

## Increasing Physician Satisfaction by Enhancing the User Experience

By Ping Zhang, Ph.D.

According to a recent analysis by PricewaterhouseCoopers, 79 million baby boomers will reach age 62 in 2008—just as most doctors near retirement age. Many medical organizations have said the physician shortage may reach 200,000 physicians by 2030, almost 25 percent of the current 850,000 practicing physicians. The worrisome news is prompting hospital administrators to rethink “physician loyalty”—a highly valued and sought after asset for financial survival—and to explore ways to minimize the impact on their own organizations and strengthen the often strained relationship between hospitals and physicians.

Administrators are acutely aware of the many factors that upset the delicate balance of physician job satisfaction and business profitability. These variables, certainly not new to anyone involved in healthcare, include declining insurance reimbursement, skyrocketing malpractice insurance rates, longer work hours, excessive bureaucracy, and technology frustrations.

Emerging market and lifestyle factors are heavily influencing today’s generation of physicians and their employment decisions. Because physician referrals remain mission-critical to a hospital or health system’s bottom line, examining these issues can help healthcare administrators justify providing a supportive environment in which physicians can build vibrant careers—and help solidify the hospital as the hospital of choice for their patients.

### Factors Challenging Physicians Relations

These current factors present the business case for orchestrating new ideas for improving physician relations, recruitment, and retention.

**Physician referrals.** Much of the physician’s business is based on referrals. A robust referring physician communication platform for consults and data sharing with referring physicians can grow patient volume and promote collaboration. High-quality customer service provided to the referring physician enables a more efficiently run practice on behalf of the patient. As patients increasingly gain access to provider performance and satisfaction data, communication with other network physicians becomes a critical step of the care process.

**Hospitals rule.** Physicians are moving to hospital employment, with many accepting the role of hospitalist. Two-thirds of hospital executives surveyed recently by PricewaterhouseCoopers’ Health Research Institute said their physicians now want to be employed by the hospital and nearly 75 percent say physicians are asking for on-call pay. Coincidentally, many hospitalists don’t have an office and are outspoken in their need to access patient data at their fingertips at any workstation.

**Specialty clinics.** Some physicians who aren’t of the “hospitals rule” mindset are setting up their own shops, bringing intense competition and more complex offerings to the market and putting a squeeze on hospitals.

**Data reporting.** External boards, such as The Joint Commission and state and national health committees, are pressuring administrators and clinicians alike to report quality outcomes more frequently, creating yet another workload burden.

**“Can I afford to be a doctor?”** This question is always in a physician’s thoughts and rightly so, given the rising cost of practicing medicine, the median physician income, and the risk of being sued for malpractice.

**Technology.** For physicians, it’s all about speed (time to data). Most doctors don’t care about the latest bells and whistles as long as the technology is shown to work correctly and consistently. They also want patient data and want it immediately.

**Work-life balance.** Physicians want to do the best job they can for their patients. That includes nurturing meaningful relationships—the top reason why they become healers. They also want to spend time with their families and enjoy a personal life away from work.

Addressing all those issues is unrealistic and can’t be tackled in a matter of months. It requires a well-thought-out plan and realistic project timelines. The good news is some of the more critical factors can be immediately addressed with Web service tools to help physicians make their work and personal lives more manageable. These tools offer an aggregate view of patient data that represents the latest technological development designed to help physicians spend more time focused on delivering patient care. This is a prime example of technology that contributes to a sustainable fiscal, IT, and physician-friendly business model.

### **Present Day Hospital IT Challenge**

From the ‘70s to the present, medical facilities have deployed multiple information management systems encompassing different clinical disciplines, often resulting in environments filled with outdated, non-interoperable legacy software. The outmoded data storage and lack of connectivity among dispersed systems has significantly hindered the dynamics of clinical workflow processes. Defined as a sequence of action steps or tasks, clinical workflow is paramount as the guiding principle driving the framework of a hospital’s technology infrastructure and evolving IT plans.

