

Results The cohort consisted of 535,801 children aged 18 years or less in NI during 2015. Over 1 in 6 (17.6%, $n=94,232$) were previously or currently known to social services. There was a clear stepwise association between level of interaction with social services and mental ill-health. Compared to children never known to social services LAC were nearly 9 times more likely to be in receipt of antidepressants (OR=8.93, 95%CI 7.06, 11.29), 10 times more likely to be in receipt of anxiolytics (OR=10.06 95%CI 7.28, 13.92) and over 40 times more likely to be receipt of antipsychotics (OR=42.59, 95%CI 32.85, 55.23). Likelihood of presenting with self-harm and psychiatric hospital admission were also significantly higher in LAC (OR=24.42, 95%CI 17.16, 34.73 and OR=86.26, 95%CI 42.58, 174.75 respectively).

Conclusion Children known to social services have poorer mental health compared to those not known. The relationship is graded, with prevalence lowest for those never known, higher for children known as CIN, and highest for LAC. Additional analysis is underway exploring variations in mental health based on care pathways and reason known to social services.

OP10

SELF-REPORTED MENTAL HEALTH VERSUS PSYCHOTROPIC MEDICATION RECORD AS A PREDICTOR OF SUICIDE: A RECORD LINKAGE STUDY

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Background Both the rates of self-reported mental ill-health and the number of individuals in receipt of psychotropic medications are increasing across the UK. Research suggests that poor mental health is a major predictor of death by suicide, but measuring individual level mental ill-health can be difficult. Population-wide prescription medication records are available in many countries and could provide useful information on indicators of suicide risk, however, the association between self-reported mental health, medication record and suicide has not been well explored. This study aimed to assess if self-reported mental health, psychotropic medication record, or both in combination better predict risk of death by suicide.

Methods Data from the 2011 Northern Ireland Census on all individuals living in the community aged 18–74 years ($n=1,098,967$) were linked to the Enhanced Prescribing Database (EPD) and death registrations and followed up until end of 2015. Mental health status was ascertained through a single-item self-reported mental health question from the Census and/or a record of psychotropic medication in the EPD. Deaths by suicide were identified using ICD-10 codes. Logistic regression models were used to examine the association between measures of mental health and death by suicide, with adjustment for census-based individual attributes known to be associated with mental ill-health and suicide.

Results A total of 857 out of the 1,098,967 individuals died by suicide during the study period. The proportion who died by suicide was 0.05% in those without mental ill-health, 0.21% in those who self-reported poor mental health, 0.16% in those in receipt of psychotropic

medication, and 0.38% in those with both self-report and psychotropic medication record. In the unadjusted logistic regression model, having both self-report and psychotropic medication record was the strongest predictor of suicide (OR=8.23, 95%CI: 6.97–9.72). Upon adjustment for socio-demographic characteristics and physical health morbidities, having both self-report and psychotropic medication record remained the strongest suicide predictor (OR=6.13, 95%CI: 4.94–7.61), followed by psychotropic medication record only (OR=4.00, 95%CI: 3.28–4.88) and self-report only (OR=2.88, 95%CI: 2.16–3.84).

Conclusion Individuals with both self-reported poor mental health and receipt of psychotropic medication had the highest likelihood of death by suicide. Of the two measures individually, receipt of psychotropic medication was associated with a higher likelihood of suicide mortality compared to self-reported mental health. Understanding which measures are the best indicators of suicide risk is vitally important for the effective targeting of interventions.

OP11

ETHNICITY AS A KEY DRIVER OF SYSTEM-WIDE HEALTH AND CARE SERVICE COSTS IN PATIENTS WITH SERIOUS MENTAL ILLNESS: A LINKED ELECTRONIC HEALTH RECORD COHORT STUDY

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Background Improving care for people with serious mental illness (SMI) is a policy priority in England, yet little is known about service use patterns across the broader health and care system outside of acute and mental health care. We sought to investigate individual- and practice-level features associated with health and care system costs (as a comparable marker of use) for patients with SMI using a system-wide linked patient-level dataset that has been developed in Barking and Dagenham (B&D), with the aim of driving improved inter-organisational working and financial sustainability.

Data This retrospective cohort study includes patients registered and resident in B&D in financial years 2016/17 and 2017/18. GP electronic health records were linked with administrative data from community, acute and mental health Trusts serving the area for both years, and local authority-funded social care records for 2016/17 (with costs imputed for 2017/18). The study population was adults on the SMI Quality and Outcomes Framework register, with comparator groups (1) matched on age, gender, and number of long term conditions (LTCs), and (2) the general adult population. Cost analyses took three forms: descriptive, regression at individual-level (generalised linear model using a Tweedie distribution), and funnel plots at GP practice-level.

