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# Patient flow i Region Midt

Strategiske handlemuligheder for Region Midt til forbedret patientbehandling gennem den kliniske logistik

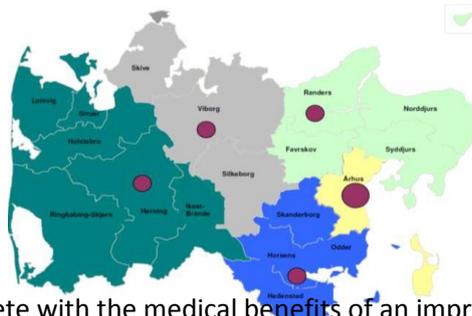
## HD(O) afhandling

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**Abstract:** No medicine can compete with the medical benefits of an improved organization of healthcare service. Patient flow is a structural problem in health care globally. Patients are dying due to bottlenecks and diminished service as a result of poor management of patient flow throughout the entire scope of healthcare. Improving organization is the best medicine in healthcare. This paper derives strategies from literature and from interviews with healthcare professionals and administrative personnel aimed to alleviate problems in patient flow for increased patient and staff satisfaction and better utilization of resources.

# Patient flow i Region Midt

## Resume.

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Healthcare in most of the western world is experiencing pressure from increased and more differentiated demand patterns. The populations are getting older resulting in more chronic and multi diagnostic diseases. Combined with an economic reality where hospitals and healthcare systems has to cut costs, challenges these organizations.

The challenges these organizations face, cannot be solved by the existing structures and just putting in more resources or by developing better medicine, more specialties and more medical training.

What is needed is a new structure of better and smarter organizations with clever visible management and leadership.

This thesis will look at the healthcare system in Denmark, specifically the part called Region Midt. The main focus is on developing implementable strategic initiatives in Region Midt to improve the security and satisfaction and productivity in patient treatment at the somatic hospitals by focusing on the clinical logistics, also called patient flow.

The question this thesis is aiming to answer is:

Which strategic initiatives does Region Midt have, for increased patient treatment and improved productivity thru the clinical logistics at the somatic hospitals.

Inside the boundaries set for this survey, will be the somatic hospitals in Region Midt including the interfaces to the primary care sector. Excluded will be the primary and community care sector. These entities will be included only to the degree it makes sense in developing initiatives covering the interface between the primary and secondary sector. The primary sector is an important stakeholder, but this paper will set its boundary at the interface between these sectors to focus mainly on the secondary sector, the hospitals.

This paper will not be dealing with the clinical profession with issues such as which medical procedures to perform or how to perform diagnosis, but focus on possible organizational and management issues that may have a, preferably, evidence based and measurable solution.

The assumption of this thesis is that hospitals, and healthcare in general, can drastically increase productivity and efficiency by improving the organizational design and management at all levels.

The overall theoretical framework is on organization theory with an emphasis on the transition from the traditional functional structure to a more horizontal process oriented structure. This is the baseline for the thesis, but applicable theories identified thru literature studies have been incorporated and has created a foundation for some of the strategic initiatives derived in this paper.

The methodology for this thesis is as follows. First, to look to understand the problem domain and what the issues are and how they appear. This is done thru literature search with a focus on system wide patient flow problems and possible evidence based solutions.

# Strategiske handlemuligheder for region midt til forbedret patientbehandling og gennem den kliniske logistik

A desk research traverse the literature to find the most relevant articles covering the problem domain. Second, this means finding in what way badly managed patient flows manifest themselves in the organization, and how they are perceived and experienced by staff and patients. These problems are linked by the literature, as the result of bad patient flow and define one group of themes derived from the literature that is discussed.

Third, this research then look to identify appropriate causes of badly managed patient flow. These causes make up the second group of themes to be discussed. These are also the relevant and appropriate themes from which to derive and develop the strategic initiatives that are the results of this thesis. The focus is on handling these issues at the root cause level and not to treat the symptoms of bad patient flow, as they are described in the first group of themes.

The cause and effect to the first group of themes is also discussed.

Fourth, conducting interviews with key people at different hospital organizations to expand on the derived strategic themes and to nuance and enrich them from aspects of the living and breathing reality in which they are developed to be implemented.

