of the model are (Stein 1980):

i. Provide all necessary care themselves, rather than arranging for it to be provided from other services.
ii. Provide care at home or in places of work
iii. Carry low caseloads (usually 10-15 patients per member)
iv. Practice ‘assertive outreach’, meaning that they persist in attempts to engage uncooperative clients
v. Place particular emphasis on medication compliance
vi. Provide 24 hour emergency cover.

“There are, however, at least in theory and respect to the original models, important structural distinctions between them. Nonetheless, through clinical practice, across time, the two interventions have evolved and tended to converge into a package of care that can be called ‘Intensive Case Management’, containing elements from both the two original models (Scott 1995; Burns 2008). Brokerage case management was rapidly abandoned in favour of Clinical Case Management (Holloway 1995) and more sophisticated, but poorly defined models were developed. In these models case managers have clinical training, provide at least some clinical services, and operate with low caseloads (Rubin 1992; Solomon 1992). Assertive Community Treatment is sometimes described as a team-based case management where Case Management involves individual caseloads, but this distinction is not maintained consistently (Burns 2001). Thus, in both clinical trials and clinical practice, what is presently called ‘Case Management’ is likely to contain some elements of ACT practice. These models can be called ‘Clinical Case Management’, ‘Intensive Case Management’ and ‘Strengths Case Management’ (Solomon 1992). However, Intensive Case Management is a broader term often used interchangeably with Assertive Case Management but distinguished from it on the grounds that it often lacks one or more ACT programme elements (Burns 2001). Intensive Case Management emphasizes the importance of small caseload (usually considerably less than 20) and high intensity input, but is otherwise not clearly defined (Marshall 2008). Intensive case managers are usually clinicians who act as therapist in addition to their case management duties.”

“Objectives: To assess the effects of Intensive Case Management (caseload <20) in comparison with non-Intensive Case Management (caseload >20) and with standard community care in people with severe mental illness. To evaluate whether the effect of ICM on hospitalisation depends on its fidelity to the ACT model and on the setting. ”

“This review compares ICM with non-Intensive Case Management (non-ICM; where people receive the same package of care but the professionals have caseloads of more than 20 people) and standard community care in people with severe mental illness. To evaluate whether the effect of ICM on hospitalisation depends on its fidelity to the ACT model and on the setting. ”

“Main results: We included 38 trials (7328 participants) in this review. The trials provided data for two comparisons: 1. ICM versus standard care, 2. ICM versus non-ICM.

1. ICM versus standard care

Twenty-four trials provided data on length of hospitalisation, and results favoured Intensive Case Management (n=3595, 24 RCTs, MD -0.86 CI -1.37 to -0.34). There was a high level of heterogeneity, but this significance still remained when the outlier studies were excluded from the analysis (n=3143,
20 RCTs, MD -0.62 CI -1.00 to -0.23). Nine studies found participants in the ICM group were less likely to be lost to psychiatric services (n=1633, 9 RCTs, RR 0.43 CI 0.30 to 0.61, I²=49%, p=0.05).

One global state scale did show an improvement in global state for those receiving ICM, the GAF scale (n=818, 5 RCTs, MD 3.41 CI 1.66 to 5.16). Results for mental state as measured through various rating scales, however, were equivocal, with no compelling evidence that ICM was really any better than standard care in improving mental state. No differences in mortality between ICM and standard care groups occurred, either due to ‘all causes’ (n=1456, 9 RCTs, RR 0.84 CI 0.48 to 1.47) or to ‘suicide’ (n=1456, 9 RCTs, RR 0.68 CI 0.31 to 1.51).

Social functioning results varied, no differences were found in terms of contact with the legal system and with employment status, whereas significant improvement in accommodation status was found, as was the incidence of not living independently, which was lower in the ICM group (n=1185, 4 RCTs, RR 0.65 CI 0.49 to 0.88). Quality of life data found no significant difference between groups, but data were weak. CSQ scores showed a greater participant satisfaction in the ICM group (n=423, 2 RCTs, MD 3.23 CI 2.31 to 4.14).

2. ICM versus non-ICM

The included studies failed to show a significant advantage of ICM in reducing the average length of hospitalisation (n=2220, 21 RCTs, MD -0.08 CI -0.37 to 0.21). They did find ICM to be more advantageous than non-ICM in reducing rate of lost to follow-up (n= 2195, 9 RCTs, RR 0.72 CI 0.52 to 0.99), although data showed a substantial level of heterogeneity (I²=59%, p=0.01). Overall, no significant differences were found in the effects of ICM compared to non-ICM for broad outcomes such as service use, mortality, social functioning, mental state, behaviour, quality of life, satisfaction and costs.

3. Fidelity to ACT

Within the meta-regression we found that i. the more ICM is adherent to the ACT model, the better it is at decreasing time in hospital (‘organisation fidelity’ variable coefficient -0.36 CI -0.66 to -0.07); and ii. the higher the baseline hospital use in the population, the better ICM is at decreasing time in hospital (‘baseline hospital use’ variable coefficient -0.20 CI -0.32 to -0.10). Combining both these variables within the model, ‘organisation fidelity’ is no longer significant, but ‘baseline hospital use’ result is still significantly influencing time in hospital (regression coefficient -0.18 CI -0.29 to -0.07, p=0.0027).

Authors’ conclusions: ICM was found effective in ameliorating many outcomes relevant to people with severe mental illnesses. Compared to standard care ICM was shown to reduce hospitalisation and increase retention in care. It also globally improved social functioning, although ICM’s effect on mental state and quality of life remains unclear. ICM is of value at least to people with severe mental illnesses who are in the sub-group of those with a high level of hospitalisation (about 4 days/month in past 2 years) and the intervention should be performed close to the original model.

It is not clear, however, what gain ICM provides on top of a less formal non-ICM approach.

We do not think that more trials comparing current ICM with standard care or non-ICM are justified, but currently we know of no review comparing non-ICM with standard care and this should be undertaken.”

“Main results

We have not been able to identify any randomised trials comparing 'as required' medication regimens to regular regimens of the same drug. Our main outcomes of interest were important changes in (i) mental state, (ii) behaviour, (iii) dose of medication used, (iv) adverse events, (v) satisfaction with care and (vi) cost of care.

Authors’ conclusions

There is currently no evidence from within randomised trials to support this common practice. Current practice is based on clinical experience and habit rather than high quality evidence.”


“Types of participants

Adults with SMI. For the purposes of the review we defined SMI as a diagnosis of a psychotic illness, including other psychoses such as bipolar disorder and depression with psychotic features. In studies where there was a mixture of diagnostic groups, only those studies where the majority of participants (that is, more than 50%) had psychotic diagnosis were included. We did not include studies where the sole diagnosis was bipolar disorder or depression. People whose main problem and primary diagnosis was one of deliberate self harm were also not the focus of this review.

Types of interventions

1. User-held information: any personalised and accessible clinical information held by the patient beyond standard care.

This includes both user-held records (notes made by professionals at appointments and kept by the patient) and crisis cards (personal information held for use in the event of a crisis or relapse). Generic information on diagnosis, treatment or services available was excluded.

2. Standard information: any information routinely held such as appointment cards and generic information on diagnosis, treatment or services available. In certain settings standard information may include a copy of the treatment plan with contact details for the key carers (DoH 1990).

“Interventions: Two of the studies (Henderson 2004; Papageorgiou 2002) tested a form of advance statement (Henderson 2008); that is, personal information and treatment preferences held for use in the event of a crisis or relapse. In these two studies, the user developed the user-held record with the help of a researcher or ‘facilitator’, and in the Henderson 2004 study the clinical team involved in delivering routine care was also involved. The content of these interventions was similar and broadly included the users’ views on relapse indicators, wishes for future treatment, contact details for themselves, their clinicians and family and carers. They may also have included an indication of treatments that they did not want, that is, a refusal of medication.

The other two studies (Lester 2003; Warner 2000) tested a form of medical record which included aspects such as contact details, clinical notes, future appointments and medication. Lester 2003 also
included an indication of relapse indicators and a diary section. For Lester 2003 and Warner 2000, these records were given to the user after randomisation.

All studies compared the active intervention to ‘treatment as usual’ in primary or secondary care. In addition, Henderson 2004 provided control participants with information leaflets regarding local services, treatments, and relevant legislation and policies (Henderson 2004).”

“Main results: Four RCTs (n = 607) of user-held records versus treatment as usual met the inclusion criteria. When the effect of user-held records on psychiatric hospital admissions was compared with treatment as usual in four studies, the pooled treatment effect showed no significant impact of the intervention and was of very low magnitude (n = 597, 4 RCTs, RR 0.99 CI 0.71 to 1.38, moderate quality evidence). Similarly, there was no significant effect of the intervention in three studies which investigated compulsory psychiatric hospital admissions (n = 507, 4 RCTs, RR 0.64 CI 0.37 to 1.10, moderate quality evidence). Other outcomes including satisfaction and mental state were investigated but pooled estimates were not obtainable due to skewed or poorly reported data, or only being investigated by one study. Two outcomes (violence and death) were not investigated by the included studies. Two important randomized studies are ongoing.

Authors’ conclusions: The evidence gap remains regarding user-held, personalised, accessible clinical information for people with psychotic illnesses for many of the outcomes of interest. However, based on moderate quality evidence, this review suggests that there is no effect of the intervention on hospital or outpatient appointment use for individuals with psychotic disorders. The number of studies is low, however, and further evidence is required to ascertain whether these results are mediated by the type of intervention, such as involvement of a clinical team or the type of information included.”


“Main results

Twenty-three randomised controlled trials met the inclusion criteria for this review. Five trials assessed a cognitive/behavioural intervention and eighteen assessed a pharmacological adjunct. In terms of prevention, two cognitive/behavioural trials showed significant treatment effect (mean weight change) at end of treatment (n=104, 2 RCTs, WMD -3.38 kg CI -4.2 to -2.0). Pharmacological adjunct treatments were significant with a modest prevention of weight gain (n=274, 6 RCTs, WMD -1.16 kg CI -1.9 to -0.4). In terms of treatments for weight loss, we found significantly greater weight reduction in the cognitive behavioural intervention group (n=129, 3 RCTs, WMD -1.69 kg CI -2.8 to -0.6) compared with standard care.

Authors’ conclusions

Modest weight loss can be achieved with selective pharmacological and non pharmacological interventions. However, interpretation is limited by the small number of studies, small sample size, short study duration and by variability of the interventions themselves, their intensity and duration. Future studies adequately powered, with longer treatment duration and rigorous methodology will be needed in further evaluating the efficacy and safety of weight loss interventions for moderating weight gain. At this stage, there is insufficient evidence to support the general use of pharmacological interventions for weight management in people with schizophrenia.”

“Background: There has been a recent trend to encourage routine outcome measurement and needs assessment as an aid to decision making in clinical practice and patient care. Standardised instruments have been developed which measure clinical symptoms of disorders such as schizophrenia, wider health related quality of life and patients' needs. Such measures might usefully be applied to aid the recognition of psychosocial problems and to monitor the course of patients' progress over time in terms of disease severity and associated deficits in health related quality of life. They might also be used to help clinicians to make decisions about treatment and to assess subsequent therapeutic impact. Such an approach is not, however, without cost and the actual benefit of the adoption of routine outcome and needs assessment in the day-to-day care of those with schizophrenia remains unclear.”

“Main results

No randomised data were found which addressed the specified objectives. One unpublished and one ongoing trial was identified.

Reviewer's conclusions

The routine use of outcomes measures and needs assessment tools is, as yet, unsupported by high quality evidence of clinical and cost effectiveness. Clinicians, patients and policy makers alike may wish to see randomised evidence before this strategy is routinely adopted.”


“Main results

Three randomised controlled trials met the inclusion criteria. Trials assessed the effects of exercise on physical and mental health. Overall numbers leaving the trials were similar. Two trials (Beebe 2005 and Marzaloni 2008) compared exercise to standard care and both found exercise to significantly improve negative symptoms of mental state (Mental Health Inventory Depression: 1RCT, n=10, MD 17.50 CI 6.70 to 28.30, PANNS negative: 1RCT, n=10, MD -8.50 CI -11.11 to -5.89). No absolute effects were found for positive symptoms of mental state. Physical health improved significantly in the exercise group compared to those in standard care (1RCT, n=13, MD 79.50 CI 33.82 to 125.18), but no effect on peoples' weight/BMI was apparent. Duraiswamy 2007 compared exercise with yoga and found that yoga had a better outcome for mental state (PANNS total: 1RCT, n=41, MD 14.95 CI 2.60 to 27.30). The same trial also found those in the yoga group had significantly better quality of life scores (WHOQOL Physical: 1RCT, n=41, MD -9.22 CI -18.86 to 0.42). Adverse effects (AIMS total scores) were, however, similar.

Authors' conclusions

Results of this Cochrane review are similar to existing reviews that have examined the health benefits of exercise in this population. Although studies included in this review are small and used various measures of physical and mental health, results indicated that regular exercise programmes are possible in this population, and that they can have healthful effects on both the physical and mental health and well-being of individuals with schizophrenia. Larger randomised studies are required before any definitive conclusions can be drawn.


“Main results:
Three small studies met the inclusion criteria. Two compared cognitive rehabilitation to a placebo intervention (total n=84), and the other to occupational therapy (n=33). Although cognitive rehabilitation was as acceptable as placebo and occupational therapy, with low attrition in both groups, no effects were demonstrated on measures of mental state, social behaviour, or cognitive functioning. An effect, in favour of cognitive rehabilitation, on a measure of self-esteem (Rosenberg Self-Esteem Scale, MD 6.3 CI 1.07-11.53) is worthy of replication in any future trials.

Reviewer's conclusions

Data are inconclusive and provide no evidence for or against cognitive rehabilitation as a treatment for schizophrenia."


“Authors' conclusions

Currently trial based data on Morita therapy is inconclusive. Morita therapy for schizophrenia remains an experimental intervention, new trials are justified and specific outlines for design of future studies are outlined in additional tables.”


“Main results

We didn't identify any relevant randomised trials.

Authors' conclusions

The Caribbean practice of treating people with severe mental illness on general medical wards has been influenced by socio-economic factors rather than evidence from randomised trials. This practice affords an opportunity for a well designed, well conducted and reported randomised trial, now impossible in many other settings.”


