



## Nursing home enhances efficiency and safety with Polycom mobile communication solution

A Polycom DECT wireless telephony solution is enhancing safety and supporting nursing staff at the Istituto Bon Bozzolla nursing home by enabling remote alerts in emergency situations.

### The Challenge

To provide a reliable remote emergency alert solution for staff at the nursing home that is capable of integrating a variety of different messaging interfaces with mobile handsets.

### The Solution

Polycom's wireless telephony solution based on its KWS1500 server combined with T-ATTIVO, an alarm management platform from Polycom partner, Tecnel.

### The Results

Enhanced mobile communication delivers better control and safety by enabling instant alerts and detailed messaging to handsets in emergency situations from anywhere on the site.

For nursing home, Istituto Bon Bozzolla, patient safety and security is paramount. Which is why management at the private nursing home near Treviso in north-east Italy are constantly investigating and updating their emergency systems and processes. Up until recently, this involved a comprehensive fire alarm system with emergency switches located in corridors and public areas throughout the Institute. This was supplemented by individual emergency bedside buttons for patients with warning lights in the corridors to identify the room to duty staff. However, when a patient needed help, it nevertheless relied on nurses being on hand in the relevant corridor. It also provided no information as to the patient condition or nature of the emergency

With pressure to upgrade to a more foolproof and detailed system, nurse coordinator Flavio Andreola sought a communication solution that would create a more 'intelligent' interface between emergency systems and staff.

"We had no such infrastructure available at the time so we realised we would be starting from scratch," Andreola explained. "We had heard about mobile telephony solutions from associate nursing homes but needed the expertise to design and install a system that would cover all our requirements."

Safety and security requirements for the Istituto Bon Bozzolla included not only interfacing patient alarms with nursing staff, but also the access alerts and fire alarms. These would involve all of entry and exit points plus fire alarm switches throughout the Institute. One of the Institute's associate nursing homes recommended the services of a local Polycom partner. Based in Milan, wireless communication specialist, Tecnel, has a wide experience with 'machine to man' alarm systems throughout the healthcare and industrial sectors.

Said Tecnel Technical Director, Mario Grassi: "Istituto Bon Bozzolla approached us to automate and integrate its safety and security alarm systems. This sort of requirement is ideal for our T-ATTIVO alarm management platform so we set about designing a solution incorporating T-ATTIVO and a Polycom DECT wireless system."

Tecnel engineers undertook an audit of the existing fire alarm and patient alert systems that included the specific requirements of the Institute for an upgraded communication solution. Important considerations were the numbers of staff on shift at any one time as well as the geographical coverage required. This latter concern took into account the nature and number of buildings populating the site because they would affect the communication abilities of the DECT signals.

*"We were able to install the infrastructure and get the whole system operational within three weeks."*

The resultant solution recommended eight Polycom Kirk DECT wireless base stations and four wireless repeaters supporting eight Polycom DECT 4040 handsets all managed by a Polycom KWS1500 server to ensure uninterrupted and comprehensive coverage across the large site.

Tecnel consequently linked its T-ATTIVO alarm management platform with the fire and patient alarm systems and integrated it with the Polycom Kirk DECT solution.

"The Polycom KIRK DECT 1500 solution with multiple base stations and repeaters not only provides emergency alert capabilities throughout the site, but also roaming telephony functionality for the staff while on duty," explained Grassi. "We were able to install the infrastructure and get the whole system operational within three weeks in May earlier this year."

The benefit of the Polycom KIRK Wireless system is that it represents a flexible emergency and telephony communication solution for the Istituto Bon Bozzolla.

A single analog KWS1500 server will support up to 64 users and up to 16 KIRK Base Stations and 48 KIRK Repeaters. With the KIRK link card and the KIRK Expansion Board, the Istituto Bon Bozzolla would be able to expand the capacity considerably to meet increasing demands. The server itself manages the base stations and repeaters as well as the synchronisation for seamless handover, echo cancellation and line delay compensation. It also handles the interface to the T-ATTIVO platform and has a built-in memory for storing data during operation.

"Once the system was operational, Tecnel gave us a demonstration," Andreola explained. "We were more than happy with the functionality which went a long way to improving security control and patient safety."

The solution means that patients are able to press their alert buttons in the same way as before. The difference is that the duty nurse who is designated to receive the call at the time receives much more detailed information as a text message on their handset. This includes information about the likely nature of the call, the patient's name, their room ID and the pre-programmed response.

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"The needs of each patient can be programmed individually into the system as their circumstances change," Andreola continued. "As an 'intelligent' system, it identifies where the patient is at the time of the alert and the response can be tailored to the latest medical advice from their physician."

The system also identifies fire alarm alerts, along with their location, as well as breaches in access to the buildings throughout the Institute. An added advantage is that staff also have the telephony ability in their hands to contact immediately anyone or any service in the outside world. Security staff can contact the police or fire service, nurses can contact the patient's doctor if necessary and administrators can call up relevant friends and families of the patient.

"With the new roaming handsets, staff are much more in control," Andreola said. "They do not have to be within sight of an emergency light or even in the same building to respond quickly and accurately. We are very happy with the operation of our Polycom KIRK DECT solution and because the system is so flexible, we will have no hesitation in upgrading and adding to it as and when required."

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