

Severe Mental illness and COVID-19 vaccination

SPI-B

Purpose: This paper aims to identify from existing literature the opportunities to improve vaccination uptake in those with severe mental illness (SMI)

Recommendations

1. Given the extensive evidence of pre-pandemic inequalities across many areas of healthcare for those with SMI, access to vaccination should be assumed to be reduced and therefore needs to be proactively enabled. [High confidence]
2. Rapid involvement of people with SMI in vaccination programme design is important to determine their preferences for location, setting, timing and type of support required. Modifications to the programme can then be identified to improve uptake. These might include flexible or longer appointments, minimal or no waiting times, travel support, carer and professional involvement. [High confidence]
3. Co-produced communication interventions aimed at this specific population and their carers providing tailored information, case studies and addressing awareness, knowledge and concerns about the vaccine. Vaccination rates in people with SMI are likely to be substantially raised with a targeted programme. [High confidence]
4. There is an opportunity for mental health professionals to proactively inform their patients about vaccination and also address any concerns or misinformation should they be raised. This should be supported by centrally co-produced resources augmented with local information, so professionals have the information at hand. [High confidence]
5. Delivering vaccinations in mental health services by mental health professionals as well as in primary care, mobile units or a mass centre contexts warrants consideration, including resource implications for training and equipment. [Moderate confidence]
6. Involving the support networks of a person with SMI (carers, family) may increase health care engagement. For example, ensuring carers/family have information related to the vaccine to address any concerns or a specific sentence in the invitation letter that those with SMI can be accompanied by a carer. [Moderate confidence]
7. Uptake of the vaccination in young adults may be lower than older age groups for a number of reasons. Young people with SMI and co-morbid physical conditions may require active engagement to improve vaccination uptake. [High confidence]
8. Uptake of the vaccination in ethnic minority groups may be lower than other groups. People from ethnic minority groups with SMI may require active engagement to improve vaccination uptake. [High confidence]
9. Monitoring of vaccination uptake rates in people with SMI is important to identify and address any inequalities at a local and national level [High confidence]

Background

People with severe mental illness (SMI) experience psychological problems that are often so debilitating that their ability to function in day to day and occupational activities is severely impaired. Schizophrenia, bipolar disorder and major depressive disorder are often referred to as SMIs but severe anxiety, OCD and a number of other mental health disorders (e.g. eating

disorders, PTSD, personality disorder) can also meet these criteria. The estimated prevalence of SMI's globally is 0.4-7.7%.

The Joint Committee on Vaccination and Immunisation (JCVI) advice on priority groups for COVID-19 vaccination is to offer vaccination to those aged 65 years and over followed by those in clinical risk groups i.e. with underlying health conditions aged 16 years and over (Priority Group 6). The main risk groups identified by the Committee include people with SMI making the UK one of very few countries in Europe to give this group higher vaccination priority, for which the committee is to be commended.¹

SMI and COVID-19 infection, morbidity and mortality

People with SMI appear to be at increased risk of infection with coronavirus and have higher rates of hospital admission, morbidity and mortality with COVID-19 compared to the general population.^{2,3,4,5} The increased risk of infection in those with SMI may be secondary to low adherence to certain protective behaviours (although there is no evidence of this) and challenges in responding to ever changing rules.⁶ Some suggest it is secondary to anti-psychotic medication such as clozapine and its effect on immunity.^{7,8} The risk for COVID-19 infection was higher among those with a recent diagnosis of a mental health disorder in a study from the USA.³ Risk was further increased among African Americans and women, though death and hospitalization rates were higher in men. These findings suggest people with SMI are a highly vulnerable population for COVID-19 infection, as well as the adverse outcomes of disease, compounded by the ethnic and gender disparities already observed in the general population.

Prior to the pandemic it was well recognised that people with SMI are at higher risk of premature mortality compared to the general population.^{9,10} They have a two to three times higher mortality rate, resulting in a 15-20 years reduced life expectancy, and there appears to be a widening gap in death rates over time.¹⁰ Major causes of death in people with SMI are largely preventable. They include non-communicable chronic physical conditions such as cardiovascular disease, respiratory disease, diabetes and hypertension.^{9,10} Prevention is often through modifiable risk factors such as smoking and obesity. It is worth noting even milder disorders such as depression have been found to be associated with a raised risk of mortality similar in size to the effects of smoking.¹¹

