

An overview of the mental health system in Italy

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Summary. This paper intends to evaluate the mental health system in Italy thirty years after the psychiatric reform, using epidemiological evidence on the prevalence of mental disorders and the features of primary care and community mental health services (data from five Regions). The network of community mental health facilities appears to be complete as concerns Residential Facilities and Community Mental Health Centres, and less complete as concerns General Hospital Psychiatric Units. Substantial variation exists between Regions and between disorders, the treatment gap being smaller for schizophrenic than for mood disorders. High quality information is essential to improve mental health care; therefore, it should be systematically collected and extensively used to prime over the next decade a virtuous circle of positive changes.

Key words: mental health system, community care, Italy, psychiatric reform, treated prevalence.

Riassunto (*Il sistema di salute mentale in Italia*). In questo contributo si vuole valutare il sistema di salute mentale in Italia trent'anni dopo la riforma psichiatrica, analizzando evidenze epidemiologiche (da cinque Regioni) sulla prevalenza dei disturbi mentali e sulle caratteristiche dei servizi di medicina di base e di salute mentale. La rete delle strutture psichiatriche riabilitative sembra essere completa per quel che riguarda le Strutture Residenziali e i Centri di Salute Mentale, e meno completa nel caso dei Servizi Psichiatrici di Diagnosi e Cura. Esiste una notevole variabilità tra le Regioni e tra i disturbi mentali: infatti, il *treatment gap* è minore nei disturbi di tipo schizofrenico che nei disturbi dell'umore. Le informazioni di alta qualità sono essenziali per migliorare il sistema di salute mentale; dovrebbero quindi essere raccolte sistematicamente ed essere intensivamente usate per innescare nella prossima decade un circolo virtuoso di cambiamenti positivi.

Parole chiave: sistema di salute mentale, servizi di salute mentale, Italia, riforma psichiatrica, prevalenza trattata.

INTRODUCTION

Thirty years ago the Italian psychiatric reform law (Legge 180) made radical changes to the whole concept of Italian mental health care, which, until then, had combined some components of community care with a prevalent mental hospital care. The new law, the above mentioned Legge 180, stated that community care must stand alone, and this led to the closing of mental hospitals. Thus Italy became the first developed country to base its mental health care solely on a community network of mental health facilities.

This process was neither linear nor uniform, and the effective closing down of the mental hospitals only took place twenty years later, at the end of the 1990s. This closing down process led to difficulties, from the point of view of both providing effective care to people with severe mental illness and of evaluating such care. This switch from institutional to community care should have opened wide horizons for research into mental health services. Research evaluation should have moved from enclosed hos-

pital premises to community, and this, in practice, would have given us the possibility to study the resultant radical changes to mental health policy and to make an in-depth evaluation of the effects of such change. However there was only a limited monitoring of the dramatic change, and thus a partial evaluation of its aftermath, the big chance for such a mental health services evaluation was lost. In any case, for the first time in Italy, mental health professionals and academics were prompted by the psychiatric reform to make an evaluation of mental health care from an epidemiological point of view, and this led to the creation of local centres of excellence in psychiatric epidemiology and mental health care evaluation, as occurred in Verona [1, 2].

Apart from the experience gained in the centres of excellence that were set up, the evaluation of mental health care has been particularly advantaged over the last decade by three national surveys that carried out an in-depth evaluation of the network of community mental health facilities and by the growth of

mental health information systems at the regional level. Today, it is possible to initiate a more systematic evaluation of the mental health system as the body of evidence in this area has increased enormously since the 1980s [3].

The goal of this paper is to evaluate the mental health system in Italy, thirty years after the psychiatric reform. Under the World Health Organization (WHO) perspective [4] a mental health system is defined as the structure and all those activities whose primary purpose is to promote, restore or maintain mental health. The mental health system includes organizations and resources focused on improving mental health. The building blocks of the mental health system are governance (including mental health plans and legislation), financing, mental health services, primary care, human resources, links with other sectors and an information system. In this paper only the service delivery has been analyzed, *i.e.* mental health services and primary care, which forms the core of the mental health system. Any assessment of the other components exceeds the goals of this paper, although a complete analysis should take them into consideration.

The Goldberg and Huxley model [5] has been used to describe the Italian mental health system, and separate analyses have been made of the epidemiological evidence concerning the prevalence of mental disorders in the general population, in both primary care and community mental health services.

MATERIALS AND METHODS

This paper summarizes the results of major national epidemiological surveys, and analyzes the data from the mental health information systems of five Italian Regions (Emilia Romagna, Friuli Venezia Giulia, Lazio, Liguria and Lombardia).

Data from the regional information systems were collected in order to have comparable figures on patients treated in Departments of Mental Health (DMHs), on the patterns of care and on the activities provided by Community Mental Health Centres (CMHCs). These five Regions were chosen as they have well structured mental health information systems covering the whole Region. Indeed Emilia Romagna, Friuli Venezia Giulia, Lazio and Lombardia the flow of the mental health information is totally computerized, however only half the DMHs in Liguria computerize their data.

For the present study we calculated for the population the crude rates per 10 000 > 14 years old; no adjustment was made for the different Regional age compositions. For instance, the treated prevalence was calculated using as the denominator the total population of the five Regions (about 20 million people) and as the numerator the total number of patients treated in these five Regions.

The data give fairly reliable figures concerning the patients cared in DMHs, though there are still some methodological problems in comparing the Regions

(*e.g.* the different network coverage of the private and/or residential facilities, there being no full information system coverage of the Residential Facilities in Liguria and Emilia Romagna). For the specific case of Lazio, data on the whole prevalence were not available, while only figures on patients treated in CMHCs were available. However the treated prevalence was estimated on the basis of the other regional mental health information systems, where the CMHC prevalence was about 95% of the overall treated prevalence. As far as concerns new cases, the evaluation of the diagnostic breakdown was hampered by the frequent lack of available diagnostic information (particularly in Friuli Venezia Giulia and Emilia Romagna where about 40% of the diagnoses were missing).

With regard to the activities provided by the CMHCs, there is wide diversity among the Regions in the classification of CMHC interventions. Therefore it was necessary to group the interventions according to a classification already used in analyzing community care [6]. Community contacts have been grouped in eight activities (psychiatrists' clinical activity, psychotherapeutic activity, nurses' activity, activity addressed to families, coordination activity, rehabilitation activity, social support activity, other activities). The present analysis should be considered an exploratory one as, in some cases, the goal of grouping the interventions was not completely achieved. One example is the activity addressed to families; in two of the Regions such interventions were certainly provided, but could not be identified among the data or were not monitored by the information system.

