

3. Monitoring Cardiovascular disease risk in people with serious mental illness (SMI) in inpatient mental health settings

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Serious mental illness (SMI) is associated with mortality rates up to three times higher than those in the general population. Severe mental disorders (such as schizophrenia, psychotic depression, bipolar and schizoaffective disorders) are debilitating and have complex symptoms (i.e. hallucinations, delusions, social dysfunction) which can be life-limiting. While increased suicide rates contribute to the high mortality rates in SMI), most of the increased mortality is due to natural causes, especially cardiovascular disease (CVD) and other chronic diseases (diabetes, respiratory-related complications, cancers). Life expectancy in SMI has been reported to be reduced by up to 25 years than in the general population.

Cardiovascular risk is greatly increased in people with serious mental illness with cardiovascular disease contributing to increased mortality and mortality rates in this patient population than other physical conditions. People with SMI are less likely to be offered physical health monitoring checks for cholesterol, glucose checks, blood pressure, pulse, weight measures and others. This focus of my Dprof research project is to explore the practice of mental health nurses in the monitoring of CVD risk factors in people with SMI in inpatient settings and their role in improving physical health needs of mental health service users.

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Notes on contributor

Herbert Mwebe

Herbert is a senior lecturer in mental health in the Department of Mental and Social work at Middlesex University. Herbert has teaching and research interest in improving physical health needs in people with serious mental illness and psychopharmacological interventions in adult mental health settings. The aim of Herbert's current doctoral research project is to explore the practice of mental health nurses in the management of CVD risk in people with serious mental illness.

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CARDIOMETABOLIC RISK MONITORING IN AN INPATIENT PSYCHIATRIC SETTING: A SECONDARY DATA ANALYSIS

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1. BACKGROUND

Poor physical health and multi-morbidity is common in SMI population. While preventative approaches (weight monitoring, smoking cessation, age appropriate screening interventions) in the developed countries has helped to lower CVD mortality/risk in the general public, in people with SMI the screening/monitoring of risk factors for metabolic disease and CVD is not always adequately and regularly done. The excess of death (50%>) in SMI is due to cardiovascular disease (CVD) and other physical conditions including diabetes, respiratory disorders. Mental health nurses are the largest frontline staff group and play a vital role in facilitating timely and opportunistic screening and monitoring activities to address cardiometabolic risk in SMI.

2. OBJECTIVES

- Explore MHNs' practice in the management of CVD risk in people with SMI
- To undertake a secondary data survey analysis of healthcare records allowing a general exploration of the practice regarding the recording of cardiometabolic risk in inpatients.
- Explore barriers to the management of CVD risk and make recommendations in relation to CVD risk management in people with SMI.

3. DATA SOURCES

A structured Ms Excel extraction data tool informed by best practice guidance (RCPNHSE,CQC,LESTER TOOL, Accreditation for Inpatient Mental Health services (AIMS) was developed and used to extract electronic patient data on screening and monitoring of CVD risk factors across 10 inpatient psychiatric wards. A target sample of 245 electronic records from 10 inpatient wards of patients discharged between 25.8.2018-13.2.2019 with a length of inpatient stay> 40 days was examined. Simple random sampling (Ms excel random number generator) was used to select a final sample of 120 electronic records from a list of 245 RIO numbers based on above inclusion criteria and patients;

- Aged between 18 -80 years
- Currently taking psychotropic medication
- With a diagnosis of one of the following conditions psychosis, paranoid schizophrenia, major depression, dementia, bipolar disorder, mania, schizoaffective disorder & eating disorder (ICD codes(F29X;F200;F600;F312;F32.3;F323;F001;F259;F220;F42.9;F50.01/2;F31.2;F33.3;F323;F332;F23;F60.3;F239)

4. STUDY ELIGIBILITY & ANALYSIS

- All of the 120 records were subjected to a manual search to examine the quality/frequency of recording in terms of screening at baseline within 24 hours, monitoring review within 3 months of admission and evidence of follow-up interventions of CVD risk parameters (blood pressure, smoking and alcohol checks, weight/BMI, waist circumference (WC) (lipid and glycemic checks (baseline within 7 days).
- Descriptive analysis was performed in MS Excel.

5. STUDY RESULTS

Smoking

- 38%** (46 of the 120 patients) not assessed @ baseline; **61%** completed
- Improved recording & monitoring review evident within 3 months of admission (**83%**)
- 55%** recorded current smokers
- Only **17%** offered intervention; No intervention (**32%**)

Alcohol

- 37%** not assessed @ baseline; **62%** completed
- Improved recording & monitoring review evident within 3 months of admission (**81%**)
- 54%** recorded current users of alcohol
- 33%** (problematic use) but only **10%** received intervention; No intervention (**23%**)

BMI & Waist circumference (WC)

- 26%** not assessed @ baseline;
- Improved recording & monitoring review of BMI evident within 3 months (**98%**)
- 82%** did not have a consistent weekly weight recording completed.
- 48%** recorded with a BMI>25kgm2; only **26%** Vs **20%** were offered intervention
- 95%** did not have a recorded **WC** in 3 months of admission;
- 44%** of patients with BMI>25kgm2 did not have a recorded **WC**

Blood Pressure

- 10%** not assessed @ baseline; **86%** completed
- Improved recording & monitoring review evident within 3 months of admission (**100%**)
- 86%** of patients had SBP<140
- 14%** of patients had SBP>140mmhg
- 13%** of patients with SBP>140mmhg were offered an intervention-

Blood lipids

- 41%** not assessed @ baseline; **36%** completed
- Improved recording & monitoring review evident within 3 months of admission -**76%**
- 12** patients had abnormal **cholesterol** levels
- **11** of the **12** patients were offered intervention

