Psychiatry during the Covid-19 Pandemic: a survey on Mental Health Departments in Italy

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Research Article

Keywords: Mental Health Departments, psychiatric assistance, functioning, activities, restrictions, response, Covid-19, Pandemic, Emergency, Italy,

Posted Date: May 21st, 2020

DOI: https://doi.org/10.21203/rs.3.rs-30357/v1

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Abstract

Background To date, very little knowledge is available with regard to the way in which mental health systems worldwide are facing the current global health emergency. The present paper reports the data emerging from a survey conducted to study the impact of the current emergency on the functioning of the Italian Departments of Mental Health (MHD).

Methods Heads of MHDs received a 40-item multiple choice questionnaire relating to Community Mental Health Centres (CMHC) and related facilities, and a 30-item questionnaire focused on General Hospital Psychiatric Wards (GHPW). Statistical analysis was carried out by means of Chi Square test with Yates correction or the Fisher Exact test, as needed.

Results: 71 questionnaires returned from the 134 MHDs (52.9%) and 107 of the 318 (32.6%) GHPWs. Less than 20% of CMHCs have been closed; approximately 25% have restricted access hours. The usual mode of operation in CMHCs changed substantially. Urgent psychiatric consultations are continuing as usual, in the same way as interventions for compulsory treatments, and prison consultations. All other activities have been reduced to some extent. Remote contacts with users have been set up in approx. 75% of cases. Cases of COVID positivity were reported amongst both staff members (approx. 50% of CHMCs), and facility users (52% of CHMCs). 20% of CMHCs reported cases of increased aggressiveness or violence, among community patients, although only 8.6% regarding severe cases. Major issues in the supply of personal protective equipment (PPE) for staff members were reported. A reduced number of GHPWs (-12%), beds (approx.-30%) and of admissions was registered (87% of GHPWs). 8% of GHPWs reported an increase in compulsory admissions, and an increased rate of violence toward self or others among inpatients. Patient swabs were carried out in 50% of GHPWs. 60% of GHPWs have reported the admission of symptomatic, COVID+ psychiatric patients to General COVID-19 Units; severely ill and non-collaborative COVID+ patients are generally admitted to specific “COVID-19” GHPWs, or to purpose-adapted isolated areas of the wards.

Conclusions The COVID-19 pandemic has heralded a radical change in the mental health system of Italy, and a consequent series of challenging issues.

Background

Italy was the first Western country to be severely affected by the COVID-19 pandemic. According to official data provided by the Italian Higher Institute of Health (Istituto Superiore di Sanità), on 17 April 2020 there were 159,107 confirmed cases throughout the country and 19,996 deaths, with an overall fatality rate of 12.6 percent; the average age of the deceased was 80 years (62 years among infected subjects) with a prevalence of males (almost 70% of deaths); the number of confirmed cases of COVID-19 amongst healthcare professionals has amounted to 16,991 (males=31.9%; average age 48 years) (1). Italy has the third highest number of infections worldwide, behind only the United States of America and Spain, and the second highest number of deaths after the United States of America (2). The epidemic has
undoubtedly placed a huge strain on the National Health System, giving rise to grave concerns as to the ability of the system to effectively respond to the needs of infected patients, particularly those requiring intensive care (3). The impact of the COVID-19 outbreak on mental health is expected to be huge (4, 5, 6), and will constitute a serious challenge for psychiatry (7, 8). To date, very little is known about the way in which mental health systems worldwide are facing the current global health emergency, with the majority of contributions coming from China, the country to first experience an outbreak of the new virus (9, 12). In Italy, only local reports relating to Italian psychiatric services have been published to date (13, 14). The transition from a hospital-centred care to a community mental health centre care system was first implemented in Italy through a reform dated 1978 (15). More than forty years later, Italian psychiatry continues to rely on a nationwide community care system, although featuring a marked variation in the level and quality of services provided throughout the different regions of the country (16) and the presence of ongoing controversy (17), even with regard to future trends (18). This system is currently facing the challenge of the prevailing pandemic. In this report, we present the first set of data obtained from a survey conducted by the Italian Society of Psychiatry to assess the impact of the current emergency on the activities of the Italian Mental Health Departments (MHDs), multi-professional units comprising Community Mental Health Centres (MHCs), Residential Facilities (RFs) and Psychiatric Wards in General Hospitals (GHPWs).

