

List of international quality indicators (macro-,meso-,micro-level)

Quality indicator	Macro-level		
	ID	Source	Quality dimension (Structure, process, outcome)
Mental health education 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	1	Gaebel et al. 2012 (EPA Guidance)	Structure
Mental health reporting and monitoring 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)	2	Gaebel et al. 2012 (EPA Guidance)	Structure
Financial protection Proportion of national health budget allocated to mental health services	3	Jordans et al. 2016	Structure/outcome
Financial protection Number of people with mental disorders who have some kind of financial protection or insurance against the cost of mental health care treatment	4	Jordans et al. 2016	Structure/outcome
Quality Number of beneficiaries who are better, worse or unchanged post treatment compared with pre-treatment, or at standard intervals after starting treatment	5	Jordans et al. 2016	
	Meso-level		
	ID	Source	Quality dimension (Structure, process, outcome)
Structural requirements to ascertain patients' dignity and basic needs	6	Gaebel et al. 2012 (EPA Guidance)	Structure

<p>Number of mental healthcare facilities following the ITHACA toolkit recommendations* divided by the number of mental healthcare facilities not following the ITHACA toolkit recommendations</p> <p>* 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.</p>			
<p>Multiprofessionality of services</p> <p>Number of multiprofessional* teams per 100,000 people with mental disorders</p> <p>* teams with competences in social occupational-, work and housing-related service provision</p>	7	Gaebel et al. 2012 (EPA Guidance)	Structure
<p>1. Access to good primary mental healthcare and specialized psychiatric care</p> <p>Number of primary mental health services 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>	8	Gaebel et al. 2012 (EPA Guidance)	Structure
<p>Availability of technological equipment for assessment and treatment</p> <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</p>	9	Gaebel et al. 2012 (EPA Guidance)	Structure

provision ECG Chest X-ray Laboratory tests EEG MRI CT Electroconvulsive therapy			
Psychiatric workforce Number of psychiatrists in outpatient psychiatric services per 100,000 people with mental disorders Number of psychiatrists in hospitals per 100,000 people with mental disorders	10	Gaebel et al. 2012 (EPA Guidance)	Structure
Catchment areas 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	11	Gaebel et al. 2012 (EPA Guidance)	Structure
Day hospitals for people with acute mental disorders Number of “places” in day hospital services for people with acute mental disorders per 100,000 people with acute mental disorders	12	Gaebel et al. 2012 (EPA Guidance)	Structure
Psychiatric care for members of minority groups 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	13	Gaebel et al. 2012 (EPA Guidance)	Structure
Evidence-based medicine 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	14	Gaebel et al. 2012 (EPA Guidance)	Process

of mental health services (in- and out-patient) without such implemented standard operating procedures)			
	Micro-level		
	ID	Source	Quality dimension (Structure, process, outcome)
<p>Essential in-patient services structural requirements</p> <p>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 recommended by the Royal College of Psychiatrists AIMS guidance divided by the number of services not fulfilling these requirements</p> <p>Each psychiatric ward is counted as a service unit</p>	15	Gaebel et al. 2012 (EPA Guidance)	Structure
<p>Essential out-patient services structural requirements</p> <p>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 recommended by the Royal College of Psychiatrists AIMS guidance divided by the number of services not fulfilling these requirements</p>	16	Gaebel et al. 2012 (EPA Guidance)	Structure
<p>Essential rehabilitation service structural requirements</p> <p>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</p>	17	Gaebel et al. 2012 (EPA Guidance)	Structure
<p>Community mental health teams for people with severe mental illness</p> <p>Number of community mental health teams for people with severe mental illnesses or</p>	18	Gaebel et al. 2012 (EPA Guidance)	Structure

personality disorders per 100,000 people with severe mental illness or personality disorders			
Intensive Case Management Number of severely ill persons in Intensive Case Management divided by the total number of severely ill persons	19	Gaebel et al. 2012 (EPA Guidance)	Structure
Integrated Care Models 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	20	Gaebel et al. 2012 (EPA Guidance)	Structure
Safety issues 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	21	Gaebel et al. 2012 (EPA Guidance)	Process
Informed consent 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	22	Gaebel et al. 2012 (EPA Guidance)	Process
Monitoring of physical illness and access to general and specialized medical services	23	Gaebel et al. 2012 (EPA Guidance)	Process

