

# Two years of COVID-19. Impacts on accessibility of a mental health service for immigrants and individuals in socio-economic difficulties

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## Abstract

**Objectives.** Mental health services utilization decreased dramatically during the COVID-19 pandemic. For persons who are highly vulnerable and at risk of health and social care exclusion, restrictions negatively affected the accessibility to treatments and their mental conditions.

**Methods.** All psychiatric and psychological interviews carried out at National Institute for Health, Migration and Poverty (INMP) Italy from January 2018 to February 2022 were included in the study. To measure services use, an interrupted time-series analysis using March 2020 as the starting data of COVID-19 pandemic period was considered, and first visits vs follow-up session numbered.

**Results.** A significant decrease was observed in March 2020 due to the lockdown restrictive measures ( $p < 0.001$ ). Later on, the number of psychological interventions significantly increased ( $p < 0.05$ ), whereas the increment of the psychiatric interventions was not significant. By the end of February 2022 the number of visits returned to pre-COVID-19 levels, although recovery was slower than expected, especially for psychiatric visits.

**Conclusions.** After a dramatic drop during the lockdown, access to mental health outpatient clinics slowly returned to pre-pandemic levels in the next two years. Considering that mental health needs have increased during the pandemic, mental health services should improve their efforts to reduce barriers of access and to implement outreach referral.

## Key words

- coronavirus
- mental health services
- vulnerable populations
- refugees
- homeless
- social care exclusion

## INTRODUCTION

The first autochthonous case of SARS-CoV-2 infection was reported in Italy the 21<sup>st</sup> of February 2020. Some days later, the 8 March, in response to the growing pandemic of COVID-19 in the country, the Italian government imposed a national restriction of movements of the population except for buying food and other necessary goods (drugs, disinfectants, etc.), essential works, and health urgencies [1]. It was the first lockdown in Western countries; at that time the general belief was that after a necessary period of total restriction the crisis would have ended, and people could return to "normal" life. However, after two years the situation is still uncertain. Restrictions have been eased but the daily number of new cases is still high (about 90,000 at the time of the writing of this article).

Due to their pre-crisis vulnerability, it was expected that within the general population some groups could be

particularly at risk in this situation. In particular, those in poor socioeconomic conditions [2, 3], homeless people [4], migrant workers [5, 6], asylum seekers and refugees [7, 8], and patients with mental disorders [9, 10].

Early evidence showed that migrants with mental problems were more likely to worsen during the lockdown if they were without VISA, unemployed or reporting food insecurity [11, 12], suggesting that part of the negative impact on mental health was mediated by social difficulties.

Another significant factor involved was the availability of mental health services in terms of accessibility and treatment adherence. Indeed, during the lockdown the accessibility of mental health outpatient services was generally reduced [13, 14], with a potential higher impact on asylum seekers and refugees [15]. Even for those mental health services that remained open and available during the lockdown, the general restrictions

on mobility negatively impacted on the possibility of people in poor socioeconomic conditions to access the services, reducing both accessibility of new patients and follow-up visits of people already in treatment [16]. Moreover, discontinuation of the psychopharmacological treatment during that period resulted in significant worsening of mental conditions [11]. In general, the COVID-19 pandemic has exacerbated social and health inequities, particularly within refugee and migrant populations, challenging the way mental health care is usually delivered [17].

After two years, a few restrictions persist (e.g., the requirement of the so-called “green pass” to access workplace, restaurants, etc.), but, although the personal mobility to reach health services is guaranteed, accessibility of health services may remain difficult, e.g., services working with free-access models had to reshape their organization and visits must now be booked in advance by telephone, some services reduced their opening hours, etc.

The aim of this study was to evaluate the evolution of the impact of COVID-19 during these two years (from March 2020 to the end of February 2022), particularly on the accessibility of outpatient services specifically dedicated to the mental health of patients with a story of immigration and/or in socioeconomic difficulties. Provided that at the beginning of the coronavirus crisis the number of both first psychiatric interviews and follow-up visits decreased dramatically [16], is this problem recovering after two years? And, provided that psychological treatments were also significantly affected by the crisis [11], how did psychological treatment change in the same period?