Blood glucose

- 23%** not assessed @ baseline; **16%** refused; **61%** completed
- Improved recording & monitoring review evident within 3 months of admission -(**82%**) however ;
- 15%** of patients did not have a recorded glucose check at 3 months review
- 18%** of patients with diabetes/abnormal glucose levels were offered intervention
- 16%** not recorded/refused

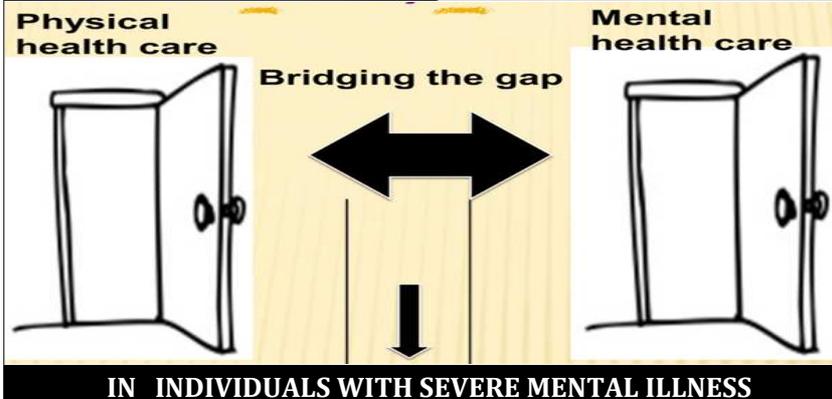
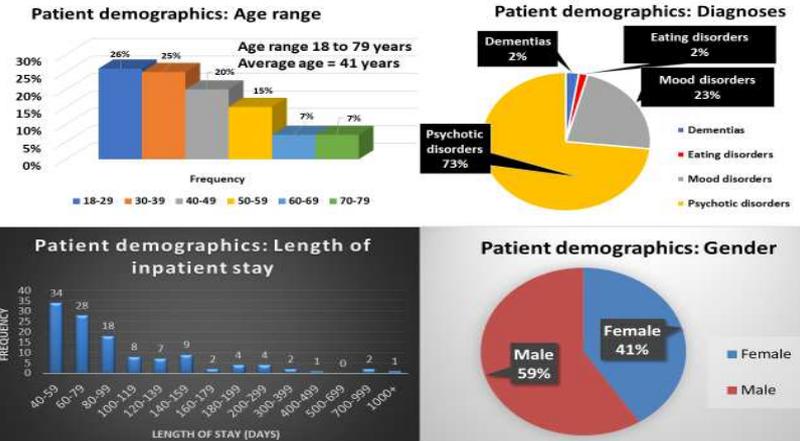
ECG monitoring

- 95%** had an ECG done in 3 month of admission; **3%** not done; **2%** refused
- All pts (**6%**) with a recorded abnormal ECGs had an intervention
- 25%** of pts over 50s had a recorded ECG completed
- 70%** of pts under 50s had a recorded ECG completed
- 38%** of female and Male (**58%**) pts had a recorded ECG

6. DEMOGRAPHICS

Cardiovascular risk monitoring in SMI Retrospective analysis of 120 inpatient electronic records (2018-19)

Demographics



7. DISCUSSION

The Royal College of Psychiatrists and NICE guidelines (and Lester UK adaptive version tool kit) provides guidance for clinicians relating to assessment and monitoring of cardiometabolic parameters in individuals with SMI taking psychotropics. As a minimum, the guidance recommends that individuals with SMI should have a physical health assessment at baseline and at least once after 3 months including CVD risk management (and personal history of CVD. There was an average of 61% compliance of the documentation of data on all individual parameters at baseline and monitoring review at least once (86% compliance) across the parameters (smoking, alcohol, BMI, BP, Glucose and lipid, ECG) checks within 3 months of admission. 82% of the inpatients did not have a weekly weight record completed in the first six weeks. 95% of the inpatients did not have a recorded (WC) within 3 months of admission and 44% of pts with BMI>25kgm2 did not have a recorded WC. Lifestyle factors (smoking, unhealthy diets, alcohol use) need to be addressed collaboratively with patients, follow-up interventions following screening of unhealthy lifestyle behaviour was not always evident in the nurse-patient interactions. All of these modifiable risk factors most commonly reported in SMI are associated with physical medical complications e.g cancers, liver disease, obesity, mental illness, diabetes, hypertension. Mental health nurses and other mental health professionals should actively take a lead role to educate patients, monitor side effects of medications and monitor physical health and identify individual risk factors. Staff should be encouraged and prompted to use the Lester UK adaption tool to screen and monitor physical health risk parameters at baseline and during treatment

8. LIMITATIONS

Clinical data was often poorly recorded, dedicated physical health forms on RIO(Healthcare record systems) were often empty or partially completed. Nearly 95% of the data captured was done manually and extracted from the progress notes view on the RIO system. This presented challenges as the data was not centralised and rather cumbersome to filter from copious amount of patients notes which were not relevant to the study objectives.

9. CONCLUSIONS

The current practice of assessment and monitoring for CVD risk in the study setting appear to be in line with current guidance and standards of physical health monitoring of individuals with SMI. However, as per our findings, further improvement in relation to monitoring of all the parameters is still needed. At the time of the study, the NHS site where this study took place was undertaking a review of physical care practices including development of more robust and responsive physical care electronic recording systems to improve recording across inpatient and community setting. This is a much welcome intervention by the Trust because informal feedback from inpatient staff revealed various challenges staff experienced when using existing recording systems in place.

