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EPA guidance on the quality of mental health services

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ABSTRACT

The main aim of this guidance of the European Psychiatric Association is to provide evidence-based recommendations on the quality of mental health services in Europe. The recommendations were derived from a systematic search of the best available evidence in the scientific literature, supplemented by information from documents retrieved upon reviewing the identified articles. While most recommendations could be based on empirical studies (although of varying quality), some had to be based on expert opinion alone, but were deemed necessary as well. Another limitation was that the wide variety of service models and service traditions for the mentally ill worldwide often made generalisations difficult. In spite of these limitations, we arrived at 30 recommendations covering structure, process and outcome quality both on a generic and a setting-specific level. Operationalisations for each recommendation with measures to be considered as denominators and numerators are given as well to suggest quality indicators for future benchmarking across European countries. Further pan-European research will need to show whether the implementation of this guidance will lead to improved quality of mental healthcare, and may help to develop useful country-specific cutoffs for the suggested quality indicators.

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1. Introduction

1.1. Aims

The main aim of this guidance of the European Psychiatric Association (EPA) is to provide recommendations for optimal structures of mental health services by identifying and evaluating the available evidence including a comparison between the efficacy of different service structures wherever possible. One basic assumption of this review is that such services can be viewed as health technologies which are amenable to quality assessment. This view has been discussed by Goldman et al. [61], who concluded that a conceptual framework for assessing the organisation of services as a healthcare technology focuses the attention on scientific evidence to guide program design and policy development.

Epidemiological studies document the large number of people affected by mental disorders in Europe and worldwide

[3,4,110,127,146], leading to estimates of treatment needs [82,101,114]. Addressing the need to provide sufficient and competent mental healthcare globally, the World Health Organisation (WHO) has published a range of background policy documents on mental healthcare [136,137,140,141]. Also, WHO published the WHO Pyramid Framework which aims at (i) optimisation of the service mix; (ii) limits on in-patient facilities; and (iii) an extension of out-patient general hospital and community mental healthcare service provision [141].

1.2. Mental health services: models and trends with an emphasis on recent developments in Europe

Mental healthcare structures in Europe have been the objective of several review issues [8,11,12,34,53,116]. Concerning the issue of an optimal mix of services, solutions may differ from country to country due to service traditions, economic constraints, lack of psychiatric experts or other factors. Therefore, the EPA Guidance on the Quality of Mental Health Services includes some general principles with the aim to guide service development and service optimisation irrespective of certain service structures. As many of

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these general recommendations are based on opinions or clinical experience and not on scientific evidence, we have taken care to explicitly state the sources of our recommendations and their evidence grade.

The European Community and the European Observatory on Health Systems and Policies have provided basic data on mental health service structures in Europe [48,82].

One major issue is the process of de-institutionalisation, which means that in-patient facilities are down-scaled in favour of out-patient facilities. Nowadays, community-based services are widespread in the USA and the United Kingdom (UK), but the range of services they provide varies very much across Europe. In the UK, for example, Johnson et al. [75] identified 131 services alone as alternatives to standard acute psychiatric in-patient facilities. Concerning the process of de-institutionalisation in Germany, the so-called “Psychiatrie-Enquête” of 1975 led to a reduction of psychiatric hospital beds and the establishment of a variety of out-patient mental health services like psychiatric out-patient departments in psychiatric hospitals, psychiatric departments in general hospitals and smaller-size psychiatric departments in general hospitals instead of large-size state hospitals [2]. This process has not come to an end yet and in 1997, the German Association of Psychiatry and Psychotherapy (Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, DGPPN) recommended that out-patient and in-patient services should be provided evenly across Germany, and that mental healthcare should follow the preference for the “least restrictive alternative” [41]. As a possible drawback of de-institutionalisation, there appears to be a general trend of re-institutionalisation (defined as a process of readmitting previously discharged long-term patients with severe mental illness into forms of long-term institutional care) of the mentally ill in Europe with increasing numbers of persons with mental illnesses in forensic services and other institutions of legal detention (the latter is often defined as “transinstitutionalisation”, e.g., people with severe mental illness are not admitted to a psychiatric hospital, but into a forensic hospital or other forms of legal detention) [13,70,103,106,107,108,109,111].

Variability between countries is considerable but no factors of supreme importance for determining outcome measures were identifiable [11], which means that there will be no simple answers to the central question of this guidance, e.g., what are the decisive structural and process features mediating the efficacy of mental healthcare services. As a means to assess the number and types of mental health services in Europe on a meso- and macrolevel, the European Service Mapping Schedule [74] was developed and implemented [40].

The large diversity of service structures and the scarcity of evaluation studies make it difficult to formulate an evidence-based EPA Guidance on Quality of Mental Health Services and we addressed this by assembling a panel of psychiatric experts from a range of European countries. Standardised performance measures for mental health services are not yet available, but local solutions are frequently reported [144]. However, European-wide standards are needed to assess the efficacy and efficiency of mental health services. This would involve developing quality indicators of specific structures and processes, similar to the 12 quality indicators used in the OECD assessments [66,67]:

- continuity of care:
 - timely ambulatory follow-up after mental health hospitalisation,
 - continuity of visits after hospitalisation for dual psychiatric/substance related condition,
 - racial/ethnic disparities in mental health follow-up rates,
 - continuity of visits after mental health-related hospitalisation,
 - coordination of care,
 - case management for severe psychiatric disorders;

- treatment:
 - visits during acute phase treatment of depression,
 - hospital readmissions for psychiatric patients,
 - length of treatment for substance-related disorders,
 - use of anticholinergic anti-depressant drugs among elderly patients,
 - continuous anti-depressant medication treatment in acute phase,
 - continuous anti-depressant medication treatment in continuation phase;
- patient outcomes:
 - mortality of persons with severe psychiatric disorders.

2. Methods

2.1. Definitions

See Info Box 1 and Fig. 1) for definitions of “Quality” and related concepts, and see Info Box 2 for definitions of “Mental Healthcare” and “Mental Health Services”.

Recommendations and quality indicators were structured following a subdivision into macro-, meso- and microlevels of analysis. Macrolevel recommendations or indicators refer to the provision of structural quality on the global or national mental health system level concerning mental health education and mental health monitoring and addressing questions of the general organisation principles of the mental healthcare system in a given country. The mesolevel recommendations deal with aspects of the internal structure of mental health systems within national mental healthcare systems, e.g., structural requirements to ascertain patient needs and dignity, multiprofessionalism of services, access to and regional distributions of mental healthcare units, availability of technologies, the workforce, catchment areas organisation and mental health services for ethnic and other minorities. A further subdivision relates to microlevel recommendations, which guide structures and processes within individual service units on a local level (Info Box 1).

2.2. Guidance development process and area of validity

The EPA decided to develop a series of guidance papers on topics related to mental healthcare (see the accompanying introductory paper by W. Gaebel and H.-J. Möller to this issue of *European Psychiatry*). We performed a systematic literature search detailed further below. The EPA Guidance then used the judgment of psychiatric experts – in this case, the co-authors of this paper – to formulate guidance recommendations. This guidance is thus based on recommendations derived from scientific evidence where possible and based on expert consensus. The area of validity for the guidance recommendations and quality indicators is Europe.

2.3. Process of evidence search

In order to identify the most important studies for the evidence base of this EPA Guidance on Quality of Mental Health Services, literature and source searches were performed. We predefined keywords with which we searched these databases and we used specified criteria for assessing the relevance of the retrieved documents. All steps of the retrieval and exclusion procedure were documented and are given in detail here. This follows the group on Quality of Reporting of Meta-Analyses of clinical randomized controlled trials (QUOROM group) statement on the improvement of the quality of reports of meta-analyses of randomised controlled trials [105].

Due to the diversity of search terms and due to the many documents retrieved on initial exploratory searches, we performed

Box 1. Quality

To define “quality” is a normative process, which may lead to generic and specific indicators of quality. To implement quality management procedures, it is important to know what is measured and what is necessary to transform the current state to the desired state. Quality will therefore be defined in the areas of structures and processes, which may be optimized. Generic aspects of quality will apply to all mental healthcare, while special aspects will apply only to special settings of mental healthcare. Quality in this context is a dynamic process and has a normative aspect. Essential for future revisions of this guidance will be the question, which processes really occur, in mental healthcare services and how effective these are.

Quality (general definitions, descriptions and examples)

The definition of “quality” in the context of a discussion of general health services or mental health service structures has not yet been universally agreed upon. Several alternatives are available [45]. The American Society for Quality defines quality as “a subjective term for which each person or sector has their own definition”. Further definitions are “fitness for use” and “conformance to requirements” [8]. According to Campbell et al. [25], quality can be defined in a generic or in a disaggregated way. Among the “generic” definitions, the Institute of Medicine (a non-profit, non-governmental U.S. organisation) has defined quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”. The disaggregated approaches focus on the aspect of “quality” as a complex and multidimensional construct, which is defined according to several dimensions or components [25]. Campbell et al. [25] propose that access to and effectiveness of services are the only two domains of quality. Maxwell identified six separate but inter-related dimensions of the quality of healthcare, which offer a framework for establishing standards and which can be applied to any healthcare setting: access to service, relevance to need, effectiveness, equity, social acceptability, efficiency and economy. Concerning the quality of services, Maxwell points out that it is important to examine how the healthcare system performs as a whole rather than its fragmented parts [149]. This is particularly true considering that in our fragmented healthcare systems there is a multitude of services involved in the treatment and care of patients. Harteloh [65] differentiates between a descriptive and a prescriptive approach of the quality concept. While the descriptive approach exemplifies the meaning of quality as a property, the prescriptive approach defines the meaning of quality as a category of judgement. The author explains a rule for interpreting the abstract concept of quality: “the term ‘quality’ is applied as a ratio of possibilities realised on the one hand and a normative frame of reference on the other”. The definition of ISO 8402 [71] is an example for a descriptive definition, where quality is described as an intrinsic property or condition: “Product and service quality can be defined as the total composite product and service characteristics of marketing, engineering, manufacture, and maintenance through which the product and service in use will meet the expectations of the customers”. The following definition from Lohr et al. [94] is also an example for a prescriptive definition: “Quality of care is a multidimensional concept reflecting a judgement that the services rendered to a patient were those most likely to produce the best outcomes that could reasonably be accepted for the individual patient and those services were given with due attention to the patient-physician relationship”. This is the basic definition, which we followed.

Generic aspects of quality (summary of generally accepted quality standards)

The eight quality management principles of the ISO (International Organisation for Standardisation) are: customer focus,

leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, mutually beneficial supplier relationships.

The World Health Organisation Assessment Instrument for Mental Health Systems (WHO-AIMS) [139,143] was developed to assess key components of mental health systems for middle- and low-income countries. It still appears to provide a range of useful suggestions for the mental healthcare structures and models in Europe, as some European countries belong to the group of low- and middle-income countries, and since some general recommendations are independent of the income level of a society. This comprehensive instrument consists of six domains: policy and legislative framework, mental health services, mental health in primary care, human resources, public information and links with other sectors, and monitoring and research. These domains address the 10 components of the World Health Report 2001 [136]:

- Provide treatment in primary care;
- Make psychotropic drugs available;
- Give care in the community;
- Educate the public;
- Involve communities, families and consumers;
- Establish national policies, programmes and legislation;
- Develop human resources;
- Link with other sectors;
- Monitor community mental health;
- Support more research.

The WHO-AIMS primarily consists of input indicators, which are related to resources that are used to develop or modify services, and process indicators dealing with the assessment of service utilisation as well as aspects of service quality. As the WHO-AIMS provides essential information for mental health policy and service delivery, countries or regions will have a comprehensive picture of the main weaknesses of their mental health system, and this knowledge can initiate and facilitate improvements. Most items in WHO-AIMS describe aggregate information, but further development of this instrument may involve linking collected data with geographical information systems to map within-country differences [118]. On a regional or national level, the fulfilment of patient needs appears to offer a guide as to translation of findings from psychiatric epidemiology, general health needs and social factors into service facility needs estimates [124]. Discrepancies between staff and patients views may occur, and needs assessment are closely intertwined with questions of patient satisfaction [121]. A draft toolkit to monitor human rights in mental health and social care institutions has been developed by the Institutional Treatment, Human Rights and Care Assessment (ITHACA) project and the WHO Department of Mental Health and Substance Abuse [72,81]. This toolkit can be applied in different settings, like in psychiatric hospitals, psychiatric wards of general hospitals, rehabilitation centres, day centres, community services and high security psychiatry facilities. A schematic overview of the requested human rights is already available. Taken together, a wide range of measures has been developed, but they either focus on selected aspects or seem to be too globally oriented to serve as models for a European guidance.

Quality of structures, processes, and outcomes

Quality of healthcare in general has been classified by Donabedian [45] in the three categories: “structure”, “process” and “outcome”. This is the basic distinction which we have followed here. “Structure” constitutes the attributes of care settings like facilities, equipment, human resources and organisational structures. “Process” indicates the activities in giving and receiving care which includes the activities of healthcare providers. “Outcome” as the third category

denotes the effects of care. According to Donabedian, information about the relationships between structures, processes and outcomes should be ascertained before quality assessment can begin [45]. Campbell et al. [25] suggest that structure is not a component of care but the conduit through which treatment and care is received and delivered. Thus, outcome is not considered a component but rather a consequence of treatment and care. “Structures” may increase or decrease the likelihood of receiving high quality care because they can have a direct or indirect impact on processes and outcomes, e.g. if special equipment is not available. Corresponding to Donabedian’s framework for quality of care, Hermann et al. [66] defined structure, process and outcome as the key domains of quality. Probably the first quantitative study, which applied Donabedian’s model to quality systems came to the result that structure correlated strongly with process and outcome [85]. Organisational characteristics associated with better disease control were reported, e.g., from diabetes research [73]. However, there are no current procedures or definitions specifically addressing these issues in mental healthcare. Following Donabedian’s model, Kilbourne et al. described a framework for measuring quality and promoting accountability across mental and general healthcare providers [78].

