COVID-19

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Audit of acute psychiatric presentations during New Zealand's first COVID-19 national lockdown

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Abstract

Objective: In this study, we aimed to identify service user demographic and clinical characteristics of an acute mental health service in South Auckland during the first New Zealand coronavirus-related lockdown.

Method: We conducted a clinical audit of a sample of service users presenting to a district health board's acute adult mental health service during New Zealand's level-4 lockdown in 2020 and made comparisons to a sample from 2019. We identified demographic factors, living situation, mode of referral, mode of assessment, diagnosis, substance use, risks, stressors, use of mental health act legislation and follow-up.

Results: During the first level-4 lockdown fewer Māori were assessed, police referrals increased, specific stressors related to confinement were identified and there was an increase in risks relating to self-harm and harm to others.

Conclusion: Service users had unique stressors and changing patterns of presentation during the level-4 New Zealand lockdown. In response to the changing needs of service users during a pandemic, we recommend optimising telehealth, enhancing connections with other essential services, development of digital interventions and care for frontline staff.

Keywords: audit, mental health services, service user, coronavirus, COVID-19

Amidst a novel coronavirus pandemic, as international borders closed, deaths from COVID-19 complications soared. Many countries, including Australia and New Zealand, instituted national lockdowns. Lockdown-related stress can be emotionally challenging. Conditions of quarantine and isolation pose risks to vulnerable members of society who may experience distress[1] suicidal thoughts[2] and psychological sequelae.[3] Service users with comorbid mental and physical illness are considered to be at increased risk of more severe outcomes relating to COVID-19.[4]

Social and community cohesion may mitigate the worst psychological effects of a pandemic lockdown.[5] During the initial level-4 restrictions from 26 March 2020 to 27 April 2020, all public venues, businesses and schools were closed and people were instructed to stay at home in their bubble other than for essential personal movement. Three of the authors continued to work in an acute assessment (crisis) service for adults in South Auckland, an ethnically diverse catchment area with the highest proportion of Māori (11%) and Pacific people (34%) in New Zealand.[6] During the lockdown period, a reduced volume of referrals for acute evaluation, an increase in more severe illness and a rapid adoption of remote consultations was observed.

In this study, we sought to capture demographic and clinical data of *tangata whaiora*, that is, service users of an acute mental health service, during the first New Zealand lockdown. We reflect on the nature of these

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presentations during a public health emergency, barriers to accessing services and prioritising resources.

Method

We conducted a clinical audit to identify characteristics of service user care and service delivery. We sought advice in project design, analysis and organisational support and gained approval for the audit from our district health board's acute mental health services clinical governance group.[7]

Data collection

We audited data from electronic clinical assessment forms which are routinely completed after a psychiatric evaluation. A statistician randomly selected a sample of adult service users, aged 18 to 64, assessed by the acute mental health team between 26 March 2020 and 27 April 2020. To identify a comparative group, the same process was undertaken for the period 26 March 2019 to 27 April 2019. The de-identified data were entered into an Excel spreadsheet. We audited the following variables (n = 231): demographic factors (age, gender, ethnicity, referral source), living situation, mode of referral, mode of assessment (technology used), psychiatric diagnoses, substance use, identified psychosocial needs, risks and stressors, use of mental health act legislation and follow-up arrangements. The audit tool was piloted using data from five service users.

Data analysis

Descriptive statistics were generated and variables from patients in the 2020 sample (n = 116) were compared with the 2019 sample (n = 115). Variables (mode of referral, mode of assessment, psychiatric diagnoses, current substance use, current stressors, particularly psychosocial stressors and COVID-19 related stressors, documented risks, mental health legislation and follow-up arrangement) were analysed according to age group, gender and ethnicity. Mode of assessment was analysed according to living situation. The percentages of each variable were calculated proportionate to each year's sample size.

