Aims. To compare people with diabetes developing severe mental illness (SMI) to those with diabetes alone with respect to risk status, diabetes care receipt, and diabetes-relevant outcomes in primary care.

Methods. Data from mental health care (Clinical Record Interactive Search; CRIS) linked to primary care (Lambeth DataNet; LDN) were used. From patients with a type 2 diabetes mellitus (T2DM) diagnosis in primary care, those with a new SMI diagnosis were matched (by age, gender, and practice) with up to five randomly selected controls. Mixed models were used to estimate associations with trajectories of recorded HbA1c levels; Poisson regression models compared total and cardiovascular comorbidity levels and number of diabetes complications; linear regression models compared BMI and total cholesterol levels; conditional logistic regression models investigated microalbuminuria, receipt of a foot or retinal examination, use of statins and receipt of insulin; Cox proportional hazards were used to model incident microvascular and macrovascular events, foot morbidity and mortality.

Results. In a cohort of 693 cases with SMI (122 bipolar disorder, 571 schizophrenia and related) and T2DM compared to 3366 controls, all-cause mortality was increased substantially in the cohort with SMI (adjusted hazard ratio 4.52, 95% CI 3.73–5.47; for bipolar 5.59, 3.37–9.28; for schizophrenia 4.42, 3.60–5.44). However, for all the other outcome comparisons, the only significant findings were of reduced foot examination (adjusted odds ratio 0.75, 0.54–0.98) and reduced retinal screening (0.77, 0.61–0.96).

Conclusion. Higher mortality suggests increased risk of adverse outcomes for people with pre-existing T2DM who develop SMI, and reduced foot/retinal examinations suggest disadvantaged healthcare receipt. However, other potential explanations for the mortality difference could not be identified from the outcomes analysed, so further investigation is needed into underlying causal pathways.

Providing the Right Support at the Right Time for People With Learning Disabilities: A Mixed-Methods Study to Identify Change Goals for a Demand, Capacity and Flow Quality Improvement Project

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Aims. 1. To evaluate demand, capacity and flow of an integrated community learning disability service in a peri- and post-COVID-19 pandemic setting. 2. To improve flow of a community learning disability service. 3. To improve staff and service user satisfaction by engaging them and identifying common priorities.

Methods. We collected demand and capacity data of all disciplines in a community learning disability service for 2021–2022. We carried out focus groups with service users and their carers (N = 5) and surveyed them with a questionnaire consisting of 6 quantitative and 2 qualitative questions (N = 63), investigating the impact of waiting times on service user experience.
We surveyed staff from all disciplines \((N = 20)\) with a questionnaire consisting of 3 qualitative questions, to identify their views on waiting times and areas to optimise.

We performed thematic analysis on all qualitative responses. We analysed quantitative data with descriptive statistics. Results. From 2021–22, the number of accepted referrals to individual disciplines increased: for example referrals to psychiatry increased by 51.6% and referrals to OT increased by 32%.

With regard to flow, the ratio of discharges to accepted referrals in the psychiatry discipline decreased from 1.51 to 0.61.

A significant proportion of service users reported waiting months (31%) or years (16%) to be seen by the learning disability team. 28% of service users reported additional problems while waiting to be seen. 31% were unaware whether they were on a waiting list or not. Quantitative data showed average waiting times for psychiatry services did not change from 2021–2022 (23.1 and 23.3 days respectively).

Thematic analysis from service users’ responses revealed an anxiety about needs not being met; a feeling of problems deteriorating while waiting; and communication issues.

Staff responses revealed desires to intervene sooner to prevent unnecessary deteriorations; and to increase team working between disciplines.

Conclusion. Quantitative data analysis suggests a greatly increased demand for our service following the COVID-19 pandemic.

Our thematic analysis identifies concern of deterioration secondary to prolonged waiting times. It also highlights that communication could be improved.

As a result of this mixed-methods approach, the following change ideas were generated and are now being tested:

1. Improve communication with patients on waiting lists by testing an accessible customisable letter.
2. Organise more joint assessments and reviews of service users with multiple disciplines.
3. Short-term allocation of more urgent casework via a new integrated health and social care duty system.

Abstracts were reviewed by the RCPsych Academic Faculty rather than by the standard BJPsych Open peer review process and should not be quoted as peer-reviewed by BJPsych Open in any subsequent publication.

A Peer-Supported, Recovery-Focused Illness Management Programme for People With Early Psychosis

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Aims. To examine the effects of a peer-supported recovery-focused self-management of Psychosis (PRSP) modified from the Crisis-resolution-team Optimisation and Relapse Prevention (CORE) programme (Johnson et al. 2018) for psychotic patients’ recovery, mental state, problem solving ability and other patient outcomes over 18 months follow-up, compared with either a psychoeducation/treatment-as-usual group) by matching with computerized random numbers. After four-month interventions, the patient outcomes were measured at immediately, 9 months and 18 months post-intervention, and analysed on intention-to-treat basis using Generalised Estimating Equation test.

Results. Significant interaction (Group \(\times\) Time) treatment effects of the PRSP were found on six outcomes (recovery, psychotic symptoms, functioning, problem-solving, and service satisfaction) between three groups at post-test, Wald \(\chi^2 = 7.05–21.87, p = 0.02–0.001\), with moderate to large effect sizes (\(n2\) of 0.12–0.24), compared to treatment-as-usual. Level of recovery, problem-solving and service satisfaction of the PRSP were also significantly greater improved than psychoeducation group at 9 and 18 months follow-ups with moderate effect sizes (0.07–0.10).

Conclusion. The findings can provide evidence about the long-term effectiveness of the peer-facilitated, recovery-based self-management programme in early psychosis on improving patients’ recovery and mental condition, functioning, and service satisfaction. Self-learning of illness management through effective problem-solving strategies, together with peer-support, are increasingly useful in recovery-focused intervention for early psychosis in views of inadequate healthcare resources/staffs.

Effects of Transauricular Vagus Nerve Stimulation on Heart Rate Variability: Wearable Sensor Data in Healthy Volunteers

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Aims. Surgically implanted vagus nerve stimulation (VNS) is a recognised treatment for depression. The vagus nerve can also be stimulated non-invasively via its auricular branch, using trans-auricular vagus nerve stimulation (taVNS). Heart rate variability (HRV) is a putative biomarker of autonomic nervous system (ANS) engagement. We aimed to test the impact of taVNS on the ANS of healthy volunteers by measuring HRV using a double-blind, sham-controlled, longitudinal design to acquire data over 7 days using wearable cardiac sensors.

Methods. taVNS was delivered to the left ear of healthy volunteers using a transcutaneous electrical nerve stimulation (TENS) device via a custom clip electrode (developed at Newcastle University). All participants were stimulated at 10 Hz, with pulse widths of 300 ms and variable current outputs, depending on perceptual thresholds. We delivered double-blinded active and sham taVNS for hour-long periods, in the morning and