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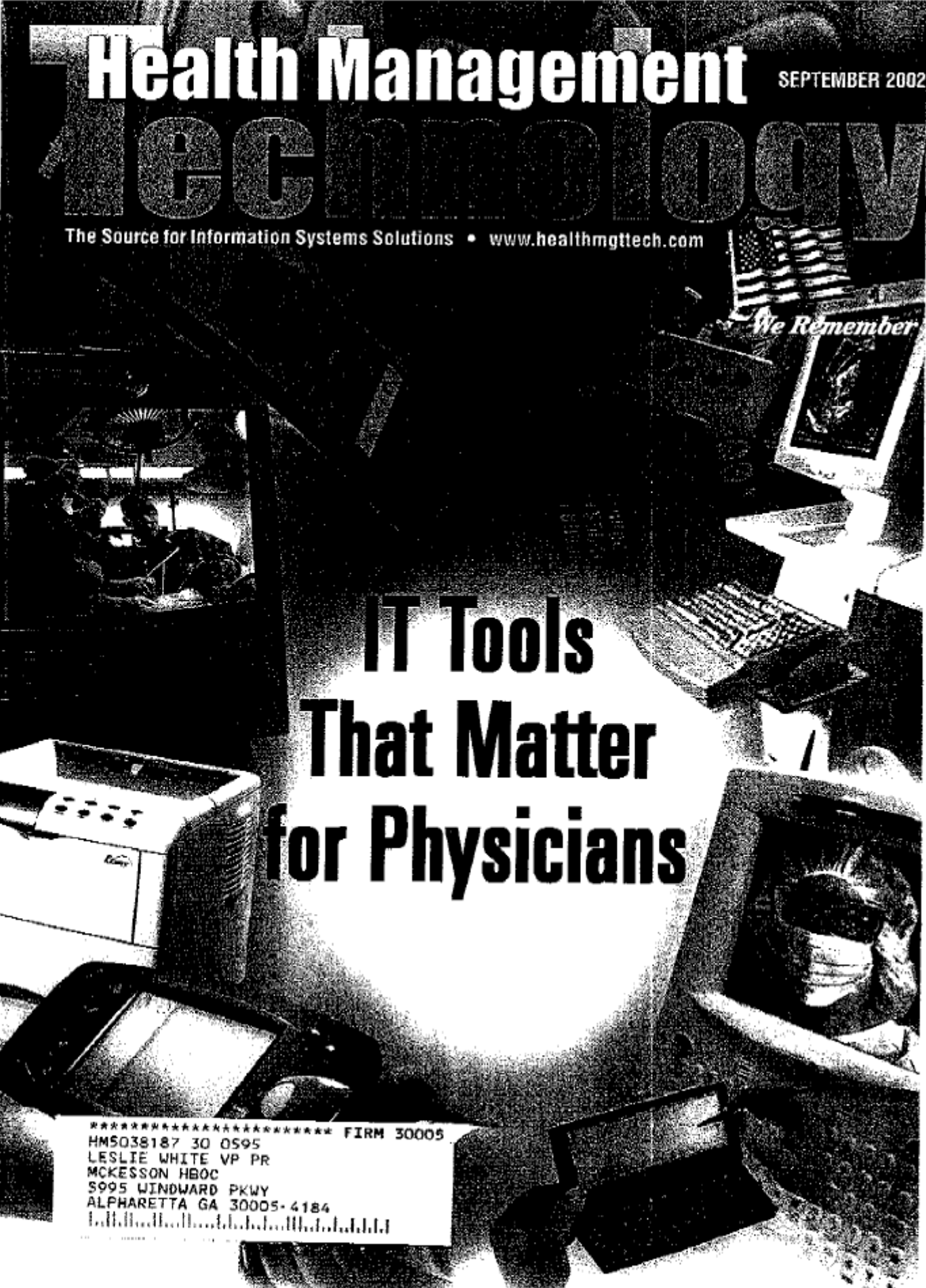


IT Tools That Matter for Physicians

Choosing Clinical IT Tools That Matter for Physicians

How hospitals view the selection of CIS tools will influence physician adoption and physician recruitment well into the future.

By Barry P. Chaiken, M.D., M.P.H.

The publicity surrounding medical errors generated by the two recent Institute of Medicine reports, coupled with the growing influence of the Leapfrog Group, is driving hospitals to purchase clinical information technology (IT) systems hurriedly in an effort to address the alarming medical errors problem.