Results

During the lockdown period of 2020, 413 service users were assessed. In the same timeframe of 2019, 785 patients were assessed. A total of 304 service users were selected for audit from 2019 and 2020. Seventy-three patients were removed from the analysis as they did not have a psychiatric evaluation. Therefore, the audit sample comprised 231 service users (2020 n = 116, 2019 n = 115). The rate of documentation (an audit standard for completion of forms) was similar in 2019 and 2020. The salient aspects of the analysis for the 2020 lockdown period compared to 2019 (see Table 1 for all audit variables) are reported.

(1) Service user demographics

During the lockdown, we identified differences in who was assessed: a comparative increase in males (3%), in older adults (13%), in New Zealand European patients (10%), in Pacific service users (6%), and a decrease in Māori service users (14%) compared to 2019.

(2) Referrer

There was an increase in referrals from police (10%) and the general hospital (7%); and a decrease in referrals from the emergency department (11%) and primary care (4%).

(3) Living situation

There was an increase in people who lived with a partner (10%), living in a shared flat (3%), living in supported accommodation (3%), and a decrease in people living with their family (8%).

(4) Mode of assessment

There was an increase in phone (21%) and videoconference assessment (4%) mostly in service users living with family or whānau (2%), and in supported accommodation (1%). There was a decrease in face to face assessments (25%), particularly Māori females living with family (5%).

(5) Diagnosis

There was an increase in mood and anxiety disorders (4%), an increase in psychotic spectrum disorders (3%) and a decrease in personality disorders (13%). Service users presenting to acute mental health services for the first time increased in 2020 (3%) with an increase in women (5%) and a decrease in Māori men aged 18 to 29 (1%) presenting to the service for the first time compared to 2019.

(6) Substance use

Self-reported cannabis and methamphetamine use were similar across both samples and alcohol use (7%) decreased in the lockdown period.

(7) Stressors

There was an increase in stress during lockdown (10%) related to childcare, family, residency/refugee status and isolation. Specific lockdown related stressors

Table 1. Comparison of audit variables between 2019 and 2020

Variable	*Sub-variable*	*2019 (n = 115)*	*2020 (n = 116)*	*Difference (n) + or –*	*Difference (%)+ or –*
Age range	18 to 29	58	45	**–13**	**–12%**
	30 to 49	47	50	**+3**	**+2%**
	50 to 65	10	25	**+15**	**+13%**
Gender	Female	*52*	*49*	**– 3**	**–3%**
	Male	*63*	*71*	**+ 8**	**+3%**
Ethnicity	NZ European	27	39	**+ 12**	**+10%**
	Maaori	40	24	**– 16**	**–14%**
	Pacific	21	28	**+7**	**+6%**
	Other	15	15	***0***	**0**
	Asian	12	10	**– 2**	**–2%**
Referrer	Police	27	39	**+ 12**	**10%**
	Emergency Department	27	15	**–12**	**–11%**
	General Practitioner	20	16	**–4**	**–4%**
	Family whaanau	10	13	**+3**	**3%**
	Self–referral	7	7	***0***	**0**
	Middlemore Hospital (other)	1	9	**+8**	**7%**
	X Other	7	3	**–4**	**–4%**
	Other DHB Community MH Service	7	2	**–5**	**–4%**
	Adult Community MH Service	3	3	***0***	**0**
	Other DHB Inpatient Unit	1	4	**3**	**3%**
	NGO Agency	2	3	**1**	**1%**
	Midwives/Plunket	1	2	**1**	**1%**
	Psych Liaison	1		ND*	**–1%**
	MH Intake (other)	1		ND*	**–1%**
Living situation	Lives with family whaanau	53	44	**–6**	**–8%**
	Lives with partner	12	24	**+12**	**+10%**
	Lives alone	14	11	**–3**	**–3%**
	No fixed abode	13	10	**–3**	**–3%**
	Not known	11	5	**–5**	**–5%**
	Flatting	6	10	**+4**	**+3%**
	Supported accommodation	3	7	**+4**	**+3%**
	Other	1	3	**+3**	**+2%**
	Lives with family (dependents)	2	1	**–1**	**–1%**
	Lives with ex–partner		1	ND*	***+1%***
Mode of assessment	Face to face	91	63	**–26**	**–25%**
	Phone	18	42	**+24**	**+21%**
	Not specified	5	5	**+1**	**0**
	Other – *videoconference*	1	6	**+6**	**+4%**
Diagnosis	Psychotic Spectrum	32	36	**+4**	**+3%**
	Mood & Anxiety Disorders	31	36	**+5**	**+4%**
	No Diagnosis/Not formally assessed	18	19	**+2**	**+1%**
	Personality Disorders	18	3	**–15**	**–13%**
	Substance misuse	9	9	**0**	**0**
	Other	4	5	**+1**	**+1%**
	Deferred	3	4	**+1**	**+1%**
First episode	Yes	28	32	**+4**	**+3%**
	No	86	83	**–3**	**–3%**
	Unknown	1	1	**0**	**0**

