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The use of a web- and SMS- based mood tracking technology called Mood 24/7 in the treatment of major depressive episodes in the outpatient setting

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Background: Psychiatrists typically monitor the moods of their patients either through the patient's retrospective recall or by utilizing handwritten diaries that are kept between office visits, but these methods have extremely low accuracy and compliance rates, respectively. Technological tools employed by psychiatrists are surprisingly limited given the integration of electronic devices into our daily lives. Mood 24/7 is an electronic mood monitoring system that was developed to accurately and efficiently track mood over time. It is a web-based technology that allows patients to track their mood through daily SMS texts that are stored on servers remotely and accessible in real time by the patient and their care providers if added to the patient's trusted circle. The present study was designed to assess the accuracy and validity of Mood 24/7 in the outpatient psychiatric setting.

Methods: In an outpatient cohort of individuals undergoing standard of care treatment for Major Depressive Episodes at the Johns Hopkins Hospital, patient's Mood 24/7 daily ratings were compared with their psychiatrist's clinical mood assessment based on the mental status exam performed at the time of their outpatient appointment. Patient's mood rating on Mood 24/7 were also compared with their score on the standardized depression assessment component of the revised Hopkins Symptom Checklist (SCL-90R), which was performed on the day of initial consultation as part of standard of care.

Results: Patient's daily mood ratings showed an overall strong correlation with the psychiatrist's blinded assessment of the patient's mood ($r=0.85$, $p<0.0001$). Patient's daily mood scores on Mood 24/7 were also statistically significantly correlated with their depression scale on the standardized SCL-90R assessment ($r=0.57$, $p=0.02$).

Conclusion: These findings support the reliability and validity of the use of Mood 24/7 to track patient's mood and depression in the outpatient psychiatric setting.

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