Number of patients with mental illness and with physical illness monitoring divided by the total number of patients with mental illness			
Hospitals/In-patient services: basic requirements			
Number of patients admitted to mental hospitals and other inpatient 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	24	Gaebel et al. 2012 (EPA Guidance)	Process
Hospitals/In-patient services: admission procedures			
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	25	Gaebel et al. 2012 (EPA Guidance)	Process
Hospitals/ In-patient Services: access of wards to special 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	26	Gaebel et al. 2012 (EPA Guidance)	Process
Hospitals/In-patient Services: detained patients procedures			
Number of detained patients with written information on their rights within 12 hours divided by the number of detained patients without such information	27	Gaebel et al. 2012 (EPA Guidance)	Process
Elimination of waiting times for out-patient appointments			
Number of patients with awaiting time of 0 days divided by the number of patients with awaiting time>0 days. From the literature, no normative standard for an acceptable maximal waiting time can be derived, because inter individual needs vary widely. The ideal target value should be zero days, since this study tried to eliminate waiting times	28	Gaebel et al. 2012 (EPA Guidance)	Process

<p>Rehabilitation units</p> <p>Number of psychiatric rehabilitation wards which fulfill all Type 1 recommendations of the Royal College of Psychiatrists AIMS guidance in Part 1 (“Policies and Protocols”) of Section 1 (“General Sandards”), 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</p>	29	Gaebel et al. 2012 (EPA Guidance)	Process
<p>Effective components of home-based treatment</p> <p>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</p> <p>Explanatory note: “Responsibility for health and social care” means that responsibility for healthcare and social care rest within the same multidisciplinary team</p>	30	Gaebel et al. 2012 (EPA Guidance)	Process
<p>Essential components of community mental health treatment</p> <p>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</p>	31	Gaebel et al. 2012 (EPA Guidance)	Process
<p>Active components of intensive case management</p> <p>Combined index of the subscales “team membership” and “team structure organisation” of the Index of Fidelity to Assertive Community Treatment.</p>	32	Gaebel et al. 2012 (EPA Guidance)	Process

(As there is just a general correlation between this index and outcome, no cutoff can be given here.)			
<p>Organisational integration of psychiatric in-patient and out-patient services</p> <p>Number of mental hospitals organisationally integrated with mental health out-patient facilities divided by the total number of mental hospitals</p>	33	Gaebel et al. 2012 (EPA Guidance)	Process
<p>Continuity <i>Timely Ambulatory Follow-Up after Mental Health Hospitalisation</i></p> <p>Numerator: Number of persons hospitalised for primary mental health diagnoses with an ambulatory mental health encounter with a mental health practitioner within i) 7 days and ii) 30 days of discharge. Denominator: Number of persons hospitalised for primary mental health diagnoses.</p>	34	Hermann & Mattke 2004 (OECD)	Process
<p>Continuity of Visits After Hospitalisation for Dual Psychiatric/Substance Related Conditions</p> <p>Numerator: Number with at least four psychiatric and at least four substance abuse visits within the 12 months following discharge. Denominator: Number of hospital discharges for dual diagnosis of psychiatric disorder and substance abuse.</p>	35	Hermann & Mattke 2004 (OECD)	Process
<p>Racial/Ethnic Disparities in Mental Health Follow-Up Rates</p> <p>Numerator: Number with at least one visit in 12 months after initial visit stratified by race/ethnicity. Denominator: Number of individuals with a mental health-related visit.</p>	36	Hermann & Mattke 2004 (OECD)	Process
<p>Continuity of Visits after Mental Health-Related Hospitalisation</p>	37	Hermann & Mattke 2004 (OECD)	Process

