

Unify Care Teams for Patient Safety

Pager Replacement Best Practices to
Manage Change, Reduce Risk, and
Strengthen Safety



Are You Swapping One Communication Silo for Another?

The frustration and inefficiency of siloed, fragmented communication are well understood by care teams: Communication dead ends. Page-and-wait toil. Alarm and interruption fatigue. Not knowing who is contacting you or why.

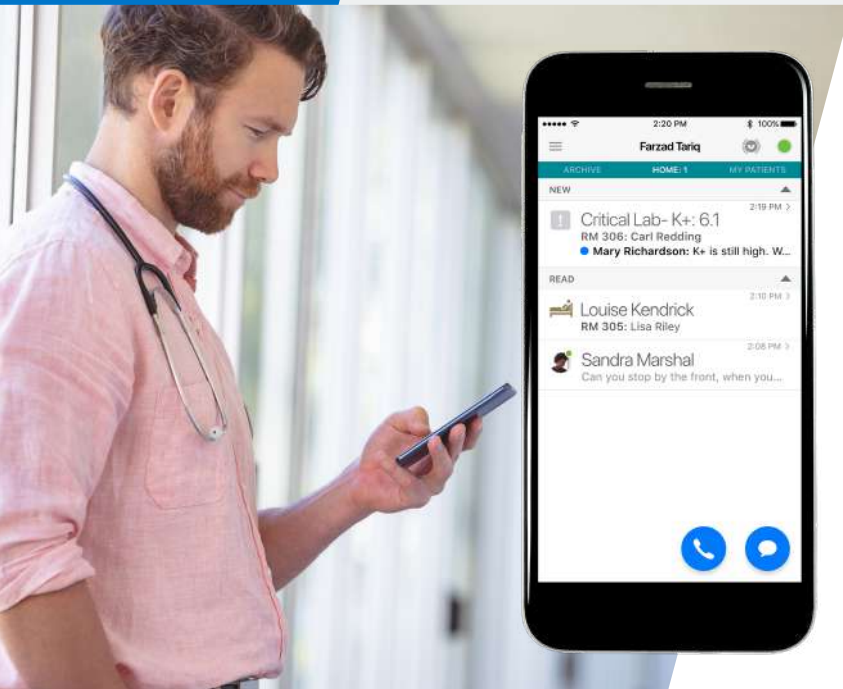
While plenty of information is available about why hospitals need to replace pagers, little guidance can be found on what should replace them, and how to replace them without putting patient and staff safety at risk.

Too many hospitals have replaced pagers with smartphones without first considering a clinical communication strategy that accounts for all the people and information needed to deliver patient care.

They end up with a fleet of expensive devices and a siloed messaging app. But they haven't solved the problem.

This guide outlines a four-part strategy for replacing pagers:

1. **Unify** communication to unify care teams
2. **Support** the transition to minimise risk
3. **Integrate and interoperate** with systems and devices
4. **Communicate** and share information easily



Unify Communication to Unify Care Teams

Forward-looking healthcare leaders know that replacing pagers is not just a matter of swapping a pager for a smartphone or messaging app.

They see an opportunity to upgrade or establish the very backbone of clinical communication in the hospital. They understand the role effective clinical communication can have in meeting mandates relating to safety and efficiency. They recognise the prospect of getting more value from their electronic medical record system (EMR) and other systems through interoperability. And they know that a clinical communication strategy must consider all the people involved in caring for patients and all the information that needs to be shared.

A strategy for replacing pagers (and siloed text messaging apps, for that matter) must address the three pillars of clinical communication in a holistic, consolidated way. The three pillars are:

- Voice communication
- Secure messaging
- Alarm notifications

The strategy must solve for a siloed, fragmented environment with support to manage change and minimise risk.

“Since implementing Vocera, we no longer have communication delays due to the ‘page and wait’ scenario.”

– Nick Roper, Clinical Director at North Tees and Hartlepool NHS Foundation Trust



Vocera Vina

Vocera Smartbadge

Vocera Badge

Consolidating Voice Communication, Secure Messaging, and Alarm Notifications

At Vocera®, we can help you integrate voice communication, secure messaging, and alarm notifications on a single platform along with on-call scheduling and a master directory to bring the whole care team together.

