Mental illness, challenging behaviour, and psychotropic drug prescribing in people with intellectual disability: UK population based cohort study

Sheehan, R., Hassiotis, A., Walters, K., Osborn, D., Strydom, A., Horsfall, L.

Presented by:
Tayla McCloud, Rakhi Gupta, Lucy Sutton
Intellectual Disability (ID)

- What is it?
  - Also known as learning disabilities
  - A significant deficit in cognitive and adaptive functioning
  - Onset during the developmental period (DSM-5; APA, 2013)
  - Causes are often unknown, and differ widely between cases.
Intellectual Disability (ID)

- Why is it important?
  - Around 1.4 million people in the UK have some form of learning disability
  - 210,000 have a severe learning disability
  - 80% of these are not known to services (Dept. of Health, 2001).
  - Prevalence of mental illness: 28%, vs. 23% in the general population (Department of Health, 2001; Singleton et al., 2003)
  - Other difficulties: atypical presentation, communication difficulties and problems accessing services.
Challenging behaviour (CB)

• What is it?
  – Behaviour of an intensity, frequency, or duration that threatens the physical safety of the person or others, or which restricts access to community facilities for the person or others (Emerson et al., 1995).
Challenging behaviour (CB)

- Management
  - Personalised
  - Behavioural strategies - reinforcement schedules, carer training, modification of environmental triggers (NICE, 2015)
  - Medication, restraint, supported accommodation.

- In those with ID
  - Around 12.5% show CB (Smiley et al., 2005).
  - Mental illness, physical illness, stress, need for attention
  - More difficult to interpret the more severe the ID.
Antipsychotics

• What are they?
  – Drugs which aim to treat psychotic disorders
  – Block dopamine receptors
  
  - Require regular monitoring as a result of side effect profile.

• 30-50% of all psychotropics prescribed for those with ID are antipsychotics (Tsouris, 2010)

• Clients report negative cognitive and emotional effects, mostly owing to side effect profile (Moritz et al., 2013).
Antipsychotics and CB

• Challenging behaviour
  – Can be used to manage aggressive behaviour associated with psychotic features (NICE, 2015)
  – Little to no evidence of efficacy in managing CB independent of psychotic symptoms (Brylewski et al., 2004).

• Recommended by NICE for CB in ID if:
  – other CB interventions fail
  – treatment for any coexisting health problems do not produce improvements
  – the risk to the person or others is severe.
Why does this matter?

- **Quality of life** for those with ID
  - Short-term side effects
  - Serious long-term side effects
  - Effects on learning and cognitive abilities (Aman et al., 1984).

- **Diagnostic overshadowing**
  - Prevalence of psychosis is estimated at around 3% (Smiley et al., 2005)
  - Other health problems left untreated.
Why does this matter?

- Evidence-based medicine
  - Lack of evidence of **efficacy** in CB in ID (Brylewski et al., 2004)
  - Lack of evidence of **long-term effects** of antipsychotic prescription in those with ID
  - RCT evidence: no significant benefit over placebo (Tyrer et al., 2008)
Objective of the Study

- the incidence of recorded mental illness & CB in people with ID in UK primary care
- to explore the prescription of psychotropic drugs
Methodology

• Cohort study: 1999 to 2013
• Datasource: The Health Improvement Network (THIN)
• Primary care database- more than 3.7 million active patients in 571 general practices
• GP hospital based specialists inf. stored in computerised system as Read codes (standardised clinical terms based on a hierarchical system)
• Contains symptoms, diagnoses, referrals to secondary care, record of treatments and of prescriptions, patients’ demographic information
Inclusion Criteria
Identified by QOF (quality and outcomes framework) ID codes and Read codes signalling ID.
Age 18+

Exclusion Criteria
people who contributed less than 12 months’ data to THIN
Outcomes of interest

- severe mental illness - schizophrenia, bipolar disorder, other psychosis, depression (including mixed depression-anxiety), anxiety
- Dementia, autism, epilepsy