<p>Numerator: Number of persons with at least one visit per month for six months following hospitalisation.</p> <p>Denominator: Number of persons hospitalised for psychiatric or substance-related disorder.</p>			
<p>Coordination of Care</p> <p>Case Management for Severe Psychiatric Disorders</p> <p>Numerator: Number in receipt of case management (all types).</p> <p>Denominator: Number of persons with specified severe psychiatric disorder in contact with the health care system.</p>	38	Hermann & Mattke 2004 (OECD)	Process
<p>Treatment</p> <p>Visits During Acute Phase Treatment of Depression</p> <p>Numerator: Number of persons with at least three medication visits or at least eight psychotherapy visits in a 12-week period.</p> <p>Denominator: Number of persons with a new diagnosis of major depression.</p>	39	Hermann & Mattke 2004 (OECD)	Process
<p>Hospital Readmissions for Psychiatric Patients</p> <p>Numerator: Of the total number of discharges from psychiatric inpatient care during a 12-month reporting period, the total number of readmissions to psychiatric inpatient care that occurred within i) 7 days and ii) 30 days.</p> <p>Denominator: Total number of discharges from psychiatric inpatient care during a 12-month reporting period.</p>	40	Hermann & Mattke 2004 (OECD)	Process
<p>Length of Treatment for Substance-Related Disorders</p> <p>Numerator: Number of persons with treatment lasting at least 90 days.</p>	41	Hermann & Mattke 2004 (OECD)	Process

Denominator: Number of persons initiating treatment for a substance-related disorder.			
<i>Use of Anti-Cholinergic Anti-Depressant Drugs Among Elderly Patients</i> Numerator: Number of persons using an anti-cholinergic anti-depressant drug. Denominator: Number of persons age 65+ prescribed anti-depressants.	42	Hermann & Mattke 2004 (OECD)	Process
<i>Continuous Anti-Depressant Medication Treatment in Acute Phase</i> Numerator: Number of persons age 18 years and older who are diagnosed with a new episode of depression and treated with anti-depressant medication, with an 84-day (12 week acute treatment phase) treatment with anti-depressant medication. Denominator: Number of persons age 18 years and older who are diagnosed with a new episode of depression and treated with anti-depressant medication.	43	Hermann & Mattke 2004 (OECD)	Process
<i>Continuous Anti-Depressant Medication Treatment in Continuation Phase</i> Numerator: Number of persons age 18 years and older who are diagnosed with a new episode of depression and treated with anti-depressant medication with a 180-day treatment with antidepressant medication. Denominator: Number of persons age 18 years and older who are diagnosed with a new episode of depression and treated with anti-depressant medication	44	Hermann & Mattke 2004 (OECD)	Process
Patient Outcomes <i>Mortality for Persons with Severe Psychiatric Disorders</i> Numerator: Standardised mortality rate for persons with specified severe psychiatric disorders. Denominator: Standardised mortality rate for the total population.	45	Hermann & Mattke 2004 (OECD)	Outcome

<p>Alcohol addiction - Diagnostics / identification of alcohol-related disorders (DGPPN QI 1 Alcohol addiction) Numerator: Nr. of persons of the denominator, who were tested on an alcohol-related disorder within three months after the suspicion of an alcohol-related disorder with a validated tool (e.g. AUDIT) Denominator: All persons with a documented suspected alcohol-related disorder documented within one year.</p>	46	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Alcohol addiction - Patient education (DGPPN QI 2 Alcohol addiction) Numerator: Number of persons of the denominator with documented information about symptoms, course and treatment of alcohol addiction within three months following diagnosis Denominator: All persons with alcohol addiction within one year</p>	47	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Alcohol addiction - Addiction-specific service recommendation after withdrawal (DGPPN QI 3 Alcohol addiction) Numerator: Number of persons of the denominator with a recommendation for addiction-specific support within three months after the diagnosis Denominator: All persons with newly diagnosed alcohol addiction within one year</p>	48	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Alcohol addiction - Motivational interviewing (DGPPN QI 4 Alcohol addiction) Numerator: Number of persons of the denominator with an addiction-related longterm therapy during an inpatient stay with motivational interviewing (either brief or extensive technique) Denominator: All persons with alcohol addiction in inpatient withdrawal treatment within one year</p>	49	Großimlinghaus et al. 2013 (DGPPN*) *German Association for Psychiatry and Psychotherapy	Process
<p>Alcohol addiction - Cognitive-behavioral therapy (CBT) (DGPPN QI 5 Alcohol addiction) Numerator: Number of persons of the denominator with an alcohol-specific cognitive-behavioral therapy within three months after withdrawal treatment Denominator: All persons with alcohol addiction after inpatient withdrawal treatment within one year</p>	50	Großimlinghaus et al. 2013 (DGPPN*) *German Association for	Process

