

# Mundane work as a dynamic non-event - Investigating everyday adaptations to manage risk in intraoperative anaesthesia care

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# Background

- Safety as a dynamic non-event, constantly present in professionals work processes<sup>1</sup>
- Focus on success - understanding how teams perform complex and critical tasks <sup>2</sup>
- Resilience as an emergent phenomena<sup>3</sup>
- The context: Anaesthesia teams, working in a complex adaptive system of an operating room<sup>4</sup>
- Investigating management of everyday complex situations may present an opportunity to elucidate the presence of management of safety<sup>5</sup>

## Aim and study design

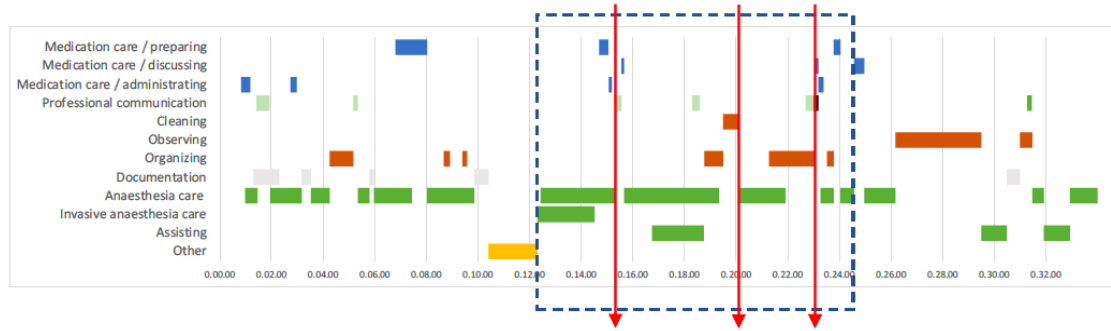
- The aim was to explore factors supporting anaesthesia nurses and anaesthesiologists in managing complex, every day situations during intraoperative anaesthesia care

Mapping RNA's  
intraoperative work  
process: Identifying  
complex everyday  
situations

Individual, semistructured  
interviews  
CTA:  
Case scenarios of  
expected and unexpected  
complex situation

Factors supporting the  
anaesthesia teams  
work in managing  
complex everyday  
situations