RESULTS

Mental disorders in the community

Using a summarized measure of population health, called the disability-adjusted life year or DALY (a time-based measure combining into a single indicator the years of life lost due to premature death and the years of life lived with a disability), the Global Burden of Disease Project [7] estimated that the burden of mental disorders in Italy is relevant: 2978 DALYs per 100 000 can be attributed to neuropsychiatric disorders, about 25% of the overall burden of disease in the country. If only mental disorders are considered, they amount to 11% of the burden, on adding also dementia and substance abuse this increases to 21%. Depression alone amounts to 7% of the global burden, while bipolar disorder, schizophrenia, obsessive-compulsive disorder, panic disorder are each 1%. Substance abuse accounts for 5% (alcohol use disorders 3% and drug use disorders 2%), while dementia is 4%.

In the last ten years the main results concerning mental disorder prevalence in communities come from two large surveys: the ESEMeD survey (ESEMeD: European Study of Epidemiology of Mental Disorders) and the Sesto Fiorentino study.

The ESEMeD survey [8, 9] was carried out in Italy in 2001-2003, and interviewed a sample of 4712 Italian citizens. The annual prevalence for common mental disorders was 7.3%, anxiety disorder was 5.1%, mood disorder 3.5% and alcohol disorder 0.1%. The most common mental disorders were major depression (3%) and specific phobia (2.7%). Women were twice as likely as men to report a mood disorder and four times as likely as men to report an anxiety disorder, while men were twice as likely as women to report an alcohol disorder. There was a high co-morbidity of mood and anxiety disorders.

Among the people with common mental disorders the use of health services is relatively scarce. Only one sixth (16.9%) used health services (20.7% of those with mood disorder and 17.3% with anxiety disorder). Among the health services users 38% were cared for only by a general practitioner, 27% only by a psychiatrist or psychologist, and about 28% by both professionals. In terms of severity, 12% of the Italian cases were serious, 35% moderate and 52% mild [10].

Wang *et al.* [11] have given a more in-depth analysis of the use of mental health services. With regard to the relationship between severity of disorder and use of health services in the Italian sample: half (51%) the people with severe mental disorder used health services, only a quarter (25.9%) of those with moderate disorders, and a fifth (17.3%) of those with mild disorders. Only one third (33%) of the people treated by the health services received minimally adequate treatment, defined as at least one month of pharmacotherapy plus at least four visits to any type of medical doctor or at least eight psychotherapy contacts. These results are quite comparable to those of other high income countries.

Faravelli *et al.* [12], assessing 2,363 residents in Sesto Fiorentino, reported that the one-year prevalence of any disorder was 8.6% (excluding depression and anxiety NOS "not otherwise specified"), and higher prevalence was found in women (12.1%) than in men (5.4%). In the last 12 months 4.6% of the sample had suffered mood disorders (excluding depression NOS), while for anxiety disorders the figure was 6% (excluding anxiety NOS). The two disorders with the highest prevalence were generalised anxiety disorders (3.5%) and major depressive episode (3.4%). Social impairment was present in 38.5% of people with mental disorders. The use of health facilities was higher than that reported by ESEMeD: among the population with mental disorders who sought help 87% sought help from their GPs and almost one third were in contact with mental health services, while 7% had no contact with health services.

Mental disorders treated in primary care

The most significant surveys of mental disorder prevalence in primary care settings were carried out in the 1990s. Compared with previous studies, these

were far more methodologically advanced: a 12-item General Health Questionnaire was used as a screening tool, identifying cases with scores higher than the GHQ-12 threshold who were then subjected to a structured or semi-structured psychiatric interview.

In 1992 the Verona study [13] involved 1625 subjects. The overall prevalence of mental disorders among those attending primary care clinics was 12.4%, of these 6.7% suffered a depressive disorder (4.7% episodes of major depression and 2% dystymia) and 7.7% some anxiety disorder (general anxiety disorder 3.7%; panic disorder 1.5% agoraphobia, 0.6% other anxiety disorders 1.9%).

The Bologna study [14] replicated the Verona study, and involved 1647 subjects. The overall prevalence was the same (12.4%), but the prevalence of major depression was lower (3.3%) and that of general anxiety disorder higher (6.1%). The severity of impairment increased from sub-threshold cases to fully-fledged cases, and, among the latter, the severity of impairment depended on the extent of the depressive and/or anxiety symptoms. Compared with other mental disorders, major depression was evident because of its greater impairment and disability effects.

A third study focussed on depression [15], and involved 1896 subjects drawn from the different Regions. The prevalence of depressive disorder was 8.4%, with no differences according to geographical area. The severity of the cases was mild in 58% of cases, moderate in 36% and severe in 6%.

Mental disorders treated in mental health services

The Departments of Mental Health

In the Italian National Health Service, the Department of Mental Health (DMH) is the health organization responsible for specialist mental health care in the community, as stated by the Progetto Obiettivo "Tutela Salute Mentale 1998-2000" [16]. Within the Department there are various facilities: CMHCs, Day Care Facilities (DCF), General Hospital Psychiatric Units (GHPUs) and Residential Facilities (RFs). The DMH is in charge of the planning and management of all medical and social resources related to prevention, treatment, and rehabilitation in mental health within a defined catchment's area.

The PROG-CSM survey [17] showed that in 2005 Departments of Mental Health were widespread in all Italian Regions, though the DMH level of complexity varied. More than half of the DMHs included not only Mental Health Services for adults, but also services for substance abuse, child and adolescent psychiatry, and clinical psychology services. Concerning the availability of the whole network of mental health facilities, about eight DMHs out of ten included RFs or DCFs and almost all had GHPUs, while day hospitals were less frequent (they were present in about half the DMHs). The level of complexity in terms of mental health facility availability is high in six DMHs of the ten, intermediate in a quarter and low in one of the ten.

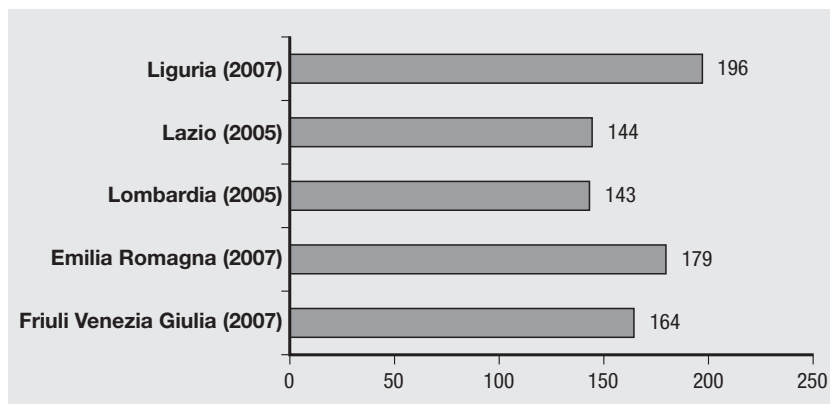


Fig. 1 | Treated one year prevalence, per Region, in Departments of Mental Health.

