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Royal National Orthopaedic
Hospital NHS Trust

Decommissioning bleeps and unifying clinical communication amidst pandemic

In December 2018, the Royal National Orthopaedic Hospital NHS Trust (RNOH) opened its new, state-of-the-art Stanmore Building. Its older facility was no longer suitable for the high-quality care and excellent clinical outcomes RNOH strives to provide. The hospital layout went from having Nightingale wards – large rooms without subdivisions for multi-patient occupancy – to modern wards with single patient rooms that offer much more privacy. Staff were accustomed to working and communicating with clear lines of visibility. Some were concerned they wouldn't be able to communicate with each other efficiently in the new hospital building, due to the reduced lines of sight in the much larger wards.

In February 2019, two months after RNOH opened the new facility, Health Secretary Matt Hancock issued his order for all NHS hospitals to remove archaic technology, including bleeps (pagers), for non-emergency communications before the end of 2021. The hospital quickly began the process to decommission bleeps and replaced them with a communication solution from Vocera that would unify staff.

One year after Mr. Hancock issued his order, the United Kingdom (UK) began to see cases of COVID-19. RNOH had to rapidly shift priorities and prepare for the impending patient surge. "If I were to give anyone advice when planning for a pandemic or impending patient surge, it would be to unify your communications now," explained Matt Phillips, Lead Clinical Practitioner, Acute Intervention Team at RNOH.

Scaling to accommodate massive patient surges

Because RNOH is a predominantly elective hospital, all elective surgery stopped within just a few days of COVID-19 cases showing up in the UK. The virus drastically changed the hospital's patient-based demographics. "In a 10-day period we turned our quiet, elective hospital into the orthopaedic trauma center for a large portion of North Central London," recalled Phillips. "We suddenly went from caring for pre-assessed, optimised patients, to having 400 trauma-related cases."

RNOH deployed the wearable Vocera communication device and the Vocera mobile app to allow staff to communicate using the device they prefer. The organisation integrated its nurse call system with its Vocera system to help improve staff response times and productivity.

Vocera technology allows RNOH staff to call by name, role and group from a range of communication devices. Staff can quickly reach the right people and groups without having to know each team member's name or phone number. "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," said Bela Haria, Information Management and Technology Senior Project Manager at RNOH. "Our Vocera solution has certainly helped speed up the process of being able to reach the right people when we need to."

Speeding up communication and coordination

RNOH turned its private patient ward into a respiratory ward to treat COVID-19 patients because it has many private side rooms. The hospital set up runners, who wore Vocera communication devices, to bring supplies to clinicians treating COVID-19 patients in the private rooms. The runners could communicate with the clinician in the room without having to go into it, which eliminated the need for the runners to don personal protective equipment (PPE). This saved time and PPE resources.

> "At no point during the COVID-19 crisis did we worry about communication. Vocera technology has proved to us that we have a truly robust communication strategy."
>
> **– Matt Phillips**
> Lead Clinical Practitioner, Acute Intervention Team at RNOH

> "Our old bleep system didn't have analytics capabilities even remotely close to what the Vocera system offers."
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"Vocera technology supported communication and coordination during the peak of the COVID-19 crisis," said Pauline Robertson, Head of Nursing for the Medicine and Therapies at RNOH. "It helped us provide seamless patient care without risking infection. We were also able to conserve precious PPE since our clinicians didn't have to exit and re-enter patient rooms to gather supplies or call for assistance."

Communicating safely while wearing PPE

Vocera technology provides a method for clear, secure communication underneath PPE. There is no need to don and doff to communicate with staff inside or outside of isolation environments which keeps staff safe, enables higher quality care, helps preserve scarce PPE resources and eliminates the need to disinfect communication devices between patients.

"The ability to wear Vocera technology under even the most restrictive PPE to facilitate communication has been amazing," Phillips said. "If anyone ever has issues with the Vocera Genie understanding their voice through PPE, we tell them to simply use the 'Learn a Command' functionality so the Genie can understand their slightly muffled voice. It has eliminated any hiccups in voice recognition that users were experiencing."