## METHODS

We conducted an interrupted time-series (ITS) analysis using data collected at the National Institute for Health, Migration and Poverty (INMP) in Rome, Italy. The study design, based on the retrospective analysis of routinely collected data, received ethical approval by the Projects & Research board of the Institute. We considered the number of monthly visits of the INMP Mental Health Unit between 1<sup>st</sup> January 2018 and 28<sup>th</sup> February 2022. This period was divided into two phases. A pre-COVID-19 era, until February 2020, and a COVID-19 pandemic period, from March 2020 to the end of February 2022. The INMP Mental Health Unit remained open and available for visits uninterrupted during the COVID-19 pandemic.

For this purpose, we used the same procedure as proposed by Schuengel, *et al.* [18]. We first detrended data using Loess regression and smoothing [19]. Then we looked for a possible seasonality following the recommendations by Ollech [20]. If the presence of seasonal effects was identified, a seasonal adjustment was performed. At the end, we tested change in intercept and slope from the pre-COVID-19 period to the COVID-19 pandemic period using Poisson regression [21]. Furthermore, we performed the same ITS analysis on different subgroups in order to assess any differences between first and follow-up visits or between psychiatric and psychological visits.

All statistical analyses were performed using R (version 4.1.3). Statistical significance was defined as  $p < 0.05$ .

## RESULTS

From January 2018 to February 2022 (N=50 months) a total of 16,841 visits and a mean of 336.82 visits per month (SD=66.26) were recorded. In the 26 months before COVID-19 restrictions a mean of 355.35 visits per month (SD=57.80) were reported, compared with 316.75 visits per month during the COVID-19 pandemic period (SD=70.10). *Figure 1* shows the total visits to the Mental Health Unit. After detrending the data, no seasonality was identified. Poisson regression detected a significant drop from pre-COVID-19 restriction levels to the start of the COVID-19 restriction phase ( $b=-0.41$ ; SE=0.10;  $t=-3.97$ ;  $p<0.001$ ). The increase in mental health visits during COVID-19 period and pre-COVID-19 period was not significantly different ( $b=0.01$ ; SE=0.01;  $t=1.54$ ;  $p=0.13$ ).

Subgroups analyses are shown in *Figure 2* (first and follow-up visits) and *Figure 3* (psychiatric and psychological visits).

Across the study period, 21.54% of all visits are represented by first visits. A total of 3,627 first visits and a mean of 72.54 first visits per month (SD=19.38) were recorded. After detrending the data no seasonality was identified. Poisson regression analysis shows a significant linear increase over the years ( $b=0.01$ ; SE=0.01;  $t=2.21$ ;  $p=0.03$ ), a significant drop at the beginning of the COVID-19 restriction phase ( $b=-0.65$ ; SE=0.14;  $t=-4.56$ ;  $p<0.001$ ), and a non-significant difference between the estimated slopes for the pre-COVID-19 and COVID-19 period ( $b=0.01$ ; SE=0.01;  $t=1.51$ ;  $p=0.14$ ).