(continued)

Table 1. (continued)

Variable	*Sub-variable*	*2019 (n = 115)*	*2020 (n = 116)*	*Difference (n) + or –*	*Difference (%)+ or –*
Substances	Unknown	19	57	**+38**	**+33%**
	Alcohol	26	18	**–8**	**–7%**
	Cannabis	14	13	**–1**	**–1%**
	None	27		**–27**	**–23%**
	Other	6	9	**+3**	**+3%**
	Alcohol & cannabis	6	5	**–1**	**–1%**
	Methamphetamine	5	6	**+1**	**+1%**
	Combination	6	3	**–3**	**–3%**
	Methamphetamine & cannabis	5	4	**–1**	**–1%**
	Methamphetamine, cannabis, & alcohol	1	1	**0**	**0**
Stressors	Conflict	30	41	**–11**	**–10%**
	COVID – Lockdown	8	1	**+7**	**+6%**
	Financial stress	11	12	**–1**	**–1%**
	Loss & Grief	5	7	**–2**	**–2%**
	Loss of employment	4	1	**+3**	**+3%**
	Not documented	38	43	**–5**	**–5%**
	Other	15	3	**+12**	**+10%**
	Physical health & stress	5	6	**–1**	**–1%**
	Substance use	ND*	1	**+1**	**+1%**
Covid–19 stress	No	111	54	**–57**	**–50%**
	Yes		33	**+33**	**+28%**
	NA**	3	29	**+26**	**22%**
Risks[2]	Unknown	31	31	**0**	
	Suicidal thoughts	25	21	**–4**	**–40%**
	Harm to others	13	20	**+7**	**+5%**
	Suicidal behaviours	13	13	**0**	**0**
	Self–harm	9	16	**+7**	**+6%**
	Suicidal thoughts & behaviours	16	7	**–9**	**–8%**
	Other	6	5	**–1**	**–1%**
	Diminished self–care	2	6	**+4**	**+3%**
	Substance use	ND*	1	**+1**	**0**
MHA	No	98	104	**+6**	**+4%**
	Yes	17	12	**–5**	**–4%**
Follow up	General Practitioner	34	51	**+17**	**+14%**
	Community Mental Health Team (CMHC)	20	13	**–7**	**–6%**
	Acute & Hospital Services	32	33	**+4**	**+3%**
	Acute & Hospital Services	*19*	*17*	**–2**	**–2%**
	Acute & Hospital Services – Inpatient Admission	*11*	*13*	**+2**	**+2%**
	Acute & Hospital Services + CMHC	*2*	*3*	**+1**	**+1%**
	Transfer of Care – *to another DHB/Service*	12	7	**–5**	**–4%**
	Other	5	6	**+1**	**+1%**
	Respite	5	1	**–4**	**–3%**
	Lost to follow up	2	3	**+1**	**+1%**
	Brief Episode of Care (BEC)	2	2	**0**	**0**
	No follow up	3		**–3**	**–3%**

Note. ND* = no difference, NA** = not applicable.

(19%) were reported: limited supports or utilities rendered inaccessible due to restrictions (gym or rehabilitation programmes), isolation, loss of employment and financial.

(8) Risks

There was an increase in risk of self-harm (6%), and diminished self-care (3%). There was a decrease in reported suicidal thoughts (4%) and suicidal thoughts and behaviour (8%). The risk of harm to others increased (5%).

