

On Call

At their most basic level, nurse call systems are designed to improve the patient experience, enabling them to call for assistance quickly and discreetly and nursing staff to respond swiftly and efficiently. As technology continues to advance, today's nurse call systems bring many other advantages and benefits to the modern healthcare facility. *Pulse* examines the latest technology and looks at some recent installations.

Wandsworth Healthcare has been designing, manufacturing and installing nurse call systems since the late 1950s and its systems have played an integral part in the drive to improve care standards and the patient experience.

In 2007 Wandsworth Healthcare launched its first system utilising Internet Protocol (IP). Its latest version, the recently launched IPiN Evolution continues to innovate, utilising the latest technology.

The ability to integrate with third parties is a key benefit of IP. An IP-based nurse call system can be integrated with other hospital systems and equipment, including door access control, infusion pump monitors, fall detection and BMS systems, and allows all mobile devices to receive alerts from these systems.

The nurse call control devices, including the bedhead unit, can be used to control patient room devices such as SIP (VoIP) communication, and even blind, temperature, entertainment and lighting control systems.

Ultimately, IP works to improve the patient experience while reducing the necessity for nursing staff involvement.

Other benefits include comprehensive site-wide administration, reporting and alerting capabilities as well as easier and faster transfer of calls between staff and many third-party panic systems. The actual range of components that can be interconnected is increasing as the software develops.

The IPiN evolution can interface with multiple communication devices including handheld mobiles, ensuring calls are passed to the correct clinicians. This enables them to react faster to developing situations. Calls can be filtered, prioritised, transferred and escalated. Clinicians and nurses can be assigned to specific wards, departments, groups of beds, and even individual beds. This improves efficiency ensuring that high priority calls are directed to senior clinicians, which naturally results in a faster response time. Lower priority calls can be allocated to junior staff.

IPiN Evolution has also been developed to make reporting and administration simple and efficient across the network. All call activity on the IPiN network is logged and stored.

Call activity reports are displayed on user-friendly 'Reporting Dashboards'. With the requirement to report against key metrics ever more important, the simplistic reporting software provided helps staff concentrate on helping patients rather than creating reports.

IPiN Evolution's communication interface enables support companies to carry out live fault diagnosis. This speeds up the time taken to respond to and resolve faults, meaning shorter down periods and patient care is not compromised.

Wandsworth's IPiN range of nurse call systems can be likened to Lego bricks. They are designed as modular systems that can be added to over time. This makes installation in a rollout simpler and smoother. A hospital can choose to equip one ward initially followed by further wards later. The software is backwards compatible, so Wandsworth can manage the centralised reporting and other elements, thus protecting the client with a smooth rollout.

Wandsworth Healthcare offers an end-to-end service, including design, and from an early stage the company consults with all stakeholders to ensure the system is tailored and configured correctly for that particular project and it meets everyone's needs and expectations. This involvement from the early stages helps eliminate future problems and potential stress. Installation is carried out by an in-house team with dedicated project managers who plan the work to minimise disruption and reduce inconvenience. Staff training is provided, along with service and maintenance contracts for complete peace of mind.

The flexible nature and modular construction of Wandsworth's IP-based systems means they can be installed in phases, ward by ward, or department by department. A Trust looking to update an existing nurse call system does not need to replace the entire network simultaneously. This can ease pressure on budgets, minimise disruption and avoid having to take a facility's entire system offline. An old system can continue to operate whilst the infrastructure is installed and the upgraded system is rolled out.

Once the IP cabling infrastructure is in place, hospitals can easily add new features, such as two-way speech,

A Wandsworth Healthcare IPiN system on a children's ward



"Wireless systems offer low-cost and undisruptive installations that can be completed quickly and cleanly on a working ward"

entertainment, centralised administration, reporting and security, and third party communication interfaces without any further disruption. Such developments and adaptations can be introduced over time, as the needs of the nursing staff change.

The IP nurse call system also requires less maintenance than older systems. With one centralised server, Estates staff are able to monitor the status of the entire system at all times and receive immediate notification should a point fail, avoiding situations where patient care is at risk because nobody has noticed there is a problem.

Wireless

Wireless systems offer low-cost and undisruptive installations that can be completed quickly and cleanly on a working ward. They also allow for easy expansion into the future.

