

## E-mental Health

O059

## Using an innovative web-based task management application to improve medical handovers at an in-patient psychiatric hospital

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**Introduction:** Safe and effective handovers are crucial for patient safety in psychiatric hospitals and a digital record helps to prevent information loss and allow auditing. Trainees at our institution raised concerns about the lack of a reliable, traceable digital record for out-of-hours handovers. The pre-existing system of handwritten notes and emails was error-prone, cumbersome and untraceable. Therefore, a more efficient digital system was needed to match the demands of a busy in-patient psychiatric hospital.

**Objectives:** To improve the safety and quality of medical handovers in our hospital.

**Methods:** A baseline survey was sent to resident doctors at The Maudsley Hospital, London, to gather feedback on handover practices. The Microsoft Planner application within Teams was introduced, providing a secure, live digital handover record accessible with two-factor authentication. It allows multiple users to edit tasks simultaneously and tracks all updates with clinician specific time stamps. Changes were communicated and feedback gathered through monthly meetings, emails, and encrypted messaging apps. After 12 weeks, we sent a follow-up survey and made further adjustments based on the feedback.

**Results:** Nine doctors responded to the baseline survey, giving an average score of 2.5 out of 5 for quality and 2.4 out of 5 for safety. Forty-six percent struggled to prioritize tasks during on-call shifts, 54.6% found it hard to track task progress, and 18.2% reported frequent task delays or omissions. After the changes, nine doctors responded with improved scores of 4.6 out of 5 for quality and 4.2 out of 5 for safety. Seventy-eight percent rarely had difficulty prioritizing tasks, 66.7% found it easy to track progress, and 87.5% reported that tasks were rarely or never missed. Feedback highlighted that use of the platform varied amongst clinicians and access issues for emergency locum doctors, leading to the creation of a trust-wide protocol to standardise the use of this technology and respond to access issues.

**Conclusions:** A web-based task management platform was introduced in a large in-patient psychiatric hospital with significant improvements seen in clinician-rated quality and safety of medical handovers. This application is now commonly used across South London and Maudsley NHS Trust, the largest mental health trust in the United Kingdom. Over 450 NHS organizations have access to the Microsoft 365 and could therefore use this innovative technology to improve their clinical handovers. Given Microsoft's global use, this could very likely be used throughout European mental health organisations.

**Disclosure of Interest:** None Declared

## Psychopharmacology and Pharmacoeconomics

O060

## How does pregnancy affects drug disposition of lithium? A retrospective observational cohort study

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**Introduction:** Lithium is used as a first-line treatment in perinatal bipolar disorder. Lithium is almost exclusively renal eliminated without undergoing metabolism. Renal changes associated with pregnancy are responsible for alterations in lithium pharmacokinetics that may impact lithium efficacy and toxicity in mother. Characterization of the trajectory of lithium disposition during the perinatal period (previous year of pregnancy, pregnancy and first year postpartum) is necessary to monitoring and dose adjustments to prevent bipolar symptom recurrence while minimizing adverse effects.

**Objectives:** To characterize the disposition of lithium during the perinatal period and to evaluate whether changes in serum lithium concentration are consistent with changes in renal function (creatinine).

**Methods:** Women treated with lithium carbonate and referred to the perinatal psychiatry out-patient clinic of a single tertiary university hospital (November 2006 -December 2018), were evaluated for eligibility to participate in this retrospective observational cohort study (HCB/2020/1305). The basis of this study was all samples analysed in the same laboratory for lithium during perinatal period obtained at steady-state and predose. Serum creatinine concentrations measurements were also extracted. Lithium concentrations were determined by means of an AVL 9180 electrolyte analyzer based on the ion- selective electrode (ISE) measurement principle. Detection limit (LoD) was 0.1 mEq/L and limit of quantification (LoQ) 0.2 mEq/L. Serum creatinine concentration was determined by molecular absorption spectrometry. Detection limit (LoD) was 0.10 mg/dL, and the limit of quantification (LoQ) was 0.15 mg/dL. Linear mixed models were used to analyze lithium and creatinine serum concentrations. Time points extractions and lithium dose were included as fixed effects, while the individual mother was included as a random effect to account for repeated measurements.

**Results:** In total, 1260 lithium and 1174 creatinine serum concentration measurements from 109 pregnancies of 95 women were available. Dose-adjusted serum lithium concentrations (C/D ratio) decreased and average of 23.9% and 27.6% during the first and second trimesters respectively, increased slightly in the third