Optimization of patient logistics

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Agenda

I. Actual conditions in patient logistics

II. Need for optimization in patient logistics

III. e-patient logistics as an strategy for otimization

VI. Implementing alternatives in e-patient logistics

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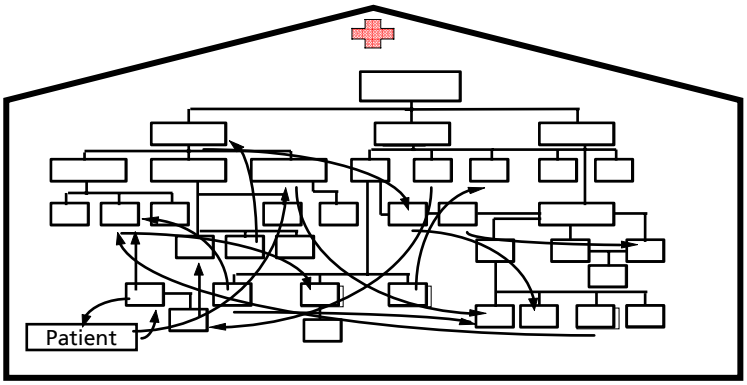
I.1 Actual condition in patient logistics



Patient logistics can be defined as attended or not-attended movements and hospitalization of inpatients and outpatients within a defined area (e.g. hospital).

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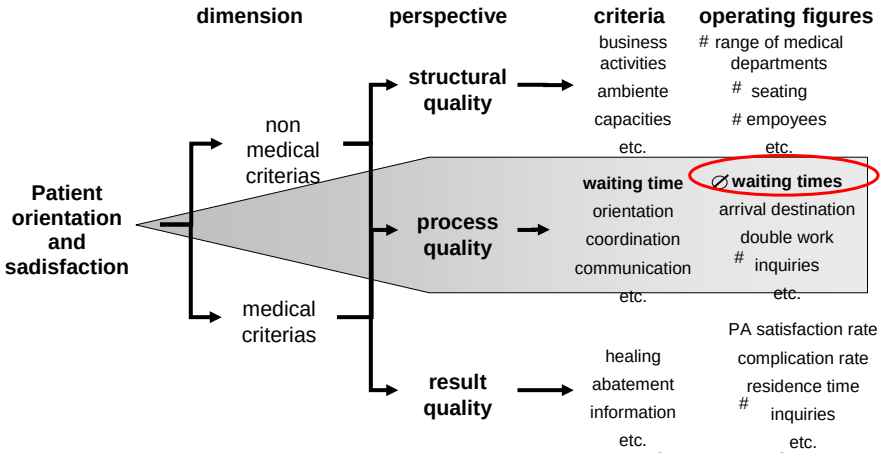
I.2 Measurement in patient orientation



Patient orientation is the extent to which there is an awareness of, a concern for, and a responsiveness in the health care organization to the patient goals, needs and perspectives.

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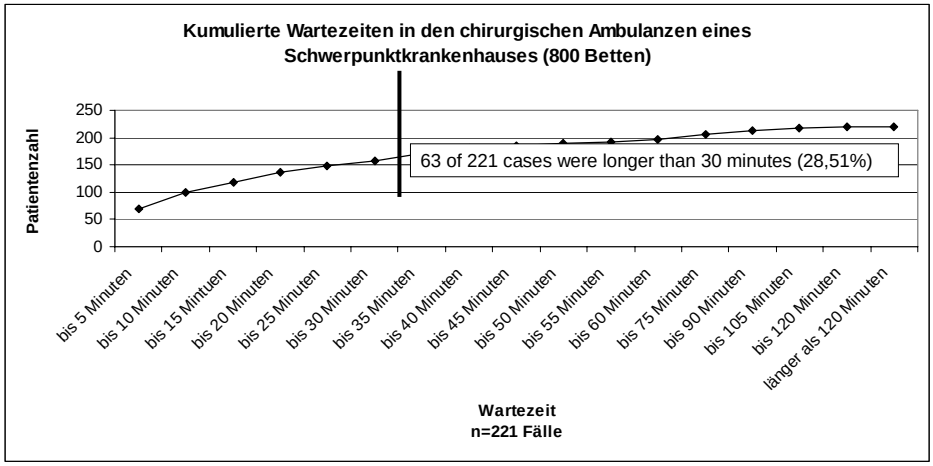
I.4 Cumulation of patient waiting times in a surgical outpatient clinic