The Vocera Platform provides a holistic, flexible solution that can address your current clinical communication objectives and scale for future growth. We'll help you put an end to communication siloes and reduce your hospital's vendor footprint and points of security vulnerability.

Vocera delivers a unified software strategy that makes it easy for people to find each other and connect instantly inside or outside the hospital using the device that suits their role and workflow — smartphone, wearable Vocera Smartbadge or Badge, or desktop console.

Users no longer need to rely on call lists to reach colleagues. People can easily reach a patient's care team, add themselves to and remove themselves from communication groups, and arrange for a colleague to receive their calls and messages for a scheduled period.

“Being able to easily get ahold of the right person without having to find a phone number or walk around the ward has been enormously helpful. Vocera has certainly sped up the process of being able to reach the right people when we need to.”

– Bela Haria, Information Management and Technology
Senior Project Manager at Royal National Orthopaedic
Hospital NHS Trust

Consolidating Voice Communication, Secure Messaging, and Alarm Notifications: A Closer Look

Communicate by Name, Role, or Group

Communicate faster and more easily by using voice commands to call by name, role, or group across your hospital or health system using your smartphone or wearable device.

Our voice recognition engine understands more than 100 voice commands and incorporates regional accents.

For example, say “Call on-call cardiologist” to connect, or say “Send a message to radiology” to send a message from your Vocera smartphone app, Smartbadge, or Badge.

Comply with Security Requirements

Send and receive text messages in compliance with the Privacy Act 1988.

With our software, users can send messages without needing to know names or numbers, and have a patient-centred conversation with one person or a group. They can quickly access patient information and securely attach photos.

Help Reduce Alarm Fatigue

Receive filtered, prioritised alarm notifications.

Delivery of notifications is enabled by interoperability with your clinical and operational systems and according to rules your organisation sets.

Rules are configurable based on one or more factors such as the patient’s condition and the recipient’s role, location, and availability.

For example, a bed exit alarm can be analysed against a fall risk score and directed to a staff member based on location.

Reach Everyone You Need Easily

Synchronise staff assignments from a variety of systems you may already use such as electronic patient records, nurse call, and on-call provider scheduling, with our Dynamic Master Directory. Our platform knows who is responsible for each patient. A notification from a patient monitor or nurse call, for example, can be sent to the right care team member with context about the patient, care team, and event. If the primary recipient isn’t available, the notification is routed to the next person in the escalation pathway.



Manage Change While Minimising Risk

Some hospitals replace pagers all at once, and some replace them over time. It's not uncommon for a hospital to take more than a year to make the transition.

We can do whatever your organisation needs to manage change while minimising risk.

In a phased deployment, Vocera technology can interoperate with your existing telephony system and with call centre and paging solutions to allow people with and without pagers to communicate easily.

Our team of clinicians and support engineers can recommend industry best practices for managing the transition based on your hospital's current state.

Our clinical experts can evaluate existing communication patterns and workflows, and transform them into more effective call flows and workflows. We provide continual support throughout planning, implementation, and beyond to help ensure your success.

“The sentiment about Vocera among staff is very enthusiastic and positive. After we introduced the technology, we could tell that staff knew straight away how much it would help their work and make their lives much easier.”


– Susan Ievers, Head of Nursing for Child and Adolescent Mental Health Services at Sheffield Children's NHS Foundation Trust

Integration and Interoperability

When choosing a vendor to help you transition from siloed communication approaches, it's critical to select one that works well with other vendors in your ecosystem.

At Vocera, we can work with providers of on-call scheduling, call centre and paging operations, electronic medical records, and more.

Our platform can interoperate with third-party pagers and other legacy devices, and siloed messaging apps. This means that as you move toward a unified communication infrastructure, care team members using different communication tools like pagers, iPhones, Androids, desk phones, and web phones will be able to communicate with each other.



“We knew the Vocera system could help us improve communication and get rid of the need for relentless phone calls and bleeps. We looked at other communication technologies, but Vocera technology met all the requirements, including robust integration capabilities.”