Quality assessment

Two types of organisational quality assessment can be distinguished: (a) mandatory and (b) optional data collection and evaluation programmes. While compulsory assessment is often carried out by governments or agencies, the voluntary quality assessment is usually carried out by professional organisations [87]. Donabedian’s framework can be used to evaluate quality based on structure, process and outcome. Quality assurance procedures should result in quality maintenance and ultimately improvement. This may not always be the case as programs or projects may not comply with professional standards [76]. Targeted quality measures can be used for quality improvement within an institution (internal quality improvement) or across institutions (external quality improvement). As evidence in healthcare quality is frequently unavailable, guidelines and quality indicators based on consensus techniques may be needed to facilitate quality improvement. As measuring alone will not automatically lead to improvement, indicators have to be used within systems of quality improvement measures [26]. External quality improvement should be characterised by explicit, valid standards, by structured assessment procedures and complementary mechanisms for implementing improvement [87]. Usually, continuous quality activities aim at improving the structural and process components of care to ascertain positive effects on outcomes [64]. However, it should be noted that quality improvement cannot succeed if it is associated with disproportionately exaggerated documentation efforts or unacceptable for users for other reasons [81]. Thus, both utility and feasibility are essential in developing effective quality improvement measures for clinical practice.

Quality indicators

Indicators are described as explicitly defined and measurable items which act as building blocks in the assessment of healthcare. They may take the form of a statement about the structure, process or outcomes of care. An indicator can also be defined as “a measurable element of practice performance for which there is evidence or consensus that it can be used to assess the quality, and hence change in the quality, of care provided” [91]. Indicators need to be based upon scientific evidence of acceptability, feasibility, reliability, sensitivity to change and – most important – validity. Obeying this rule, the effectiveness of quality indicators in quality improvement strategies can be maximised [26,51]. Quality indicators for mental health service structures and processes especially related to treatment processes for specific disorders are currently being developed and cover a range of processes and structures [67–70,89,91–93,120,123,147,148].

For the present guidance, we had to take into account a complex interrelationship between mental health service structures, outcomes and quality indicators (Fig. 1).

As can be seen from the figure, mental health services are characterized by structural and process elements for which any number n of quality indicators may be defined. These generic quality indicators are useful to assess the quality of services or provide benchmarking indicators for comparing individual services in different places. Outcome is assessed by outcome quality indicators. They are different from quality indicators for mental health service structures, but the quality of mental healthcare service structures may be assessed using outcome indicators. Therefore, some outcome indicators may overlap with quality indicators of mental health service structures.

Mental health services in general should provide both structural and process quality. For example, minimum staffing requirements may be necessary for a certain service structure (QI_S), or certain process rules must be adhered to for a certain service under certain circumstances (e.g., rules for the time until a newly admitted patient is seen by a psychiatrist; QI_P). These quality indicators allow quality assessments of the service structure and its processes per se, they are determined by empirical studies and may then become normative features, or they may be defined via patient outcomes. They may also serve for inter-service benchmarking. Outcome assessments are performed, for example using clinical outcomes like disease remission rates (QI_O), and these are values and not service structures or processes. However, patient outcomes are influenced by service structures and processes and therefore service-specific quality indicators may also be defined as outcomes (QI_P or QI_S may then be identical to QI_O). Other outcome quality indicators may comprise patient satisfaction, retention in services, frequency of readmissions, social functioning, activities of daily living and many others.

Quality management

Some techniques and concepts of Total Quality Management incorporated into the management of mental health organisations arose from the manufacturing and industrial sectors mainly to reduce costs [139]. The International Organisation for Standardisation (ISO) and the EFQM model (European Foundation for Quality Management) are examples of industrial models of quality improvement that have been applied to healthcare. The EFQM model promotes quality improvement through self-assessment while ISO focuses on the implementation of international norms [90].

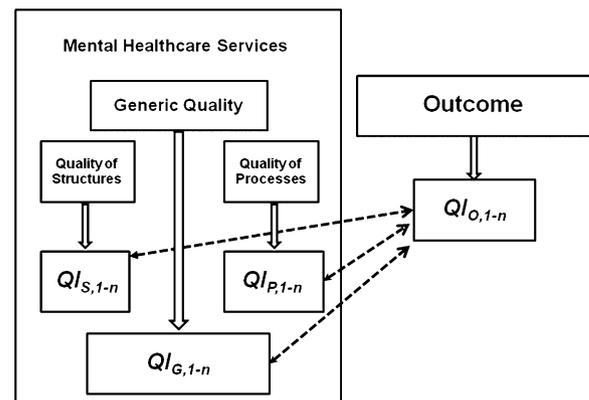


Fig. 1. Complex interrelationship between mental healthcare service structures, processes, outcomes and quality indicators. QI = quality indicator. The suffix “G” denotes a generic indicator, the suffix “S” denotes a structure indicator, the suffix “P” denotes a process indicator, the suffix “O” denotes an outcome indicator. Any number n of quality indicators may be defined for a given mental healthcare service.

Box 2. Mental Health Services

For the purpose of this guidance, we define mental health services as the “Specialist provision of mental health and social care provision integrated across organisational boundaries.” (Source: A National Service Framework for Mental Health; National Health System; <http://www.acutecareprogramme.org.uk/silo/files/national-service-framework-for-mental-health.pdf>). A psychiatric service is any service providing diagnosis, treatment and other types of healthcare to people with mental disorders and in which a psychiatrist has the final medical responsibility (this definition was created by the authors of this guidance, since no standard definition for the term “psychiatric service” could be found). European mental healthcare services are characterized by a mixture of in- and out-patient services with curative or rehabilitative approaches. In addition, there are services which integrate in- and out-patient services. We have studied the following service types. This selection was made by the authors of this guidance with the aim to cover all mental health services:

1. Hospitals/In-patient services
2. Out-patient services
 - 2.1. Home-based Treatment (used here as a term for a specialised form of community-based care)
 - 2.2. Community Mental Health Teams (used here as a term for a specialised form of community-based care)
 - 2.3. Intensive Case Management (used here as a term encompassing both assertive community treatment and case management)
 - 2.3.1. Assertive Community Treatment
 - 2.3.2. Case Management
 - 2.4. Day Hospitals
3. Rehabilitation Units
4. Integrated Care Models

We used the term “out-patient services” here as a supraordinate term for several types of out-patient services, which are further specified and described in separate chapters. Note that Rehabilitation Units may be provided in in- and out-patient settings, but are dealt with here separately because of the special nature of rehabilitation services. Also, integrated care models would be expected to cross the border between in- and out-patient services and provide access and treatment in both areas. In some countries like Germany, out-patient mental health services are mainly provided by psychiatrists in private practices. However, there are currently no systematic studies on quality indicators or structural or process recommendations yet available for this special type of mental health services.

Hospitals/In-patient Services

In-patient services provide treatment and stabilisation when the required services cannot be delivered in community settings [127–129]. There are certain groups of patients, who usually require high-intensity immediate support in acute in-patient hospital units (sometimes also on a compulsory basis):

- patients who need urgent medical assessment;
- patients who suffer from severe and co-morbid medical and psychiatric conditions which cannot be controlled on an out-patient basis or in other kinds of settings;
- severe psychiatric relapses and behavioural disturbances;
- strong violence, suicidality;
- acute neuropsychiatric conditions;
- old age and severe concomitant physical disorders.

Mental health services in general hospitals include psychiatric in-patient wards, psychiatric beds in general wards and emergency departments, day hospitals and out-patients clinics.

They serve a range of diagnostic and demographic groups and some offer specialist services for specific disorders or patient groups [137–139]. The availability of psychiatric beds in the European countries varies greatly, but there are considerable methodological problems in comparing “psychiatric bed” numbers between countries due to incomplete reporting or varying definitions of service classes between countries [142]. Thus, the large variation of psychiatric hospital beds among European countries may be due to a number of factors including reporting standards and organisational issues.

Out-patient services

Out-patient services can be provided in different settings, such as primary care health centres, general hospitals and community mental health centres, where diagnostic assessment and treatment is offered [126]. Most of them are staffed exclusively with medical doctors (around 80%), 9% include psychologists, 17% provide care by nurses according to service mapping data in England. Some of these clinics function as specialist services, e.g. for people with eating disorders, or in need for various kinds of rehabilitation [60].

Day hospitals

While the function of day hospitals formerly was to mainly provide a place for follow-up-treatment after an acute in-patient episode, they increasingly take a role in the acute treatment of mentally ill [77]. They may even be an alternative to in-patient treatment for many acute care patients. Day hospitals are facilities which offer intermediate interventions between full-time hospitalisations and out-patient care.

Rehabilitation units

Rehabilitation settings for people with mental illnesses generally include rehabilitation units in psychiatric hospitals or specialised psychiatric rehabilitation in-patient units, vocational services and day activity/recreational services [29,113,114]. Evidence-based practice is increasingly implemented and the evidence is strongest for assertive community treatment, supported employment and family psychoeducation [14]. However, implementation of these interventions is often impeded by motivational and organisational barriers even if the required structures would be available [98]. In Europe, generally accepted standards for psychiatric rehabilitation units are currently not available. In Germany, the national working group on rehabilitation (“Bundesarbeitsgemeinschaft für Rehabilitation”) has issued recommendations for basic structural and organisational requirements for psychiatric rehabilitation. These include, among others, that rehabilitation units should be available close to the clients’ home, that services should be well coordinated between rehabilitation and general practitioners’ services, that members of the social environment of those in need of psychiatric rehabilitation should be involved in the rehabilitation process, and that an interdisciplinary team of mental health professionals should be available [17]. There is a clear common understanding that rehabilitation should be offered primarily in the natural environment of the affected persons.

Community-based care

Community-based mental healthcare services comprise out-patient clinics, day hospitals, home treatment services, and community mental health teams in community mental health centres [115]. According to Thornicroft and Tansella [129], a community-based mental health service provides a full range of mental healthcare to a defined population and is dedicated to treating and helping people with mental disorders, in proportion to their suffering or distress, in collaboration with other local agencies. Thornicroft et al. [130] also mention that there are wide inconsistencies between and within countries in how community – oriented care is defined, interpreted and provided. The objective is a “balanced care model”, which provides most services in community settings while hospital stays should be reduced as far as possible. Services need to be adapted to the specific needs of low-resource-, medium-resource- and high-resource-countries, low resource areas may

need to focus on the provision of mental healthcare through primary care, while areas with medium resources should provide more differentiated services. High-resource areas should provide all specialised services (e.g. in-patient care, community care, residential and rehabilitation care, alternative occupation) [126,128,129]. Types of diagnoses treated in community-based services largely depend on local, regional and national availability of the respective services, traditions and the availability of alternative types of services. Community-based treatment services usually are provided by an interdisciplinary team of mental health professionals. Treatment focuses on improving quality of life and on reducing the need for in-patient care.

Home treatment

Home treatment or crisis resolution teams offer mobile services and play an important role for acute and emergency treatment. Their services try to avoid in-patient care from the outset [9,20,21,60,132].

Community mental health teams

Community mental health teams (CMHTs) comprise nurses, one or more psychiatrists, social workers, psychologists, occupational therapists and possibly other professionals such as counsellors. They provide short- and long-term care. Usually, patients meet the mental health professionals at the team base [60].

Intensive Case Management

This term now incorporates both assertive community treatment and case management [43,115].

Assertive community treatment

Assertive Treatment teams (ACT) are also called “Assertive Outreach Teams” (e.g., in the UK) and are widespread by now. Assertive community treatment teams comprise psychiatrists, nurses, social workers and occupational therapists and are intended to provide long-term care for rather “difficult” patients, e.g., patients who do not accept treatment. The functions of ACTs are medication management, monitoring the state of health and to offer help in everyday life [9,60]. Assertive community treatment can be viewed as a specialised form of case management, not a categorically different approach [18]. It is usually defined by treatment manuals and fidelity scales, and it includes special features such as daily team meetings, case sharing, 24 hour availability and doctors as full team members [99].

Case management

Case management includes the coordination of various services and aims for continuity of care and service. Case management combines the activities of linking (referring patients to all required services), monitoring and case-specific advocacy. A case manager serves a certain number of patients and has to cooperate with several mental health services [43,115].

Integrated care models

Kodner and Spreeuwenberg [83] provided a comprehensive definition of integrated care based on a terminological clarification of the different meanings of the term “integration”: “Integration is a coherent set of methods and models on the funding, administrative, organisational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors. The goal of these methods and models is to enhance quality of care and quality of life, consumer satisfaction and system efficiency for patients with complex, long-term problems cutting across multiple services, providers and settings. The result of such multi-pronged efforts to promote integration for the benefit of these special patient groups is called “integrated care”. Integrated care models thus constitute an organisational framework in which important therapeutic modules are administered according to individual requirements especially for people with severe mental illnesses like schizophrenia. These models facilitate synergies between out-patient and in-patient care and also should ascertain continuity of care [134]. In Germany, some of these models have been tested but only few – mainly health economic – evaluations are available

[10]. As a special type of integrated care, the so-called regional budget in Germany involves the authorisation of a single provider of mental health services to finance a model of multi-sector mental healthcare services. This has been shown to have complex effects on total costs, modes of service provision, and some beneficial effects on patient outcome parameters [84,112].

