

TASK FORCE TO SOLVE LONG WAITING TIMES
IN LANDSPITALI ´ S EMERGENCY UNIT FOR
PATIENTS SUBMITTED FOR INTERNAL WARD -
EXTERNAL REVISION

REPORT TO THE MINISTER OF HEALTH

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Thank you for the opportunity to study the present situation at Landspítali from the perspective of the problem that a large number of patients have a very long waiting time at the emergency unit, before being admitted to a ward. Our observations, analysis and recommendations are based on studies of previous reports and communicated material from the Ministry of health and from the hospital (performed before our first visit), a site visit to the hospital for one day, interviews with a large number of personnel during this visit and extended and deep discussions and co-operation with the appointed Task Force (during our two visits).

Our main contact with the Leadership of the Hospital has been with the adviser to the Director (part of the Task Force and present during the whole period of work). We have shortly met the director (40 minutes). We had a good discussion with 9 of the newly appointed Department heads at the hospital, and we have met and discussed with the Minister of Health and with the Permanent Secretary of the Department of Health.

The main purpose in appointing us to the Task Force, was to interact with the group during the work in order to share our previous experiences and contribute with ideas and propose actions by which the roots to the problem can be attacked. We have, during the work and at the different meetings, communicated our reflections and ideas as clearly as we can.

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The problem – a short description

For an extended length of time, Landspítali has had a gradually growing problem with patients getting stuck in “a traffic jam” at the emergency unit, instead of being admitted to a ward and a bed after the decision that they need to be hospitalized. Patients can be waiting to get a bed at a ward within the hospital for days. The number of patients waiting for a bed for more than 24 h is 20-40 per day. In January 2020, the emergency department (E.D.) produced slightly more than 900 care days, equaling 30 patients waiting for a bed for more than 24 h per day.

To be stuck at the E.D., in transit between the E.D and a hospital bed, is documented to be dangerous for the patients. Such patients, in the literature named as “border patients”, have an increased risk of death, increased risk of hospital-acquired infections and documented prolonged length of stay at the hospital. Also, it has been shown that costs for these patients are very high, both for the hospital and for society. At Landspítali, the border patients represent a group of frail elderly, often with multiple diagnoses and complex medical needs. Also, the length of the transit period is increasing with age. The older the patients are, the longer they wait! The vast majority of these patients, subjected to this problem and thus the bearers of this problem are the elderly Icelandic citizens with complex needs, frailty and often multiple diseases.

This phenomenon, per se, is not unique for Iceland or for Landspítali. But it must be stressed that the magnitude of the problem, and the amount of patients that every day are waiting at the E.D. of Landspítali for a bed, is of enormous proportions; leading to suffering and probably to severe complications for individual patients. Quite worryingly, there are signs that the problem is escalating. Thus, there is a very urgent need for action to improve the situation.

Analysis of the Emergency department's medical operations

The E.D at Landspítali is not only a place where the residents of Reykjavik seek help for their medical problems. Landspítali's E.D. is the only emergency department in Reykjavik with the full resources of a hospital and is of mandatory importance for Iceland in the country's ability to cope with scenarios of a larger scale e.g. mass casualties, emerging epidemics, volcano outbreaks, etc.

The E.D. has taken several measures to take care of the border patients, even though the E.D. is not equipped for caring of patients admitted to the hospital. The E.D. does not have the space, not the logistics or the personnel, nor the hygienic standards or measures needed to provide autonomous and discretionary care. It must be stressed that the E.D. should not be equipped for caring for admitted patients. A development where the E.D. is equipped for in-hospital care, as repeatedly demonstrated by others in the literature, would decrease the quality of the core mission of the E.D., i.e. to triage, identify and primarily stabilize patients with a need for advanced care and to further identify and admit patients with a need to stay within the hospital. To hold the border between the E.D. and the rest of the hospital is thus of crucial importance for all efficient hospital care.

The E.D. has a good efficiency in its core operations with medical quality of high standards. The E.D. operates a separate floor for patients whose needs approximate general care with fast flow times. This flow is operated at a floor separate from the other, more acute flow, to where patients are triaged whose presentations at the E.D. approximate a higher need for the hospital's full resources. Approximately 60% of the total patient volume at the E.D. are triaged to the latter flow. The ratio of admitted patients to patients sent home from the latter flow is 23%, a number significant of an efficient patient flow. Due to the differentiated flows and the efficiency of the E.D.'s core operations, measures that target the inflow to the hospital will only affect the main problem to a small extent.

