International experiences of the active period of COVID-19 - Mental health care

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ARTICLE INFO

ABSTRACT

Aim: To summarise commonalities and variations in the mental health response to COVID-19 across different sites and countries, with a view to better understanding key steps not only in crisis management, but for future systemic reform of mental health care.

Method: We conducted a Rapid Synthesis and Translation Process of lessons learned from an international panel of experts, collecting on the ground experiences of the pandemic as it evolved in real time. Digital conferencing and individual interviews were used to rapidly acquire knowledge on the COVID-19 outbreak across 16 locations in Australia, Denmark, Italy, Spain, Taiwan, the UK, and the USA.

Results: COVID-19 has had massive impacts on mental health care internationally. Most systems were under-resourced and under-prepared, struggling to manage both existing and new clients. There were significant differences between sites, depending on the explosivity the pandemic and the readiness of the mental health system. Integrated, community mental health systems exhibited greater adaptability in contrast to services which depended on face-to-face and hospital-based care. COVID-19 has demonstrated the need for a new approach to rapid response to crisis in mental health. New decision support system tools are necessary to ensure local decision-makers can effectively respond to the enormous practical challenges posed in these circumstances.

Conclusions: The process we have undertaken has generated clear lessons for mental health policymakers worldwide, beyond pandemic planning and response to guide next steps in systemic mental health reform. Key here is achieving some balance between national leadership and local context adaptation of evidence.

Introduction

Worldwide, and even before COVID-19, mental health was recognised as one of the most fragile elements of the health system, due to its complexity, chronic under-resourcing, inequity, and poor access and service gaps [1–5]. Major changes in mental health systems had been suggested and were already underway before 2020 with notable examples in Europe [6], such as the full-scale national reform enacted in Belgium [7]; and Latin America [8].

They have also been planned in Australia [9], against a backdrop where available mental health funding (7.6% of the health budget), fails to properly respond to the burden of disease (12%) [10]. The disruption caused by COVID-19 now further spurs the opportunity for mental health reform changes, in the context of a second global financial crisis [11] which is already having a major impact in mental health [12].

COVID-19 has also called into question the whole process of prioritisation and planning in mental healthcare, during the pandemic and beyond. Information spread through social media and governmental or health agencies has reached a huge scale, certainly unprecedented in human history [13]. Apart from rapid review syn-

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thesis [14], the existing knowledge base on mental health and COVID-19 is currently derived largely from calls for action based on national data [15] or expert recommendations [16,17], surveys on the impact of COVID-19 on mental health [18], and narratives based on personal experience [19]. The limitations around each of these approaches suggest the need for another way to quickly develop deeper understanding about crises such as COVID-19, its mental health implications, and how best to develop appropriate policy responses.

The Interactive Systems Framework (ISF) for Dissemination and Implementation presents an overall framework for translating knowledge into action. It uses the Rapid Synthesis and Translation Process (RSTP), allowing public agencies to expedite the transfer of research knowledge to practitioners and policy makers. RSTP combines domain expert knowledge together with rapid reviews to inform action planning in real world conditions [20].

It follows a multi-step process guided by a series of practical questions:

- What's the pull?
- What's out there?
- What do we already know?
- What does science tell us?
- What are core/common components?
- What are the key messages that guide decision making (framing)?
- Does the product work? (e.g. a new recommendation guideline or a policy report for government)
- Is the product intellectually accessible? and
- Should we make adjustments?

This paper describes how an international panel of experts in policy research and on-the-ground planning adapted the RSTP to acquire and share rapid knowledge on the emerging impact of COVID-19 on mental health.

The aim has been to quickly develop better understanding about how to respond to COVID-19, taking global lessons and considering how to drive better local decision-making in mental health care – a 'glocal' approach [21]. With such a wide range of pandemic experiences across different mental health systems, achieving this 'glocal' balance can assist in identifying common issues and opportunities for better decision-making and reform, with specific national implications.

