Thinking Outside the Visit: Digitally Extending the Reach of Behavioral Health

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Over 50 % of premature morbidity and mortality is attributable to behavioral causes, and by 2020, behavioral health disorders will surpass physical diseases as the main cause of disability worldwide.[1–3] Chemical addictions are particularly problematic, with tobacco smoking alone accounting for over 400,000 preventable deaths per year in the United States.[4] Hazardous alcohol consumption is the third leading behavioral cause of death, and costs over $230 billion annually.[1,2] Obesity has reached epidemic rates, with associated morbidity and mortality from diabetes, cardiovascular disease, and other illnesses. The consequences of a medication-only approach to chronic pain are being acutely felt, as the health care system struggles to respond to an emerging opioid crisis.

Primary care clinics offer the ideal setting for identifying and intervening with patients who engage in behaviors that harm their health. Patients can be screened and identified in the early stages of an emerging problem and counseled to change and/or referred to specialty care.[5] Conversations about physical activity, nutrition, fitness, and non-pharmacological pain management can be started in primary care, and patients can be prepared to accept referrals to behavioral health providers.

Although effective behavioral counseling strategies have been validated for use in primary care, most busy practices simply do not have the resources or skill sets to deliver behavior change counseling. Commonly cited obstacles include competing demands on provider time, competing patient medical comorbidities, lack of staff, insufficient resources (including billing reimbursements), and lack of provider skill or confidence. When behavioral counseling is attempted, it is often done in an uncoordinated, non-longitudinal way that leaves patients feeling unsupported and unsatisfied. Consequently, the self-help industry is flourishing, resulting in a proliferation of non-evidence-based tools, where patients attempt to change their behaviors on their own without the benefit of a medical professional who may better understand the health implications of their behavior and could better tailor interventions to the patient's preferences and needs.

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The emerging healthcare climate affords an unprecedented opportunity to address substance use and other behavioral health issues in innovative, efficient, and effective ways. The Affordable Care Act (ACA) and accreditation standards for patient-centered medical homes (PCMH) reflect the importance and value now placed on preventive and integrated behavioral health interventions. Team-based practice models have expanded the range of providers who are able to deliver these services, while increasing the need for tools to coordinate care. Patient empowerment and chronic disease management approaches highlight the importance of creating service delivery models and treatment tools that include the patient and are tailored to his/her social context. Given this climate, and the unmet clinical need, the time is ripe for innovative digital tools that deliver evidence-based behavioral interventions, coordinate care, and actively engage patients, while preserving and even utilizing the important longitudinal relationship with the health care team.

In this issue of *JGIM*, Rose and colleagues offer an intriguing alternative to the traditional and unrealistic clinician-centric approach to behavioral screening and interventions.[6] They use a "low-tech" interactive voice response (IVR) system to conduct behavioral health screenings and, for risky alcohol use, brief interventions, including encouraging patients to discuss the issue with their provider. Rose and her colleagues at the University of Vermont have created a simple, straightforward screening approach for common behavioral health issues including pain, smoking, alcohol use, physical activity, weight concerns, and mood. Patients are contacted via telephone 1–3 days prior to their primary care visit and asked to take part in the IVR screening. They are then given the option of submitting the data to their electronic health record or keeping it private. A prior publication has shown the feasibility of IVR "pre-screening" in helping both patients and providers decide where to focus the bulk of their time during the upcoming visit.[7]