“Main results

We included 32 trials with a total of 3165 participants. Evaluation of long-term integrated care included four RCTs (n = 735). We found no significant differences on loss to treatment (n = 603, 3 RCTs, RR 1.09 CI 0.82 to 1.45, low quality of evidence), death by 3 years (n = 421, 2 RCTs, RR 1.18 CI 0.39 to 3.57, low quality of evidence), alcohol use (not in remission at 36 months) (n = 143, 1 RCT, RR 1.15 CI 0.84 to 1.56, low quality of evidence), substance use (n = 85, 1 RCT, RR 0.89 CI 0.63 to 1.25, low quality of evidence), global assessment of functioning (n = 171, 1 RCT, MD 0.7 CI 2.07 to 3.47, low quality of evidence), or general life satisfaction (n = 372, 2 RCTs, MD 0.02 higher CI 0.28 to 0.32, moderate quality of evidence). For evaluation of non-integrated intensive case management with usual treatment (4 RCTs, n = 163) we found no statistically significant difference for loss to treatment at 12 months (n = 134, 3 RCTs, RR 1.21 CI 0.73 to 1.99, very low quality of evidence). Motivational
interviewing plus cognitive behavioural therapy compared to usual treatment (7 RCTs, total n = 878) did not reveal any advantage for retaining participants at 12 months (n = 327, 1 RCT, RR 0.99 CI 0.62 to 1.59, low quality of evidence) or for death (n = 493, 3 RCTs, RR 0.72 CI 0.22 to 2.41, low quality of evidence), and no benefit for reducing substance use (n = 119, 1 RCT, MD 0.19 CI -0.22 to 0.6, low quality of evidence), relapse (n = 36, 1 RCT, RR 0.5 CI 0.24 to 1.04, very low quality of evidence) or global functioning (n = 445, 4 RCTs, MD 1.24 CI 1.86 to 4.34, very low quality of evidence). Cognitive behavioural therapy alone compared with usual treatment (2 RCTs, n = 152) showed no significant difference for losses from treatment at 3 months (n = 152, 2 RCTs, RR 1.12 CI 0.44 to 2.86, low quality of evidence). No benefits were observed on measures of lessening cannabis use at 6 months (n = 47, 1 RCT, RR 1.30 CI 0.79 to 2.15, very low quality of evidence) or mental state (n = 105, 1 RCT, Brief Psychiatric Rating Scale MD 0.52 CI -0.78 to 1.82, low quality of evidence). We found no advantage for motivational interviewing alone compared with usual treatment (8 RCTs, n = 509) in reducing losses to treatment at 6 months (n = 62, 1 RCT, RR 1.71 CI 0.63 to 4.64, very low quality of evidence), although significantly more participants in the motivational interviewing group reported for their first aftercare appointment (n = 93, 1 RCT, RR 0.69 CI 0.53 to 0.9). Some differences, favouring treatment, were observed in abstaining from alcohol (n = 28, 1 RCT, RR 0.36 CI 0.17 to 0.75, very low quality of evidence) but not other substances (n = 89, 1 RCT, RR -0.07 CI 0.56 to 0.42, very low quality of evidence), and no differences were observed in mental state (n = 30, 1 RCT, MD 0.19 CI -0.59 to 0.21, very low quality of evidence). We found no significant differences for skills training in the numbers lost to treatment by 12 months (n = 94, 2 RCTs, RR 0.70 CI 0.44 to 1.1, very low quality of evidence). We found no differences for contingency management compared with usual treatment (2 RCTs, n = 206) in numbers lost to treatment at 3 months (n = 176, 1 RCT, RR 1.65 CI 1.18 to 2.31, low quality of evidence), number of stimulant positive urine tests at 6 months (n = 176, 1 RCT, RR 0.83 CI 0.65 to 1.06, low quality of evidence) or hospitalisations (n = 176, 1 RCT, RR 0.21 CI 0.05 to 0.93, low quality of evidence). We were unable to summarise all findings due to skewed data or because trials did not measure the outcome of interest. In general, evidence was rated as low or very low due to high or unclear risks of bias because of poor trial methods, or poorly reported methods, and imprecision due to small sample sizes, low event rates and wide confidence intervals.

Authors' conclusions

We included 32 RCTs and found no compelling evidence to support any one psychosocial treatment over another for people to remain in treatment or to reduce substance use or improve mental state in people with serious mental illnesses. Furthermore, methodological difficulties exist which hinder pooling and interpreting results. Further high quality trials are required which address these concerns and improve the evidence in this important area.”


“Reviewers' conclusions

The studies in this field are few, small, poorly reported and outdated. Hypnosis could be helpful for people with schizophrenia but to ascertain this requires better designed, conducted and reported randomised studies.”


“Types of interventions
1. Cognitive behavioural therapy (CBT)

The label cognitive behavioural therapy has been applied to a variety of interventions, accordingly, is difficult to provide a single, unambiguous definition. Recognising this, the review authors constructed criteria that were felt to be both workable and to capture the elements of good practice in CBT. In order to be classified as ‘well-defined’ the intervention must clearly demonstrate the following components:

- a discrete psychological intervention, which is in addition to, and separate from, other therapeutic interventions (for example, behavioural family therapy) and
- recipients establish links between their symptoms, thoughts and beliefs, and consequent distress or problem behaviour and
- the re-evaluation of their perceptions, beliefs or reasoning relating to the target symptoms; this may include the reevaluation of specific “inferential” beliefs or more global “evaluative” beliefs.

(...) In addition, we undertook a sensitivity analysis between studies that employed qualified CBT therapists compared with relatively unqualified CBT therapists. Qualified CBT therapists may be defined as:

- persons possessing appropriate professional qualifications for the provision of CBT (e.g., British Association of Behavioural and Cognitive Psychotherapy (BABCP) accreditation, Diploma in CBT, or other professionally accredited qualifications involving CBT as major part of training (e.g. Clinical or Counselling Psychologist)) or
- in situations where the qualifications of the therapist are unclear but they appear to have received training in CBT or specific training for the trial and there is a thorough adherence protocol.

Unqualified CBT therapists may be defined as persons not possessing appropriate professional qualifications or no report of training and adherence protocols.

2. Other psychosocial interventions

Where standard care has been supplemented by additional psychological or social interventions, or both, such as supportive therapy, psycho-education, family therapy and other ‘talking therapies’.

This review distinguishes between trials that described ‘active’ psychosocial interventions (e.g., family therapy) aimed at a meaningful symptom reduction and those trials which have used ‘non-active’ psychosocial interventions (e.g., unstructured conversations) which act as merely a control for the non-specific effects of therapy (e.g., time spent with therapist). Outcomes are presented separately for active and non-active psychosocial interventions and the pooled effect of these trials is also presented.”

“Main results

Thirty papers described 20 trials. Trials were often small and of limited quality. When CBT was compared with other psychosocial therapies, no difference was found for outcomes relevant to adverse effect/events (2 RCTs, n = 202, RR death 0.57 CI 0.12 to 2.60). Relapse was not reduced over any time period (5 RCTs, n = 183, RR long-term 0.91 CI 0.63 to 1.32) nor was rehospitalisation (5 RCTs, n = 294, RR in longer term 0.86 CI 0.62 to 1.21). Various global mental state measures failed to show difference (4 RCTs, n = 244, RR no important change in mental state 0.84 CI 0.64 to 1.09). More
specific measures of mental state failed to show differential effects on positive or negative symptoms of schizophrenia but there may be some longer term effect for affective symptoms (2 RCTs, n = 105, mean difference (MD) Beck Depression Inventory (BDI) -6.21 CI -10.81 to -1.61). Few trials report on social functioning or quality of life. Findings do not convincingly favour either of the interventions (2 RCTs, n = 103, MD Social Functioning Scale (SFS) 1.32 CI -4.90 to 7.54; n = 37, MD EuroQOL -1.86 CI -19.20 to 15.48). For the outcome of leaving the study early, we found no significant advantage when CBT was compared with either non-active control therapies (4 RCTs, n = 433, RR 0.88 CI 0.63 to 1.23) or active therapies (6 RCTs, n = 339, RR 0.75 CI 0.40 to 1.43)

Authors' conclusions

Trial-based evidence suggests no clear and convincing advantage for cognitive behavioural therapy over other - and sometime much less sophisticated - therapies for people with schizophrenia.”


“Background:

Non-compliance is a significant problem among people with serious mental disorders, presenting a challenge for mental health professionals. Prompts such as telephone calls, visits, and a posted referral letter to patients are currently used to encourage patient attendance at clinics and/or compliance with medication. More recently, the use of information and communication technology (ICT)-based prompting methods have increased. Methods include mobile text message (SMS - short message service), e-mail or use of any other electronic device with the stated purpose of encouraging compliance.”

“Participants

People in the two studies were diagnosed with schizophrenia (Montes 2011), schizoaffective disorder or mood disorder, such as unipolar and bipolar depression (Hulsbosch 2008), and in both cases operational criteria (DSMIV) was used. The average age was around 40 to 46 years, and both men and woman were included. Participants were clinically stable outpatients who were considered to have poor adherence to antipsychotic therapy (Montes 2011). In Hulsbosch 2008 the average year in care was just over a decade. In Montes 2011 participants were outpatients in Mental Health Centres receiving antipsychotic medication.

Interventions

Hulsbosch 2008 compared a telecare group, i.e. a digital communication device plus care as usual with care as usual. The device included regular or crisis consultation via web cam, computerized information about treatment plans, laboratory results, reminders and scheduled appointments, and support by significant others. Participants in the control group received standard counseling (care as usual). The duration of the intervention was 18 months with measurement points at zero, nine and 18 months. The Montes 2011 study compared daily text message (short message service - SMS) on mobile phone to remind the person to take medication with a control (no SMS) - both supplementary to standard care. The reminder SMS message was sent daily at 10 am or 2 pm. The duration of the intervention was three months with measurement points at zero, three and six months.”

“Main results:
The search identified 35 references, with 25 studies, but we could only include two studies with a total of 358 participants. The studies had a moderate risk of bias, and therefore risk overestimating any positive effects of ICT-based prompting. Both included studies compared semi-automatised ICT-based prompting intervention with standard care groups in mental health outpatient care. The interventions were SMS-message and an electronic assistant device. One included study reported our primary outcome, compliance. There was not any clear evidence that ICT-based prompts increase improvement in compliance (stop taking medication within six months n = 320, RR 1.11 CI 0.96 to 1.29, moderate quality evidence). There was some low quality evidence that ICT-based prompts have small effects for: mental state (average change in specific symptom scores within three months n = 251, MD -0.30 CI -0.53 to -0.07; severity of illness within three months n = 251, MD -0.10 CI -0.13 to -0.07 and six months n = 251, MD -0.10 CI -0.13 to -0.07; average change in depressive scores within six months n = 251, RR 0.00 CI -0.28 to 0.28; global symptoms within three months n = 251, MD -0.10 CI -0.38 to -0.07; negative symptoms within three months n = 251, MD -0.10 CI -0.38 to 0.18 and six months n = 251, MD -0.30 CI -0.58 to 0.02, low quality evidence). Level of insight improved more among people receiving ICT-based prompt compared with those in the control group at six months (n = 251, MD -0.10 CI -0.13 to -0.07). ICT-based prompts also increased quality of life (average change in quality of life within six months n = 251, RR 0.50 CI 0.19 to 0.81, moderate quality evidence). Based on the existing data, there is no evidence that either intervention is less acceptable than the other (n = 347, 2 RCTs, RR 1.46 CI 0.70 to 3.05, low quality evidence). Included studies did not report outcomes of service utilisation, behaviour, costs or adverse events.

Authors' conclusions

The evidence base on the effects of ICT-based prompts is still inconclusive. Data to clarify ICT-based prompting effects are awaited from an ongoing trial, but further well-conducted trials considering the different ICT-based prompts are warranted.”


“Main results:
We did not identify any studies that met our inclusion criteria.

Authors' conclusions:

Healthcare professionals should be more proactive in liaising with oral health professionals in developing novel ways to cater for the needs of people with serious mental illness.”


“Background:

People who suffer from severe mental disorder experience high rates of unemployment. Supported employment is an approach to vocational rehabilitation that involves trying to place clients in competitive jobs without any extended preparation. The Individual placement and support (IPS) model is a carefully specified form of supported employment.”

“Main results
A total of 14 randomised controlled trials were included in this review (total 2265 people). In terms of our primary outcome (employment: days in competitive employment, over one year follow-up), supported employment seems to significantly increase levels of any employment obtained during the course of studies (7 RCTs, n = 951, RR 3.24 CI 2.17 to 4.82, very low quality of evidence). Supported employment also seems to increase length of competitive employment when compared with other vocational approaches (1 RCT, n = 204, MD 70.63 CI 43.22 to 94.04, very low quality evidence). Supported employment also showed some advantages in other secondary outcomes. It appears to increase length (in days) of any form of paid employment (2 RCTs, n = 510, MD 84.94 CI 51.99 to 117.89, very low quality evidence) and job tenure (weeks) for competitive employment (1 RCT, n = 204, MD 9.86 CI 5.36 to 14.36, very low quality evidence) and any paid employment (3 RCTs, n = 735, MD 3.86 CI -2.94 to 22.17, very low quality evidence). Furthermore, one study indicated a decreased time to first competitive employment in the long term for people in supported employment (1 RCT, n = 204, MD -161.60 CI -225.73 to -97.47, very low quality evidence). A large amount of data were considerably skewed, and therefore not included in meta-analysis, which makes any meaningful interpretation of the vast amount of data very difficult.

Authors' conclusions

The limited available evidence suggests that supported employment is effective in improving a number of vocational outcomes relevant to people with severe mental illness, though there appears to exist some overall risk of bias in terms of the quality of individual studies. All studies should report a standard set of vocational and non-vocational outcomes that are relevant to the consumers and policy-makers. Studies with longer follow-up should be conducted to answer or address the critical question about durability of effects.”

Kisely SR, Campbell LA. Compulsory community and involuntary outpatient treatment for people with severe mental disorders. Cochrane Database Syst Rev. 2014;(12):CD004408

“Included studies

We included three studies involving 752 participants: two studies from the USA comparing outpatient commitment (OPC) with entirely voluntary treatment and one UK study, the Oxford Community Treatment Order Evaluation Trial (OCTET) comparing two types of compulsory community treatment interspaced with voluntary care. OCTET randomised patients discharged from hospital to an experimental group (community treatment order (CTO)) or a control group (extended leave under section 17 of the Mental Health Act) and compared their outcomes at 12 months (Burns 2013). “Leave of absence” under Section 17 of the Act allows patients to leave hospital for some hours or days, or even exceptionally weeks, while still subject to recall.

(…)

All three studies were of patients in community settings who were followed up over 12 months. Two trials from the USA were of court-ordered ‘Outpatient Commitment’ (OPC) compared with voluntary community treatment. The third compared clinician initiated community treatment orders (CTOs) with another type of supervised discharge in England.”

“Experimental (from a previous version of the review)

Both trials used the American OPC (Outpatient Commitment) form of treatment. This is a court-ordered compulsory treatment plan for people suffering from severe mental illness who have the capacity to survive in the community with available supports, a clinical history indicating a need for treatment to prevent deterioration that would predictably result in dangerousness, and a mental
status that limits or negates their ability to comply voluntarily or make informed decisions regarding treatment. Following a hearing, the court may order compulsory community treatment, which allows clinicians to request that law officers escort the patient to a mental health facility for examination, persuasion to accept treatment, or eventual evaluation for involuntary inpatient commitment (Swartz 1999). The statute explicitly prohibits forced medication. The provisions of outpatient commitment were similar in both states.”