The one year treated prevalence

Treated prevalence provides a measure of the capacity of the mental health system, *i.e.* the total number of people served within the mental health system. Treated prevalence can also be used to estimate the extent of mental health coverage, or, in other words, what proportion of the population with mental disorder is actually receiving treatment.

Data on one year treated prevalence at the DMH level were available from the five Regions (*Figure 1*). The total prevalence rate, not adjusted, was 158 per 10 000 over 14 years of age. The rate was higher in Liguria, lower in Lazio and Lombardia. Regional variability was not high (average 167, SD \pm 24.4).

Table 1 shows the diagnostic breakdown from the one year prevalence data in three Regions (figures from Liguria and Lazio were not available as far as treated prevalence), grouped by the 10th International Classification of Mental Disorders [18]. Note that the reliability and validity of diagnoses in an administrative data set is always open to question, but such figures are a useful tool for a better understanding of the priorities in mental health systems. In our data set, patients with schizophrenic disorders were about one third – one fourth of the patients being treated in public Mental Health Departments. In terms of frequency, the second most common diagnoses were mood disorders – Friuli Venezia Giulia and Lombardia, and neurotic disorders – Emilia Romagna. In all these Regions personality disorders

amounted to about one tenth of the subjects. It was quite rare for patients with substance abuse to be treated in a DMH as there are specialized services set up for them. About one twentieth of the patients suffered an organic mental disorder.

With regard to the new cases treated in DMHs (*Figure 2*), the crude rate was 60 per 10 000 over 14 years old. The rate in Lazio was 3-fold that in Liguria and the Regional variability was higher for new cases (average 58, SD \pm 23.2) than for cases already under treatment, suggesting marked differences in terms of accessibility between Regions.

As far as concerns diagnoses, neurotic disorders represented the majority of new cases, though there was a considerable gap between Friuli (where they are a quarter) and Emilia Romagna (where they represent about a half) (*Table 2*). In Lombardia and Friuli Venezia Giulia one patient in four suffered mood disorder, while in Emilia-Romagna this was one in ten. The percentage of patients with schizophrenia was quite homogeneous (around 10% in all four regions). Personality disorders were a bit less than one tenth, with the exception of Friuli Venezia Giulia, where they were less than one twentieth. There is a growing need for care for organic mental disorders, not only in Friuli Venezia Giulia where they represent about a sixth of the new cases, but also in the other Regions.

Using the data of the annual prevalence in public DMHs and that on the utilization of mental

Table 1 | Treated one year prevalence in DMHs of three Italian regions by ICD 10 diagnostic groups (percentages of cases with diagnoses)

	Friuli Venezia Giulia (2007)	Emilia Romagna (2007)	Lombardia (2005)
Schizophrenic disorders	30.9%	24.9%	30.7%
Mood disorders	25.5%	17.2%	20.7%
Neurotic disorders	19.2%	33.8%	20.6%
Organic mental disorders	7.3%	3.7%	3.5%
Personality disorders	6.5%	11.8%	11.6%
Disorders due to substance abuse	2.9%	2.1%	2.6%
Others	7.8%	6.4%	7.9%

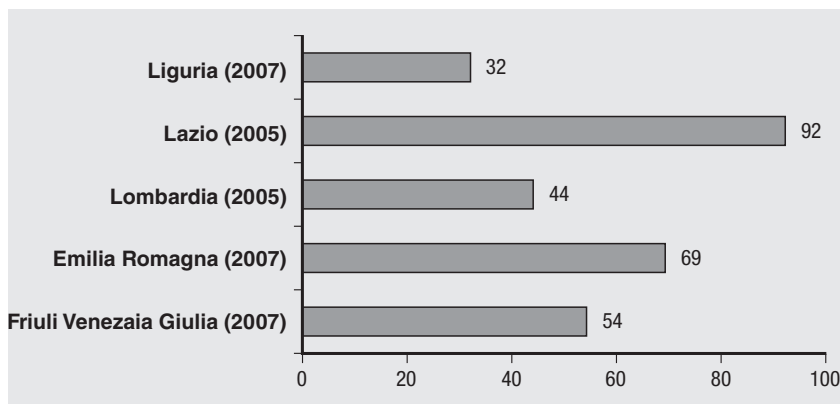


Fig. 2 | New cases treated, per Region, in Departments of Mental Health (rates per 10 000 >14 yrs).

health facilities, it is possible to construct patterns of care (Table 3). The present analysis regards four Regions (Friuli Venezia Giulia, Lazio, Liguria and Lombardia) where both sets of data were available. Interpreting the data requires some caveats, because regional information systems differ in their coverage of mental health facilities (e.g. in Liguria there were no figures available for residential facilities).

CMHCs treated 93% to 97% of the patients cared for in DMHs. The percentage of acute patients treated in GHPUs varied from 5% in Friuli Venezia Giulia to 22% in Liguria. Only about one patient in twenty was cared for in Day Care or Residential Facilities, though in Friuli Venezia Giulia this figure increases to one in ten.

The treatment gap in schizophrenic and mood disorders

In order to evaluate the capacity of the mental health system to treat mental disorders it is useful to consider treatment coverage and treatment gap. Treatment gap can be defined as the difference between the prevalence of a specific mental disorder in a population and the proportion of affected individuals receiving treatment for the disorder. Alternatively, treatment gap can be expressed as the percentage of individuals requiring care but not receiving treatment [19].

Data concerning the coverage and the treatment gap for schizophrenic disorders cover only DMHs, private psychiatric practice or primary care were

not included. In fact it can be assumed that patients with schizophrenic disorders will be cared only for through specialized mental health services. Thus the percentage of patients with schizophrenic disorders treated in such settings is a crucial indicator of the capacity of a mental health system to take care of severe mental illnesses. The Global Burden of Disease study (GBD) [7], estimated that the annual prevalence > 14 years old for highly developed European countries is 0.6%. The treatment prevalence for schizophrenia across Friuli Venezia Giulia, Lombardia and Emilia Romagna was compared to the estimates for schizophrenia from the GBD study. A perfect relationship between estimated rates for schizophrenia and treated cases is a score of 100. On comparing the GBD estimate (0.60%) with the treated prevalence of the DMH in these three Italian Regions (0.33%), the treatment gap is 57%.