Integrated care is used here in a narrow sense describing specialised mental health services following a set of standardized interventions and services. For example, the integrated care pathways (ICPs) for mental health standards have four main elements:

- process standards describe the key tasks which affect how well ICPs are developed in an area;
- generic care standards describe the interactions and interventions that should be generally offered;
- condition-specific care standards describe the interactions and interventions that must be offered to people with a specific condition;
- service improvement standards measure how ICPs are implemented and how variations from planned care are recorded [108,109].

the database literature searches sequentially and updated them if appropriate because of the time lag between the first search and the preparation of the final version of the manuscript. The first of our literature searches was on the quality of mental hospitals and details of the methods are given in Fig. 2.

Fifteen documents retrieved by this search are mentioned in the text [1,16,24,33,42,46,47,55,62–64,68,79,86,128]. This search strategy was supplemented in a second search on controlled trials and systematic reviews on a variety of mental health service structures. The exact search terms and methods are shown in Fig. 3.

This resulted in the additional identification of three controlled studies [7,32,88] and four review articles [28,50,80,131], which were used in this text.

We performed a further literature search in Medline (from 2005 on) on August 9, 2011, in order to better cover out-patient services and the details are given in Fig. 4.

One study showing reduced hospitalisation rates after out-patient waiting time reduction was used for the guidance [145], and another article dealing with in-patient mental health, which had already been identified previously [146]. We also screened the following papers of international and German journals, which published articles on the quality of mental healthcare in 2010, because this was the year in which most of the information retrieval work for this guidance was performed:

- *International Journal for Quality in Health Care*;
- *Journal for Health Care Quality*;
- *Quality Management in Health Care*;
- *Quality Assurance in Health Care*;
- *Gesundheitsökonomie und Qualitätsmanagement*;
- *Deutsches Ärzteblatt*;
- *Psychiatrische Praxis*;
- *Nervenarzt*;
- *Die Psychiatrie*.

Websites of various international and national institutes and organisations have also been screened once in early 2010 by K.S.:

- Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen;
- Institut für angewandte Qualitätsförderung u. Forschung im Gesundheitswesen;

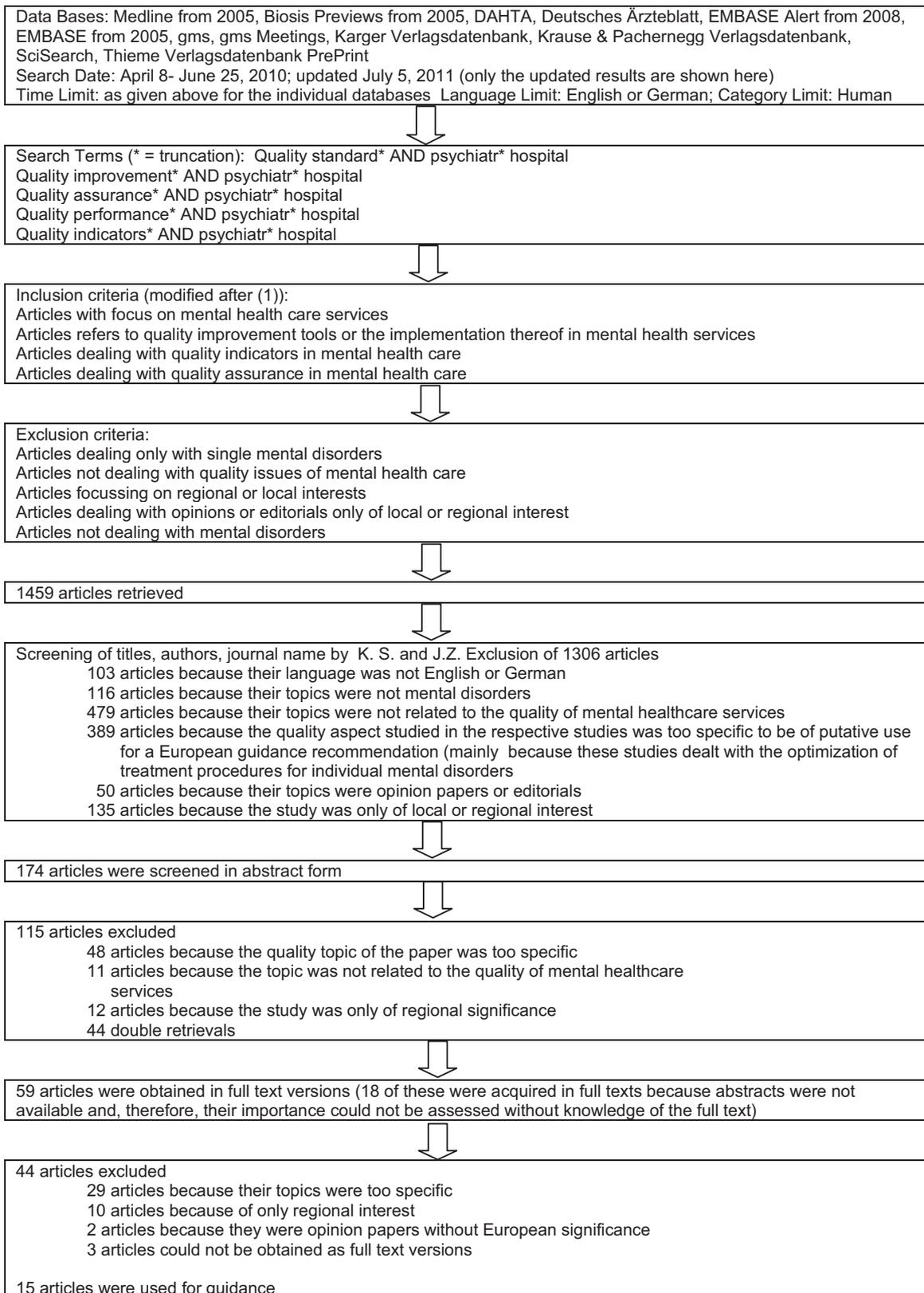


Fig. 2. Flow scheme of the initial literature search and the results pertaining to quality assessments in mental healthcare (see Figs. 3–4 for further literature searches).

- Dt. Krankenhausgesellschaft;
- Agency for Health Care Research and Quality;
- Maryland Hospital Association's Quality Indicator Project;
- WHO;
- Swedish Council on Health Technology Assessment;

- National Institute of Clinical Excellence (NICE-UK).

Further articles were identified by obtaining "related documents", which is a feature of the Medline database providing a list of publications which deal with similar publications compared to

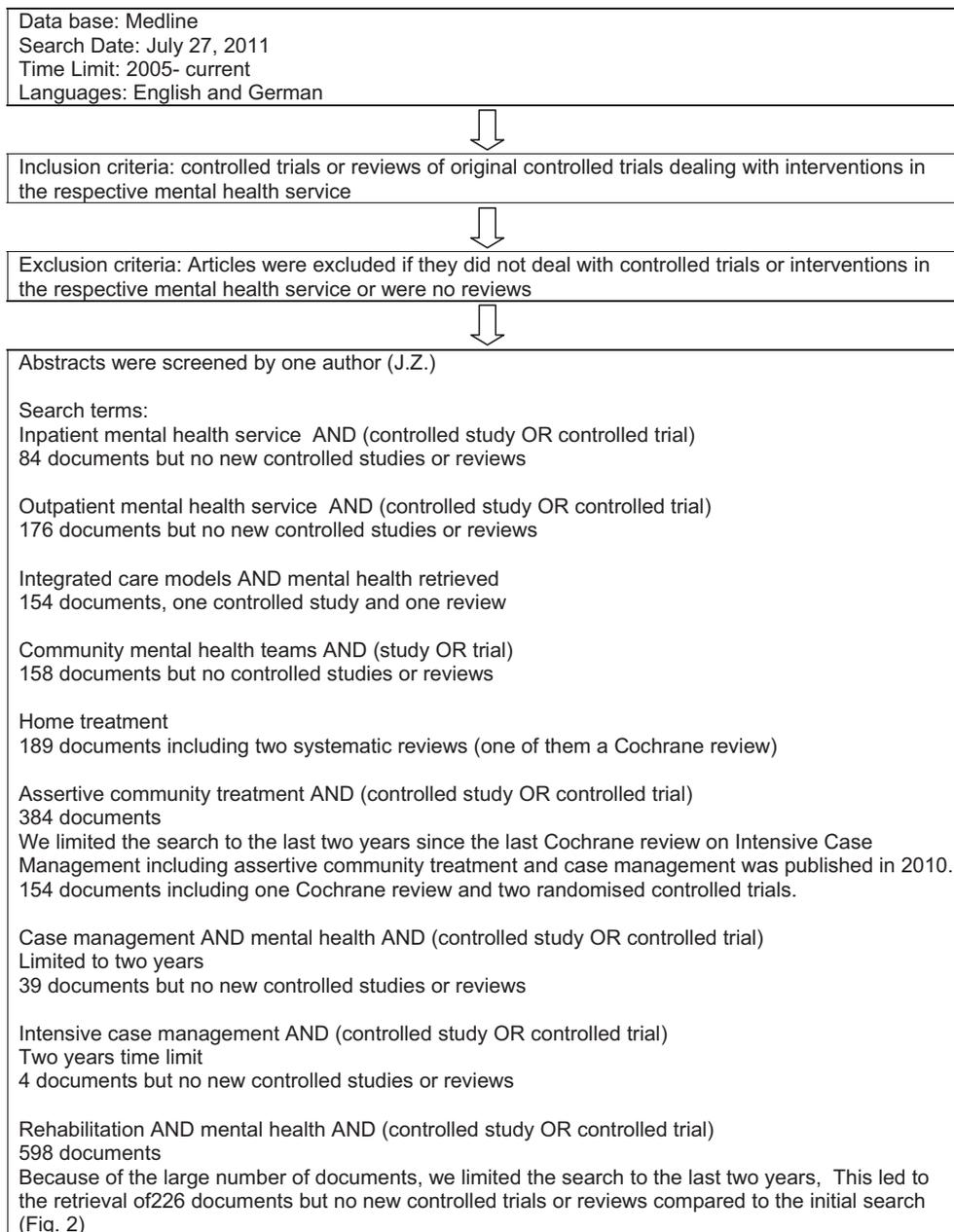


Fig. 3. Flow scheme of literature search specified for controlled single studies and review articles on specific types of mental healthcare.

those identified in a Medline search. These were screened by one co-author (J.Z.) whereby due to the large number of “related documents” only the first 100 were considered if the number of related documents for a retrieved document was larger than 100. Also, articles were identified because they were known personally to the authors or because the authors became aware of them when reading the documents which we had obtained. The total number of articles obtained via colleagues, related documents information, Website visits, reading articles and the reviews of the befornmentioned journal homepages was $n = 128$, but we did not keep track of the dates or retrieval steps of these articles.

2.4. Process of developing recommendations

The recommendations were subjected to peer review by the co-authors, the Steering Committee of the European Psychiatric Association European Guidance and the Executive Committee of the EPA. We structured the guidance recommendations into

structure and process as well as general and specific recommendations (Table 1). Whereas general (or “generic”) recommendation and quality indicators (QIs) apply to all types of mental health services, service-specific QIs are only applicable to a certain type of mental health services, but not to other types. Outcome was not used here as a separate quality category since many studies assessed the results of their investigations on structure or process quality with the help of outcome measures. However, the range of applied psychiatric outcome measures is vast and encompasses patient-based outcomes (like the subjective quality of life in single patients, individual or group-wise clinical assessments of global or disease-specific psychiatric symptom scales and function scales including assessments of employment, independent living or death rates), administrative outcomes (like contact rates in various settings, hospital readmission rates, therapy rates like medication prescription rates, costs) or combinations thereof [59]. It needs to be defined what would be clinically meaningful outcome measures applicable to all European countries, all mental health service

