

## Driving Business Value for Healthcare Through Unified Communications



Even the healthcare sector is turning to technology to take a 'connected' approach, as organizations align technology and operational needs to support and streamline information flows. A number of things are driving this transformation.

### Key Challenges Facing the Healthcare Industry

Some broad market forces and trends that are shaping the entire industry are impacting all the stakeholders. The healthcare industry has three different stakeholder groups that provide various kinds of services to patients. They include:

- Healthcare providers - hospitals, physician groups, clinics, etc.
- Life sciences companies - pharmaceuticals, bio-tech companies, etc.
- Payers - managed care organizations, insurance companies, etc.

The trends affecting the healthcare industry include changing demographics, an aging population, the increased demand for healthcare services, the need to improve patient safety and quality of care, rising costs, the need for greater collaboration and sharing of patient information, patient privacy and regulatory concerns, etc.

In addition to the broad market forces, each stakeholder group has its own specific set of challenges. For example, the healthcare providers are facing a shortage of clinical staff. The pharmaceutical companies are facing pressure from companies producing generic drugs and do not have the same robust drug pipelines like they used to have.

There has also been a lot of consolidation among healthcare payers over the last decade. For many of these companies, the costs of integration are higher than the benefits that they have been able to derive.

Currently, one of healthcare's biggest challenges is the excessive cost, time and error relating to administration and the exchange of basic information, which drives up the cost of patient care.

Cisco's research shows that approximately 33 percent of each healthcare dollar is spent on non-clinical patient care expenses such as determining patient eligibility, approving referrals, reporting test results, and paying claims.

In an attempt to improve information flow and knowledge, many healthcare providers have invested in technologies such as online order entry, electronic medical records, and picture archiving and communications systems (PACS). These applications usually support care within an organizational silo - such as a hospital - rather than being available across entire organizations and thereby creating an integrated network of care among physicians, health systems, and ancillary services such as laboratories and pharmacies.

In addition, healthcare communications are usually inefficient partly because practicing physicians tend to practice in groups that are very small, geographically dispersed, and unconnected. Most healthcare participants currently rely on paper and phone-based methods to exchange critical information, which result in errors and information bottlenecks, and causes delays in treating patients.

### **Communication Inefficiencies Impact Staff Productivity and Patient Care**

For nursing staff, communication inefficiencies are one of the biggest drags on productivity.

Nurses typically have to manage several station duties in addition to medical care. A regular duty is to coordinate with medical staff and doctors throughout their shift.

Typically, the staff that the nurse needs to coordinate with are very mobile. As a result, the nurse has to call multiple times or send out multiple pages. This means nurses spend a lot of time during their shift going back and forth to the nurses' station to manage routine communications.

In addition, nurses often need to locate experts, which can prove challenging.

The result is that nurses lose a lot of time in their shifts trying to manage communications. This impacts the amount of time a nurse has available to focus on patient care, and it has a negative impact on their satisfaction which indirectly impacts patient care.

Some interesting statistics from the Forrester survey that surveyed nursing supervisors and hospital administrators found that 65 percent of respondents said they spent 20-60+ minutes a day finding other staff members.

Another finding was that 54 percent of nurses said they could save 30-60 minutes per day if they could reach physicians on a single number on the first try and another 26 percent said they would save 15-30 minutes.

The report found that every minute engaged in tracking and locating others reduces a nurse's availability for the patient. This highlights a good opportunity where Unified Communications can help streamline communications, improve productivity and enable nurses to focus more of their time on patient care.

### **Unified Communications Leveraged to Address Key Healthcare Priorities**

Increasingly, healthcare providers understand that if they hope to optimize the delivery of services and reduce medical errors - they will need processes and technologies that help diverse entities to collaborate and communicate effectively. This creates an opportunity to leverage Unified Communications to address inefficiencies, streamline processes and workflows and enable business transformation, to help the healthcare industry manage rising costs and quality gaps.

The other consideration is that these objectives have implications on all functional areas across the entire value chain from Research to Operations, Delivery and Service, and translate into a set of top of mind issues in each area. (see Diagram 1)

