



MITEL

Health Care Solutions

Rx for Improving Patient-Provider Communications

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Industry Diagnosis

While trying to deliver the best-quality health care to patients, providers continue to struggle with increasing budget constraints and spiraling costs. The trend shows no signs of stopping. According to a report by the National Health Statistics Group at the Centers for Medicare and Medicaid Services, costs for core health care services, such as hospitals and physicians, will increase by 6-7 percent annually until 2016, or about one to two percentage points more than the overall economy. Consequently, health care spending in the U.S. will nearly double and account for almost 20 percent of every dollar spent.

Cost is just one symptom of the overburdened health care system. The industry is also suffering from a shortage of skilled staff and fewer medical facilities. Compounding this problem are the millions of baby boomers rapidly reaching retirement age. According to a recent report by the American Hospital Association, the 65 and older population will nearly triple between now and 2030, with 6 out of 10 boomers projected to have more than one chronic condition.

Common challenges shared by medical service providers, related service organizations, manufacturers of medical equipment, payers and others within the industry include:

- Controlling costs and growing revenues
- Ensuring quality and patient safety
- Minimizing risk and complying with regulatory requirements
- Succeeding in an increasingly complex and competitive environment

Meeting Medical Challenges through Advanced Communications Technologies

Leading health care organizations today recognize that technology – specifically communications technology – plays a critical role in overcoming these challenges. Organizations are moving away from the “old school” view that communications is nothing more than a cost of doing business toward using today’s advanced systems to ensure business continuity, improve business processes and maintain a healthy bottom line. Communications technologies can be combined with electronic health care initiatives to automate medical processes, help medical staff become more efficient and provide increased mobility through remote patient monitoring capabilities. Other benefits include reduced medical errors, improved quality and cost reduction.

Traditional communications and information access has been limited to wired devices, severely curtailing the effectiveness of today’s highly mobile health care professional. Modern health care facilities require a more patient-centered approach that starts with a technology support infrastructure designed to aid health care professionals in the delivery of services. New means of communicating are possible by deploying an IP network enhanced by wireless technology. “Unplugging” health care staff from fixed devices and fixed workstations enables new ways of working, ushering in an era of access to information at the point of care, the patient’s bedside. Wireless devices supporting both voice and data can transform how health care professionals carry out their roles by improving performance through increased responsiveness and accuracy.

Converged IP Networking

The convergence of voice and data communications through technologies such as Voice over Internet Protocol (VoIP) and Web services, enables access to information at the point of care and changes the rules of delivering health care services. Improved patient care and reduced communications costs are just two of the immediate benefits realized through the implementation of IP telephony:

- Network management is simplified and infrastructure costs can be minimized through a unified, holistic architecture that provides security, reliability, flexibility and reduced complexity.
- Computer Telephony Integration (CTI) between the phone system and applications, such as patient records, provides enhanced patient care management.
- Speech-recognition enables medical personnel to easily access and update patient information. It can also be used in clinical workflow systems to improve processes related to admissions and discharges to reduce bed blocking.

- Videoconferencing linked to a translation service bureau can be used to aid in the diagnosis of patients who speak foreign languages.
- IP telephony facilitates the trend toward remote monitoring of patients, enabling patient care to move from the hospital to the home.
- Security surveillance systems can be centralized over an IP network, resulting in enhanced security, improved response times, reduction in theft and vandalism, and reduced risk to patients and staff.

The multiple networks found in today’s health care settings – be it a single-practice office, diagnostic lab, or hospital campus – have the potential to be converged into one high-speed IP network hosting voice, data and a wide range of applications. The inclusion of wireless access points extends the network to provide mobility. The result is substantial cost savings, productivity gains, and new levels of flexibility and avenues of communication.

A Holistic Approach to Health Care Communications

Today’s progressive practices and providers use a wide variety of tools and technologies to facilitate communications. Information can be relayed and exchanged by instant message, e-mail, telephone, and audio- or videoconferencing. In addition, the concept of “presence” allows us to know ahead of time if someone is available to receive a message or take a call. It also lets us set up rules on how, when, where and on what devices we want to be contacted.