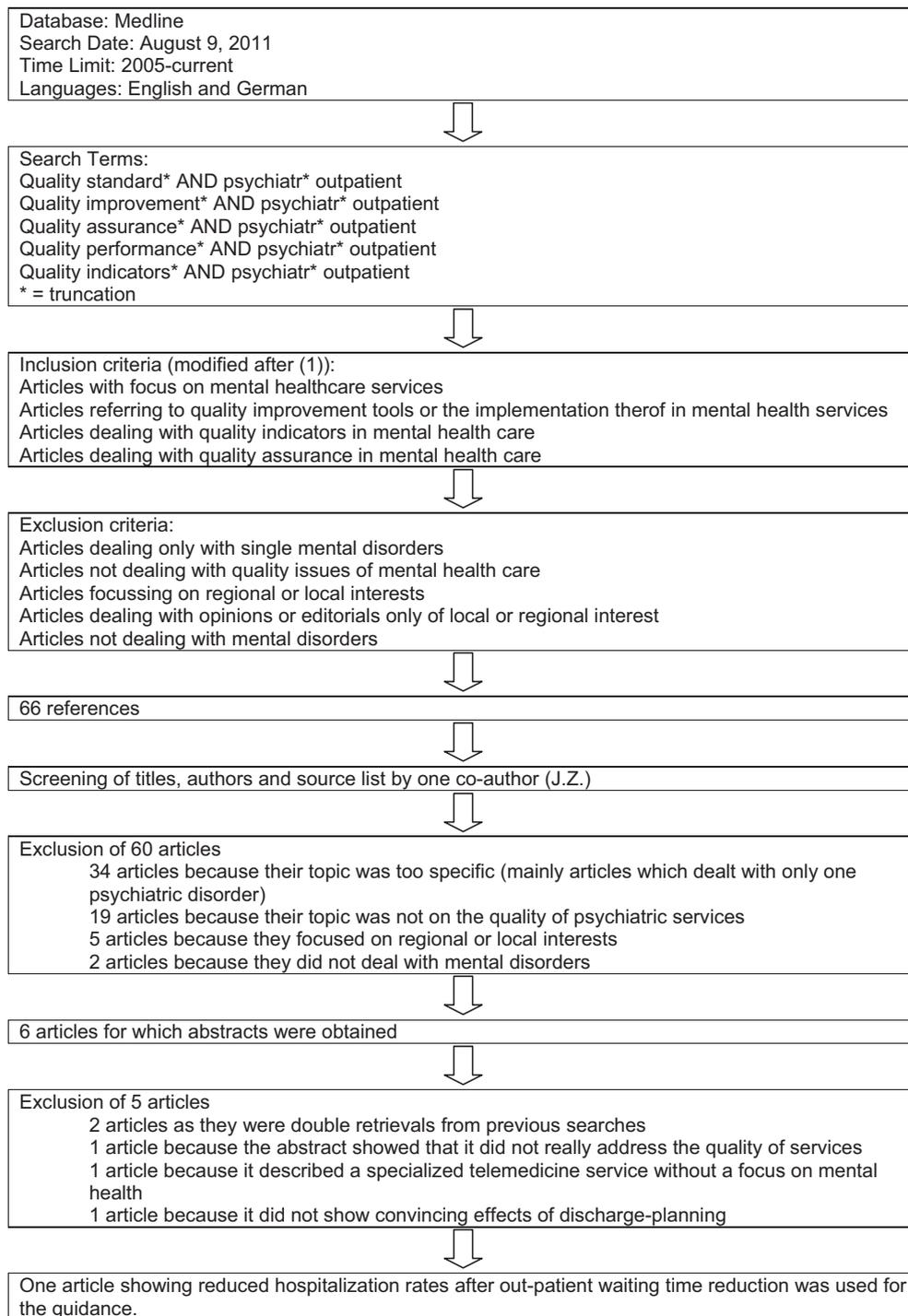


Fig. 4. Flow scheme of literature search specified on out-patient mental healthcare quality assessment studies.

settings, and all mental disorders. This will be the subject of a separate EPA guidance recommendation. Further details about the concept of quality used here are given in Info Box 1.

2.5. Grading of evidence and recommendations

Modified after a systematic review by Weightman et al. [133] for the grading of evidence and recommendations for public health interventions, the evidence retrieved in the literature search was graded following a three-part evidence rating system: +: expert opinion; ++: unsystematic reviews; +++: Cochrane Review or other systematic reviews. A systematic review is a review which

predefines search terms and databases, gives details about inclusion and exclusion criteria, and provides details about the number of retrieved, included, and excluded documents, plus a commented list of documents used for the purpose of the systematic review. All other types of reviews are defined here as “unsystematic”.

In some cases, single trials were used if no systematic reviews were available and graded instead of reviews, and in these cases, the evidence was graded as follows: +: single uncontrolled study; ++: single controlled, unrandomized study; +++: single controlled, randomized study. The recommendations were graded following a three-part recommendation rating system: *: recommendation

based mainly on expert opinion; **: recommendation based on expert opinion and/or unsystematic reviews and/or single uncontrolled or controlled, but unrandomized studies; ***: recommendation based on Cochrane reviews or other systematic reviews or single controlled, randomized studies.

2.6. Development of quality indicators

To develop quality indicators is a normative process, deciding on the range of values of a consented operational ratio with explicitly defined nominators and denominators based on empirical data. They have been structured as explained in the previous chapters. Quality indicators were developed by the authors of this guidance based on the developed recommendations. Where possible, we used quality indicators provided by the sources of the recommendations. In most cases, quality indicators here are formulated as ratios of nominators and denominators. Usually, the number of services which provide a certain structural or procedural feature is divided by the total number of services. This may then be multiplied by 100, which gives the percentage of services providing a certain feature. Definitions of these quality indicators are given in Table 1.

3. Results

Table 1 summarizes the consented general and setting-specific recommendations for the assessment, assurance and optimisation of structure and process quality of mental health services in Europe, including gradings for evidence and recommendations, additional comments, and source informations.

This table should not be regarded as a “cookbook” for mental health services, but rather as a guide to important aspects when evaluating, developing or managing such services with respect to quality. Note that we have omitted important but rather self-explanatory components like access to fresh air or adequate staffing from the list mainly due to the fact that such elementary quality indicators can be found in generally accessible standards like those published by the Royal College of Psychiatrists (see references in Table 1). Based on the expert consensus and the retrieved evidence, the following 30 recommendations can be given on the following subjects. However, general structure recommendations on the microlevel and specific structure recommendations on both the macro- and mesolevel, as well as general process recommendations on the macrolevel and specific process recommendations on both the macro- and mesolevel cannot be given mainly because of a lack of studies.

3.1. Structure recommendations

3.1.1. General structure recommendations

3.1.1.1. Macrolevel recommendations.

3.1.1.1.1. Recommendation 1: Mental health education. Provide coordinating bodies (e.g., committees, boards, offices) that coordinate and oversee public education and awareness campaigns on mental health and mental disorders.

This recommendation is based on the WHO-AIMS Version 2.2. [143] and ensures that mental health policies are coordinated, which appears to be an important aspect to the developers of this guidance given the beformentioned mix of service structures found in European countries. The second part of the recommendation ensures that public education on mental disorders becomes a topic of awareness campaigns, which is important to ascertain that the public knows about the typical signs, symptoms and treatment opportunities for mental disorders. This recommendation is expert opinion-based since we could not identify studies showing that

such coordinating bodies or awareness campaigns lead to improved detection or better treatment of people with mental disorders.

3.1.1.1.2. Recommendation 2: Mental health reporting and monitoring. Install mental health information systems to monitor the epidemiology of mental disorders and data on the number of mental healthcare facilities, their regional distribution, frequency and type of use, staffing, and mental health research. The items mentioned in this recommendation are derived from the respective chapter (domain 6) in the WHO-AIMS Version 2.2. [143]. They are important for providing sufficient and even access to mental health services, and in order to ascertain progress in mental health research. These are the core features of mental healthcare systems—according to the opinion of the authors of this guidance – and need to be monitored and ascertained. This is an expert opinion because studies withholding such key tenets of mental healthcare in a systematized fashion would be unethical.

3.1.1.2. Mesolevel recommendations.

3.1.1.2.1. Recommendation 3: Structural requirements to ascertain patients' dignity and basic needs. Implement the ITHACA Toolkit items to ascertain that the structural requirements of in- and out-patient mental healthcare facilities are met for the fulfilment of patients' basic needs, and to ascertain that patients' dignity and human rights are observed at all times. This general structure recommendation uses the ITHACA Toolkit [72], which provides a compilation of 30 sections for monitoring human rights in mental health and social care institutions, and which is partly overlapping with corresponding recommendations in the Royal College of Psychiatrist assessment of psychiatric wards [30], and the Finnish Quality Recommendations for Mental Health Services [104]. Ascertaining human rights and the basic needs of people with mental disorders is of prime importance on the service structure level and was therefore chosen as the first recommendation on the mesolevel. Similar to recommendation 2, it would be unethical to withhold such basic rights in putative controlled studies on this subject matter, therefore the recommendation can only be on the expert level.

3.1.1.2.2. Recommendation 4: Multiprofessionality of services. Assemble multiprofessional teams with competences in social occupational-, work- and housing-related service provision. Multiprofessional teams caring for people with mental disorders are efficient, based on the evidence showing that community mental health teams, assertive community treatment teams and other types of intensive case management are efficient [reviewed by 43, 53, 97]. However, no study has formally shown that the multiprofessionality is superior to uniprofessionality, simply because such studies would ethically unfeasible and impractical. Therefore, this recommendation is based on both expert opinion and Cochrane review of international systematic studies on multiprofessional services. Following conclusions in [52], such multiprofessional teams should include a psychiatrist within an interdisciplinary team comprised of medical and social professions.

3.1.1.2.3. Recommendation 5: Access to good primary mental healthcare and specialised psychiatric care. Provide access to good primary care for mental health problems by developing primary care services with the capacity to detect and treat mental health problems, and create centres of competence and promote networks in each region; ensure access to specialised psychiatric services for those in need. Primary care here is defined as a form of healthcare which is the primary contact point of help-seeking persons. “Access” here is defined as a timely appointment for every person with a mental disorder who is in need of specialised psychiatric services. The rationale for this recommendation is the individualisation of treatment provision in that both basic and

Table 1

EPA guidance on quality of mental health services – evidence base and recommendations.

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
General structure recommendations					
Macrolevel recommendations					
Recommendation 1: Mental health education	Provide coordinating bodies (e.g., committees, boards, offices) that coordinate and oversee public education and awareness campaigns on mental health and mental disorders ^c	WHO Assessment Instrument for Mental Health Systems ⁺	Number of coordination bodies (e.g., committees, boards, offices that coordinate and oversee public education and awareness campaigns on mental health and mental disorders) per 100,000 population	Summarised recommendation derived from Items 5.1.1 in [143]: “Existence of coordinating bodies (e.g. committees, boards, offices) that coordinate and oversee public education and awareness campaigns on mental health and mental disorders”	[143] (WHO-AIMS Version 2.2.) ^c
Recommendation 2: Mental health reporting and monitoring	Install mental health information systems to monitor the epidemiology of mental disorders and data on the number of mental healthcare facilities, their regional distribution, frequency and type of use, staffing, and mental health research ^c	WHO Assessment Instrument for Mental Health Systems ⁺	Presence of a mental health information system providing annually updated information of the number of mental healthcare facilities, their regional distribution, their staffing and use (numbers of patients per diagnosis per year and per service)	Summarised recommendation derived from Domain 6 in [143]: items include that there is a formally defined list of individual data items that ought to be collected, that there is a proportion of mental hospitals, community-based psychiatric in-patient units, and mental health out-patient facilities routinely collecting and compiling data by type of information, that there is a proportion of mental health facilities from which the government health department received data in the last year, that there is a report covering mental health data by the government health department in the last year, that there is monitoring of the mental health professionals working in mental health services who have been involved as researchers in the last five years	[143] (WHO-AIMS Version 2.2.) ^c
Mesolevel Recommendations					
Recommendation 3: Structural requirements to ascertain patients' dignity and basic needs	Follow the requirements of the ITHACA Toolkit items to ascertain that the structural requirements of in- and out-patient mental healthcare facilities are met for the fulfilment of patients' basic needs, and to ascertain that patients' dignity and human rights are observed at all times ¹	Expert opinion ⁺	Number of mental healthcare facilities following the ITHACA toolkit recommendations divided by the number of mental healthcare facilities not following the ITHACA toolkit recommendations	The Ithaca toolkit provides a compilation of 30 sections for monitoring human rights in mental health and social care institutions with many recommendations similar to the recommendations by the Royal College of Psychiatrists for acute psychiatric wards [30]. This recommendation corresponds with recommendation 1 of the Finnish Quality Recommendations for Mental Health Services [72]	[72] (ITHACA Toolkit) ^d , [104]
Recommendation 4: Multiprofessionality of services	Assemble multiprofessional teams with competences in social occupational-, work- and housing-related service provision ^{***}	Expert opinion based on a metareview and Cochrane reviews of international studies ^{***}	Number of multiprofessional teams per 100,000 people with mental disorders	Recommendation in agreement with similar recommendation in the conclusion chapter of [52] and evidence for the efficiency of community mental health teams, assertive community treatment and other types of intensive case management usually involving multiprofessional teams [43,97]	[43,52,97]

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 5: Access to good primary mental healthcare and specialised psychiatric care	Provide access to good primary care for mental health problems by developing primary care services with the capacity to detect and treat mental health problems, and create centres of competence and promote networks in each region; ensure access to specialised psychiatric services for those in need [*]	Expert opinion [*]	<p>Number of primary mental health services. Korrigiert per 100,000 people with mental disorders</p> <p>Number of competence centres for psychiatry per 100,000 people with mental disorders</p> <p>Competence centers for the purpose of this guidance are those centers which health professionals, service users, carers and the media can contact for advice on the management of mental disorders</p>	<p>Structural recommendation in recommendation 6 on the need for good primary care for mental health problems (“Ensure that all people have good access to mental health services in primary care setting”, “Create centers of competence and promote networks in each region which health professionals, service users, carer and the media can contact for advice.”, “Design and implement treatment and referral protocols in primary care establishing good practice and clearly defining the respective responsibilities in networks of primary care and specialist mental health services”) [140]</p> <p>This recommendation corresponds with recommendations 3 and 7 of the Finnish Quality Recommendations for Mental Health Services [104]</p>	[140] (Mental Health Action Plan for Europe, WHO Europe, 2005) ^e , [104]
Recommendation 6: Availability of technological equipment for assessment and treatment	Provide all state of the art evidence-based technological diagnostic and therapeutic equipment and services to help-seekers within 72 hours for non-acute cases and immediate access for acute cases [*]	Expert opinion [*]	<p>Number of in- and out-patient services which provide access to major evidence-based diagnostic and therapeutic technologies within 72 hours for non-acute cases and immediate access for acute cases divided by the number of in- and out-patient services without such a provision</p> <p>ECG Chest X-ray Laboratory tests EEG MRI CT Electroconvulsive therapy</p>	Developed by authors	Expert opinion
Recommendation 7: Psychiatric workforce	Create a sufficient and competent workforce ensuring an equitable distribution and develop specialist training streams [*]	Expert opinion [*]	<p>Number of psychiatrists in out-patient psychiatric services per 100,000 people with mental disorders</p> <p>Number of psychiatrists in hospitals per 100,000 people with mental disorders</p>	<p>Structural recommendation in recommendation 9 (“Create a sufficient and competent workforce”) [140]</p> <p>This recommendation corresponds with recommendations 9 and 10 of the Finnish Quality Recommendations for Mental Health Services [104]</p>	[140] (Mental Health Action Plan for Europe, WHO Europe, 2005) ^e , [104]
Recommendation 8: Catchment areas	Ensure that catchment areas/ service areas are implemented as a way to organise psychiatric services to communities [*]	WHO Assessment Instrument for Mental Health Systems [*]	Number of people living in areas in which catchment areas are defined divided by the number of people living in areas in which no catchment areas were defined	Item 2.1.2 in [143]: “Catchment areas/ service areas exist as a way to organize mental health services to communities”	[143] (WHO-AIMS Version 2.2) ^{c*}