Methods

According to the latest Mental Health Report issued by the Ministry of Health (19), Italy has a total of 134 active MHDs with 1481 CMHCs, 2346 RFs and 318 GHPWs. Between 1 and 11 April 2020 all Heads of MHDs received a 40-item multiple choice questionnaire relating to CMHCs and a 30-item questionnaire to GHPWs. Responses were analysed according to acknowledged geographical macro-areas of Italy (Northern Italy; Central Italy; Southern Italy, including the Islands) and to rates of COVID-19 cases in the reference area for each MHD. For this purpose, rates of cases per 1000 inhabitants were calculated for each Italian region, on the basis of data relating to confirmed cases issued by the Italian Ministry of Health on 11 April 2020. Based on the finding of an average national rate of 2.02 x 1000 inhabitants (range 0.42-5.12), two groups were considered as follows: group 1= ≥2 cases x 1000 (high rate regions); group 2: < 2 cases x 1.000 (medium-low rate regions). Statistical analysis of nominal data was carried out by means of Chi Square test with Yates correction or Fisher Exact test, as needed.

Results

To date, 71 questionnaires have been returned from the 134 MHDs (52.9% of the total) and 107 from the 318 GHPWs. (33.6% of the total). The main general findings obtained for currently operating CMCHCs are shown in Tab.1.

Tab. 1 Community Mental Health Centres and other community facilities operating during Covid-19 epidemics in Italy
| Items                                      | N (%) of respondents | Statistically significant differences according to geographical area<sup>1</sup> | Differences according to groups based upon rates of Covid+ cases per 1000 inhabitants on a regional basis<sup>2</sup> |
|-------------------------------------------|----------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| CMHCs’ with daily regular opening         | 61 (85.9)            | None                                                                            | None                                                                                            |
| CHMCs with regular daily hours of opening | 53 (73.2)            | None                                                                            | None                                                                                            |
| CMCHCs’ Day Hospital active               | 16 (22.5)            | None                                                                            | None                                                                                            |
| CMHCs’ Day Centre active                  | 11 (15.5)            | None                                                                            | None                                                                                            |
| Residential facilities (RFs) active<sup>3</sup> | 71 (100)             | None                                                                            | None                                                                                            |

<sup>1</sup> Italy’s Geographical areas are: N=North, C=Centre, S=South and Islands

<sup>2</sup> Group 1 ≥ 2 cases x 1000 inhabitants; group 2 < 2 cases x 1000 inhabitants; high rate regions are those included in group 1, as above; Low rate regions are those included in class 2 as above

<sup>3</sup> RFs are small units (20 beds on the average), generally managed by private cooperatives or societies, which operate under Regional Health Authority accreditation and MHDs’ control and supervision

<sup>7</sup> Only in selected cases, when deemed necessary

<sup>8</sup> In case of suspension of on site or home visits (type of contacts: telephone calls 100%, video calls 67%; e mails 19%; all type 41%)

<sup>9</sup> Contact programmed, on a regular basis according to individual needs

<sup>10</sup> Psychiatric consultations are delivered by CHCMs’ psychiatrist when the General Hospital in the catchment area is not equipped with a GHPW

<sup>11</sup> On site or in videoconference

<sup>12</sup> PPD = Personal Protection Devices

As a premise, it should be mentioned that these approx. 1400 CMCHs are spread throughout the country and are generally open 5-7 days a week, 12 hours per day, in line with regional regulations, with a few located in specific areas remaining open 24/7. Our data revealed how since the lockdown approx. 13% of these facilities have been closed, and 25% have reduced their hours of access. Moreover, a noticeable decrease (approx. -80%) has been registered in active Day Hospitals, the semi-residential facilities within MHDs largely involved in clinical monitoring and treatment of subacute, not severe cases. An even greater reduction (-85%) has been observed in the number of operational Day Centres, semi-residential facilities focussing on psychosocial and rehabilitation activities. Only Residential Facilities, the small, (generally 20-bed) units specifically deputed to middle-long term rehabilitation, have remained almost fully
operational, although with restrictions in new admissions and discharges. Data relating to ongoing levels and types of activity in CMHCs during this period of emergency are reported in Table 2.