# A visualization of a complex everyday situation

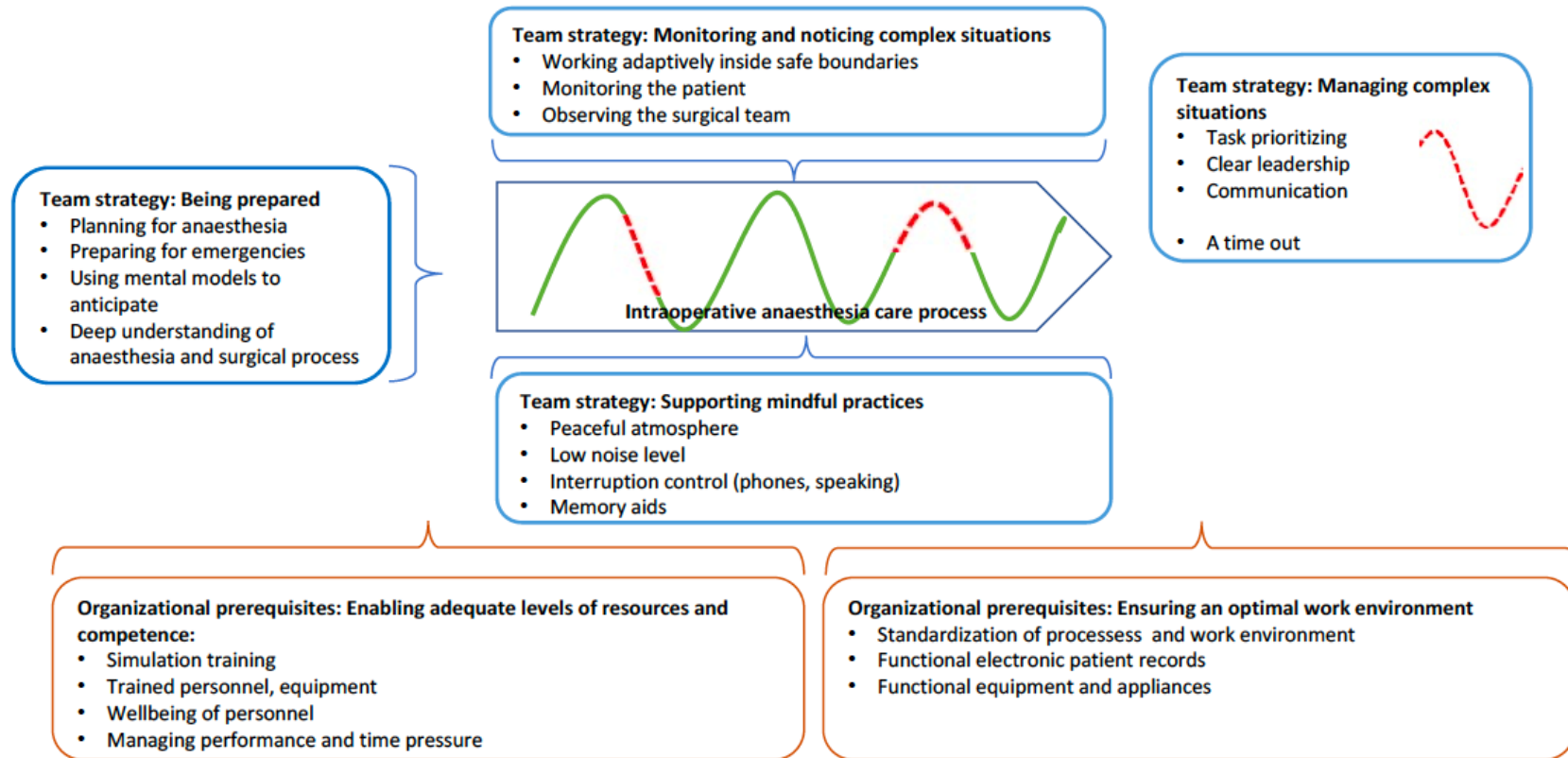


Visualization of induction. Visualization constructed from data collected with structured, direct observations (WOMBAT), and mapping of process phases (tasks, multitasking, interruptions).<sup>4</sup>

# Methods

- Setting: Three hospitals in Finland (two county and one university), anaesthesia departments
- Participants: Anaesthesia nurses (n=9) and anaesthesiologists (n=6), purposive sample
- Data collected 1-2/2020
- Individual, semi-structured interviews using cognitive task analysis<sup>6</sup>
- Data analysis with framework method<sup>7</sup>
- Study conducted according to research ethics<sup>8,9</sup>

# Results



# Results

- Team strategies

- Being prepared

- Planning for anaesthesia during the preceding day
    - Preparing for possible emergencies
    - Using mental models to anticipate events
    - Deep understanding of both anaesthesia and the surgical process

- Supporting mindful practices

- Creating a peaceful atmosphere for the patient
    - Keeping noise levels low, planning the usage of phones and when to interrupt a colleague
    - Using memory aids to focus on the primary task

# Results

- Team strategies

- Monitoring and noticing complex situations

- Working adaptively inside the safe boundaries
    - Monitoring the patient may provide clues regarding a change
    - Observing the mood and actions of the surgical team

- Managing complex situations

- Prioritizing, knowing the next steps and testing alternative solutions calmly, without delay
    - Clear and undivided leadership
    - Open, timely and honest communication
    - A timeout after a complex situation for checks and feedback



# Results

- Organizational prerequisites
  - Ensuring an optimal work environment
    - Standardization of processes and work environment
    - Suitable and functional electronic patient records, equipment and appliances
  - Enabling adequate levels of resources and competence
    - Simulation training promotes the ability to react and adapt
    - Adequate amount of personnel and stable teams
    - The personal wellbeing of the anaesthesia professionals
    - Performance and time pressures should be manageable

## Strenghts and limitations

- + Triangulation of data and analyses
- + Experienced professionals interviewed, rich descriptions of the phenomenon
- + Data collection from multiple organizations
- + Using observations as a base to case scenarios – dependability
- Transferability uncertain

## Conclusions

- Enabling adaptive capacity to grow through deep understanding of processes and learning from success may support the anticipation and successful management of expected and unexpected complex situations
- High quality teamwork and non technical skills are beneficial
- Exploring complex everyday work provided knowledge on prerequisites and strategies which aid management of safety

# Thank you!

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