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 9: Day hospitals for people with acute mental disorders	Develop day hospital services for people with acute mental disorders ⁺⁺⁺	Cochrane review based on nine randomised controlled studies ⁺⁺⁺	Number of “places” in day hospital services for people with acute mental disorders per 100,000 people with acute mental disorders	Caring for people in acute day hospitals can achieve substantial reductions in the number of people needing in-patient care, whilst improving patient outcome. This review only considered studies with acute day hospitals and patient characteristics were not further described. However, the definition of a “day hospital” in the sense of this Cochrane review was “diagnostic and treatment services for acutely ill patients who would otherwise be treated on traditional psychiatric in-patient units” [100]. Therefore, the conclusions from the Cochrane review were formulated by the authors to pertain to “acute mental disorders” for the purposes of this guidance	[100]
Recommendation 10: Psychiatric care for members of minority groups	Provide adequate psychiatric care facilities for linguistic, ethnic and religious minority groups ⁺	WHO Assessment Instrument for Mental Health Systems ⁺	Number of linguistic, ethnic and religious minority groups for which specialised mental healthcare services are available divided by the number of linguistic, ethnic and religious minority groups for which specialised mental healthcare services are not available	Summarised recommendation derived from Items 2.11.3–5 [143]: 2.11.3: “Percentage of mental health out-patient facilities that employ a specific strategy to ensure that linguistic minorities can access mental health services in a language in which they are fluent” 2.11.4: “Proportionate use of mental health services by ethnic and religious minority groups in comparison to their relative population size” 2.11.5: “Proportionate number of ethnic and religious minority groups admissions to mental hospitals in comparison to their relative population size”	[143] (WHO-AIMS Version 2.2) ^c
Specific Structure Recommendations					
Microlevel recommendations					
Recommendation 11: Essential in-patient services structural requirements	Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance (Part 2) “Staffing” of Section 1 (“General Standards”) and Section 4 (“Environment and Facilities”) ⁺	Expert opinion ⁺	Number of psychiatric hospitals/ in-patient psychiatric services fulfilling the essential structural requirements outlined as Type 1 recommendations in Part 2 “Staffing” of Section 1 and Section 4 (“Environment and Facilities”) as recommender by the Royal College of Psychiatrists AIMS guidance divided by the number of services not fulfilling these requirements Each psychiatric ward is counted as a service unit	General recommendations on staffing and structures of psychiatric wards	[30]

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 12: Essential out-patient services structural requirements	Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance for in-patient services (Part 2) "Staffing" of Section 1 ("General Standards") and Section 4 ("Environment and Facilities") [*]	Expert opinion ⁺	Number of out-patient services fulfilling the essential structural requirements outlined as Type 1 recommendations in Part 2 "Staffing" of Section 1 and Section 4 ("Environment and Facilities") as recommender by the Royal College of Psychiatrists AIMS guidance divided by the number of services not fulfilling these requirements	General recommendations on staffing and structures of psychiatric wards which may in analogy be used as best practice recommendations for out-patient services	[30]
Recommendation 13: Essential rehabilitation services structural requirements	Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance (Part 2 "Staffing" of Section 1 ("General Standards") and Section 4 ("Environment and Facilities")) [*]	Expert opinion ⁺	Number of rehabilitation wards fulfilling the structural requirements as outlined as Type 1 recommendations by the Royal College of Psychiatrists AIMS guidance (Part 2 "staffing" of Section 1 ("General Standards") and Section 4 ("Environment and Facilities")) divided by the total number of rehabilitation units	General recommendations on staffing and structures of psychiatric wards, in which Type 1 recommendations are the essential ones	[31]
Recommendation 14: Community mental health teams for people with severe mental illnesses	Develop a system of community mental health teams for people with severe mental illnesses and disordered personality ^{**}	Cochrane review based on three randomised controlled studies ⁺⁺⁺	Number of community mental health teams for people with severe mental illnesses or personality disorders per 100,000 people with severe mental illness or personality disorders	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. "Personality disorder" was not closer defined in this study, but the term "personality disorder" was used as a search term for the identification of studies of putative relevance for this Cochrane review	[97]
Recommendation 15: Intensive Case Management	Implement Intensive Case Management services for severely mentally ill persons with high hospital use ⁺⁺⁺	Cochrane review of 38 trials ⁺⁺⁺	Number of severely ill persons in Intensive Case Management divided by the total number of severely ill persons	This subgroup of patients benefited from intensive case management (reduced hospitalisations, increased retention in care). "Severe mental illness" was defined using the National Institute of Mental Health criteria (Note by the Authors: this involves a diagnosis of non-organic psychosis or personality disorder, duration characterized as involving "prolonged illness" and "long term treatment" and operationalised as a two-year or longer history of mental illness or treatment, and disability, which includes dangerous or disturbing social behaviour, moderate impairment in work and non-work activities and mild impairment in basic needs), and, in the absence of these criteria, an illness such as schizophrenia, schizophrenia-like disorders, bipolar disorder, depression with psychotic features or/and personality disorder [43]	[43]

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 16: Integrated Care Models	Develop and implement integrated models of cooperative community care providing scientific evidence-based services with joint budgetary responsibility of participating service providers**	Expert opinion based on a metareview of international studies**	Number of integrated models of cooperative community care providing evidence-based services with joint budgetary responsibility of participating service providers divided by the sum of the numbers of psychiatric hospitals, psychiatric departments in general hospitals, out-patient mental healthcare services and private psychiatric practices	Recommendation derived from similar recommendations in the conclusion chapter of Ref. [52]	[52]
Process recommendations					
General process recommendations					
Mesolevel recommendations					
Recommendation 17: Evidence-based medicine	Follow the rules of evidence-based medicine in diagnostic and therapeutic decisions**	Systematic reviews and single studies**	Numbers of mental health services (in- and out-patient) with implemented standard operating procedures ascertaining obedience to the rules of evidence-based medicine divided by the number of mental health services (in- and out-patient) without such implemented standard operating procedures	Reviews and single studies show that following evidence-based medicine guidelines leads to improved outcome	[147]
Microlevel recommendations					
Recommendation 18: Safety issues	Implement operational policies in psychiatric facilities to ascertain patient and staff safety, e.g., with efficient alarm systems, and to manage violent patient behaviour*	Royal College of Psychiatrists Accreditation for Acute In-patient Mental Health Services*	Number of the mental health services (in- and out-patient) with standard operational policies to ascertain patient and staff safety divided by the number of those without such standard operational policies Operational policies defined here for the purpose of this guidance as predefined standard procedures which are used to deal with specific organisational tasks	Recommendations in Numbers 18.1–18.5 (safety), 19.1–19.9. (management of violence), 20.1–20.7 (falls), 21.1–21.3 (pressure ulcer care), 22.1–22.5 (infection control), 23.1–23.2 (management of alcohol and illicit drugs), 24.1–24.7 (safety) and 25.1 (alarm systems)	[30] (Royal College of Psychiatrists) ^f
Recommendation 19: Informed consent	Ascertain that the choice of treatment is made jointly by the patient and the responsible clinician based on an informed consent*	Royal College of Psychiatrists Accreditation for Acute In-patient Mental Health Services*	Number of patients in all mental health services treated with informed consent divided by the number of patients in all mental health services treated without informed consent	Recommendation 37.1 generalized here to apply to all patients in all types of mental health services and not only related to medication decisions: "The choice of medication is made following consultation with the patient and/or carer and the responsible clinician based on an informed discussion of: the relative benefits of the medication; the side-effects; alternatives; the route of administration (which may include consideration of the need for covert medicines administration if medication refusal is an issue)"	[30] (Royal College of Psychiatrists) ^f

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 20: Monitoring of physical illness and access to general and specialised medical services	Monitor physical illness and provide timely access to general and specialised medical services when necessary ^{**}	WPA recommendation on physical illness in patients with mental disorders and EPA position statement on cardiovascular disease and diabetes in people with severe mental illness (unsystematic reviews) ^{**}	Number of patients with mental illness and with physical illness monitoring divided by the total number of patients with mental illness	In correspondence with recommendation 4 at the system level (e.g., population-wide recommendations as contrasted to individual level actions recommended) [39], to improve access to and care of physical health of people with severe mental illness (“Improve access and care of physical health of the SMI population”) SMI = severe mental illness	[36,38,39]
Specific process recommendations Microlevel recommendations					
Recommendation 21: Hospitals/ In-patient Services: basic requirements	Implement the essential process requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS (Section 2 “Timely and Purposeful Admission” and Section 3 “Safety”) [†]	Expert opinion [†]	Number of patients admitted to mental hospitals and other in-patient services for which Type 1 recommendations of Section 2 (“Timely and Purposeful Admission”) and Section 3 (“Safety”) are fulfilled divided by the total number of admitted patients	These Type 1 recommendations are essential elements of the general recommendations on staffing and structures of psychiatric wards, which are here focused on timely and purposeful admission and safety aspects as the key elements for providing basic requirements	[30] (Royal College of Psychiatrists) ^f
Recommendation 22: Hospitals/ In-patient Services: admission procedures	Ensure that on the day of their admission to a psychiatric ward, patients receive a basic structured psychiatric and medical assessment [†]	Royal College of Psychiatrists Accreditation for Acute In-patient Mental Health Services [†]	Number of patients with mental illness admitted to a psychiatric ward or other in-patient psychiatric service with psychiatric and medical assessment within 24 hours of admission divided by the number of admitted patients with mental illness	Revised recommendation 12.8: “On the day of their admission or as soon as they are well enough, patients receive a basic structured standard medical assessment and this is documented”	[30] (Royal College of Psychiatrists) ^f
Recommendation 23: Hospitals/ In-patient Services: access of wards to special services	Implement access of psychiatric wards to the following services: psychology, occupational therapy, social work, administration, pharmacy [†]	Royal College of Psychiatrists Accreditation for Acute In-patient Mental Health Services [†]	Number of the mental hospital and other in-patient units with access to psychology, occupational therapy, social work, administration and pharmacy divided by the total number of mental hospital wards	Recommendation 2.9: “The ward has access to sessional or part-sessional support from the following services: psychology, psychological therapies, occupational therapy, social work, pharmacy, dietetics, speech and language therapy”	[30] (Royal College of Psychiatrists) ^f
Recommendation 24: Hospitals/ In-patient Services: detained patients procedures	Give detained patients prompt written information on their rights according to national rules and regulations [†]	Royal College of Psychiatrists Accreditation for Acute In-patient Mental Health Services [†]	Number of detained patients with written information on their rights within 12 hours divided by the number of detained patients without such information	Rewritten and generalised recommendation 12.5: “On the day of their admission or as soon as they are well enough, detained patients are, in accordance with section 132 of the MHA, given written information on their rights, rights to advocacy and second opinion, right to move hospital, right of access to interpreting services, professional roles and responsibilities, and the complaints procedures.” MHA = mental health act	[30] (Royal College of Psychiatrists) ^f

