

R034: Mental health, firearm ownership, and risk of death by suicide: a population-wide data linkage study - QUB

Death by suicide is a major public health concern, especially in Northern Ireland (NI), which has the highest suicide rate in the UK. Restricting access to means is a key principle in effective suicide prevention. In the USA, there is clear evidence that access to a firearm increases risk of suicide for firearm owners but there are few equivalent UK studies. Owners of legally held firearms in NI must hold a Firearms Certificate (FAC), a register of which is maintained by the Police Service of NI (PSNI) which can be linked to other administrative data sources to identify FAC holders, their mental health status and suicide risk.

Northern Ireland (NI) with over 150,000 licensed firearms has the highest proportion of firearms per capita in the UK (1 per 12 people compared to 1 per 32 people in GB, and 1 per 26 in Ireland). With around 4% of all suicides in NI due to a firearm (12 out of 328 deaths in 2016)¹ there is a need to understand the mental health and suicide risk of those who have access to a firearm to ensure the safety of the population.

The Police Service of Northern Ireland (PSNI) hold a detailed register of all Firearms Certificate (FAC) holders, however this register tells us little about the mental health status of these individuals. Linking these data to Health and Social Care data will allow for the examination of the mental and cognitive health of FAC holders and linking to death records will allow for the examination of suicide risk.

The proposed project will help inform policy around public safety and suicide prevention.

Specifically the project aims to determine:

- (i) what proportion of FAC holders have significant mental and cognitive ill-health
- (ii) if access to a firearm increases the risk of firearm related death, including suicide
- (iii) if only those FAC holders with poor mental health are at an increased risk of firearm related death, including suicide
- (iv) the rate of presentation of new mental/cognitive health conditions amongst FAC holders in relation to license renewal cycles