Method

Drawing on previous experience with the RSTP method for knowledge-to action planning in mental health [22], and our current work on decision analytics at the Visual and Decision Analytics Lab [23], and our international partnerships, we established a COVID-19 Pandemic-Mental Health International Network (Pan-MHIN). This Network comprised key mental health leaders and policy makers. Pan-MHIN members were each able to provide a formal and real-time account of their on-the-ground experience managing mental health care in different local scenarios across the world during the COVID-19 pandemic (see Acknowledgements for full list of members). We engaged this Network in a rapid series of webinars. Each meeting began with a briefing on the unfolding crisis, including data updates drawing on national and international dashboards and repositories, including the World Health Organisation (WHO) COVID-19 dashboard [24], the European Centre for Disease Prevention and Control COVID-19 dashboard [25] and the COVID-19 module of the US Centre for Disease Control and Prevention [26]. The meetings also shared a purposive search of the published literature and key technical reports. The webinars then featured a presentation from a key speaker, followed by questions and answers. We scheduled an additional webinar with the

head of the Department of Mental Health and Drug Addiction at the WHO, reviewing their role and contribution to the worldwide mental health response to COVID-19. All webinars were recorded and uploaded to a publicly-accessible online repository at Centre for Mental Health Research webpage at the Australian National University [27].

Summaries of each webinar were produced by one of the authors (SR) and disseminated through Croakey Health Media, an independent open source platform of social journalism for health (https://croakey.org/).

We also conducted individual interviews with the webinar speakers, as well as other service planners and experts from the participating countries to increase the knowledge base.

Through these webinars and interviews, the Network was able to provide real-time rapid review of unfolding pandemic issues affecting mental healthcare across 16 pandemic locations: Madrid, Barcelona and Canary Islands (Spain), London (UK), the Friuli Venezia Giulia (FVG) region and Florence (Italy), Boston and New York City in the USA, Taiwan, the Central Region of Denmark and Australia (New South Wales, Victoria, Queensland, Western Australia and South Australia). Therefore, the following results are insights from reanalysis of existing information across the world, sourced from publications and technical reports, which have been elaborated by the Pan-MHIN experts group through a series of webinars.

Results

We conducted eight webinars, engaging around 500 participants (including members of the Network) from the participating countries and sites, plus Canada. Over 1500 downloads were made from the webinar repository at the end of the series. We divided the information gathered in two major sections: general issues and mental health issues. We also conducted 15 interviews with the presenters and other experts from the catchment areas to clarify, contrast and increase the knowledge base.

General issues

Considering the general characteristics of COVID-19 relevant for framing mental health, it is our view that the literature on mental health and pandemics before COVID-19 did not provide a usable matrix to arrange the emerging information on COVID-19 [28]. This expert review identified deficiencies in systems indicators, major changes in the use of digital health, the relevance of adopting a healthcare ecosystem approach and problems in the typology of the phases and the severity of the pandemic to better frame its impact on mental health. We adopted a simple typology of three main phases: preparatory, active (initiation, acceleration and deceleration), and recovery [28].

Mental health issues

This study found both commonalities and disparities between reporting sites, with a particular split between high and low-impacted countries. Except for Taiwan, most places reported a significant lack of preparedness of the centres and the workforce. Mental health staffs were typically poorly trained to respond to pandemic, with health professionals having difficulty accessing Personal Protective Equipment (PPE), or not knowing relevant biosafety protocols. Several places reported that the role of psychiatry in this kind of crisis was unclear, with some staff shifted to provide general medical care, others continuing to provide mental health care to clients, while others played a role in managing the mental health of other health professionals. Home visits by mental health staff have become rare during COVID-19 to keep both client

and provider safe. Where meetings do occur, it was reported they might occur outside the service premises or the user's home.

Across the studied sites, all forms of mental health care – inpatient, community, residential and outpatient have been very significantly affected. There was a general decrease in demand for mental health care during the initial and acceleration phase of the pandemic, followed by quick adaptation of all the mental health systems to the new context of care, including a major shift to telemedicine and eHealth. This shift was partly unexpected, catching many mental health systems unprepared and still reliant on face to face service modalities. Workforces were often unfamiliar with the use of phone or video for mental health service delivery. Services in Italy and Spain report some clients clearly prefer this mode of care to face to face.