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 25: Elimination of waiting times for out-patient appointments	Implement processes to eliminate waiting times for out-patient appointments ^c	Single uncontrolled study ^d	Number of patients with a waiting time of 0 days divided by the number of patients with a waiting time > 0 days. From the literature, no normative standard for an acceptable maximal waiting time can be derived, because interindividual needs vary widely. The ideal target value should be zero days, since this study tried to eliminate waiting times	Elimination of waiting times for out-patient appointment reduces hospital admissions	[145]
Recommendation 26: Rehabilitation units	Implement the essential process requirements as outlined as Type 1 recommendations by the Royal College of Psychiatrists AIMS guidance: Part 1 "Policies and Protocols" of Section 1 ("General Standards"); Part 15 "Initial Assessment and Care Planning", of Section 4 ("Timely and Purposeful Admission"), and Section 3 ("Safety") ^e	Expert opinion ^d	Number of psychiatric rehabilitation wards which fulfil all Type 1 recommendations of the Royal College of Psychiatrists AIMS guidance in Part 1 ("Policies and Protocols") of Section 1 ("General Standards"), Part 15 ("Initial Assessment and Care Planning"), of Section 4 ("Timely and Purposeful Admission"), and Section 3 ("Safety") divided by the number of psychiatric rehabilitation wards	General recommendations on staffing and structures of rehabilitation in-patient units	[31]
Recommendation 27: Effective components of home-based treatment	Implement the effective process components of home treatment teams: small case load, regular visits at home, high percentage of contacts at home, responsibility for health and social care ^e	Cochrane search and expert opinion ^{d+}	Number of mental healthcare facilities providing home treatment and follow a plan for regularly visiting at home, achieve at least a 50% rate of contacts at home, have responsibility for health and social care, and have small case loads of less than 50 patients per case manager, divided by those mental healthcare facilities providing home treatment and not fulfilling at least one of these requirements Explanatory note: "Responsibility for health and social care" means that responsibility for healthcare and social care rest within the same multidisciplinary team [21]	This indicator assesses whether home treatment services implement effective process components as identified in [21]. Note that the contact rate of 50% and the case load of 50 cases per case manager were chosen as expert opinions since there are no studies proving the efficacy or non-efficacy of home treatment for services not meeting a certain contact rate or with higher or lower numbers of cases per case manager. The studies show associations between case load and outcome and between high percentages of contact at home and outcome. Based on an analysis of the efficiency of assertive community treatment and other types of home-based treatment [21], the authors had shown that results varied widely giving an inconclusive picture. Therefore, this review set out to define the active components across the different home-based services and found that these two components were significantly associated with a reduction in hospitalization	[21]

Table 1 (Continued)

Topic	Recommendations and gradings ^a	Evidence base and gradings ^b	Quality indicators (proposals)	Comments	Source
Structure Recommendations					
Recommendation 28: Essential components of community mental health treatment	Implement the essential components of community mental health treatment: Multidisciplinary patient assessment, regular team reviews, monitoring and prescribing medication, psychological interventions, focus on continuity of care ^c	Cochrane review and expert opinion ^{**}	Number of persons in community mental healthcare who receive all of the following: multidisciplinary assessment, regular team reviews, monitoring and prescribing medication, psychological interventions and whose management plan has a focus on the continuity of care, divided by the number of all persons in community mental healthcare	These are the elements characteristic of community mental healthcare teams. Although there are no studies showing that high fidelity to these elements is significantly effective, the lack of studies pertaining to this question makes only an expert opinion available based on current practice	[97]
Recommendation 29: Active components of intensive case management	Implement the known active components of intensive case management, if intensive case management is used ^{***}	Cochrane review of 38 trials ^{***}	Combined index of the subscales "team membership" and "team structure organisation" of the Index of Fidelity to Assertive Community Treatment. As there is just a general correlation between this index and outcome, no cutoff can be given here	Model fidelity was associated with decreased hospital times	[43]
Recommendation 30: Organisational integration of psychiatric in-patient and out-patient services	Organisationally integrate psychiatric hospitals or psychiatric departments in general hospitals with psychiatric out-patient facilities including out-patient facilities in psychiatric hospitals, private practices and other ambulatory mental health services ^d	WHO Assessment Instrument for Mental Health Systems ^e	Number of mental hospitals organisationally integrated with mental health out-patient facilities divided by the total number of mental hospitals	Item 2.1.3: "Proportion of mental hospitals organisationally integrated with mental health out-patient facilities"	[143] (WHO-AIMS Version 2.2.) ^{c,f}

Although WHO-AIMS was mainly developed as an assessment instrument for middle- and low-income countries [118], it provides a range of indicators that appear also useful for European high-income countries, and these were transposed into recommendations for the European Guidance.

^a The recommendations developed by the authors of this paper were graded following a three-part recommendation rating system: *: recommendation based mainly on expert opinion; **: recommendation based on expert opinion and/or unsystematic reviews and/or single uncontrolled or controlled, but unrandomized studies; ***: recommendation based on Cochrane reviews or other systematic reviews or single controlled, randomized studies.

^b The evidence retrieved in the literature search was graded following a three-part evidence rating system: +: expert opinion; ++: unsystematic reviews; +++: Cochrane Review or other systematic reviews. A systematic review is a review which predefines search terms and databases, gives details about inclusion and exclusion criteria, and provides details about the number of retrieved, included, and excluded documents, plus a commented list of documents used for the purpose of the systematic review. All other types of reviews are defined here as "unsystematic". In recommendations where single trials were used as the best available evidence source, the evidence was graded as follows: +: single uncontrolled study; ++: single controlled, but unrandomized study; +++: single controlled, randomized study.

^c http://www.who.int/mental_health/evidence/AIMS_WHO_2_2.pdf.

^d <http://www.ithaca-study.eu/outlines.html>.

^e http://www.euro.who.int/__data/assets/pdf_file/0008/96452/E87301.pdf.

^f <http://www.rcpsych.ac.uk/crtu/centreforqualityimprovement/aims.aspx>. Internet sources c to f, last accessed on August 24, 2010.

specialised mental health services are necessary to cover the needs of all people with mental disorders. This cannot be studied in controlled trials, therefore this recommendation is founded on expert opinion, but it is based on recommendations from the WHO Mental Health Action Plan for Europe [140] and the Finnish Quality Recommendations for Mental Health Services [104].

3.1.1.2.4. Recommendation 6: Availability of technological equipment for assessment and treatment. Provide all state of the art evidence-based technological diagnostic and therapeutic equipment and services within 72 hours. This structural recommendation is based on the clinical experience that a thorough (preferably evidence-based) diagnostic workup in a person with a mental health problem may require a range of technical investigations. The time limit of 72 hours will be considered sufficient for non-acute cases. However, in acute cases, immediate referral to specialists providing these services may be required. An important aspect for the general quality of mental health services is whether they can provide access to all necessary diagnostic and therapeutic procedures in time. For instance, medical technologies like biochemical laboratory assessments including drug monitoring, electrocardiography, electroencephalography, neuroimaging (computed tomography, magnetic resonance imaging), or facilities for electroconvulsive treatment, neuropsychological testing, somatic counselling services and experimental-psychological investigations should be provided close to the help-seeking person. We could not identify any systematic studies comparing settings with and without the availability of such technology, and such research would ethically hardly be justifiable. Given the frequent mentioning of such technologies in evidence-based guidelines for the diagnosis and treatment of mental disorders, we felt it necessary to add this item to the guidance list as a prerequisite for any modern mental healthcare service.

3.1.1.2.5. Recommendation 7: Psychiatric Workforce. Create a sufficient and competent workforce ensuring an equitable distribution and develop specialist training streams. This recommendation should not only cover psychiatrists but any number of specialists necessary to supply a sufficient number of services with sufficiently qualified numbers of mental healthcare professionals with an equitable distribution over a region (see also the recommendation on the multiprofessionality of services). The ideal would be a quantitatively sufficient and qualitatively competent workforce depending on the need of the targeted region. This recommendation has an ethical background and was based on a corresponding recommendation by WHO [140] and the Finnish health authorities [104]. A large number of quality indicators could be developed but we focused on the numbers of psychiatrists in in- and out-patient settings per 100,000 people since this guidance mainly aims at optimizing mental healthcare by psychiatrists. Similar indicators may be developed for other professions like psychologists, social workers and nurses in order to ascertain availability and training to support access to adequate multiprofessional mental healthcare (see also Recommendation 4). An important but problematic issue would be the optimal number of psychiatrists or other mental healthcare professionals, which would be expected to be highly variable due to the available mental healthcare framework, the mix of mental healthcare services, the prevalence and incidence of mental disorders and the financial resources. Therefore, we could not give any concrete figures or limits for these quality indicators, but advise to use them in order to detect trends over time which may indicate a deterioration of service qualities if the indicator declines. Other pressing questions are the definitions of “sufficient” and “competent”, and we suggest that mental healthcare planners decide on these definitions individually since these are normative concepts whose operationalisations will be highly dependable on the

available resources, mental healthcare traditions and societal consensus in every country.

3.1.1.2.6. Recommendation 8: Catchment areas. Ensure that catchment areas/service areas are implemented as a way to organise mental health services to communities. This recommendation is expert opinion-based and follows a corresponding WHO recommendation [143]. This was deemed important for inclusion in the EPA Guidance since it will help to structure and analyse mental healthcare services in a given region also clarifying responsibilities for mental healthcare provision in a given country or area.

3.1.1.2.7. Recommendation 9: Day hospitals for people with acute mental disorders. Develop day hospital services for people with acute mental disorders. This recommendation is based on a Cochrane review [100] and the major sources of evidence were 9 randomized, controlled studies showing that caring for people in acute day hospitals can achieve substantial reductions in the number of people needing in-patient care, whilst improving patient outcome. This review only considered studies with acute day hospitals and patient characteristics were not further described. However, the definition of a “day hospital” in the sense of this Cochrane review was “diagnostic and treatment services for acutely ill patients who would otherwise be treated on traditional psychiatric in-patient units” [100]. Therefore, the conclusions from the Cochrane review were formulated by the authors to pertain to “acute mental disorders” for the purposes of this guidance. Marshall et al. analysed the effects of day hospital versus in-patient care for people with acute psychiatric disorders in their systematic Cochrane review. The conclusion was that acute day hospitals can reduce the number of patients requiring in-patient care and reduce costs. For patients who were judged suitable for day hospital care, the patient data indicated a more rapid improvement in mental state, but not in social functioning amongst people treated in the day hospital. There was no significant difference in readmission rates between day hospitals and controls and while the total hospital day numbers were unchanged, the relative distribution changed towards day hospital days [100] (evidence grade: systematic Cochrane Review). Another Cochrane Review [119] assessed the effects of day hospitals as an alternative to continuing out-patient care for people with schizophrenia and similar severe mental illnesses. The authors stated that day hospitals may help to avoid in-patient care, but they also point out that evidence is limited; there was a lack of some outcome parameters like “quality of life”, “satisfaction”, “healthy days” and “costs”. Data on time spent as in-patient were poorly reported, data regarding allocation rates to hospital care were heterogeneous. There was no difference for loss to follow-up and findings on social functioning were equivocal. There was some indication for a reduction of the rate of unemployment. Different measures of mental state showed no convincing effect (evidence grade: systematic Cochrane review). No information is available as to the process components which are necessary for providing efficient day hospital services. A similar model of mental healthcare is day centre care, but the last Cochrane review found no sufficient studies to assess this type of service coming to the conclusion that pragmatic decisions should be taken if given the choice of using a day centre for mental illness [28]. Therefore, we have not added a recommendation for or against day centres in this guidance.

3.1.1.2.8. Recommendation 10: Psychiatric care for members of minority groups. Provide adequate psychiatric care facilities for linguistic, ethnic and religious minority groups. Given the multiethnicity of the European population and the free exchange of people between European countries, this expert opinion-based recommendation was derived from similar WHO recommendations [143]. It seems important to the developers of the EPA

Guidance since migration backgrounds are now common in a significant ratio of people in Europe and the nature of mental disorders makes it highly advisable to assure that mental healthcare is offered in the mother-tongue of any person affected by a mental disorder. In addition, individual ethnic and religious aspects of a mental disorder need to be respected, which may necessitate certain organisational provisions like special meals or time and space for religious ceremonies in in-patient settings. This, of course, may put a high organisational strain on mental healthcare service providers, but it is inevitable in order to ascertain a high service standard which meets the demands of people with mental disorders.

3.1.2. Specific structure recommendations

3.1.2.1. Microlevel recommendations.

3.1.2.1.1. Recommendation 11: Essential in-patient services structural requirements. Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance (Part 2) “Staffing” of Section 1 (“General Standards”) and Section 4 (“Environment and Facilities”). We chose only the Type 1 recommendations, because according to the classification of recommendations in the AIMS guidance [30], failure to meet these standards would result in a significant threat to patient safety, rights or dignity and/or would breach the law. Type 2 recommendations are those that an accredited ward would be expected to meet and type 3 recommendations are standards that an excellent ward should meet or standards that are not the direct responsibility of the ward. This expert opinion-based recommendation serves to ascertain a minimum structural quality in selected staffing and facility hardware-centered areas of in-patient mental healthcare. It is based on the recommendation set for psychiatric wards developed by the Royal College of Psychiatrists [30]. We chose the AIMS guidance as our main source because it is available in English, is rather comprehensive and has a high face value. We wanted to be as explicit as possible in our recommendations without overwhelming the EPA Guidance by too many items, therefore we selected “staffing” and “environment and facilities” as the central elements. Other aspects of in-patient treatment covered by the AIMS guidance are dealt with in other recommendations of the EPA Guidance.

International experiences are limited in defining the essential in-patient structural requirements. A working group of Swiss chief psychiatrists agreed on 9 standards for in-patient psychiatric hospitals (these standards include handling critical processes like admission, treatment contract and discharge, dealing with risky situations, involuntary treatment [fixation, isolation, medication], evidence-based treatment, patient satisfaction, interdisciplinary cooperation, handling patient data, appraisal interviews, integrating medico-economical thinking and actions) (evidence grade: expert opinion). These standards can help to build up quality projects or to fulfil external quality requirements like those from EFQM or ISO [135]. The Finnish Mental Health Preparation and Monitoring Group and the UK Royal College of Psychiatrists’ Centre for Quality Improvement have published standards for several mental health services in various settings (evidence grade: expert opinion). The patient questionnaires mentioned above and also the standard instruments of the Royal College of Psychiatrists can be recommended for quality assessments of psychiatric hospitals. No evidence-based consensus method to determine the optimal amount of in-patient beds or treatment places could be identified, we have therefore not made any recommendation for this question, and no studies addressed the question which were the effective process components for mental health in-patient services in general. Therefore, we by and large suggested to follow the Royal College of Psychiatrists recommendations for the structure and

processes of in-patient mental health services [30] supplemented by the Finnish recommendations [104].