For physicians attempting to function in this less-than-ideal situation, the inability to view patient information archived in a myriad of software applications results in an incomplete picture of a patient’s medical record. This problem reduces physician productivity as (s)he struggles to gather information stored in network “silos.” Even worse, the lack of integration ultimately affects physicians’ critical decision-making skills, which can negatively influence a patient’s care.

Studies have found that healthcare providers end up spending up to a third of their workday searching for patient information. How does this happen? The physician workflow touches a broad range of applications, including patient history, medications, lab results, order entry, scheduling, and more. To access that data, physicians must launch each application, log in using a unique password, select a patient, and then begin the search for relevant patient data. This process is typically repeated five to 12 times per patient to access all the necessary information stored in the multitude of software applications. Additionally, the physician must wrestle with independent navigation and workflow schemes in each application. Now multiply this scenario by two or three to account for the number of hospitals that many physicians simultaneously support.

This disjointed process wastes precious physician time that could otherwise be spent with patients. Moreover, it can create security issues as physicians—tired of remembering passwords—begin

sharing passwords with others, creating generic group IDs, or even posting the password in an easily accessible physical location. Such behavior threatens system security and contributes to non-compliance with privacy regulations.

Additionally, many critical applications may not be remotely available via secure connections, contributing to discontinuity of care. This has become a growing issue as on-call physicians are asked to remotely provide consultations or review new admissions. Even inside the hospital, physicians may need to verify offsite patient test results, past records or scheduled specialist appointments to efficiently manage the patient's care. An intensivist, for example, would almost certainly rather view real-time patient data instead of having to walk to the Intensive Care Unit (ICU) or even drive to the hospital to download results. A similar scenario occurs when emergency room physicians treat walk-ins or new patients who arrive without records. Finally, many surgeons would prefer to remotely download (from home or their clinic) and study the pre-op status of the patient or, following surgery, check the post-op status.

### **Introducing Web Services for Patient Information Aggregation**

It's hard to imagine today's computer technologies without the Web, which has become ubiquitous because of its simplicity. Web services are a new breed of Web applications that make functional building blocks accessible, regardless of platform. These Web services can be new applications or just wrapped around existing legacy systems, and can rely on another service to achieve its goals.

Web services for patient information aggregation are proving to enhance physicians' workflow and their overall user experience. The services provide a unified view of a patient's medical record, regardless of where the data resides, omitting the need to move data from the native and legacy applications to a new repository.

Here's how it works: The Web service queries the organization's application mix for any information regarding a selected patient, encounter, observation, or custom subject. Within seconds, it contextually aligns the queried data, displays a unified view of the patient's record in a format conducive to the particular user's medical specialty and workflow, and makes that data accessible via a Web browser anytime and anywhere (e.g., in the hospital, physician's office, home, or other location).

Additionally, a subset of a patient's data can be securely delivered through the Web. This lets a patient log in, schedule appointments, view accounts, make a payment, enter insulin levels, update medical history with new medications, and provide insurance and other demographic updates.

To further streamline and optimize a physician's workflow, such Web services can easily leverage context management capabilities. Context management lets users choose a subject once in one application, and have all other applications containing information on that same subject "tune" to the data they contain, eliminating the need to redundantly select the subject in the various applications. In healthcare, an example of context management is when the physician changes patients or encounters in one application, such as an Electronic Medical Record (EMR), while simultaneously all other open applications instantly switch to the same patients and encounters. When the user further "drills" into the application to retrieve a test result or review a previous diagnosis, for example, all context-aware applications continue to drill-down, too, into the data in context with the user's requests.

This automated, dynamic system empowers physicians with real-time, context-sensitive data that helps them make safer, more informed clinical decisions, significantly reducing the risk of medical errors. Moreover, these specialized Web tools can help healthcare organizations leverage their Web strategies and investments in a meaningful manner for their clinician, business office, and patient populations.