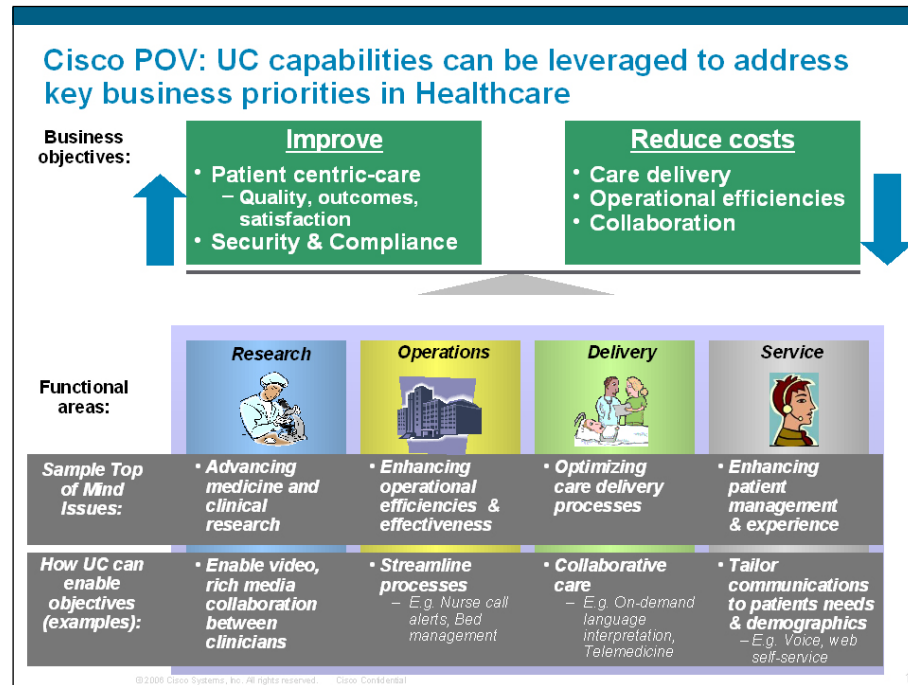


Diagram 1

For example, in Research, the focus is on developing new drugs or identifying new and effective therapies.

In Operations, the focus is on improving operational effectiveness, workflow efficiency and streamlining processes.

In Delivery, the focus is on optimizing care delivery processes and increasing the effectiveness of caregivers to improve the quality of care and patient safety.

In Service, the focus is on improving the patient experience and enhancing patient management, such as improving preventive, self-care, post-operative care, persistence and compliance with medications, disease management, automating tasks like prescription refill reminders etc.

Unified Communications can play a significant role in enabling business transformation and help address the key business priorities across the value chain like:

- Improving quality of care by eliminating communication inefficiencies and enabling collaboration e.g. video, rich media collaboration between clinicians, Telemedicine, On-demand language interpretation services.
- Enhancing operational effectiveness by improving staff productivity and workflow efficiency for processes like nurse call alerts, bed management.
- Improve patient management and the patient experience by enabling service excellence e.g. leverage Contact Center capabilities to tailor communications to specific patient needs and demographics.

## Transforming Healthcare with Unified Communications

Cisco's experience with customers who deploy Unified Communications are seeing business value from three key elements:

- **Cost savings:** This is a critically important driver of "how to pay for" Unified Communications deployment from an IT point of view.
- **Employee efficiency and productivity:** This is a soft benefit but a very important one to the business.
- **Driving Business Transformation:** Potentially the biggest driver of benefits with a concrete impact on business operating metrics like revenue, customer satisfaction, etc.

In Cisco's work done with healthcare providers, there is typically a diagnostic phase of the engagement where Cisco will conduct a set of interviews with key stakeholders. This would uncover a range of user issues and concerns, which is helpful to develop a framework to categorize the concerns so that appropriate solutions could be identified.

User issues tend to fall into four broad categories. They can be seen in Diagram 2 and include:

- **Personal productivity:** giving time back to clinicians so that they can focus more time on patient care and increase patient capacity.
- **Collaboration:** enhancing the richness and effectiveness of interactions between clinicians to help enhance patient care.
- **Mobility:** providing clinicians with all the necessary tools so that they can be equally effective when they are outside their office.
- **External stakeholder interactions:** providing capabilities to enhance the experience of patients, referring physicians, external research collaborators etc.

