



## **The Changing Face of the Medical Community Online**

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RT Image

America ranks as the world's largest and most costly healthcare system. And because of this, it faces unique requirements in terms of information accessibility and reliability, as well as security and confidentiality, which, until recently, have been largely unaddressed via the potential of the Internet.

And, while each sector of the medical community – physicians, hospitals, patients, medical associations, institutions and healthcare manufacturers – is critically important to the other, the industry remains largely fragmented and has yet to fully apply the Internet to make the essential connections that will ultimately contribute to enhancing patient care.

Radiological medicine is recognized for a staggering array of breakthroughs in diagnostic and management technologies. In the wake of such advancements, one cannot help but appreciate the irony in the observation that the healthcare industry continues to be viewed as lagging behind others in the application of information technology (IT).



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Recently, there have been signs that there is a shift in mindset as healthcare decision makers such as physicians, hospitals, insurers, medical organizations and government agencies turn their focus to IT as a way of improving patient care and driving considerable cost savings. Advancements in portable computing and wireless communications have opened up new options for using and sharing medical information more efficiently.

### **The Need for a Medical Community Online**

For radiologists and imaging specialists specifically, challenges, such as collaborating with colleagues and sharing diagnostic results and image-rich files from remote locations, have been surmounted by the introduction of digitized file formats and new methods of online file transmission. And while most of today's radiographic images are now digitized, issues, such as patient confidentiality, file size and complexity and network fragmentation, continue to present very real limitations.

Although electronic file sharing is available within closed hospitals and many clinic-based networks, individual or "out-of-network" clinicians have very limited or no access at all to virtual private networks or secure extranets for reviewing and/or transferring files.

In fact, a significant percentage of non-institutional hospitals still lack the ability to leverage technology, such as viewing and sharing diagnostic information online, thus causing very real delays in access and treatment. Additionally, the growing trend of hospitals outsourcing radiology services to clinics or independent imaging centers and the need for seamless connections to multiple remote constituents becomes even greater.

While the medical community continues to address HIPAA and FTC regulations, the introduction of the Internet into this equation further complicates the matter. For example, members of the radiology community may send HIPAA-protected information within the body of e-mail messages without fully realizing how easy it is for this content to be viewed by others.

### **A Domain for the Medical Community**

Educational institutions (".edu"), governmental agencies (".gov"), and non-profits (".org") have enjoyed their own Internet domains or communities for years and the introduction of subject-specific vertical segments, such as ".travel," ".jobs," ".museum" and ".info," are now taking on new meaning for organizations and individuals seeking to use the power of the Internet to maximize search, make meaningful online connections, and go beyond static content. While there is an ever-increasing number of healthcare and medical-related Web sites, a unique online destination (or domain) for the medical community has, until recently, not existed.

The December 2005 launch of the medical domain ".md," focused specifically on the medical community, is a good example of the trend toward addressing the unique nature of the medical community online. This domain seeks to establish an Internet community for the benefit of all healthcare participants.

In the development of .md, the sponsoring organization conducted extensive qualitative and quantitative research, which revealed that the concept of a medical domain was desirable to physicians of all specialties, as well as to patients.

The .md domain provides a subject-specific vertical or domain that focuses on a specific category – in this case, medicine – with the ultimate goal of enhancing the quality and speed of patient care and access.

### **Secure Information Exchange**

The introduction of domains, such as .md, offers the imaging community, as well as other specialties, a more effective way to communicate and safer methods to use the Internet, potentially mitigating many of the unnecessary risks associated with transmitting patient-related information via the Internet.

Such domains also provide physicians with a HIPAA-enabled secure e-mail solution, allowing users to confidently share information and collaborate online while meeting the regulatory requirements for managing electronic patient information.

For the imaging community specifically, the introduction of an e-mail solution that allows for the simple and secure transmission of radiographic images, regardless of size or complexity, professional affiliation or geographic location is a tremendous advancement. Larger images are easily shared via a link to a secure online location, where recipients use encrypted password technology to easily download and view files anytime, anywhere, virtually eliminating the need for working with VPNs, extranets, CD-based or even film-based data.

### **Addressing Critical Issues**

Issues, such as those we've touched on, have understandably and justifiably contributed to the slow response of the medical community in fully embracing the Internet as a tool to enhance patient care. In order to provide a forum to further explore these important issues, the sponsors of the .md domain brought together a council of impartial, well-respected professionals representing medical academia, online privacy issues, medical education and informatics and industry leaders.

The goal of such a council is to advise and give voice to issues such as online security and patient confidentiality, effective communication and collaboration via the Internet and healthcare search in an effort to bring about positive and necessary change.

### **Paradigm Shift**

The continued prevalence of the Internet and the movement toward the digitization of healthcare clearly point to the need for authoritative and credible medical information, as well as flexible and secure technology to support related initiatives. Rising patient expectations, the emergence of portable health solutions and the ongoing trend toward electronic medical records indicate the inevitable migration of patient management and healthcare delivery activities to the Internet.

As the radiological community looks to the future, the intersection of broadband, consumer-driven health, online communities and rich content create a perfect foundation for the next generation of e-health, bringing not only fundamental changes but significant advancements to today's healthcare providers.

### **References**

1. Manhattan Research, 2004
2. Manhattan Research, November 2005
3. Registrations as of November 31, 2005.

Source: Data compiled by ZookNIC, 2005

**— David W. Dempster, PhD, is professor of clinical pathology at Columbia University College of Physicians and Surgeons in New York City. He is a member of the .md Online Medical Advancement Council. MaxMD ([www.max.md](http://www.max.md)) is the official provider of .md domain names in the United States. The company was founded in 2003 to develop a subject-specific Internet domain that addresses the**

***unique needs of the medical community. MaxMD also provides supporting services and Web-based resources designed to facilitate online peer-to-peer communication and patient health management activities. The .md Online Medical Advancement ([www.medcouncil.md](http://www.medcouncil.md)) collective has been created to give voice to many of the challenging Internet issues affecting physicians and their relationships with patients such as the accessibility and accuracy of online medical information, online privacy and healthcare search. Questions and comments can be directed to [editorial@rt-image.com](mailto:editorial@rt-image.com).***