The same exercise can be done for mood disorders. For mood disorders, the data analyzed both the DMH data and the estimates on cases treated in primary care. A GBD study and an ESEMeD survey for depressive unipolar disorders resulted in the same figures (3.5%), while the GBD study for bipolar disorders estimated the one year prevalence to be 0.5% for the developed European countries. Therefore the total one year prevalence for mood disorders is 4%. In the three Italian Regions the treated prevalence at the DMH level for mood disorders is 0.30%, while at the primary care level the estimate inferred from

Table 2 | New cases treated in DMHs of three Italian regions by ICD 10 diagnostic groups (percentages of cases with diagnoses)

	Friuli Venezia Giulia (2007)	Emilia Romagna (2007)	Lombardia (2005)
Schizophrenic disorders	12.1%	8.8%	9.9%
Mood disorders	25.8%	13.4%	27.0%
Neurotic disorders	28.5%	54.8%	37.5%
Organic mental disorders	13.8%	6.9%	5.0%
Personality disorders	3.7%	9.0%	7.3%
Disorders due to substance abuse	3.7%	3.5%	1.0%
Others	12.4%	3.5%	10.4%

Table 3 | Patterns of care: patients treated in DMHs by different types of facilities (percentages of patients cared for by each facility type in the overall DMH prevalence)

	Friuli Venezia Giulia (2007)	Liguria (2007)	Lazio (2005)	Lombardia (2005)
General hospital psychiatric units	5%	22%	9%	12%
Residential facilities	8%	UN	1%	5%
Day care facilities	10%	4%	3%	4%
Community mental health centers	97%	92%	95%	93%

(UN = unknown)

the Italian ESEMeD data is 0.54%. The results are impressive: there is very low coverage of mood disorders in both mental health services (7.6%) and in primary care (13.5%), thus the treatment gap is huge (79%). Data from Sesto Fiorentino are radically different, because in this site there is a extremely high coverage of primary care services and the treatment gap is practically absent.

The network of mental health facilities

Community Mental Health Centres

Community Mental Health Centres (CMHCs) are the core of the community-based system. They cover all activities pertaining to adult psychiatry in outpatient settings, and manage therapeutic and rehabilitation activities delivered by DCFs and RFs.

During 2005-2006, the PROG-CSM survey [17] analyzed, at the national level, the network of CMHCs in 20 regions (except Molise), evaluating about 95% of Italy's CMHCs.

The CMHC/resident ratio was about 1 facility per 80 460 inhabitants. With regard to fulltime staff, each CMHC had, on average, 4 psychiatrists, 2 psychologists, 2 social workers or rehabilitation therapists, and 7.7 nurses. This means about 24.8 fulltime professionals per 100 000 residents. There were few differences between geographical areas: Northern Italy averaged 25.9 professionals per 100 000 residents (SD ± 11.5), Central Italy 28.3 (SD ± 7.4) and Southern Italy 23.7 (SD ± 6.9). However in the same geographical area marked differences exist between Regions: e.g. in the North the staff rate in Friuli Venezia Giulia is 3-fold that in Veneto and Lombardia.

The rate of patients treated in CMHCs over a three months period was 90.8 per 10 000 residents. Of this rate, the new cases (first visit to CMHC in 2004) were 38% of the three months period prevalence. On the whole sample, women made up 57%, and considering age, 42.5% were less than 44 years old, 36% were 45-64 and 21.5% were over 64.

With regard to diagnoses, psychotic disorders (mainly schizophrenic disorder) were about 29%, mood disorders 25%, anxiety disorders 22.5% and other disorders 23.5%. For the new cases the diagnostic breakdown was different: psychotic disorders were 14%, mood disorders 20%, anxiety disorders and other disorders each about 26%. A quarter of all the patients received community treatments

(home visits, intervention in the community, etc.) outside the CMHC facility.

The CMHC organization, integration and care continuity with other community DMH facilities was very satisfactory in more than 69% of the facilities. At the patient level, more 37% of the CMHCs developed high quality programs to ensure continuity and care coordination for severe mental disorders (including intensive home care, drop-out prevention programs). Integration with other community health and social services was excellent in 31% of the CMHCs, while it was totally inadequate in about 10%. Prevention and promotion programs were not widespread among the CMHCs: only in 18% of the CMHC could these programs be considered adequate.

The CMHC activity is analysed in greater detail, using data provided by the five Regions (Table 4). On the whole the crude treated-patient rate in CMHCs over a one year period was 148 per 10 000, and the variability among the Regions was small (average 158; SD ± 22). Instead, the CMHC intervention rate is 2402 per 10 000 and in this case there was greater variability among the Regions (average 2792; SD ± 1226).

The main activities provided by the CMHC were the psychiatrists' and nurses' activities: they represented 60% of overall CMHC activity in the five Regions. Rehabilitative – socializing, psychotherapeutic and coordination activities were 6-10%, while social support activities and activities addressed to families were less than 5%.

Acute inpatient facilities

Within the DMH system, acute inpatient care is delivered in General Hospital Psychiatric Units (GHPUs). These inpatient facilities with a maximum of 15 beds

Table 4 | Patients treated and interventions provided yearly by CMHCs, per region (rates per 10 000 > 14 years old)

	Patients	Interventions
Friuli Venezia Giulia (2007)	159	3.848
Emilia Romagna (2007)	179	4.339
Lombardia (2005)	133	1.731
Lazio (2005)	138	1.709
Liguria (2007)	180	2.334

Table 5 | *Activities provided by CMHCs (percentages)*

Activities	Interventions	Total	Friuli Venezia Giulia (2007)	Emilia Romagna (2007)	Lazio (2005)	Liguria (2007)	Lombardia (2005)
Clinical psychiatrists' activity	Outpatient clinical contact with psychiatrists for forensic psychiatric assessment	29%	26%	20%	37%	46%	30%
Psycho therapeutic activity	Psychological assessment, outpatient clinical contact with psychologist, psychotherapy	8%	5%	2%	19%	10%	9%
Nurses' activities	Outpatient contact with nurse, nurse's home visit, administering psychotropic drugs	31%	46%	35%	25%	26%	28%
Activity addressed to families	Meeting with relatives and carers (without the presence of the patient), psycho-educational Intervention, family groups	4%	5%	4%	NA	NA	7%
Care coordination activity	Staff meeting in the department, meeting with other health and non-health services, meeting with social network	6%	7%	3%	7%	4%	8%
Rehabilitative and socializing activity	Intervention aimed at achieving basic, interpersonal and social skills training, occupational activities or vocational training, sheltered employment activities, leisure and socializing activities, psychomotor and creative therapy, outpatient contact with rehabilitation therapist	9%	4%	17%	5%	9%	4%
Social support activity	Outpatient contact with social worker, social support	4%	3%	2%	6%	2%	7%
Others		3%	4%	1%	0%	2%	5%

(NA= not assessed in the Region)

are closely linked with the CMHCs to ensure continuity of care.

The PROGRES-Acute Project [20] covered the network of acute inpatient facilities in 20 regions (except Sicily) during 2002-2003. Italy had a rate of 0.78 public acute-inpatient beds per 10 000 inhabitants, located in GHPU (88%), University Psychiatric Clinics (10%) and 24-hour CMHCs (2%). The availability of public acute beds in Italy was approximately 20% less than the official national standard (1 bed per 10 000 inhabitants). The corresponding rate of private beds was 0.94 beds per 10 000 inhabitants. On the whole, in Italy, the rate of acute, short-term psychiatric beds (public and private) was 1.72 per 10 000 inhabitants. Not only did this rate (private plus public beds) present considerable variation across the different regions, the ratio being 8:1, but also the number of public beds varied greatly from the South to the North-East and Centre (by nearly a 1:2 ratio).

