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New study shows electronic health records often capture incomplete mental health data

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Complementary sources of data can be used to paint a more complete picture of a patient's health trajectory than a single source. Significant recent investment in Electronic Health Records (EHRs) took place on the assumption of improved patient safety, research capacity, and cost savings. However, most of these health systems and health records are fragmented and do not share patient information. While fragmentation and incomplete clinical data in EHRs are recognized problems, almost no published data estimate their extent. This study compares information available in a typical EHR with data from insurance claims, focusing on diagnoses, visits, and hospital care for depression and bipolar disorder.

The results show that:

- EHRs alone inadequately capture mental health diagnoses, visits, specialty care, hospitalizations, and medications. This missing data could potentially result in medication errors and other patient harms from behavioral care services.
- Patients with depression and bipolar disorder, respectively, averaged 8.4 and 14.0 days of outpatient behavioral care per year. 60% and 54% of these, respectively, were missing from the EHR because they occurred offsite.
- Total outpatient care days were 20.5 for those with depression and 25.0 for those with bipolar disorder, with 45% and 46% missing, respectively, from the EHR.
- The EHR also missed 89% of acute psychiatric services.
- Study diagnoses were missing from the EHR's structured event

data for 27.3% and 27.7% of patients.

The study highlights the usefulness of complementing EHR-derived data with external sources of information.

More information: Jeanne M Madden et al, Missing clinical and behavioral health data in a large electronic health record (EHR) system, *Journal of the American Medical Informatics Association* (2016). DOI: 10.1093/jamia/ocw021