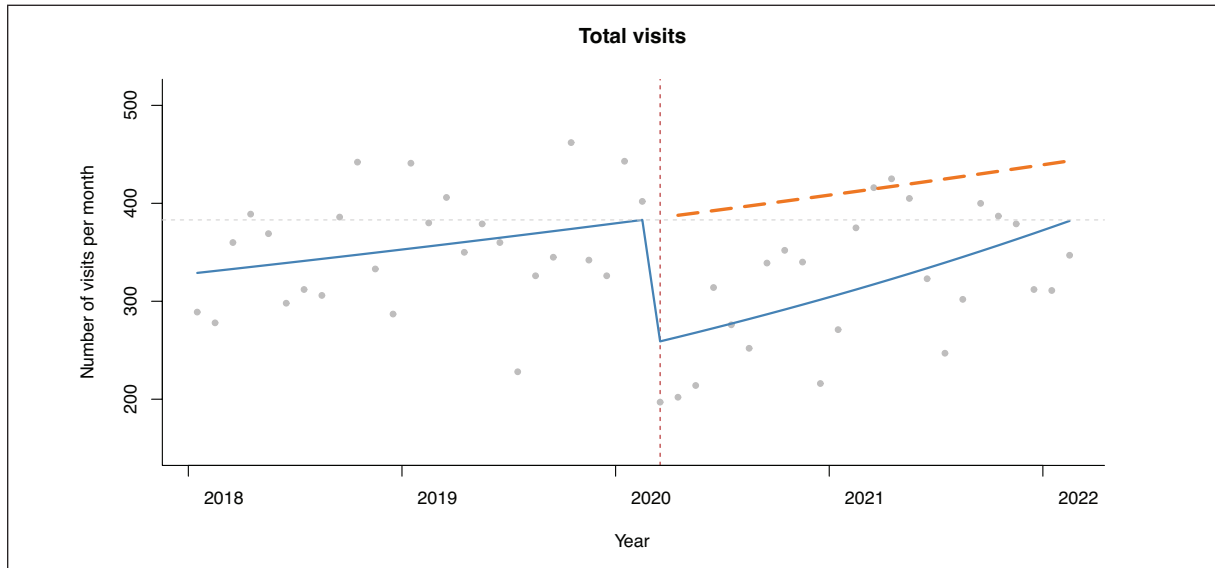
Follow ups were 13,214 (78.46% of all visits), with a mean of 264.28 visits per month (SD=53.29) and no seasonality was identified. Poisson regression analysis shows a significant drop at the beginning of the COVID-19 restriction phase ( $b=-0.34$ ; SE=0.11;  $t=-3.16$ ;  $p=0.002$ ) and a no significant difference between the estimated slopes for the pre-COVID-19 and COVID-19 period ( $b=0.01$ ; SE=0.01;  $t=1.33$ ;  $p=0.19$ ).

About a quarter of the total visits (4,250 interviews = 25.24%) were related to psychiatry, with a mean of 85 visits per month (SD=19.66). The other 12,591 visits regarded psychological treatments (74.76% of all visits), with a mean of 251.82 visits per month (SD=53.26). After detrending the data no seasonality was identified. Poisson regression analysis for psychiatric visits shows a significant increase over the years ( $b=0.01$ ; SE=0.005;  $t=2.37$ ;  $p=0.02$ ) and a significant decrease at the start of the COVID-19 restriction phase ( $b=-0.39$ ; SE=0.12;  $t=-3.20$ ;  $p=0.002$ ).

Same analysis for psychological treatments indicates a significant drop at the start of the COVID-19 restriction phase ( $b= 0.41$ ; SE=0.11;  $t=-3.69$ ;  $p<0.001$ ) and that the slope for the COVID-19 period was significantly higher than for the pre-COVID-19 period ( $b=0.01$ ; SE=0.01;  $t=2.02$ ;  $p=0.049$ ).

## DISCUSSION

This study follows a previous one of our group showing that the lockdown had a strong effect on the availability



