



De Zorggroep Limburg operates 31 nursing homes across the south of the Netherlands, caring for almost 2,500 elderly and mentally challenged patients. The Venray location, featured in this study, has 100 residents.



CASE STUDY

Acoustic Monitoring De Zorggroep Limburg

Scheduled in-room checks were proving an inefficient means to providing care where needed in a timely fashion. Chances of assistance being required inbetween routine visits were high and, especially at larger locations, staff doing rounds often found themselves to be badly positioned at the moment of need. Residents also did not respond well to having their sleep disturbed and their privacy compromised.

Implementation of CLB's acoustic monitoring system improved the situation at every level.

With intermittent checks replaced by continuous, non-intrusive monitoring of each room, delays in discovering needs have been eliminated. Staff remain centrally located, ready to respond promptly to alerts triggered when a room's sound from noises such as continuous coughing, crying or shouting exceeds its designated level over a period of time.

Residents who are sleeping quietly no longer need to be disturbed unless there is a known reason to do so, which has led to improved general behaviour. If required, proactive checks can also be done by specifically listening in to a room.

CLB's acoustic monitoring system promptly and effectively identifies problems and enables more efficient deployment of staff, who can now focus on attending to needs instead of looking for them. Staff at Venray noted that specific residents could also be monitored better with little additional effort. With a 50% increase in productivity, the facility was able to reduce staff present during the night by 34%. The money saved was reallocated to improving daytime facilities and care, which is more highly appreciated by residents.

Challenge

Night-time monitoring of residents is traditionally conducted via intermittent in-room checks. This method typically results in delayed response to assistance needs, inefficient use of staff and negative psychological impact on residents. Moreover, it is difficult to respect the privacy of residents.

The solution

An acoustic monitoring system which facilitates continual, effective and non-intrusive resident monitoring from a central location.

The benefits

- Immediate alert:** Delay periods between intermittent visits are eliminated. Problems are identified as they occur, facilitating faster response.
- Faster response:** Staff who no longer have to patrol the building are positioned more centrally when an alert is raised. This increases their likelihood of reaching the scene of the problem faster.
- Improved resident wellbeing:** Lack of disturbance caused by in-room checks means residents sleep better through the night and experience less invasion of privacy.
- Reduced costs:** More efficient deployment of staff means fewer staff are needed.

System

'Introducing acoustic monitoring has significantly improved the quality of care we can provide during the night while significantly reducing the overall cost'

Marc Denton, Care Communication Advisor, Venlo

General set up and configuration

In-room monitoring units feed in to multiple on-site hubs, which are connected to CLB's central system. Each location has a per-ward monitoring client, which allows local staff to manage their own part of system.

Typical user scenario

Local staff activate the acoustic monitoring as they arrive on shift at night and deactivate it in the morning. Monitoring can be activated per ward or individually per patient. Alerts are routed to mobile handsets and various fixed screens, both enable staff to listen in and talk back into the rooms. The system can also be used during the day for more intensive monitoring of patients with special needs.

Growth path

- Alerts can be relayed via mobile communication methods such as the WiFi Messenger or the CLB Smart Phone app.

- The system is prepared for 3rd Generation acoustic monitoring which enables recognition of specific sound categories. This can increase alertness for designated sounds such as crying or screaming, while reducing false alarms caused by ambient noises such as slamming doors, flushing toilets, etc.

Application areas

- Mental Healthcare
- Elderly Care
- Neo-natal (intensive) care units

Used components

- Unicare & UniControl Call Screen
- Controller
- Room module
- 3rd party Dect telephone & messaging system

Privacy

As long as appropriate usage procedures are established and adhered to, the system does not raise privacy issues. In-room indicators (visual and/or audio) can be used to let patients know when they are being monitored. When explained correctly to them, clients and their peers welcome use of this system as a balanced trade-off between providing care and respecting privacy.