Suspicion still exists around the reliability of wireless networks in life critical environments, but Aid Call says that modern wireless systems offer secure, dependable communication. Aid Call utilises an adaptable, two-way radio network with cutting edge XBee wireless mesh network technology that directs all calls via the quickest and safest route because each device acts as a communicative node. This ensures all calls get through even in the event of a component failure, with reassurance lights on each device confirming to the user that their call has been received.

Touch screens facilitate the quick

and easy manoeuvring of more complex software by staff without having to request an engineer. For example, with an Aid Call system, including the new release, Touchsafe Pro, staff can easily program reminder or medication calls, apply differing night/day modes and create separate nurse profiles. Simple tasks, such as changing the date or time are also effortless.

Aid Call systems are compatible with a wide range of telecare devices that provide support and give independence to patients with more debilitating conditions. These include pendants, movement sensors, pressure mats, epilepsy monitors and environmental sensors.

By nature, these additions pre-empt when a resident may need assistance. They automatically raise an alarm through the corresponding nurse call system without the individual having to consciously make a call themselves. For instance, an enuresis mat that is placed on the mattress will react to the presence of moisture and will instantly raise an alert. As well as allowing staff to respond discreetly to a potentially sensitive issue, this eliminates concern over residents who refrain from making such a call through embarrassment or fear of being a nuisance. This responsive technology allows care teams to support residents who may not have the necessary cognitive ability to utilise a standard nurse call system.

Additional devices also mean staff can provide preventative care. A door



Aid Call door monitor

monitor, for example, will raise an alert when a door has been opened. This will guide staff to the location of a wandering patient who can then be accompanied safely back to bed.

Aid Call's systems provide greater accountability by recording all calls that go through the system and indicating call location, call type and response time. This is invaluable as a safeguarding tool and, as it is indicative of individual staff performance, is useful for staff audits.

Installation of a wireless system is quick and easy. Each device is simply attached to the wall using a bracket and two screws, or it connects to bed head trunking. This can take place without disruption on a working ward and the site will not be left without a working system for any length of time. Hospital staff can decide on the location of each device, which is easily changeable/upgradeable should requirements change in the future.

Case Study

Great Western Hospitals NHS Foundation Trust

The wireless installation and connectivity, call logging and prioritisation and flexible re-programmability of wireless nurse call systems were major factors in Great

Western Hospitals NHS Foundation Trust's decision to adopt wireless technology.

The move is part of a rolling upgrade programme as the incumbent nurse call system reaches the end of its service life at each of the Trust's hospitals, which include the Great Western Hospital in Swindon and seven further community hospitals.

Peter Scott, Head of Projects from Great Western Hospitals NHS Foundation Trust explains: "The ultimate aim is to homogenise our nurse call systems but we have designed the move to wireless very much as an asset replacement upgrade.

"The flexibility of Courtney Thorne's wireless nurse call system facilitates this approach, helping us to manage our capital expenditure while future-proofing any investment because the system can be re-programmed so easily, with no 'dirty works' to wiring."

The Trust opted to begin the programme at Warminster Community Hospital, which has a 25-bed short stay ward. Two wireless systems were shortlisted and nursing staff were asked to provide feedback on both options.

Scott continues: "The feedback we had was that the touch screen nurses' station unit for the Courtney Thorne system is intuitive to use and provides

a level of detail that enables nurses to prioritise and respond quickly to patients' needs."

Courtney Thorne provided room units and wireless nurse call 'pendants' at Warminster Community Hospital. The pendants can be worn or carried by patients, enabling staff to encourage them to get out of bed and use the day room facilities while ensuring that nurses can identify and locate each patient when they are away from their bed.

Following the success of the Warminster installation, roll out of the Courtney Thorne system has now started at Chippenham Community Hospital, which includes two short stay wards and a Minor Injuries Unit (MIU).

Wireless nurse call is already proving to have management information benefits.

Scott concludes: "It's clear to see how easily wireless technology will help us adapt to changes in patient numbers, services and building layout in the future.

"It's also evident that the data collected by the Courtney Thorne system can help with accurate reporting, evidence-based call records and even planning of staffing levels - all without any of the time, disruption, noise or dust associated with changes to the wiring."



Aid Call pendant with neck cord

Courtney Thorne is upgrading the nurse call systems at Great Western Hospitals NHS Foundation Trust's hospitals with its wireless solutions



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