“Main results:

All studies (n=3) involved patients in community settings who were followed up over 12 months (n = 752 participants). Two RCTs from the USA (total n = 416) compared court-ordered ‘Outpatient Commitment’ (OPC) with voluntary community treatment. OPC did not result in significant differences compared to voluntary treatment in any of the main outcome indices: health service use (2 RCTs, n = 416, RR for readmission to hospital by 11-12 months 0.98 CI 0.79 to 1.21, low grade evidence); social functioning (2 RCTs, n = 416, RR for arrested at least once by 11-12 months 0.97 CI 0.62 to 1.52, low grade evidence); mental state; quality of life (2 RCTs, n = 416, RR for homelessness 0.67 CI 0.39 to 1.15, low grade evidence) or satisfaction with care (2 RCTs, n = 416, RR for perceived coercion 1.36 CI 0.97 to 1.89, low grade evidence). However, risk of victimisation decreased with OPC (1 RCT, n = 264, RR 0.50 CI 0.31 to 0.80). Other than perceived coercion, no adverse outcomes were reported. In terms of numbers needed to treat (NNT), it would take 85 OPC orders to prevent one readmission, 27 to prevent one episode of homelessness and 238 to prevent one arrest. The NNT for the reduction of victimisation was lower at six (CI 6 to 6.5). One further RCT compared community treatment orders (CTOs) with less intensive supervised discharge in England and found no difference between the two for either the main outcome of readmission (1 RCT, n = 333, RR for readmission to hospital by 12 months 0.99 CI 0.74 to 1.32, medium grade evidence), or any of the secondary outcomes including social functioning and mental state. It was not possible to calculate the NNT. The English study met three out of the seven criteria of The Cochrane Collaboration's tool for assessing risk of bias, the others only one, the majority being rated unclear.

Authors' conclusions

CCT results in no significant difference in service use, social functioning or quality of life compared with standard voluntary care. People receiving CCT were, however, less likely to be victims of violent or non-violent crime. It is unclear whether this benefit is due to the intensity of treatment or its compulsory nature. Short periods of conditional leave may be as effective (or non-effective) as formal compulsory treatment in the community. Evaluation of a wide range of outcomes should be considered when this legislation is introduced. However, conclusions are based on three relatively small trials, with high or unclear risk of blinding bias, and evidence we rated as low to medium quality.”


“Authors' conclusions:

Based on the current very low quality data, there is insufficient evidence to draw any conclusions on benefits or harms of horticultural therapy for people with schizophrenia. This therapy remains unproven and more and larger randomised trials are needed to increase high quality evidence in this area.”

“Main results

We identified eight randomised trials, involving 530 participants, which met our selection criteria.

For the cannabis reduction studies no one treatment showed superiority for reduction in cannabis use. Overall, data were poorly reported for many outcomes of interest. Our main outcomes of interest were medium-term data for cannabis use, global state, mental state, global functioning, adverse events, leaving the study early and satisfaction with treatment.

1. Reduction in cannabis use: adjunct psychological therapies (specifically about cannabis and psychosis) versus treatment as usual

Results from one small study showed people receiving adjunct psychological therapies specifically about cannabis and psychosis were no more likely to reduce their intake than those receiving treatment as usual (n = 54, 1 RCT, MD -0.10, 95% CI -2.44 to 2.24, moderate quality evidence). Results for other main outcomes at medium term were also equivocal. No difference in mental state measured on the PANSS positive were observed between groups (n = 62, 1 RCT, MD -0.30 95% CI -2.55 to 1.95, moderate quality evidence). Nor for the outcome of general functioning measured using the World Health Organization Quality of Life BREF (n = 49, 1 RCT, MD 0.90 95% CI -1.15 to 2.95, moderate quality evidence). No data were reported for the other main outcomes of interest

2. Reduction in cannabis use: adjunct psychological therapy (specifically about cannabis and psychosis) versus adjunct non-specific psychoeducation

One study compared specific psychological therapy aimed at cannabis reduction with general psychological therapy. At three-month follow-up, the use of cannabis in the previous four weeks was similar between treatment groups (n = 47, 1 RCT, RR 1.04 95% CI 0.62 to 1.74, moderate quality evidence). Again, at a medium-term follow-up, the average mental state scores from the Brief Psychiatric Rating Scale-Expanded were similar between groups (n = 47, 1 RCT, MD 3.60 95% CI -5.61 to 12.81, moderate quality evidence). No data were reported for the other main outcomes of interest: global state, general functioning, adverse events, leaving the study early and satisfaction with treatment.

3. Reduction in cannabis use: antipsychotic versus antipsychotic

In a small trial comparing effectiveness of olanzapine versus risperidone for cannabis reduction, there was no difference between groups at medium-term follow-up (n = 16, 1 RCT, RR 1.80 95% CI 0.52 to 6.22, moderate quality evidence). The number of participants leaving the study early at medium term was also similar (n = 28, 1 RCT, RR 0.50 95% CI 0.19 to 1.29, moderate quality evidence). Mental state data were reported, however they were reported within the short term and no difference was observed. No data were reported for global state, general functioning, and satisfaction with treatment.

With regards to adverse effects data, no study reported medium-term data. Short-term data were presented but overall, no real differences between treatment groups were observed for adverse effects.

4. Cannabinoid as treatment: cannabidiol versus amisulpride
Again, no data were reported for any of the main outcomes of interest at medium term. There were short-term data reported for mental state using the BPRS and PANSS, no overall differences in mental state were observed between treatment groups.

Authors' conclusions

Results are limited and inconclusive due to the small number and size of randomised controlled trials available and quality of data reporting within these trials. More research is needed to a) explore the effects of adjunct psychological therapy that is specifically about cannabis and psychosis as currently there is no evidence for any novel intervention being better than standard treatment, for those that use cannabis and have schizophrenia b) decide the most effective drug treatment in treating those that use cannabis and have schizophrenia, and c) assess the effectiveness of cannabidiol in treating schizophrenia. Currently evidence is insufficient to show cannabidiol has an antipsychotic effect.”


McMonagle et Sultana (juillet 2000) évaluent les données concernant la technique des jetons (économie de jetons).

“Background

A token economy is a behavioural therapy technique in which the desired change is achieved by means of tokens administered for the performance of predefined behaviours according to a program. Though token economy programmes were widespread in the 1970s they became largely restricted to wards where long-stay patients from institutions are prepared for transfer into the community and were particularly aimed at changing negative symptoms of schizophrenia - poor motivation, poor attention and social withdrawal.”

“Methods

Only three studies\(^\text{63}\) were included; all of these were reported as randomised.

Participants

The three included studies focused on people who had chronic illness, a long hospital stay and a diagnosis of schizophrenia. Only Li 1994 used published criteria (Chinese Medical Association Criteria) for the diagnosis. In addition, the patients had predominantly negative symptoms scoring greater than 25 on the SANS (Chinese version). Hall 1977 included only male patients, Maley 1973 only women, and Li 1994, both sexes. The mean age was about 41 years and all participants were in hospital.

Interventions

Treatment group: Hall 1977 reported that the experimental group on a token economy ward received praise, explanation and contingent tokens. In Li 1994, two nurses provided regular training in life skills, such as organising personal possessions, and organised occupational, recreational and

\(^{63}\) Hall 1977 (published data only)


sporting activities. The two nurses had received one week’s training for this role. Tokens were administered if the score on behavioural rating scale exceeded the mean daily score for experimental group in the previous week which raised the complexity of expected goals over three months of treatment. The life skills training in Li 1994 was regarded by the reviewers as an integral part of a token economy intervention so the study was included.

Control group: Hall 1977 attempted to have a comparable ‘attentional placebo’ which consisted of praise, explanation and non-contingent regular monetary payments for six patients on the token economy ward. A further control group of six remained on their long stay wards and received unspecified treatment as usual. The only outcome available for analysis from this study was ‘leaving the study early’ so the two control groups were combined for this review. Li 1994 reported that control group patients, who were on the same ward as the treatment group, were asked to perform the same tasks and participate in the same social activities but did not receive life skills training or any rewards for their participation. Maley 1973 did not describe the control group treatment beyond saying that it consisted of whatever treatment was available on other wards. Though Elliott 1978 compared regimes, each of which omitted a single element of the token economy procedure, there were no usable studies comparing full token economies in different forms.”

“Main results

Only three randomised controlled trials could be included in the analyses (total n=110). There were no usable data on target or non-target behaviour. One small study favoured the token economy approach for the outcome ‘change in mental state’ on the SANS-CV with improvement in negative symptoms at three months (n=40, WMD -12.7, CI -21.44 to -3.96).

Reviewer’s conclusions

The token economy approach may have effects on negative symptoms but it is unclear if these results are reproducible, clinically meaningful and are maintained beyond the treatment programme. Token economy remains worthy of careful evaluation in well designed, conducted and reported randomised trials.”


“We only identified one small (n=56) study for inclusion in this review (O’Donnell 2003) 64. The single included trial was conducted over a period of two years, although all data except ‘inpatient days’ were available only at one year follow up. O’Donnell 2003 were consenting patients from 94 consecutive admissions to inpatient care. These people were aged 18-65 with an IQ of more than 80. All were fluent English speakers and had no evidence of organic disease. An operational (DSM III-R) diagnosis of schizophrenia was confirmed using a structured clinical interview (SCID). O’Donnell 2003 was conducted in an urban catchment area of Dublin, Ireland. O’Donnell 2003 randomised 56 people. O’Donnell 2003 defined compliance therapy as a cognitive behavioural Intervention with techniques adopted from motivational interviewing, cognitive therapy and psychoeducation. Compliance therapy was conducted according to a manual (Kemp 1996) and delivered over five sessions, each lasting 30-60 minutes. The patient’s illness history, understanding of illness, ambivalence to treatment, maintenance treatment and stigma regarding mental illness were reviewed during the therapy sessions. The control therapy ‘non-specific counseling’ also consisted of five sessions of 30-60 minutes each. However, when patients raised matters relating to medication, they were advised to discuss these matters with their treating teams.”

We included one trial with relevant and available data (n=56, duration 2 years) comparing compliance therapy with non-specific counseling. The primary outcome 'non-compliance with treatment' showed no significant difference between compliance therapy and non-specific counseling (n=56, RR 1.23 CI 0.74 to 2.05). The compliance therapy did not substantially affect attitudes to treatment (n=50, WMD DAI score -2.10 CI -6.11 to 1.91). Very few people (~10%) left the study by one year (n=56, RR 0.5 CI 0.1 to 2.51). Mental state seemed unaffected by the therapy (n=50, WMD PANSS score 6.1 CI -4.54 to 16.74) as was insight (n=50, WMD SAI -0.5 CI -2.43 to 1.43), global functioning (n=50, WMD GAF -4.20 CI -16.42 to 8.02) and quality of life (n=50, WMD QLS -3.40 CI -16.25 to 9.45). At both one and two years the average number of days in hospital was non-significantly reduced for those allocated to the compliance therapy.

Authors’ conclusions

There is no clear evidence to suggest that compliance therapy is beneficial for people with schizophrenia and related syndromes but more randomised studies are justified and needed in order for this intervention to be fully examined.”
people in more standard type of care - real-world evaluation could take place. In the UK further randomised control trials are probably impossible, as many of these types of facilities have closed. The broader lesson of this review is to ensure early and rigorous evaluation of fashionable innovations before they are superseded by new approaches.”


“Background:
People with schizophrenia and severe mental illness may require considerable support from health care professionals, in most cases over a long period of time. Research on the effects of psychotherapy for schizophrenia shows mixed results. Although pharmacological interventions remain the treatment of choice for schizophrenia patients, it is also of interest to look at the effects of treatment methods focusing on psychosocial factors affecting schizophrenia.”

“Main results
We included four randomised trials (total 528 participants, 5 comparisons). All used a psychodynamic approach and reported limited data.

For individual psychodynamic therapy versus medication alone we found significantly more participants in the therapy group were unable to be discharged (n=92, RR 8.35 CI 2.0 to 34.3, NNH 3 CI 2 to 6). We found no significant difference between groups in the number of participants who were re-hospitalised (n=24, RR 0.63 CI 0.3 to 1.4) during long-term analyses. At 12 months, fewer participants in the psychotherapy groups needed additional medications compared with those who did receive medication (n=74, RR 0.64 CI 0.5 to 0.8, NNT 3 CI 3 to 6), and also at three years follow up (n=87, RR 0.85 CI 0.8 to 1.0, NNT 7 CI 5 to 26).

For individual psychodynamic therapy plus medication versus medication alone we found no significant difference in suicide (n=92, RR 0.16 CI 0.01 to 2.9) or suitability for discharge (n=92, RR 1.09 CI 0.2 to 7.4). Also, we found re-hospitalisation rates in long-term analyses were equivocal (n=24, RR 1.00 CI 0.4 to 2.6). For insight-orientated psychodynamic psychotherapy versus reality adaptive psychotherapy we found no significant difference in re-hospitalisation rates (n=164, RR 1.20 CI 0.9 to 1.6), but we found study attrition favoured the insight-orientated psychodynamic psychotherapy group at 12 months (n=164, RR 0.46 CI 0.3 to 0.6, NNT 2 CI 2 to 4). For individual psychodynamic psychotherapy versus group psychotherapy we found no significant difference in global state ‘not improved’ (n=100, RR 1.27 CI 1.0 to 1.7). For individual psychodynamic therapy plus medication versus individual psychodynamic therapy we found rates of re-hospitalisation during long-term analyses were equivocal (n=24, RR 1.00 CI 0.4 to 2.6). There is no clear evidence of any positive effect of psychodynamic therapy and the possibility of adverse effects seems never to have been considered. We did not identify any trials using a psychoanalytic approach.

Authors’ conclusions
Current data do not support the use of psychodynamic psychotherapy techniques for hospitalised people with schizophrenia. If psychoanalytic therapy is being used for people with schizophrenia there is an urgent need for trials.”
Malone, Newron-Howes G, Simmonds S, Marriot S, Tyrer P. Community mental health teams (CMHTs) for people with severe mental illnesses and disordered personality. Cochrane Database Syst Rev. 2007 Jul 18;(3). (Malone et al., 2007)

“Types of interventions
Community Mental Health Team: management of care from a multi disciplinary, community-based team (that is more than a single person designated to work within a team).

Standard or usual care: must be stated to be the normal care” in the area concerned. This could be non-team community care,” outpatient care, admission to hospital (where acutely ill people” were diverted from admission and allocated CMHT or in-patient” care), or day hospital(...).”

“Included studies
We included three studies65, with a total of 587 participants. All three were randomised, and compared a standard hospital based service which usually assessed patients in the outpatient clinics, with less emphasis on multidisciplinary working and usually doctor lead. The comparator intervention had more focus on community based assessments in the community and multidisciplinary working. In none of the studies were the interventions a 24 hour service, nor were there restrictions on case loads indicative on crisis intervention or assertive community treatment respectively. One of the authors (Burns 1993), during correspondence, indicated that he felt the comparison was of two CMHT and with re-evaluation it was felt that this study still met the inclusion criteria.

The follow-up period between initial and final assessments vary between three months and 12 months. Burns 1993 final assessment was at 12 months, Merson 1992b at three months and Tyrer 1998 at 12 months.

In all three studies schizophrenia was the most common diagnosis and all included a significant minority of those with neurotic disorders. In only one of the studies was personality status recorded before treatment (Merson 1992b). Studies all included people of both sexes, and there were slightly more females than males. All studies used operationalised diagnoses. Burns 1993 used the Present State Examination (PSE). Merson 1992b used the International Classification of Diseases (ICD-10) and Tyrer 1998 used the Operational Criteria Checklist for Psychotic Illness (OPCRIT) diagnostic system.