		Psychiatry and Psychotherapy	
Alcohol addiction - Motivation for self help group (DGPPN QI 6 Alcohol addiction) Numerator: Number of persons of the denominator with participation in a self-help group within three months after the diagnosis Denominator: All persons with alcohol addiction within one year	51	Großimlinghaus et al. 2013 (DGPPN*) *German Association for Psychiatry and Psychotherapy	Process
Alcohol addiction - Therapy / Outpatient follow up after inpatient treatment (DGPPN QI 7 Alcohol addiction) <i>Numerator:</i> All persons of the denominator who had attended at least one psychiatric follow-up appointment once a month within at least six months after an inpatient stay <i>Denominator:</i> All persons with an inpatient stay due to alcohol addiction within one year	52	Großimlinghaus et al. 2013 (DGPPN*) *German Association for Psychiatry and Psychotherapy	Process
Alcohol addiction -Pharmacological relapse prevention (DGPPN QI 8 Alcohol addiction) Numerator: Number of persons of the denominator with a psychological intervention and pharmacological treatment for relapse prevention with Acamprosate or Naltrexon or after unsuccessful treatment with Acamprosate or Naltrexon a pharmacotherapy with disulfiram within an addiction-specific treatment plan Denominator: All persons with alcohol addiction within one year	53	Großimlinghaus et al. 2013 (DGPPN*) *German Association for Psychiatry and Psychotherapy	Process
Alcohol addiction - Comorbidity (DGPPN QI 9 Alcohol addiction) Numerator: Number of persons of the denominator with specific treatment of the psychiatric comorbidity within three months Denominator: All persons with alcohol addiction and psychiatric comorbidity within one year	54	Großimlinghaus et al. 2013 (DGPPN)	Process

<p>Alcohol addiction - Promotion of occupation and employment (DGPPN QI 10 Alcohol addiction) Numerator: Number of persons of the denominator who were offered occupational therapy Denominator: All unemployed persons with alcohol addiction within one year who are not unable to work</p>	55	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Detection of severity (DGPPN QI 1 Depression) Numerator: Number of persons of the denominator who received an appraisal of the severity of symptoms at the start of their treatment by means of the ICD-10 criteria (F32-33) Denominator: All persons with an initial diagnosis of depression or another depressive episode within one year</p>	56	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Coronary heart disease and/or diabetes (DGPPN QI 2 Depression) Numerator: Number of persons of the denominator who were tested for depression with two screening questions Denominator: All persons with chronic somatic disease with a higher risk for depressive disorders within one year (e.g. stroke, Parkinson's disease, epilepsy, cancer, coronary heart disease)</p>	57	Großimlinghaus et al. 2013 (DGPPN*) *German Association for Psychiatry and Psychotherapy	Process
<p>Depression - Patient education (DGPPN QI 3 Depression) Numerator: Number of persons of the denominator with documented information about the causes, symptoms, prognosis and treatment options of depression (shared decision making) Denominator: All persons with a diagnosis of unipolar depression within one year</p>	58	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Involvement of self-help and relatives (DGPPN QI 4 Depression) Numerator: Number of persons of the denominator who received documented information about self-help groups/relatives' groups Denominator: All persons with a unipolar depressive episode in treatment within 90 days</p>	59	Großimlinghaus et al. 2013 (DGPPN)	Process

