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The shifting role of nurse call solutions during the COVID-19 pandemic

Matt Wakelam, Senior Healthcare Solutions Manager at Static Systems Group (SSG), explores the ways in which the COVID-19 pandemic has stimulated more sophisticated ways of working and led to far greater recognition of the many benefits delivered by advanced nurse call technology.

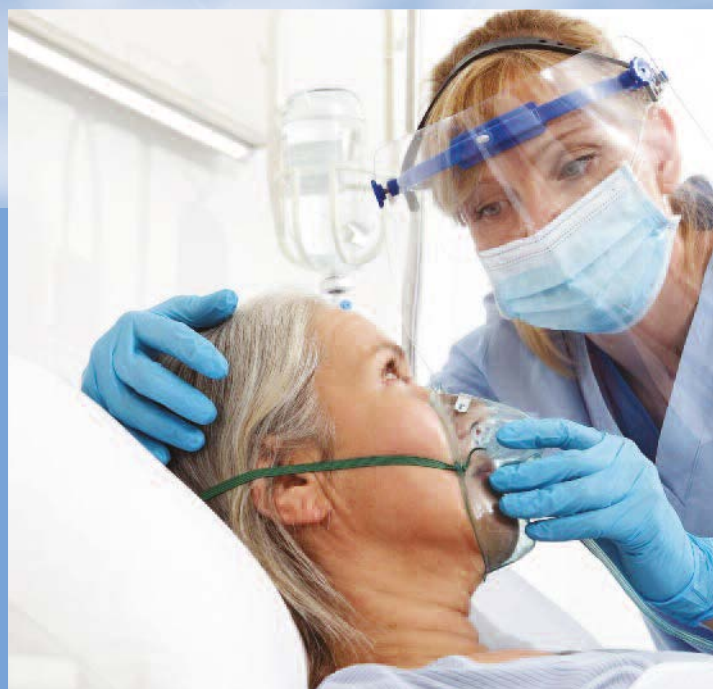
Digitalisation is changing the face of healthcare, and, through necessity, the COVID-19 pandemic has encouraged greater acceptance of the digitally-enhanced hospital; allowing transformation to take place more quickly than would have been the case in normal times. The pandemic saw SSG work in close collaboration with numerous clinical teams throughout the UK and overseas to help hospitals embrace the full functionality of nurse call – far beyond patient-to-staff communication. By developing innovative solutions that integrate critical alarm and ward communication with other advanced healthcare technology, we have not only helped healthcare providers to reduce the exposure between COVID-positive patients and care teams but have, at the same time, assisted hospitals in enhancing workflow efficiency as a result of improved communication and collaboration across the clinical space.

One interesting example of this has been the acceptance of speech - available with our systems - to help reduce the risk of infection transmission.

The benefits of two-way speech communication between patients and clinical staff

During the early stages of the pandemic, for example, we were approached by a UK-based NHS Trust with whom we have a longstanding relationship, and tasked to help reduce risk.

We enabled the nurse call speech facility, connected it with the existing telephony system and provided staff with 'hands-free' devices. This meant that prioritised and triaged events were sent directly to staff, allowing alerts to be received at any location, and two-way voice



The COVID-19 pandemic has stimulated more sophisticated ways of using advanced nurse call technology.

communication between staff and patients was made possible – allowing conversations to take place and assessments to be made without the need to approach the patient bedside.

Reducing the risk of transmission

The amount of repeat visits to a patient for a single call was consequently reduced as by talking with the patient in advance, staff were able to check which information or supplies were required prior to attending the bedside. By minimising the amount of time spent in the patient's room, the risk of exposure and transmission of the virus was much lower. Furthermore, the amount of PPE being used was significantly reduced as it was only now required when entering the patient room and not for every query.

Having a two-way speech facility also delivers benefits for COVID-positive patients being cared for in isolation. Hands-free and touch-screen intercoms located outside the patient's room allow the patient to communicate more easily with those responsible for their care, and to receive reassurance.