Factors that have contributed to worse health and mortality outcomes pre-pandemic most likely are also playing a role in these outcomes for people with SMI and COVID-19. These include poorer premorbid general health, physical comorbidity and multimorbidity, reduced access to medical care, and environmental and lifestyle factors such as lower socioeconomic status, overcrowded housing or institutional living, high rates of smoking, or obesity.^{2,5} The risk for obesity, which is an important associated factor for mortality in patients with COVID-19, can be more than four times higher in people with schizophrenia and about one and a half times higher in those with major depressive disorder or bipolar disorder, compared to the general population.⁶ The high prevalence of obesity and other associated metabolic disorders, such as type 2 diabetes and cardiovascular disease, contribute to adverse outcomes from COVID-19. Several reasons have been proposed for the high levels of obesity in those with SMI including a shared biological vulnerability between SMI and abnormal metabolic

processes, medications (for example, weight gain associated with antipsychotic agents) and unhealthy lifestyles.^{5,6}

Another group of factors likely to underlie pre-pandemic health disadvantages, COVID-19 outcomes and vaccine uptake are healthcare inequalities experienced by people with SMI. These have been demonstrated in a diverse range of scenarios and include lower likelihood of meeting cardiovascular disease treatment guidelines in primary care¹², lower likelihood of recommended treatment receipt after acute coronary syndrome in secondary care¹³, lower likelihood of breast or cervical cancer screening receipt¹⁴, more advanced cancer at first presentation, higher cancer mortality after diagnosis¹⁵, worse outcomes following vascular surgery¹⁶, as well as recognised wider inequalities in interventions for high-priority global health disorders such as HIV, tuberculosis and malaria¹⁷. There are likely to be multiple reasons for these disadvantages including stigma, discrimination, structural and practical barriers alongside the intersection of having an SMI and socio-economic deprivation; however, the end results are lower levels of help-seeking, recognition and management of physical diseases in people with SMI, preventing early presentation to healthcare and early intervention resulting in late intervention during the course of disease. These are as likely to affect COVID-19 detection, treatment and prevention as any other disorder, and a risk of inequality in vaccine receipt should be assumed (and action taken to mitigate this) until proven otherwise.

Ethical considerations and COVID-19 vaccination in people with SMI

Some argue there is an ethical duty to prioritise people with SMI for COVID-19 vaccination as a consequence of their higher levels of infection and adverse outcomes (morbidity and mortality) with COVID-19 based on clinical and socio-economic factors.^{5,6} A number of organisations including the WHO and the National Academies of Sciences, Engineering, and Medicine (USA) have proposed ethical frameworks for equitable allocation of COVID-19 vaccine. Two guiding principles, present in all these frameworks, are relevant to people with SMI. One is prioritizing populations that may experience disproportionately greater health burdens as a result of the COVID-19 pandemic. The other relates to equal respect for every person, and requires that, in allocation and priority-setting, individuals are considered and treated as having equal dignity and worth. Individuals who, because of their vulnerability or experience of structural inequalities, would face barriers to accessing a vaccine, should be offered an equal opportunity to be vaccinated as compared to the general population. This equality of opportunity should result in equal outcomes i.e. equivalent rates of vaccine uptake in the general population and those with SMI. Monitoring opportunity to be vaccinated (e.g. distance to travel) and equality of outcome at a local and national level (i.e. vaccination uptake and refusal alongside reasons why in this group) is important to address any disparities- to offer vaccination is unlikely to be sufficient to optimise uptake both to protect individuals and the population.

Vaccine uptake in people with SMI

Patients with SMI experience barriers to immunisation, including a lack of knowledge and awareness, accessibility problems, costs (travel), fears about immunisation, within systems that are not tailored to their specific needs.¹⁸ There are concerns about COVID-19 vaccine

hesitancy in the general population. Factors underlying vaccine hesitancy are mainly related to: confidence in vaccine safety and efficacy (i.e. the speed and perceived lack of proper safety processes with which vaccines have been developed and a lack of information on long term side effects); perceived low risk of COVID-19 (those who view themselves at low risk of infection or serious illness); low levels of knowledge, awareness and understanding of the benefits of the vaccine; and misinformation. It is unknown how these issues will affect vaccine uptake in those with SMI. There is a potential for their accentuation in those with paranoid thoughts, high levels of generalised anxiety or reduced motivation secondary to depression, although evidence is scarce. A review of the literature (non-systematic) up to February 2021 found no studies of the attitudes of people with mental health disorders regarding vaccination against SARS-CoV-2.⁵ Two studies, from Australia¹⁸ and the USA¹⁹, found high levels of general willingness to be vaccinated in people with SMI, at 74% and 84% respectively. The Australian study took place during the 2009 H1N1 influenza pandemic and the US study just before the current COVID-19 pandemic. On the other hand, low uptake (24–28%) of influenza vaccination was found in people attending an outpatient clinic for severe mental illness in Alabama, USA²⁰.

