



# DrFirst

A View On  
Collaborative  
Communication  
Technology in the Clinical  
Environment



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Consider a Common Scenario: A patient's lab results come back demonstrating a critical abnormal result. The patient's attending nurse walks the floor to locate the physician to take action on the lab. Unable to find the physician, the nurse pages the doctor. Hearing only the page, the physician is unaware of the nature of the problem and elects to finish a current task prior to responding. Thirty minutes elapse between initial receipt of the abnormal lab, access to the physician, and securing the physician's response as to how to proceed with care.

**Our Premise:** Collaborative communication technologies can have a substantial impact on transforming healthcare by dramatically improving the speed, safety, precision, and efficiency of the interactions amongst care team members and between healthcare facilities.

## **A View on Collaborative Communication Technology in the Clinical Environment**

The landscape of the American healthcare system is changing. Demands placed on healthcare providers will explode with the combination of a rapidly ageing U.S. population that will require increasing levels of medical care and the addition of millions of Americans in need of medical assistance following the implementation of the Affordable Care Act.<sup>1</sup> The American healthcare system, as it currently exists, cannot expand rapidly enough to meet this increased demand in new patient services without bankrupting itself, as the addition of each new hospital bed currently requires an upfront investment of \$1 million in resources.<sup>2</sup>

New methods of increasing the efficiency of medical providers and facilities must be implemented in order to alleviate this strain on our future healthcare system. However, increasing efficiency does not have to come at the expense of providing high quality patient care and patient safety. In fact, increasing efficiencies through collaborative communication technologies can result in better health outcomes. The answer lies in providing healthcare professionals with technology that not only increases the speed and precision of their work, but also allows for more collaborative, coordinated and patient-centered care among care team members.

A growing number of experts agree that making smart investments in healthcare IT will be the easiest and most cost-effective way to increase efficiency while improving the quality of patient care.<sup>3</sup> Investing in new collaborative communication technologies specifically designed for the healthcare market can be simple, powerful and effective, and widespread adoption of such solutions will positively impact the healthcare landscape, including the betterment of protecting patient privacy.

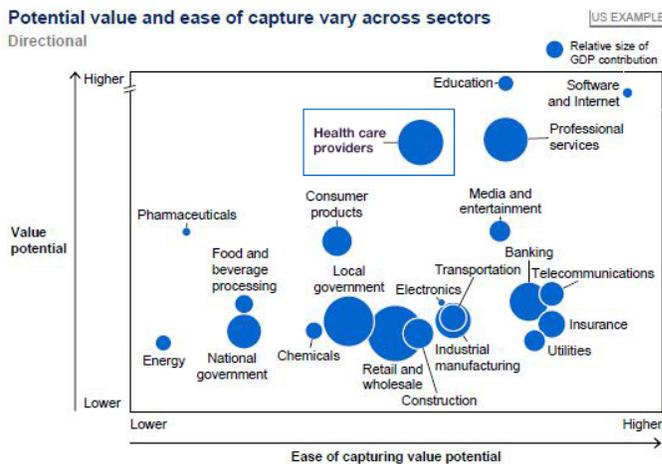
## **The Benefits of Collaborative Communication Technology in Healthcare**

In what will one day be seen as having happened in the blink of an eye, social communication technologies have transformed human culture. IT-enabled communities now boast some 1.5 billion members, globally. The impact of collaborative communication technology on industry will be equally transformative, and healthcare is near the top of the scale vis-à-vis its opportunity to increase productivity and care coordination through such tools.

Healthcare professionals understand that building and maintaining strong channels of communication is bedrock for providing quality care to their patients. Medical providers and their staff rely on each other to work collaboratively within care teams that encompass various specializations and expertise, as well as to maintain attention to detail to avoid adverse events. Unfortunately, according to the Joint Commission, 66% of all sentinel events occur due to breakdowns in communication between healthcare professionals.<sup>4</sup> The Joint Commission’s findings demonstrate that significant opportunity exists within the healthcare industry to improve communication capabilities and resulting health outcomes.

The McKinsey Global Institute estimates that embracing “social” communication technologies can help raise productivity levels for interaction workers by as much as 20 to 25 percent. When such tools are used by interaction workers within a collaborative work environment, dramatic increases in efficiency and productivity can be realized.<sup>5</sup> The McKinsey data below illustrates how the American healthcare industry stands to benefit from the increased use of these technologies in comparison to other industries.

