The Role of Technology in the Small Medical Office

Small practices now have access to technologies once previously available only to larger organizations with big budgets.

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The medical profession has embraced technology in the diagnosis and treatment of patients. We have become dependent on technology for imagining lesions as small as 1 mm inside the body. Our patients have benefited from bio-engineered medications that are disease—and even patient-specific that have allowed us to create precision medicine and treat patients as individuals rather than as diseases or conditions. However, many doctors have not made use of the technology that is available to improve the efficiency, productivity, and even the quality of care that they provide. With improved availability, affordability, and mobility of medical technology, small practices now have access to technologies once previously available only to larger organizations with big budgets and full IT departments. This article discusses the technologies that are available to small practices that result in significant improvement in the care that we offer our patients.

Electronic Medical Records

Electronic medical record (EMR) systems are now de rigueur in a modern medical practice, whether it be large or small. A comprehensive EMR saves on chart storage space, reduces paper consumption, and allows for remote accessibility while on the go. With the advent of "software as a service" (SAAS) EMR systems, small practices without large budgets can have access to an EMR on a subscription basis without needing to make costly upfront investments in the acquisition and maintenance of on-site servers. Remote data backup to the cloud is automatic, protecting patient data from the hazards of failed equipment.

For a small medical practice without extensive cross coverage, remote access to the EMR (via Web or remote desktop connection) allows the physician to stay caught up with lab results, phone calls, and charting while on the go. The SAAS model has dramatically improved the affordability of EMR systems, and some highly rated EMR products are free to the practice. However, affordability must be balanced with usability. Your EMR system can have a major impact on work flow and efficiency. Therefore, it is essential to select a system that is customizable to your practice and documentation style. Never commit to a system without first giving it a trial run.

Patient Portals

The most robust EMR systems are equipped with patient portals, which give patients secure 24-hour access to their health information

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from anywhere with an Internet connection. A full-featured patient portal will reduce physician documentation time, as patients can complete history forms on their own devices before they even set foot in the office. The front desk can import this information into the patient's chart, allowing physician review before the initial evaluation. Patient portals also facilitate collections with electronic statements and online bill-pay features. When the interactive features of patient portals are optimized, it is no longer necessary to use valuable time on the phone for non-urgent

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issues such as appointment requests and confirmations, medication refills, normal laboratory results, routine questions, or clinical updates. Having an interactive patient portal is now a Meaningful Use requirement for CMS, and can help your practice qualify for financial incentives and avoid penalties.

Virtual Visits

A variety of telehealth applications now enable HIPAA-compliant video conferencing and virtual patient visits. Although virtual visits are not a covered benefit under all commercial health insurance plans, many patients value the convenience and accessibility of such a service so much that they will happily agree to a reasonable out-of-pocket fee for virtual encounters. Virtual visits are no substitute for a comprehensive physical evaluation, but they are ideal for counseling sessions in which a physical exam is not necessary. These include pre-procedure counseling, the review of abnormal laboratory results, and nutritional/dietary education, among others.

Virtual visits can be automatically recorded as mp4 files and then imported into the EMR. Using virtual visits effectively can improve patient satisfaction, reduce no-shows, and positively affect the bottom line.

Internet Telephony

Voice over Internet Protocol (VOIP) phone systems offer the features of pricey telephony set-ups at a bargain cost. HIPAA-compliant options are now readily available for voice, fax, text, and video conferencing. Using VOIP reduces expenses by leveraging existing equipment, and features regular software updates, keeping your phone system from quickly becoming obsolete. A well-configured VOIP system is highly flexible and customizable, allowing the administrator to easily change settings from a mobile phone or desktop application. Auto-attendant features help to direct phone traffic without requiring costly manpower. The ability to configure the system to simultaneously or sequentially

ring on the office phone, mobile, and home phone increases portability and the patient's perception of your office's accessibility.

Social Media

No discussion of medical technology is complete without addressing the enormous impact of social media on how patients access health information. In the United States, close to 75% of people look to the Internet for healthcare information, and social media networks can be important hubs for the dissemination of health education. With a modicum of effort, a small practice can have a professional and robust social media footprint, which can save thousands of

dollars in marketing expenses while simultaneously being a source where patients can obtain high-quality health information.