Australia made telehealth services part of its Medicare public health insurance system because of COVID-19 and reports that $35 m has been spent on mental telehealth services just in the six weeks between mid-March and end April [29].

Rehabilitation and social services for mental illness have also been affected, in many cases ceased. There were significant practical implications. Mental health acute wards were often converted into more space to treat COVID-19 patients. Inpatient services were emptied. In London, a whole new emergency psychiatric assessment service was established in one Trust to keep mental health clients from attending general accident and emergency. Many mental health services lost staff, transferred to other parts of the health system to respond to COVID-19, infected or under quarantine. In Madrid all the psychiatric registrars were transferred to emergency and general hospital wards during the acceleration phase.

With these changes, as well as heeding the general call to the community to stay home, existing mental health clients refrained from attending services and many current services ceased.

The WHO has played an active role in preparing, preventing and guiding mental health support during COVID-19. It released a statement with key messages and recommendations related to COVID-19 and mental health [30], which was followed by a UN Policy report [1]. This policy report provides an excellent review of the state of the art on mental health and COVID-19 through until mid-May 2020. It corroborated many of the key issues identified in the webinar series. Similarly country and regional reports and comments have been published in Italy [31–33] Spain [32], the US [12], and confirm the centrality of the issues discussed in the webinar series.

General impact on mental illness

A rise in mental health problems during the deceleration phase and the recovery phases was generally expected. Based on the experience of COVID-19 in Lombardy (Italy) [33] it was possible to identify seven population subgroups affected by the psychosocial consequences of the COVID-19:

1. the general population affected by restrictive measures,
2. people subjected to quarantine because of contact with an individual with an infection, who themselves were not positive,
3. people positive for the virus who did not need hospital treatment and were isolated at home,
4. people positive for COVID-19 who were hospitalized and have recovered,
5. health care personnel coordinating or providing care during the pandemic,
6. relatives of persons who died, and
7. patients in treatment for mental disorders.

The webinar series discussed the local experience in dealing with all these groups except relatives of the deceased.

A major focus was consideration of responses to common mental disorders, suicide, severe mental illness, mental health in specific age groups (children, adolescents and young adult), and those with specific conditions such as neurodevelopmental disorders. The webinars also provided some initial appraisal of the response across multiple care settings: hospitals, outpatient care in the community, rehabilitation, recovery and supported accommodation services, and home care. The high variability found across countries and within countries indicated that, particularly at times of crisis, nationwide mental health planning for targeted groups, settings and services should be subject to regional tailoring to promote local adaptation.

There is a plethora of known determinants of mental illness that have been affirmed or increased by COVID-19. The interruption of global markets and the effects of the lock-down on businesses had a quick impact on the labour market, with high rates of unemployment and a global financial crisis more severe and widespread than any other. The 2008 financial crisis was significantly lower in the Pacific than in the Atlantic countries, and it affected southern countries in Europe considerably more than northern. The mental health impact of the 2008 crisis in Europe, especially Italy and Spain, has been extensively analysed [34,35] and may facilitate useful information to develop models to estimate the emerging impact of COVID-19 in different countries. Social adversity and inequity issues and their relationship with mental health and COVID-19 deserve special attention [36]. In Australia, the mental health complaints system managed in Victoria provided a detailed, real-time perspective on the range and severity of issues arising for local mental health clients.

General population, specific groups and health professionals

A critical element in Taiwan's success is the outstanding preparatory phase and the results of promotion and prevention strategies. Taiwan had previously established well-documented and rehearsed pandemic plans, addressing the bio-psycho-social impacts of pandemics on mental health and wellbeing.

Borne from their experience with SARS and MERS, Taiwan has invested in the infrastructure to support a holistic pandemic response, integrating both clinical and psychosocial aspects of care. As part of this process, the Taiwanese Ministry of Health and Welfare recommended that people limit their consumption of COVID-19-related news to 30 min per day. This was also proposed in Spain. This can minimise feelings of concern or despair and promote greater calm. To this policy and technological infrastructure was married a willingness to act without hesitation and at the first sign of the pandemic's potential. Experience had taught Taiwan's planners that hesitation equalled failure.

