The future of telemonitoring in peri-operative care

A strategic design approach to the integration of telemonitoring services in peri-operative care

1 Struggles

Telemonitoring is a useful tool for **extending care** for major gastrointestinal surgeries. However, current services are not yet prepared for its adoption. The main barriers are the **over-abundance** and **lack of integration of data**, that doesn't present an overview of the patient's state. The lack of integration is also seen in the actors involved, given the need for a diverse range of specialties and knowledge. Overall, there is a **lack of** standardization and **guidelines** regarding procedures and a **lack of involvement of stakeholders**, whose goals are not always the driving forces for these services. Finally, the **smart systems** implemented **don't** always **respond to the user's needs and expectations**, who in the end, have to adapt to the new dynamics technologies bring.

2 Aims

1. Decrease overall amount of medical **procedures**.

2. Reduce the number of **emergencies** by transforming them into scheduled procedures.
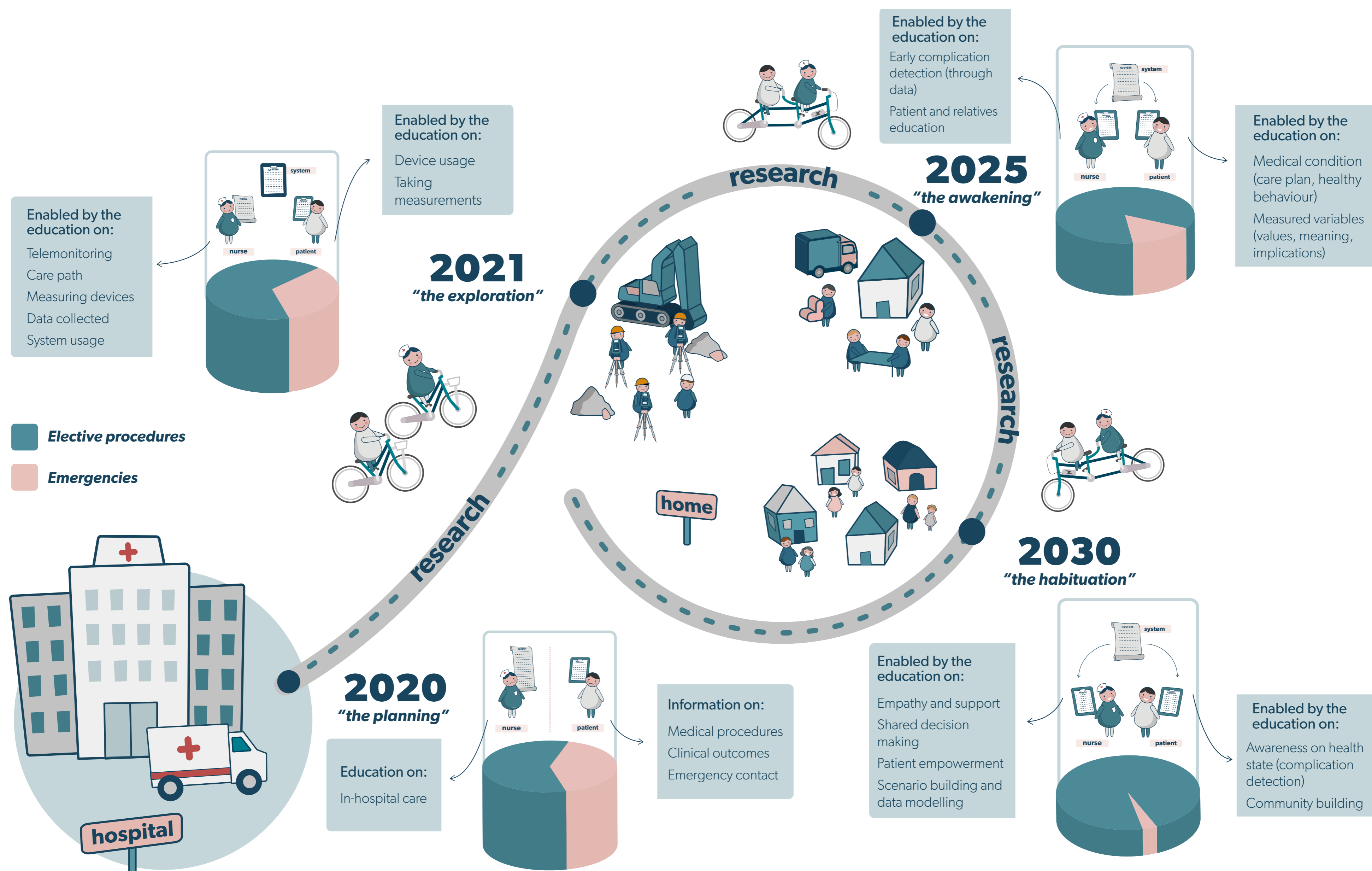
3 Approach

A **scoping review** guided the initial research. Two databases were used: Pubmed and Embase. The results included challenges and strategies that telemonitoring in peri-operative care brings to healthcare staff.

These findings were confirmed with **user research and expert interviews**. The insights gave a direction to the design process.

Finally, a **trend analysis** served as a basis for the conceptualization phase. The design outcomes are around the development of a **future vision for telemonitoring in peri-operative care**.

3 The Vision

This vision represents the mindset around peri-operative care supported by telemonitoring. It presents a journey over time on the implementation of these services, considering some of the transformations needed around the roles, tasks, and behaviors of the actors involved.

5 Enablers

Here a proposal around education, innovation, and research fulfills the project's aims.

Patient education: Empowered to actively seek for their wellbeing

Staff education: Support patient's active role and awareness of data and smart systems usages

Innovation: Smart systems provide support on nurses' burdensome tasks and enable education

Research: As a "meta enabler" that brings insights and continuous feedback on education and innovation

6 Benefits

- **Better resource allocation** (human and non-human)
- **Reduction** in hospital's **expenses**
- More **informed risk** assessments and **decision** making
- **Increase nurse-patient time** by a reduction of burdensome tasks
- **Improve** nurse-patient **understanding** and **relationship**
- **Enhance patient's satisfaction** with the service and the care plan
- **Enhance nurse's satisfaction** with the service, their working conditions, and duties

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