<p>Depression - Antidepressants (DGPPN QI 5 Depression) Numerator: Number of persons of the denominator with a documented recommendation for pharmacotherapy with an antidepressant Denominator: All persons with an acute moderately severe depressive episode in treatment within 90 days</p>	60	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Combination of psycho- and pharmacotherapy (Offer) (DGPPN QI 6 Depression) Numerator: Number of persons of the denominator with a documented recommendation of a combination treatment with pharmaco- and psychotherapy Denominator: All persons with acute and chronic severe and recurrent depressive episodes in treatment within 90 days</p>	61	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Combination of psycho- and pharmacotherapy (Receipt) (DGPPN QI 7 Depression) Numerator: Number of persons of the denominator with combination treatment with pharmaco- and psychotherapy Denominator: All persons with acute and chronic severe and recurrent depressive episodes in treatment for whom is documented that a combination treatment with pharmaco- and psychotherapy was offered within 90 days</p>	62	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Psychotherapy (Offer) (DGPPN QI 8 Depression) Numerator: Number of persons of the denominator with a documented recommendation of psychotherapy Denominator: All persons with a mild or moderately severe depressive episode in treatment within 90 days</p>	63	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Psychotherapy (Receipt) (DGPPN QI 9 Depression) Numerator: Number of persons of the denominator who received psychotherapy Denominator: All persons with a mild or moderately severe depressive episode in treatment within 90 days</p>	64	Großimlinghaus et al. 2013 (DGPPN)	Process

<p>Depression - Electroconvulsive therapy (ECT) in treatment resistance (DGPPN QI 10 Depression) Numerator: Number of persons of the denominator with documented information about the option of an ECT Denominator: All persons with severe depressive therapy-resistant episodes in inpatient treatment within 90 days respectively in outpatient treatment within one year</p>	65	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Therapy: Treatment continuity with suicidal tendency (DGPPN QI 11 Depression) Numerator: Nr. of persons of the denominator who received a documented short-term follow-up appointment (within one week after inpatient discharge). Denominator: All persons with a depressive episode and an inpatient stay due to suicidality within 90 days</p>	66	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Depression - Therapy - Screening for self-endangerment after inpatient stay (DGPPN QI 12 Depression) Numerator: Nr. of persons of the denominator who were contacted in order to appraise their risk for suicide or self-harm. Denominator: All persons, who were treatment in an inpatient setting because of a suicidal tendency who did not keep their follow up contact within 90 days.</p>	67	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Schizophrenia - Pharmacotherapy- long-term / prescription of antipsychotics (DGPPN QI 1 Schizophrenia): Numerator: Nr. of persons of the denominator, who are prescribed antipsychotics Denominator: All persons being at least 18 years old with the main diagnosis of schizophrenia within one year.</p>	68	Großimlinghaus et al. 2013 (DGPPN)	Process
<p>Schizophrenia - Pharmacotherapy- long-term /prescription of antipsychotics after discharge (DGPPN QI 2 Schizophrenia) Numerator: Nr. of persons of the denominator, who are prescribed antipsychotics</p>	69	Großimlinghaus et al. 2013 (DGPPN)	Process

Denominator: All persons being at least 18 years old with the main diagnosis of schizophrenia and one episode within one year.			
Schizophrenia - Monitoring of side-effects (DGPPN QI 3 Schizophrenia) Numerator: Number of persons of the denominator who received monitoring of side-effects once every six months Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia who receive a long-term medication within one year	70	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Cognitive-behavioral therapy (CBT) (DGPPN QI 4 Schizophrenia) Numerator: Number of persons of the denominator who were recommended cognitive behavioural therapy within one year Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia who receive pharmacotherapy and suffer under persistent psychotic symptoms despite of the pharmacotherapy within one year	71	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Manualised psychoeducation for patients (DGPPN QI 5 Schizophrenia) Numerator: Number of persons of the denominator who were recommended psychoeducation 12 months after the initial diagnosis Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia within one year	72	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Long-term therapy: Outpatient contact after inpatient discharge (DGPPN QI 6 Schizophrenia) Numerator: Nr. of persons of the denominator who have an outpatient psychiatric contact within 7 days after inpatient discharge Denominator: All persons being 18 years old or older with an inpatient treatment of schizophrenia within one year	73	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Medical anamnesis (DGPPN QI 7 Schizophrenia) Numerator: Number of persons of the denominator who received a physical examination for the detection of somatic disorders	74	Großimlinghaus et al. 2013 (DGPPN)	Process

Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia within one year			
Schizophrenia - Number of suicides and suicide attempts (DGPPN QI 8 Schizophrenia) Numerator: Number of persons of the denominator whose suicide risk was documented at each doctor's visit Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia within one year	75	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Acute therapy - coercive measures (DGPPN QI 9 Schizophrenia) Numerator: All persons of the denominator who received a compulsory measure (fixation, seclusion, compulsory medication) Denominator: All persons with schizophrenia who are treated in an inpatient setting within one year	76	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Psychoeducation for care-providers (DGPPN QI 10 Schizophrenia) Numerator: Number of persons of the denominator whose relatives or care-providers participated in a psychoeducational family intervention Denominator: All persons with at least one inpatient stay within one year who are in continuous contact with their relatives or care-providers (e.g. parents, siblings, partners, children)	77	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Occupational rehabilitation (DGPPN QI 11 Schizophrenia) Numerator: Number of persons of the denominator who were recommended occupational therapy Denominator: All persons 18 years or older with the principal diagnosis schizophrenia who are not unable to work within one year	78	Großimlinghaus et al. 2013 (DGPPN)	Process
Schizophrenia - Diagnostics - Standardized assessment of psychopathology (DGPPN QI 12 Schizophrenia) Numerator: Number of persons of the denominator with a documented examination at their first	79	Großimlinghaus et al. 2013 (DGPPN)	Process

contact with the psychiatrist and then every six months with the following psychometric scales: CGI, GAF, PANSS/BPRS Denominator: All persons 18 years or older with a primary diagnosis of schizophrenia within one year			
Dementia - Depression Screening (DGPPN QI 1 Dementia) Numerator: Number of persons of the denominator with a documented investigation of the presence of depression within three months after dementia was newly diagnosed Denominator: All persons with newly diagnosed dementia within one year	80	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Laboratory diagnostics (DGPPN QI 2 Dementia) Numerator: Number of persons of the denominator with documented laboratory tests within three months after the first diagnosis: blood count, thyroid stimulating hormone, electrolytes, blood glucose, blood sedimentation rate or CRP, GOT, gamma-GT, creatinine, urea, vitamine B12 Denominator: All persons with newly diagnosed dementia within one year	81	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Imaging (DGPPN QI 3 Dementia) Numerator: Number of persons of the denominator with a documented brain imaging study within six months after the initial diagnosis Denominator: All persons with newly diagnosed dementia within one year	82	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Physical examination (DGPPN QI 4 Dementia) Numerator: Number of persons of the denominator with a documented a physical/neurological examination within three months after the first diagnosis Denominator: All persons with newly diagnosed dementia within one year	83	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Cognitive appraisal (DGPPN QI 5 Dementia) Numerator: Number of persons of the denominator with a documented cognitive short test (e.g. MMST) within the scope of basic diagnostics within three months after the initial diagnosis Denominator: All persons with newly diagnosed dementia within one year	84	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Etiology (DGPPN QI 6 Dementia)	85		

Numerator: Number of persons of the denominator with a documented determination of the etiology (e.g. Alzheimer, vascular) within six months after the initial diagnosis Denominator: All persons with newly diagnosed dementia within one year			
Dementia - Alzheimer's disease (DGPPN QI 7 Dementia) Numerator: Number of persons of the denominator with a documented recommendation for pharmacotherapy with an appropriate dosage of Acetylcholinesterase-inhibitors or Memantine Denominator: All persons with Alzheimer's disease within one year	86	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Mental and behavioral symptoms (DGPPN QI 8 Dementia) Numerator: Number of persons of the denominator who were not prescribed antipsychotics Denominator: All persons with dementia within one year	87	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Patient education (DGPPN QI 9 Dementia) Numerator: Number of persons of the denominator with documented information about diagnosis, prognosis, therapy and possibilities of further support Denominator: All persons with newly diagnosed dementia within one year	88	Großimlinghaus et al. 2013 (DGPPN)	Process
Dementia - Education of relatives and caretakers (DGPPN QI 10 Dementia) Numerator: Number of persons of the denominator with documented information for their relatives/caretakers about the diagnosis, prognosis, therapy and possibilities for further support for patients and relatives/caretakers Denominator: All persons with diagnosed dementia within one year	89	Großimlinghaus et al. 2013 (DGPPN)	Process
Seclusion - Inpatients having seclusion Numerator: Total number of inpatients having seclusion Denominator: Total number of inpatient discharges	90	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb.	Process