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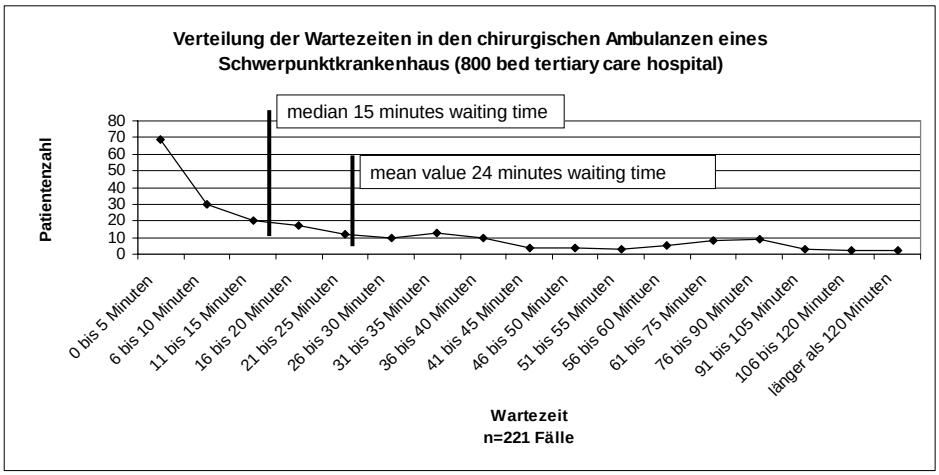
I.3 Patient waiting times in a surgical outpatient clinic



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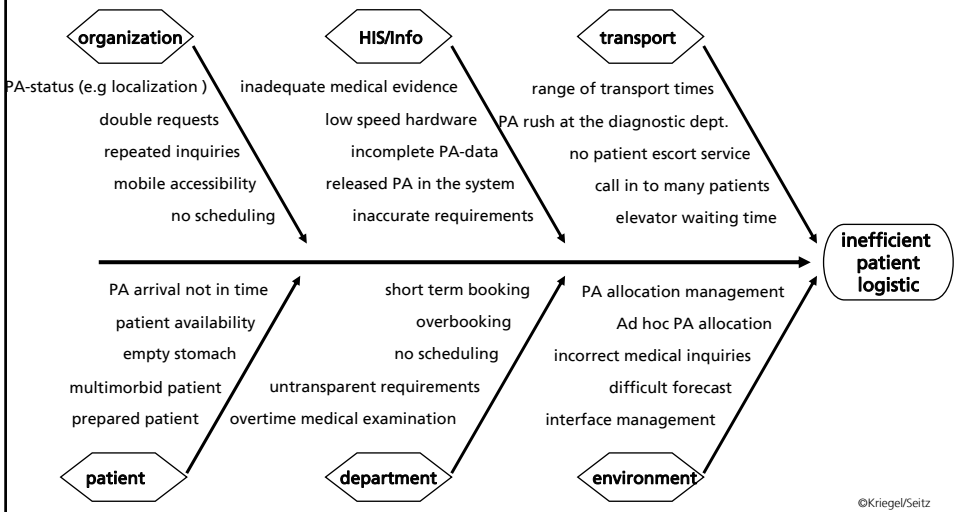
II.1 Weakness in patient logistics



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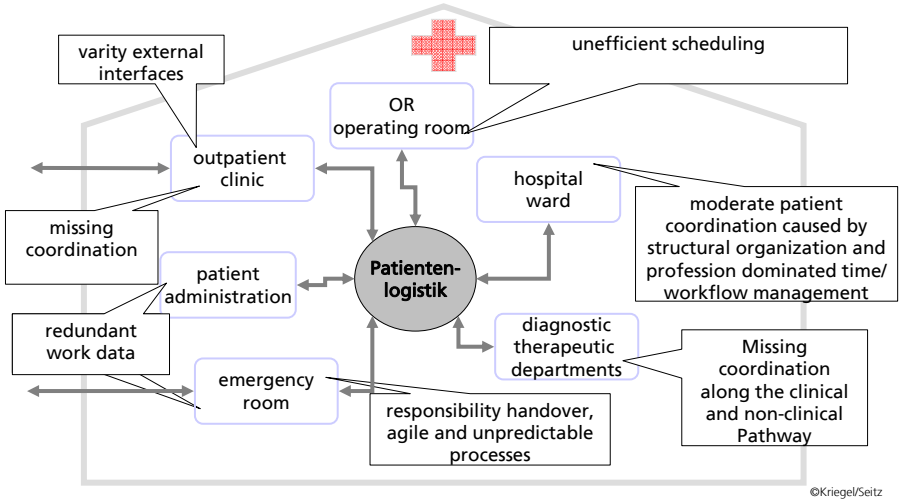
II.2 Need for optimization in patient logistics



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III.1 Optimization by e-patient logistics

e-Patient logistic can be defined as the electronic supported guidance and coordination of patient throughput and the related data flow.

The goal is to establish a common and transparent data base on which the involved players/health professionals and service providers can accomplish necessary information, documentation, coordination and decision functions.