Concerning staffing: all public and private facilities had 24 hours coverage, with staff on duty at night. The 301 public facilities employed 8058 professionals, 86.5% of whom worked full-time. The number of staff in private facilities was much smaller (2384 professionals, of whom 1918 were working full-time). The figures show a full-time staff quota per bed in private facilities that is much smaller than in any type of public facility: in the public facilities the

staff/patient ratio ranged from 1.44 to 5.17, showing that facilities for acute patients rely greatly on human resources; in contrast, ratios for private facilities were markedly smaller (0.45 staff/patient ratio).

The mean length of stay varies between facilities, with a median number of days per admission of 11.4 in GHPU, 17.8 in University Psychiatric Clinics, 21.1 in 24-hour CMHCs and 37.6 days in Private Facilities. There was a substantial variation in the length of stay across the different areas: the mean length of stay in the northeast region was almost twice that in the central and southern regions. Even the number of public beds differs greatly between the southern regions and the north-east and central regions. Indeed, the different bed availability could account for the much shorter average length of stay observed for the south.

In 2001 the psychiatric admissions and the number of admitted patient-rates per 10 000 inhabitants in public facilities were 19.8 and 13.4 respectively, whereas in private facilities these were 6.9 and 4.4 respectively. The percentage of "revolving-door" patients (*i.e.* the patients who had had three or more admissions to the same facility) was similar in public and private facilities (8.7% versus 8.3%).

The percentage of compulsory admissions was 12.9%, and it varies from region to region. As a temporal trend the percentage of compulsory admissions decreased from approximately 50% in 1975

(3 years before the Reform Law), to approximately 20% in 1984. Ten-years later, in 1994, this percentage had dropped to 11.8% of the total of public psychiatric admissions [21].

Within the context of PROGRES-ACUTI, diagnoses in a sample of admissions were analyzed [22]. Patients with schizophrenia represented 37.9% of the total admissions to public inpatient units and 25.9% to private ones. Patients with bipolar affective disorders were 18.4% in public facilities and 19.6% in private; those with unipolar depressive disorders were 16.1% in public and 20% in private facilities. A second assessment in the PROGRES-ACUTI Project was conducted specifically to address psychiatric inpatient characteristics on a given census day [23]. The public and private facilities showed great differences in age and gender distribution: public facilities admitted mostly young men, whereas one-third of the beds in private facilities were occupied by women aged 65 and older.

Community residential facilities

The PROGRES study [24], a wide national survey, monitored the network of community Residential Facilities (RF) in Italy. In the year 2000, Italy had 1370 Community RFs and a rate of 3.5 beds per 10 000 inhabitants over 14 years of age. There was marked variability (up to 10-fold) in the provision of residential places among the different regions: 73% of the RFs had 24-hour staffing and more than half were (and still are) managed directly by DMHs, and more than three quarters are funded by National Health Service. The mean number of full-time staff was 8.2 and the overall ratio of patients to full-time staff was 1.4:1.

The results of the PROGRES survey also suggested that many RFs provide mostly long-term accommodation: three quarters of them have no formal limitation to the length of stay; resident turnover was, and is, low, there being few new admissions and few discharges, and discharge to independent accommodation is uncommon. For many chronic, disabled patients, RFs represent "a home for life", rather than a transitional facility. The environmental characteristics are relatively good: residential units are small (an average of 12.5 beds each), residents generally living in twin-bed rooms, and generally open spaces, like gardens, are available. Although the study found a homelike atmosphere in many RFs, most facilities have restrictive rules on the patients' daily life and behaviour. The RFs had several external activities targeted at integrating patients within the local community, however 45% of the patients were totally inactive, not even assisting with their facility's daily activities. Standardized assessment instruments and written treatment plans were rarely used. Leisure and socializing activities, psychomotor and creative interventions prevailed in the rehabilitative interventions (*i.e.* aimed at basic, interpersonal and social skills training); family addressed activities were not frequent [25].

A sample of the total population, 2962 subjects, was evaluated in greater depth [26]. Most were males (63.2%) who had never married, and more than 70% were over 40 years of age; 85% received a pension, most commonly because of psychiatric disability. A substantial proportion (39.8%) had never worked, and very few were currently employed (2.5%); 45% of the sample was totally inactive, not even assisting with domestic activities in the facility. Two-thirds had a diagnosis of schizophrenia (68.2%), while the second most frequent diagnosis was mental retardation (13.1%) and the third, personality disorder (8.5%). Co-morbid or primary substance abuse was uncommon. Mental illness had been long-lasting and severe: for seven out of ten patients the severe mental problems had begun more than fifteen years earlier, and in the last five years about fifty per cent of the sample had suffered persistent positive psychotic symptoms. Twenty-one per cent had a history of severe interpersonal violence, but violent episodes in the RFs were infrequent. The majority the total sample of RF residents (58.5%) had never been admitted to a mental hospital or a forensic mental hospital; almost 40% had been admitted, at least once, to a mental hospital, and 1.6% had been detained in a forensic mental hospital.

CONCLUSIONS

The treatment of common mental disorders in primary care: an unsolved problem

Two community surveys [8, 12] assessed the prevalence of common mental disorders in Italy to be about 7-8%, with very concordant figures. These prevalence estimates were generally lower than in parallel surveys carried out in other Western European countries. However on the crucial issue of service planning, namely the use of health services by those with mental disorders, we have radically different figures from these two surveys. Of the two, the Sesto Fiorentino estimates were more optimistic, but limited to one site, while if there is confirmation of the more pessimistic ESEMeD findings we must conclude that primary care accessibility for common mental disorders is particularly low. Given that the two estimates are widely divergent, there is an urgent need for definitive and concordant indications on the coverage of mental disorders in primary care.

About one tenth of the patients cared for in primary care suffer from some kind of mental disorder, and the prevalence of depressive episodes in this setting varies between 3.3% and 8.4%. However surveys like the two mentioned above do not provide a better understanding of the primary care role in the mental health system, because they do not include information concerning the adequacy of the treatment provided to these patients. The ESEMeD study [27] highlighted that in six European countries only one fourth of the patients with affective disorders received sufficiently adequate treatment in pri-

mary care. Further improvements for the treatment of depression in primary care, like the development of collaborative care [28], should be based on solid estimates of the existing adequacy of the usual treatments. Without this piece of epidemiological information it is not possible to adequately monitor the needed improving actions.

The burden of mood disorders is certainly large regardless of the primary care data used to choose for the estimates. A strategic goal for the National Health System is to bridge this gap: it cannot be tackled without proactive and sustained action at the primary care level and without developing a solid referral and back-referral system with mental health services. However, until now there has been a scarcity of both epidemiological information and strategic actions for improving the treatment of affective disorders at this level.

