WARD-EU

Wireless Assessment of Respiratory and Circulatory Distress – Europe

ABSTRACT

Standard patient monitoring practices throughout Europe are manual and intermittent without evidence for the preventive effect. Thus, 10-30% of hospitalized patients will experience severe adverse events, whereof 40% are preventable. Simple continuous vital sign monitoring leads to excessive alarms, desensitizing staff and missing relevant alerts. Discharged patients also lack monitoring, leading to delayed responses and potential readmissions or prolonged hospital stays. Current clinical solutions are organisational focused, instead of patient centred and personalised, leaving especially vulnerable patients at risk. Therefore, the need for a new solution for continuous patient monitoring is evident. Technological mature and CE-approved solutions using AI-alert filtering exist, where knowledge on barriers and facilitators for implementation across healthcare systems is a crucial part for fulfilling the huge potential for prevention of complications during and after hospital admission.

PROMISE aims to:

- Describe standards for patient monitoring across 5 different European healthcare systems
- Demonstrate and pilot implementation and transferability of WARD-CSS (Wireless Assessment of Respiratory and circulatory Distress – Clinical Support System), including validating and adopt WARD-CSS from the study results
- Document facilitators and barriers for implementation and up-scaling of WARD-CSS by assessing the end-users perspectives across European hospital systems
- Document the technology's relevance across diseases for secondary and tertiary complications, including vulnerable groups
- Document the technology's ability to counter inequality in healthcare by using the AI to improve the whole healthcare systems knowledge and experience, freeing up resources especially for vulnerable groups, and the impact of WARD-CSS on the workforce in relation to workload and interaction with patients
- Document that the WARD-CSS is applicant to the respect for health-care data (i.e. GDPR), and this is trusted by the citizens, whilst striving for the FAIR principles
- Use and identify measures and indicators that can be used for monitoring the improvements in health, care and prevention from technologies such as the WARD-CSS
- Use the experiences from WARD-CSS to explore and foster a receptive culture for complication prevention among key stakeholders (clinicians, patients, relatives, politicians etc.)

The PROMISE study will use the CE-marked WARD-CSS to reduce complications and save healthcare resources across healthcare systems and settings including during hospitalization and at home. WARD-CSS is device agnostic technology that uses evidence-based AI-interpretation of wirelessly collected vital signs to identify deviations that need to be relayed to the clinical staff, and not when a specific threshold is crossed alone. This is shown to reduce alerts frequency by >70%, and serious adverse events by >25% relatively, whilst freeing up nurses' resources.

PROMISE will change the current inefficient but time-consuming manual intermittent monitoring practices, to a preventive data-driven paradigm. This will free up healthcare resources, not only by reducing costly complications but also the scarce staff-resources. This will allow staff to focus on tasks where the human-to-human interaction is essential, such as communication and treatments decisions, but potentially also earlier and safe discharge. This will, together with reduced need for (re-)admission increase the overall healthcare capacity. By automating monitoring by AI, resources can be directed to vulnerable groups at need, and not the majority of low-risk patients as is the case today.

Using the 20 million annual major surgeries in the EU as an example, PROMISE, if widely adopted, could prevent complications in 5% of high-risk patients, potentially reducing severe complications by 300,000 annually. This could save European healthcare systems at least 4.5 billion Euros yearly.

KEYWORDS

- Complications
- Patient monitoring
- AI
- Health technology
- Prevention
- Vital signs
- Wireless sensors

DURATION

24 months

PARTNERS

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