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III.2 Optional IT-support and IT-use in patient logistics

- sickbed management
- patient throughput management
- management of patient escort service
- patient escort route planning
- data registration for his
- mobile collection of data
- DRG-billing and cost unit accounting
- patient track&tracing and stock-taking
- disposition of medical treatment resources
- planning clinical pathways
- simulation von patient focused performance
-

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IV.1 Optimized logistics for patients supported by smart object technologies (Olog-PAT) – Objectives

- technology-supported process management
- transparent visualization and coordination of logistic objects (e.g. patients) in hospital
- effective and efficient management of result-oriented care

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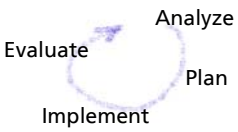
IV.3 Olog-PAT – Deliverables



- explicit problem description
- process analysis and visualization
- target concept of an optimized patient logistic
- dedicated smart objects for patient locating and tracing in hospitals
- Olog-PAT integration platform
- interface between Olog-PAT integration platform and clinical information system
- optimization algorithms supporting cross-sectional patient scheduling

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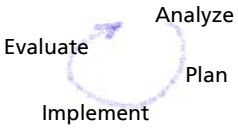
IV.2 Olog-PAT – Approach



WP 1: Project Management

WP 2: Analysis of system environment

WP 4: Specification of Application System

WP 5: Development of Smart Objects for Patients and Employees

WP 6: Integration of Smart Objects and Clinical Information System

WP 7: Development of Application System

WP 3: Service Engineering

WP 8: System Integration and Testing

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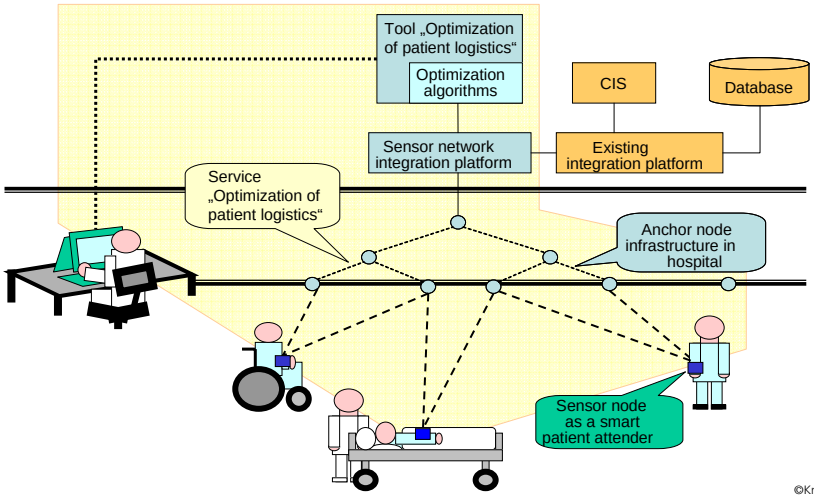
IV.4 Olog-PAT – Target architecture



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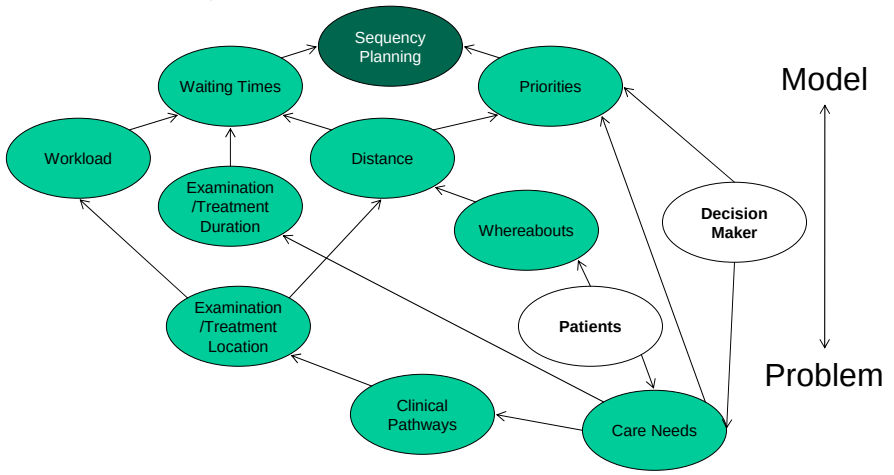
IV.5 Transparency



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IV.6 Optimization

Target / Trade-Off	• minimize waiting times • allow for priorities (manual configuration, care needs, emergencies)
Parameters	• workload • examination / Treatment duration • distance • priorities
Side conditions	• clinical pathways (sequence) • resource limits
Waiting strategies	• move-first • wait-first • (advanced)-dynamic-waiting
Critical success factors	• model as close to reality as possible • real-time capabilities (short response times)

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Thank you for your attention

and participation in the following discussion!

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