(9) Mental health legislation

The use of mental health legislation decreased (4%).

(10) Follow up arrangements

There was an increase in primary care follow up (14%) and a decrease in community mental health services follow up (6%).

Discussion

This audit presents empirical data relating to characteristics of service users of an acute service during lockdown conditions. We identified that fewer service users were assessed than usual during the lockdown, compared to the same timeframe in 2019. There were specific lockdown-related stressors and an increase in the risk of reported self-harm. The audit is limited by the variable detail provided in the original psychiatric evaluation forms. The results may not reflect the extent of the toll on peoples' psychological health during the most severe pandemic restrictions.

Quarantine conditions during a lockdown may be associated with negative psychological effects. Feelings of confinement, frustration and boredom at loss of routine are common. Social isolation and distancing measures are risk factors for psychological difficulties.[1] Our audit showed an increase in people living in shared or supported accommodation. During the lockdown, rates of psychiatric admission were not increased and use of mental health legislation slightly reduced. We identified a rise in diagnoses of psychosis, anxiety and depression and in risks of harming self. These presentations may indicate a high level of distress and difficulty in coping with reported lockdown related stress, such as social isolation, unemployment and financial insecurity. These stressors frequently compounded the severity of presentations; service users and families were stressed by illness but also by the complications of movement, travel and the prospect of contact with others. We expected, but did not see, increases in reported substance use and first episode presentations. We observed fewer presentations associated with acute substance intoxication. We hypothesise this may be due to the lockdown milieu, as the public limited excursions and mostly complied with advice to stay at home. Confinement may have provided a measure of containment with support for vulnerable family members, despite relationship stress and dysfunction.

During lockdown, the acute service received an increased number of police referrals and slightly fewer referrals from primary care. Service users may have been less inclined to access healthcare, specifically primary care and particularly so in South Auckland which is an area of moderate to marked social deprivation. Māori are typically over-represented in psychiatric inpatient admissions.[8] Yet fewer Māori were assessed during lockdown which may reflect reduced access to services, both in primary and secondary care, and reduced face-to-face contact, as staff from acute services typically visit families at home to engage service users who prefer in-person contact. Clinicians preferentially consulted by telephone and video-conferencing. It is not clear if this hindered Māori engagement with services. There were likely gaps and delays in earlier intervention with fewer services actively providing psychosocial support during the lockdown. With easing of restrictions, service delivery reverted to "business as usual" and remote consultations were not routinely offered, despite feedback from some service users that they preferred using zoom technology.

The 2020 level-4 lockdown was an unusual and haphazard time, introducing an unprecedented level of stress in all sectors of society. It would be useful to repeat the audit for similar periods of restriction to look at other groups such as young people and the prevalence of anxiety and eating disorders. Mental health services, like other areas of health, swiftly shifted to a remote mode of working. This caused a high degree of trepidation and anxiety among frontline clinical staff. Policies and emergency procedures were rapidly updated and then revised. Hygiene measures were adopted to mitigate concerns about the potential for infection. We reflected on prioritising our lean resources during a lockdown: (1) *Optimise telehealth*: Upskill staff in use of telehealth, identify optimal uses and procedures for in-person follow up and ensure technology is available. (2) *Enhanced connections with other essential services*: Precise communication and liaison with primary care and frontline services on referral procedures and follow up arrangements. (3) *Develop digital interventions*: Improve mental health literacy, access to information on psychological first aid and access to support, particularly electronic resources. (4) *Care for frontline staff*: Identify vulnerable staff members, place and utilise staff efficiently, ensure education in measures for self-care.

Conclusion

During the level-4 New Zealand lockdown of 2020, unique stressors and changing patterns of presentation in mental health service users were identified. Prioritising resources may assist with lockdown preparation: optimising telehealth, enhancing connections with other essential services, development of digital interventions and care for frontline staff.

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Notes

1. ND = No data (not indicated).
2. For the 2020 audit population, n=120 as additional information was accounted for (harm to others and harm to self, for example).

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