Results SMI patients had three-fold greater system costs than matched patients. Increased spending was concentrated in mental health Trust outpatient and social care settings. Increased spending was not observed in primary care and emergency departments. Apart from LTC count, ethnicity was the main driver of spending, particularly within social care. Spending per White British patient per year (£10,181) was almost twice that of Asian or Black patients (£5,442

and £5,505, respectively). Regression analysis demonstrated that this increased spending for White British patients holds after accounting for age, gender, deprivation, LTC count, and primary care network ($p=0.0002$). Funnel plot analyses did not show significant patterns in GP practice-level variability in social care, emergency departments nor mental health service use. There was no clear individual-level relationship between primary care consumption and use of these other services.

Discussion These findings raise questions around ethnicity-based equity of care. Furthermore, they do not support the common narrative around differential access and gate-keeping at a GP practice-level affecting broader system costs. An increased focus on drivers of costs in social care rather than emergency or primary care settings may be needed for patients with SMI. However, the generalisability of these B&D results to the general population has not yet been explored.

OP12

MORTALITY RISK FOLLOWING SELF-HARM IN YOUNG PEOPLE: AN EXPLORATION OF SELF-HARM AND SUICIDE USING THE NORTHERN IRELAND REGISTRY OF SELF-HARM

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Background Suicide is the second leading cause of death in young people worldwide. Self-harm is a recognised predictor of future suicide and is most common in young people under the age of 24 years. The aim of this study was to estimate the risk of mortality following self-harm in adolescents, including death by suicide, and to examine the factors associated with this outcome.

Methods The Northern Ireland Registry of Self-Harm (NIRSH) collects information on all self-harm presentations to all Emergency Departments (ED) in NI. NIRSH data from 2012–2015 was linked to centralised electronic data relating to primary care registration, prescribed medication and death records. Logistic regression was employed to examine the factors associated with increased likelihood of self-harm and Cox regression to estimate mortality risk following self-harm and to examine the factors associated with the greatest risk of mortality.

Results The cohort consisted of all 395,771 individuals aged 10–24 years who were resident in NI on 1st April 2012 followed up until 31st December 2019. During the study 4,513 (1.14%) young people presented with self-harm, 116 (2.6%) of whom died during follow-up with 49% ($n=57$) of those deaths being by suicide. Rates of self-harm were highest in females, those aged 20–24 years ($OR=3.47$, 95% CI 3.23–3.73), and those living in the most deprived areas ($OR=3.10$, 95% CI 2.80–3.42). Most individuals self-harmed via self-poisoning with psychotropic medications (68.6%), followed by self-injury with a sharp object (24.1%). Although only 57 of those who presented with self-harm went on to die by suicide they accounted for 28.8% of all deaths by suicide in this cohort. Those who presented with self-harm were 27 times more likely to die by suicide compared to those who did not present with self-harm after adjustment for age and sex ($HR=27.20$, 95% CI 19.86–37.25).

Conclusion This constitutes the first population-wide study of self-harm and suicide in young people in the UK and provides valuable information to inform suicide prevention strategies. Additional analysis is underway exploring variation in mortality risk based on ED care intervention and will be complete by the time of the conference.

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Wednesday 9 September

Smoking: Cessation Services to Policy

OP13

WE CAN QUIT2 – PRELIMINARY RESULTS OF A PILOT CLUSTER RANDOMISED CONTROLLED TRIAL OF A COMMUNITY-BASED INTERVENTION ON SMOKING CESSATION FOR WOMEN LIVING IN DISADVANTAGED AREAS OF IRELAND

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Background Tobacco use is the leading cause of preventable death worldwide. In Ireland almost 6000 smokers die each year from smoking-related diseases. 'We Can Quit2' (WCQ2) is a pilot pragmatic two-arm, parallel group, cluster randomised trial of a community-based peer-led smoking cessation intervention for women living in disadvantaged areas. The aim is to explore feasibility and acceptability of trial processes including recruitment and retention rates. A future trial will assess the effectiveness on short and medium-term cessation rates.

Methods Four matched pairs of districts (eight clusters) selected by area level of deprivation, geographical proximity, and eligibility for free medical services were randomised to receive either WCQ (behavioural support + access to Nicotine Replacement Therapy (NRT)) delivered over 12 weeks by trained Community Facilitators (CFs) or to a one-to-one smoking cessation service delivered by health professionals from Ireland's Health Service Executive (HSE). Recruitment target: 24–25 women per cluster (97 per arm; 194 in total) in four waves with consent obtained prior to randomisation. Primary outcome: achievement of recruitment target. Secondary outcomes included retention and data completion rates at 12 weeks(w) and 6 months(m) post-quit date and proportion continuously absent from smoking at 12w (primary outcome for a future DT) and at 6m, (self-report +biochemical validation). Acceptability of trial processes and intervention delivery was assessed by interview with participants and community facilitators.