29. USING VOICE-CONTROL SMART DEVICES TO ENGAGE PATIENTS

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BACKGROUND:
Hospimatix in Mönchengladbach, Germany has developed a pilot project to address the shortage of specialists in healthcare (nurses and doctors) in Germany. The number of elderly patients presenting with many co-occurring diseases is increasing. Hospitals therefore need to treat more patients (36% increase since 1991), requiring more nurses.

OBJECTIVES:
- Optimise nursing workflows – to improve efficiency
- Improve patient stay and empower patients to help themselves
- Connect all occupational groups with each other and with patients
- Minimize time spent on administrative tasks

RESULTS:
What will be achieved?
- Smart devices and voice-controlled devices installed in all patients’ rooms
- Service features changed, saving time for qualified nurses
- Improved connections among healthcare professionals and with patients, reducing needless walking
- Less documentation needed
- Patients feel more independent and less helpless

METHODS:
The pilot project team analysed unit-based workflows and conditions in a typical hospital, identifying inefficiencies that reduced patients’ autonomy. As an example of a typical inefficient workflow a patient complains of having pain so calls a nurse. She walks to the patient (50 secs), talks to the patient (2 mins), walks back to the unit base (50 secs), searches for the doctor (4 mins), prepares painkillers (2 mins), walks to the patient (50 secs), administers the medication (1-2 mins), taking a total of 12.5 minutes.

The proposed solution was to integrate smart devices and voice-controlled devices in patients’ rooms. The offline voice-control interface was designed to comply with data-protection laws.

The main challenge was how to integrate the voice-control interface into the various existing documentation programmes. The next step is to explore how to best adapt this approach to older patients, in order to make it easier for them to use the interface and boost their confidence.

TAKE-AWAYS:
What do we think will work well?
- Adapting an intuitive, pragmatic approach
- Trying out simple solutions
- Keeping costs manageable and reducing effort needed
- Ensuring effective data protection

To discuss:
- How to adapt the user interface to better meet the needs of elderly patients?
- How to integrate the voice-control interface into different documentation programmes
- How to ensure that the time saved does not result in the dismissal of healthcare professionals (especially nurses)?