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Innovative Solutions: MedTech and Process Efficiency in Tackling Staff Shortages Erwin Hans, CHOIR - University of Twente



Towards more impact on healthcare transformation through a transdisciplinary approach

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CHOIR

Center for Healthcare Operations Improvement & Research

http://www.utwente.nl/choir







1: How can we maintain equitable access to high quality care

without additional expenses / capacity?



2: How can we make more impact on this challenge?



1: How can we maintain equitable access to high quality care

without additional expenses / capacity?

Transforming healthcare: potential solutions

- Prevention
- Shift of care towards the patient's home
- 'Zinnige zorg' (appropriate care)
- Technology to support *delivery* and *organization* of care
- Address systemic perverse incentives
- Data-driven decision making, AI, etc.
- Integrated capacity planning / collaboration

Integrated capacity planning, within and amongst care providers



Increase production + Reduce waiting + Reduce work pressure



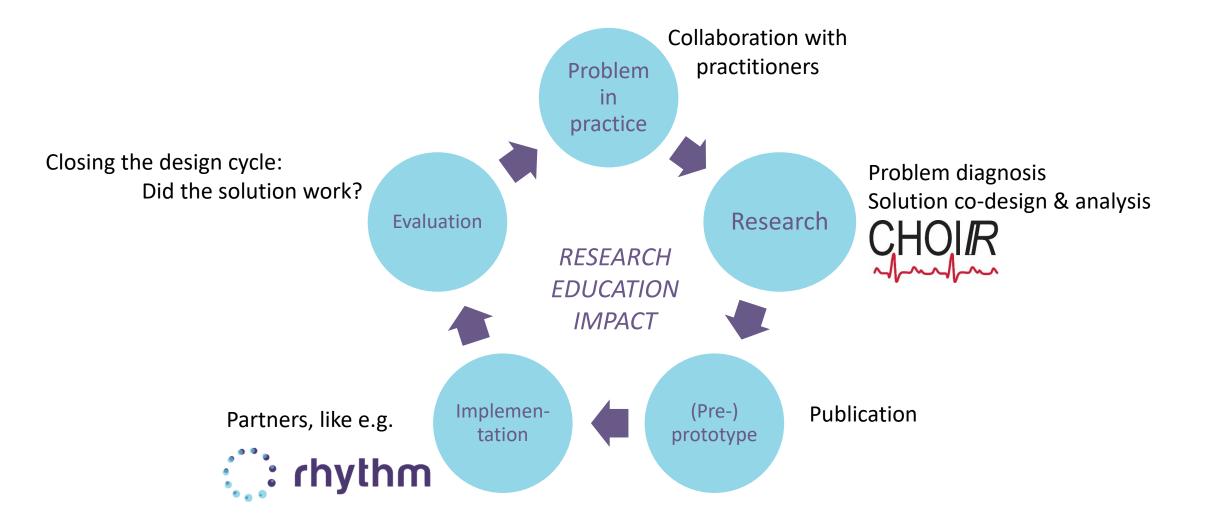
A holistic / integrated view on...

- Entire care pathway
- Performance (quality of care, service and labor, productivity, sustainability)
- Decision hierarchy
 - System perspective
 - Organization perspective strategic, tactical, operational
- Managerial areas (medical, capacity, material, financial, ...)



2: How can we make more impact on this challenge?

An impact-driven approach to research and education





Barriers for transformation

- Complexity of challenges
- Risk-avoiding nature of healthcare
- Leadership
- Lack of training
- Lack of international academic reward for impactful research
- Siloed scientific world, in *research* and in *education*



Perspectives

Cost-effectiveness

Systems Engineering

Operations Management

Capacity-effectiveness

Organizational behavior

Sustainability

Leadership

Change management

Judicial



Dr. Anke

health

services

Prof.dr. **Carine Doggeri**



Technology in Healthcare **Transformations**

Dr. Mireille Post-Hubers

Organisational change scholar

Implementing organisational

change

Prof.dr.ir. **Erwin Hans**

Dr.ir. Gréanne Leeftink Industrial Engineer Healthcare process optimisation



Dr. Caroline **Fischer** Public administration scholar Management of public services

> Prof.dr. **René Torenvlied**

Education

- More interdisciplinary education in UT's (healthcare) programmes
- Medical schools in hospitals should be about more than (technical) medicine
- An interdisciplinary executive training programme organized by TechMed for the healthcare sector

Center for Healthcare Operations Improvement and Research

WE CAN SUSTAIN CARE UNDER REDUCED RESOURCES THROUGH OPTIMIZATION OF THE LOGISTICAL PROCESSES VIA CAREFUL USE OF MODELS AND DATA





Dental First Aid Surgeon

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