Fifth, the information, experience and knowledge from the interviews, expand on and form the themes into strategic initiatives that have a living chance of being implemented in the organizations.

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The resulting list of articles and the selected book (Litvak, Eugene, 2010) can be found under section 10 of this thesis.

The most relevant literature for the problem definition is a book by Eugene Litvak, "*Managing Patient Flow in Hospitals, strategies and Solutions*", 2010, and among the articles for example one by Leti Vos et. al., 2012, "*Towards an organisation-wide process-oriented organisation of care: A literature review.*" and by Stefano Villa, et.al., 2008, "*Restructuring patient flow logistics around patient care needs: Implications and practicalities from three critical cases.*".

The resulting 2 groups of themes identified from the chosen literature, are listed below.

# Patient flow i Region Midt

<b>Group 1: Problem (symptoms) of poor patient flow.</b>
Inferior patient security and suboptimal care
Over crowded inpatient units. Boarding. Increased mortality
Increased wait times
Increased readmissions
Poor patient and staff satisfaction. Poor working conditions. Understaffing.
Unattractive workplace. Problems recruiting qualified personnel.
Reduced efficiency and productivity.
Increased Left Without Being Seen. ( LWBS).
Redundant examinations and diagnostics
Increased costs

<b>Group 2: Causes of poor patient flow</b>
Lack of logistically homogenous groups of patients.
Existence of artificial variability in patient flow.
Poor management of the predictive natural variability in patient flow.
Poor communication and corporation between primary and secondary care sector.
No planned path for typical patient flows.
Silo construction and thinking Functional organization design lacking horizontal communication.

Group 2 identified as the causes of poor patient flow, are the appropriate themes to approach and rectify by developing strategic initiatives aimed specifically at these themes and where each initiative will, by itself and in combination, be supporting an overarching balanced strategy to improve patient flow.

Armed with the new found knowledge and identified themes, the interviews commences.

The interviews confirmed that the identified themes in group 1 as symptoms of poor patient flow, were indeed correct. Equal confirmation were found in an interview with a doctor who is researching patient flow issues, that the themes in group 2 are root causes of poor patient flow.

An interview with a managing doctor at a hospital in Silkeborg, confirmed that small changes in their organization has had tremendous effect on patient satisfaction, security and throughput.

These interviews with real life indications on the issues of patient flow, enriches and expands on the themes from group 2.

# Strategiske handlemuligheder for region midt til forbedret patientbehandling og gennem den kliniske logistik

Analyzing the transcribed interviews from the perspective of this thesis problem definition and the identified themes from literature, I argue that the following 6 strategic initiatives is a solid set of implementable initiatives that, in separation and in combination, will support an overarching balanced strategic framework that will drastically improve patient flow and throughput.

The resulting strategic initiatives are:

1. Create and sustain motivation for change in the organizations. (One real life contribution here is to include the labor unions that different groups of staff are members of.)
2. Improve access to specialist advice thru redesigning the processes. (For example, the general practitioners (GP) access to hospital specialists and more complete patient information from GP to hospital physicians at start of patient flow.)
3. Homogenizing and separation of elective and non elective patients in logistical homogenous patient flows.
4. Improve patient flow by eliminating artificial variability thru valid data, measures, and analysis, and to better manage natural variability. (Thru ex. queue techniques.)
5. Establish clear criteria for admission and discharge for each inpatient unit.
6. Date of discharge is set at admission to hospital.

This thesis also discusses some possible wrong steps in implementing the strategic initiatives, such as the organization itself with entrenchment because of a history of previously poorly implemented strategies, a top management with lack of or poor communication strategy and IT and other technical infrastructure flawed and unable to support the strategies. It also gives a few pointers on the application of LEAN.

In conclusion, this thesis has demonstrated, that improved organization, management and leadership is the correct medicine for the healthcare sector. It demonstrates that a cohesion exists between the themes from the selected literature and the real life issues put forward by the respondents in the interviews. It has also showed a reasonable cohesion between the root causes of poor patient flow and the derived strategic initiatives, and the applicability and soundness of these initiatives.