An important question when addressing the issue of structural requirements of in-patient mental health services was how to consider patients’ views. A study in Germany aimed to identify aspects of care and treatment which patients considered important, and the degree of patient satisfaction with the services provided. The questionnaire developed for this study covered 22 areas of care and treatment. Patients distinguished between aspects they considered important and aspects they were satisfied with. Areas that were rated as highly important but received low satisfaction ratings included: medication, medical/psychiatric examinations and patient participation in treatment planning. Patient-staff relationships were rated as important and satisfactory. Patient-staff-relationships were also more important for patient satisfaction than the “hotel factor”, which includes “ward accommodation” and “quality of food”. The authors conclude that the patient survey can be used for quality improvement in psychiatric hospitals (evidence grade: uncontrolled study) [89]. The question remains open how much weight should be given to patients’ perceptions and what other evidence should be considered. Gigantesco et al. [58] have also developed and evaluated a self-rating questionnaire for the routine assessment of patients’ opinions and experiences of the quality of care in in-patient psychiatric wards. The ROQ-PW questionnaire (Rome Opinion Questionnaire for Psychiatric Wards’) includes 10 items. The overall results of the study seem to indicate that this questionnaire is an adequate tool for evaluating patients’ opinions on the care provided in in-patient psychiatric wards, which could be slightly modified for use in other settings, such as day centres, residential facilities and day hospitals (evidence grade: uncontrolled study). As it does not involve observer-based assessments, it avoids observer biases.

3.1.2.1.2. Recommendation 12: Essential out-patient services structural requirements. Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance for in-patient services (Part 2) “Staffing” of Section 1 (“General Standards”) and Section 4 (“Environment and Facilities”). This is an expert opinion-based recommendation analogous to the corresponding in-patient services recommendation (Recommendation 10). It was developed by the authors of this guidance in order to ascertain that some basic structural requirements are also supplied for the orientation and assessment of mental health out-patient services. Since there was no generic out-patient recommendation available, we suggest to use the applicable AIMS in-patient recommendations in analogy [30]. No comparative suggestions for essential general components of out-patient services are available in Europe. One important factor could be the number of psychiatrists in out-patient services and the number of out-patient mental healthcare facilities, but the necessary numbers depend on a large number of factors like the degree of dehospitalisation in a given country. Therefore, no specific recommendations for the number of in-patient beds and out-patient treatment places, or the optimal mix between these two areas of mental healthcare in a given mental healthcare system, are given here.

3.1.2.1.3. Recommendation 13: Essential rehabilitation services structural requirements. Implement the essential structural requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS guidance (Part 2) “Staffing” of Section 1 (“General Standards”) and Section 4 (“Environment and Facilities”). This is a recommendation analogous to recommendations 11 and 12, but now with a more specific reference to the AIMS guidance developed for in-patient rehabilitation units [31]. The developers of the EPA Guidance think that the same standards used for psychiatric in- and out-patient services should also be applied

to special rehabilitation units and although the AIMS guideline was developed for in-patient rehabilitation units, it may be used in analogy for out-patient rehabilitation units as well. Thus, the rationale for its inclusion is similar as for recommendations 11 and 12. We could not identify specific studies on comparative analyses of different service structures or specific processes in rehabilitation mental healthcare. Certain measures like supported employment or cognitive training are effective in improving rehabilitation outcome especially in schizophrenia and other severe mental illnesses (evidence grade: controlled studies) [15,23,27,44,102]. The components of such complex interventions like supported employment which are most important for therapeutic effects are manifold, but model fidelity appears to play a role and the mental healthcare setting in which these measures are applied is a major factor (evidence grade: systematic review) [15]. The beneficial effects of supported employment are partly dependent on the country in which the method is applied and the generalisability of the beneficial effects of cognitive training to diverse settings and countries remains to be determined. Thus, while it appears reasonable to assume that the structural measures for providing supported employment and cognitive training in mental health rehabilitation should be provided, it appears premature to suggest this as an EPA Guidance. Considering the lack of studies on structure or process effectivity components, we chose to recommend to implement the Royal College of Psychiatrists standards for psychiatric wards (expert opinion recommendations) also for rehabilitation services. These were designed for in-patient rehabilitation units and we could not identify any similarly systematic specific structure or process recommendations for out-patient rehabilitation services.

3.1.2.1.4. Recommendation 14: Community mental health teams for people with severe mental illnesses. Develop a system of community mental health teams for people with severe mental illnesses and disordered personality. This recommendation is based on a Cochrane Review with three randomised controlled studies [97]. 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. “Personality disorder” was not closer defined in this study, but the term “personality disorder” was used as a search term for the identification of studies of putative relevance for this Cochrane review. Especially the Italian experience has provided a wealth of data regarding the efficiency of community-based mental healthcare [6,125]. While substantial reductions in the numbers of hospital care patients have been achieved, community mental health services were established and more frequently used (evidence grade: systematic review) [6]. While residential facilities have been established more or less completely, general hospital psychiatric units are still being added [95]. The spectrum of patients treated in the different facilities and the range of facilities offered shows considerable regional variation even thirty years after the start of the Italian reforms with shortages of public in-patient beds in some regions [35,95]. While the public in-patient sector declined, the private sector remained at the pre-reform level so that the number of private in-patient beds per 10,000 population now exceeds the number of public beds [35]. A major lesson here was that de-institutionalisation can only succeed when the appropriate community mental health services are simultaneously scaled up. From a more general view, the ways of implementing community-based mental health services vary widely between countries prohibiting premature generalisations. A systematic review of community-based care services came to the conclusion that the psychiatric workforce plays a decisive role when outcome variance was to be explained. The presence of a psychiatrist, for example, was considered to be essential for the

success of assertive community treatment (ACT) teams. The same applied to staffing levels, the availability of a minimum number of psychiatric beds and the compliance with elementary principles of the ACT service model (“model fidelity”) [52] (evidence base: systematic review). The World Psychiatric Association has recently summarized the global experiences of de-institutionalisation in mental healthcare and provided a guidance on steps, obstacles and mistakes to avoid in the implementation of community mental healthcare [130]. Besides financial and organisational aspects, not neglecting mental disorders other than schizophrenia in community mental healthcare and paying due attention to patients’ physical health appear as important additional factors to be considered. A new trend is the introduction of compulsory community treatment and involuntary out-patient treatment for people with severe mental disorders. A recent Cochrane review showed that only few studies were available and that this results in no significant difference in service use, social functioning or quality of life compared with standard care, but that people receiving compulsory community treatment were less likely to be victims of crime [80]. Given this small evidence base, we have not formulated guidance recommendations for this special type of out-patient mental health service.

3.1.2.1.5. Recommendation 15: Intensive case management. Implement Intensive Case Management services for severely mentally ill persons with high hospital use. This recommendation is based on a Cochrane review of 38 studies and although the intervention effects seemed weak, the subgroup of severely mentally ill persons benefited from intensive case management (reduced hospitalisations, increased retention in care).

3.1.2.1.6. Recommendation 16: Integrated care models. Develop and implement integrated models of cooperative community care providing scientific evidence-based services with joint budgetary responsibility of participating service providers. This recommendation is derived from the conclusions of a review [52] and based on results from studies and expert opinion.

3.2. Process recommendations

3.2.1. General process recommendations

3.2.1.1. Mesolevel recommendations.

3.2.1.1.1. Recommendation 17: Implementation of evidence-based medicine. Follow the rules of evidence-based medicine in diagnostic and therapeutic decisions. This recommendation was derived from a review and single studies (summarized in [147]). This summary was focused on guideline implementation and although the evidence base is small, this is the best evidence that is available and therefore this recommendation can be made in general.

3.2.1.2. Microlevel recommendations.

3.2.1.2.1. Recommendation 18: Safety procedures. Implement operational policies in mental health facilities to ascertain patient and staff safety, e.g., with efficient alarm systems, and to manage violent patient behaviour. This recommendation is based on expert opinion following the Royal College of Psychiatrists AIMS recommendation [30]. It was included because it addresses an important issue in mental healthcare and although no studies are available, active management of such problematic situations seems the best evidence-based practice. The prevention of deep vein thrombosis, for example, is important for secluded or restrained patients with mental illnesses and it is essential to establish a detailed management plan on seclusion and fixation taking into account the medical risks of physical restraint [37]. The AIMS recommendation also includes suggestions on how to deal with critical situations like the necessity for restraint, with a

special emphasis on those persons with medical conditions which may increase the likelihood of injury during periods of restraint (recommendations 12.10 and 20.6 in [30]).

3.2.1.2.2. Recommendation 19: Informed consent. Ascertain that the choice of treatment is made jointly by the patient and the responsible clinician based on an informed consent. This expert opinion-based recommendation was derived from a medication-related AIMS recommendation [30] and generalized to include all treatment decisions – not just medication decisions.

3.2.1.2.3. Recommendation 20: Monitoring of physical illness and access to general and specialised medical services. Monitor physical illness and provide timely access to general and specialised medical services when necessary. This recommendation is based on expert opinion and on studies indicating the high prevalence of physical illness in persons with mental disorders [36,38,39].

3.2.2. Specific process recommendations

3.2.2.1. Microlevel recommendations.

3.2.2.1.1. Recommendation 21: Hospitals/in-patient services: basic requirements. Implement the essential process requirements as outlined as Type 1 recommendation by the Royal College of Psychiatrists AIMS (Section 2 “Timely and Purposeful Admission” and Section 3 “Safety”) [30]. This expert opinion-based recommendation serves to ascertain that in two essential elements of in-patient processes, namely admission procedures and safety, basic requirements are met.

3.2.2.1.2. Recommendation 22: Hospitals/in-patient services: admission procedures. Ensure that on the day of their admission to a psychiatric ward, patients receive a basic structured psychiatric and medical assessment. This recommendation follows a similar recommendation in the AIMS guidance [30] and is based on expert opinion. It has a high face validity and its fulfilment needs to be ascertained since it is essential to in-patient services quality. A question that we also addressed was the necessary length of hospital stays. A Cochrane review by Alwan et al. [5] had identified six randomized trials comparing the effects of long vs. short stays and that the persons with short stays were more likely to be employed. However, given the lack of systematic studies and the large intra- and interindividual variability of the presumed optimal length of stay, we did not include any recommendation as to the necessary duration.

3.2.2.1.3. Recommendation 23: Hospitals/in-patient services: access of wards to special services. Implement access of psychiatric wards to the following services: psychology, occupational therapy, social work, administration, pharmacy. This expert opinion-based recommendation was developed following a similar AIMS recommendation [30] and reflects the necessity of multiprofessional service provision of people with mental disorders.

3.2.2.1.4. Recommendation 24: Hospitals/in-patient services: detained patients procedures. Give detained patients prompt-written information on their rights according to national rules and regulations. This expert opinion-based recommendation was developed following a similar AIMS recommendation [30] and shall assure that in this very sensitive therapeutic setting, essential legal standards are adhered to.

3.2.2.1.5. Recommendation 25: Elimination of waiting times for out-patient appointments. Implement processes to eliminate waiting times for out-patient appointments. Although this recommendation is evidence based from only a single uncontrolled study [145], it provides quality assurance for a very important field dealing with the continuity and accessibility of mental healthcare.

3.2.2.1.6. Recommendation 26: Rehabilitation units. Implement the essential process requirements as outlined as Type 1 recommendations by the Royal College of Psychiatrists AIMS guidance: Part 1 “Policies and Protocols” of Section 1 (“General Standards”); Part 15 “Initial Assessment and Care Planning” of Section 4 (“Timely and

Purposeful Admission”) and Section 3 (“Safety”). This is a recommendation serving to ascertain that basic process requirements are met in rehabilitation service units. It is expert opinion-based [31] and provides a selection of essential requirements out of a larger and more comprehensive list.

3.2.2.1.7. Recommendation 27: Effective components of home-based treatment. Implementation of the effective process components of home treatment teams are included: small case load, regular visits at home, high percentage of contacts at home, responsibility for health and social care. This indicator assesses whether home-treatment services implement effective process components as identified in [21]. The studies show associations between case load and outcome and between high percentages of contact at home and outcome. Based on an analysis of the efficiency of assertive community treatment and other types of home-based treatment, it was shown that results varied widely giving an inconclusive picture. A recent Cochrane review dealing with home crisis intervention came to the conclusion that home care leads to a reduction of repeated hospital admissions, reduces loss to follow-up and reduces family burden, and increases patient and relatives satisfaction, but that more evaluative studies were needed [76]. No effects on mental state or mortality were found. For older people with mental health problems, a systematic review by Toot et al. [131] came to the conclusion that crisis resolution/home treatment teams were effective in reducing the number of hospital admissions, but that evidence was inadequate for drawing conclusions about length of hospital stay and maintenance of community residence. A randomized controlled trial concluded that mobile crisis team intervention to enhance linkage of suicidal emergency department patients to out-patient psychiatric services had no positive effects on patient-relevant outcomes although it increased the contact rate [35]. The evaluation of home-based mental healthcare services is made difficult due to the large variation of the kinds of services provided [20]. Burns et al., however, identified the following six components as the effective ingredients of home-based care for mental illness based on a Cochrane search: smaller case loads, regularly visiting at home, a high percentage of contacts at home, responsibility for health and social care, multidisciplinary teams and a psychiatrist integrated in the team [21]. These were chosen as structural or process recommendations as appropriate.