– Susan Ievers, Head of Nursing for Child and Adolescent Mental Health Services at Sheffield Children's NHS Foundation Trust

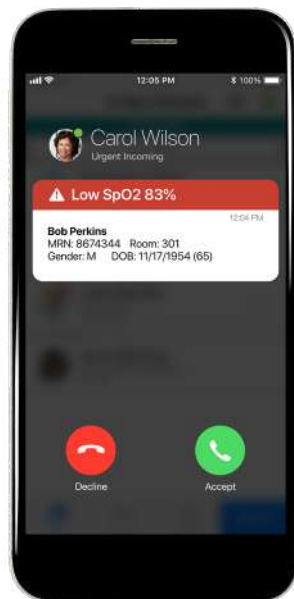
Get More Value from Your Investments in Clinical and Operational Systems

The Vocera Platform is interoperable with more than 150 clinical and operational systems.

Receive automated notifications from the EMR for events like new orders, critical lab results, radiology findings, high-risk admissions, pain assessment reminders, patient consults, room cleaning, and transport. Link your mobile EMR and Vocera apps to streamline communication. Synchronise EMR staff assignments in our Dynamic Master Directory.

In addition to EMRs, some of the most common systems and medical devices the Vocera Platform integrates with include:

- **Nurse Call:** Allow direct routing of requests to the right person with automated escalation.
- **Lab and Radiology:** Receive automatic, timely, closed-loop notifications.
- **Physiologic Monitors, Infusion Pumps, and Other Medical Devices:** Get filtered, prioritised alarm notifications.
- **Patient Surveillance, Fall Prevention, and Bed Alarms:** Receive warnings about patient deterioration, sepsis risk, and potential falls.
- **Patient Flow and Bed Management:** Get housekeeping and transport requests directly; make closed-loop status updates.
- **Emergency Communications and Building Management:** Send emergency and critical facilities-related communications discreetly.



Notifications from the EMR and from other systems and medical devices are delivered to the right person at the right time.

Addressing Patient Safety Mandates

Adhere to your Hospital's Sepsis Protocol

Mortality from sepsis increases by as much as 8% for every hour treatment is delayed.² We partner with providers of sepsis surveillance solutions to enable direct delivery of actionable sepsis risk notifications to the right care team member's mobile device or desktop.

Reduce Wait Times and Optimise Patient Flow

Reduce crowding and wait times and improve patient flow by using Vocera technology to help optimise bed management:

- Send bed request alerts from the electronic medical record (EMR) directly to environmental services staff on their mobile devices through two-way integration between the Vocera Platform and the EMR. Staff can easily update the status of room cleaning requests and bed availability in real time.
- Alert nurses when new patients arrive on the unit by integrating the TeleTracking patient flow solution with the Vocera Platform.
- Send patient discharge order alerts from the EMR to staff on their wearable devices or smartphones.



*Halifax Health
improved sepsis
mortality rates*

33%

*by linking its sepsis
early warning
programme with
Vocera technology.¹*

1. <https://www.vocera.com/press-release/wolters-kluwer-and-vocera-arm-halifax-health-rapid-sepsis-identification-solutions>

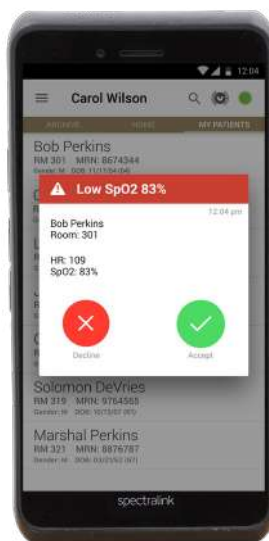
2. McGregor C. "Improving time to antibiotics and implementing the 'Sepsis 6'." BMJ Open Quality 2014; 2:u202548.w1443. doi: 10.1136/bmjquality.u202548.w1443, <https://bmjopenquality.bmj.com/content/2/2/u202548.w1443>.

Spotlight: Secure Messages and Notifications

“Vocera has been very successful – it’s allowing staff to instantly communicate with each other to provide the best patient care. It has removed the need to use desk phones or pagers because Vocera is immediate.”