The ability to “unify” this plethora of technologies and applications is essential to keep pace with the demand for real-time communications and to address mission-critical business and patient needs. Unified communications is more than just an emerging IP application — it represents a new generation of sophisticated applications and services not previously available. Unified communications offer several benefits for streamlining communications:

Need	Objective	Mitel Solutions
Save Money	<ul style="list-style-type: none"> • Improve business processes • Reduce operational costs • Generate new revenue • Migration strategy to protect communications investment 	Unified Communications Solutions
Stay Connected	<ul style="list-style-type: none"> • Enable anytime, anywhere access and communication • Leverage distributed workforce • Reduce mobility costs 	Mobility Solutions TeleCollaboration Solutions
Excel in Customer Service	<ul style="list-style-type: none"> • Improve patient service levels • Attract, retain patient client base • Meet corporate governance and regulatory compliancy requirements 	Customer Interaction Solutions Managed Services Solutions
Be Green	<ul style="list-style-type: none"> • Reduce energy costs • Minimize carbon footprint 	

With unified communications applications, health care providers can streamline business processes by integrating effective communication and collaboration solutions including messaging; voice, video and Web conferencing; and unified communications clients. These standards-based applications integrate with business tools such as Microsoft® Outlook® and IBM Lotus Notes®, tying together applications with a simple user interface.

The Right Prescription: Mitel Portfolio Guide for Health Care

Mitel provides the health care industry with a unified approach to communications, featuring a host of converged communications platforms supporting integrated IP-based applications that address specific business processes including growing revenue, controlling costs, succeeding in an increasingly complex and competitive environment, ensuring quality care and patient safety, minimizing risk, and complying with HIPPA and other regulatory requirements.

Our unified portfolio of Health Care Solutions delivers advanced communications and a number of deployment options that help improve customer service, and optimize operational productivity and costs for organizations of any size. The foundation of these solutions starts with Mitel's open-standards, IP-based communications platforms and applications that can be tailored to meet the specific challenges and needs of the health care industry. With the emergence of IP communications and next generation networks, open standards like Session Initiation Protocol (SIP) are further improving compatibility between systems, networks and devices to provide users with more choices.



Mitel 3300 ICP (10-65,000 users)

The Mitel 3300 IP Communications Platform (ICP) has a unique architecture to support traditional and IP communications, fixed and wireless, allowing health care facilities to benefit from IP communications while protecting their investment in traditional telephony. The 3300 ICP has a range of embedded features including voice mail, auto attendant, recorded announcements, call recording and MOH to provide a simple, easily managed solution.



Mitel SX-200 ICP (up to 600 users)

The Mitel SX-200® IP Communications Platform is an expandable, feature-rich communications platform with the option to add features and functionality as your requirements change.