## Social Communication Technologies



As the chart indicates, the healthcare sector has more to gain from investments in these technologies than almost any other industry, with only education and the software and internet sectors having a higher value potential. The data also illustrate that healthcare providers will be able to capitalize on the potential offered by adoption of such communication technologies more easily than workers in other industries.

Consider the hospital environment. Providers are highly-specialized and have increasingly specific roles in order to provide high quality, individualized patient care. Frequent medical needs in combination with knowledge of planned events such as surgeries, long-term patient therapies, maternity events, and the like can guide administrators in staffing and equipping the hospital around established expectations. Still, on a day-to-day basis, no hospital can predict with certainty the type of medical needs that will be presented, the volume of those needs, nor the order in which those needs must be met.

So beyond staffing and equipping the best-available doctors, nurses and techs across the right medical disciplines, the greatest opportunity to improve productivity, efficiency and health outcomes is to introduce new procedures and/or technologies that enable healthcare professionals to collaborate and communicate at a higher level. Thus, hospitals and the healthcare industry at large must seek out and embrace new capabilities that make collaboration and communication more timely, effective, and accurate.

## Privacy and Security Compliance

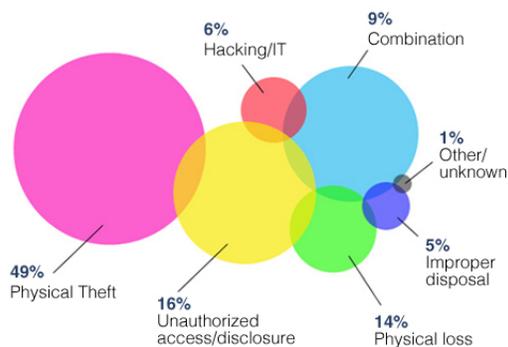
Given the exceptionally rapid personal adoption rates of social communication technologies, it’s no wonder that some 70% of physicians have employed common email, text and instant messaging tools to communicate and collaborate with colleagues.<sup>7</sup> Yet, use of these technologies is putting hospitals, practices and other healthcare organizations at risk for severe penalties.

Integrating new health IT within the healthcare workspace and the clinical workflow comes with numerous challenges. Of primary importance is the need to secure protected health information (PHI), now governed largely by privacy and security rules asserted through the Health Insurance Portability and Accountability (HIPAA) Act and the Health Information Technology for Economic and Clinical Health (HITECH) Act. Beyond the individual desire of ethical providers to protect their patients, penalties arising from violation of these privacy and security rules are serious and costly.

The data below, from the U.S. Department of Health and Human Resources, demonstrates the leading causes of HIPAA violations. The most common breaches – physical theft, unauthorized access/disclosure and physical loss – affirm the necessity of a secure digital system for sharing and storing PHI within the clinical environment.

## HIPAA Violations

Type of Breach and Number of Instances



SOURCE: U.S. Department of Health and Human Services Resource Services; SoftwareAdvice.com 8

Numerous companies have now created messaging tools designed to meet requirements under HIPAA and HITECH, largely informed by these privacy rules' PHI protection standards, encryption and authentication requirements, and security protocols. This is a step forward.

However, the simplistic perspective of ensuring a certain level of secure data transfer combined with the applied marketing moniker of "HIPAA-compliant" does not guarantee the appropriate protection of PHI nor does it address the tremendous opportunity to enhance productivity through the use of social communication technologies within the clinical environment. Organizations seeking merely to guard against privacy and security violations should be mindful that none of these tools are "HIPAA-compliant" in and of themselves; rather, it is the appropriate use of and macro processes surrounding such tools that enable a real path to HIPAA compliance.

## Akario Secure Exchange Suite

Realizing the opportunity for both increased productivity and PHI protection through the deployment of new, collaborative communication technologies within the healthcare setting, DrFirst developed the Akario Secure Exchange Suite<sup>SM</sup> – software tools that make vital communication between care providers immediate, easy, information rich and secure. Further, since the Akario Suite was developed specifically for healthcare providers, each product has built-in features designed to boost communication efficacy, efficiency and productivity within the clinical environment.