– Viv Priestley, Urgent and Emergency Care Operational Manager at North Tees and Hartlepool NHS Foundation Trust

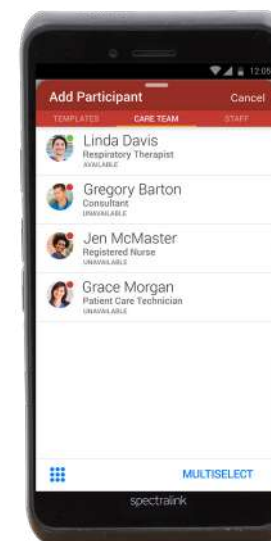
Care team members can receive patient, event, and care team context with calls, text messages, and alarm notifications. Relevant information like lab values, nurse-call data, sepsis risk indicators, infectious disease results, and more is included.



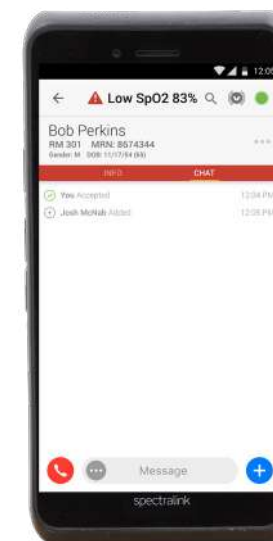
Receive alarm notifications with relevant information from multiple systems.



Access additional patient details from within a conversation or alarm notification.



View and add care team members.



See the full history of communication about the patient or event within a single conversational thread.

Choose the Right Device for the Role

“We spend a lot of our time in intensive care having conversations that are very crucial to patient outcomes. If there are obstacles to those conversations — communications delays, colleagues we can’t locate — it makes it harder to do our jobs. Vocera removes those obstacles.”

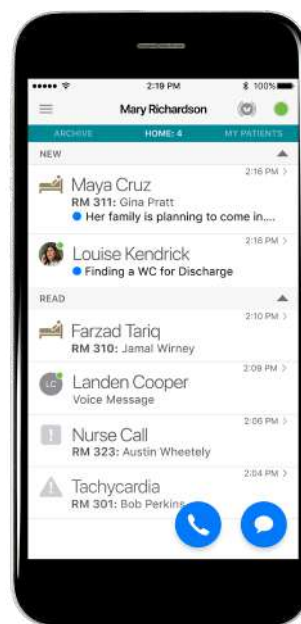
– Dr. Adrian Plunkett, Consultant at Birmingham Women’s and Children’s Hospital NHS Trust

Let clinicians and staff communicate using the device that fits the way they work — a hands-free Vocera Smartbadge or Badge, an iPhone or Android smartphone, a tablet for rounding, or a laptop or desktop workstation. Only Vocera offers users their choice of device.



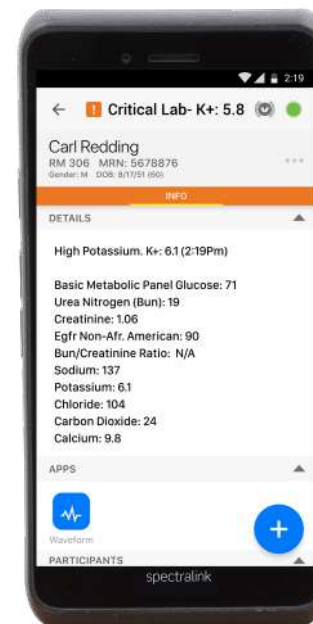
Vocera Smartbadge

A wearable device for users who need voice, text messaging, and alarm notifications with context about the patient, care team, and event.



iPhone or Android Smartphone

Smartphone software for clinicians who need to access clinical applications, scan barcodes, take notes, and perform other complex computing tasks. We support all deployment strategies, including BYOD.



Vocera Badge

A wearable device for users who communicate primarily with voice and need to receive basic text messages and alarm notifications.

Spotlight: Time Savings

The before-and-after scenario shown here is based on a workflow assessment in which a hospital reduced a communication workflow by more than six minutes. Effective communication adds up to well-documented improvements to hospital efficiency.