Our firm analysis of the E.D. is that the solution to the problem does not lie within the E.D.'s operations. The E.D. has, with the patients in the foreground, to the best of its ability tried to solve the problem with the very high amounts of patients cared for in transit to the rest of the hospital. However, the tipping point where the efficiency of the E.D.'s core operations decline due to the pressure of caring for the border patients, is possibly getting closer. There are already some signs to that, with the mean time to decide whether a patient needs to be admitted to the hospital increasing.

Analysis of the rest of Landspítali operational efficiency

Landspítali has comparatively many open beds compared to the population. There are approximately 30 beds currently closed, due to nurse force shortage. The mean length of stay (LOS) in Landspítali is comparatively high. This is possibly driven by the approximately 6-7% share of the patients that have very long LOS, >30 days at the hospital. The long LOS in this share of the patients is a root cause to the main problem and has caused a traffic jam within the hospital.

Landspítali has two wards with beds reserved for elective surgery, however the beds are sometimes used for non-elective patients as well. There are two acute wards (MAVA-medical acute ward and GAVA-geriatric acute ward). MAVA is a ward with a clear aim; to care for patients with an anticipated LOS of <48 h. Approx 90% of the patients are supposed to have a LOS of <48h. However, the flow of patients from the E.R. to the internal medicine wards are routed mainly through MAVA, thereby not using the requisites set up for the ward. A much lower percentage than the aimed for 90% have a LOS of <48h. Thus, MAVA is also jammed. The mean LOS at GAVA is slightly >30 days and is thus not used as intended.

There are currently 6+7 ICU beds open at the respective sites. The nurse to patient ratio is 1:1, which is a very high ratio. In comparison, the nurse to patient ratio at Sahlgrenska University Hospital is 1:2, at Karolinska University Huddinge 1:1.5 and at Uppsala University Hospital 1:1.6. The Icelandic nurse to patient ratio could thus be challenged, perhaps with the use of other professionals such as nurse assistants. If the nurse to patient ratio would be changed to approximate other Nordic university level ICUs, the open beds would increase.

There is no intermediate level of care, often called high dependency unit (HDU) at Landspítali. HDU, or the intermediate level of care is not a defined level but implies a ward with a different nurse to patient ratio, e.g. 1:3-1:4, than general wards. Also, the competency level of such a ward is higher than a general ward, but lower than an ICU. These measures serves the HDU to care for patients with a higher risk of death or high level of need for care. If more ICU-beds would be open at Landspítali together with a number of HDU-beds, the mean level of need of care would decrease in the general wards, improving the wards possibility to care for more patients with the same staffing level.

The number of senior doctors present at the wards is comparatively low at Landspítali, making the progress of the care of the patients slower and effectively stops patients being signed home from the hospital except for during the morning rounds.

Analysis of Landspítali's leadership strategy and proposed modifications

Landspítali's highest leadership consists of the Hospital Director and his leadership team. Icelandic law states that the Director is the responsibility party for all decisions. The leadership team members are advising and not deciding. The team consists of 3 second line Directors, the CMO, the CNO and the advisor to the Director.

Even though the problem and the situation at the hospital, has been obvious and present for an extended period of time and known by the Director, no obvious measures have been effectuated to solve the problem. Measures undertaken rather have been addressing secondary effects, than to attacking the root of the problem. The communicated message from the Leadership of the Hospital, states that the problem is more of a society problem than a problem that can be solves by the Hospital or effected within the Hospital.

By all means, Iceland as well as all other comparable societies, has a growing problem to maintain well fare at a state that citizens are used to and are demanding. The balance between hospital beds, nursing home capacity, primary care and ambulatory home care function is a society challenge that requires skills and understanding of how complex systems are built and maintained. The present problem, observed at Landspítali as well as at other hospitals and societies, is of course a part of a greater conglomerate of problems associated to the challenges and change that western societies are subjected to and need to overcome.

