Diabetes Care in an Acute Psychiatric Inpatient Setting –

A Logic Model For Service Delivery

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Introduction

People with severe mental illness have a shortened life expectancy [1,2,3], with cardiovascular disease the main cause. [4] Diabetes is a major risk factor for this. [5] The aim of the project was to develop a logic model that illustrates the steps needed to develop an effective intervention for diabetes management in a psychiatric inpatient setting, as the point of admission to a psychiatric inpatient unit may present as an opportune time for improving diabetes care.

Methods

We undertook (i) a survey of diabetes care among inpatients in a Mental Health Trust in England, comparing care to the National Health Service (NHS) Core National Diabetes Standards [6] (ii) interviews with key clinical staff to understand challenges in delivering good diabetes care (iii) a review of current UK guidance on standards for diabetes care. Based on the findings, we developed an initial logic model for service delivery.

Results

Among 163 inpatient records reviewed, 44 (27%) had a diagnosis of diabetes, and only 3 (7%) had all three National Institute for Health and Care Excellence (NICE) treatment targets of HbA1c, cholesterol and blood pressure within range. Staff identified needs for regular training, better understanding of roles in shared care, and good quality IT support. We developed a logic model that illustrates the steps needed to develop an effective intervention for diabetes management in a psychiatric inpatient setting.

The Logic Model

Situation

Increased risk of diabetes in those with serious mental illness (SMI), due to medication and lifestyle factors. Increased risk of complications and hospitlitisation in people with SMI.

Problems relating to diabetes care in a psychiatric inpatient setting arise from issues in knowledge, attitude and cultures.

Poorer self-management of diabetes due to factors such as SMI and access to healthcare resources.

Parties with an interest in improved psychiatric inpatient diabetes care include the patients, clinicians with an immediate interest due to duty of care, patients with an intermediate interest due to the risks of poorly managed diabetes, and the healthcare trusts with a long term interest due to the impact of multi-morbidity on care.

Inputs

Physical health
-Diabetic In-reach services
-Follow-up on discharge

Staff training
-Improved knowledge
- Skills training
-Improved understanding of role relating to diabetes care

Routine care Processes
-Standardises protocols for delivering and recording care
-Communication between primary care, secondary care and mental health services
-Equipment- blood testing, physical observations, BMI, ketone monitoring
-Software- documentation, reminders, screening and follow-up

Ward management guidance
-Assessment and monitoring
-Management of at-risk patients
-Referral pathways

Out of hours care
-Assessment and monitoring
-Out of hours care pathways

Activities

Research
-Defining the problem by reviewing current literature and meeting with parties with an interest

Training
-Increasing knowledge and understanding of identification and management of diabetes in SMI
-Increasing staff ability to empower patients in self-management via increased knowledge and understanding

Assessment
-Initial assessment
-Monitoring of parameters and risk factors throughout admission
-Monitoring to include: HbA1c, glucose, lipids, BMI, blood pressure, complications (e.g. vascular, eye screening)

Shared care
-Registered with a GP
-Registered with a dentist
-Healthy living programmes
-Diabetic eye screening

Short-Term Outputs

Knowledge and skills
Staff knowledge and skills improved with training and guidance

Role in care
Staff role and expectations clarified with training and guidance

Identifying at-risk
Improved identification and management of patients at-risk of diabetes due to improved knowledge, guidance and software support

Improved inpatient diabetes care
- Better knowledge and cultures
- Referrals to in-reach services and dietetics
-Medication review to reduce risk of sedation and weight gain
-Improved ward environment
-Access to physical activity
-Access to improved diet

Supported self- management
-Improved understanding of diabetes care
- Implementation of healthy living strategies
-Patient- led goal setting

Shared care
- Referrals to in-reach services and dietetics
- Shared care with in-reach service and wider services
- Improved communication between health care providers

Medium-Term Outputs

Knowledge, attitudes and beliefs
Improved across all parties with an interest

Primary Prevention
-Identification of at-risk patients
-Optimisation of care at this time
-On-going medication and risk factor review

Improved diabetes care
-Appropriate outpatient follow-up on discharge
-Improved participation in diabetes related screening
-Comprehensive shared care record

Self-management
-Patient's initiating and sustain change in diabetes control, medication adherence and healthy living via improved knowledge and skills
-On-going practical support via service accessibility and continuity of care
-Sharing of treatment issues and effectiveness to help improve perceived control

Identifying barriers
-Improved integration of both in-reach and care at discharge
-Reviewing training and guidance to ensure it remains up to date and effective
-Reviewing software

Long-Term Outputs

Optimised diabetes care in a psychiatric inpatient setting, including improved glycaemic control, cardiovascular risk reduction and reduced rate of complications.

Appropriate planning and utilisation of diabetes follow-up and screening on discharge from a psychiatric inpatient setting

Reduction in the inequalities of care for those with co-morbid diabetes and SMI

Improved quality of life in those with co-morbid diabetes and SMI

Well-integrated mental health and diabetes care with improved communication between services

Discussion

The results of the survey demonstrate a need for better diabetes care in the inpatient psychiatric setting. The problem in care is likely to include patient factors such as understanding of disease and need for treatment, adherence to treatment and mental state alongside shared care and referral pathways. Key themes of the logic model include developing staff training to help improve knowledge, skills and understanding of roles within mental health professionals, as well as cohesive shared care between medical specialties and services and identifying barriers to good care in order to achieve longer-term outputs.

Conclusion

Admission to a psychiatric inpatient setting provides an opportunity in which diabetes care may be optimised. The quality and understanding of diabetes care will need to be enhanced if this opportunity is to be exploited.

References

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