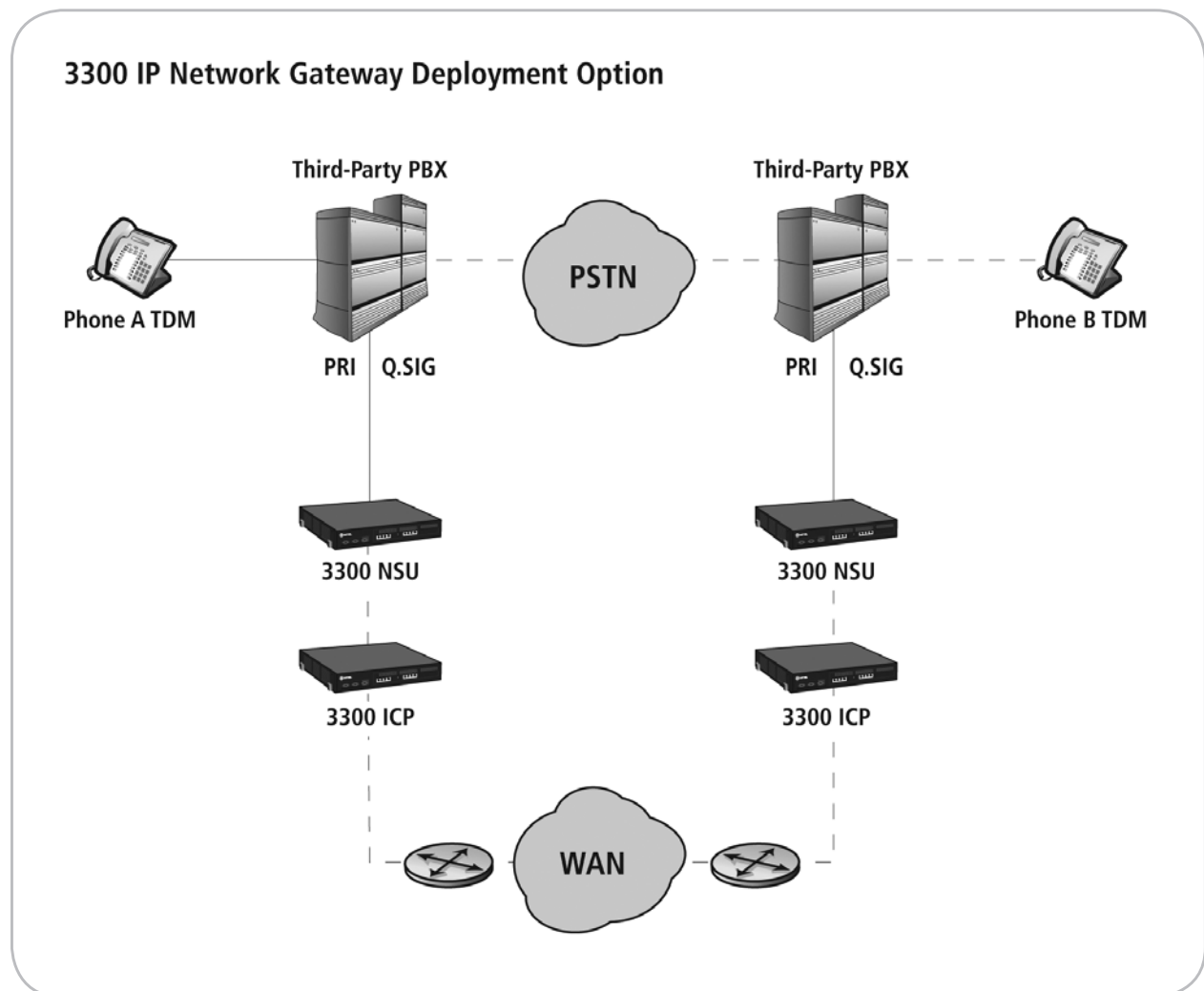


Mitel 5000 Communications Platform (up to 250 users)

Offering advanced multimedia communications capabilities and substantial cost savings for facilities with up to 250 users, the Mitel 5000 Communications Platform (CP) is based on open architecture interfaces and standard protocols for flexibility in tailoring a system to suit your dynamic needs.

Where distributed, multi-facility health care providers have separate voice and data infrastructures, there is an opportunity to improve communications, simplify management and reduce costs by converging voice, video and data on the Wide Area Network (WAN). IP networking is a more efficient and flexible way to transport voice and data traffic, especially where MultiProtocol Label Switching (MPLS) is employed. MPLS delivers the Quality of Service (QoS) needed for real-time voice and video. This can be done by swapping out the whole voice infrastructure (big bang), or deploying network gateways (progressive migration).

Mitel's innovative architecture allows the Mitel 3300 IP Communications Platform (ICP) to support legacy and IP pure communications "in the box," making it ideal for deployment as a network gateway. Distributed health care organizations can progressively integrate voice and data onto a single IP network without a fork lift upgrade.



Challenge 1: Improve the Patient Experience

Need	Mitel Solutions	Solution Benefits
Improve patient service levels	<ul style="list-style-type: none"> • Mitel Contact Center Solutions • Mitel Business Dashboard • Mitel Customer Service Manager • Mitel Intelligent Queue • Auto Attendant with Multi-Language Support • Mitel Unified Communicator Advanced • Mitel 5300 Unified Communicator Express • Mitel 5300 Intelligent Directory • Mitel 5300 Intelligent Directory Presence Option • Mitel Audio and Web Conferencing • Mitel Group Directory* 	<ul style="list-style-type: none"> • Extend hours of operation to 24/7/365 so patients can access services on their own schedule without requiring additional staffing • Increase communications and service levels with multi-language capability • Leverage speech recognition capabilities to automatically greet and route callers to appropriate team members and resources • Reduce and/or eliminate hold times • Automatically route callers to the next available or most appropriate customer service resource
Support first-call issue resolution	<ul style="list-style-type: none"> • Mitel Contact Center Solutions • Mitel Attendant Console • Mitel NuPoint Unified Messaging • Mitel Enterprise Messaging 	<ul style="list-style-type: none"> • Streamline operations by enabling patient services agents to focus on solving patient issues • Reduce misrouted calls by enabling staff to properly handle and route patient inquiries • Provide transparent communications for remote locations, teleworkers and mobile employees • Handle incoming communications from multiple sources, including phone calls, e-mails, faxes, multi-media resources
Attract, retain patient/client base	<ul style="list-style-type: none"> • Mitel Contact Center Solutions • Mitel Attendant Console 	<ul style="list-style-type: none"> • Integration with existing customer databases to screen pop account information • Track patient histories • "At a Glance" directory of names, extensions and presence status for efficient call handling • Generate call logs so associates can return missed and abandoned calls

