Digital night monitoring with cameras

— safety and undisturbed sleep

THE GLOBAL GOALS

Nordic Council of Ministers

Government Offices of Sweden
Ministry of Health and Social Affairs

region västerbotten

Summary

Kramfors municipality uses digital night monitoring to allow users to enjoy an undisturbed night's sleep, while being as safe as if they had been physically checked. The whole purpose of using cameras is to match the unique needs of every user.

Users can choose between physical visits and digital monitoring during the night. The number of checks will be the same but, if the situation should change, it is significantly easier to adapt to greater needs using the digital version. It is also easier to meet individual needs if the checks can be carried out by a camera as there will be no need to schedule visits to match a specific driving schedule.

In Kramfors, a central unit handles all digital checks. The unit makes 30 checks per night, which takes a total of around 15 minutes. In comparison, driving to remote parts of the municipality can take 50 minutes, one way. In other municipalities, for example, Skellefteå, the same night patrol that makes physical visits is also responsible for the digital checks and makes 92 digital checks each night. About 46% of all Swedish municipalities offer some form of digital night monitoring.

Main effects of the solution

Effects for the patient

- Patients can be checked but still enjoy an undisturbed night's sleep.

- Patients with cognitive impairment or dementia might be worried about a physical visit. This cannot happen with digital monitoring.

- Reduced risk of fall injuries.

- In some cases, medication might be reduced (reported from Skellefteå).

- The checks can be adapted to suit individual needs.

Effects for the care giver

- Work model that will work in the future.
- Less time-consuming journeys.
- Fewer hours spent in cars driving at night on dark roads.
- Frees up time for patients who really require a physical visit.

Other effects

- A reduction in driving is good for the environment.

Users

- Some of the users have cognitive impairment or some form of dementia.
- In all cases an individual decision is required by a social service worker for the elderly.
- Assistant nurses perform the actual digital checks and report to the night patrol if a physical visit is required.

Quotes/Testimonials

"I feel safe with the camera. That thing up there (pointing to the camera) sees everything and I get help when I need it". — Patient aged 100+

Elaboration

Needs and challenges

Physical checks during the night can be very disturbing for patients. If they wake up they will often get out of bed which, in turn, could lead to a fall and possible injuries. Users with cognitive impairment or some form of dementia could become upset if they wake up during a physical visit.

Physical visits also require a lot more staff as they are very time consuming. It is difficult to recruit staff and in the future we will have an older population with increased needs. It will be difficult to match such needs with the same workforce we have today. Thus, new work models are needed.

Solution and function

A camera and mobile router is installed in the user's home and the camera is directed at the bed. Sometimes, an antenna amplifier is needed. If the camera cannot be reached an alarm is triggered and a technician will handle the issue. It is rare for a camera to malfunction. When this occurs the most common reason is that the camera has been unplugged due to cleaning.

Digital checks take place at specific times during the night, as agreed with the user, by an assistant nurse at a central unit in the municipality. The capacity is 30 digital checks per night. This constitutes around 26% of all night checks in Kramfors. Almost all physical checks have to be physical as other tasks must be performed, e.g. help visiting the bathroom, changing incontinence aids, etc.

Economy

Digital night monitoring is free of charge for the user. Physical visits are charged according to a standard hourly rate. The equipment is leased from the service provider and costs SEK 450 per month, per user. In Kramfors this is paid for by the municipality.

It is much more efficient for the municipality to use digital monitoring than make physical visits as there is no need to use transport. A digital check take significantly less time.

Process – implementation

The implementation process is not difficult but a decision must be made regarding who does what. Also, a clear process assessment must be performed. Training for staff who will be conducting the monitoring takes one hour and training for technicians takes three hours. Naturally, staff training is not very time consuming.

More time needs to be spent on information and marketing. It is very important to notify potential users and the public early in the process and it will be a challenge to do this in the most optimal way, e.g. marketing via different channels, attending meetings with elderly people, being proactive with the media. Dealing with negative articles and comments can be difficult so it is best to engage the media early in the process and provide examples of positive cases. You could perhaps provide information or write articles yourself. Information meetings must be also held with staff who work within elderly care so that they, in turn, can be good ambassadors.

Organisation and politics

It was not necessary to make any political decisions in Kramfors, although the local politicians were informed early in the process.

Follow-up/monitoring

Follow-ups are regulated by law and take place 1–2 times per year. Every service that a user receives is evaluated.

Communication

As previously mentioned, it is important to be proactive when it comes to communication about digital night monitoring in order to make people understand that it is not about surveillance. This issue concerns both the general population and potential users, politicians and the media. It is important to attend meetings and answer all questions posed by worried users and their relatives.

More about effects

In Kramfors, a municipality comprising around 18,000 inhabitants, the use of digital night monitoring replaces 5.8 hours in a car every night and 2,118 hours in a car per year. This is time that can be used more effectively on patients who needs it. There are also obvious positive effects for the environment. 173 kilometres of car travel can be replaced by digital checks every night and 63,080 kilometres per year.

Patients can enjoy an undisturbed night's sleep and still feel safe using this solution, knowing that if something happens it will be noticed by staff via the camera, and that the patient's needs will be addressed via a physical visit. Assistant nurses in home care can dedicate their time to

patients that really need a physical visit, i.e. meet the patient's needs in situations, using the appropriate measures.

Learnings and tips

An effort should be made to identify enthusiasts in the organization who can help with engagement, marketing and competence. It is also important to get full support from social service workers for the elderly, since they play a key role in deciding what service a specific user is entitled to receive. They must have fully trust in digital night monitoring, otherwise it will be hard to expand its use. And again, being proactive when it comes to communication is a major issue.

Further information

- [Watch a short movie about the solution »](#)
- [Information about digital night monitoring on kramfors municipality website »](#)
- [Information about digital night monitoring on skellefteå municipality website »](#)

The solution is described in two reports from the national board of health and welfare:

- [E-Health And Welfare Technology In Municipalities 2018 (PDF)](#)
- [A Study Of The Use Of Security Cameras And Gps Alarms In 12 Municipalities (PDF)](#)

All information is in swedish.

Context

Digital night monitoring can be used in all municipalities and is appropriate for all users for whom a physical visit is not required. Naturally, rural communities are particularly suitable as significant distances can be involved, although the solution can also be used in more urban areas.

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Name of the service

Kramfors municipality uses Tunstall and Skellefteå municipality uses Great Security.