Network members shared concerns in relation to domestic violence, to equity issues in access to direct mental health care and to eHealth. The problems of care for elderly populations and in nursing homes were discussed with colleagues in Barcelona (Spain), where the government transferred these services from the social to the health sector in April 2020. Child, adolescent and young adult care were discussed in Boston, with a positive view on the use of teleconsultation and the engagement of parents as part of this process. Another common concern across the Network was the mental health of health professionals themselves, particularly in those regions facing an explosive acceleration phase. This was when demand for consultations by professionals was reaching its peak in Italy, the UK, and particularly in Spain, which experienced the highest rate of infected health professionals in April-May 2020. The Network considered the vital role played by Aboriginal Controlled Health Organisations and Indigenous national leadership in preparing Aboriginal and Torres Strait Islander communities for COVID-19, including imposing travel bans on prospective visitors,

providing education, training and other resources to staff and communities. These measures have minimised the impact of the pandemic.

The Network also shared fundamental serious concerns regarding the lack of preparedness for the epidemic in the mental health sector, fears of infection and spreading it to peers, family and patients and complex ethical decision in the triage of patients, for example, whether to turn away some clearly in danger of suicide. There were also concerns about burn out and of posttraumatic stress disorder in health professionals, right through the webinar series. There is already evidence emerging of the toll daily stress has had on health workers [32,37–39].

Increase in psychological distress, common mental disorders

There is genuine, international concern about the prospect of a new wave of unmet need for mental health care. Experts from all regions have estimated an increase of psychological distress, anxiety and depression in their catchment areas and countries. This estimate was corroborated by surveys and expert reports.

A Kaiser Permanente report released in April 2020 [18] found that 45% of adults in the US reported an impact on their mental health (19% with a "major impact."). The McKinsey Global Institute in Safeguarding Lives and Livelihoods warned of the effects of the rate of infection, deaths and uncertainty on anxiety and grief [40]. There is now Australian data suggesting mental health problems are at least twice as prevalent as in non-pandemic circumstances [41]. While the data shows that almost all age groups are affected, adolescence and young adults are disproportionately affected by the pandemic in Australia, recording much higher rate of psychological distress, depression and anxiety [42,43].

De Girolamo et al. underscored the importance of being able to measure respondents' stress levels and psychosocial adjustment as essential to both plan for the necessary psychosocial support during the recovery phase and for preparedness for future pandemics [33]. The rapid shift to telemedicine had a major impact on outpatient mental health for common mental disorders across all the regions participating in the Network, with attendances dropping steeply. However, most services chose not to provide care to new clients during the active period. Most were struggling with the challenges of maintaining a level of mental health care to existing clients in new ways, through telehealth for example. The rate of access to mental health care by existing clients fell markedly during the initiation and acceleration phase, with new reliance on regular phone contacts rather than face to face care. A very significant exception was previous digital health services in Australia that were able to absorb the new demand without any requirement for face-to-face care. MindSpot is an online tool for psychotherapy. Its utility in a crisis was tested during the 2019 bushfires in Australia. Its use in Western Australia was discussed in the last webinar of the series [44].

Suicide

Mental illness and suicidality may occur arising from COVID-19 in response to economic hardship, unemployment, bankruptcy and social dislocation [45]. This concern was also considered by the Network during the webinar series. The suicide prevention and high-risk surveillance program in Taiwan and the suicide monitoring experience in Denmark were discussed, as well as the adaptation of existing strategies in Australia, redirected to COVID-19. Early expert concerns about the increase in suicide rates and the need for revising the prevention measures were published during April 2020 [16], and anecdotal increase in suicide rates have been noted [31]. A 25% increase in suicides has been predicted for each year

for the next five years [46]. However, longer-term trend of suicide need to be observed.