**Figure 1**

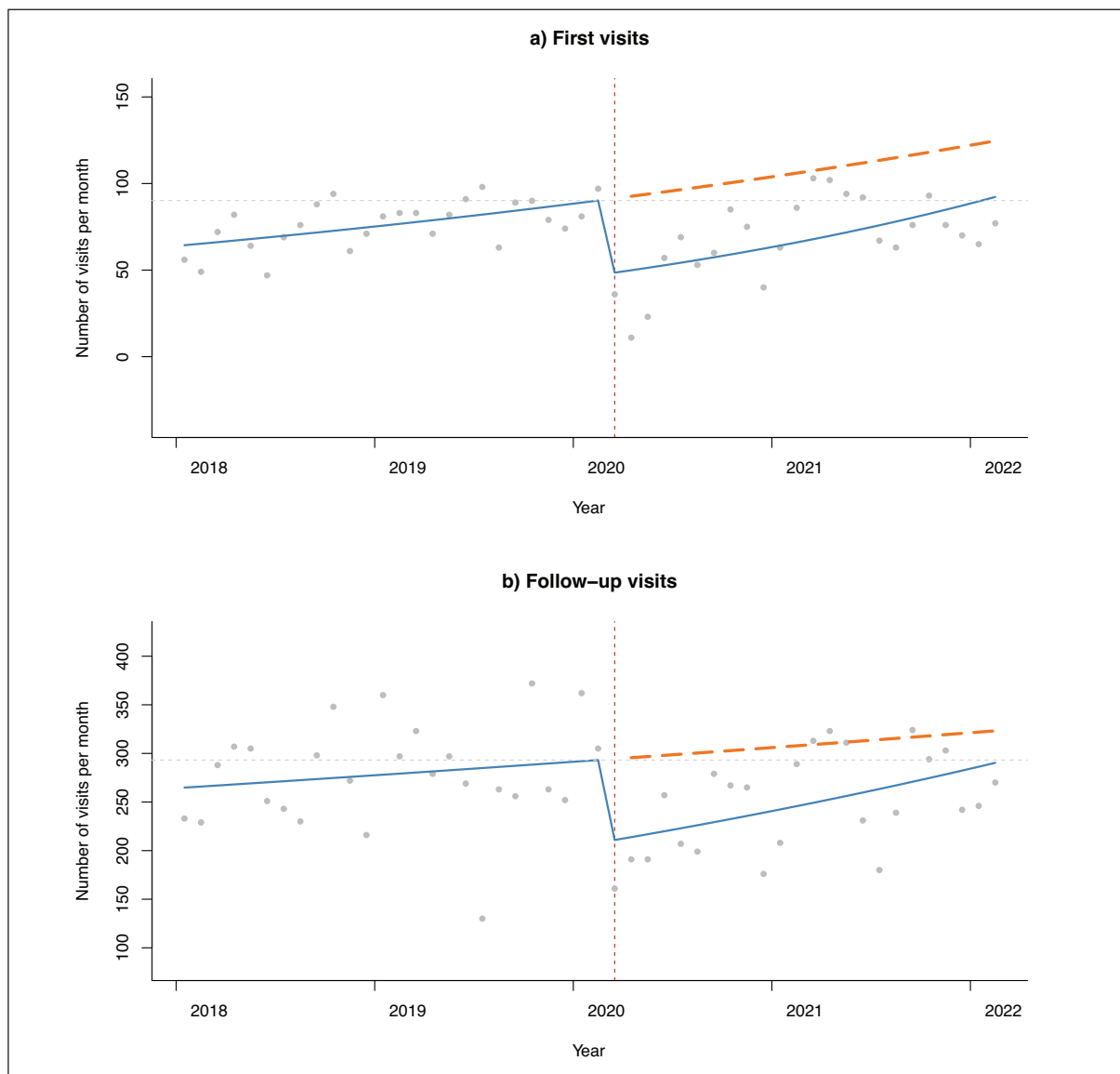
Number of monthly visits before and during the pandemic COVID-19. Vertical dashed line: introduction of restrictions. Continuous line: trend over the years. Dashed line: counterfactual scenario. Horizontal dashed line: pre-pandemic level.

of mental health facilities for immigrants and persons in poor socio-economic conditions, resulting in a significant reduction of the number of both first and follow-up psychiatric visits [16]. In the present study, previous indicators of treatment availability and adherence were extended temporarily to study their trend before and after the onset of the COVID-19 pandemic, from January 2018 to February 2022. Moreover, we considered the entire spectrum of mental health visits available in our service (psychiatric and psychological visits).

As expected, at the beginning of the crisis the rigid lockdown caused a dramatic drop of both first and follow-up visits, not only in psychiatry but also in psychological activities. However, after the initial lockdown the restrictions were gradually removed and then reshaped differently according to the different pandemic phases. As a result, people returned to be free to move to reach health facilities. Our data show that following this change, the total number of visits to mental health services increased progressively over time, and after two years they returned to pre-COVID-19 levels. A similar trend is shown when first visits are differentiated from follow-up visits. However, the present number of visits is still below the level expected if the pre-pandemic trend of visits had continued over time. Moreover, it is noteworthy that the return to pre-pandemic levels has been so slow and has taken so long, despite the restrictions of movements were largely removed already in June 2021. This is a serious concern, considering that during the pandemic it is frequently reported an increase in mental health needs, particularly in vulnerable populations like immigrants, patients with pre-existing mental health issues, and people in poor socio-economic condition (which are also increased in number due to the social and economic disaster produced by the pandemic) [22-25]. Accordingly, we would have expected a faster recovery in the utilization of mental health services after the lockdown, as well as a significant increase of total

numbers. Although a “ceiling-effect” (see limitations of the study) can have influenced this result, the effect should be less on the slope than on rough numbers, so it is likely that barriers of access are also operating and proactive changes of the organization of the service are needed to reach unexpressed needs.