Web services deliver, in a unified view, a knowledge-centric approach of the most relevant data that immediately lets physicians perform their role as care provider instead of an IT technician. Physicians immediately benefit from streamlined workflow and improved efficiencies with access to all authorized applications, independent of their location or platform. They no longer have to spend unnecessary time searching for information. Bottom line: This Web service strategy of vastly improving data access greatly enhances the physician user experience.

### **Open Platform Advantages**

Many hospital IT departments have resigned themselves to the domination of closed application vendors that promote a walled environment for organizations. These “turnkey” solutions often demand massive and expensive replacements of legacy systems that have yet to attain their much-promised ROI. Yet, on the market today are several solutions based on an open platform, all of which offer the ability to link distinct applications without incurring back-end trauma.

This capacity to incorporate existing systems into an open new platform minimizes the depletion of IT resources, and the drain on the corporate budget. It also provides a common front-end that’s familiar to physicians, which reduces the user learning curve and increases the speed of adoption of the new technology solutions. Another benefit of an open platform system is its ability to integrate with best-of-breed solutions that address your current and future expansion needs.

### **Clinical IT Best Practices**

Now, more than ever, healthcare organizations are adhering to evidence-based practice guidelines when deploying large IT projects to ensure adoption success and on-time completion. These best practices are recommended:

- Organize cross-functional teams to help uncover potential process challenges and help allay the concerns of individual departments.
- Explain the technology in terms of the benefits to each care provider. Describe the benefits with specific examples and illustrate those with a hands-on demo, if possible.
- Recruit one or more physician champions. Since many physicians look to their peers for recommendations about new health technologies, the fastest route to organizationwide adoption is to seed the environment with physicians who understand the solution, appreciate the new efficiencies, and can guide other physicians. Solicit the participation of these champions in the initial project planning and pilot rollout.
- Clearly communicate the IT pain points and how they’ll be addressed to the IT department and hospital administrators. IT personnel will see a drop in help desk calls related to password resets and changes to application access. Also, security will be enhanced by reducing dependency on individuals to maintain their passwords in a private, secure manner.
- Demonstrate the simplicity of good business sense. Explain that when a technology solution saves a physician up to two hours per day by reducing repeated logins and simplifying data access, this translates into increased billable hours and greater profitability for the organization and for the physician.

- Reiterate that the new technology solution is in the best interest of the patient. Physicians and hospital administrators are dedicated to providing the best patient care possible. Web-based tools let physicians quickly access all patient information, ensuring that care decisions are based on the most complete medical information.
- Carefully evaluate phased (incremental) rollouts vs. enterprisewide deployments. The decision to select either deployment option should take into account the hospital's IT environment, available resources, anticipated timelines, and organizational priorities. Some organizations may prefer sequential deployments to gain acceptance and build on implementation success. Enterprisewide deployments deliver a holistic solution that supplies a turnkey, full-featured experience—addressing all user needs at once, including speeding user approval and adoption. Furthermore, greater ROI can be gained with full deployment across all business units.
- Closely examine the financial resources and timeframe required to integrate (or aggregate, depending on your solution) custom applications with current solutions.
- Secure executive buy-in. This is as critical to a successful deployment as the participation of the physicians and staff.

## Conclusion

Web service solutions have delivered tangible results, including greater profitability for hospitals. A compelling consideration motivating organizations to finally move forward is the reasonable cost and implementation timeframe of the open platform of Web service solutions. Instead of facing a multi-year implementation schedule, IT departments can roll out these solutions in a matter of months and continue to leverage the installed legacy application base—minimizing new capital expenses.

Equipping physicians with the right Web service tools that simplify access to information can go a long way toward achieving optimum care management as well as physician workflow and job satisfaction. This win-win solution benefits all participants in the healthcare organization—physicians, IT, administrators and, of course, patients.

Dr. Ping Zhang, EVP and CTO, Carefx Corp., has more than 20 years of technology, software engineering management and business experience. He has held management and executive positions with organizations ranging from start-ups to well-known companies such as QuadraMed and Siemens.

Email: [pzhang@carefx.com](mailto:pzhang@carefx.com)

Website: [www.carefx.com](http://www.carefx.com)