**Tab. 2 Community Mental Health Centres activities during Covid-19 epidemics in Italy**
| Items                                                                 | % of respondents | Statistically significant differences according to geographical area | Differences according to groups based upon rates of Covid+ cases per 1000 inhabitants on a regional basis |
|----------------------------------------------------------------------|------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Written protocols about management of activities during the emergency | 50 (70.4)        | None                                                                | High rate regions\(^3\) = 35 (85.4)\(^*\) low rate regions\(^4\) = 14 (48.3)\(^*\)                   |
| Scheduled on site psychiatric visits\(^3\)                           | 63 (88.7)        | None                                                                | None                                                                                                     |
| Scheduled at home psychiatric visits\(^3\)                           | 59 (83.0)        | None                                                                | None                                                                                                     |
| Urgent psychiatric visits on site                                    | 71 (100)         | None                                                                | None                                                                                                     |
| Urgent psychiatric visits at home                                    | 68 (95.7)        | None                                                                | None                                                                                                     |
| Compulsory Treatments                                                | 71 (100)         | None                                                                | None                                                                                                     |
| Individual Psychotherapy\(^3\)                                       | 33 (46.4)        | none                                                               | High rate regions\(^3\) = 23 (57.4) low rate regions\(^4\) =10 (34.4)\(^*\)                           |
| Group Psychotherapy\(^3\)                                            | 4 (5.6)          | None                                                                | None                                                                                                     |
| Psycosocial Interventions\(^3\)                                      | 1 (1.4)          | None                                                                | None                                                                                                     |
| Contacts with patients\(^4\)                                         | 54 (76.0)        | None                                                                | None                                                                                                     |
| Scheduled contacts\(^5\)                                             | 66 (93.0)        | N= 40 (100) C= 10 (100) S=15 (70)\(^*\)                            | None                                                                                                     |
| Phone and/or Video Counselling for general population                | 60 (84.5)        | None                                                                | None                                                                                                     |
| Phone and/or Video Counselling for health services operators         | 66 (92.0)        | N=40 (100) C= 10(100) S= 16 (76.2)\(^*\)                           | None                                                                                                     |
| Psychiatric Consultations for General Hospitals\(^6\)               | 55 (77.4)        | None                                                                | None                                                                                                     |
| Staff Meetings\(^7\)                                                 | 56 (78.9)        | None                                                                | None                                                                                                     |
| Schedules Administration of LAI antipsychotics                       | Both on site and at home= 65 (91,5) | None                                                        | None                                                                                                     |
| On site only= 5 (7.0) | Regular psychiatric monitoring of cases at RFs | 32 (46.5)% N=17 (42.5) C= 5 (50.0) S= 12 (57.1)* | High rate regions³ = 32 (76.0) low rate regions⁴ = 17 (58.6)* p< 0.05 |
|---------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| New admissions in RFs suspended | 55 (77.4) N=27 (67.5) C=9 (90) S=19 (90,5)* | None | None |
| Discharge from RFs suspended | 59 (83.0) None | None | None |
| Regular Monitoring of offenders entrusted to CMCHs | 43 (60.5) N=32 (80), C=5 (50), S= 7 (33.3) *** | None | None |
| Psychiatric Consultations in Jails | 51 (71.8) None | None | None |
| Reduction of Hospital Admissions | 60 (84.5) None | None | None |
| Reduction of Interventions for compulsory admissions | 47 (66.2) None | None | None |
| Increase of aggressivity toward self or others | 15 (21.1) None | None | None |

¹Italy's Geographical areas are: N=North, C=Centre, S=South and Islands

²group 1 ≥ 2 cases x 1000 inhabitants ; group 2 < 2 cases x 1000 inhabitants ;high rate regions are those included in group 1, as above; Low rate regions are those included in class 2 as above

³Only in selected cases, when deemed necessary

⁴Contacts were established in case of suspension of on site or home visits (type of contacts :telephone calls 100%, video calls 67%; e mails 19%; all type 41%)

⁵Contact programmed on a regular basis according to individual needs

⁶Psychiatric consultations are delivered by CHCMs‘psychiatrist when the General Hospital in the catchment area is not equipped with a GHPW