Comparing trends in psychiatric and psychological activities, the psychiatric service utilization seems to have dropped less sharply during the national lockdown while the increase in psychiatric visits during the COVID-19 period appears slower. In contrast, after a relatively more dramatic drop, the increase in visits was faster for psychological activities, with a significantly higher slope for the COVID-19 period, surpassing the pre-pandemic levels. This result suggests that the persisting difficulties of access discussed above are mainly related to psychiatric treatments. Possible reasons for this difference may be related to the characteristics of treatments and to organizational factors. Overall, psychiatric visits were influenced less strongly by the initial lockdown, probably because some pharmacological treatments could not be stopped and in these cases the Italian lockdown restriction rules did not apply to patients directed to a hospital for essential treatments. On the contrary, psychotherapies were more likely to be considered non-essential treatments and were temporarily suspended with higher frequency. As regard to the post-lockdown phase, it is possible that after the removal of main restrictions, the more severe patients usually referred to the psychiatrist had more difficulties in reaching the service. This because in some cases other agencies (e.g., NGOs) providing outreach information and orientation to health services reduced their activity during these years, while in other cases the staff of reception centers for migrants was reduced in favor of smart working, decreasing their ability to detect early symptoms in resettled persons. As a consequence, this could have led to a reduction of the referral of, respectively, homeless people and asylum seekers. On the

**Figure 2**

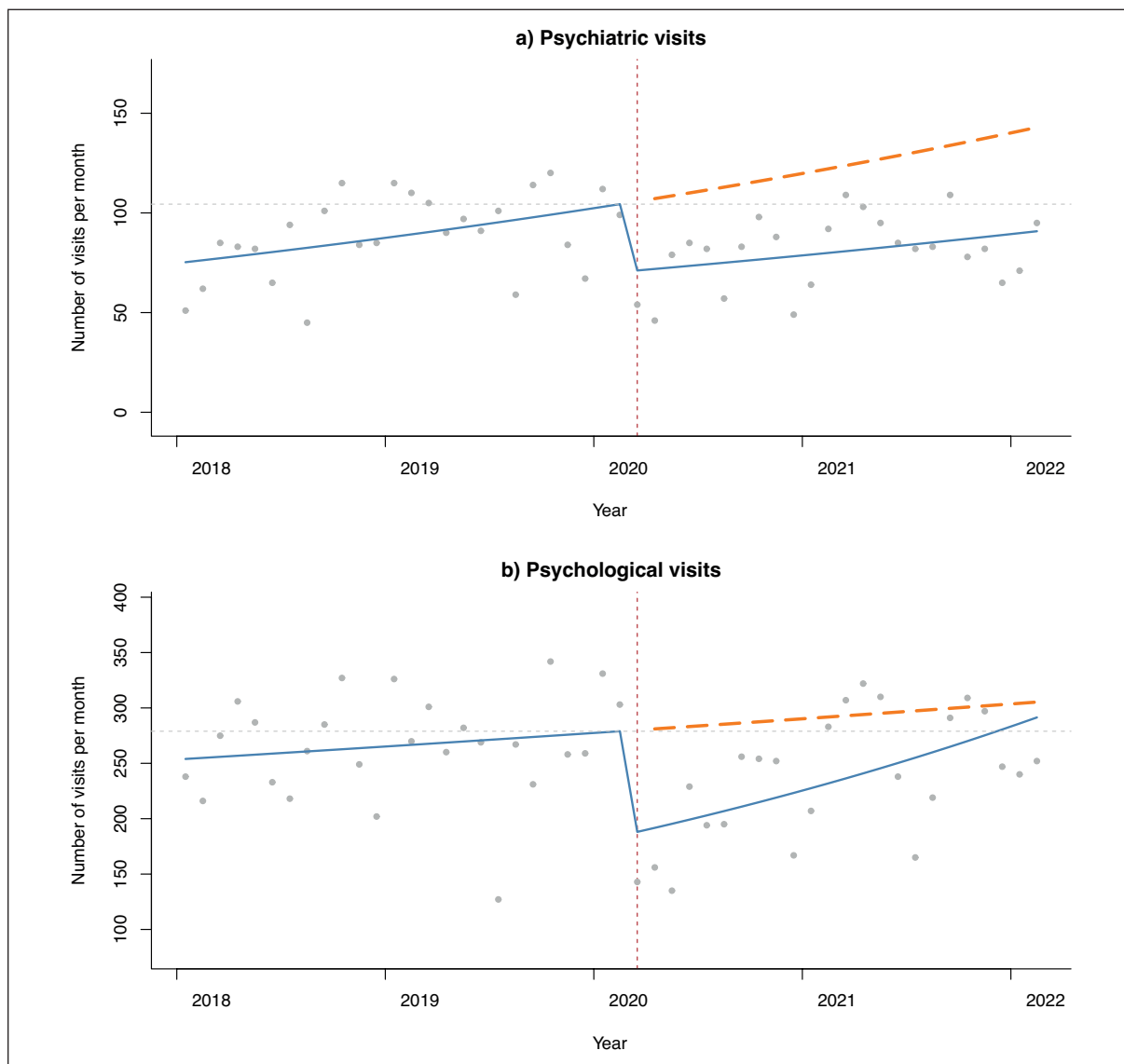
Monthly counts of first visits (a) and follow ups (b) before and during the pandemic COVID-19. Vertical dashed line: introduction of restrictions. Continuous line: trend over the years. Dashed line: counterfactual scenario. Horizontal dashed line: pre-pandemic level.