Although some of these tools might satisfy the immediate needs of an institution, a broader vision is required to develop plans that will lead to better medical decisions and desired clinical and financial results over the next five to 10 years. Therefore, it is important to understand current industry trends as they apply to physicians and how they practice medicine.

Changing of the Guard

The current physician leadership (e.g., chief medical officers, chiefs of the medical staff) is undergoing a profound change. Approximately 15 years ago, computerized clinical applications appeared in hospitals and medical schools. Since then, these applications have become more robust, clinically complex and portable. Today, almost all medical students and residents work with PDA devices that hold drug knowledgebases, clinical guidelines, patient lists and laboratory results.

The same physicians who pioneered the use of these information technologies and then graduated to bigger and more useful applications are now beginning to hold positions of great influence in their organizations. In addition, their younger brethren are even more demanding when it comes to their desire for various clinical IT applications.

Organizations that are choosing clinical IT tools must give critical thought to choosing solutions that provide measurable benefits for themselves and their physicians. They should not worry about outright physician resistance based upon computerization alone. In fact, within the next five years, organizations that do not have a comprehensive clinical IT offering and implementation plan may find that the best physicians will admit their patients and align themselves with "more wired" facilities.

For more information about McKesson's comprehensive Horizon suite of clinical applications, www.rsleads.com/209ht-192

Variability of Care and Clinical Guidelines

For more than 25 years, dating back to the research of Dr. John Wennberg, variability in the cost and quality of care has been an issue in medical practice. Dr. Wennberg completed a landmark study in two Vermont towns comparing the rates of tonsillectomies among the population. Although the towns were similar in almost all other ways, one town experienced an incidence of surgery several times higher than the other.

Other researchers documented the variability of Caesarian section rates within and across regions, and we still see news items today about the wide-ranging cost of medical treatment for similar conditions. In the vast majority of cases, variability is unwarranted and leads to poor clinical and financial outcomes.

Organizations have attempted to reduce variability through various retrospective means, including the re-education of physicians through continuing medical education and clinical profiling. Although these efforts have been somewhat successful in changing behavior and improving care, the results are neither spectacular nor surprising.

Behavioral research shows that prospective interventions, those that are closer to the point at which

decisions are made, are more likely to change behavior. In the case of physicians, that means changing the guidelines they follow in making decisions and delivering care. These guidelines are largely implicit, developed and nurtured within their own minds based on their personal experience. Implicit guidelines are hard to examine and even harder to change.

Changing Behavior

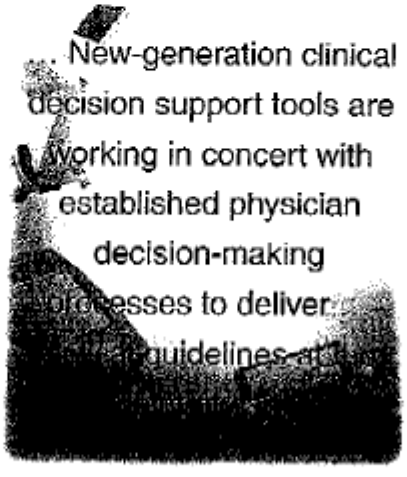
Rather than try to change physician behavior by modifying these implicit or internal guidelines, new-generation clinical decision support tools are working in concert with established physician decision-making processes to deliver readily available explicit, or external, clinical guidelines at the point of care.

Evidence-based medicine guidelines, developed by content experts from review of the medical literature and real-world testing, utilize standard Web technologies to deliver guidelines in a way that can change physician behavior with the least impact on physician autonomy or workflow. These guidelines offer a referential foundation upon which physicians can develop treatment plans that are proven to deliver desired outcomes.

Providing the latest clinical information in this format reduces the burden on the physician to act as a data repository of clinical knowledge and frees the physician to concentrate on more complex clinical analytical issues. For example, most patients that seek care have multiple medical problems, but most medical guidelines cover single disease processes. The reason for these single disease guidelines is the enormous complexity in authoring a guideline that covers multiple diseases simultaneously. There are just too many variables.

Although humans may be poor at direct memorization and fact recall as detailed in a compendium of single disease-specific guidelines, they are inherently expert at identifying patterns and integrating concepts as they review those guidelines in light of a patient's relevant medical condition. A physician armed with integrated, online access to the latest evidence-based medicine guidelines as he or she is delivering care is best prepared to develop a customized treatment plan for a patient with multiple disease processes.