⁷On site or in videoconference

*p<.05  ** p<.01 ***p<.005 ****p<.001 *****p<.0001
Generally, the operational mode in these units is regulated by specific written protocols, particularly in areas featuring higher rates of contagion. Urgent psychiatric consultations, both on-site and at home, are proceeding as usual, in the same way as interventions for compulsory treatments, psychiatric prison consultations and both on-site and home administration of LAI antipsychotics. Almost everywhere MHDs have set up remote counselling activities, usually by phone, both for the general population and specifically targeting health workers. All other activities have been affected by a significant decrease. Indeed, scheduled psychiatric consultations, both at home and on-site, have only continued for selected cases, being replaced in approx. 75% of CMHCs by scheduled remote contact with staff members. These contacts take place mainly by means of phone calls (100% of cases), videocalls (67% of cases) or e-mails (19% of cases), with only 41% of Departmental CMHCs adopting all these means of contact. Once the need for a face-to-face consultation is identified during remote contacts, the individual is invited to attend an on-site appointment in compliance with all enforced safety measures (i.e. no accompanying person unless deemed strictly necessary, social distancing of at least one meter or more in waiting rooms and in consultation rooms. On accessing the facility patients are asked to fill in a form relating to their personal health status and their body temperature is checked using infrared thermometers; surgical masks are compulsory for both patients and doctors/nurses). No on-site or home appointments are permitted in the presence of suspected infection of patients. Should the latter occur, in line with a specific protocol, a report is sent to the Local Crisis Unit involved in managing these cases. All other operations have been affected by a significant decrease, including psychiatric consultations for General Hospitals (approx. -25%), individual psychotherapies (approx. -65%), group psychotherapies and psychosocial interventions (approx. -90/95%), and monitoring of both subjects admitted to Residential Facilities (-60%) and offenders affected by mental disorders assigned by the Courts to CMCHs (-45%). As a general rule, staff meetings are going ahead as planned, wherever possible using videoconferencing facilities. Table 3 provides details of safety data relating to CHCMs workers and users.

**Tab. 3 Staff and users safety at Community Mental Health Centres during Covid-19 epidemics in Italy**
| Items                                      | % of respondents Yes | Statistically significant differences according to geographical area¹ | Differences according to classes based upon rates of Covid+ cases per 1000 inhabitants on a regional basis² |
|--------------------------------------------|----------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Staff concerns about personal safety       | 65 (91.5)            | None                                                                  | None                                                                                                  |
| PPD available                              |                      | None                                                                  | None                                                                                                  |
|                                            |                      |                                                                       |                                                                                                       |
| PPD Evaluation                             | Adequate=9 (12.7)    | N= 6 (15.0) C= 3 (30.0) S= 0 (0.0) *                                  | High rate regions² = 5 (11.9) low rate regions²=10 (34.5)***                                       |
|                                            | Partly adeq=44 (61.9)| N=27 (67.5) C= 6 (60.0) S=12 (57.0)°                                 |                                                                                                       |
|                                            | Inadequate=15 (21.1)| N= 5 (12.5) C= 0.0 S=100**                                           |                                                                                                       |
| Reported Covid+ cases among staff members  | 37 (52.1)            | N= 33 (82.5) C= 2 (20) S= 1 (4.7)****                                 | High rate regions² = 34 (80.9) low rate regions² =13 (44.8)****                                       |
| Reported Staff members in quarantine       | 47 (66.2)            | N=34 (85.0) C=5 (50.0) S=7 (33.3) ***                                 | High rate regions² = 34 (80.9) low rate regions² = 13 (44.8)***                                       |
| Reported Covid+ cases among CMCHs’patients | 37 (52.1)            | N=29 (72.5) C=3 (30.0) S= 4 (19.0) ***                                | High rate regions² = 32 (76.1) low rate regions² = 6 (20.7)***                                         |
| Reported Covid+ cases among RFs’ patients  | 26 (36.6)            | N=23 (57.5) C=2 (20) S=0 (0.0)****                                   | High rate regions² = 24 (57.1) low rate regions² = 1 (3.5) ****                                        |
Italy’s Geographical areas are: N=North, C=Centre, S=South and Islands

2 group 1 ≥ 2 cases x 1000 inhabitants ; group 2 < 2 cases x 1000 inhabitants ; high rate regions are those included in group 1, as above; Low rate regions are those included in class 2 as above

° not significant  *p<.05  **p<.005  ***p<.001  ****p<.0001

The majority of staff members have expressed safety concerns. Major issues in the supply of PPE have been reported for infrared thermometers, high protection masks, safety glasses and disposable gloves. Although no difference in supplies were detected based on macro-areas, a referred lack of equipment was largely registered in southern Italy, namely, the areas featuring prevalently lower rates of infection. COVID+ cases have been reported frequently by both CMHC staff (reported by 52% of MHDs) and facility users (reported by 52% of MHDs), while lower rates have been referred for patients living in RFs. As expected, a significantly higher number of cases have been reported in regions in Northern Italy, the areas featuring the highest rates of infection. Finally, a limited number of MHDs (21.4%) have reported cases of increased aggressiveness or violence, either towards self or others, among community patients, with a mere 8.6% constituting severe cases. General information relating to GHPWs operating during the current pandemic and the activities carried out are shown in Tab.4.