If your consultants could reclaim six minutes or more per communication, what would it do for your hospital's patient flow?

Vocera direct communication time: 1:15

PACU nurse sees patient's pain level isn't relieved by medication	Nurse securely texts or calls anaesthetist	Anaesthetist securely texts orders to nurse
0:00	0:15	1:15

Running time >

Page-and-wait communication time: 7:30

PACU nurse sees patient's pain level isn't relieved by medication	Nurse walks to PACU desk phone and pages anaesthetist	Nurse returns to monitor the patient	Anaesthetist calls back to PACU desk	Secretary puts anaesthetist on hold	Secretary notifies nurse while anaesthetist waits	Nurse walks to phone, receives orders from anaesthetist
0:00	2:00	2:30	4:30	5:00	6:00	7:30

Running time >



Royal National Orthopaedic Hospital NHS Trust

In 2019, Royal National Orthopaedic Hospital NHS Trust (RNOH) decommissioned pagers in its new, state-of-the-art Stanmore Building and replaced them with a Vocera clinical communication solution. A key goal was to unify staff in the new facility, where the layout had gone from Nightingale wards to single-patient rooms.

The hospital's Vocera deployment includes the Vocera Badge, Vocera smartphone app, and nurse call integration.

One important way the hospital uses its Vocera system is to mobilise its Crash team, which is focused on treating cardiac arrest. After deploying Vocera technology, Crash team mobilisation time improved 84%, dropping from an average of two minutes and five seconds to 20 seconds.

With COVID-19, Vocera hands-free communication has helped the hospital save time and PPE. Runners wearing Vocera Badges bring supplies to clinicians treating COVID-19 patients.

"If I were to give anyone advice when planning for a pandemic or impending patient surge, it would be to unify your communications now," said Matt Phillips, Lead Clinical Practitioner, Acute Intervention Team at RNOH.

"We were able to shave an average of one minute and 45 seconds off our Crash team response time. We have resilience in our emergency call system now where we never had it before, thanks to Vocera."

– Matt Phillips, Lead Clinical Practitioner, Acute Intervention Team at Royal National Orthopaedic Hospital NHS Trust



“Vocera has certainly sped up the process of being able to reach the right people when we need to.”

*– Bela Haria, Information Management and Technology
Senior Project Manager at Royal National Orthopaedic
Hospital NHS Trust*

Optimise Safety and Quality When Replacing Pagers

Optimise safety and quality by replacing pagers with a flexible, holistic communication platform. Ease the transition with a phased approach that lets people with and without pagers communicate easily:

IT Benefits

- Minimise communication siloes and points of vulnerability and failure.
- Manage change and minimise risk and costs in a mixed environment.
- Maximise the value of your technology investments.
- Make just one call when you have a question or need support.

Clinical Benefits

- Streamline the process for physician consults and cut page-and-wait toil.
- Communicate faster and more easily.
- Receive only the communications and notifications you need and make sure important information reaches the right recipient.
- Know who’s contacting you and why; receive patient, care team, and event context with communications.

About Vocera

Vocera offers the leading platform for clinical communication and workflow. More than 2,300 facilities worldwide, including over 1,900 hospitals and healthcare facilities, have selected our solutions.

Care team members use our solutions to communicate and collaborate by securely texting or calling, and to be notified of important alerts and alarms. They can choose the right device for their role or task, including smartphones or our hands-free, wearable Vocera Smartbadge and Vocera Badge. They can create a richer, more human connection for patients and their loved ones before, during, and after care using Vocera Ease applications.

Vocera (NYSE: VCRA) is publicly traded with the resources and fortitude to help ensure your success with our solutions over the long term. Vocera has made the list of Forbes 100 Most Trustworthy Companies in America, and the Vocera Smartbadge was named to TIME's list of the 100 Best Inventions of 2020. Learn more at www.vocera.com and follow [@VoceraComm](https://twitter.com/VoceraComm) and [@VoceraEase](https://twitter.com/VoceraEase) on Twitter.

For more information, visit vocera.com/pagerreplacement/au.

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