All studies were undertaken in the UK in community settings.”

“Main results

65 Burns 1993 (published data only)
Merson 1992 (published and unpublished data)
Tyrer 1998 (published data only)
CMHT management did not reveal any statistically significant difference in death by suicide and in suspicious circumstances (n=587, 3 RCTs, RR 0.49 CI 0.1 to 2.2) although overall, fewer deaths occurred in the CMHT group. We found no significant differences in the number of people leaving the studies early (n=253, 2 RCTs, RR 1.10 CI 0.7 to 1.8). Significantly fewer people in the CMHT group were not satisfied with services compared with those receiving standard care (n=87, RR 0.37 CI 0.2 to 0.8, NNT 4 CI 3 to 11). Also, hospital admission rates were significantly lower in the CMHT group (n=587, 3 RCTs, RR 0.81 CI 0.7 to 1.0, NNT 17 CI 10 to 104) compared with standard care. Admittance to accident and emergency services, contact with primary care, and contact with social services did not reveal any statistical difference between comparison groups.

Authors' conclusions

Community mental health team management is not inferior to non-team standard care in any important respects and is superior in promoting greater acceptance of treatment. It may also be superior in reducing hospital admission and avoiding death by suicide. The evidence for CMHT based care is insubstantial considering the massive impact the drive toward community care has on patients, carers, clinicians and the community at large.”


“Background

Inpatient treatment is an expensive way of caring for people with acute psychiatric disorders. It has been proposed that many of those currently treated as inpatients could be cared for in acute psychiatric day hospitals.”

“Included studies


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66 Creed-UK-1990 [published data only]

Creed-UK-1996 [published data only]

Dick-UK-1985 [published data only]


Herz-US-1971 [published data only]

Kallert-EU-2007 [published data only]

Adamowski T, Hadrys T, Kiejna A. Comparison between the day-care ward and the inpatient ward in terms of treatment effectiveness based on the analysis of psychopathologic symptoms, subjective quality of life and number of rehospitalisations after discharge [Efektywnosc leczenia na psychiatrycznym oddziale dziennym, w porównaniu z oddziale stacjonarnym, na podstawie analizy objawow psychopatologicznych, subiektywnej oceny jakości zycia oraz czestosci rehospitalizacji po zakonczeniu leczenia]. Psychiatria Polska 2008;42(4):571–81. [MEDLINE: 19189601]


Raboch J. Experiences with Eden project and day care system at the psychiatric department in Prague. Proceedings of the 12th World Congress of Psychiatry; 2002 Aug 24-29; Yokohama, Japan. 2002.


NL-1989; Zwerling-US-1964). This review now includes data on 2685 randomised people from within these 10 separate trials.”

“Participants

Participants now total 2685 people. These were both men and women, mostly aged between 30 and 50 years of age, with diagnoses of various acute psychiatric disorders, but mainly schizophrenia and mood disorders. Only Kallert-EU-2007 reported a pretrial power calculation. The trials in descending order of size were: Kallert-EU-2007 (1117); Zwerling-US-1964 (378); Schene-NL-1993 (222); Sledge-US-1996 (197); Creed-UK-1996 (187); Wiersma-NL-1989 (160); Kris-US-1965 (141); Creed-UK-1990 (102); Dick-UK-1985 (91) and Herz-US-1971 (90).

Setting

All trials except Wiersma-NL-1989 recruited from a population who would otherwise have been admitted to a general adult psychiatric ward. Two trials took place in the same day hospital in an inner city area of Manchester, UK (Creed-UK-1990; Creed-UK-1996). In the earlier trial, eligible patients were voluntary patients who were not too ill for day care, and who had no social factors that made day care impractical (such as being of no fixed abode). In addition to these criteria, the later trial excluded patients with organic brain disease or mania. Dick-UK-1985 took place in an acute day hospital in Dundee, Scotland. Patients were excluded if day hospital treatment was judged impractical or they were considered too ill or suicidal. Herz-US-1971 took place in an acute day hospital in New York State, USA. Patients were excluded if day care was judged impractical or if they were considered too ill or too well for day care. Kallert-EU-2007 was a multi-centre study with five sites: Dresden, Germany; London, UK; Wroclaw, Poland; Michalovce, Slovak Republic; and Prague, Czech Republic. Patients were included if they were in need of acute admission to a psychiatric facility and excluded if it was an involuntary admission, they lived too far from the hospital or were homeless, acute intoxication, addictive disorder, or required inpatient care. Kris-US-1965 took place in an acute day hospital in New York, USA. Patients were eligible if they had had a previous admission for a psychotic disorder. Schene-NL-1993 took place in an acute day hospital at the University of Utrecht, Netherlands. Patients were excluded if there were contraindications to day hospital treatment (not specified) or they had organic brain disease or a primary diagnosis of substance abuse or mental retardation. Sledge-US-1996 took place at a community mental health centre day hospital in New Haven, Connecticut, USA. The day hospital was closely linked to a crisis residence run by a non-profit organisation. Patients were excluded if they were; involuntary, not living locally, too ill for day patient treatment, intoxicated, or physically unwell. Wiersma-NL-1989 took place in a day hospital operated by the Regional Institute for Ambulatory Mental Health Care in Groningen, Netherlands. All patients presenting for inpatient care were included in the trial except for forensic patients on court orders and patients with dementia. No prior assessment was made of suitability for day hospital treatment. Patients randomised to day hospital treatment who were too unwell for immediate transfer were treated as inpatients but transferred to day hospital care as soon as feasible. Zwerling-US-1964 took place in a day hospital in New York, USA.

Interventions

In Creed-UK-1990, eight nurses and three occupational therapists staffed the day hospital with input from three consultant psychiatrists. In Creed-UK-1996, the day hospital had similar staffing levels to Creed-UK-1990, but there was additional input from a community psychiatric nurse (who could visit patients who failed to turn up for treatment) and an out of hours on-call service for day patients. In


* Zwerling I, Wilder JF. An evaluation of the applicability of the day hospital in the treatment of acutely disturbed patients. Israel Annals of Psychiatry and Related Disciplines
Dick-UK-1985 the day hospital was staffed by two trained staff and an occupational therapist and had a staff/patient ratio of 1:12.5. The day hospital offered individual counselling, groups, activities and medication. In Herz-US-1971 the day hospital offered group-oriented psychotherapy; staffing levels were not reported. In Kallert-EU-2007 the day hospitals provided between 15 and 35 places, with mean staff hours per week per treatment place ranging from 8.8 to 16.0. General clinical expertise was high in all centres. Within the centres, the day hospital and inpatient settings varied, but not systematically. In the Dresden day hospital they specialised in outreach activities and vocational rehabilitation, and in Wroclaw there were similar differences; in London “psychological interventions” for inpatients were limited to supportive talks; in Wroclaw and Michalovce there was a low level of general hospitals. In Prague, the there were no differences between the settings. In Kris-US-1965, the day hospital offered milieu and group therapy; staffing levels were not reported. In Schene-NL-1993, the day hospital offered psychosocial therapy and had a staff:patient ratio of 1:12.5. In Sledge-US-1996, the day hospital was a 20-patient facility staffed by doctors, nurses, social workers and other therapists. Treatment emphasised group work, control of symptoms and improvement in daily living skills. The day hospital was linked to a crisis residence, which was a three-bedroom apartment supported by a crisis respite unit. In Wiersma-NL-1989, the day hospital was supported by integrated ambulatory and domiciliary care and by a back-up bed on the inpatient ward. A 24-hour telephone help-line was available to all day hospital patients. The day hospital offered an multi-disciplinary treatment programme, but staffing levels were not reported. In Zwerling-US-1964, the day hospital offered group-oriented activities and family therapy for up to 30 patients. Staffing consisted of four full-time nurses, four nurse’s aides, a clinical psychologist, a social worker and dedicated time from senior and junior psychiatrists.

“Main results:

Ten trials (involving 2685 people) met the inclusion criteria. We obtained individual patient data for four trials (involving 646 people). We found no difference in the number lost to follow-up by one year between day hospital care and inpatient care (5 RCTs, n = 1694, RR 0.94 CI 0.82 to 1.08). There is moderate evidence that the duration of index admission is longer for patients in day hospital care than inpatient care (4 RCTs, n = 1582, WMD 27.47 CI 3.96 to 50.98). There is very low evidence that the duration of day patient care (adjusted days/month) is longer for patients in day hospital care than inpatient care (3 RCTs, n = 265, WMD 2.34 days/month CI 1.97 to 2.70). There is no difference between day hospital care and inpatient care for the being readmitted to in/day patient care after discharge (5 RCTs, n = 667, RR 0.91 CI 0.72 to 1.15). It is likely that there is no difference between day hospital care and inpatient care for being unemployed at the end of the study (1 RCT, n = 179, RR 0.88 CI 0.66 to 1.19), for quality of life (1 RCT, n = 1117, MD 0.01 CI -0.13 to 0.15) or for treatment satisfaction (1 RCT, n = 1117, MD 0.06 CI -0.18 to 0.30).

Authors’ conclusions

Caring for people in acute day hospitals is as effective as inpatient care in treating acutely ill psychiatric patients. However, further data are still needed on the cost effectiveness of day hospitals."


“Background

There is evidence suggesting that people with serious mental illness are less responsive to everyday social rewards such as praise. Motivation and performance in social situations can be poor. Rewarding of tasks with money improves motivation to complete the tasks in everyday life. Careful
use of targeted monetary rewards could also help people with troublesome symptoms of schizophrenia.”

“Main results

Five trials are excluded that investigate one type of monetary reward over another and may be included in a future update. We did include one study, carried out over 40 years ago, randomising a total of 25 very chronically ill people who had been in hospital an average of 20 years. The targeted task that was being encouraged was assembly of dolls. People allocated to the payment group produced less dolls than those not paid at all although this difference did not reach conventional levels of statistical significance (MD -0.80 CI -1.44 to -0.16).

Authors’ conclusions

Monetary rewards have been the topic for sporadic evaluative research for decades and this review shows that randomised studies are possible. We suggest a design for a future informative trial.”


“Thirty-two studies include early warning signs recognition as part of other psychological interventions. Six studies had recognition of early warning signs as a primary focus (Garety 2008; Herz 2000; Liberman 1998; Shon 2002; Tait 2002; Van Meijel 2006). In all studies early warning signs interventions provided education to the patient about the nature of schizophrenia as well as early warning sign recognition and management in addition to treatment as usual. Twenty-three studies had the control group with only treatment as usual, three studies had a control group including treatment as usual and another psychological therapy, in four studies the control groups included treatment as usual and occupational therapy (Anzai 2002; Chan 2007; Kopelowicz 1998a; Liberman 1998), three also included social and recreational activities (Drury 1996; Norman 2002; Vreeland 2006), and in one study, the control group received social skills training (Horan 2009). Six studies delivered the intervention to individuals, 16 delivered it in groups, five to both groups and individually, and in the remaining studies it was either unclear or not reported. In 20 studies the early warning signs training was delivered to the patients only. In 11 studies the families or carers of the participants were included in the early warning signs programme, and in one study family involvement was optional (Shin 2002). In two of these studies, treatment as usual also included family support services (Bradley 2006; Chien 2004). Gumley 2003 and Garety 2008 used cognitive behavioural therapy (CBT) as part of the early warning signs intervention and in Buchkremer 1997, one of the early warning signs interventions was cognitive psychotherapy. In three studies the intervention was delivered to the carer/health professional only. In Li 2003, a cluster-RCT, although the study included interventions for both the patients and their families, only families received early warning signs training. In Garety 2008, there were two treatment pathways: one for patients who had a carer and one for patients without carers. In the no-carer pathway patients were randomised to CBT with early warning signs training or treatment as usual. In the carer pathway, patients were randomised to CBT with early warning signs training, treatment as usual or family intervention in which only the family members received early warning signs training. Harris 2009 was a cluster-RCT in which community health professionals were trained in an experimental medication management training programme that included early warning signs work and relapse prevention.”

“Main results

Thirty-two RCTs and two cluster-RCTs that randomised 3554 people satisfied criteria for inclusion. Only one study examined the effects of early warning signs interventions without additional psychological interventions, and many of the outcomes for this review were not reported or poorly-reported. Significantly fewer people relapsed with early warning signs interventions than with usual care (23% versus 43%; RR 0.53, 95% CI 0.36 to 0.79; 15 RCTs, 1502 participants; very low quality evidence). Time to relapse did not significantly differ between intervention groups (6 RCTs, 550 participants; very low quality evidence). Risk of re-hospitalisation was significantly lower with early warning signs interventions compared to usual care (19% versus 39%; RR 0.48, 95% CI 0.35 to 0.66; 15 RCTs, 1457 participants; very low quality evidence). Time to re-hospitalisation did not significantly differ between intervention groups (6 RCTs; 1149 participants; very low quality evidence). Participants’ satisfaction with care and economic costs were inconclusive because of a lack of evidence.

Authors’ conclusions

This review indicates that early warning signs interventions may have a positive effect on the proportions of people re-hospitalised and on rates of relapse, but not on time to recurrence. However, the overall quality of the evidence was very low, indicating that we do not know if early warning signs interventions will have similar effects outside trials and that it is very likely that further research will alter these estimates. Moreover, the early warning signs interventions were used alongside other psychological interventions, and we do not know if they would be effective on their own. They may be cost-effective due to reduced hospitalisation and relapse rates, but before mental health services consider routinely providing psychological interventions involving the early recognition and prompt management of early warning signs to adults with schizophrenia, further research is required to provide evidence of high or moderate quality regarding the efficacy of early warning signs interventions added to usual care without additional psychological interventions, or to clarify the kinds of additional psychological interventions that might aid its efficacy. Future RCTs should be adequately-powered, and designed to minimise the risk of bias and be transparently reported. They should also systematically evaluate resource costs and resource use, alongside efficacy outcomes and other outcomes that are important to people with serious mental illness and their carers.”


“We included eight studies that compared music therapy added to standard care with standard care alone (Ceccato 2009; He 2005; Li 2007; Talwar 2006; Tang 1994; Ulrich 2007;Wen 2005; Yang 1998).

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The duration of studies varied from one to four months. Five studies examined the short-term effects of music therapy over about one to one-and-a-half months (He 2005; Li 2007; Tang 1994; Ulrich 2007; Wen 2005). The three other trials investigated medium-term effects over three to four months (Ceccato 2009; Talwar 2006; Yang 1998). No later follow-up assessments over a longer term were included in any of the studies.

