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## BACKGROUND

Provision of appropriate care through delivery of quality health services to people in need is a core function of health systems. The World Health Organization includes the provision of mental healthcare in community-based settings as a key objective of Mental Health Care (MHC) systems. Simple assessment and reporting of rates of contact with mental healthcare potentially overestimates the full expected health benefits of services. Thus, the conceptualization of Tanahashi et al., useful for addressing what and how monitoring and assessing coverage of community-oriented mental health services, introduced the concepts of "contact coverage" (i.e., the gap between use and need) and "effective coverage" (i.e., the gap between the use of service the health gain), which introduces the dimension of service quality and captures improvements in health achieved by patients who receive care.

Thus, because better contact or treatment coverage does not necessarily mean more effective coverage, a study for evaluating the association between MHC coverage and measurable clinical outcomes was designed.

## AIM

To measure the gap between contact and effective coverage of mental healthcare (i.e., the gap between service use and health gain) in a large sample of Italian patients newly taken-into-care for severe mental disorders including depressive, schizophrenic, bipolar and personality disorders, using health administrative databases.

## METHODS

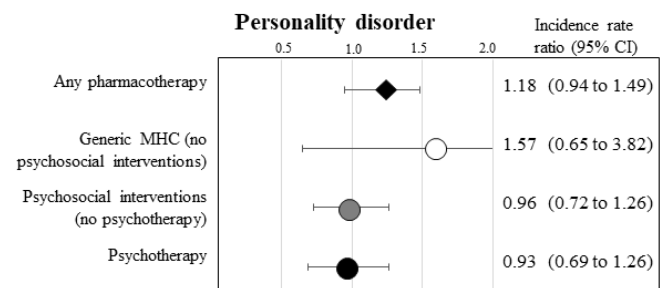
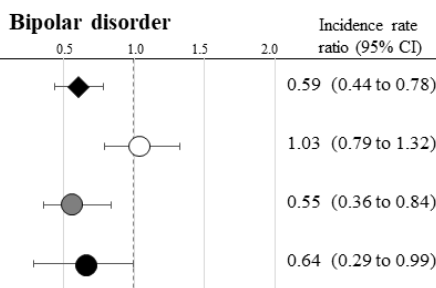
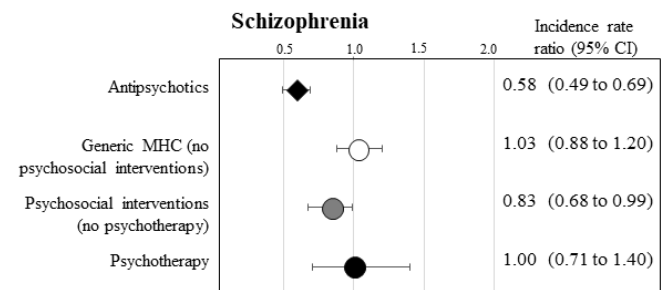
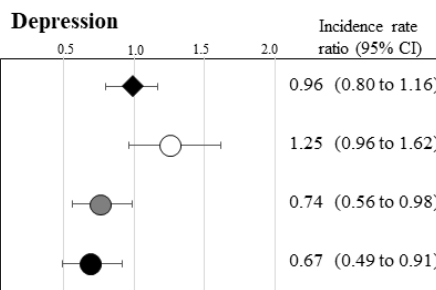
This study is based on healthcare databases from 4 Italian regions (Lombardy, Emilia-Romagna, Lazio, Sicily), including information as hospital diagnosis, drug prescriptions, outpatient visits, and specific diagnostic and therapeutic codes for patients receiving specialist MHC. NHS beneficiaries, aged 18-40, who during 2013-2016 had a diagnosis of depression, schizophrenia, bipolar or personality disorder, were identified. Patients who received a prior diagnosis of mental disorder at any time or received two prescriptions of psychotropic drugs in the 2 years prior the index date, were excluded. Newly taken-into-care patients were followed-up until the 06/30/2018.

Emergency admissions to psychiatric wards during follow-up were recorded as outcome episodes and considered as surrogates of relapse. Exposure to two broad categories of MHC, specific therapies with psychotropic drugs (i.e., antidepressants, antipsychotics, mood stabilizers) and community care (generic care, psychosocial and psychotherapy interventions), were considered.

We used a self-controlled case series (SCCS) design, a within person approach to compare the rates of relapse while a patient was covered or uncovered by MHC. To account for the possibility that exposure and relapse are time-correlated, estimates generated from the SCCS were compared with those generated from a self-controlled referent series (matched with the case series individuals for gender, age, date of mental diagnosis). Conditional Poisson regression was used for estimating incidence rate ratios for both case (IRRc) and referent (IRRr) series. Dividing IRRc by IRRr, the time-trend adjusted IRRa was obtained.

## RESULTS

Among the 227,751 eligible prevalent cases, 181,990 were excluded (mostly because of a previous diagnosis of mental disorder), while 45,761 individuals were included into the study as newly taken-into-care patients with diagnosis of depression (73%), schizophrenia (10%), personality (12%), or bipolar disorder (4%). In total, 11,500 relapses occurred. Relapse risk (Figure) was reduced during periods covered by (i) psychotherapy for patients with depression (IRR 0.67; 95% CI, 0.49 to 0.91) and bipolar disorder (0.64; 0.29 to 0.99); (ii) psychosocial interventions for those with depression (0.74; 0.56 to 0.98), schizophrenia (0.83; 0.68 to 0.99) and bipolar disorder (0.55; 0.36 to 0.84), (iii) pharmacotherapy for those with schizophrenia (0.58; 0.49 to 0.69), and bipolar disorder (0.59; 0.44 to 0.78). Coverage with generic mental healthcare, in the absence of psychosocial/psychotherapeutic interventions, did not affect the risk of relapse.



## CONCLUSION

Our study ascertained that the gap between contact and effective coverage in mental health is substantial. Community mental healthcare showing evidence of effectively prevent the onset of relapse were (i) psychosocial interventions and psychotherapy for depression, (ii) antipsychotics and psychosocial intervention for schizophrenia, (iii) mood stabilizers, psychosocial intervention and psychotherapy for bipolar disorder.

Furthermore, the current study supplied evidence that administrative data may usefully contribute to assess the effectiveness of a mental health system even in the absence of ad hoc data collection.