

R066: COVID-19 impact in those with Severe Mental Illness (SMI), and neurodevelopmental disorders (NDD) in Northern Ireland: exploring the relationship between COVID-19 and patterns of hospitalisation and medication use; rates of suicide/suicidal behaviour; treatment outcomes (including relationship with GP); and mortality – UU

This study will assess the impact of the COVID-19 pandemic and subsequent quarantine on the health of people with severe mental illness (SMI) or a neurodevelopmental disorder (NDD). For this study, SMI comprises *schizophrenia*, *bi-polar disorder* and *personality disorders*, while NDD comprises *Autism*, *ASD*, *ADHD*. These groups may have been more negatively impacted by Covid-19 and the subsequent lockdown than other people. Outside the COVID-19 period they are known to have a reduced life expectancy (15-20 years) when compared with those in the general population, mostly due to preventable causes, multiple-morbidities, poor diet and problematic lifestyle behaviours such as smoking, alcohol and substance misuse (Walker, 2015). These problems can be compounded by low self-esteem, stigma and poor physical healthcare provision. These groups are also known to have complicated relationships with their GP: for example, where GPs can focus specifically on the mental health needs patients with SMI/NDD to the detriment of physical problems. In March 2020, the World Health Organisation declared the novel coronavirus (COVID-19) pandemic (WHO, 2020). Although people with SMI or NDD have a higher risk of contracting COVID-19, the subsequent lockdown may have had more widespread and serious consequences for their physical and mental health. Thus, central to our study, we seek to examine the following outcomes for people with SMI during the COVID-19 pandemic and quarantine period: (1) heightened psychiatric symptoms requiring changes in psychiatric medication; (2) contact with emergency health services; (3) self-harm; (4) medical events and hospital admissions; and finally (5) relationship with GP (for example, changing GP, being deducted from a GP Practice).

To do this, we will analyse the hospital records data of people with a SMI or NDD and compare these to the data of people without SMI/NDD. Thus, we will use the diagnostic codes provided with hospital records to examine age and sex-specific outcomes (patterns of hospitalisation, duration of stay and treatment, medication use, emergency care, treatment and mortality) for people with SMI and/or NDD. Of particular interest are people identified as having serious life limiting diseases such as cancer, coronary heart disease (CHD) and diabetes. We will identify and describe cases admitted to hospital with COVID-19 and will examine any differences between people with SMI/NDD and those without. This may provide better evidence on disparities, opportunities for early diagnosis, and gaps in screening and treatment. Our study is intended to assist policy makers, service providers and health practitioners in addressing this major health gap.

We seek to assess the health impacts of the COVID-19 pandemic and quarantine on people with SMI or NDD. We will analyse hospital and prescription data over the period 24 months before, and 18 months after, the beginning of the pandemic and the subsequent quarantine. For this cohort, we will examine (1) hospital admissions for both mental and physical health reasons, including for covid-related health, psychiatric emergency and involuntary care; (2)

changes in psychiatric symptoms (measured by all psychotropic medication and diagnostic-specific medication).

The proposed study is guided by the following questions:

(a) do people with SMI/NDD have worse medical outcomes across a range of life-limiting conditions when compared to matched hospital controls with no history of SMI or NDD?

(b) What factors are associated with poor medical outcomes in people with SMI/NDD?

(c) What are the sociodemographic profiles of people with SMI or NDD admitted to hospital with COVID-19?

(d) What changes in prescribed psychotropic medications for the study population have occurred during the COVID-19 pandemic and quarantine?

We hypothesise that prescription rates for psychotropic medication for people with SMI or NDD will increase over the COVID-19 pandemic period (January 2020-March 2021). Additionally, people with SMI or NDD will have different (1) medical treatments, (2) duration of stay and (3) time to mortality than hospital patients without SMI or NDD.