All studies included adults with schizophrenia or related psychoses. The included studies differed somewhat with respect to diagnostic heterogeneity. Two studies included people with schizophrenia as well as people with related psychoses (Talwar 2006; Ulrich 2007). The other six trials were more restrictive, allowing only schizophrenia (Ceccato 2009; Li 2007; Wen 2005) or only a certain subtype of schizophrenia (chronic, Yang 1998; residual, Tang 1994; type II, He 2005). People with acute positive symptoms were also excluded by Ulrich 2007. Diagnosis was based on three different psychiatric classification systems primarily used in the Western world (International Classification of Diseases (ICD), Diagnostic and Statistical Manual of Mental Disorders (DSM)) and China (Chinese Classification of Mental Disorders (CCMD)). The CCMD is similar in categorisation and structure to the ICD and DSM in terms of most diagnostic items, though acknowledging cultural related differences (Lee 2001). ICD-10 was used in Ceccato 2009 and Talwar 2006, and Ulrich 2007 and Tang 1994 referred to the DSM-III-R. The CCMD-2 was used in Yang 1998 and the current third version of the CCMD was used as classification system in He 2005, Li 2007, and Wen 2005. History of disorder was reported in only two studies (He 2005: around nine years; Yang 1998: range two to 26 years).

Most studies concerned inpatients (He 2005; Li 2007; Talwar 2006; Tang 1994; Ulrich 2007; Wen 2005). Ceccato 2009, however, included both in- and outpatients.
There were six studies with a sample size between 60 and 81 (Ceccato 2009; He 2005; Li 2007; Talwar 2006; Tang 1994; Yang 1998) and two smaller trials (Ulrich 2007, n = 37; Wen 2005, n = 30).

All studies compared music therapy added to standard care with standard care alone. The setting of music therapy varied from individual (Talwar 2006) to large group therapy (Ceccato 2009; He 2005; Li 2007; Tang 1994; Ulrich 2007; Wen 2005). Yang 1998 used a combination of group and individual settings. Music therapy varied according to the use of active and receptive methods, level of structure, focus of discussions and verbal reflection. In four studies the content of music therapy included receptive working modalities (listening to music) (Ceccato 2009; He 2005; Li 2007; Wen 2005). Two trials included exclusively active music making (improvisation, singing) (Talwar 2006; Ulrich 2007), and the last two made use of both active and receptive ingredients (Tang 1994; Yang 1998). For all trials, except for Ceccato 2009, the musical experiences were accompanied by a discussion or verbal reflection of therapy contents. Musical improvisation seemed most central in Talwar 2006 and somewhat less so in Ulrich 2007 and Yang 1998 (Table 1). Listening to music seemed to be most predominant in He 2005, Li 2007, Tang 1994, Wen 2005, and Ceccato 2009, and of somewhat less of importance in Yang 1998. All studies used active music-making, and musical improvisation was explicitly mentioned in all but Tang 1994. Receptive techniques seemed most predominant in Tang 1994, somewhat less so in Yang 1998, and of marginal importance in the two other studies. The focus of discussions and level of structure varied between patients, depending on their ability level (explicitly mentioned in Ulrich 2007). Those two studies using exclusively active music making referred to a process-oriented approach, whereas Ceccato 2009 offered a relatively fixed session structure. For the five remaining studies (He 2005; Li 2007; Tang 1994; Wen 2005; Yang 1998) the level of structure was not explained explicitly, but according to the described working modalities a more structured session process can be assumed. In summary, there was variation in music therapy methods but overall, all were within the accepted range. There was more worrisome variation in music therapy training. The number of sessions per week varied greatly from one (Talwar 2006) to six (Yang 1998). There was less variation in the total duration of therapy (from one to four months). The total number of sessions received was reported explicitly in only two studies (Ulrich 2007, 7.5 sessions, Tang 1994, 19 sessions). Sixteen sessions were offered in Ceccato 2009 and 12 in Talwar 2006. For the other studies, we calculated the maximum possible number of sessions from session frequency and duration: He 2005, Li 2007, and Wen 2005: 30 sessions (five weekly over six weeks), Yang 1998: 78 sessions (six weekly over three months). The actual number of sessions received, however, could have been less: Talwar 2006 reported that only 58% of all participants received more than eight sessions. According to the a priori criteria for this review, four of these studies can be classified as low ‘dosage’ (less than 20 sessions) of music therapy and four studies as high ‘dosage’ (20 or more sessions). Additionally, five of these studies can be classified as short-term music therapy (up to 12 weeks) (He 2005; Li 2007; Ulrich 2007; Tang 1994; Wen 2005) and three studies as medium term music therapy (13 to 26 weeks) (Ceccato 2009; Talwar 2006; Yang 1998).”

“Main results

We included eight studies (total 483 participants). These examined effects of music therapy over the short- to medium-term (one to four months), with treatment ‘dosage’ varying from seven to 78 sessions. Music therapy added to standard care was superior to standard care for global state (medium-term, 1 RCT, n = 72, RR 0.10 95% CI 0.03 to 0.31, NNT 2 95% CI 1.2 to 2.2). Continuous data identified good effects on negative symptoms (4 RCTs, n = 240, SMD average endpoint Scale for the Assessment of Negative Symptoms (SANS) -0.74 95% CI -1.00 to -0.47); general mental state (1 RCT, n = 69, SMD average endpoint Positive and Negative Symptoms Scale (PANSS) -0.36 95% CI -0.85 to 0.12; 2 RCTs, n = 100, SMD average endpoint Brief Psychiatric Rating Scale (BPRS) -0.73 95% CI -1.16 to -0.31); depression (2 RCTs, n = 90, SMD average endpoint Self-Rating Depression Scale (SDS) -0.63 95% CI -1.06 to -0.21; 1 RCT, n = 30, SMD average endpoint Hamilton Depression Scale (Ham-D) -0.52 95% CI -1.45 to 0.38).
95% CI -1.25 to -0.21); and anxiety (1 RCT, n = 60, SMD average endpoint SAS -0.61 95% CI -1.13 to -0.09). Positive effects were also found for social functioning (1 RCT, n = 70, SMD average endpoint Social Disability Schedule for Inpatients (SDSI) score -0.78 95% CI -1.27 to -0.28). Furthermore, some aspects of cognitive functioning and behaviour seem to develop positively through music therapy. Effects, however, were inconsistent across studies and depended on the number of music therapy sessions as well as the quality of the music therapy provided.

Authors' conclusions

Music therapy as an addition to standard care helps people with schizophrenia to improve their global state, mental state (including negative symptoms) and social functioning if a sufficient number of music therapy sessions are provided by qualified music therapists. Further research should especially address the long-term effects of music therapy, dose-response relationships, as well as the relevance of outcomes measures in relation to music therapy.”


“Main results

The update search September 2014 found no further new studies for inclusion, the number of studies included in this review remains eight with a total of 1144 participants. Our main outcomes of interest are hospital use, global state, mental state, quality of life, participant satisfaction and family burden. With the exception of mental state, it was not possible to pool data for these outcomes. Crisis intervention may reduce repeat admissions to hospital (excluding index admissions) at six months (1 RCT, n = 369, RR 0.75 CI 0.50 to 1.13, high quality evidence), but does appear to reduce family burden (at six months: 1 RCT, n = 120, RR 0.34 CI 0.20 to 0.59, low quality evidence), improve mental state (Brief Psychiatric Rating Scale (BPRS) three months: 2 RCTs, n = 248, MD -4.03 CI -8.18 to 0.12, low quality evidence), and improve global state (Global Assessment Scale (GAS) 20 months; 1 RCT, n = 142, MD 5.70, -0.26 to 11.66, moderate quality evidence). Participants in the crisis-intervention group were more satisfied with their care 20 months after crisis (Client Satisfaction Questionnaire (CSQ-8): 1 RCT, n = 137, MD 5.40 CI 3.91 to 6.89, moderate quality evidence). However, quality of life scores at six months were similar between treatment groups (Manchester Short Assessment of quality of life (Mansa); 1 RCT, n = 226, MD -1.50 CI -5.15 to 2.15, low quality evidence). Favourable results for crisis intervention were also found for leaving the study early and family satisfaction. No differences in death rates were found. Some studies suggested crisis intervention to be more cost-effective than hospital care but all numerical data were either skewed or unusable. We identified no data on staff satisfaction, carer input, complications with medication or number of relapses.

Authors' conclusions

Care based on crisis-intervention principles, with or without an ongoing homecare package, appears to be a viable and acceptable way of treating people with serious mental illnesses. However only eight small studies with unclear blinding, reporting and attrition bias could be included and evidence for the main outcomes of interest is low to moderate quality. If this approach is to be widely implemented it would seem that more evaluative studies are still needed.”

“After the 2010 update the total number of included studies has increased to eight. These eight studies70 randomised a total of 1144 people (Fenton 1979; Fenton 1998; Hoult 1983; Howard 2010; Johnson 2005; Muijen 1992; Pasamanick 1964a; Stein 1975).”

70 Fenton 1979 (published data only)
* Fenton 1998 (published data only)

Hoult 1983 (published data only)

Howard 2010 (published data only)

Johnson 2005 (published data only)

Muijen 1992 (published data only)

Pasamanick 1964a (published data only)

Stein 1975 (published data only)
“Participants

The eight included studies all focused on severely mentally ill adults who were in crisis and required or were in need of immediate hospitalisation. The majority of participants were psychotic (most suffering from schizophrenia), but there was a substantial representation of other diagnoses such as depression and severe neuroses. Three studies stated how they had used diagnostic criteria for diagnosis (Fenton 1979; Hoult 1983; Muijen 1992). All included people aged 18 years and above of both sexes (except Howard 2010 who included women only).

Setting

Due to the inclusion criteria, all included studies needed to take place in hospital and the community. The trials were based in Australia (Hoult 1983), Canada (Fenton 1979; Fenton 1998), the USA (Pasamanick 1964a, Stein 1975) and the UK (Howard 2010, Johnson 2005 and Muijen 1992).

Size

Trial size ranged from 41 participants (Howard 2010) to 260 participants (Johnson 2005).

Crisis Intervention

Johnson 2005 investigated care provided by crisis resolution home teams versus standard care. Five other trials (Fenton 1979; Hoult 1983; Muijen 1992; Pasamanick 1964a; Stein 1975) had home-based treatments similar to each other where crisis intervention was included as part of a package. Two studies investigated crisis houses providing residential home-like care. For all studies, a multidisciplinary team, usually comprising psychiatrists, psychologists, nurses, occupational therapists and social workers, delivered care. To be included in this review, the teams had to treat crises occurring in and out of office hours. All included studies provided emergency care although the type of cover varied. Six had members of staff on call ready to visit 24 hours a day if needed (Fenton 1979; Fenton 1998; Hoult 1983; Howard 2010; Johnson 2005; Stein 1975). Muijen 1992 provided a telephone answering service only, but if people wanted further help they could use the walk-in emergency clinic at the local hospital. Pasamanick 1964a initially provided a telephone service with home visits but then switching to an answer-machine instructing callers to call back during office hours. If it was truly an emergency they could contact the local police station.

Standard care

Standard care for all the included studies involved hospitalisation if required. The majority of standard care patients were hospitalized immediately after allocation. Once hospitalised, people received the standard level of care for that hospital. This tended to be short and intense care with the overall aim being early discharge. As well as medication, various forms of treatment programmes such as counselling, physiotherapy and occupational therapy were available on site. Social workers were also available. After discharge all trials used their normal outpatient services.”

“Main Results

Three new studies have been found since the last review in 2006 to add to the five studies already included in this review. None of the previously included studies investigated crisis intervention alone;
all used a form of home care for acutely ill people, which included elements of crisis intervention. However, one of the new studies focuses purely on crisis intervention as provided by Crisis Resolution Home Teams within the UK; the two other new studies investigated crisis houses i.e. residential alternatives to hospitalisation providing home-like environments. Crisis intervention appears to reduce repeat admissions to hospital after the initial 'index' crises investigated in the included studies, this was particularly so for mobile crisis teams supporting patients in their own homes. Crisis intervention reduces the number of people leaving the study early, reduces family burden, is a more satisfactory form of care for both patients and families and at three months after crisis, mental state is superior to standard care. We found no differences in death outcomes. Some studies found crisis interventions to be more cost effective than hospital care but all numerical data were either skewed or unusable. No data on staff satisfaction, carer input, complications with medication or number of relapses were available.

Authors' conclusions

Care based on crisis intervention principles, with or without an ongoing home care package, appears to be a viable and acceptable way of treating people with serious mental illnesses. If this approach is to be widely implemented it would seem that more evaluative studies are still needed.”


“Objectives

To review the effects of brief CBTp (6 to 10 regular sessions given in less than 4 months and using a manual) for people with schizophrenia compared with standard CBTp (12 to 20 regular sessions given in 4 to 6 months and using a manual).

(...)

Main results

We found only seven studies which used a brief version of CBTp, but no study compared brief CBTp with CBTp of standard duration. No studies could be included.

Authors' conclusions

Currently there is no literature available to compare brief with standard CBTp for people with schizophrenia. We cannot, therefore, conclude whether brief CBTp is as effective, less effective or even more effective than standard courses of the same therapy. This lack of evidence for brief CBTp has serious implications for research and practice. Well planned, conducted and reported randomised trials are indicated.”


“Main results:

Four studies randomising 163 people could be included in the review. It is not clear if brief family intervention reduces the utilisation of health services by patients, as most results are equivocal at long term and only one study reported data for the primary outcomes of interest of hospital
admission (n = 30, 1 RCT, RR 0.50, 95% CI 0.22 to 1.11, very low quality evidence). Data for relapse are also equivocal by medium term (n = 40, 1 RCT, RR 0.50, 95% CI 0.10 to 2.43, low quality evidence). However, data for the family outcome of understanding of family member significantly favoured brief family intervention (n = 70, 1 RCT, MD 14.90, 95% CI 7.20 to 22.60, very low quality evidence). No study reported data for other outcomes of interest including days in hospital; adverse events; medication compliance; quality of life or satisfaction with care; or any economic outcomes.

Authors' conclusions:

The findings of this review are not outstanding due to the size and quality of studies providing data; the analysed outcomes were also minimal, with no meta-analysis possible. All outcomes in the 'Summary of findings' table were rated low or very low quality evidence. However, the importance of brief family intervention should not be dismissed outright, with the present state of demand and resources available. The designs of such brief interventions could be modified to be more effective with larger studies, which may then have enough power to inform clinical practice.”


“Main results

We did not identify any studies that met our inclusion criteria.

Authors' conclusions

Dietary advice has been shown to improve the dietary intake of the general population. Research is needed to determine whether dietary advice can have a similar benefit in people with serious mental illness.”


“Setting

Studies were conducted in Australia (two trials), Canada (one trial), Europe (12 trials), the People’s Republic of China (28 trials) and the USA (10 trials).

Participants

Participants in all the included trials (except Szmukler 2003 and Leavey 2004) were diagnosed as having schizophrenia or schizoaffective disorder. Most studies used structured clinical assessments to determine the diagnosis (DSM 20 studies, CCMD 15 studies, ICD-10 seven studies, RDC two studies, New Haven Index one study, and PSE six studies). Szmukler 2003 included more than 80% with a diagnosis of schizophrenia-like illnesses, whilst the remainder suffered from bipolar affective disorder, or psychotic depression. Leavey 2004 included people described as having a psychotic illness. Overall, the age of participants ranged from 16 to 80 years. Of those studies which reported the sex of the participants, most included both men and women, although Glynn 1992, Liu 2007, Zhang 1994, and Zhang 2006a included only male patients. Patients had varied histories. Most studies involved families whose relatives had had multiple admissions, although three trials did involve substantial proportions of people with first episodes of illness (Goldstein 1978; Linszen 1996; Zhang 1994).