The core of the mental health system: the Departments of Mental Health

The DMH is the core of community mental health care in Italy: such departments are widespread throughout the country, though with different levels of complexity. With regard to the types of facilities present, the DMHs seem quite complete with the exception of day hospitals. The complexity of DMHs is high in terms of mental health facilities, while it is lower in terms of type of specialized clinical services (like child psychiatry, alcohol and drug abuse services) included in DMHs, given that four DMHs out of ten were limited to adult psychiatry.

The data from regional information systems in five Regions, covering about 20 000 000 people, have given us reliable annual figures for patients treated in public DMHs. Indeed, about 1.6% of the population was cared for by DMHs and new cases were 0.60%. The variability among the Regions with regard to new cases is higher than for treated prevalence, suggesting marked differences in terms of accessibility. In the 1980s data collected from psychiatric case registers on one treated prevalence ranged between 0.70-0.97%, while for new cases the range was between 0.12-0.23% [29, 30]. In the last thirty years the mental health system has grown greatly in terms of both treatment capacity (+89% for treated cases) and accessibility (+243% for new cases).

About one fourth of the treated cases in DMHs had schizophrenic disorders, and about a fifth mood disorders; among the new cases these diagnoses were less frequent, while neurotic disorders were the majority (from one third to half) and organic mental disorders a tenth. The DMHs are focussed on treating severe mental illnesses, which was also revealed by regional analyses on resource utilization [31].

As far as concerns public DMHs, the coverage for schizophrenic disorders is about 57%. This result is close to the NEMESIS survey in the Netherlands [32], but is questionable because it depends strongly on the prevalence estimates of population schizophrenic disorders. For example, if we use the other

estimates [33, 34], the prevalence rates are lower (about 0.3%) and the treatment gap is practically 0%. In any case, even assuming uncertainty in prevalence, this indicator is useful to monitor system accessibility for patients with severe mental illnesses.

The patterns of care were strongly influenced by the mental health information system coverage, and by the structure of the different regional mental health systems in terms of available facilities. This last issue requires more in-depth analyses, as it is relevant for assessing the adequacy of the National Health System with regard to mental health care.

The network of community mental health facilities: mission accomplished?

Thirty years after the reform (Legge 180) the network of community mental health facilities seems complete, especially as far as concerns RFs, CMHCs and, partly, GHPUs, though a relevant variability still remains among the Regions.

Our analysis revealed that more than nine out of ten of the patients treated by Mental Health Departments had contact with the CMHCs. This means that CMHCs are the hub of community care, and are crucial to developing the whole system's treatment capacity. The rate of professionals working in CMHCs was quite homogeneous for the North, Centre and South of Italy, though there are still differences among the Regions. The rate of patients treated at the CMHC level showed a range of between 130-180 per 10 000. Data from specific research on patterns of care [6] suggest that CMHCs are highly accessible, also for patients with severe mental disorders (in Lombardia about two thirds of the patients with schizophrenic disorders were treated solely by CMHCs). This preliminary analysis from five Regions showed marked variations in terms of contact rate and type of CMHC activities. Further research is needed to evaluate whether these differences derive only from different service delivery levels, or whether they were at least partly related to different information system characteristics. Indeed, the amount of care provided by CMHCs is a central issue for the development of community care: greater delivery of CMHC care calls for a larger CMHC capacity to provide intensive community treatment, in order to respond to acute cases without hospitalization and to implement innovative interventions (*e.g.* early interventions in psychosis or psychoeducational approaches).

Quite different is the situation concerning GHPUs, both in terms of bed availability and, in part, of structural adequacy [35]. The differences are still relevant among Regions and also geographical areas: in 2003, the rate of public beds in GHPUs in the centre and south of Italy was one third below the Progetto Obiettivo standard and that of the North. In the same geographical areas the Private Acute Facilities had double the beds of the GHPUs, but because of the different case mix between public and private facilities, and the often poorly structured coordination with the DMHs, it was practically impossible

for private facilities to replace the care provided by GHPUs. In a country which has one of the lowest rates of acute inpatient beds in Europe [36], and where day hospitals are not widespread, there is a high risk that the clinical needs of people with severe mental illness are not met during times of acute crisis if the public GHPU network is weak and the CMHCs are not able to care for these patients in the community.

Let us summarize the results of PROGRES: in Italy, many people with severe mental illness who, previously, would have been treated in mental hospitals are now cared for in residential facilities. However the historical gap in the mental health system of the 80s, *i.e.* the lack of RFs in the community, has been now filled. However there are still some problems to be tackled. First, the provision of residential beds varies greatly across the Regions. Second, analyses of the care process in residential facilities show large heterogeneity, and efforts should be made to improve the effectiveness, and coordination, of care within the Departments of Mental Health. Third, in recent years the number of beds in residential facilities is still rapidly increasing [37, 31], and further RF expansion could hamper, in terms of competition for resources, the provision of intensive and innovative community care by CMHCs. This last is a crucial issue for the development of community care, not only in Italy but also throughout Europe [38].

Information, strategic tool for improving the Italian mental health system

As stated by WHO, good information is needed to obtain a valid and reliable picture of a country's mental health system [39]. Without high quality information it is not possible to reach a planning rationale, the governance of the system is severely hampered, and accountability at both the national and regional levels is impeded. Decision Support 2000+, a US national initiative, has highlighted that the quality of information determines the quality of mental health care [40].

Thirty years after the psychiatric reform there is still no electronically recorded national mental health information system interactive among the Regions, which is a severe gap in the Italian mental health system. The comparisons presented in this paper derive from a few Regions which, over the last ten years, have autonomously developed regional information systems. These figures from the five Regions are preliminary findings and still present some methodological weaknesses, but they give some insight into the enormous monitoring and evaluation potential within the mental health information system.

In 2001 the Regions and the Ministry of Health [41] made a joint statement concerning the implementation of a national mental health information system, but this has not yet been translated into action. Some of the problems met with in this paper, *e.g.* the comparison of CMHC activities because of differences in terminology, would be easily resolved if the Glossary of Community Mental Health Ac-

tivities, included in the National Mental Health Information System Framework, was applied.

The lack of a national mental health information system severely hampers not only planning and monitoring, but also any analysis of the mental health system. To this day the only data available at the national level is derived from surveys (*e.g.* PROGRES surveys) that have analyzed, in-depth, the individual mental health facility networks; such data provided only a part of the comprehensive picture of the mental health system and were not at all suitable for monitoring changes as mental health information systems can.