		15 th , 2013 (unpublished document) (IIMHL)	
Restraint - Percentage of clients restrained at least once during the reporting period Numerator: Total number of inpatients who were restrained at least once during the reporting period Denominator: Total number of inpatients who were inpatients at the facility during the reporting period	91	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process
Involuntary/ Compulsory Hospitalization - Involuntary (forced) admissions in psychiatric hospitalization (inpatient) Numerator: Number of involuntary (forced) admissions to inpatient stays Denominator: Total number of admissions to inpatient stays	92	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process
7-Day Follow-up after Inpatient Discharge - Outpatient follow up after inpatient discharge Numerator: Number of episodes of hospitalization for primary mental health diagnosis in	93	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb.	Process

<p>which the patient received a follow up outpatient visit (not ER visit) within 7 days after hospital discharge</p> <p>Denominator: All episodes of hospitalization for a patient with a primary MH diagnosis</p>		<p>15th, 2013 (unpublished document) (IIMHL)</p>	
<p>Medication Adherence - Use and adherence to antipsychotics among patients with schizophrenia in continuing care</p> <p><u>Numerator:</u> Calculate the % of days covered by prescription fills for antipsychotic medications during the measurement year. Adherence will be measured by the medication possession ratio (MPR). Individuals with 0% MPR did not fill any prescription for antipsychotic medications.</p> <p><u>Denominator:</u> Continuously eligible individuals ages 19 years or older by the end of the measurement year with schizophrenia</p>	<p>94</p>	<p>IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15th, 2013 (unpublished document) (IIMHL)</p>	<p>Process</p>
<p>Polypharmacy - Proportion of patients w/ schizophrenia receiving two or more antipsychotic medications</p> <p>Numerator: Patients in the denominator with simultaneous prescriptions for two or more oral antipsychotic agents for 90 or more days during the measurement period</p> <p>Denominator: All patients diagnosed with Schizophrenia prescribed at least one antipsychotic agent during the measurement period</p>	<p>95</p>	<p>IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15th, 2013 (unpublished document) (IIMHL)</p>	<p>Process</p>
<p>Symptom Reduction - Reduction in target symptoms during new treatment episode</p> <p><u>Numerator:</u> Patients in the denominator who within the 3-months following a new treatment episode have a documented reduction in score based on a</p>	<p>96</p>	<p>IIMHL Clinical Indicator Project phase II – Final Report</p>	<p>Process</p>

<p>standardized measure/instrument <u>Denominator:</u> Patients with a new treatment episode and at least two standardized assessments using the same tool within 90 days of the start of the new treatment episode</p>		<p>(DRAFT), Feb. 15th, 2013 (unpublished document) (IIMHL)</p>	
<p>Survey - Patient Involvement - Patient involvement in decisions about their own care</p> <p>1) Patient involvement: "Were you involved as much as you wanted to be in decisions about your care and treatment?" 2) Patient satisfaction: "Were you satisfied with the care you received?" 3) Perceived availability of care: "Did you get care when needed?"</p> <p><u>Numerator:</u> Total number of patients who indicated that they were 1) involved; 2) satisfied with their care; and 3) received care when needed (agree/ strongly agree) <u>Denominator:</u> Total number of patients responding</p>	<p>97</p>	<p>IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15th, 2013 (unpublished document) (IIMHL)</p>	<p>Process</p>
<p>Death Rates - The death rate by age group for people with severe and enduring mental illness compared to the average population (adjusted for demographic factors)</p> <p><u>Numerator:</u> Death rate by age group for people with severe mental illness <u>Denominator:</u> Death rate by age group for average population (adjusted for demographic factors)</p>	<p>98</p>	<p>IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15th, 2013 (unpublished document) (IIMHL)</p>	<p>Process</p>