Challenge 1: Improve the Patient Experience cont.

Meet corporate governance and regulatory compliancy requirements

- Mitel Contact Center Solutions
- Record and monitor internal and external telephone conversations
- Scheduled or Criteria Based Recording (also known as service observe) supports applications where full time recording is not required
- Create and maintain a comprehensive Catalog database of recordings
- Permit authorized users to easily search for and play back recordings
- Store recordings on hard disk(s) for immediate on-line access
- Archive recordings onto DVD-RAM cartridges for long-term storage and playback
- Create and maintain a library database of easily searchable, previously recorded DVD-RAM cartridges

Leverage distributed workforce

- Mitel Teleworker Solution
- Mitel 5300 Series IP Phones
- Flexibility and familiarity using a standard Mitel IP Phone
- Transparent access to corporate voice and data services
- High levels of security
- Seamless integration with Microsoft® Windows clients for access to corporate data network
- Scalability with support for large numbers of remote workers
- Plug-and-work simplicity

*Customizable product



Mitel IP Desktop Applications

The Mitel 5300 Intelligent Directory provides a simple, intuitive on-screen searchable directory of both campus (Microsoft® Active Directory®) and personal contacts (Microsoft Outlook®), and includes presence information for the entire directory list right on the phone's display.

Challenge 2: Increase Physician/Staff Efficiency and Productivity

Need	Mitel Solutions	Solution Benefits
Enhance patient care	<ul style="list-style-type: none"> • Polycom HDX and VSX Practitioner Carts • IgeaCare Nurse Call Systems 	<ul style="list-style-type: none"> • Real-time, interactive voice and video communication for maximum mobility and customized videoconferencing at point-of-care • Integrate features and functionality of nurse call, security, wireless, local and long distance into one system • Connect patients and caregivers in real-time
Mobility	<ul style="list-style-type: none"> • Mitel Dynamic Expansion • Mitel Teleworker Solution • Mitel Unified Communicator Mobile • Mitel Multi-Protocol Border Gateway • Cordless Handsets • Mitel Cordless Headsets 	<ul style="list-style-type: none"> • Leverage distributed and mobile workforce • Hot desk to any device, even those external to the corporate network • Make and receive calls from your office extension no matter where you are • Connect to any network, even third-party legacy networks • Twin to any number, device and network • Keep your existing legacy architecture (no rip and replace) • Reduce roaming charges by pushing calls to other devices without interrupting the conversation • Route all employee business calls through the corporate network • Use any brand and type of mobile phone without additional client software or hardware • Increase mobility support without the need for an additional server • Switch devices, networks, or communication methods with just one button • Maintain one voice mail box for up to eight devices • Leverage wired or wireless high-speed Internet access to deploy WiFi handsets