How can epidemiological information help the mental health system in Italy? First, we should consider that a unique mental health system in Italy does not exist: after the 1978, Psychiatric Reform regionalizing mental health care, 21 regional mental health systems were developed and these differ greatly in terms of organization, network of facilities, accessibility, care delivered etc. Therefore these differences among the regional systems need urgent evaluation. Second, in the last thirty years much attention has been paid to the development of a network of community mental health services, therefore we should now focus on assessing the overall quality of these mental health systems. This requires to evaluate through mental information system data the usual dimensions of quality assessment, *i.e.* accessibility, adequacy, acceptability, continuity and effectiveness [42]. In Italy, as in the rest of the world [43], there is an urgent need for more research into the mental health system to explore these crucial issues.

However working only at the system level does not meet all the quality needs in the mental health system, also practices at the DMH level need changing. While our knowledge about effective mental health care is growing fast, putting such knowledge into practice and using it in day-to-day patient care often fails [44]. Pincus *et al.* [45] stated that in mental health care "The gap between the care that patients *could* receive and do receive is greater than a fissure, it is a chasm". To fill such a gap, the authors suggest a more efficient dissemination of evidence to clinicians in order to strengthen the measure of quality, the improvement of the informative infrastructure needed for measuring and reporting quality, and the supporting of quality improvement practices at the locus of care. High quality information is also needed for implementing clinical governance at the DMH level [46].

There is growing consensus on the use of evidence-based clinical indicators for improving quality [47]. In Italy the SIEP DIRECT'S Project goes in this direction [48, 49]. This Project, conducted in 19 DMHs, evaluated the quality of care delivered to patients with schizophrenia through a set of indicators (www.eps-journal.com/custom/direct/2008_4-Instrument_2.pdf) based on NICE Guideline recommendations [50]. This tool may increase awareness of the strengths and weaknesses of customary mental care and open the door to improving actions.

From information to action: this is the virtuous circle that we should be implementing over the next decade, promoting high quality information and using it to improve mental health systems and clinical practices.

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References

- Tansella M. The long journey of monitoring and evaluating a new mental health service. *Acta Psychiatr Scand* 2007;437(Suppl.):3-5.
- Tansella M, Amaddeo F, Burti L, Lasalvia A, Ruggeri M. Evaluating a community-based mental health service focusing on severe mental illness. The Verona experience. *Acta Psychiatr Scand* 2006;429(Suppl.):90-4.
- de Girolamo G, Bassi M, Neri G, Ruggeri M, Santone G, Picardi A. The current state of mental health care in Italy: problems, perspectives, and lessons to learn. *Eur Arch Psychiatry Clin Neurosci* 2007;257:83-91.
- World Health Organization *Everybody business: strengthening health systems to improve health outcomes: WHO's framework for action*. Geneva: WHO; 2007.
- Goldberg D, Huxley P. *Mental illness in the community: the pathway to psychiatric care*. London: Tavistock Publications; 1980.
- Lora A, Cosentino U, Gandini A, Zocchetti C. Which community care for patients with schizophrenic disorders? Packages of care provided by departments of mental health in Lombardy (Italy) *Epidemiol Psychiatr Soc* 2007;16:330-8.
- Disease Control Priorities Project. *Global Burden of Disease and Risk Factors*. Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL. (Ed.). Oxford University Press and The World Bank; 2006. Available from: <http://www.dcp2.org/main/Home.html>.
- de Girolamo G, Polidori G, Morosini P, Scarpino V, Reda V, Serra G, Mazzi F, Alonso J, Vilagut G, Visonà G, Falsirollo F, Rossi A, Warner R. Prevalence of common mental disorders in Italy: results from the European Study of the Epidemiology of Mental Disorders (ESEMED). *Soc Psychiatry Psychiatr Epidemiol* 2006;41:853-61.
- de Girolamo G, Polidori G, Morosini P, Mazzi F, Serra G, Scarpino V, Reda V, Visonà G, Falsirollo F, Rossi A. Prevalence of common mental disorders in Italy, risk factors, health status, and utilization of health services: the ESEMED-WMH project. *Epidemiol Psychiatr Soc* 2005;14(Suppl. 4):1-100.
- The WHO World Mental Health Survey Consortium. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA* 2004;291:2581-90.
- Wang PS, Aguilar-Gaxiola S, Alonso J, Angermeyer MC, Borges G, Bromet EJ, Bruffaerts R, de Girolamo G, de Graaf R, Gureje O, Haro JM, Karam EG, Kessler RC, Kovess V, Lane MC, Lee S, Levinson D, Ono Y, Petukhova M, Posada-Villa J, Seedat S, Wells JE. Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO World Mental Health Surveys. *Lancet* 2007;370:841-50.
- Faravelli C, Abrardi L, Bartolozzi D, Cecchi C, Cosci F, D'Adamo D, Lo Iacono B, Ravaldi C, Scarpato MA, Truglia E, Rossi Prodi PM, Rosi S. The Sesto Fiorentino study: point and one-year prevalences of psychiatric disorders in an Italian community sample using clinical interviewers. *Psychother Psychosom* 2004;73:226-34.
- Piccinelli M, Pini S, Bellantuono C, Bonizzato P, Paltrineiri E, Ustun TB, Sartorius N, Tansella M. Lo studio internazionale multicentrico della Organizzazione Mondiale della Sanità sui disturbi psichici nella medicina generale: risultati relativi all'area di Verona *Epidemiol Psychiatr Soc* 1995;1:27-50.
- Berardi D, Berti Ceroni G, Leggieri G, Rucci P, Ustün B, Ferrari G. Mental, physical and functional status in primary care attenders. *Int J Psychiatry Med* 1999;29:133-48.
- Berardi D, Leggieri G, Ceroni GB, Rucci P, Pezzoli A, Paltrinieri E, Grazian N, Ferrari G. Depression in primary care. A nationwide epidemiological survey. *Fam Pract* 2002;19:397-400.
- Ministero della Salute. Progetto Obiettivo "Tutela Salute Mentale 1998-2000" Available from: http://www.ministerosalute.it/imgs/C_17_pubblicazioni_558_allegato.pdf.
- Centro Studi e Ricerche in Psichiatria. *Una valutazione nazionale dei Centri di Salute Mentale Territoriali Italiani: il Progetto PROG-CSM Fase I - Report al Ministero della Salute* (unpublished report). Torimo; 2008.
- World Health Organization. *The ICD 10 classification of mental and behavioural disorders: diagnostic criteria for research*. Geneva: WHO; 1993.
- Kohn R, Saxena S, Levay I, Saraceno B. The treatment gap in mental health care *Bull World Health Org* 2004;82:858-66.
- de Girolamo G, Barbato, Bracco A, Gaddini R, Miglio A, Morosini R, Norcio B, Picardi A, Rossi E, Rucci P, Santone G, & Dell'Acqua, G. The characteristics and activities of acute psychiatric inpatient facilities: A national survey in Italy. *Br J Psychiatry* 2007;191:170-7.
- Barbato A. Psychiatry in transition: outcomes of mental health policy shift in Italy. *Aust NZ J Psychiatry* 1998;32:673-9.
- Preti A, Rucci P, Santone G, Picardi A, Miglio R, Bracco R, Norcio B, de Girolamo G. Patterns of admission to acute psychiatric in-patient facilities: a national survey in Italy. *Psychol Med* 2008;26:1-12.
- Gaddini A, Biscaglia L, Bracco R, de Girolamo G, Miglio R, Norcio B, Rossi E, Rucci P, Santone G. A one-day census of acute psychiatric inpatient facilities in Italy: findings from the PROGRES-Acute Project. *Psychiatr Serv* 2008;59:722-4.
- de Girolamo G, Picardi A, Micciolo R, Falloon I, Fioritti A, Morosini P. For the Italian PROGRES Study Group. Residential care in Italy: a national survey of non-hospital facilities. *Br J Psychiatry* 2002;181:220-5.
- Santone G, de Girolamo G, Falloon I, Fioritti A, Micciolo A, Picardi A, Zanalda E. For the PROGRES Group. The process of care in residential facilities. A national survey in Italy. *Soc Psychiatry Psychiatr Epidemiol* 2005;40:540-50.
- de Girolamo G, Picardi A, Santone G, Falloon I, Morosini P, Fioritti A, Micciolo R. For the PROGRES Group. The severely mentally ill in residential facilities: a national survey in Italy. *Psychol Med* 2005;34:1-11.
- Fernández A, Haro JM, Martínez-Alonso M, Demyttenaere K, Brugha TS, Autonell J, de Girolamo G, Bernert S, Lépine JP,