other side, psychological visits increased faster, probably because a part of these activities were influenced differently by contextual factors. For example, in our service a part of the psychological interviews was dedicated to the evaluation of asylum seekers for legal support in their request of an international protection VISA. While this activity was completely stopped during the lockdown, after the removal of main restrictions it restarted as usual.

A first limitation of this study is that it is a single center study in a mental health service specifically dedicated to migrants and people in difficult socioeconomic conditions, thus the findings cannot be directly generalized to the other mental health services of the National Health System. However, they can be representative of the situation in similar mental health facilities for migrants and low socioeconomic status, in Italy and abroad (e.g., those of charities or non-governmental organizations). Another limitation is in the counterfactual

predictions. With the same number of psychiatrists and psychologists, it is possible that in the pre-pandemic period we were nearly the apex of our possibilities, so a sort of ceiling-effect shall be considered. In this case, it would be normal that the trend does not continue to increase even after total numbers are returning around the pre-pandemic levels. However, the slope of the curve in the period after the strict lockdown phase should had been more sharp, so the finding remains informative, suggesting an upturn which is slower than expected (especially for psychiatry).

In conclusion, our study shows that once the strict lockdown measures were eased, mental health patients in vulnerable conditions (migrants and persons in economic and social difficulty) returned to be healed at levels which are not very different from pre-pandemic ones. There is still relatively more difficulty for psychiatric treatments than for psychological interventions.



**Figure 3**

Monthly counts of psychiatric (a) and psychological visits (b) before and during the pandemic COVID-19. Vertical dashed line: introduction of restrictions. Continuous line: trend over the years. Dashed line: counterfactual scenario. Horizontal dashed line: pre-pandemic level.

This is probably due to a higher impact on psychiatric patients of persisting difficulties in the territory to reach the most vulnerable patients and to refer them to psychiatric services. The other relevant finding is that it took two years to return to the pre-pandemic levels. Considering that in the meanwhile mental health needs should have increased due to the economic and social consequences of the pandemic, mental health services should improve their efforts to reduce barriers of access and to implement outreach referral.

#### **Ethical considerations**

This study has been performed in accordance with the Helsinki declaration. Research design and ethicality of the study reviewed and approved by INMP Review Board.

#### **Funding**

None.

#### **Authors' contributions**

MA: study design, data collection and data entry, writing of the manuscript. GN: methodology, data analysis, writing of the manuscript. GL: methodological audit, text review. AC: study design, text review, bibliographic analysis. GC: methodological revision, text review. CM: conceptualization, text review.

#### **Conflict of interest statement**

None.

Received on 4 May 2022.

Accepted on 3 October 2022.

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