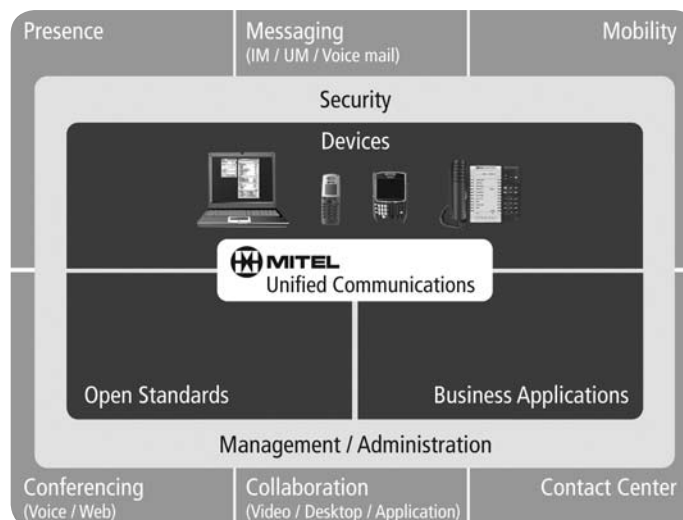
Challenge 2: Increase Physician/Staff Efficiency and Productivity cont.

Streamline communications

- Mitel Unified Communicator
- Mitel Contact Center Solutions
- Mitel Attendant Console
- Mitel NuPoint Unified Messaging
- Mitel Enterprise Messaging
- Mitel 5300 Intelligent Directory
- Mitel 5300 Intelligent Directory Presence Option
- Benbria BlazeCast
- Give staff immediate visibility into the status of their colleagues, anywhere on the network
- Centralize call services
- Reduce misrouted calls by enabling staff to properly handle and route patient inquiries
- Provide transparent communications for remote locations, teleworkers and mobile employees
- Handle incoming communications from multiple sources, including phone calls, e-mails, faxes, multi-media resources
- Searchable onscreen directory of both corporate and personal contacts
- On-premise alert notification and IP paging to reach thousands of recipients through phone, e-mail, SMS, loudspeaker paging and compatible Mitel IP phones
- Centralized contact management, administration, broadcast controls and reporting

Improve decision making and collaboration

- Mitel TeleCollaboration Solution
- Mitel Audio and Web Conferencing
- Mitel Unified Communicator
- Mitel Unified Communicator Advanced Collaboration Option
- Mitel Live Business Gateway
- Dual Forking with Remote Call Control
- PC-to-Phone
- Easy to use, scalable, cost-effective conferencing tools
- Allow medical staff in geographically dispersed locations to communicate more effectively
- Enable highly interactive online meetings, training and presentations
- Conduct conference calls "on the fly"
- Click-to-dial, incoming caller ID pop-up, PC-based missed calls and speed calls list
- Integration with leading business productivity tools like Microsoft Exchange®/Outlook and Office and IBM® Lotus Notes®



Challenge 3: Reduce Operational Costs

Need	Mitel Solutions	Solution Benefits
<p>Reduce communications and operational costs</p>	<ul style="list-style-type: none"> • Mitel Managed Services • Mitel Mobility • Mitel Application Suite • Mitel Contact Center Solutions • Mitel Attendant Console • Mitel TeleCollaboration Solutions • Mitel Call Accounting 	<ul style="list-style-type: none"> • End-to-end communications services including hardware and software; data networking solutions; managed network services; financing and service options; and third-party solutions • Eliminate communications-related financial risk and simplify planning and budgeting • Free software upgrades and guaranteed rates of expansion keep your costs down, even as capacity and functionality grow with your business • Significantly reduce mobile phone costs • Use choice of mobile or fixed device – no need for standardized devices or mobile device contracts • All business calls from mobile devices are routed through the business PBX and billed to the company while personal calls remain the responsibility of the user • Reduce the need for unnecessary corporate travel and related costs • Reduce/eliminate high costs of outsourced conferencing services • No limitations to number of conferencing hosts, no special event connection costs • No per user minute costs for web conferencing or charges for internal users accessing the audio conferencing bridge • International callers can be configured to call over the IP telephony network using least cost routing • Track, report and control telecommunication costs • Reduce network services by leveraging WAN for multi-location and head office voice traffic • Leverage LAN and WAN with IP connectivity and support for PMS, SMDR, call accounting and embedded messaging • Improve ROI with hosted solutions

Challenge 3: Reduce Operational Costs cont.