The Akario Secure Exchange Suite includes Akario Mail<sup>SM</sup> secure email, Akario Backline<sup>SM</sup> secure chat, and the Akario Enterprise<sup>SM</sup> administrator control dashboard, as well as the open API, Akario SR<sup>SM</sup>, which enables integration of secure messaging capabilities within the workflow of EMR, EHR and HIS systems.

Akario Mail software allows physicians, nurses and authorized staff to electronically send patient medical information (up to 20 MBs of data per email), including medical records, x-rays, labs, pictures, audio or video files, or virtually any patient document in any format (including PDF and JPG), to authorized recipients inside or outside their facility or practice. This is particularly valuable in helping medical providers coordinate with specialists or follow-up care providers inside and outside of their practice, facilitate information transfer related to hospital admissions and discharges, and foster better continuity of care across a patient's circle of caregivers.

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Akario Backline is designed to facilitate immediate contact among colleagues regarding patient care in progress, particularly but not limited to acute care situations. This secure chat or instant messaging platform is accessible via web, iPhone or Android, and supports WiFi and 3G/4G to ensure connectivity from virtually any location. It allows authorized users to communicate in a variety of customizable forums, including one-on-one private chats as well as multi-participant chats within or across medical disciplines. An additional critical advantage of Akario Backline is its patient-centered chat mode, which enables caregivers sharing a common patient – be they authorized physicians, nurses, technicians, therapists, etc. – to participate in a secure communication thread about that particular patient. Within the application, the care team can also attach, transfer and review patient records, CCDs, photos, x-rays, labs or any pertinent document up to 20 MBs in size. As such, the care team supporting the patient can freely and securely share current patient data, facilitate medication orders, review and respond to labs, request consults, or access historical data about the patient, thereby measurably increasing information access, communication efficiency and opportunities for collaboration in service to the patient.

Akario Enterprise is the dashboard console that enables authorized facility administrators and practice managers to oversee and govern their organizations' use of Akario Mail and Akario Backline. Akario Enterprise allows the administrator to easily on-board, authorize and de-authorize users on demand, manage user accounts and privileges, delete or recover individual messages, and send “broadcast” messages or materials to large numbers of users simultaneously. Most importantly, Akario Enterprise is the root to managing the archiving, retrieval and audit support of the data and PHI created and/or communicated via Akario Mail and Akario Backline. This storage and auditing capability is also a critical component of the privacy rules enacted through HIPAA and HITECH.

Let's re-consider the common scenario illustrated at the beginning of this paper. Now empowered by a robust collaborative communication technology, the attending nurse has several more available options in reaching the physician and addressing the patient's needs more efficiently. Using Akario Backline the nurse verifies the on-duty status and availability of the doctor. The nurse sends the physician a chat message, summarizing the critical lab and attaching the results document for the doctor's review. The nurse is notified that the message has been received, and again when the physician reads the message. Thus within just a few minutes the nurse is freed to pursue other tasks and the physician is empowered with all of the information necessary to prioritize and render a response. Further, that communication is securely archived, searchable, retrievable, and can be added to the patient's medical record.

As currently available, the Akario Secure Exchange Suite represents a significant advance in collaborative communication technologies for clinical care, particularly because these applications are not driven simply by a reaction to government regulation but by a passion for enhancing care coordination, communication and collaboration to deliver better health outcomes. Moreover, future releases of the Akario Suite will be centered on driving greater collaboration and higher productivity features that touch providers as well as patients, and capabilities that foster critical interoperability across healthcare organizations and through otherwise independent EMR, EHR and HIS systems.

As healthcare organizations begin to deploy such tools, it is critical that they do so strategically in service to better patient care. While government legislation created critical momentum toward and mandates for higher levels of security and patient privacy, these are just the baseline in considering the value potential of collaborative communication technologies. The true opportunity in the use of collaborative communication technologies lies in the improvement in health outcomes that will be fostered by a focus on increased efficiency, the ability to minimize communication breakdowns in clinical environments, and the enhanced collaboration and overall productivity that can be attained through such tools.

**We invite and encourage your feedback on this important issue. Please visit our blog post on this topic, and add your opinions and commentary to the dialogue: <http://blog.drfirst.com/secure-messaging/akario-backline/>**

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