

participants with BD, with patients reporting them to be supportive and only mildly intrusive.

**Conclusion.** Our preliminary analysis suggests that digital phenotyping of social behaviour may be acceptable and tolerable to participants with Bipolar Disorder. In an increasingly digital world, digital phenotyping methods of social behaviour may assist physicians with clinical assessment and prediction of clinical outcomes including relapse. Future analyses will assess the reliability and validity of the data that such methods yield, and their potential therapeutic value.

### What Do Secure Care Stakeholders Want From the Forensic MDT? a Qualitative Study With Service Users, Carers, and Nurses

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**Aims.** Clinical teams oversee the care of patients within secure psychiatric inpatient settings. They are made up of a number of professions, including psychiatrists, psychologists, occupational therapists, social workers and nurses. The effective collaboration of the different members of the clinical team is vital for its functioning. However, so is the team's interface with other key stakeholder groups, namely nursing teams, service users and carers. Understanding the needs and priorities of these groups regarding their relationships with the clinical team is also important to recognise and in the provision of good quality care. This study aims to understand the experiences, priorities and needs of stakeholder groups in their relationship with the clinical team. Gaining feedback from multiple sources (service users, carers, nurses) will help facilitate functioning of the clinical team in the delivery of excellent care to service users.

**Methods.** Ethical approval was granted by the host NHS trust. Between October 2019 and October 2021, three focus groups were conducted using a semi-structured interview to gather responses from carers, nurses and service users (6 participants in each group) respectively. The interviews were recorded and transcribed. Thematic analysis was used to code each transcript and themes were drawn from the coded data.

**Results.** Dominant themes emerged from the three data sets. Consistent themes between groups included communication, hierarchy/power and representation. There were also differences in themes identified, with the carer group bringing the theme of education/ knowledge, and nursing group raising the value of human relationships, including compassion. The theme of transparency emerged strongly for the service user group.

**Conclusion.** This study offers an interesting perspective on what distinct stakeholder groups want and value in their relationship with the clinical team. Gaining feedback from multiple sources (service users, carers, nurses and members of the MDT) can better inform a team about its functioning and help improve performance. Developing a tool to aid the systematic collection of multi-source feedback is the next step of this

project, facilitating the voices of key stakeholder groups to be heard.

### Derivation and Validation of the Management and Supervision Tool (MaST) Risk of Crisis (RoC) Algorithm Using Electronic Health Record (EHR) Data

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**Aims.** The Management and Supervision Tool (MaST) helps NHS mental health care professionals identify patients who are most likely to need psychiatric hospital admission or home treatment, due to severe mental illness, through a Risk of Crisis (RoC) algorithm driven by electronic health record (EHR) data analytics. We describe the derivation and validation of the MaST RoC algorithm, and its implementation to support preventative mental healthcare in the NHS.

**Methods.** The RoC algorithm was developed and evaluated with EHR data from six UK NHS trusts using Ordered Predictor List propensity scores informed by a priori weightings from pre-existing literature, as well as real-world evidence evaluating the associations of clinical risk factors with mental health crisis using NHS EHR data. Mental health crisis was defined as admission to a psychiatric hospital or acceptance to a community crisis service within a 28-day period. Predictor variables included age, gender, accommodation status, employment status, Mental Health Act (MHA) status (under section or Community Treatment Order), and previous mental health service contacts (including hospital admissions and crisis services). Data were analysed using Ordered Predictor List propensity scores. The algorithm was derived using structured EHR data from 2,620 patients in a single NHS trust and externally validated using data from 107,879 patients in five other NHS trusts. Qualitative and quantitative data on feasibility, acceptability and system efficiency impacts of MaST implementation were obtained through staff surveys and local audits.

**Results.** The factors associated with greatest propensity for mental health crisis included recent previous crisis, multiple previous crises, higher number of mental health service contacts in recent weeks, MHA section, accommodation status and employment status. The RoC algorithm identified 64% and 80% crises in its top quintile. Sentiment analysis of staff surveys suggested that the use of MaST improved productivity by reducing time taken to access patient information to support caseload management that was previously difficult to obtain through manual review of EHRs. The systems efficiency audit revealed a reduction in duration of crisis and inpatient admissions following MaST implementation.

**Conclusion.** The MaST RoC algorithm supports the identification of people more likely to use crisis services in NHS mental health trusts, is feasible to implement, and improves systems efficiency. EHR-derived algorithms can support real-world clinical practice to improve outcomes in people receiving NHS mental healthcare.