Interventions
Intervention group: All participants received family interventions and some had an educational component. Thirteen trials included family therapy in the presence of patients (Barrowclough 2001; De Giacomo 1997; Dyck 2002; Falloon 1981; Glynn 1992; Goldstein 1978; Herz 2000; Leff 1982; Leff 2001; Linszen 1996; Mak 1997; Xiong 1994; Zhang 1994) whilst eight restricted the groups to relatives (Bloch 1995; Buchkremer 1995; Chien 2004; Hogarty 1997; Leav ey 2004; Posner 1992; Tarrier 1988; Vaughan 1992). Szmukler 2003 conducted family sessions mostly without the patient being present. Overall, the main aim of the family-based interventions, when reported, was to improve family atmosphere and reduce relapse of schizophrenia. In addition to ‘standard’ family intervention (i.e. schizophrenia education and behavioural modification), the family intervention groups used other non-pharmacological approaches as part of their strategy. Barrowclough 2001 used motivational interviewing and cognitive behavioural intervention. Falloon 1981 provided 24-hour support for the family therapy group. Goldstein 1978 utilised a ‘crisis-orientated’ family intervention as part of the family intervention and Hogarty 1997 incorporated relaxation training for the intervention group and educated the ‘family’ on stressors for schizophrenia and prodromal symptoms. Role-play was used by Tarrier 1988 as a means of educating family members on how to manage schizophrenia, whereas Vaughan 1992 incorporated homework exercises for the family members.

Comparison group: The control groups were all given standard care or usual level of care that involved pharmacological interventions. Bloch 1995 provided the control group with a single session discussion about the study, and also gave participants educational material describing schizophrenia. Leff 2001 gave two sessions of education about schizophrenia to the control group. Szmukler 2003 provided a single one-hour session for the control group in which the study was described and the carers discussed their problems; carers were also provided with the same written and video information as the intervention group. Further measures were employed by Falloon 1981 who used supportive psychotherapy for the control arm of the study. Linszen 1996 and Merinder 1999 provided psychosocial support in an individualised context without family involvement.

“Main results:

This 2009-10 update adds 21 additional studies, with a total of 53 randomised controlled trials included. Family intervention may decrease the frequency of relapse (n = 2981, 32 RCTs, RR 0.55 CI 0.5 to 0.6, NNT 7 CI 6 to 8), although some small but negative studies might not have been identified by the search. Family intervention may also reduce hospital admission (n = 481, 8 RCTs, RR 0.78 CI 0.6 to 1.0, NNT 8 CI 6 to 13) and encourage compliance with medication (n = 695, 10 RCTs, RR 0.60 CI 0.5 to 0.7, NNT 6 CI 5 to 9) but it does not obviously affect the tendency of individuals/families to leave care (n = 733, 10 RCTs, RR 0.74 CI 0.5 to 1.0). Family intervention also seems to improve general social impairment and the levels of expressed emotion within the family. We did not find data to suggest that family intervention either prevents or promotes suicide.

Authors' conclusions:

Family intervention may reduce the number of relapse events and hospitalisations and would therefore be of interest to people with schizophrenia, clinicians and policy makers. However, the treatment effects of these trials may be overestimated due to the poor methodological quality. Further data from trials that describe the methods of randomisation, test the blindness of the study evaluators, and implement the CONSORT guidelines would enable greater confidence in these findings.”

“Main results

Only one small trial of the seven included studies truly evaluated TCM for schizophrenia. The other trials evaluated Chinese herbs for schizophrenia. We found one study comparing Chinese herbal medicine with antipsychotic drugs. Data for the global state outcome 'no change/worse' favoured people allocated to antipsychotic medication (n=90, RR 1.88 CI 1.2 to 2.9, NNH 4 CI 2 to 12). Six trials compared Chinese herbal medicine in combination with antipsychotic with antipsychotic drugs alone. One trial found global state 'not improved/worse' favoured the herbal medicine/antipsychotic combination (n=123, RR 0.19 CI 0.1 to 0.6, NNT 6 CI 5 to 11). Two studies (n=103) also found short-term data from the Clinical Global Impression scale favoured the herbal medicine plus antipsychotic group (WMD -0.46 CI -0.9 to -0.1) compared with those given only antipsychotics. Significantly fewer people in the experimental group left the study early compared with those given antipsychotics alone (n=1004, 6 RCTs, RR 0.30 CI 0.16 to 0.58, NNT 21 CI 18 to 35). Reports of constipation were significantly lower in the treatment group compared to those receiving antipsychotics (n=67, 1 RCT, RR 0.03 CI 0.0 to 0.5, NNH 2 CI 2 to 4).

Authors' conclusions

Chinese herbal medicines, given in a Western biomedical context, may be beneficial for people with schizophrenia when combined with antipsychotics. Traditional Chinese medicine is also under-evaluated, but results from one pioneering study that attempted to evaluate TCM should encourage further trials.”


“We found 1318 references (586 studies). Despite extensive searches we only found four trials71 (total n=789) that could be included. Not one of these studies exclusively reports on the effects of prompts for people with serious mental illnesses.

Included studies

Only four trials could be included (Burgoyne 1983, Kluger 1983, Swenson 1988, Kitcheman 2008) with a total of 690 participants. While the intent of this review is to look at encouraging attendance at clinic appointments in general, all four included studies looked at attendance at first appointment.

Participants

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No trial met the original inclusion criteria of focusing only on “anyone having been diagnosed with, or suspected of, a serious mental illness such as schizophrenia or schizophrenia-like illnesses, diagnosed by any criteria. The inclusion of studies where all participants were due to attend their first appointments at community mental health centres and general adult clinics allows some speculation on how prompting may affect attendance of seriously mentally ill people. Certainly, a high proportion of those attending such centres should suffer from undiagnosed serious mental illnesses. While this may result in a more heterogeneous study population, it is more likely to accurately reflect the effects of prompts in the first attender population. The demographic background of the participants in Burgoyne 1983 and Swenson 1988 was not described but people entering the Kluger 1983 study were, on average, in their thirties, over 70% male and over 60% from African-American or Hispanic background. The Burgoyne 1983 and Kluger 1983 studies were both set in urban North American cities. Swenson 1988, on the other hand was run from a Community Mental Health Centre that served a small urban and rural population in the Midwest of the USA. Kitcheman 2008 looked at people attending the outpatient clinic for the first time, in seven study clinics for different psychiatric sub-specialities, in an urban population in the north of England. Some of these sub-specialities would have a low rate of serious mental illness such as schizophrenia or schizophrenia-like illnesses. Analysis of data from this study was therefore limited to the general adult clinic sample as it was felt this group would have the higher rate of serious mental illness. (…)

Interventions

Burgoyne 1983 compared telephone prompt (48 hours before clinic) with a control (no telephone call). Kluger 1983 also compared a telephone prompt, this time 24 hours before clinic, with a control. This study had two additional groups. One received an orientation statement and the other an orientation statement and a telephone call. The orientation statement was a short paragraph, taking about 30 seconds to read, explaining the programme of care, the fee system, and providing gentle encouragement. Swenson 1988 compared a very similar statement delivered either 72 or 24 hours before appointment, with a standard letter prompt, again 72 or 24 hours before the clinic appointment was due. The control group in Swenson 1988 was issued the standard appointment card. Kitcheman 2008 compared an individualised pro-forma letter in the form of an ‘orientation statement’ (on headed paper explaining the time of the appointment, name of the doctor, description of the clinic and its routine, a map and a request to bring a list of medication and a friend or family member) sent 72 hours before the appointment plus standard care (of either an appointment card within 13 weeks of the appointment or an opt-in partial booking system) with standard care alone.”

“Main results

Only three relevant trials were identified (total n=597). It is not clear whether there is any real difference between attendance of those prompted by telephone one or two days before the appointment, and those given the standard appointment management system (2 trials, n=457, RR missed appointment 0.84 CI 0.7 to 1.1). Text-based prompts, a few days before the appointment day, did increase clinic attendance when compared with no prompt (2 trials, n=200, RR missed appointment 0.6 CI 0.4 to 0.9, NNT 6 CI 2 to 14). Only one small study (n=61) reported data on the combination of telephone and text-based prompts versus no prompt (RR missed appointments 0.7 CI 0.4 to 1.2). When telephone prompts were compared with text-based prompts (1 trial, n=75), the latter, in the form of an ‘orientation statement’ (a short paragraph, taking about 30 seconds to read, explaining the programme of care, the fee system, and providing gentle encouragement) may be somewhat more effective than the telephone prompt (RR missed appointments 1.9 CI 0.98 to 3.8). One last study (n=120) compared a standard letter prompt with a letter ‘orientation statement’. Overall, results tended to favour the orientation statement approach rather than the simple letter prompting attendance but the results did not reach conventional levels of statistical significance (RR missed appointments 1.6 CI 0.9 to 2.9).
Reviewer's conclusions

There is evidence that a simple prompt to attend clinic, very close to the time of the appointment may encourage attendance, and a simple orientation-type letter, 24 hours before the clinic appointment, may be more effective than a telephone prompt. This simple intervention could be a more cost effective means of encouraging compliance at first attendance, but supplementing these data with the results of large, well designed, conducted and reported randomised studies would be desirable. 


“Defining collaborative care

There is no universally agreed definition of collaborative care, so as a prelude to the main review, we examined the definitions that have been cited in six systematic literature reviews of collaborative care for mental health conditions. (...) The reviews were conducted within the last eight years and include a total of 60 studies. In all of the reviews, collaborative care is described as an intervention that aims to foster closer working relationships between primary care and specialist health care. There are different ways in which this can be achieved, making collaborative care a ‘complex intervention’ i.e. it includes several components, which may act independently and interdependently and within pre-existing systems for providing health care. As such, the ‘active ingredient’ of the intervention can be difficult to identify (Campbell 2000).”

“The collaborative care intervention was delivered to patients in the mental health outpatient clinics of 11 participating VAMCs. The collaborative care intervention is described as ‘team-based’ and required a designated psychiatrist (0.25 full time equivalent) and nurse care co-ordinator (NCC) (0.5 full time equivalent) for a caseload of 45 to 50 patients. The NCC facilitated information flow to the psychiatrist by feeding back the results of patient assessments, sending reminders to monitor patients in accordance with the treatment algorithm and liaising with other mental health, medical and surgical providers. The NCC delivered group psychoeducation- The Life Goals Psycho-education Program- to patients and provided three types of follow-up: ‘backbone scheduled care’, ‘demand responsive services’ and pro-active ‘outreach and in-reach contacts’. A one page algorithm contained a summary of the information published in the VA Clinical Practice Guidelines for Bipolar Disorder on prescribing of pharmacotherapy (Bauer 1999) and was accompanied by a six page manual. A two-day clinical training programme was delivered to collaborative care providers at the beginning of the study. Conference calls and newsletters were used to provide updates on treatment guidelines, to discuss difficult patients and to review access and continuity issues. The treatment algorithm and The Life Goals Program aimed to encourage patients to develop collaborative action plans with healthcare providers.”

“Main results

We included one RCT (306 participants; US veterans with bipolar disorder I or II) in this review. We did not find any trials meeting our inclusion criteria that included people with schizophrenia. The trial provided data for one comparison: collaborative care versus standard care. All results are ‘low or very low quality evidence’. Data indicated that collaborative care reduced psychiatric admissions at year two in comparison to standard care (n = 306, 1 RCT, RR 0.75, 95% CI 0.57 to 0.99). The sensitivity analysis showed that the proportion of participants psychiatrically hospitalised was lower in the intervention group than the standard care group in year three: 28% compared to 38% (n = 330, 1 RCT, RR 0.72, 95% CI 0.53 to 0.99). In comparison to the standard care group, collaborative care significantly improved the Mental Health Component (MHC) of quality of life at the three-year
follow-up, (n = 306, 1 RCT, MD 3.50, 95% CI 1.80 to 5.20). The Physical Health Component (PHC) of the quality of life measure at the three-year follow-up did not differ significantly between groups (n = 306, 1 RCT, MD 0.50, 95% CI 0.91 to 1.91). Direct intervention (all-treatment) costs of collaborative care at the three-year follow-up did not differ significantly from standard care (n = 306, 1 RCT, MD -2981.00, 95% CI $16934.93 to $10972.93). The proportion of participants leaving the study early did not differ significantly between groups (n = 306, 1 RCT, RR 1.71, 95% CI 0.77 to 3.79). There is no trial-based information regarding the effect of collaborative care for people with schizophrenia. No statistically significant differences were found between groups for number of deaths by suicide at three years (n = 330, 1 RCT, RR 0.34, 95% CI 0.01 to 8.32), or the number of participants that died from all other causes at three years (n = 330, 1 RCT, RR 1.54, 95% CI 0.65 to 3.66).

Authors’ conclusions
The review did not identify any studies relevant to care of people with schizophrenia and hence there is no evidence available to determine if collaborative care is effective for people suffering from schizophrenia or schizophreniform disorders. There was however one trial at high risk of bias that suggests that collaborative care for US veterans with bipolar disorder may reduce psychiatric admissions at two years and improves quality of life (mental health component) at three years, however, on its own it is not sufficient for us to make any recommendations regarding its effectiveness. More large, well designed, conducted and reported trials are required before any clinical or policy making decisions can be made.”


“Main results
We included one single blind study (total n = 45) of reasonable quality. It compared dance therapy plus routine care with routine care alone. Most people tolerated the treatment package but nearly 40% were lost in both groups by four months (1 RCT n = 45, RR 0.68 95% CI 0.31 to 1.51, low quality evidence). The Positive and Negative Syndrome Scale (PANSS) average endpoint total scores were similar in both groups (1 RCT n = 43, MD -0.50 95% CI -11.80 to 10.80, moderate quality evidence) as were the positive sub-scores (1 RCT n = 43, MD 2.50 CI -0.67 to 5.67, moderate quality evidence). At the end of treatment, significantly more people in the dance therapy group had a greater than 20% reduction in PANSS negative symptom score (1 RCT n = 45, RR 0.62 CI 0.39 to 0.97, moderate quality evidence), and overall, average negative endpoint scores were lower (1 RCT n = 43, MD -4.40 CI -8.15 to -0.65, moderate quality evidence). There was no difference in satisfaction score (average Client’s Assessment of Treatment Scale (CAT) score, 1 RCT n = 42, MD 0.40 CI -0.78 to 1.58, moderate quality evidence) and quality of life data were also equivocal (average Manchester Short Assessment of Quality of life (MANSA) score, 1 RCT n = 39, MD 0.00 CI -0.48 to 0.48, moderate quality evidence).

Authors’ conclusions
Based on predominantly moderate quality data, there is no evidence to support - or refute - the use of dance therapy in this group of people. This therapy remains unproven and those with schizophrenia, their carers, trialists and funders of research may wish to encourage future work to increase high quality evidence in this area.”


“Main results
The search identified 183 references but only five studies (total n=210) met the inclusion criteria. All of the studies were on inpatient populations and compared the intervention with standard inpatient care. One study had drama therapy as the intervention, one had role-playing, one had a social drama group and two used psychodrama. Two of the included studies were Chinese and it is difficult to know whether psychodrama and indeed inpatient psychiatric care in China is comparable with the drama interventions and inpatient care in the other included studies. There were no significant findings about the value of drama interventions for keeping inpatients engaged in treatment. Due to poor reporting very little data from the five studies could be used and there were no conclusive findings about the harms or benefits of drama therapy for inpatients with schizophrenia.