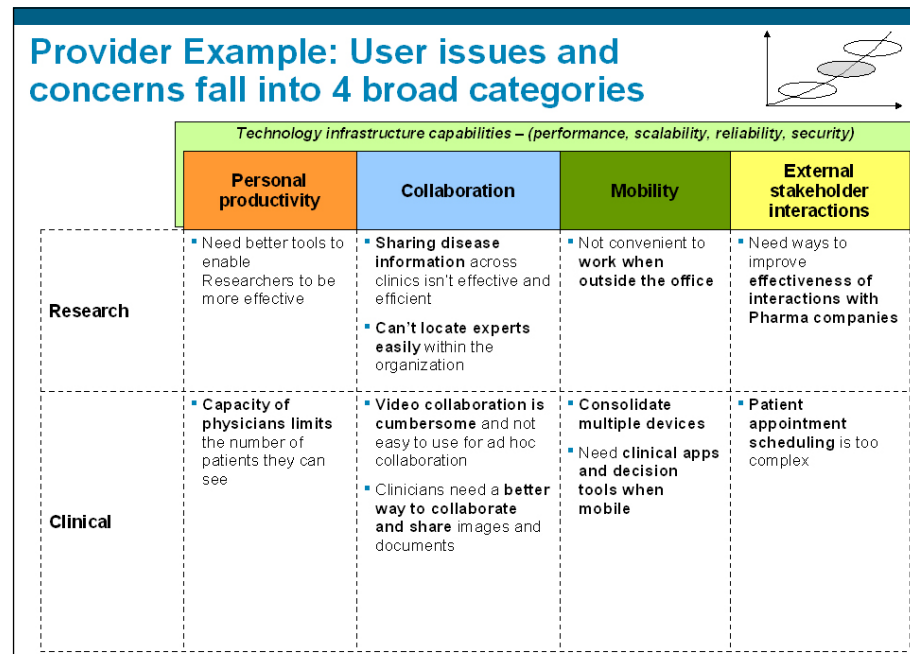


Diagram 2

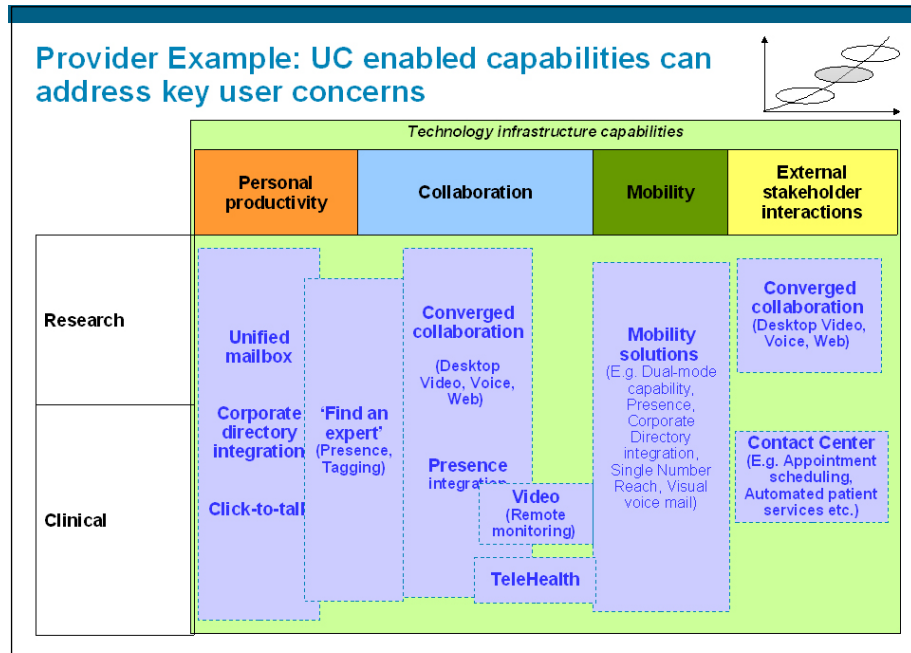


Diagram 3

Given these concerns, Diagram 3 shows the same framework as seen in Diagram 2, with Unified Communications capabilities added that can help address the user concerns

The business value that customers can enjoy when the productivity of clinical staff is enhanced with Unified Communications is illustrated in Diagram 4. Business transformation is achieved by improving collaboration between staff, reducing communication inefficiencies, streamlining workflows, enhancing the patient experience and promoting service excellence.