- Alonso J. Treatment adequacy for anxiety and depressive disorders in six European countries. *Br J Psychiatry* 2007;190:172-3.
28. Bower P, Gilbody S, Richards D, Fletcher J, Sutton A. Collaborative care for depression in primary care. Making sense of a complex intervention: systematic review and meta-regression *Br J Psychiatry* 2006;189:484-93.
 29. Torre E, Marinoni A. Registers studies data from four areas in Northern Italy. *Acta Psychiatr Scand* 1985;316:87-94.
 30. Balestrieri M, Micciolo R, De Salvia D, Tansella M. Confronti e prospettive nella utilizzazione dei Registri Psichiatrici dei Casi. *Epidemiol Psichiatr Soc* 1992;2:133-14.
 31. Regione Lombardia. Direzione Generale Sanità. *Il Sistema di Salute Mentale della Regione Lombardia* (a cura di Antonio Lora). Milano: Regione Lombardia; 2008.
 32. Bijl RV, Ravelli A. Psychiatric morbidity, service use, and need for care in the general population: results of the Netherlands Mental Health Survey and Incidence Study. *Am J Public Health* 2000;90:602-7.
 33. Goldner EM, Hsu L, Waraich P, Somers JM. Prevalence and incidence studies of schizophrenic disorders: a systematic review of the literature. *Can J Psychiatry* 2002;47:833-43.
 34. Saha S, Chant D, Welham J, McGrath J. A systematic review of the prevalence of schizophrenia. *PLoS Med* 2005;2:e141.
 35. Dell'Acqua G, Norcio B, de Girolamo G, Barbato A, Bracco R, Gaddini A, Miglio R, Morosini P, Picardi A, Rossi E, Rucci P, Santone G. Caratteristiche e attività delle strutture di ricovero per pazienti psichiatrici acuti: i risultati dell'indagine nazionale "Progres-Acuti". *G Ital Psicopatol* 2007;13:26-39.
 36. WHO Regional Office for Europe. *Policies and practices for mental health in Europe-meeting the challenges*. 2008. Available from www.euro.who.int/Document/e91732.pdf.
 37. Regione Emilia-Romagna. Le strutture Residenziali Psichiatriche in Emilia Romagna – anno 2006. Direzione Generale Sanità e Politiche Sociali, Servizio Salute Mentale e Assistenza Sanitaria nelle Carceri, Bologna. Regione Emilia Romagna (unpublished report). 2006.
 38. Priebe S, Badesconyi A, Fioritti A, Hansson L, Kilian R, Torres-Gonzales F, Turner T, Wiersma D. Reinstitutionalisation in mental health care: comparison of data on service provision from six European countries. *BMJ* 2005;330:123-6.
 39. World Health Organization. *The World Health Report 2001. Mental Health: New Understanding, New Hope*. Geneva: WHO; 2001.
 40. Manderscheid RW, Henderson MJ. From many into one: an integrated information agenda for mental health. *Behav Healthc Tomorrow* 2004;13:38-41.
 41. Ministero della Salute. *Accordo Conferenza Stato Regioni dell'11 ottobre 2001: "Il Sistema Informativo nazionale per la Salute Mentale"*. Documento programmatico relativo alla costituzione del Sistema Informativo per la Salute Mentale. 11 ottobre 2001. Available from: <http://www.nsis.ministero-salute.it/nsis/nsis.jsp>.
 42. McEwan K, Goldner EM. *Accountability and Performance Indicators for Mental Health Services and Supports A Resource Kit Prepared for the Federal/ Provincial/ Territorial Advisory Network on Mental Health* 2001. Available from: <http://www.hc-sc.gc.ca/hppb/mentalhealth/service>.
 43. Saraceno B. Mental health systems research is urgently needed. *Int J Ment Health Syst* 2007;1:2 doi:10.1186/1752-4458-1-2.
 44. Grol R. Knowledge transfer in mental health care: how do we bring evidence into day-to-day practice? *Can J Psychiatry* 2008;53:275-6.
 45. Pincus HA, Page AE, Druss B, Appelbaum PS, Gottlieb G, England MJ Can psychiatry cross the quality chasm? Improving the quality of health care for mental and substance use conditions. *Am J Psychiatry* 2007;164:712-9.
 46. Lora A. Sistema informativo e governo clinico. *Psichiatria di Comunità* 2006;5:217-21.
 47. Mainz J, Krog BR, Bjørnshave B, Bartels P. Nationwide continuous quality improvement using clinical indicators: the Danish National Indicator Project. *Int J Qual Health Care* 2004;16(Suppl. 1):i45-50.
 48. Semisa D, Lora A, Morosini P, Ruggeri M. The SIEP-DIRECT'S Project on the discrepancy between routine practice and evidence in the treatment of schizophrenia. The design, the indicators, and the methodology of the study. *Epidemiol Psichiatr Soc* 2008;17:358-68.
 49. Ruggeri M, Lora A, Semisa D on behalf of the Group SIEP-DIRECT'S. The SIEP-DIRECT'S Project on the discrepancy between routine practice and evidence. An outline of the main findings and the practical implications for the future of community based mental health services *Epidemiol Psichiatr Soc* 2008;17:278-90.
 50. National Collaborating Centre for Mental Health. *Schizophrenia: Full National Clinical Guideline on Core Interventions in Primary and Secondary Care*. Gaskell: London; 2003.