<p>Functioning (Change in the daily functioning of the client) – Percentage of clients per diagnosis group, where daily functioning measured both before and after: (1) has improved; (2) has stabilized</p> <p><u>Numerator:</u> Number of clients per diagnosis group where daily functioning measured both before and after: (1) has improved; (2) has stabilized</p> <p><u>Denominator:</u> Total number of patients per diagnosis group who were assessed with a standardized measure (e.g., GAF, HoNOS, etc.)</p>	99	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process
<p>Continuity of Care/ Discharge Plan - Post discharge continuing care plan created</p> <p><u>Numerator:</u> Psychiatric inpatients for whom the post discharge continuing care plan is created and contains all of the following: reason for hospitalization, principal discharge diagnosis, discharge medications and communication of recommendations to next level of care.</p> <p><u>Denominator:</u> Psychiatric inpatient discharges</p>	100	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process
<p>Medication errors</p> <p>Numerator: Total number of medication errors</p> <p>Denominator: Total number of inpatient days</p>	101	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process

<p>Screening for substance abuse - Percentage of persons screened for substance use disorder</p> <p><u>Numerator:</u> Number of new patients screened for a substance use disorder with an evidence based instrument during a measurement period</p> <p><u>Denominator:</u> Number of new patients during the measurement period</p>	102	IIMHL Clinical Indicator Project phase II – Final Report (DRAFT), Feb. 15 th , 2013 (unpublished document) (IIMHL)	Process
<p>Needs</p> <p>Rates of suicide deaths and attempts</p>	103	Jordans et al. 2016	Outcome
<p>Quality</p> <p>Number of people receiving mental health care who are lost to follow-up (drop-out rate)</p>	104	Jordans et al. 2016	Process
<p>Utilization</p> <p>Number of persons taking psychotropic drugs</p>	105	Jordans et al. 2016	Process
<p>Quality</p> <p>Number of patients and caregivers expressing satisfaction with received services</p>	106	Jordans et al. 2016	Outcome
<p>Quality</p> <p>Number of serious complications or incidents associated with treatment</p>	107	Jordans et al. 2016	Outcome
<p>Quality</p> <p>Number of days in last one month that psychotropic medicines were out of stock</p>	108	Jordans et al. 2016	Structure
<p>Quality</p> <p>Number of trained mental health workers at inpatient and outpatient service</p>	109	Jordans et al. 2016	Structure

Utilization Number of people with severe mental disorder who received mental health treatment	110	Jordans et al. 2016	Process
Needs Number of people diagnosed with any mental disorder (all health system)	111	Jordans et al. 2016	Process
Needs Number of people diagnosed with severe mental disorders (all health system)	112	Jordans et al. 2016	Process
Utilization Number of people with any mental disorder who received mental health treatment (amongst diagnosed people)	113	Jordans et al. 2016	Process
Quality Number of patients re-admitted to in-patient mental health care	114	Jordans et al. 2016	Process
Psychopathology - relevant assessment scale (e.g. SCAN, PANSS, BPRS, CGI-SCH, etc.)	115	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Global Functioning and Disability - relevant assessment scale (e.g. WHODAS, GAF, etc.)	116	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Social functioning - relevant assessment scale (e.g. HoNOS, PSP, etc.)	117	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Needs - relevant assessment scale (e.g. CAN)	118	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Service consumption - relevant assessment scale (e.g. CSRI)	119	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
QALY - relevant assessment scale (e.g. EQ-5D, SF-36)	120	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome

Quality of Life - relevant assessment scale (e.g. WHOQoL, LQOLP, etc.)	121	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Satisfaction with services - relevant assessment scale (e.g. VSSS, CSQ, SSS, Care Satisfaction Questionnaire, etc.)	122	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Social contacts - relevant assessment scale (e.g. SNS)	123	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Stigma - experienced and perceived - relevant assessment scale (e.g. ISMI, DISC, etc.)	124	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Consequences for family - relevant assessment scale (e.g. IEQ, ECI, Family Interview Schedule, etc.)	125	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Health state (incl. death) - relevant assessment scale	126	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Adherence to care/medication - relevant assessment scale (e.g. DAI)	127	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome
Recovery - relevant assessment scale - relevant assessment scale (e.g. RAS, QPR, etc.)	128	Thornicroft, G. & Tansella, M. ed. 2010,	Individual outcome

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Abbreviations

IIMHL - International Initiative of Mental Health Leadership

DGPPN - German Association for Psychiatry and Psychotherapy

EPA - European Psychiatric Association