Authors' conclusions

Randomised studies are possible in this field. The use of drama therapy for schizophrenia and schizophrenia-like illnesses should continue to be under evaluation as its benefits, or harms, are unclear.”


“Main results

The search identified 61 reports but only two studies (total n=137) met the inclusion criteria. Both compared art therapy plus standard care with standard care alone. More people completed the therapy if allocated to the art therapy group compared with standard care in the short (n=90, 1 RCT, RR 0.97 CI 0.41 to 2.29), medium (n=47, 1 RCT, RR 0.34 CI 0.15 to 0.80) and long term (n=47, 1 RCT, RR 0.96 CI 0.57 to 1.60). Data from one mental state measure (SANS) showed a small but significant difference favouring the art-therapy group (n=73, 1 RCT, WMD -2.3 CI -4.10 to -0.5). In the short term, a measure of social functioning (SFS) showed no clear difference between groups in endpoint scores (n=70, 1 RCT, WMD 7.20 CI -2.53 to 16.93) and quality of life, as measured by the PerQoL, did not indicate effects of art therapy (n=74, 1 RCT, WMD 0.1 CI -2.7 to 0.47).

Authors' conclusions:

Randomised studies are possible in this field. Further evaluation of the use of art therapy for serious mental illnesses is needed as its benefits or harms remain unclear.”


“Background

Antipsychotic medication is considered the mainstay of treatment for schizophrenia and is generally regarded as highly effective, especially in controlling positive symptoms. However, long-term antipsychotic exposure has been associated with a range of adverse effects, including extra-pyramidal symptoms (EPS), neuroleptic malignant syndrome (NMS), tardive dyskinesia and death. Intermittent drug techniques refers to the 'use of medication only during periods of incipient relapse or symptom exacerbation rather than continuously'. The aim is to reduce the risk of typical adverse effects of antipsychotics by 'reducing long-term medication exposure for patients who are receiving maintenance treatment while limiting the risk of relapse', with a further goal of improving social functioning resulting from the reduction of antipsychotic-induced side effects.
Objectives

To review the effects of different intermittent drug techniques compared with maintenance treatment in people with schizophrenia or related disorders.

(...)

Main results

Of 241 records retrieved by the search, 17 trials conducted between 1961 and 2011, involving 2252 participants with follow-up from six weeks to two years, were included. Homogenous data demonstrated that instances of relapse were significantly higher in people receiving any intermittent drug treatment in the long term (n = 436, 7 RCTs, RR 2.46, 95% CI 1.70 to 3.54, moderate quality evidence). Intermittent treatment was shown to be more effective than placebo, however, and demonstrated that significantly less people receiving intermittent antipsychotics experienced full relapse by medium term (n = 290, 2 RCTs, RR 0.37, 95% CI 0.24 to 0.58, very low quality evidence). Hospitalisation rates were higher for people receiving any intermittent drug treatment by long term (n = 626, 5 RCTs, RR 1.65, 95% CI 1.33 to 2.06, moderate quality evidence). Results demonstrated little difference in instances of tardive dyskinesia in groups with any intermittent drug technique versus maintenance therapy, with equivocal results (displaying slight heterogeneity) at long term (n = 165, 4 RCTs, RR 1.15, 95% CI 0.58 to 2.30, low quality evidence).

Authors’ conclusions

Results of this review support the existing evidence that intermittent antipsychotic treatment is not as effective as continuous, maintained antipsychotic therapy in preventing relapse in people with schizophrenia. More research is needed to assess any potential benefits or harm of intermittent treatment regarding adverse effects typically associated with maintained antipsychotic treatment, as well as any cost-effectiveness of this experimental treatment.”


“The original review, Marshall 2001, included eight trials. However, four of these did not meet the entry criteria for the present review (Bateman 1999, Dick 1985, Piper 1993, Tyrer 1979). Although all studies were randomised controlled trials, only four had data specifically about people with schizophrenia (Glick 1986, Linn 1979, Meltzoff 1966, Weldon 1979). Additional references from the search results have not contributed to the included studies. Thus the present review includes four studies.”

“Participants: Linn 1979 recruited people with schizophrenia who had just been discharged from inpatient care. This trial was conducted in Veterans’ Administration hospitals and was restricted to men only. The diagnosis of schizophrenia was confirmed by a psychiatrist using unspecified criteria. Meltzoff 1966 was also a Veterans’ Administration trial. This trial recruited men “with a

72 Glick 1986 (published data only)

Linn 1979 (published data only)

Meltzoff 1966 (published data only)

Weldon 1979 (published data only)
neuropsychiatric disability” who had spent time in hospital, and were not suicidal or violent. Ninety-one per cent had schizophrenia, though it was unclear how this diagnosis was made. Weldon 1979 recruited people with schizophrenia who had recently been discharged from inpatient care and had no history of self-harm, violent behaviour or drug abuse. It was unclear how the diagnosis of schizophrenia was made. In contrast to the other two trials, the majority of participants were women (21 out of 30). Glick 1986 recruited people with schizophrenia or major affective disorders who were referred from the inpatient wards of a large psychiatric hospital. Participants were required to have residual psychotic symptoms and a need for ongoing treatment.”

“Interventions

Day hospital: We think that Linn 1979, Meltzoff 1966 and Weldon 1979 fall into the same broad category of ‘day treatment centres’. In Linn 1979 there were 10 Veterans’ Administration day care centres that aimed to enhance social functioning for the long term by offering a place to socialise and engage in productive activities. The centres employed social workers and physicians and offered: recreational activities, group therapy, counselling, occupational therapy and medication follow up. For Meltzoff 1966 the day care centre offered individual and group psychotherapy and medication. The staff to patient ratio was not reported. In Weldon 1979 the day care centre group received group therapy, medication and structured activities. The staff to patient ratio was 1:2.5. In Glick 1986, however, the day hospital aimed to enhance social functioning in chronic patients by offering a place to socialize and engage in productive activities. The hospital employed social workers and physicians and offered: recreational activities, group therapy, counselling, occupational therapy, and medication follow up. Staff members acted as a case managers, managed one-to-one intervention and coordinated patients care plans. Existing inpatient staff were used to provide daily recreational therapy/ weekly dance therapy. Inpatient medical staff provided ongoing medical management. The “transitional treatment staff ” were also part of inpatient unit staff and were therefore familiar with all patients before their initiation into program. We feel justified in categorising this differently to the other three trials and calling it a ‘transitional day hospital’.

Outpatient care: Control treatments for each study were as follows: Linn 1979 and Glick 1986 provided outpatient drug management from the same physicians as worked in the day care centres, no other aftercare was offered. In Meltzoff 1966 participants received standard outpatient care and in Weldon 1979 participants received psychotherapy oriented outpatient care, but also offered medication.”

“Main results

We identified four relevant trials all dating from before 1986 (total n=309 participants); all but one of which (n=37) evaluated day treatment centres. Across time less people allocated to day hospital care tend to be admitted to hospital (beyond one year: n=242, 2 RCTs, RR 0.71 CI 0.56 to 0.89 day treatment centres) but data are heterogeneous (I(2) =74% P=0.05) and should not be taken into account. Data on time spent as an inpatient seem to support this finding but are poorly reported. We found no clear difference between day hospital and outpatient care for the outcome of ‘lost to follow up’ (at six months: n=147, 3 RCTs, RR 0.97 CI 0.48 to 1.95; at 12 months: n=117, 2 RCTs, RR 0.97 CI 0.48 to 1.95 day treatment centres / transitional day hospital). Scale derived findings on social functioning are equivocal (SAS: n=37, 1 RCT, MD 0.36 CI -0.07 to 0.79 transitional day hospital) but there was some suggestion from small studies that day hospital care may decrease the risk of unemployment (at 12 months: n=80, 1 RCT, RR 0.86 CI 0.69 to 1.06 day treatment centre). Different measures of mental state showed no convincing effect (Symptom Check List: n=30, 1 RCT, MD -90 0.31 CI -0.20 to 0.82 day treatment centre). Poorly reported economic data from decades ago suggested that day hospitals were more costly to establish and run than outpatient care but took no account of other costs such as inpatient stay.
Authors’ conclusions

Evidence is limited and dated. Day hospital care may help avoid inpatient care but data are lacking on missing on a raft of outcomes that are now considered important, such as quality of life, satisfaction, healthy days, and cost.”


“Background

Acupuncture, with many categories such as traditional acupuncture, electroacupuncture, laser acupuncture, and acupoint injection, has been shown to be relatively safe with few adverse effects. It is accessible and inexpensive, at least in China, and is likely to be widely used there for psychotic symptoms.

(...)

Main results

After an update search in 2012 the review now includes 30 studies testing different forms of acupuncture across six different comparisons. All studies were at moderate risk of bias. When acupuncture plus standard antipsychotic treatment was compared with standard antipsychotic treatment alone, people were at less risk of being 'not improved' (n = 244, 3 RCTs, medium-term RR 0.40 CI 0.28 to 0.57, very low quality evidence). Mental state findings were mostly consistent with this finding as was time in hospital (n = 120, 1 RCT, days MD -16.00 CI -19.54 to -12.46, moderate quality evidence). If anything, adverse effects were less for the acupuncture group (e.g. central nervous system, insomnia, short-term, n = 202, 3 RCTs, RR 0.30 CI 0.11 to 0.83, low quality evidence). When acupuncture was added to low dose antipsychotics and this was compared with standard dose antipsychotic drugs, relapse was less in the experimental group (n = 170, 1 RCT, long-term RR 0.57 CI 0.37 to 0.89, very low quality evidence) but there was no difference for the outcome of 'not improved'. Again, mental state findings were mostly consistent with the latter. Incidences of extrapyramidal symptoms - akathisia, were less for those in the acupuncture added to low dose antipsychotics group (n = 180, 1 RCT, short-term RR 0.03 CI 0.00 to 0.49, low quality evidence) - as dry mouth, blurred vision and tachycardia. When acupuncture was compared with antipsychotic drugs of known efficacy in standard doses, there were equivocal data for outcomes such as 'not improved' using different global state criteria. Traditional acupuncture added to TCM drug had benefit over use of TCM drug alone (n = 360, 2 RCTs, RR no clinically important change 0.11 CI 0.02 to 0.59, low quality evidence), but when traditional acupuncture was compared with TCM drug directly there was no significant difference in the short-term. However, we found that participants given electroacupuncture were significantly less likely to experience a worsening in global state (n = 88, 1 RCT, short-term RR 0.52 CI 0.34 to 0.80, low quality evidence). In the one study that compared electric acupuncture convulsive therapy with electroconvulsive therapy there were significantly different rates of spinal fracture between the groups (n = 68, 1 RCT, short-term RR 0.33 CI 0.14 to 0.81, low quality evidence). Attrition in all studies was minimal. No studies reported death, engagement with services, satisfaction with treatment, quality of life, or economic outcomes.

Authors' conclusions

Limited evidence suggests that acupuncture may have some antipsychotic effects as measured on global and mental state with few adverse effects. Better designed large studies are needed to fully and fairly test the effects of acupuncture for people with schizophrenia.”
Tosh G, Clifton AV, Xia J, White MM. Physical health care monitoring for people with serious mental illness. Cochrane Database Syst Rev. 2014 (Tosh, Clifton, Xia, & White, 2014b)

“Main results

No relevant randomised trials which assess the effectiveness of physical health monitoring in people with serious mental illness have been completed. We identified one ongoing study.

Authors' conclusions

There is still no evidence from randomised trials to support or refute current guidance and practice. Guidance and practice are based on expert consensus, clinical experience and good intentions rather than high quality evidence.”


“Background:

There is currently much focus on provision of general physical health advice to people with serious mental illness and there has been increasing pressure for services to take responsibility for providing this.

(...)

Main results

Seven studies are now included in this review. For the comparison of physical healthcare advice versus standard care we identified six studies (total n = 964) of limited quality. For measures of quality of life one trial found no difference (n = 54, 1 RCT, MD Lehman scale 0.20, CI -0.47 to 0.87, very low quality of evidence) but another two did for the Quality of Life Medical Outcomes Scale - mental component (n = 487, 2 RCTs, MD 3.70, CI 1.76 to 5.64). There was no difference between groups for the outcome of death (n = 487, 2 RCTs, RR 0.98, CI 0.27 to 3.56, low quality of evidence). For service use two studies presented favourable results for health advice, uptake of ill-health prevention services was significantly greater in the advice group (n = 363, 1 RCT, MD 36.90, CI 33.07 to 40.73) and service use: one or more primary care visit was significantly higher in the advice group (n = 80, 1 RCT, RR 1.77, CI 1.09 to 2.85). Economic data were equivocal. Attrition was large (> 30%) but similar for both groups (n = 964, 6 RCTs, RR 1.11, CI 0.92 to 1.35). Comparisons of one type of physical healthcare advice with another were grossly underpowered and equivocal.

Authors' conclusions:

General physical health could lead to people with serious mental illness accessing more health services which, in turn, could mean they see longer-term benefits such as reduced mortality or morbidity. On the other hand, it is possible clinicians are expending much effort, time and financial resources on giving ineffective advice. The main results in this review are based on low or very low quality data. There is some limited and poor quality evidence that the provision of general physical healthcare advice can improve health-related quality of life in the mental component but not the physical component, but this evidence is based on data from one study only. This is an important area for good research reporting outcome of interest to carers and people with serious illnesses as well as researchers and fundholders.”

“Background

Most people with schizophrenia have a cyclical pattern of illness characterised by remission and relapses. The illness can reduce the ability of self-care and functioning and can lead to the illness becoming disabling. Life skills programmes, emphasising the needs associated with independent functioning, are often a part of the rehabilitation process. These programmes have been developed to enhance independent living and quality of life for people with schizophrenia.

(...) Main results

We included seven randomised controlled trials with a total of 483 participants. These evaluated life skills programmes versus standard care, or support group. We found no significant difference in life skills performance between people given life skills training and standard care (1 RCT, n = 32, MD -1.10; 95% CI -7.82 to 5.62). Life skills training did not improve or worsen study retention (5 RCTs, n = 345, RR 1.16; 95% CI 0.40 to 3.36). We found no significant difference in PANSS positive, negative or total scores between life skills intervention and standard care. We found quality of life scores to be equivocal between participants given life skills training (1 RCT, n = 32, MD -0.02; 95% CI -0.07 to 0.03) and standard care. Life skills compared with support groups also did not reveal any significant differences in PANSS scores, quality of life, or social performance skills (1 RCT, n = 158, MD -0.90; 95% CI -3.39 to 1.59).

Authors’ conclusions

Currently there is no good evidence to suggest life skills programmes are effective for people with chronic mental illnesses. More robust data are needed from studies that are adequately powered to determine whether life skills training is beneficial for people with chronic mental health problems.”