Severe mental illness and neuropsychiatric conditions

Problems in dealing with severe mental illness in the different locations were also discussed. Increases of new-onset psychosis cases have been reported in Madrid (Spain) [47]. A main concern was the suppression of rehabilitation and community services [48], the achievement of a rapid shift to telemedicine and telemonitoring of registered cases [48], the need to relocate patients from psychiatric wards (e.g. in Spain), or the need to a rapid reconversion of routine practices in FVG (Italy). People with serious mental illness were also reported as facing difficulties complying with social distancing, use of PPE and other norms, as well as problems associated with confinement. The Network noted some exceptions made to confinement rules for people with neurodevelopmental disorders, for example in Italy and in Spain. In the UK, the US and Italy, it was reported that different types of problems manifested among those treated at home versus those in residential care, with some people living at home facing more of a challenge adapting to confinement. Hard won self-management skills were at risk, undermining the steady progress made through many years of rehabilitation for some. Network members also reflected on the impossibility of managing and implementing the torrent of recommendations and guidelines from central office, working out how to translate them to the local care system and to tailor them to individual needs. There were sometimes ethical implications related to the transformation of the pattern and provision of care for example, decisions on whether a person with a mental illness should be admitted into care or not, given the risk of contracting COVID 19 in shared spaces.

Emerging neurocognitive impairment due to COVID-19 was also discussed in the seminar on the Central Region of Denmark. The problems of care for people with neurodevelopmental disorders was discussed in Boston and Florence, with specific recommendations suggested for this group as part of an international guide development started in Italy [49]. The Network noted for this group an increase of behavioural problems, concerns as to whether general care could meet the needs of persons with intellectual disabilities and COVID-19, problems in the use of protection measures and equipment and differences in home and residential care. Many of these issues have been identified and confirmed in a recent report [50].

Discussion

The Network identified key ingredients which had emerged in successful management of mental health care in the context of COVID-19, and that were confirmed by subsequent reports by experts and national and international organisations [1]. Access to universal public health care, higher levels of service and technological integration between primary, community and tertiary elements of mental health care were reported as key aspects in organising an effective and successful response to the pandemic. Shared access to e-health and e-prescribing records was a pertinent example of this integration.

Given the massive reduction in face to face access to mental health care, particularly hospital- based acute and outpatient care, those services with significant community mental health infrastructure are better placed to respond to an event such as COVID-19. Particularly where services were accustomed to providing a combination of clinical and psychosocial support to mental health clients, they were often able to draw on a level of flexibility which permitted quicker and more effective adaptation to the restrictions imposed by COVID-19. In the UK this meant interpreting centralised guidance to suit local circumstances, so as to continue to help a person with mental illness live in supported accommoda-

tion. In Madrid there was concern to ensure people had continued access to long acting and depot medications. In FVG there has been focus on extensive home monitoring and involvement of the Third Sector in re-modulating rehabilitation activities. The network of Community Mental Health Centres and different housing facilities remained completely operative during the emergency. With the use of hospital services for mental health care minimised, alternative options to help people stay well in the community are critical. In Madrid and Denmark especially, mental health systems were able to draw on a fundamentally integrated health system, where primary, community, hospital-based and social services operated as part of the same 'system'. This created a platform for continuity of care, even at a time of crisis. Availability of accurate data was judged to be a relevant factor. The US also reported how these fractured service arrangements are mirrored by a lack of data integration, limiting both the sources and quality of information available to guide decision-makers. There they often relied on delayed, retrospective billing information as a prime source of information about COVID-19 mental health help-seeking.

> Governance arrangements were also seen to have a role in determining the impact of COVID-19 on mental health care. Those countries with more independent, local governance and management of the pandemic seemed to perform better and offered higher levels of confidence than those where decision-making was more guided by politics or central office.

The RSTP process we have undertaken has generated some clear lessons for mental health policymakers worldwide, not just in relation to pandemic planning and response, but in relation to key next steps in systemic mental health reform. This article sets out these lessons. In relation to Thigpen's first three questions [20]

1) What's the pull? – the Pan-MHIN agreed the desirability of rapidly sharing their experiences and related data, in recognition of the urgency imposed by the pandemic and concern for both immediate and longer-term mental health impacts arising from COVID-19.
2) What's out there? – the process was effective in gathering 'on the ground' intelligence in real-time that was re-affirmed by the publications and technical reports.
3) What do we already know? - COVID-19 has accelerated the significant challenges facing mental health systems worldwide. Systems already under pressure now face a common, critical challenge. They must not only manage their existing clients. They must also consider the broader impact of a global pandemic on community mental health, often in the context of widespread neglect of mental health system development.