<p>Automate basic business processes</p> <p>Generate new revenue opportunities</p>	<ul style="list-style-type: none"> • Mitel Contact Center Enterprise Edition • Mitel Auto Attendant • Customized Interactive Voice Response (IVR) • 5300 Series IP Phones • Mitel Business Dashboard • Mitel Call Accounting 	<ul style="list-style-type: none"> • Customized integrations for customer relationship management (CRM) and workforce management (WFM) • Create customized on-hold messages to promote your business • Reduce/eliminate hold times with customized IVR greetings and menus • Enable DIY services for customer account management • Provide 24/7 access to customer account and other personalized information • Track effectiveness of marketing and ad campaigns • Monitor phone usage and establish call patterns for departments and work groups • Perform cost recovery and carrier bill reconciliation
<p>Simplify system administration and management</p>	<ul style="list-style-type: none"> • Mitel Managed Services • Mitel Applications Suite • Mitel Enterprise Manager • Remote Management 	<ul style="list-style-type: none"> • Single-point-of-contact for complete management of your communications infrastructure • Access to multiple sites and systems from a single interface, lowering business costs and increasing staff productivity • Reduced time and cost reduction associated with initial deployment and on-going management overhead • Select and benefit from a set of starter packages best suited to your business needs • Greatly decrease service costs by reducing engineer site visits • Drastically improve response times in resolving customer issues • Automatically forward system alarms to specific service providers
<p>Monitor and maximize resources</p>	<ul style="list-style-type: none"> • Mitel Contact Center Solutions • Mitel Business Dashboard • Mitel Call Accounting • Mitel Contact Center Phone Set Manager 	<ul style="list-style-type: none"> • Extensive custom reporting options for real-time visual of business performance • Skill-based and labor cost scheduling tools for more efficient, cost-effective staffing • Support for distributed, multi-site, virtual deployments • Optimize use of both employee and system resources • Monitor employee performance and identify opportunities for improvement • Identify opportunities for cost savings

Challenge 3: Reduce Operational Costs cont.

Reduce energy costs, be green

- Sun Ray™ Unified IP Client powered by Mitel
- Mitel Teleworker Solution
- Mitel TeleCollaboration Solutions
- Mitel IP Phones
- Consolidate mission critical voice applications such as messaging, mobility, conferencing and Microsoft® Office Communications Server 2007 in the data room environment
- Significantly reduce power consumption with need for fewer servers, and a combined 9W required to power the Sun Ray Thin Client and Mitel IP phone compared with 80W PC/60W laptop and 10W IP phones
- Reduce the need for unnecessary corporate travel and related costs
- Decrease facilities overhead by enabling employees to telecommute with full access to voice mail, conferencing and other features of the office phone system
- Manage all communications from one application with presence, instant messaging, telephony, video and messaging
- Manage electricity costs by providing telephony control to building lighting

Reduce churn

- Mitel Teleworker Solution
- Provide flexible working environment with telecommuting
- Empower medical staff to focus on helping patients
- Transparent access to corporate voice and data services
- Seamless integration with Microsoft® Windows clients for access to corporate data network
- Scalability with support for large numbers of remote workers
- Plug-and-work simplicity

Challenge 4: Maintain Business Continuity and Security

Need	Mitel Solutions	Solution Benefits
Mobility	<ul style="list-style-type: none"> • Mitel Dynamic Extension • Mitel Teleworker Solution • Mitel Unified Communicator Mobile • Mitel Multi-Protocol Border Gateway • Cordless Handsets • Mitel Cordless Headsets • Sun Ray™ Unified IP Client powered by Mitel 	<ul style="list-style-type: none"> • When medical staff can't get into the office, enable business continuity and employee productivity from anywhere • Leverage wired or wireless high-speed Internet access to deploy WiFi handsets • Hot desk into both Mitel IP phones and Sun Ray thin client terminals using a personal, authenticated Java Card for secure access to voice and data services at any workstation on the network

Challenge 4: Business Continuity and Security cont.

Call recording

- Mitel Secure Recording Connector
- Mitel Contact Center Phone Set Manager
- Implement call recording solutions without having to sacrifice the added security of voice encryption
- Conduct financial transactions safely and securely
- Record, retrieve and archive calls for documentation and follow-up
- Resolve issues quickly by discreetly monitoring staff/patient interactions

