Vocera Integration Solutions: Leveraging Communication and Collaboration to Empower Clinicians

The Vocera® Communication System enhances the speed and simplicity of communication among teams of healthcare providers and hospital staff. The Vocera System software allows for dynamic mobile communication that instantly connects care team members to each other and to the patients they serve. Whether it’s a physician on a smartphone outside the hospital, or a nurse wearing a hands-free Vocera Badge within the healthcare facility, Vocera enables critical communication and collaboration that drives better outcomes and experiences for the patient and caregiver.

Hospitals can leverage their investments and amplify the benefits of their Vocera deployment through platform integration with a wide range of industry-leading clinical systems. Vocera partners with these clinical system providers to deliver integrated solutions that ensure the right information is delivered to the right care team members at the right time, on their device of choice.

Vocera Integrated Solutions

In hospitals worldwide, Vocera has been integrated into a variety of alarm, alert, and notification systems including:

- Nurse Call
- Patient Monitoring
- Patient Flow Systems
- Electronic Health Records
- Real-Time Location Systems
- Patient Experience Systems
- Supply Management

Vocera Integrates with more than 50 clinical systems. Visit www.vocera.com/partners for a list of integration partners.

Vocera Integration in Action

Common Vocera integrations include nurse call, patient monitoring, electronic health records, and patient flow.

**Nurse Call**

Nurse call systems provide a critical communication link from patients to caregivers. This link becomes even more important as hospitals are building larger units with more private rooms in a movement toward patient-centered care. The larger units and additional private rooms present logistics challenges, as it becomes more difficult to see patient rooms and to hear alarms from these rooms.

Community Heart and Vascular Hospital of Indianapolis, Indiana has integrated its nurse call system with the Vocera System. Prior to Vocera, a nurse would respond to a patient call light by physically walking over to the console at the nursing station, or by going into the patient’s room.
With nurse call integration, the patient’s request is sent directly to the Vocera Badge, providing instant notification. The nurse can choose to accept or reject the request, or can call the patient back directly at the pillow speaker. Using this integration, Community Heart and Vascular Hospital had a 40% improvement in care team response times, which has a direct impact on patient satisfaction scores. Additionally, the hospital is able to provide a much quieter, more healing environment due to a reduction in overhead paging.

**Patient Monitoring**

The Vocera System integrates with a number of real-time patient monitoring applications. For example, the University of Arkansas for Medical Sciences (UAMS) has established a successful patient fall-prevention program. As part of this program, UAMS integrated its fall alarm system with the Vocera System. When a patient identified as high risk for a fall attempts to exit a bed or chair, an alert is sent directly to the care team via a Vocera Badge or Vocera-enabled smartphone. As a result, UAMS realized an 11% reduction in falls and a 60% reduction in fall-related injuries. The hospital’s estimated savings in fall-related injuries in 2011 alone was $1.27 million.

Similarly, vital-sign monitoring systems in use at other hospitals worldwide are integrated with Vocera to send automatic alerts to the appropriate Vocera user when a patient’s vital signs move out of desired ranges (such as in irregular heartbeat or hypopnea). This integration can dramatically improve clinician response time, which improves patient safety and staff efficiency. In Troy, Michigan, Beaumont Hospital integrated Vocera into its telemetry response process and decreased its telemetry alarm notification-to-closure time from 9+ minutes to 39 seconds, with 100% of alarms having documented closure.

**Electronic Health Records (EHRs)**

EHR integration enables breakthrough workflow enhancements that drive efficiencies in many processes such as the delivery of STAT (urgent) orders, admission notifications, dietary orders, room cleaning requests, and transport activities. The EHR can trigger automated alerts to care team members on their device of choice based on pre-defined best practices for operational and clinical process optimization. The notifications can include a prompt to log into the EHR, or details of the order/request. By integrating Vocera with the EHR, hospitals improve collaboration and ensure that the right team member gets the right information, eliminating delays in communication. By reducing the number of times necessary to log into the EHR to look for information, hospitals boost care team efficiency while improving patient care, safety, and satisfaction.