**Tab. 4 General Hospital Psychiatric Wards operating during Covid-19 epidemics in Italy and activities**
| Items                                                                 | % of respondents Yes | Statistically significant differences according to geographical area¹ | Differences according to classes based upon rates of Covid+ cases per 1000 inhabitants on a regional basis² |
|----------------------------------------------------------------------|----------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| PWs closed                                                          | 15 (13.1)            | None                                                            | None                                                                                                           |
| Number of beds reduced                                              | 34 (31.8)            | None                                                            | None                                                                                                           |
| Scheduled, not urgent admissions allowed                            | 39 (36.4)            | None                                                            | None                                                                                                           |
| Admissions reduced                                                  | 94 (87.8)            | None                                                            | None                                                                                                           |
| Compulsory Admissions increased                                     | 9 (8.4)              | None                                                            | None                                                                                                           |
| Staff meetings ³                                                     | 72 (67.2)            | None                                                            | None                                                                                                           |
| Urgent Psychiatric Consultations for General Hospital Emergency Rooms/Other Medical Units | 103 (96.3)           | None                                                            | None                                                                                                           |
| Psychiatric Consultations for Covid+ cases                          | 23 (21.5)            | N=19 (33.9) C=1 (7.1) S= 3 (9.7)*                           | High rate regions² = 2(33.8) low rate regions² =5 (11 .1)**                                                   |
| Psychiatric Consultations for Medical/surgical Units in other Hospitals ⁴ | Overall 58 (54.2)    | None                                                            | High rate regions² =41(66.1) low rate regions²=19(42.2)**                                                   |
|                                                                  | Only urgent          | None                                                            | High rate regions² =8 (12.9) low rate regions²=15 (33.3) *                                                  |
|                                                                  | 28 (26.2)            |                                                                                     |                                                                                                                 |
| Decrease of psychiatric consultations                               | 74 (69.1)            | None                                                            | High rate regions² =50 (80.6) low rate regions²=22 (48.9)***                                                |
| Frequency of consultations according to psychiatric disorders       | Delirium 35 (32.7)   | None                                                            | None                                                                                                           |
|                                                                  | Mood disord 68 (63.5) |                                                                  |                                                                                                                 |
|                                                                  | Anxiety Dis 51 (47.7) |                                                                  |                                                                                                                 |
|                                                                  | Adjust Dis 37 (34.6)  |                                                                  |                                                                                                                 |
|                                                                  | Personality Dis 21 (19.6) |                                                              |                                                                                                                 |
|                                                                  | Subst use 36 (33.6)   |                                                                  |                                                                                                                 |
Other psyco-org

dis 22
(20.5)
Suicide
Attempts 51
(47.7)
Psychoses
56 (52.3)
Complic
Mourning 3
(2.8)

Inpatients violence (increase) 9 (8.4) None None

1Italy’s Geographical areas are: N=North, C=Centre, S=South and Islands
2group 1 ≥ 2 cases x 1000 inhabitants ; group 2 < 2 cases x 1000 inhabitants ; high rate regions are those included in
3group 1, as above; Low rate regions are those included in class 2 as above
4On site or in videoconference
5Psychiatric consultation may be required in several regions of Italy to GHPWs for other Hospitals of the same Trust
6General Covid Units= General Hospitals’ Intensive and Non Intensive Care Units
7Special GHPWs= General Hospital Psychiatric Wards specifically devoted to Covid+ patients
8Other= psychiatric pts managed in isolated rooms or sections within GHPWs
9PPD= Personal Protection Devices
*p<.05 **p<.01 ***p<.005****p<.001

A certain reduction in the number of wards (-13%) has been observed, mainly due to conversion into
General COVID Units for positive patients, and in the number of beds available (approx.-30%), due to the
need to increase the distance between patients and to set up isolation rooms. An overall reduction of
admissions has been registered in 88% of GHPWs, partly due to the interruption of all scheduled
admissions in approx. 64% of these units. Only 8% of GHPWs have reported an increase in compulsory
admissions. On approx. one third of wards, staff meetings are no longer going ahead, whilst the vast
majority of GHPWs continue to guarantee psychiatric consultations for A&E departments, and, to a lesser
extent, for Medical and Surgical units. Psychiatric Consultations for COVID Units are performed in approx.
one fifth of GHPWs. Mood disorders, Psychoses, Anxiety disorders and Attempted Suicides are the most
frequent reasons for consultations. Only 8% of Wards have registered an increased rate of violence
towards self or others among inpatients. With regard to safety measures adopted (Tab.5), the majority of
hospitals hosting PWs have set up a “filter area” through which to access the hospital, although only 72%
of these require patients to wait in these areas until the outcome of their swabs is received, prior to admission to units.