While people with SMI have a relatively high prevalence of obesity, asthma, diabetes, COPD, CHD, and stroke, these differences are more pronounced in younger age groups with the highest health inequalities in those aged 15 to 34 for asthma, diabetes, hypertension and obesity.¹⁰ This has implications for a national programme. Given the recognised associations between these physical conditions and worse outcomes of COVID-19, consideration should be given to vaccination uptake in younger populations with SMI. Uptake in this age group in general may be lower since they may not see themselves as at risk, given received messaging about young people and lower risk of COVID morbidity and mortality. As a consequence young people with SMI and co-morbid physical conditions may require active engagement to improve uptake. Similar considerations will need to be made for those from minority ethnic communities with SMI. People from minority ethnic groups are significantly more likely to refuse a COVID-19 vaccine²¹. Indian, Pakistani, and Bangladeshi research participants had higher intention for vaccination uptake, than respondents describing themselves as Black or Chinese²².

Ways to improve vaccination uptake in people with SMI.

A Royal Society of Public Health study identified that timing, availability and location of appointments were barriers to vaccination.²³ Improving access therefore remains crucial, especially when considering and tackling inequalities. Rapid involvement of people with SMI in national and local vaccination programme design is important so that their preferences for location, setting, timing and type of support (appointment availability, no or minimal waiting times, double appointments or longer duration appointments, timing of appointments, travel, caring responsibilities) to improve vaccination uptake can be identified and targeted.

Barriers to vaccination could be actively mitigated by listening to and engaging with people with SMI, in the implementation of immunisation policies and programmes, and addressing their concerns, to build trust, confidence, and acceptance²². This should happen at a national and local level with rapid co-produced communication interventions aimed at this specific population, their carers and professionals. Partnering with mental health third sector

organisations to ensure that accurate information is available online and misinformation addressed (although not repeated) will be important in allaying any concerns. Vaccination rates in people with SMI are likely to be substantially raised with a targeted programme.¹²

Mechanisms to establish and maintain strong links between primary care/vaccination clinics and mental health services to ensure that patients attend vaccination appointments may improve uptake through reminders from familiar contacts. Involving the patient's support network can increase health care engagement.²⁴ This could include ensuring carers/family have information related to the vaccine to address any concerns or a specific sentence in the invitation letter that those with SMI can be accompanied by a carer. Doctors and nurses are consistently identified as a valued source of information about vaccines;²³ therefore mental health professionals caring for people with SMI should be aware and knowledgeable of the different types of vaccinations that become available, their safety and efficacy. They should be ready to address any concerns raised by patients receiving care from their services (e.g., on potential interactions between vaccinations and other medications and/or any vaccine related misinformation). They should be informed about local vaccination schemes and able to sign-post to locations and travel support, or even accompany appointments. This should be supported by centrally co-produced resources augmented with local information so that professionals have the information to hand.⁵ Case studies specifically related to those with SMI who have received the vaccine could be developed. Patients should be provided with up-to-date information about the benefits of vaccination and invited to the vaccination programme¹⁹ with clear accessible invitation letters with reminders for appointments.

One possible approach would be to deliver vaccination programmes in mental health clinics and to actively reach out to individuals at risk or assist them in reaching the clinic.² On the other hand, a review of interventions to increase access to and/or uptake of physical health screening in people with SMI found no strong evidence as to whether an intervention to increase uptake of screening would be better suited in primary or secondary care²⁵. Delivering vaccinations in and by mental health services and professionals as well as in primary care, mobile units or a mass centre context warrants consideration, including resource implications for training and equipment.

Vaccine refusal

Mental health professionals or others faced with vaccine hesitancy or refusal in those with SMI, as in the general population, should provide their patients with adequate information and counter misinformation, address negative attitudes in a respectful way, and discuss the advantages and possible risks of vaccination. In the end, it should be left to the individual to weigh the benefits and the risks, and to give informed consent for vaccination.

Conclusion

Because people with SMI are at high risk for SARS-CoV-2 infection and COVID-19-related morbidity and mortality, vaccination is an important preventative intervention. Given extensive evidence of pre-pandemic inequalities across many areas of healthcare for those with SMI, access to vaccination should be assumed to be reduced and therefore needs to be proactively enabled.

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