

## Engaging Patients Through the Internet: The Business Case

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A burgeoning new area of clinician intervention services is arising around Internet-based patient engagement tools. Included in this category are patient portals, Internet interventions (dynamic portals that combine patient-specific health information with interactive components, such as self-assessment and decision support), and personal health records. Clinical evidence has demonstrated that at least one of these patient engagement tools, Internet interventions, improves the quality of care delivered, in terms both of the patient experience and clinical outcomes in conditions as diverse as asthma, diabetes, incontinence, and HIV/AIDS.

In addition to the clinical benefits afforded by engaging patients in these ways, multiple market factors and industry stakeholders are creating business momentum for adoption by the practicing clinician in terms of both top- and bottom-line results for the practice. Not only are patients increasingly demanding these sorts of services, preferring that they be delivered by their clinicians, many are willing to pay for them out of pocket. A medical practice that offers Internet-based patient engagement tools can meet patient demand and improve satisfaction, reap savings of both money and time, differentiate itself in an increasingly competitive marketplace, and create opportunities for research and patient data analysis. This edition of the *Review* explores these and other

business benefits of Internet-based patient engagement tools.

### Online Patient Service Revenues

Patient demand for online access to their clinicians and health information, as well as demand for online transactions with the practice, is high and growing. Moreover, market research and clinical study reports indicate that a substantial proportion of patients are willing to pay for these online services.

The majority of American adults are Internet users and have expectations regarding online communications with their providers. Consumers have become accustomed to using the Internet for most personal services and transactions, such as banking, shopping, and travel, and expect similar levels of convenience from their physician's office. According to a 2006 Harris Interactive Health-Care Poll, the majority of adults say they would like to use email and other online services to connect with their physician.

A number of reports indicate patients' willingness to pay for access to Internet-based patient engagement tools. A recent publication from an urban family practice community spanning a broad range of ages and socioeconomic groups concluded "that patients of all ages are currently ready and willing to pay a small annual fee for online services with their primary care physician's office" (Adler). This readiness to pay for

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online patient services has been consistently reported in other studies as well.

- In the urban family practice study, nearly 75 percent of patients with Internet access — and 12 percent of non-Internet users — said they would be willing to pay an annual fee for one or more of the following online services: emailing with their physician, medication refills, viewing parts of their medical record, appointment requests, and billing inquiries (Adler).
- Market research studies have estimated that 20 to 40 percent of patients are willing to pay for online communications with their providers (Taylor; Lin).
- Nearly half of all surveyed patients of an academic internal medicine practice said that they were willing to pay for online correspondence with their physician (Lin).

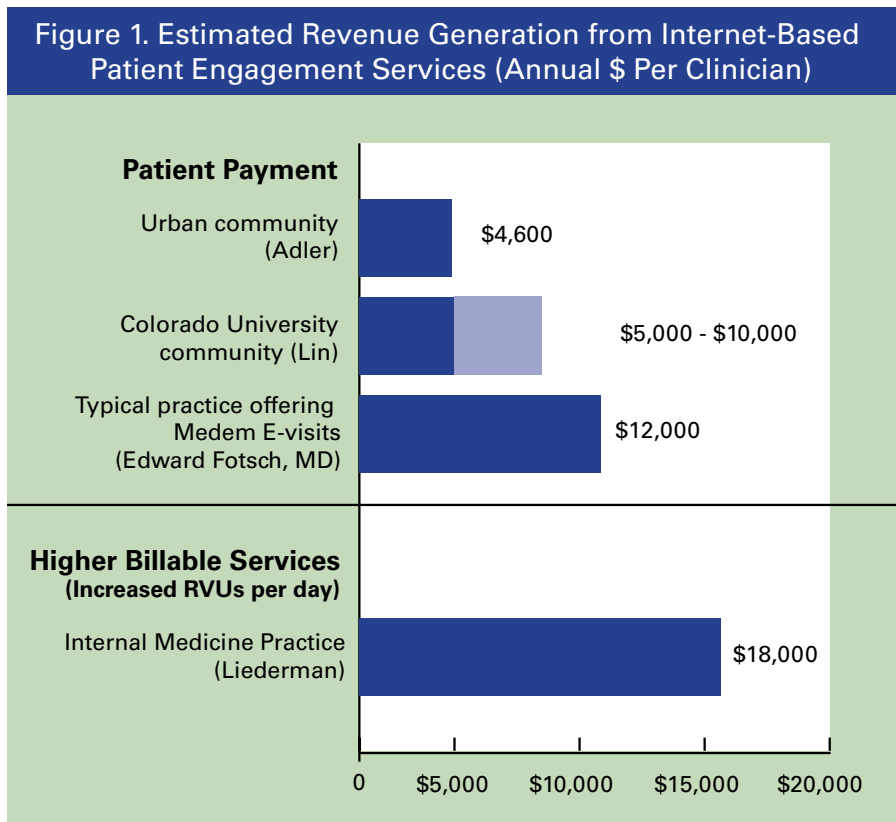
- Practices that offer “e-visits” in exchange for a patient fee are typically charging from about \$25 to \$50 for each consultation (Liederman; Brewer).
- If 47.7 percent of a practice of 2,500 patients each paid \$10 per year for online services, the annual revenue generated would be \$11,775 (Adler). If this same number paid \$4 per message, it could generate an estimated \$4,600 a year in revenue (Lin).