Creating custom workflows and call groups

The Vocera solution allowed the hospital to quickly create new groups and custom workflows to respond to the pandemic. Staff could simply say, "Call COVID Intubation Team" and reach the members of that team to quickly summon assistance. "The beauty of Vocera technology is that the entire administration system is very user-driven and easy to configure," Haria explained. "Setting up new groups and custom workflows to respond to COVID-19 took minutes rather than days."

Communicating seamlessly when working from home

Staff who work from home or need to be available outside of their typical working hours can easily stay connected using the Vocera system. "During this pandemic, the Vocera app has been instrumental and has opened up the possibility for many staff to work from home," said Phillips. "Vocera allows our clinical on-call staff to be contacted without having to phone the switchboard operator. It enables continuity of communication."

Communicating securely in pop-up locations

Another innovative way RNOH leveraged Vocera technology during the peak of the COVID-19 crisis was using Vocera communication devices in pop-up testing tents that the British Army set up in the hospital's car park. Fortunately, when the hospital initially deployed Vocera, they understood the importance of having a strong Wi-Fi network and expanded their Wi-Fi access across their entire campus and car park. This foresight allowed clinicians to communicate in pop-up locations during the pandemic.

"We wouldn't have had a way to securely and easily communicate with staff working in our testing tents if it weren't for our Vocera solution," explained Phillips. "Vocera technology was brilliant because we didn't have to worry about anything related to communication. We gave staff working in testing tents a Vocera device and we were instantly at peace knowing they had a secure means to communicate with each other and with the rest of hospital staff."

Not missing the bleeps

When the Vocera system was initially deployed at RNOH, there were pockets of staff who were resistant to the change. Through strong leadership, confidence and adoption of Vocera technology quickly grew. The COVID-19 pandemic hit RNOH at a time when the hospital was already in the process of decommissioning bleeps. As the first wave of the pandemic began to settle down, hospital leadership noticed that adoption of Vocera technology had never been stronger.

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"Prying bleeps out of doctor's hands was something we struggled with when we began our bleep decommissioning efforts," said Haria. "The onset of COVID-19 gave Vocera technology quite a boost at our hospital because the technology was part of our mandatory crisis training. Our doctors are now prolific Vocera mobile app users!"

Ward-based doctors, nurses, pharmacists, therapists and ward clerks rely on the Vocera communication device to communicate hands-free at RNOH, while consultants, non-clinical staff and registrars at the hospital tend to use the Vocera mobile application for seamless communication on their personal smartphones. The hospital also uses Vocera Analytics, a core monitoring and diagnostic feature of the Vocera system. "We love the auditability of the Vocera system," explained Haria. "We have access to the best analytics, which enables us to determine when a call was made, when it was responded to and more. Our old bleep system didn't have analytics capabilities even remotely close to what the Vocera system offers."

Crash team response time improves by **84%***

RNOH uses its Vocera system to mobilise its Crash team, which is focused on treating cardiac arrest. Before Vocera, the Crash team relied on bleeps to be notified of a critical event. A member of staff would first ring the emergency bell, then find a phone to share the critical message with the switchboard operator. The switchboard operator would then repeat the message back for accuracy and issue a bleep to the Crash team. It was not an effective or speedy way to respond to such a critical notification. Additionally, if the hospital's phone system ever went down, there was no way to reach the Crash team in an emergency.

Before Vocera technology was introduced, the time to mobilise the Crash team averaged two minutes and five seconds. After the Crash team deployed the Vocera solution, the average time to mobilise the Crash team dropped down to just 20 seconds – an 84% improvement. "Prior to implementing our Vocera solution, when our Crash team needed to be mobilised, the workflow was clunky," said Phillips. "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 technology."

*In addition to Vocera technology, the facility's results may reflect the additional training, policies, procedures and specific configuration parameters implemented by the facility. The results are not necessarily representative of what another facility may experience.

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