Assessment of Cardiovascular Disease using the QRISK-3 Assessment Tool within an Enhanced Physical Health Clinic for People with Intellectual Disabilities and Mental Health Difficulties

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Overview

- **Background**

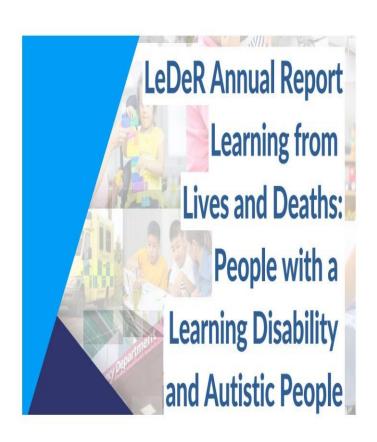- **Enhanced Physical Health Clinic**

- **Results**

- **Conclusions**

Background

People with intellectual disabilities (ID), particularly those with co-existing mental health difficulties, experience considerable health inequalities; reduced life expectancy

PWLD more comorbid disorders with a median of eleven compared with five in the general population

People with intellectual disabilities the prevalence of cardiovascular diseases being 14% higher than the general population

Background

LeDeR Annual Report Learning from Lives and Deaths: People with a Learning Disability and Autistic People

People with learning disabilities likely to die from an avoidable cause twice more likely as people in the general population

According to the LeDeR report in 2023, more than **1 in 4 of avoidable deaths in people with intellectual disabilitie**s are linked to
cardiovascular conditions.

Avoidable death

- For people with an intellectual disability, cardiovascular conditions are the **highest** cause of avoidable deaths

  - Preventable death that can be mainly avoided through effective public health and primary prevention interventions (that is, before the onset of diseases or injuries, to reduce incidence).
  - Treatable : can be avoided through timely and effective healthcare interventions.

Background

Factors which influence cardiovascular health:

1) **health behaviours** (diet, physical activity, sleep, nicotine exposures)

2) **health factors** (blood pressure, cholesterol, body mass index, blood glucose**).**

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People with intellectual disability may have health behaviours that increase the risk of cardiovascular disease

They are known to have more health problems, such as diabetes, high cholesterol, and obesity

- People with intellectual disabilities often face an array of co-occurring mental health conditions, such as depressive disorder, bipolar disorder, anxiety disorders and psychotic illnesses.

- People with intellectual disability are more likely to be prescribed psychotropic medications for psychiatric conditions

- Psychotropic medication can contribute to cardiovascular disease, such as weight gain and metabolic syndrome (a combination of conditions that is associated with high blood sugar, increased blood pressure, abnormal cholesterol or triglyceride levels and excess fat around the waist

Background – Risk Predictor Tools

Risk prediction tools are the recommended guidelines for initiating statin therapy to prevent cardiovascular disease in people whose predicted risk is beyond a specific threshold.

Presently in the UK and Wales, the National Institute of Health and Care Excellence (NICE) recommends the QRISK3 tool to predict cardiovascular disease risk.

The tool is a validated risk-stratification instrument, which calculates a person's risk of developing a heart attack or stroke over the next 10 years.

Enhanced Physical Health Clinic

At present, the monitoring of physical health conditions related to mental health difficulties or use of psychotropic medication are carried out in primary care

Novel physical health monitoring clinic

East of England (HPFT)

Service users who are currently open to a secondary care intellectual disability team
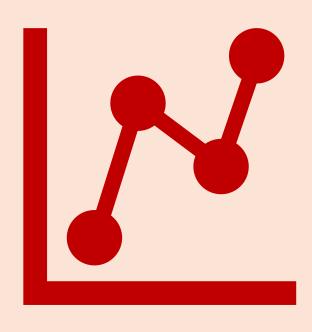
On psychotropic medications

Aims of the project

This project aimed to evaluate the use of the QRISK-3 tool in an Enhanced Physical Health Clinic (EPHC) for people with intellectual disabilities and prescribed antipsyhotic medication

To improve the physical health outcomes by supporting patients to uptake eligible screening and appropriate management options

EPHC

- Psychotropic medication side effects and cardiometabolic/cardiovascular risks monitoring:
  - Weight, Body Mass Index (BMI) and waist circumference.
  - Pulse and blood pressure monitoring
- Blood lipids, HbA1c, 12 Lead ECG
- Calculation of QRisk3
- Psychoeducation provided with easy read leaflets for medications, diet ,lifestyle, sleep, smoking & easy read action plan
- Proactive individual health facilitation, referral to GP and sign posting
- Reasonable Adjustments

Analysis

The QRISK3-2018 risk calculator was used to estimate risk of cardiovascular disease. It is a validated risk-stratification tool, calculating the 10-year risk of developing a heart attack or stroke.

As per criteria of the QRISK3 calculator, patients aged 25 – 84 were included. Patients with a diagnosis of stroke/transient ischemic attack or ischaemic heart disease were excluded.

.A QRISK3 score of more than 10% indicates that the patient would require medical attention.

Comparisons between patients with a QRISK3 score of more than 10%, and those without, conducted using X tests for sex, and the incidence of certain physical health and developmental/psychiatric comorbidities.

Participants and Setting

n = 453

2021-2023

Results

A total of 358 patients had their QRISK3 scores recorded within the sample

Demographics:

- Females 142 (39%)
- Males 216 (61%)

Level of ID

- Mild 158 (48%)
- Moderate 96 (29%)
- Severe 74 (23%)

Results

Among the sample, 92 patients (20%) had a QRISK3 score greater than 10%.

No significant difference was observed in QRISK3 scores between male and female patients.

Results

Comparing these groups by age, the group with Q-Risk scores of 10% or higher were significantly older on average (t [354] = 16.03, $p < 0.0001$).

Sample	n	Mean Age	SD age
Q-Risk <10%	266	42.33	11.84
Q-Risk >10%	90	63.68	7.51

Relationship between psychiatric conditions and Q-Risk

There was a significant difference between groups for Schizophrenia/psychosis

Sample	n	Mean Q-Risk	SD Q-Risk
Schiz/Psych	53	0.110	0.091
No Schiz/Psych	305	0.066	0.077

Results

Sample	n	Mean Q-Risk	SD Q-Risk
Bipolar	45	0.109	0.109
No Bipolar	313	0.067	0.074

Relationship between anti-psychotic medication and Q-Risk

Sample	n	Mean Q-Risk	SD Q-Risk
Antipsychotic use	276	0.08	0.0856
Antipsychotic: N	82	0.046	0.0534

Relationship between physical health measures and Q-Risk: *Diabetes*

Sample	n	Mean Q-Risk	SD Q-Risk
Diabetes	31	0.137	0.075
No Diabetes	327	0.066	0.078

Relationship between physical health measures and Q-Risk: *Hypertension*

Sample	n	Mean Q-Risk	SD Q-Risk
Hypertension	31	0.142	0.111
No Hypertension	327	0.065	0.073

Conclusion

- There is an increased risk of cardiovascular disease among people with intellectual disabilities

- Considering the high risk of avoidable deaths in people with ID, it is important to identify the risk factors

- The QRISK3 tool highlighted a considerable number of patients had elevated CVD risk in this ID study population

- The clinic was an attempt to address significant health barriers experienced by this population

- Increased routine CVD risk assessment and management should be considered as another measure to reduce morbidity and mortality

Thank you for your time

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