How audio technologies improve patient care in healthcare facilities

In healthcare, ensuring that patients receive the utmost care and comfort from healthcare workers is the greatest priority. Healthcare professionals are embracing a patient-centric approach to improve patient care and ensure that they deliver on increased demands and expectations from patients and their families and feel cared for within a hospital.

Hospitals are leaning on technologies such as Artificial Intelligent to improve their efficiency by automating daily tasks and therefore, reducing demand on healthcare workers. Medical staff require these technologies to help deliver high-quality service and improve patient care.

In this whitepaper, we explore how audio solutions such as IP intercoms and speakers are effective technological tools for medical workers to reimagine how they deliver patient care.

Sense of connectiveness
According to a 2023 study by Intensive and Critical Care Nursing on the effect of video visitation on intensive care unit patients and family members, any form of remote communication between patients and family has proven to increase patient and family member satisfaction.

This is particularly the case with critically ill patients in intensive care units where visitation is highly restricted.

Providing a sense of connectiveness can improve a patient's mental well-being. As an example, a video-enabled intercom mounted to a patient bed in isolation rooms allows a patient to initiate communication with medical staff. Depending on the need, the medical staff can swiftly act. With the possibility to connect the nurse call cord to an intercom, patients can pull the cord to initiate a two-way, HD video communication to express their needs right from their bed.
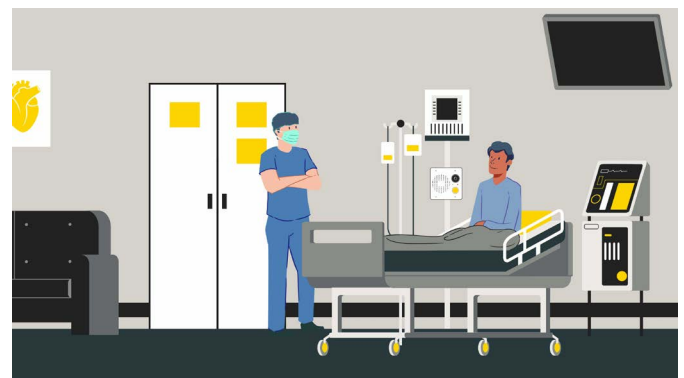
Remote patient monitoring and care

A [study](#) published by LeLaurin, et. al, revealed that each year in the US, there are approximately 250,000 injuries and up to 11,000 deaths related to patient falls in hospitals. A delay in response to inpatient falls can result in significant physical and economic burdens to patients as well as to medical organizations.

Patients who roam on their own outside their wards risk falls and even death. Technologies such as IP video cameras can help to keep a close eye on vulnerable patients. In addition, integrating an audio device such an intercom or IP speaker into your video surveillance solution can dispatch an automated voice notification message to patients, advising them not to leave the bed and therefore help to mitigate safety risks.
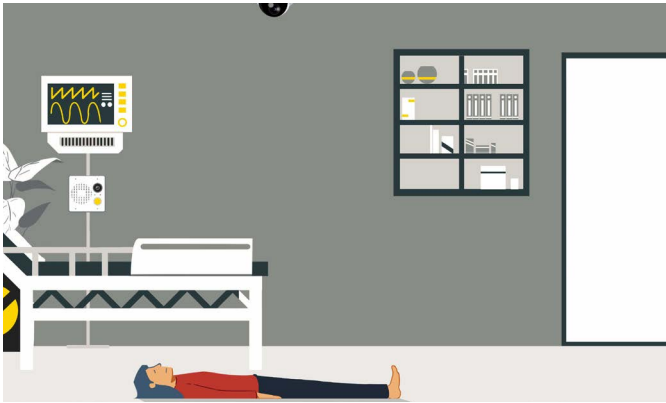
When the patient fails to obey the voice notification message and falls, technologies such as video analytics can help to automatically identify the incident. By integrating with audio solutions, an automated workflow can be initiated to inform the medical staff of the incident while helping hospitals to significantly reduce the response time.

Such coordinated responses for emergency incidents within hospitals are made possible by the seamless integration of various security systems such as video surveillance, analytics, and audio. Open standards such as ONVIF and SIP are instrumental in achieving this seamless integration with security systems. ONVIF-compatible products such as IP cameras and intercoms can communicate natively using the security platforms.

Learn more here about how Zenitel can be your communication partner in providing better patient care today: zenitel.com/healthcare-communication-solutions

Reducing emergency response time

Studies have shown that reducing response times by one second is linked to a [0.9%](#) decrease in overall patient mortality risk. Cities around the globe have taken various initiatives to reduce the ambulance dispatch time. In addition, preemptive communication between ambulatory staffs and medical staffs at the hospital can help to reduce the overall response time. Such collaborative efforts help hospital staff to receive full knowledge of the patient's condition before they even reach the hospital. This helps them to prepare the hospital to cater for the specific needs of the patient.

TETRA radio communication is widely used in many cities, and the integration between TETRA systems and critical communication platforms in a hospital gives an emergency response team two-way voice communication with the hospital staff. A surgeon can converse directly with the ambulatory staff using an IP cleanroom intercom inside the operation theater.

In addition, critical communication solutions in a hospital such as intercoms or IP speakers can be part of the talk group with TETRA radio, allowing multiple parties to be a part of the conversation and better coordinate the emergency response.