It is, however, very dangerous by the Hospital to communicate that the role of the Hospital rather is the role of a victim than as of a responsible part to the problem and as a part of the solutions required to solve the problem. By claiming that long term actions by other parts of the well-fare system, such as construction of new nursing homes and more resources to the Hospital are the only solutions that can improve the situation at the ED at the Hospital, one gets the impression that actions at the Hospital are not important. Whatever the Hospital do, the problem will remain.

And this is, at part, what we observe has happened at Landspítali. At lot of actions are undertaken, but rather to cope with effects of the problem, than to make the necessary changes that the Hospital can do by itself and right now to influence the situation within the hospital. Actions to make significant change are possible and can be clearly identified. Further down in our summery, we list actions that would influence the core of the problem. All these actions have been discussed in depth during the work with the Task Force and are part of the action plan that will be presented by the Task Force.

Besides what can be done within the hospital, the Hospital leadership must take a leading role in actions needed to handle the problem outside the Hospital. Landspítali is a major part of Icelandic well-fare system, and not much will happen without involvement from the Hospital. It has the key resources, the role, skills and experience required to make innovation and change successful. Landspítali cannot solve things by itself, but need to take the leading role in the necessary work with other involved actors. The situation at the ED is a chronic catastrophe, and it is happening within the hospital. Patients, old and frail, are in large numbers suffering due to the present situation.

It is clear that the Leadership has been aware of the vast majority of the suggested actions below, as well as a number of ongoing innovative measures in-house at Landspítali as well as in the adjacent society, addressing the problem by improving the outflow from the hospital. Many such innovative initiatives have been identified, initiated both by the Hospital and by the Ministry, during our work with the task force. Obviously, a different strategy to implement change and other priorities has been selected by the Hospital Leadership. In our opinion the Director, and the leadership team, now need to prioritize the situation, make the necessary strategic decisions and remain with these decisions until the situation improves. The leadership of the Hospital must make sure that, in all possible ways, the Hospital takes an active and leading part in all work in the whole system with the aim to improve the situation for the group of frail patients that for the moment carry the burdens of the insufficient situation of care within the Hospital. To change the situation and to implement permanent change for the patients is primarily a leadership challenge that must be rapidly met by the Hospital.

In the end of 2019, a new organization was implemented. A new line of Department Heads were appointed, with responsibility for economy, personnel and medical operations within their department. The extension of the mandate to these newly appointed Heads is not made clear. It is our recommendation that these newly appointed Heads (11), as being the core of the new organization of the Hospitals leadership structure, should be used in their full capacity to improve change management. The group represent a vital mixture of professionals, with an experience and gender mix that reflecting the society. The Heads as a group express competence and energy. They express willingness to take strong action to solve this problem and other required changes. They should be considered as a key element and a very important potential for the Icelandic society.

We recommend that the newly appointed Heads as soon as possible are given a clear and communicated mandate in the leadership organization. They should be provided with adequate support, such as leadership and innovation mentors, and an effective line of collaboration between them in order to support innovation and implement change should be formed. It is important, especially regarding change and innovation, that this group reports directly to the Director. Last but not least, the leadership by the Director needs to be very active, present and visible. This newly appointed group has the potential to achieve a lot, but will need good leadership.

Suggested plan of actions

The following suggested solutions are recommended as measures to release the traffic jam of patients in transit from the E.D. and focuses on measures readily available within the hospital, with a low need of funding.