Tab. 5  Staff and users safety at General Hospital Psychiatric Wards during Covid-19 epidemics in Italy
| Items                                                                 | % of respondents | Statistically significant differences according to geographical area | Differences according to classes based upon rates of Covid+ cases per 1000 inhabitants on a regional basis |
|----------------------------------------------------------------------|------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| “Filter” area for accessing to Hospital                              | 86 (80.4)        | None                                                                | None                                                                                                  |
| Pts remaining in the filter area before swab outcomes are known      | 79 (73.8)        | None                                                                | None                                                                                                  |
| Access limitations to wards for family members/carers                | 106 (99.1)       | None                                                                | None                                                                                                  |
| Swabs for patients                                                   |                  |                                                                    |                                                                                                       |
| Overall=54 (50.5)                                                    | None             |                                                                     | None                                                                                                  |
| admission+discharge=21 (19.6)                                        | None             |                                                                     | None                                                                                                  |
| Only on admission=28 (26.2)                                          | None             |                                                                     | None                                                                                                  |
| Only on discharge= 3 (2.8)                                           | None             |                                                                     | None                                                                                                  |
| Pathways reserved for patients with suspected infection              | 93 (86.9)        | None                                                                | None                                                                                                  |
| Voluntary Admitted Covid+Cases to                                    |                  |                                                                    |                                                                                                       |
| General Covid Units$^3$=68 (63.6)                                    | None             |                                                                     |                                                                                                       |
| Special GHPWs$^4$= 23 (21.5)                                         | None             |                                                                     |                                                                                                       |
| Other$^5$= 16 (14.9)                                                 | None             |                                                                     |                                                                                                       |
| Compulsory admitted Covid+ cases (managed in)                        |                  |                                                                    |                                                                                                       |
| General Covid Units$^3$=67 (62.6)                                    |                  |                                                                     |                                                                                                       |
| Special GHPWs$^4$=21 (19.6)                                          |                  |                                                                     |                                                                                                       |
| Other$^5$= 19 (17.7)                                                 |                  |                                                                     |                                                                                                       |
| Management of Covid+ agitated pts                                   |                  |                                                                    |                                                                                                       |
| Locked doors 33 (30.8)                                               | None             |                                                                     | None                                                                                                  |
| Sedation 90 (84.0)                                                   | None             |                                                                     |                                                                                                       |
| Physical restraint 42 (39.2)                                         |                  |                                                                     | None                                                                                                  |
| N=25 (43.1) C=11 (68.7) S=6 (18.1)**                                 |                  |                                                                     | High rate reg$^2$=30 (48.3) low rate reg$^2$=12 (26.6) **  

*P<0.05  **P<0.01
|                             | Control by videocam 31 (28.9) | None | None |
|-----------------------------|--------------------------------|------|------|
| Routine Swabs for staff members exposed to suspected cases | 48 (44.9) | None | None |
| covid+ cases reported among staff members | 30 (28.0) | N=24(41.4) C=3 (18.7); S= 5 (15.1)** | High rate regions²= 24 (38.7) low rate regions²=6(13.3)** |
| PPD Evaluation^6 | Adequate=17.8 | None | None |
|                  | Partially adequate=52.5 | None | None |
|                  | Inadequate=27.7 | None | None |
| Staff concerns about personal safety | 90 (84.1) | None | None |

1Italy’s Geographical areas are: N=North, C=Centre, S=South and Islands

2group 1 ≥ 2 cases x 1000 inhabitants ; group 2 < 2 cases x 1000 inhabitants ; high rate regions are those included in group 1, as above; Low rate regions are those included in class 2 as above

3General Covid Units= General Hospitals’ Intensive and Non Intensive Care Units

4Special GHPWs= General Hospital Psychiatric Wards specifically devoted to Covid+ patients

