
EHR-Integrated Depression Assessment in Primary Care



Depression has become a growing concern, with increasing numbers of individuals displaying symptoms. Despite its prevalence, depression often goes undetected and untreated in primary care settings. To address this issue, health information technology (HIT) offers opportunities to enhance the identification, diagnosis, and treatment of depression. The PORTAL-Depression project aimed to integrate a computerised adaptive test (CAT) for depression into the electronic health record (EHR), making it accessible in clinics and via patient portals. A review published in JAMIA Open explores this innovative approach's development, implementation, and outcomes to improve depression care in a primary care setting.

Project Overview

The primary challenge in managing depression in primary care is the lack of systematic screening, with about half of the affected individuals going unrecognised and receiving inadequate care. Traditional methods for depression assessment, such as paper-based questionnaires, are often time-consuming and ineffective in providing measurement-based care. HIT, however, offers a promising approach to address these gaps by enabling population-level interventions and improving access to mental healthcare.

The PORTAL-Depression project was initiated as a quality improvement (QI) intervention designed to enhance depression care by integrating a computerised adaptive test within the EHR. The project was conducted at an academic internal medicine clinic serving a large, medically underserved metropolitan population. By incorporating an adaptive web-based tool, the intervention sought to improve depression detection rates, provide timely assessments, and reduce the in-clinic burden of conducting these assessments.

Key Innovations

The PORTAL-Depression project included several key HIT innovations designed to enhance depression care workflows:

- **Computerised Adaptive Test for Depression Assessment:** The computerised adaptive test (CAT) utilised algorithms to ask tailored questions based on patient responses, allowing a more precise and brief assessment than traditional methods. This approach facilitated a more efficient and accurate identification of depression symptoms.
- **EHR Integration and Two-Way Communication:** The CAT was integrated with the EHR to enable seamless, secure communication without transferring protected health information (PHI). When an order for a depression assessment was placed, a unique link was generated so the patient could access the CAT in their preferred language. Completed assessments were automatically saved in the EHR, allowing primary care physicians (PCPs) to view and promptly act upon the results.
- **Enhanced Accessibility and Awareness:** To improve workflow and reduce administrative burden, the EHR was configured to display results similarly to laboratory tests. The system also prompted PCPs to acknowledge positive results and provided options for follow-up care, including adding depression to the problem list and accessing relevant referrals and patient instructions.
- **Patient Portal Functionality:** A significant feature of the project was the ability to administer depression assessments outside of clinic visits. The patient portal sent eligible patients unique links to complete the CAT, allowing for continuous monitoring and a proactive approach to depression care.

Implementation Strategies and Outcomes

The project spanned 30 months and employed a variety of strategies to ensure successful adoption, implementation, and sustainability:

- **Training and Stakeholder Engagement:** The project team conducted thorough training for clinic staff, including attending and resident physicians, medical assistants (MAs), and nurses, to ensure familiarity with the new workflows. Regular in-person and online sessions were held, and continuous support was provided to address any issues or questions.
- **Interactive and Iterative Process:** The implementation followed a phased approach, with initial pilots to streamline workflows and identify challenges. Daily audits and weekly feedback sessions were conducted to monitor progress, and small incentives were introduced to encourage team engagement.
- **Adaptations and Challenges:** Patient-facing materials were refined throughout the project based on feedback from patients and community members. However, financial constraints and the complexity of maintaining the full intervention led to the need to adapt and simplify certain aspects for long-term sustainability.

The intervention showed notable achievements, including higher positivity rates for depression identification than the previously used Patient Health Questionnaire (PHQ). PCPs found the CAT results more accessible within the EHR, and portal-based assessments reached more patients than in-clinic assessments alone. Despite this progress, the project's complexity and resource intensity limited the sustainability of all components, with some features, such as portal workflow automation, remaining unimplemented due to logistical challenges.

The PORTAL-Depression project demonstrated that integrating a computerised adaptive test for depression within the EHR can improve identification, assessment, and awareness of depression in a primary care setting. The intervention's success relied heavily on a highly engaged clinic environment, ongoing training, and an iterative, feedback-driven process. However, financial and personnel constraints posed challenges to sustaining all aspects of the intervention.

Overall, the PORTAL-Depression project highlights the potential of HIT innovations to enhance depression care and the importance of balancing complexity with sustainability. Future efforts should consider cost-effective tools and automation of key processes to facilitate the scalability of similar interventions across different healthcare settings.

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