3.2.2.1.8. Recommendation 28: Essential components of community mental health treatment. Implement the essential components of community mental health treatment. If implemented, community mental health treatment should include effective elements. This includes the following process elements: multidisciplinary patient assessment, regular team reviews, monitoring and prescribing medication, psychological interventions, focus on continuity of care. As a conclusion of 6 controlled studies from England, Australia and Canada, community mental health teams had no added effect on psychiatric symptoms. Admissions to hospitals were possibly lower. Social adjustment and patient satisfaction levels were better [52]. Malone et al. [97] evaluated the effects of community mental health teams for people with serious mental illnesses versus non-team standard care (evidence base: systematic Cochrane review). They concluded that community mental health teams were superior in promoting greater acceptance of treatment and may be superior in reducing hospital admission and avoiding death by suicide. As aforementioned, the WPA guidance discusses this issue in more detail [96,130]. For the EPA guidance recommendation, the positive effects on treatment acceptance suggest the usefulness of implementing CMHT services and to include the following process elements: multidisciplinary patient assessment, regular team reviews, monitoring and prescribing medication, psychological interventions, focus on continuity of care. These are the elements characteristic of CMT teams. Although

there are no studies showing that high fidelity to these elements is significantly effective, the lack of studies pertaining to this question makes only an expert opinion available based on current practice [100].

3.2.2.1.9. Recommendation 29: Active components of intensive case management. Implement the known active components of intensive case management, if intensive case management is used. If implemented, intensive case management should follow the rules outlined by assertive community treatment procedures. This recommendation is based on a Cochrane review of 38 studies showing that model fidelity was associated with reduced hospital times [43]. The available evidence suggests that intensive case management is most effective to reduce the numbers of days in psychiatric hospitals in the most severely affected people with mental illness with high-frequency use of mental health services [23] (evidence base: systematic review). There was a global positive effect on social functioning. The effects on mental state and quality of life, however, remained uncertain. Intensive Case Management seems to be most effective in those with a severe mental illness with high levels of hospitalisation rates and in those who receive this service in a setting with high fidelity to the original service construct. Marshall identified several critical issues in that terminology in this field was often confusing and that the adherence to the definitions of complex interventions was of central importance. Also, the choice of control group was very decisive for the net effect of such complex interventions, a problem which makes meta-analyses inherently difficult. Similarly, Burns et al. reported that European studies on intensive case management failed to replicate the highly significant advantages over standard care demonstrated in early American and Australian work [19]. In the EPA guidance, intensive case management is therefore only recommended for those with severe mental illness and high hospital use (structure recommendation), and a high degree of model fidelity to standardised model constructs like assertive community treatment or case management is necessary. A recent controlled trial concluded that assertive community treatment was effective for improving one-year outcome in schizophrenia patients [88] (evidence base: controlled study). Interventions in this class of mental health services were assessed in a recent Cochrane review by Dieterich et al. [43] with the main result that such services reduced hospitalisations compared to standard care, increased retention in care and reduced loss to follow-up. The results on mental state outcomes were considered equivocal. Mortality or suicidality were not changed compared to standard care. Social functioning results varied and data for quality of life were weak and inconclusive. A close adherence to the assertive community treatment model appeared to benefit the outcome “decreasing times in hospital”, which was most pronounced in services with a high baseline hospital use rate in the population. In summary, Dieterich et al. [43] concluded that intensive case management was effective in improving process variables, but less so – if any – outcome variables. The conclusion for this guidance is to suggest the implementation of such services only for severely ill persons with high hospital use (structure recommendation) and to suggest to use model fidelity as a process recommendation.

While preadmission out-patient care appears to lead to reduce hospital stay times [33] (evidence base: observational study in different settings with and without preadmission out-patient care) and seems to be a quality indicator which may be dealt with by a case manager, it is questionable in how far the number of readmissions is a quality indicator for the mental healthcare system as a whole, but readmission frequency appears to be a quality indicator of the previous hospitalisation [24] (evidence base: naturalistic retrospective analysis) and there is only limited information on how to prevent readmissions [47]. Meta-analyses

came to similar, but in some parts contradictory results (especially regarding the efficacy of case management to reduce symptom scores) [23,122,150].

3.2.2.1.10. Recommendation 30: Organisational integration of psychiatric in-patient and out-patient services. Develop and implement integrated models of cooperative community care providing scientific evidence-based services with joint budgetary responsibility of participating service providers. This recommendation is based on a conclusion from a review, which, however, also implied expert consensus [52]. Generally, the integration of mental health services is considered to be important [52], and a recent review came to the conclusion that integrated care models could improve outcome compared with conventional services [50] (evidence base: systematic review). However, only improving access does not automatically improve outcomes in integrated care models as shown in a randomized controlled study for mental healthcare in older patients from minority groups [7]. Regarding care pathways, there is relatively little published in relation to mental health [49]. Mainly based on recommendations in [52] (evidence base: systematic review), we here suggest to develop and implement integrated models of cooperative community care providing scientific evidence-based services with joint budgetary responsibility of participating service providers (structure recommendation) and to organisationally integrate mental health hospitals with mental health out-patient facilities (based on an expert opinion-based WHO-AIMS recommendation).

4. Conclusions and perspectives

The main intention of this guidance is to promote the optimisation of mental healthcare service structures in Europe. There is a need to investigate the relationship between particular components and contents of mental health services and outcome, in order to increase the knowledge of what is effective in improving mental health and to provide cost-effective measures in mental health services [64].

When reviewing the available studies, we noticed that some areas like “acute day hospitals” were much researched, but are not very common across Europe, while essential questions like whether electroconvulsive treatment as one of the “state of the art” treatments is available have only begun to become the object of systematic studies. Thus, there is a certain discrepancy between the large diversity of mental health service structures that have evolved in Europe and the objects of mental healthcare research, which – as we strived to develop evidence-based recommendations – is also reflected in our recommendations. The recommendations may therefore unjustly privilege mental healthcare structures like home-based treatment, assertive community treatment or day hospitals although an immediate transfer to European countries other than those in which these services have been studied may neither be feasible nor warranted. This limitation clearly underscores our point that these recommendations are not cookbook prescriptions for mental healthcare planning, but rather a reflection of the current state of the art, which needs to be critically assessed for every European country. Pan-European studies comparing different models of mental healthcare services are necessary to further develop European recommendations for mental healthcare. These recommendations cannot be a master plan for mental health services planning, but may provide an initial panel of recommendations, which will now need to be tested in the European countries. As quality indicators are also given here, we recommend to establish a European study group which will assess whether the implementation of these recommendations leads to optimized mental healthcare. Another aspect was that for some essential structural components like the

necessary number of psychiatric beds in a certain region, no evidence-based figures are available. In Germany, for example, this number is determined by the Hill-Burton formula, which is based on the US-American Hill Burton Act of 1946. This Act set standards for the number of hospital beds if federal funding was to be allocated to a certain provider. Later, it became useful to determine the number of beds in psychiatric hospitals. However, it is more of a guidance for political decisions in the mental healthcare market rather than an evidence-based guideline, and does not help individual psychiatric hospitals to determine the number of beds needed. Its formulation according to the German Hospital Association [57] is:

$$\text{HBF} = \frac{E \times \text{KH} \times \text{VD} \times 100}{\text{BN} \times 1000 \times 365}$$

HBF (“Hill Burton Formula”) is the number of beds needed for a given population with E as the population number. KH is the number of hospital cases multiplied with 1000 and divided by E, VD is the average number of hospital days per case and BN is the degree of bed occupancy in percent. The complexity and diversity of the mental healthcare systems and structures in European countries makes it difficult to compare them. We tried to overcome this problem by formulating general principles but avoiding too specific recommendations. Some mental healthcare service structure analyses are only published in the local language, which limits access in other countries. They also often lack strict methodological criteria. We focussed on English and German language papers which introduces language bias to our study, but reviewing all European mental healthcare systems was beyond the scope of this project. It now appears necessary to also review the current mental healthcare systems and identify studies which may have been published in local languages only with a view to adapt additional recommendations. Furthermore, such a study should identify areas of mental healthcare research which would be feasible in the pan-European setting and could become a task of the EPA. Attitudes in society at large towards mental ill-health need to be taken into consideration when assessing mental healthcare structures [117]. These will influence policy makers and therefore an EPA-guided survey of these attitudes would additionally be necessary. One also needs to take into consideration that there are new trends in some European countries away from the all-encompassing, transsectoral community social psychiatric models introducing a new focus on expert psychiatric clinics like clinics for affective disorders, suicide prevention clinics, clinics for treatment refractory schizophrenia etc., linked to both psychiatric intensive beds in wards of general hospitals and outreach teams for chronic patients, with less participation of psychiatrists in assertive community treatment teams [108]. While there is some evidence suggesting a link between the numbers of treated patients and the achievable quality of mental healthcare, these interrelationships are not yet clear and are in need of further study [46]. These developments will make timely updates of the EPA guidance necessary warranting a continuous updating process to be initiated by EPA. Measures should be developed to provide standard tools to assess the efficacy and efficiency of mental health services. Currently, measures of the “content of care” are being developed, e.g., measures to assess whether a person affected by a mental disorder receives the needed social, psychological and physical/ pharmaceutical interventions, and if general care organisation is adequate [97,99]. Future updates of this recommendation may need to include such measures once more data on their use become available. There is a pressing need for high-quality, multinational mental healthcare research studies to identify the most effective components of mental healthcare and the EPA is strongly advised

to initiate such European research initiatives. The EPA guidance project can be an important step in this direction by providing an overview over the – quantitatively and qualitatively somewhat limited – evidence. International studies are needed which address the issue of the most effective components of mental health service structures and processes with a view to obtain a more solid evidence base for any recommendations about mental health services in Europe. There are only few studies which analyse the impact of mental healthcare structural parameters on patient outcomes. Also, patient outcome is inevitably influenced both by structure quality and process quality. While processes and structures are generally taken as important areas of quality assurance, assessing the outcome of mental healthcare is a third important area and is often used as a readout of the effects of implementing quality assurance measures in mental healthcare structures and processes [42]. However, there is a scarcity of studies relating outcome to structures, while there is a large number of studies assessing the outcomes of specific therapeutic processes. The latter, however, have only limited usefulness for general guidance recommendation pertinent to all European countries and all psychiatric disorders. Still, improving the structures of mental health services may have “downward” effects on processes and outcome [63]. We addressed this complex interrelationship by structuring the recommendations accordingly hoping to clarify which parts of the mental healthcare system are addressed by every individual recommendation. The interventions relevant to mental healthcare structures and processes reviewed in this guidance are mainly of the psychosocial type and do not deal with isolated interventions, with some notable exceptions like the EQOLISE study to assess the efficacy of supported employment [22]. We were challenged by the fact that no standardized assessment procedure was available for interventions like reducing waiting times in out-patient settings or introducing complex service structures or service processes like day hospitals or community mental health teams. We regard the suggestions on the grading of evidence of public health interventions published by a NICE committee as a good starting point for the development of our recommendation grading and evidence rating system [133], and attempt to solve this problem by devising a rating/grading system adapted to the purposes of the EPA guidance recommendations. The generalisability of some recommendations may be highly questionable and will have to be assessed for every European country. The EQOLISE study on supported employment was one of the European multinational mental healthcare studies identified here and showed clear differences of the results in different European countries, which seem to be dependent on the baseline unemployment rate and the social services available besides the intervention method [22]. An important aspect is the comparator in any studies dealing with the effects of novel mental healthcare methods. If “care as usual” is used, context-dependent factors will severely limit the generalisability of any research results. Large-scale international studies are warranted to provide evidence that can be used for developing European recommendations. Therefore, critically assessing the transferability of any study results and resulting recommendations to individual countries must become the task for a future update and the truly pan-European expert panel to be included then. Psychiatry as a medical specialty is constantly undergoing changes following scientific progress which bears upon psychiatric diagnostic or therapeutic procedures. An important current trend that follows from the progress in neurobiology and psychology is to centre psychiatric diagnosis and treatment on the assessment of brain-behavioural functions and their disturbances in mental disorders (“modular psychiatry”; [54]). Neurobiological and psychological models inform psychiatric treatment and recent progress in the psychotherapy of psychotic symptoms is based on such information from

neurobiology and psychology [56]. Such processes will make more sophisticated diagnostic and therapeutic procedures possible. Introducing sub-specialisations may lead to differentiated training programs for those medical students and residents who are more interested in the social psychiatric community-based approach, and more specialised training programs for those becoming high-level psychiatric specialists working in psychiatric expertise medical centers. This could also be a way to attract more medical students into psychiatry as a medical specialty and a medical career. The World Psychiatric Association recently compiled a review on the stigmatisation of psychiatry and psychiatrists, and ways to overcome them [117]. Sharpening the profile of psychiatry as a medical specialty and implementing structures of mental healthcare that foster a medical approach may be important to recruit more highly motivated medical students into the field [108]. Continuous updates of the EPA Guidance will be useful to consider future demographic changes and neuroscientific advances pertinent to mental healthcare. In conclusion, we suggest 30 recommendations for the quality of mental healthcare services accompanied by a corresponding set of quality indicators to assess the degree of implementation of these recommendations. In perspective, with the support of continuous updates, the recommendations will hopefully advance the development of optimal mental healthcare services in Europe in the short and long-term future.

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