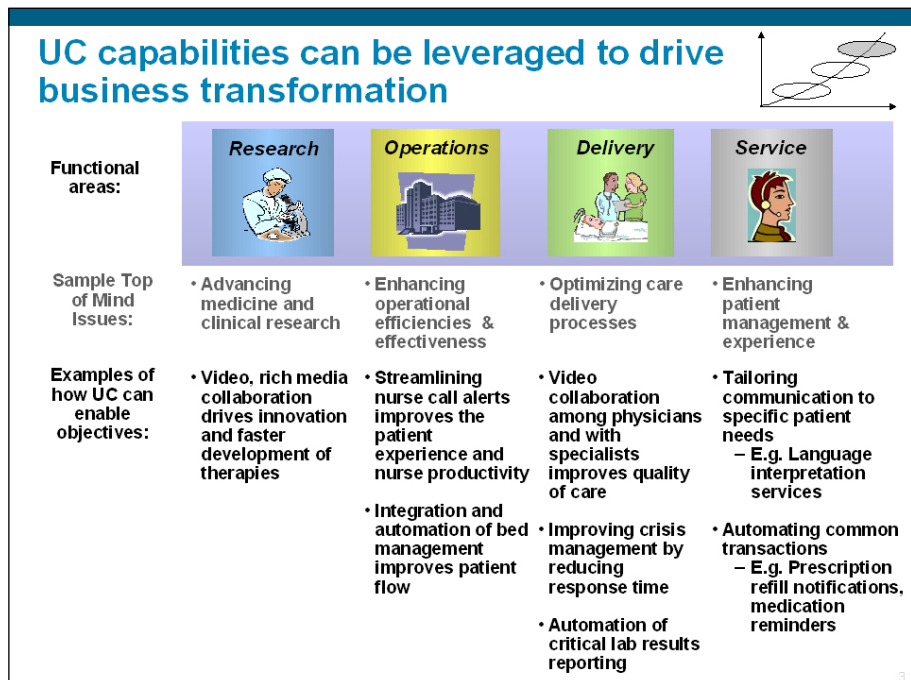


Diagram 4

**Example: Hospital Optimizes Patient Flow**

This is an example from an international hospital where the integration of a Bed Management system with Unified Communications has enabled the hospital to improve operational efficiency and patient flow.

The business challenges included inefficient communication and coordination among admissions staff, wards and hospital service staff with a lot of manual coordination required. As a result, patient waiting times were as long as 20 to 60 minutes based on the level of bed occupancy.

The hospital's customer goal was to streamline processes and create a "Hassle-Free Hospital" that could provide efficient patient care. Previously when a patient came in and had to be admitted, the admissions desk would have to start a phone call intensive process to find an available bed. A lot of manual coordination was required to communicate patient care arrangements to hospital service staff.

When the Cisco Clinical Connection Suite (CCS) and Unified Communications was integrated with Globestar Systems' Bed Management Unit, business transformation occurred.

The results and impact have been quite significant. There has been a 30 percent reduction in patient waiting times and improved patient satisfaction, as patients no longer have to wait for a fixed time to check in and check out. Instead, they can occupy a bed the moment it becomes available.

For the hospital staff, there is increased productivity and operational efficiency as the amount of manual coordination required between admissions, wards, and nurses when preparing beds for patients has been reduced.

**Example: Hospital Crisis Management**

This next example is of a large hospital that leveraged Unified Communications to enhance the quality of care by improving the speed of response during crisis situations.

Large hospitals can be spread out and it can take doctors and other caregivers a few minutes to get from one location to another. In a crisis or emergency response situation, every second counts. The key is to bring the emergency response team together as quickly as possible so that diagnosis and treatment can start as early as possible.

The hospital then integrated Cisco MeetingPlace with the existing telephony system, the PBX was integrated into the hospital wireless telephony system.

When there is a Code Blue or a patient emergency, the nurse can push a single button, record an emergency message and launch an audio conference. An emergency response team is pre-defined in the system and MeetingPlace automatically dials out and conferences in the emergency response team.

So while the caregivers are rushing to the patient's location they are briefed on the patient status so that diagnosis and treatment can be started as quickly as possible.

Using this solution, the hospital was able to significantly reduce response time down to 33 sec from the time of the emergency trigger.

## **Cisco Unified Communications for Healthcare Solutions**

Cisco enables a Connected Health community through interoperable processes, technology, and people to provide critical health information at any time from any location.

The Cisco Medical-Grade Network is an intelligent network that connects all of the stakeholders in the healthcare environment to a single information and communications infrastructure and delivers vital healthcare resources-anywhere, anytime.

Above all, the Cisco Medical-Grade Network is:

- **Resilient:** A highly reliable infrastructure with lifecycle support services to meet the challenges and continually changing business requirements of healthcare.
- **Protected:** Fully embedded network-wide security to provide comprehensive protection of information and applications.
- **Responsive:** Access to information at any time, from any location, through wireless-enabled and remote-ready applications and devices.
- **Interactive:** Converged voice, video, and data on a single system to dynamically connect in-house and remote medical staff

In collaboration with leading vendors of medical information technology, Cisco has built a portfolio of integrated solutions.

The Cisco Clinical Connection Suite helps clinicians and healthcare providers deliver significantly enhanced quality of care and services. The components include:

- **Collaborative Care:** Connects the right people with patient information in order to improve the time-to-treatment ratio and to facilitate access to the right specialists.
- **Location: Aware Healthcare-**Provides intelligence about the location of wheelchairs, IV pumps, and other mobile resources within a healthcare facility to streamline business and clinical processes and free staff, facilitating high-quality care.