1. A strategic decision needs to be formed by the Director that the border patients are the number one priority of Landspítali. Further, all other questions not related to the border patients need to be given a lower priority. The strategic decision needs to be made shortly, be clear and effectively communicated to the whole organization. Further, the leadership needs to stick to the decision and implement the decision in the hospital's strategic plans for a foreseeable future. We see this measure to be of extreme importance.
2. The strategic decision in suggestion 1 needs to be complemented with an explicit ban on patients waiting more than 6 h in the E.D., that time starting at the entrance to the E.D. A plan with specific targets with a maximum number of patients accepted should be stated, where a clear progression to fulfil the ban is visible.
3. There is a good hospital-wide daily meeting at Landspítali, called the Hurdle. At the Hurdle, information about the available number of beds are gathered together with the number of patients waiting for a hospital bed in the E.D. We strongly recommend the Hurdle-meeting to be reformed from a meeting with the character of information gathering, to a meeting with the explicit target to procure a plan for each individual border patient, each day. Instruments that would be helpful, originating from the Karolinska University Hospital have been made available to the task force, and can be adjusted to Landspítali's conditions.
4. MAVA and GAVA should be used according to the explicit requisites of the respective ward. To achieve this, the hospital may need to take actions such as inhibit elective surgery for some time, thus producing a window of opportunity to achieve a better patient-mix at MAVA and GAVA.
5. An instrument to predict the LOS for each patient needs to be developed, or if not, the predicted LOS by the admitting physician can be used. The aim is to only admit patients with a predicted LOS of <48 h to MAVA. Other patients need to be admitted to respective wards according to their medical need.
6. The attendance of senior physicians at Landspítali needs to improve, especially from the afternoons to early night. The aim is to improve the progress of each patient and to actively assess the need for each patient to remain admitted to the hospital. Several examples of the effectiveness of this measure are available, e.g. St Görans Hospital, Stockholm, Sweden. Contacts can be procured at will.
7. We recommend the hospital to open up more ICU-beds, possibly by analyzing nurse to patient ratios and considering using other professionals in the care for the patients. Moreover, the ICU are instrumental in starting HDU-care at Landspítali. The aim is to reduce the level of disease and the need of care at the general wards, giving the possibility to open up more beds at the rest of Landspítali.

8. We recommend that Landspítali take active part in the innovative measures lead by the Ministry of Health with the aim to start new forms of care in the Icelandic society, e.g. mobile teams allowing for home care, advanced care at home or long-term care facilities where patients can stay during rehabilitation from hospital care before returning to their domicile.
9. We recommend that the E.D's operations are protected, and that actions to open up spaces for border patients in the same facilities as the care flow that handles patients with a low predicted need for in-hospital care, are actively abandoned.
10. We recommend that action plans are produced for: a. Achieving a window of opportunity to re-boot the hospital b. Improving the usage of MAVA and GAVA c. An active and leading role from Landspítali in the innovation work lead by the Ministry of health. We strongly recommend that the newly appointed Heads of departments are responsible for the procurement and implementation of the above-mentioned action plans.

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More than 30 scientific publications, presently advisor to 5 Ph.D –students.

Member of the board, Swedish Society for Intensive Care 2014 -

Diplomate, European Society of Anesthesia and Intensive Care. 2011 –

Senior consultant, Intensive Care Medicine at Region Sörmland and at Karolinska University Hospital 2019 -

Director of Intensive Care, Karolinska University Hospital 2014 – 2019 (Including all adult intensive care medicine operations at Karolinska, with approximately 3000 patients every year. The organization included approximately 500 doctors, nurses and nurse assistants.)

He lead the transition of Intensive Care in the reorganization of Karolinska University Hospital as well as the planning, allocation and moving into new hospital buildings at Solna and Huddinge sites. He is an active researcher, appointed as a senior lecturer at Uppsala University. He further works with several regional health authorities in Sweden to analyze and suggest improvements in the Swedish health care system.

Johan Permert M.D, Ph.D., Professor of Surgery at Karolinska Institutet.

More than 130 scientific publications.

Previous Advisor to more than 10 Ph.D. students.

President for the European Society of Pancreatology 2010.

Senior consultant of surgeon since 35 years. Specialized in upper abdominal surgery.

Chaiman of Surgery at Karolinska University Hospital 2006 – 2011.

Director of Development and Innovation, Karolinska University Hospital 2011 – 2016

CIO and CTO at Karolinska University Hospital 2011 – 2016.

Senior Advisor to the Director of Care at the County of Östergötland, and the Director of Linköping University Hospital 2016 - 2017.

Director of Research and Education, Stockholms Sjukhem, 2018.

Senior Advisor to the Director of the County of Dalarna, 2018 –

Senior Advisor to the Director of operations, surgical specialities and oncology, Örebro University Hospital 2019-

Johan has a vast experience from a large number of change management projects and of re-structuring of complex care and university systems, both in the public and private sector. Experience both from how to achieve change and development by working from the inside as part of the faculty and as a leader/manager or in the Leaders team. As well as working from the outside as a consultant to the local leading team.

Johan has built several care-chains, both connecting different hospitals and level of care, as well as creating function within hospitals. He has focused on how innovation can be used as a tool for change and development. He has reformed, built and implemented system for leading and change management in academic institutions, hospitals and in counties.