This process could also guide the literature search for Thigpen's fourth question (what does the science tell us?) by improving the knowledge base for the literature review.

As stated, the international phases of pandemic did not allow a proper international comparison to frame the mental health problems related to COVID-19. This approach to rapid response could also facilitate the development of a product, such as a set of recommendations, in response to questions 5 and 6 in the RSTP model for knowledge-to-action planning.

A key lesson from the health response to COVID-19 has been the need for a new approach to rapid response to crisis. As stated by Lesser and Reeves *"COVID-19 has made every organisation aware of the limits of its ability to learn quickly in an extremely fast-moving environment, in which ten days of hesitation can lead to the quadrupling of infections and to an escalation of business and societal disruption"* [51]. It is clearer now that decision-makers need access to a whole set of tools, as part of developing a Rapid Response Decision Support System for prioritising and guiding evidence informed policy.

This would include the rapid appraisal approach described in this article, based on online discussions and open access to facilitate corroboration. We also need new methods and tools to drive literature reviews that incorporate Artificial Intelligence and Natural Language Processing. These are critical, enabling the effective screening of the vast number of papers which emerge during crises such as COVID-19, including grey literature. These automated review tools would reduce the need for human screening and hand search. Other decision support tools to be developed should include on-line methods for gathering expert knowledge including virtual nominal groups; quick data analytics; better visualisation tools and real time dashboards; new modelling systems for mental health planning that incorporate provision and capacity at the local level; and real time forecasting to better plan the general mental health response as well as the response to local outbreaks and a putative second wave.

A remarkable feature of the response to COVID-19 has been the establishment of telehealth as a core element of service delivery. A critical challenge going forward will be to ensure that, beyond mere phone or video calls, telehealth services evolve with agreed models, to verifiable standards and with measurable outcomes. These kinds of standards, in telepsychiatry for example, do not currently exist. While telehealth mental health services have become an important part of service delivery, for people with severe mental illness, this was not straightforward. It is not possible to move every mental health service online for this client group.

In many countries the risk of pandemic spread was higher in psychiatric residential care and communal supported accommodation settings than where services users received home based care or used outpatient services, even if restricted. Residential facilities for the elderly have proven to be hotspots. There is no relevant, systematic European data collection regarding the impact of COVID-19 on the elderly, though the WHO is collecting data now. Despite this, there have been a number of interesting surveys showing that small scale group homes and all forms of supported accommodations were much safer than large residential institutions. [71]. In psychiatric hospitals the safety of patients and health-care providers, as well as the preservation of patients' rights have been raised by International organizations [52].

Along the 'glocal' lines discussed earlier, a final central question regarding responses to crises such as COVID-19 is whether they are best managed and led nationally/centrally, or managed locally? The Italian experience is an example of great heterogeneity, from Lombardy characterized by isolation and confusion, to FVG characterized by a rapid re-organization of services and integration with both other health services and social sector [53]. By contrast, and as stated earlier, voluminous national pronouncements and guidelines in the UK and elsewhere necessitated careful local translation if they were to avoid causing unintentional, additional harm. Either way, the need to establish a workable balance between the evidence and the local context is clear. Different regional and local mental health systems are facing different types of epidemics. While they share this challenge, they are responding in different ways.

Crises like COVID-19 challenges these systems to continue to provide vital services while maintaining concern for quality care and individual client respect. This is a situation services will continue to face, probably made more challenging with the arrival of new and unmet demand for professional mental health care. Sharing and comparing individual responses can increase our collective capacity to provide effective care.

Author contributions

Dr Rosenberg and Professor Salvador-Carulla were responsible for drafting this paper. Adj Assoc Professor Mendoza and Dr Tabatabaei-Jafari helped determine the content, contributed to the text and edited the draft. All the network members (Pan-MHIN) contributed to the final version.

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