If physicians rely solely upon implicit guidelines in these instances, there are numerous opportunities for errors such as missed treatment steps, or lack of knowledge of new, proven and effective treatments. In contrast, explicit clinical guidelines can help improve quality and reduce costs by applying resources more appropriately and engaging in more effective clinical activities that drive toward improving patient health—an inherently more efficient process.



Physician Workflow

Ultimately, physician acceptance of clinical information technology tools is based upon how these various tools fit into existing physician workflow. Six Sigma tenets clearly suggest that it is foolhardy to automate poor processes, but physician workflow is driven by a variety of factors that make it difficult to modify. Success relies upon the ability to identify what needs to be changed, what is changeable and what incentives are required to drive that change.

Unlike most other professionals, physicians do not have a single physical location where they work. Even within facilities, physicians move from room to room and floor to floor. Their "desks" are the hallway, the examining room or the emergency department. In addition, physicians may be in different places from day to day. From a workflow automation perspective, this creates significant challenges because there is no "location" to re-engineer and automate.

However, information is a common denominator that drives medical practice. Physicians are information workers, and information drives everything they do. Most of what they produce is also information—for example, information drives decisions, which then lead to orders. By focusing on the information part of a physician's workflow, more effective means to enhance workflow—and in turn productivity and efficiency—become more apparent.

For example, providing physicians with real-time clinical results using a variety of handheld, portable and desktop devices offers information access solutions that are independent of location. Al-

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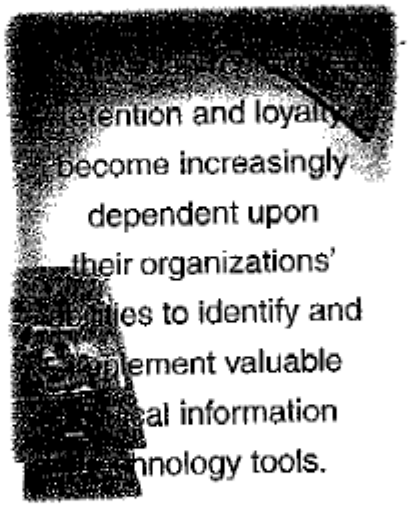
though overall capabilities vary for each device, the basic information that the physician relies upon is available for use on an "anywhere, anytime" basis.

Encouraging Physician Adoption

In addition, this information is presented in varying formats in response to the differing workflow requirements of the various settings of care (e.g., inpatient, emergency department or the physician's office). This kind of easy access to patient information, along with personalization through different devices, provides a clear benefit to physicians that will change their behavior and workflow. They will use the devices while replacing their old method of obtaining information (e.g., telephoning the laboratory) with the new method because it is faster, more reliable and easier to use.

In some instances, access to information is enhanced as clinical guidelines drawn from diagnosis-driven, disease-specific, evidence-based guidelines become easily available at the point of care during the treatment planning process. Unlike existing paper-based guidelines that have been published electronically, new forms of electronic guidelines can be embedded in the workflow applications to interact with physicians, providing guidance and feedback at the point of care on the key clinical issues at hand.

These smart guidelines process existing clinical information through rules engines to present only the information that is valuable at the time of decision-making. This eliminates the searching required by simplistic, electronic guidelines drawn from paper-based content that present only clinical information in bulk, text form. The interactive nature of these new types of guidelines, coupled with their links to clinical content in the traditional reference format, presents to the physician a robust clinical decision support system that is both effective and easy to use.



Tool Selection

Healthcare executives must recognize that physician leadership now demands sophisticated clinical information technology tools. Smart executives will tap into the expertise and insight of physician leaders as they plan to expand clinical information technology in their organizations.

In addition, these executives understand that physician recruitment, retention and loyalty become increasingly dependent upon their organizations' abilities to identify and implement valuable clinical information technology tools. As they did with CT scanners or MRIs, physicians will choose institutions based upon the availability of the IT tools they deem to be critical to their work.

Quality of care is not only a marketing issue, but an ethical issue as well. Organizations are expected to have processes in place that reduce variability and deliver safe care. Providing clinical information technology tools that engage physicians and help them utilize evidence-based guidelines in their treatment planning can help to address patient safety while better managing limited resources through the reduction of waste.

Lastly, the right tools for the job are solutions that engage physicians by respecting their workflow before seeking to enhance it. Anywhere, anytime access is no longer a distant future deliverable. Web technology and the rollout of broadband wireless networks make real-time, widespread clinical information access for physicians a deliverable today. These capabilities provide enormous benefits to physicians and the patients they treat.

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