Rose and colleagues identified patients who screened positive for at-risk alcohol use, and randomly divided them into two groups, one who received an automated telephone brief intervention (IVR-BI) and a no-intervention control.[6] The BI followed the National Institute on Alcohol Abuse and Alcoholism (NIAAA) guidelines, in which patients were asked about alcohol use, assessed for problems, advised (and assisted) to cut down, and encouraged to arrange follow-up care. Patients were then called after their primary care visit to

assess three simple factors: 1) did a conversation about alcohol occur, 2) who brought it up, and 3) did the provider make any recommendations about alcohol use to the patient. IVR-BI patients were more likely to have a discussion about alcohol, were more likely to bring it up themselves during the visit, and were more likely to receive recommendations from their provider. Patients with a college degree were more likely to discuss their alcohol use. Older patients were more likely to initiate the conversation with their provider. As one might hope, patients with an alcohol use disorder were more likely to receive specific medical recommendations. Not surprisingly, the other IVR behavioral pre-screens with no added brief intervention (e.g. pain, smoking, weight, mood) did not change the frequency of conversations about the other health topics, suggesting that the brief intervention was the "active" ingredient in promoting conversations about alcohol.

This study highlights an important yet inexpensive digital tool that extends the reach of clinicians in primary care by deftly performing pre-screens and a basic brief intervention by telephone. The patient completion rate was 97 %, suggesting that the intervention was highly acceptable. However, without any measure of the quality of the ensuing conversation or any clinical outcome data, enthusiasm must be tempered. While the study and its associated IVR tool were of minimal burden to the primary care clinics, more thought should be given to how best to support and guide providers and staff as they partner with patients in the difficult task of changing health-related behaviors. Transferring the data to the electronic health record is an important (and rare) start, but providers and staff are often eager for more guidance and support in efficiently delivering evidence-based care.[8] Tools that "extend" the clinician may become essential, but the field has not yet found the "sweet spot" where burden is minimized and intervention quality is maximized in a way that results in clearly measurable improved clinical outcomes. Moreover, since nearly all behavior change efforts occur over an extended period of time, clinician-extenders must have longitudinal, multi-visit capabilities and must be smart enough to adapt to the patient's successes, challenges, and changing circumstances—again, while minimizing the burden but remaining true to evidence-based care. Even beyond the technology, this study provides a subtle yet important reminder about the importance of priming patients before a primary care visit and encouraging them to be more active in the conversation with their providers.

As the healthcare field accepts the impossibility of providing complete preventive and behavioral health care within the confines of the traditional primary care appointment, digital clinician-extenders may become more common. The innovative hybrid service delivery models they make possible may offer efficient alternatives to standard behavior change counseling and may address the common obstacles of time, resources, and clinician competence. An effective and efficient digital tool that partners patients and primary care providers (PCPs) to engage in tailored yet evidence-based behavioral counseling could substantially "disrupt" the way substance use disorders and other behavioral health problems are managed in primary care, and could significantly improve clinical outcomes. Such a tool may improve PCP competence and skill in using decision tools and talking points, extend interventions outside of the valuable and limited clinic visit time with patient homework and text messaging, encourage greater patient engagement and activation with diary-keeping and progress feedback, and offer greater and ongoing "doses" of counseling for more difficult-to-treat behaviors such as substance use disorders.[9,10] While IVR may not have all of these capabilities, it might be part of a larger, more heterogeneous library of digital tools that are selected based on local conditions, needs, and resources.

Despite its promise, the research behind digital health tools in primary care remains underdeveloped, and has been largely overwhelmed with hype and pseudoscience. There are approximately 31,000 behavioral health mobile apps currently on the market, but few are evidence-based, patient adherence is extremely poor, very few facilitate collaborations between patients and providers, and clinics usually fail to fully implement or sustain technological innovations. Even the high-quality, validated tools operate mostly within their own ecosystems and do not integrate with the EHR or with one another, leaving overstretched clinicians with a haystack of data to manage. While having a library of tools with which to tailor an approach to behavioral counseling is appealing, integration and coordination across platforms, with careful user-centered design in mind, will be essential.

Due to its technological limitations, IVR probably isn't the solution to effective and efficient behavioral health care, but it is certainly a tool worth considering. The appeal of IVR is in its simplicity and relative low cost. Most importantly, the IVR approach used by Rose and colleagues reminds us that, ultimately, the most important conversation is the one that occurs between provider and patient. Empowering and preparing a patient to make the most of that important time seems like a winning proposition.

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