5Other= psychiatric pts managed in isolated rooms or sections within GHPWs

6PPD= Personal Protection Devices

*p<.05  **p<.01

Visitor access to wards is prohibited in almost all GHPWs, and in the vast majority of cases (approx. 90%) specific pathways are adopted for patients with suspected COVID-19 infection. Fifty percent of GHPWs report the availability of swabs for patients; however, only 20% are able to request patient swabbing on both admission and discharge. Irrespective of whether the admission is voluntary or compulsory, approx.60% of GHPWs taking part in the survey reported that COVID+ psychiatric patients with no significant behavioural disturbances may be admitted to General COVID Units; one fifth of GHPWs reported that acute patients who are unable to collaborate because of their mental condition are admitted to other GHPWs specifically set up to care for COVID+ patients, whilst approx. 15% of wards place patients in isolated areas of the ward. In the presence of agitation, measures most frequently adopted by GHPWs in controlling COVID+ patients include pharmacological sedation (approx. 85% of units) and physical restraint (approx.40% of units). The latter has been adopted with significant frequency in wards
Discussion

The COVID-19 epidemic, which was initially confined to China, has rapidly evolved into a pandemic. Due to the need to check the spread of the COVID-19 infection, a series of measures have been set up by Governments virtually worldwide (i.e. voluntary or compulsory home confinement, restriction on gatherings of large groups of people, cancellation of all public events, and a series of domestic and international travel restrictions) (20). On 31 January 2020 the Italian Government declared a Public Health Emergency of International Concern, and from February 2020 a series of decrees have been progressively issued, finally resulting on 21 March in a nationwide lockdown, which is still ongoing. The severe limitation of movement for the population and a mandatory reduction of active staffing and respective rotas explain, at least in part, the observed decline in activities provided by community services (decrease in number of open CMCHs, CDs and DHs, reduced access hours, restriction of activities to psychiatric visits only for severe cases, marked reduction of other activities, such as psychosocial and rehabilitative interventions, and monitoring of patients living in RFs etc...). Care requirements for the populations concerned have been addressed through the implementation of remote contacts (phone and/or video calls), although no consistent level has been achieved nationwide; thus, the first major trial on the application of telepsychiatry (TP) on a national scale is still ongoing in Italy. A recent review of studies has highlighted how mental health interventions performed remotely are as effective as those conducted face-to-face, although concerns have been raised with regards to privacy issues and the usefulness of TP in emergency situations, such as those we are currently facing (21). However, TP is currently viewed as the most effective means for mental health services to deliver interventions under the circumstances associated with the COVID-19 pandemic (22,23, 24), with similar solutions being adopted throughout a series of other countries (25, 26, 27). In Italy, currently adopted measures consist in finalizing remote contacts for the purpose of providing clinical monitoring, psychological support, teaching of safety measures (i.e. social distancing and hand washing), amending pharmacological treatments as required, and collecting information on the physical health of users and caregivers, particularly fever and respiratory signs and/or symptoms. In several MHDs, individual psychotherapies are delivered using audio-visual platforms. In doing so, routine ordinary activities have been partially replaced, achieving fairly satisfactory results. The limited increase in reports of both voluntary and compulsory hospital admissions, and the negligible increase in aggressive behaviours in community patients seems to indicate that the shrinkage in community care does not appear to have had a substantially negative impact, at least in the short term. However, the substantial decrease in psychotherapeutic, psychosocial and rehabilitative interventions, expected to be particularly detrimental
in the long run for those affected by severe mental disorders (28), viewed as representing the most vulnerable segment of the population in these circumstances, may prove challenging (23). Moreover, the impossibility of providing new access to CMHCs may have prevented a large portion of the population exposed to the negative psychological impact of the epidemic (6) from obtaining help from the public healthcare system. The reduction of beds in GHPWs has been the price to pay for the conversion of numerous departments into Intensive COVID-19 Units, due to the dramatic lack of beds in the latter units. Likewise, the marked restriction of scheduled hospitalizations and hospital admission for only severe cases may justify the observed reduction in hospitalization rates in GHPWs. However, the potential contribution of additional factors, such as a severe limitation of access to substance users as a result of the rigid lockdown, with consequent cessation or reduction of a slatentizing effect of substances on relapses both in affective and non-affective psychotic disorders, cannot be ruled out. Moreover, with particular focus on voluntary admissions, a fear of contagion may have deterred those in need of intensive care from seeking hospitalisation. Individuals affected by mental disorders may encounter a series of obstacles in accessing health services due to a double discrimination linked to both their mental illness and to being infected by coronavirus (29). However, this feared discrimination appears to have been relatively limited in Italy, as demonstrated by our data relating to the access of non-decompensated psychiatric patients to COVID-19 Units in General Hospitals. As expected from the experience of other Countries (11), the management of patients with severe psychiatric disorders in the presence of suspected or confirmed COVID-19 represents a major logistic challenge for Psychiatric Wards for which no simple solutions or use across the board are currently available. Indeed, the most frequently applied solutions to this problem include the setting up of specific, separate areas within the wards or of specific Psychiatric Wards for COVID+ patients, in line with the Recommendations of the Italian Society of Psychiatry for the containment of the SARS-COV-19 virus (29). Fortunately, the psychological burden produced by the ongoing emergency does not seem to have led to an increase in the rates of psychomotor agitation and/or violence on psychiatric wards. As could be expected, a reduction in number of consultations in General Hospital Medical and Surgical units was registered in our survey, particularly in the areas affected by a high spread of the epidemic. The challenge of securing sufficient supplies of PPE for all patients has been highlighted during this emergency (11), and this was no different for our inpatients; however, this lack of PPE is not merely confined to patients on psychiatric wards, but also affects the mental health workers operating in both community and hospital services. This represents a problem of both an ethical and psychological nature, particularly given that almost all MHDs have expressed the numerous related concerns raised by mental health workers. Moreover, we are also dealing with a public health issue, particularly as infected health workers in whom the infection has not been swab-confirmed may contribute towards further spreading the infection. As reported very recently, Italy has registered many more infections among healthcare workers than China, with more than 12,000 subjects testing positive for COVID-19, approx. 10% of all COVID-19 cases registered in the country. This finding underlines the need to view the protection of healthcare workers as an absolute priority aimed at limiting the spread of the virus (31) To summarize, the main problems to emerge are represented by the management of acute, COVID+ cases in inpatient units, an inadequate physical monitoring of psychiatric inpatients, mainly due to the limited availability of rota swaps, and a lack of monitoring of and protective
measures for mental health workers. Although to date the community mental health system seems to have been successful in facing the challenges manifested, should the current restrictions to operational levels continue, particularly in the field of psychosocial interventions, it is debatable whether the system will continue to cope. Moreover, in the near future a severe strain will be placed on MHDs due to the expected increase of mental disorders as a result not only of the prolongation of home confinement and a forced, and almost radical, change of lifestyle, but above all to the added burden of an unprecedented economic crisis.