Thus, a growing number of clinicians offering patient engagement tools through the Internet are finding this enhances the care they deliver and generates a new type of revenue stream.

### Workflow Streamlining Equals Savings

Online messaging and other aspects of Internet interventions can efficiently handle common administrative communications between patient and office staff, including appointment scheduling, refill requests, and registration information. This generates several sources of savings for practices, in terms of labor costs and clinician productivity. First, addressing these needs via secure web messaging decreases telephone traffic, improving on-hold times and saving office labor costs. For example, one study found that providers who use web messaging with patients experienced an 18 percent drop in telephone volume call and a 14 percent drop in total message volume (Liederman).

Second, the productivity of physicians who use web messaging is considerably higher than that of their counterparts who do not. In one study, these physicians averaged 11.1 percent more patient visits per day (2.54 more patients per physician), which translates into \$95.34 more per physician per day than physicians who did not use Internet-based patient tools



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Reduced no-show rates from patient engagement through online practice communications increase revenue-generating visits. And pre-visit intake lowers mailing costs and streamlines patient processing so that waiting room delays are mitigated. Time savings can also result when patients enter data into their personal health records or complete medical histories online prior to the clinic encounter.

### **Differentiation in a Transparent Marketplace**

By offering a number of “high access, high quality” Internet-based patient engagement tools such as Internet communications and patient portals, providers can differentiate their practice in the marketplace as “high performing and patient

centered.” As a new world of provider performance transparency is rapidly approaching, with scorecards and healthcare purchasers demanding high value medical care, this type of differentiation can drive case referrals and even support a premium in reimbursement rates.

Currently more than 100 pay-for-performance programs link provider reimbursement to performance, and an estimated one-half of these will publicly report performance results by 2007. Medicare plans to roll out physician-based pay-for-performance within the next 2 to 5 years, with up to 30 percent of total payments tied to reimbursement. In addition, a recent report by the Institute of Medicine and the August 2006 Executive Order by President Bush indicate that performance transparency is a top government priority. At the same time, patients are becoming more financially responsible for their healthcare, as employers shift costs to employees through cost-sharing and higher co-pays. This trend will amplify the interest in practices that offer web-based patient engagement, as these healthcare consumers begin to “shop” for providers and services.

Patient engagement is also a driver of provider performance in terms of affecting satisfaction with the clinical experience and even clinical outcomes. Patient experience measures are a major component of many pay-for-performance programs, representing up to 30 percent of a physician’s performance scorecard. Internet-based patient engagement tools allow patients to receive quality information about their health, ask questions of their providers, and have those questions answered. A randomized trial in a Colorado internal medicine practice found that patients using patient portal services were significantly more satisfied with their communications with the clinic and the overall quality of care they received (Lin). Accordingly, there is reason to

**Figure 2. Estimated Clinician Productivity Increases with Use of Internet-based Patient Engagement Services**

**More Efficient  
Clinician Messaging**



**More  
Patient Visits**



- Clinician telephone volume decreases: 18%
- Total clinician message volume decreases: 14%
- Patient visits per day increase: 11%

Source: Liederman

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believe that patients receiving Internet-based patient engagement tools are more likely to report higher satisfaction on performance surveys, give their physician high performance ratings, and refer other patients to the physician.

Patient engagement and understanding have also been found to improve adherence and, therefore, outcomes: A growing body of research shows that patients who are well informed about their condition, test, and treatment options are more likely to comply with prescribed therapies (Forkner-Dunn; Guadagnino). Indeed, patients with chronic illnesses who collaborate with their physicians tend to have less pain, better functional outcomes, and better medication adherence (Tang). Because of these effects, Internet interventions provide clinicians with an advantage as trends toward transparency and pay-for-performance rapidly strengthen.

### **Additional Opportunities for Revenue**

Internet-based patient engagement tools have the potential to help practices create an electronic network of patients, which can then be managed and analyzed. True quality improvement and outcomes-based medicine require clinical data, which practices may obtain from patients' electronic and personal health records (PHRs). The Personalized Health Information Act (PHIA) of 2006 recently introduced to Congress by Patrick Kennedy (D-RI) also suggests such a role for PHRs in providing de-identified data for public health analysis and research purposes. This may give practices the edge in recruiting patients for clinical investigations, another opportunity for revenue.

Internet-based patient engagement tools, and PHRs specifically, offer another advantage to practices. According to the PHIA, web-based portals with messaging capabilities can serve several purposes. They allow providers to send personalized

patient education, reminders, and clinical messages to patients. PHRs also provide for the sending of appropriate patient-specific messages (not advertisements) to consumers from relevant pharmaceutical and device manufacturers recommended by the physician. Such messages could increase treatment adherence and — since manufacturers would likely pay for the opportunity to contact patients — provide practices with an additional source of revenue.

### **Conclusion**

As the trends of pay-for-performance and transparency continue to grow, physicians are seeking ways to differentiate their practices, increase patient satisfaction, and improve clinical outcomes. By engaging patients in their own care, Internet-based patient engagement tools can accomplish all of these goals. In addition, web-based portals have been shown to help practices boost revenue, making them an intelligent investment for providers who wish to capitalize on the growing e-technology movement in healthcare.

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