**Patient Flow**

When the Vocera System is integrated with bed management systems, hospitals experience significant reductions in the time their patients wait for admission to a hospital bed, a transfer, or discharge from the hospital. St. Thomas Elgin General Hospital in St. Thomas, Ontario, Canada, has integrated both the Vocera System and Vocera Messaging with its admissions-discharge-transfer and bed optimization systems to reach its goal of reducing emergency department admit-to-bed time to 60 minutes. This integration has transformed the hospital’s workflow and processes, which has decreased the time patients spend waiting to be admitted or discharged. This improvement, in turn, translates into reduced length of stay and improved patient satisfaction.

The integration of Vocera with patient flow systems improves communication and prevents bottlenecks for patient transport as well. For example, Saint Barnabas Medical Center in Livingston, New Jersey automated their patient transport functions to intelligently and efficiently assign transport requests and connect management, nursing, and transport technicians with the right information via Vocera. Additionally, Toronto East General Hospital in Toronto, Ontario, Canada reduced the average patient transfer wait time from more than 60 minutes to less than 20 minutes through integration of its patient flow system with Vocera.
Other Clinical System Integrations
Real Time Location System (RTLS) integrations with Vocera provide a valuable way for hospitals to improve the tracking and safety of patients and physical assets by delivering alerts directly to the appropriate teams. Integration with interactive patient experience systems improves patient/care team communication, and enables staff to respond more quickly to patient needs and potential service recovery issues, supporting enhanced patient satisfaction.

Integration Methods
Vocera offers multiple integration methods to suit various workflow requirements. Vocera has established integrations with more than 50 clinical systems, and can partner with hospitals and providers of other systems to establish new integrations. The team of clinical and technical experts at Vocera can assist with detailed workflow design and implementation services to ensure hospitals achieve the most value from their integrated solutions.

Email
With simple configuration changes to the Vocera Server and email system, hospitals can enable the delivery of email messages from their clinical systems to Vocera users. For example, STAT orders, critical lab values, and requests for room cleaning or ancillary support services can be sent from the EHR to Vocera devices for response from the appropriate care team member.

Vocera Messaging Interface (VMI)
The Vocera VMI is an application programming interface (API) that enables direct intelligent two-way integration between clinical systems and the Vocera System. For example, VMI allows a nurse call system to send a message to a Vocera Badge or Vocera-enabled device, and to receive acknowledgements that describe the delivery status of the message, along with optional responses from the message recipient, including call-back to the patient’s pillow speaker.

Middleware
Vocera has established interoperability with popular middleware systems including Amcom Messenger, Connexall, EXTENSION, and Philips IntelliSpace Event Management (formerly Emergin). Middleware supports the delivery of alerts and alarms to the Vocera System and enables advanced workflow functionality, including user-initiated message escalation. If a Vocera user is busy with a patient, for instance, he or she can escalate a message to the next user in the Vocera group to ensure the request is handled in a timely manner.

Vocera Administration Interface (VAI)
The Vocera VAI is an API that allows the control and administration of the Vocera System programmatically through an interface other than the standard Vocera Administrator Console. Hospitals can integrate Vocera with enterprise applications to update Vocera groups with data from third-party scheduling systems, or manage Vocera users with data from HR or Active Directory systems.

Vocera continues to develop additional integration methods to provide flexible, feature-rich solutions for a variety of environments and clinical workflow needs.
Implementation Support
Vocera offers comprehensive professional services to support hospitals with the design, implementation, testing, and training needed for their integrated solutions. The team of clinical experts at Vocera combines proven methodologies with practical, real-world nursing experience to help develop alert and alarm workflows that ensure every integrated solution supports optimal staff mobility and efficiency. In addition, Vocera technical experts assist with system configuration and coordinate with the providers of other clinical systems providing hospitals with a seamless implementation process.

Reporting and Analytics
Information about external clinical systems that send messages to Vocera can be captured in a series of integration reports. These scheduled reports provide diagnostic, event and audit trail, and response, plus call duration information. These reports are available to help drive efficiencies and optimize clinical workflow.

Find Out for Yourself
To learn more about the Vocera System and how to integrate it with other clinical systems, contact your Vocera sales representative or visit our website at www.vocera.com/partners.

For More Information
Visit www.vocera.com, email info@vocera.com, or telephone 1-888-9-VOCERA (1-888-962-2372).