STATIC SYSTEMS GROUP

The Hidden Value of Nurse Call Systems: From Infection Prevention to Predictive Patient Safety

By Claire Doggett
Head of Nursing for Infection Prevention and Control

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Kerry Holden
Deputy Director of Infection Prevention and Control, Gloucestershire Hospitals NHS Foundation Trust

Exploring how rethinking nurse call system design could support safer isolation, smarter workflows and a more future-ready approach to infection prevention and control.

When was the last time your organisation discussed its nurse call system?

More importantly, was that discussion about patient safety, operational performance and infection prevention, or simply about replacing ageing infrastructure?

For many healthcare organisations, nurse call systems sit quietly in the background until they fail. They are often viewed as a necessary component of the estate: a communication tool between patients and staff that is replaced when it reaches the end of its life. **But what if this view is limiting the value these systems could deliver?**

From our infection prevention and control (IPC) perspective, nurse call systems are among the most frequently touched objects in a patient's bedspace. As high-touch surfaces and potential fomites, they are considered through the lens of routine cleaning and decontamination. This is not simply a theoretical concern.

During one **Clostridioides difficile** outbreak, older nurse call handsets were identified alongside bed rails and other frequently touched items within the patient's immediate environment as areas that were not always being decontaminated effectively. **Some of the older handset designs were particularly difficult to clean thoroughly. As a result, they became an important focus of the IPC response.**

The organisation introduced an educational intervention that placed greater emphasis on **correctly decontaminating the equipment and surfaces closest to the patient.** These improvements helped bring the outbreak under control.

The experience demonstrated how something as seemingly simple as **the design of a nurse call handset can have a direct impact on patient safety.** It also reinforced the importance of considering how equipment design can support IPC, particularly when staff are working under significant pressure.

In some modern nurse call systems, high-touch components such as patient hand units and staff and patient panels can also be manufactured with antimicrobial additives, providing an additional layer of surface protection alongside routine cleaning and decontamination processes.

Before joining SSG's clinical advisory board, this was largely how we viewed them too. However, discussions with healthcare professionals from around the UK across multiple specialities challenged us to think differently. Rather than simply being another infection risk to manage, nurse call systems began to emerge as something much more significant: **a potential enabler of patient safety, operational efficiency and smarter care delivery.**

At a time when NHS organisations are under increasing pressure and capital budgets are limited, immediate transformation is not always possible. Encouraging different ways of thinking is therefore an important first step towards meaningful change.

The discussions prompted us to ask whether organisations may sometimes be procuring nurse call systems based primarily on their traditional communication function, rather than considering **the wider clinical and operational value they could potentially provide.**

From Infection Risk to Patient Safety Opportunity

One of the greatest impacts of the SSG advisory board has been the conversations it has prompted with colleagues.

Like many healthcare professionals, we initially viewed nurse call systems as reactive communication tools. Yet discussions with specialists from dementia care, critical care, digital health, maternity, governance and patient safety highlighted opportunities we had never previously considered.

The value of those conversations extended beyond the nurse call system itself. **Hearing from colleagues from different specialties helped us understand how the same piece of technology can be viewed through very different clinical lenses.**

These conversations also continued beyond the formal meetings. We were able to contact one another for advice on areas such as critical care design and the needs of patients with cognitive impairment.

That opportunity to step outside our own organisations and specialties has been particularly valuable. It has helped us see how different clinical priorities connect and how much can be missed when systems are considered from only one perspective.

For example, enhanced nurse call functionality could support safer single-room isolation of vulnerable patients without compromising staff responsiveness or patient safety. In some systems, this could include overdoor lights being configured to visually highlight specific risks, such as when a patient is in isolation. In this scenario, the light can display a particular colour outside the room to alert staff before reverting to its primary nurse call function when an alarm is activated.

As healthcare organisations continue to face growing challenges associated with antimicrobial resistance and emerging infectious diseases, **the ability to safely isolate patients remains critical within IPC practice.**

Viewed through this lens, the nurse call system becomes more than a communication device. It becomes part of the infrastructure supporting patient safety.

The Hidden Cost of "Like-for-Like" Thinking

Across the NHS, many estates and infrastructure decisions are understandably shaped by financial pressures. When budgets are stretched, replacing existing systems with similar alternatives can feel like the safest option.

However, one of the recurring themes from our discussions was the risk of viewing nurse call systems purely as infrastructure projects.

Too often, digital teams, estates departments, procurement functions and clinical teams operate in parallel rather than together. Estates teams are tasked with maintaining infrastructure. Procurement teams focus on cost and compliance. Clinical teams focus on patient outcomes.

The problem is that each group may be solving a different problem. Our own conversations illustrated this clearly.

When one of us approached an estates team to discuss what more a nurse call system might offer, the initial response was that its responsibility was to replace existing equipment like for like. The capital estates team explained that it would install the system requested by clinical services, but that clinical teams first needed to determine what they wanted the technology to deliver.

The conversation therefore moved to matrons, quality leads and other clinical colleagues who understood the needs of patients and the realities of care delivery.

Only then did the wider question begin to emerge: **what problem should the organisation be trying to solve before a system is selected?**

No single team held the complete answer. Estates understood the infrastructure. Clinical teams understood the patient. IPC teams understood the infection risks, while digital and procurement colleagues understood the technical and financial requirements.

The opportunity lies in bringing those perspectives together at the beginning. As a result, organisations can find themselves replacing infrastructure without fully considering how that investment could contribute to wider operational priorities.