Creating a Facebook page for the practice allows the office to share practice news and pertinent media reports, and also to engage with potential and current patients. Twitter, the microblogging service, is an excellent method for sharing links to journal articles, medical news stories, and succinct "pearls" of medical wisdom. Patients who "follow" the practice's Twitter account will instantly be alerted on their mobile devices when you post, enabling rapid communication of weather-related practice closures or last-minute appointment availability, for example.

On YouTube, Google's video sharing service, practices can create their own "channels" to share original videos with the public. Topics can include provider interviews, anatomic explanations, demonstrations of medical device usage, and reviews of the risks and benefits of medical procedures.

Having a library of videos will improve practice visibility, establish a personal connection with patients before they walk in the door, and reduce time spent on repetitive counseling (for example, as adjunct to written informed consent). One of the major benefits of having an effective social media strategy is that high-quality content will often be shared by patients from one social media platform to another, extending your practice's reach at a minimal cost.

Integrated Sensors

Sensors are an exciting development in medical technology. Medical monitoring devices have rapidly be-

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come more portable and affordable over the past few years, with many now integrating with and drawing their power from mobile phones. Electronic peak flow meters, glucometers, and blood pressure monitors can all input data directly into mobile applications, with data then shared to your office with the click of a button. Reviewing these data with the patient regularly can help your practice proactively monitor chronic health conditions, and qualify for certain insurance reimbursements.

Smartphone Applications

Let's not forget the piece of medical technology that we all already have in our pockets! With the right suite of mobile applications, your smartphone can be a portable and inexpensive pharmacopoeia, medical calculator, encyclopedia of clinical guidelines, medical journal, billing/coding reference, and voice recorder. With advances in voice recognition technology, mobile phones can also replace a transcription service for quick dictations.

Adding Technology to Your Office

It can be overwhelming to a small practice owner to consider the various technologies available for implementation. A structured plan for the introduction of technology to the office can help to control costs, reduce frustration, and maintain workflow efficiency.

First, it is essential to create a list of needs versus wants. A comprehensive phone system and EMR may be on your immediate "must-have" list, while a patient portal and virtual visit capability can wait. Allocate the majority of your technology budget to essential items, with the remainder reserved for wish-list items down the road. Gaining competency in one system at a time will keep your office humming with a minimum amount of workflow interruption, and will keep your staff from experiencing tech "burn-out."

Naturally, certain costs and downsides come with the implementation of technology in a small medical practice. The most obvious of these is the financial outlay required. Small practices operate on unforgiving margins, and typically do not have large reserves of cash available. Several studies estimate that the cost per provider for implementation of an EMR system can range from $15,000 to $75,000. A detailed discussion of costs is available online at HealthIT.gov (www.healthit.gov/providers-professionals/faqs/how-much-going-cost-me). Converting practice operations to Internet-based technologies creates a dependency on reliable connectivity. Practices that "got by" with entry-level Internet speeds while operating analog systems will almost certainly need to invest in reliable high-speed connectivity packages and computers that can handle the increased workload of operating multiple technologies simultaneously.

Failing to do so can open your practice to the risk of an office shut-down if your Internet connection goes down. The individual costs of telehealth applications, VOIP telephony systems, sensors, and mobile applications pale in comparison. However, even these small costs can add up and be a drain on the budget if they are not being utilized effectively. Therefore, it is essential to implement only those technologies that you anticipate will fill gaps in your practice and be used frequently enough to justify the expense.

Privacy concerns must also be considered. Select only HIPAA-compliant vendors, and obtain the appropriate business associate agreements to protect your practice from potentially costly privacy violations. As all systems have a learning curve, one must anticipate the need for training time and temporary hits to efficiency as new technologies are introduced to the office. Patients and staff may be resistant at first, but this can be overcome by designating a technology "champion" charged with communicating the benefits and addressing any road-blocks to successful implementation.

Finally, we should keep in mind that even the most advanced technology will not compensate for lackluster clinical or customer service skills. Technology is a tool to help a patient-centered practice operate efficiently and should enhance, rather than detract from or replace, provider-patient interactions.

Conclusion

In the future, physicians will be required to embrace technology in the care they provide their patients. In the past, the cost of adding technology in small medical practices was prohibitive. However, today it is possible for small practices, including solo practices, to afford implementing technology that makes the practice more efficient, more productive, and can even provide patients with stellar experiences that will motivate patients to tell others about their outstanding experiences with you and your practice. **PM**

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