Emergency response

- Emergency Response Advisor
- IP Duress Alarm
- Zone based Paging and Mass Notification
- 5300 HTML Emergency Broadcast
- Malicious Call Tagging
- Security Call Box
- Record-a-Call
- SpectraLink Wireless Telephones
- Enable on- and offsite emergency notification and response, regardless of location at time of the event
- Pinpoint exact location of 911 calls to greatly improve response times
- Provide staff with the ability to generate silent alarms requesting security assistance
- Disseminate critical operating information to designated safety officials during an emergency
- Record, schedule and deliver simultaneous messages to all or selected phones and speakers across multiple sites
- Integrate the features and functions of emergency call, security, wireless communications and telephone services into one solution
- Develop customized HTML screen applications that interact directly with information systems databases
- Record, retrieve and archive all threatening incoming calls (e.g., security threats, angry employees)

Network security

- Mitel Managed Services
- Remote Management
- Mitel Management Access Point
- Full system replacement in case of disaster
- Notification for alerting service provider of alarm changes
- Screening of in-bound modem calls based on originating phone numbers
- Screening of Internet VPN tunnel connections based on originating IP addresses
- Inability to sniff, capture, or replay passwords
- MS-CHAPv2 forced for highly secure VPN connections
- Restriction of LAN access to select Mitel devices and ports
- Tracking of configuration changes during privileged connections

A Healthy ROI

There are few places in the world where communications are as complex – or as critical – as in a health care facility. Physicians, nurses and staff often juggle a number of devices to stay connected, including desk phones, PCs, cell phones, faxes, pagers and PDAs. Managing this complex web of communications can waste time, delay the transfer of critical information and leave patients dissatisfied with long waits and unresponsive staff. It can even result in medical errors that put patients at risk.

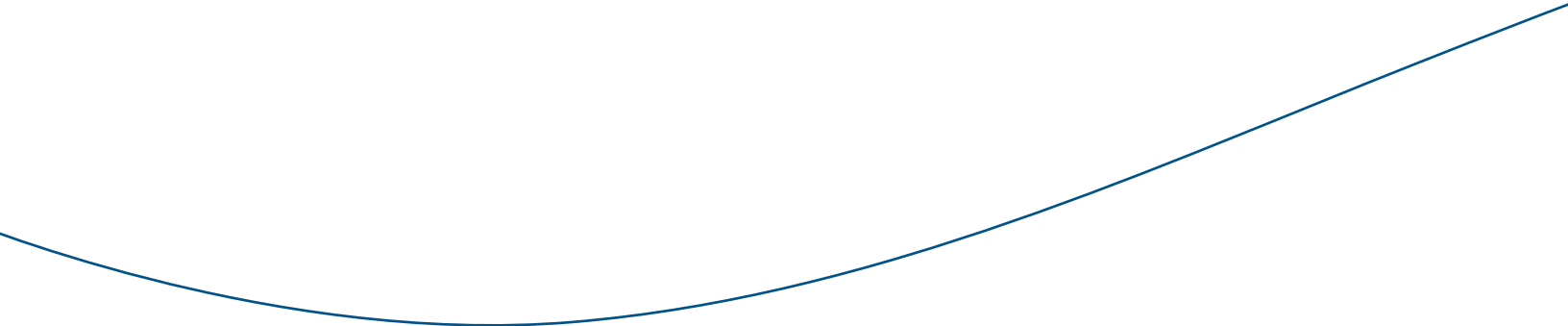
Mobile communications, remote monitoring and novel technologies present opportunities to create new models for health care management as the role of communication technologies continues to evolve. Technology in consumers' homes, an aging population, the rise of patients with chronic disease, a shortage of specialists, sharply rising costs, and patient demand for quality and convenience, are changing and shaping the future of a more cost-effective and efficient health care delivery system.

The delivery of health care services through communication technologies and other electronic health care initiatives yields a better return on time invested by patients as they maneuver through the health care system. Improving on this metric provides an enormous lifestyle benefit to patients and caregivers that, as interaction with the health care system becomes more convenient, may eventually translate into health benefits.

About Mitel

Mitel delivers flexibility and simplicity in smart unified communications solutions and applications for organizations of all sizes. Combined with a full range of managed services that include voice and data network design and traffic provisioning, custom application development, and attractive financing options, Mitel is reinventing how successful organizations gain competitive advantage by easily collaborating and communicating over distance and time with customers, colleagues and partners. Mitel's (www.mitel.com) US headquarters are in Phoenix, AZ. Global headquarters are in Ottawa, Canada, with offices, partners and resellers worldwide.





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