Having commented on the results of this survey, the authors would however like to acknowledge the limitations of the study, including the fact that only approx. 50% of mental health departments could be tested and that data relating to inpatient units were received for only one third of GHPWs. Moreover, although questionnaires were filled in by the Heads of MHDs, the possibility that data reported may not always be fully precise cannot be ruled out. However, the objective difficulty of involving keyworker colleagues working on the front line in this research study should be given due consideration. However, even in the light of the abovementioned limitations, the data emerging from this survey certainly provides a fairly reliable cross-section of the current reality in the context of the Italian mental health services.

Declarations

Ethics and consent: not applicable

Consent for publication: all authors give their consent to the present paper

Availability of data and materials: data will made available by the corresponding authors

Competing interests: no competing interest regarding this paper are declared by Authors

Funding: no funding was available for the present survey

Authors Contribution: BC contributed to planning the survey, elaborating questionnaires, doing statistical analysis, interpreting the data and writing the paper; MT contributed to elaborating questionnaires and managing the data base; EZ, GD, MD contributed to planning the survey, elaborating questionnaires and revising the paper;

Acknowledgments The authors are grateful to The Executive Committee of The Italian Society of Psychiatry for the contribution in elaborating questionnaires and collecting data; the EC is constituted by Enrico Zanalda, Massimo Di Giannantonio, Bernardo Carpi, Claudio Mencacci, Matteo Balestrieri, Emi Bondi, Salvatore Varia, Antonio Vita, Guido Di Sciascio, Moreno De Rossi, Mario Amore, Antonello Bellomo, Paola Calò, Giancarlo Cerveri, Giulio Corrivetti, Giuseppe Ducci, Andrea Fagliolini, Bruno Forti, Lucio Ghio, Pierluigi Politi, Paola Rocca, Rita Roncone, Vincenzo Villari, Rocco Zoccali.

No Ethic Committee approval was needed being not applicable, given that the study was a survey where respondent were all physicians (the Heads of all Italian Mental Health Depts) who were contacted on
behalf of the Italian Society of Psychiatry. No data regarding patients (either obtained by means of interviews or by consulting medical records) were used for the survey, which regards only functioning of MH services during Covid pandemic in Italy.

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