If a nurse call system is viewed solely as a bedside communication device, procurement decisions will naturally focus on replacing existing functionality. But if that same system is viewed as a source of operational intelligence, a contributor to patient safety and a tool that supports workflow improvement, the conversation changes entirely.

The question is no longer "What does this system cost?" but rather "What value could this system unlock?"

Why Clinical Voices Must Be Involved Earlier

One of the clearest lessons from the advisory board was the importance of involving clinical teams at the earliest stages of any procurement or digital transformation programme.

IPC teams are often brought into projects after decisions have already been made. By that stage, systems have been selected, budgets allocated and infrastructure plans finalised.

Unfortunately, this can result in missed opportunities or even cause projects to be stopped.

It can also lead to systems being introduced that do not connect with the organisation's wider digital infrastructure. Procurement may progress in one direction while digital, estates and clinical teams move in another. By the time the disconnect becomes clear, organisations can find themselves backpedalling because one system cannot communicate with another or does not work as expected within the clinical environment.

In some cases, technology can be left underused because the people expected to work with it were not involved early enough.

That does not mean early collaboration will make the process quick or straightforward. Reaching agreement between different specialities, balancing clinical requirements against affordability and understanding what can realistically be implemented all take time.

IPC teams understand patient needs, safety risks, environmental considerations and the practical realities of care delivery. We often see where systems create unintended consequences and where processes become vulnerable under operational pressure.

When clinical expertise is incorporated from the outset, organisations are better positioned to ensure that technologies are connected, fit for purpose and aligned with wider organisational objectives.

Most importantly, they are **more likely** to invest in solutions that deliver long-term value rather than simply replacing existing infrastructure.

Seeing Nurse Call Data Differently

Perhaps one of the most surprising insights came from our visit to SSG's virtual ward and seeing what modern nurse call systems can generate beyond simple call alerts.

Historically, we have thought about nurse call systems in terms of response times. But response times tell only part of the story.

What if organisations could understand patterns of demand throughout the day? What if they could identify peak periods of activity, escalation frequency or areas of the ward where patients consistently require additional support?

One simple ward observation brought this opportunity to life. During a visit shortly before lunchtime, the arrival of the meal trolley appeared to coincide with a sudden increase in nurse calls. Many patients wanted help to use the toilet before eating.

On its own, this was only an observation. But if nurse call data showed that the same pattern occurred consistently, the ward could begin to respond proactively.

For example, additional support could be put in place before the lunch trolley arrives, rather than staff having to respond to multiple requests simultaneously.

From an IPC perspective, these insights are particularly valuable.

Busy wards and competing priorities create conditions where infection risks increase. Hand hygiene opportunities may be missed, and decontamination processes may not always be performed properly.

Understanding when and where these challenges occur creates opportunities to redesign workflows, provide targeted support and implement preventative interventions before problems arise.

Importantly, this data should never be viewed as a performance management tool. Its value lies in supporting learning, informing quality improvement and helping organisations understand the realities of care delivery.

A response time does not, on its own, explain what was happening on the ward when a patient made a call.

Staff may have been responding to another patient with a more urgent clinical need. The ward may have been experiencing an unusually busy period, or the environment and available resources may have made it more difficult to respond.

Data must therefore be understood within the context in which care is being delivered. The purpose should not be to identify an individual who did not respond quickly enough, but to understand the factors influencing that response and where systems, processes or resources could be improved.

Used in this way, nurse call data could help organisations examine the environmental pressures, equipment requirements, staffing challenges and workflow issues that affect care delivery.

It also creates a safer environment in which staff can discuss the challenges they face without feeling that the technology is being used to monitor or blame them.

The most useful question is not "Why did this person take longer to respond?" but "What was happening within the system, and what could help the team respond more effectively next time?"

Looking Beyond Reactive Infection Prevention

In IPC, a lot of our work can be reactive:
an outbreak occurs and organisations respond.
A problem emerges and interventions are introduced.

But what if technology could help identify risks earlier?

Future systems may enable organisations to identify patterns that warrant further investigation before issues escalate. For example, repeated requests related to hydration or toileting could reveal changes in patient need that warrant closer clinical review.

At a ward level, unusual increases in requests for commodes and bedpans could provide earlier indications that patient review is needed. While these possibilities remain exploratory, they highlight an important shift in thinking.

Nurse call activity alone could not determine whether an infection or outbreak was developing. However, a change in the type or frequency of requests could provide an additional signal that warrants closer investigation.

Its value would not lie in replacing professional judgement, but in helping clinical teams recognise potentially important patterns and act sooner.

Rather than responding to problems after they occur, healthcare organisations may increasingly be able to use operational data to support earlier intervention, proactive risk management and preventative care.

A Different Question for Healthcare Leaders

The most important lesson from this experience is that innovation is not always about purchasing new technology.

Sometimes, it starts by asking more appropriate questions.

For years, nurse call systems have been viewed primarily as communication tools. Yet the conversations we have had throughout this process suggest they may have a much broader role to play in supporting patient safety, infection prevention, operational efficiency and future models of care.

For healthcare leaders, estates teams and procurement professionals, the challenge may not simply be deciding when to replace a nurse call system. It may be deciding whether they are evaluating it through the right lens in the first place.

Because if a nurse call system can contribute to safer isolation, improved workflows, operational intelligence and future predictive capabilities, then perhaps **the question is not whether organisations can afford to think differently about nurse call systems. It is whether they can afford not to.**

Created in collaboration with
Static Systems Group
and **Onyx Health**

For further information, please contact:
+44 (0) 1902 895551
katharine.cassidy@staticsystems.co.uk

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