- the final list - more than 200 codes refined by 4 clinical academics (3 psychiatrists specialising in ID & 1 GP)
- severity of intellectual disability

- Antipsychotics
- antidepressants
- mood stabilisers
- anxiolytics
- hypnotics (including benzodiazepines)
- antidementia drugs
- drugs for ADHD
Statistic Analysis

Multivariable mixed Poisson regression
- time trends of MI & PD
- incidence rate ratios
- factors associated with CB & antipsychotic drugs
- multiplicative interactions between sex, CB, and prescription of antipsychotics

Wald tests
- significance for categorical variables and categorical interaction terms.
- P value of 0.05 to be statistically significant (two tailed)
Results

• 33,016 people met the inclusion criteria (58% male)
• Average age at study entry: 36.3 years
• Median follow-up time was 5.5 (interquartile range 2.2-11.5) years
Percentage Description

- Mental Illness: 21% at study entry, 34% by the end of the study
- Severe Mental Illness: 7% at study entry, 9% by the end of the study
- Challenging Behavior: 25% at study entry, 36% by the end of the study
- Psychotropic Drugs: 49% at study entry, 63% by the end of the study
New recordings of CB significantly more common in people

- older than 50 years
- with mental illness (including severe mental illness, depression, and anxiety), autism, dementia, and epilepsy

Positive association b/w CB and degree of ID
Time trends in new prescriptions of psychotropic drugs in adults with intellectual disability in UK primary care, 1999-2013
Relations between recorded severe mental illness, CB, and prescription of antipsychotic drugs in adults with ID

- 71% - no record of severe mental illness
- 26% - no severe mental illness, No CB

Diagram shows the distribution of individuals with and without severe mental illness, and those prescribed antipsychotic drugs.
Conclusions

- Prescription of psychotropic drugs without any record of CB & MI
- Antipsychotics- often prescribed for CB
Strengths

• The THIN database is a record of real life clinical practice in UK primary care, and therefore provides an accurate insight into contemporary care.

• THIN is representative of the UK population in terms of demographics and crude prevalence of major conditions (Blak et al, 2011).

• Provides routinely collected data for people with ID, who may otherwise be difficult to study.
Limitations

Sample
• May be over-representative of higher socioeconomic groups or people with more engaged carers
• Younger patients were excluded (<18 years old)
• Mild cases of ID may have been missed
• No control group of people without ID
Measures

Intellectual disability
• doesn’t include diagnoses that may have been entered in free text on the computer system
• Certain characteristics of ID (e.g. severity) are not always well recorded

Neuropsychiatric disorders
• Restricted mental illness code lists – exclusion of categories such as personality disorder and substance misuse
Measures

Challenging behaviour
• challenging behaviour code list has not been externally validated

Psychotropic drugs
• only recorded prescriptions given by GPs
• cannot establish with certainty the reason for prescribing medication
Clinical Implications

Implications for the individual and for healthcare systems

• Adverse side effects
• Risk of drug-drug interactions
• Difficulty with patients who lack the capacity to consent to drug treatment

- Therefore it is important that family/carers are provided with adequate information regarding the use of psychotropic drugs and availability of other means of treatment and support

• Burden of avoidable costs to healthcare services in terms of supplying the drugs and additional monitoring of patients
Future research and areas of focus

Qualitative research should be conducted to address the following:
1. Why most antipsychotics are prescribed to people without a record of severe mental illness
2. Why so many people with challenging behaviour receive antipsychotics.

Additional research should aim to:
1. Expand the evidence base for the use of drug treatment in people with ID
2. Improve accessibility and development of alternative strategies to managing challenging behaviour
Future research and areas of focus

What else can be done?

• Ensure carers and patients are educated about particular drug treatments and the availability of alternative interventions
• Try to improve the accuracy and time taken to diagnose mental illness in people with ID
• Conduct medicine optimization programs for people with ID who are taking these psychotropic drugs
  - Improve their outcomes
  - Take their medication correctly
  - Avoid taking unnecessary medicines
  - Improve medicine safety
  - Consider opportunities for lifestyle changes and nonmedical therapies