“Participants totalled 1063 people with schizophrenia from the six trials between the years 2001 to 2010. Rotondi 2005 specified participants’ diagnosis as “schizophrenia and schizoaffective disorder”

73 Chen 2007 (published data only)

Hansson 2008 (published data only)


Jones 2001a (published data only)

while Salzer 2004 used “schizophrenia-spectrum”. Diagnoses were based on different operationalised criteria such as ICD-10 (Hansson 2008; Jones 2001b; Valimaki 2010), CCMD-3 (Chen 2007) or DSM-IV (Salzer 2004). In three trials, participants were aged between 18 and 65 years (Hansson 2008; Jones 2001b; Valimaki 2010). Chen 2007 included some younger people (range 15 to 65 years). Rotondi 2005 reported age by mean (37.5 years) and Salzer 2004 did not report information about age. Patients were in different states of illness. Chen 2007 reported that the mean length of patient illness was 10 years, while in Hansson 2008 study patients’ duration of illness was about 16 years. The mean number of hospital admissions was about five in Hansson 2008. In the Valimaki 2010 study, patients were admitted into psychiatric hospitals and the mean length of their hospital stay was 60 days. In two studies patients were excluded if they had severe organic psychiatric illness (Hansson 2008) of if patients were acutely ill (Jones 2001b). On the other hand, Rotondi 2005 excluded patients if they had not had hospitalisation within the previous two years. In one study (Salzer 2004) patients’ illness history was not described in detail.

Interventions

Intervention group: All psychoeducation or patient support interventions were included. Interventions used in the trials, however, varied considerably. We excluded staff support systems. Chen 2007 used technology-mediated psychoeducation and a standardised nursing intervention. ICT involved digital and spot network group and psychological online consultation. In Hansson 2008, clinicians, in addition to continuing with standard treatment, implemented the manualised intervention ‘DIALOG’. This is a computer-mediated procedure to discuss quality of life domains with patients. Answers to all questions were entered directly onto a hand-held computer or laptop using software specifically developed for the study. The intervention was repeated every two months so that participants’ views on their situation and needs for care were explicit (Hansson 2008). The Jones 2001a study involved five educational sessions using a computer intervention. In a ‘computer only’ group, patients were shown how to use the computer by a researcher. Three different types of screen display were used: general information, personal information from the viewing patient’s medical record with general information and questionnaires including medical record audit plus feedback displays. At the end of the session, participants received feedback information if requested (Jones 2001b). Rotondi 2005 used the SchizophreniaGuide website as a telehealth intervention. The programme collected information on each participant’s usage of the website. The Schizophrenia Guide provided three online therapy groups; the ability to ask questions of the experts associated with the project and receive an answer; a library of previous asked and answered questions; activities in the community and news items that focus on mental health issues; and educational

Jones R. Development and evaluation of personalised patient information for patients with schizophrenia living in the community. National Research Register 2001; Vol.1. [: N0466011493]


Rotondi 2005 (published data only)


Salzer 2004 (published data only)


Valimaki 2010 (published data only)


reading materials (Rotondi 2005). Salzer 2004 employed a brief telephone-based medication management programme (TMM) to enhance communication, insight, attitudes, knowledge and satisfaction among patients in weekly programme (altogether 52 weeks). Lastly Valimaki 2010 used an IT-based patient education programme to support well-being. The programme offered need-based computerised information and discussions with staff in five sessions, plus printed material based on patients’ requests. This involved a total of five sessions for each participant.

Comparison group: There were also different comparison groups for each of the six studies. Chen 2007 used “general rehabilitation treatment” as standardized care. The Hansson 2008 control used keyworker as “treatment as usual”. Rotondi 2005 and Salzer 2004 both used “general treatment” as control. The Jones 2001a control involved a standardised nursing intervention as the comparison group. This was “community psychiatric nurse only” in which the hour-long session with the community psychiatric nurse covered the same content as the computer system. Participants could also receive a printed summary. In addition, “combination of community psychiatric nurse and computer”, which combined a first session offered by community nurse, sessions two to four by computer and the last session again with the nurse. In addition, patients were given relevant printed summaries from sessions. Finally Valimaki 2010 used a “standardised nursing intervention” as comparison group. In this case “traditional patient education” included five patient education sessions with printed leaflets for each participant.

“Main results

We included six trials with a total of 1063 participants. We found no significant differences in the primary outcomes (patient compliance and global state) between psychoeducational interventions using ICT and standard care. Technology-mediated psychoeducation improved mental state in the short term (n = 84, 1 RCT, RR 0.75, 95% CI 0.56 to 1.00; n = 30, 1 RCT, MD -0.51, 95% CI -0.90 to -0.12) but not global state (n = 84, 1 RCT, RR 1.07, 95% CI 0.82 to 1.42). Knowledge and insight were not effected (n = 84, 1 RCT, RR 0.89, 95% CI 0.68 to 1.15; n = 84, 1 RCT, RR 0.77, 95% CI 0.58 to 1.03). People allocated to technology-mediated psychoeducation perceived that they received more social support than people allocated to the standard care group (n = 30, 1 RCT, MD 0.42, 95% CI 0.04 to 0.80). When technology-mediated psychoeducation was used as an adjunct to standard care it did not improve general compliance in the short term (n = 291, 3 RCTs, RR for leaving the study early 0.81, 95% CI 0.55 to 1.19) or in the long term (n = 434, 2 RCTs, RR for leaving the study early 0.70, 95% CI 0.39 to 1.25). However, it did improve compliance with medication in the long term (n = 71, 1 RCT, RR 0.45, 95% CI 0.27 to 0.77). Adding technology-mediated psychoeducation on top of standard care did not clearly improve either general mental state, negative or positive symptoms, global state, level of knowledge or quality of life. However, the results were not consistent regarding level of knowledge and satisfaction with treatment. When technology-mediated psychoeducation plus standard care was compared with patient education not using technology the only outcome reported was satisfaction with treatment. There were no differences between groups.

Authors’ conclusions

Using ICT to deliver psychoeducational interventions has no clear effects compared with standard care, other methods of delivering psychoeducation and support, or both. Researchers used a variety of methods of delivery and outcomes, and studies were few and underpowered. ICT remains a promising method of delivering psychoeducation; the equivocal findings of this review should not postpone high-quality research in this area.”

“All three included studies used virtual reality (VR) programmes to deliver skills training sessions.

The VR program used in Chan 2010 was a two dimensional VR programme that enables a person to engage in a series of simulated tasks within a VR environment through video contact. The system comprises more than 20 programmed VR activities, which can be adjusted to the level of difficulty in speed, directionality, and/or number of distracters. Users wearing red gloves stand or sit in a demarcated area, viewing a large screen that displays one of the series of simulated tasks, such as catching a virtual ball or playing goalie in a virtual soccer game. A single-camera, vision-based tracking system is placed in front of the demarcated area and captures the real-time image and movement of the person for processing. The person’s video-captured image is processed by the system on the same plane as the screen graphical animations that react in real time in response to his or her movement. The person can control his or her movements within the virtual environments and can interact with graphic objects as depicted in this environment. The VR programme consists of two VR activities: ball and bird, and shark bait using IREX. These activities were selected because they tapped into fluid intelligence. Park 2011 included a personal computer for rendering and providing the virtual environment, a head mounted display for displaying the virtual environment in amore immersive manner, and a position tracker for following the head direction in real time. The participants were able to move their heads to direct their gaze in a natural manner, and the display of the virtual environment depended on the orientation data obtained from the participants’ head direction. VR role-plays were displayed through two different panels: an HMD and a 120 inch screen. Social skill training using virtual reality role-playing (SST-VR) included core features of role-playing games. For example, the participant was provided with a joystick and buttons to operate his/her avatar, which produced the first-person perspective view. By using the joystick and buttons, he/she freely moved and interacted with avatars in the virtual space. In the Tsang 2013 study, participants attended a VR-based vocational skills training in a virtual boutique scenario (VRVTS). Before training, the participants were briefed on the training procedures. They were required to attend 10 sessions of training (30 minutes each) with a specific topics (e.g. identifying clothes, checking stock, sorting clothes, checking clothes). To ensure better adaption and to observe any cases of cyber sickness, the participants were allowed to browse the VR scenario for five to 10 minutes during the first session. Standard care used as a control group varied in the included studies. First, in Chan 2010 study, participants in the control group attended the usual program in the facility and were to receive the VR programme three months later. Park 2011 used verbal, writing, picture, and video supplies as simulators of the scenes and social skills training (SST) therapists as the actors were used in TR role-plays. Finally, Tsang 2013 used work-simulated workshops in the occupational therapy department including packaging tasks, typing, and cleansing tasks. Participants also attended at least three hours of prevocational skills training in every working day during hospitalisation.”

“Main results

24 Chan 2010 (published data only)

Park 2011 (published data only)

Tsang 2013 (published data only)
We identified three short-term trials (total of 156 participants, duration five to 12 weeks). Outcomes were prone to at least a moderate risk of overestimating positive effects. We found that virtual reality had little effects regarding compliance (3 RCTs, n = 156, RD loss to follow-up 0.02 CI -0.08 to 0.12, low quality evidence), cognitive functioning (1 RCT, n = 27, MD average score on Cognistat 4.67 CI -1.76 to 11.10, low quality evidence), social skills (1 RCT, n = 64, MD average score on social problem solving SPSSI-R (Social Problem Solving Inventory - Revised) -2.30 CI -8.13 to 3.53, low quality evidence), or acceptability of intervention (2 RCTs, n = 92, RD 0.05 CI -0.09 to 0.19, low quality evidence). There were no data reported on mental state, insight, behaviour, quality of life, costs, service utilisation, or adverse effects. Satisfaction with treatment - measured using an un-referenced scale - and reported as “interest in training” was better for the virtual reality group (1 RCT, n = 64, MD 6.00 CI 1.39 to 10.61, low quality evidence).

Authors’ conclusions

There is no clear good quality evidence for or against using virtual reality for treatment compliance among people with serious mental illness. If virtual reality is used, the experimental nature of the intervention should be clearly explained. High-quality studies should be undertaken in this area to explore any effects of this novel intervention and variations of approach.”

Xia J, Li C. Problem solving skills for schizophrenia. Cochrane Database Syst Rev. 2007 Apr 18;(2):CD006365. (Xia & Li, 2007)

“Main results

We included only three small trials (n=52) that evaluated problem solving versus routine care, coping skills training or non-specific interaction. Inadequate reporting of data rendered many outcomes unusable. We were unable to undertake meta-analysis. Overall results were limited and inconclusive with no significant differences between treatment groups for hospital admission, mental state, behaviour, social skills or leaving the study early. No data were presented for global state, quality of life or satisfaction.

Authors’ conclusions

We found insufficient evidence to confirm or refute the benefits of problem solving therapy as an additional treatment for those with schizophrenia. The small number of participants, the quality of reporting of methods and results were of concern. More trials with adequate reporting of methods to minimize bias, adequately powered, with validated, reliable and clinically meaningful outcomes are needed to provide robust evidence to guide policy and practice.”


“Methods: All included studies were randomised controlled trials. Only 11 of the included studies described randomisation method. Two studies were randomised by independent institutions (Brief - Group 1995; Brief - Group 1999); five studies used random number table (Brief - Individual 1996; Standard - Group 2006; Standard - Individual 03c; Unclear - Both 2007; 2008); one study drew lots (Standard - Individual 03b); one study used tossing a coin to randomise (Brief - Group 2007a); one study used block randomisation (Standard - Unclear 1996) and one study used computer generated cards (Standard - Both 1996) - this is also the only study that described allocation concealment (concealed with sealed envelop). Blinding was generally not described. One study (Standard - Individual 03c) was double blind. Four studies were single (assessor) blind (Standard - Group 2007; Standard – Both 1996; Standard - Group 2006; Standard - Unclear 1996). One trial did not use blinding (Brief - Individual 1996). Four other studies had some of their outcomes assessed single
blind, but not for all outcomes (Brief - Group 1995; Brief - Group 1999; Standard – Group 1988; Standard - Individual 93). Blinding method was not stated in the other 35 included studies.

Study duration: Study duration varied from one session (Brief - Group 1995a) to five years (Standard - Unclear 2005a) (but intervention frequency was not stated in this particular study). Standard - Unclear 1988 and Standard - Both 1996 are both of 18 months’ duration but the median study duration of all other studies is around 12 weeks.

Settings: Most studies were conducted with inpatients, except four (Standard – Group 2007; Standard - Unclear 1996; Standard - Group 2008; Standard - Unclear 2005a). Most of the included trials were carried out in China, while one trial was conducted in France, three in the USA, one in Canada, two in Germany, three in the UK, one in Denmark and one in Malaysia.

Participants: A total of 5142 participants are included from 44 trials conducted from 1988 and 2009. Participants are patients with schizophrenia or schizoaffective disorder diagnosed using operationalised criteria (DSM, ICD, CCMD). The majority of the studies included patients between the ages of 18 and 60 years, except four that did not describe the age range (Unclear - Group 1996; Unclear - Both 2008; Brief - Group 2006; Brief – Group 2007b). Four studies included only men (Standard - Unclear 2005; Standard - Unclear 2007; Standard - Both 2008a; Unclear - Both 2007) and one study included female participants only (Standard - Both 2006). Four other studies did not describe gender and all other remaining studies involved both male and female participants. Size of the included studies range from 20 (Standard - Individual 93) participants to 286 (Brief - Unclear 2005). The three other studies with over 200 participants are Standard - Group 2004, Standard – Group 2005 and Standard - Unclear 1996.

Interventions: Thirteen trials used brief psychoeducation, 22 standard psychoeducation and nine did not state whether brief or standard intervention was used (tagged in this review as ‘unclear’). Of the 44 included studies, 17 used group therapy, six individual therapy, 13 employed a mixture of both group and individual therapy and eight other studies did not state the type of therapy used.”

“Main results

This review includes a total of 5142 participants (mostly inpatients) from 44 trials conducted between 1988 and 2009 (median study duration ~ 12 weeks, risk of bias - moderate). We found that incidences of non-compliance were lower in the psychoeducation group in the short term (n = 1400, RR 0.52 CI 0.40 to 0.67, NNT 11 CI 9 to 16). This finding holds for the medium and long term. Relapse appeared to be lower in psychoeducation group (n = 1214, RR 0.70 CI 0.61 to 0.81, NNT 9 CI 7 to 14) and this also applied to readmission (n = 206, RR 0.71 CI 0.56 to 0.89, NNT 5 CI 4 to 13). Scale-derived data also suggested that psychoeducation promotes better social and global functioning. In the medium term, treating four people with schizophrenia with psychoeducation instead of standard care resulted in one additional person showing a clinical improvement. Evidence suggests that participants receiving psychoeducation are more likely to be satisfied with mental health services (n = 236, RR 0.24 CI 0.12 to 0.50, NNT 5 CI 5 to 8) and have improved quality of life.

Authors’ conclusions

Psychoeducation does seem to reduce relapse, readmission and encourage medication compliance, as well as reduce the length of hospital stay in these hospital-based studies of limited quality. The true size of effect is likely to be less than demonstrated in this review - but, nevertheless, some sort of psychoeducation could be clinically effective and potentially cost beneficial. It is not difficult to
justify better, more applicable, research in this area aimed at fully investigating the effects of this promising approach.”