By also integrating our nurse call systems with other facilities such as lighting, blinds, heating and entertainment, we are able to make patients feel more in



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control of their immediate environment, which can have a positive impact on patients who are facing a prolonged and difficult period in hospital.

Another project we worked on was for the design, installation and commissioning of a nurse call system for North Lantau Hospital Hong Kong Infection Control Centre (HKICC), a temporary isolation hospital funded by the central government for treating COVID-19 patients in the Hong Kong Special Administrative Region (HKSAR).

The hospital covers a land area of 30,000 square metres and comprises six inpatient buildings, a medical centre and other facilities. It is capable of providing 136 wards and 816 negative pressure beds. Its design is in line with the standards required for a permanent structure. To build a hospital of this scale in Hong Kong would normally take four years, however, with new building technology and construction going on around the clock, the project was completed in just four months.

In order to assist the hospital in achieving its vision, the nurse call system SSG recommended included a patient-to-staff speech facility at each bedside; offering all the benefits highlighted above in the UK-based project. Furthermore, at HKICC, the patient hand units we supplied contain a silver-based antimicrobial agent which is incorporated during the manufacturing process to help further strengthen the infection control measures instigated by the hospital. Importantly, the active agent will not degrade over time and can be cleaned with a sterilising wipe to eliminate bio-hazards and reduce cross-infection risks between users.

Improving communication and collaboration between clinical teams

Throughout the COVID-19 pandemic, many hospitals have benefited from enabling two-way speech, and thanks to the interoperability between systems, trusts have also reaped the benefits of improved communication and collaboration between individual team members and between different clinical teams.

The latest nurse call devices allow individual clinical staff and different care teams to talk to and message each other directly. And, when you add in logic-based automation the solution becomes even more powerful - automating or smartening up interaction between different parts of the clinical space.

By using logic, nurse call events can be processed independently or with information gathered from multiple systems to create intelligent alerts and automated actions or responses. Once the events are being automatically triaged, we can then look at how different parts of the clinical space collaborate or communicate with each other. The goal is to create a unified approach to prioritising and delivering alerts

as this will help to create consistency in the way care teams respond and provide staff more time to care.

Reducing alarm fatigue and cognitive overload

The COVID-19 pandemic has placed care teams globally under unprecedented levels of pressure and has drawn attention to the many interruptions and events that are simultaneously clouding the clinical space. While communication between patients and care teams is a fundamental aspect of every healthcare setting, if clinical staff are exposed to an excessive number of alarms - commonly referred to as 'alarm fatigue' or 'cognitive overload' - this can ultimately put patients safety at risk, and can prove disruptive if clinical staff are frequently notified of events relating to patients whose care they aren't responsible for.

Nurse call solutions can play a vital role in helping to reduce alarm fatigue and alleviate cognitive overload, and have done so throughout the COVID-19 pandemic.

By automatically triaging and prioritising events so that the event details are only sent to those staff members that need to be aware of them, communication between patients and care teams can be made easier. With events only sent to the relevant staff member, they can then automatically clear the events from their body-worn notification devices as soon as they are dealt with. As a result, staff are only presented with active events that are intended for them. This not only has the instant effect of reducing alarm fatigue and cognitive overload, but also means that all the events are logged and can be guaranteed a response.

Reducing alarm fatigue and alleviating cognitive overload will continue to be a significant challenge for trusts, and one which must be addressed in order to avoid clinicians becoming overwhelmed and, in the worst-case scenario, missing a potentially clinically significant event.

How we automate, collaborate and communicate within the clinical space will continue to evolve, with AI at the forefront of future developments, and we are proud to be playing our part in developing intelligent solutions for the future.

Looking to the future

We anticipate even more widespread adoption of innovative and sophisticated technologies, as well as more examples of integration with other clinical systems and building services.

For further information visit:
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