

Learning from the Danish Safer Hospital Programme



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Hospital Programme



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TrygFonden



Danish Society for

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Introduction

Since 2007, the Danish foundation TrygFonden, Danish Regions (an organization representing the five Danish regions), and the Danish Society for Patient Safety have worked together on a number of major improvement programmes in Danish healthcare. Taken together, these programmes – by supporting and helping clinicians change the way they do their work – have demonstrated how better results can be created for patients. At the same time, joy of work has been improved among hospital staff.

The first programme was Operation Life, 2007-2009, a nationwide campaign in Danish hospitals. In light of the success of the campaign, The Danish Safer Hospital Programme was launched in 2010 with the participation of five hospitals, one in each of the five Danish regions. Since then, experiences and learning have been spread to

other hospitals and in a number of new improvement programmes: The Danish Patient Safety Program for Mental Health, the Danish Safe Patient Flow Collaborative, the Danish Patient Safety Program for Primary Care, and the Danish Perinatal Safety Programme.

Since 2010, the Danish Society for Patient Safety has been a strategic partner of the Institute for Healthcare Improvement, IHI. Through cooperation with IHI, the Danish improvement programmes have received support and advice from international improvement experts from the United States, England, Scotland, and Wales.

This publication describes the experiences and learning from, primarily, The Danish Safer Hospital Programme, where improvement methods have been tested, developed, and adapted to the Danish

healthcare setting. The five hospitals in the programme now use these improvement methods on a variety of other areas for improvement, and improvement methods and mindset is spreading all over the Danish healthcare sector.

June 2015

TrygFonden, Danish Regions and the Danish Society for Patient Safety

The Danish Safer Hospital Programme was a collaboration between TrygFonden, Danish Regions, and the Danish Society for Patient Safety. The programme was delivered with expert assistance from the Institute for Healthcare Improvement, IHI.



Site visit at Thisted Hospital, January 2013.

New ways of working in healthcare

New realizations, new management methods, new energy. Visible improvements for patients and pride among healthcare professionals. Recent years' improvement programmes have paved the way for new ways of thinking, measuring, and working in Danish healthcare. These mindsets, behaviors, and methods together have the potential to accelerate improvements in healthcare and provide a fundamentally different system; a system in which patient outcomes are at the core. The background is that many patients are harmed during hospitalization. This happens, even though it is well known what is needed to prevent such harms. However, the knowledge available about best practices is not always applied systematically and consistently.

There is a gap between the existing knowledge and the service provision in healthcare. This is not a Danish phenomenon only. Internationally, this knowing-doing gap in healthcare is known as the Quality Chasm.

The improvement efforts aim at ensuring that existing knowledge be put to full use; in this way, all patients will benefit, and the knowing-doing gap will be closed.

Both what and how

The core of improvement work is taking an interest in work processes rather than just the output. Simply put, the focus needs to change from looking only at what kind of care patients should receive, to also looking at how all the elements of care should be provided. This calls for a

new way of doing the job for both management and healthcare professionals.

Many healthcare professionals are aware that their daily work processes contain barriers, which prevent patients from receiving the intended treatment. Healthcare professionals often have ideas for improving their work processes, but in a traditional organisation they do not have the tools, resources, or influence in the organisation to materialise these ideas.

For improvement efforts to be successful, healthcare executives and decision-makers must cooperate with patients and healthcare professionals to set ambitious goals for quality and patient safety. They



Learning seminar in Kolding, March 2012.



“Until we became part of the Danish Safer Hospital Programme - as hospital executives, we often used benchmarking to assess hospital quality. Whenever new numbers were released, typically once a year, we compared our own outcomes with those of neighbouring hospitals or the national average. If we were at the average or above, fine. Now, we monitor our own development over time. Are we moving in the right direction? Are we improving fast enough in light of the goals we have set for ourselves? Continual improvement is what we strive for.”

*From a feature in Politiken (Danish national newspaper)
by the five hospital executives*

must support frontline staff in re-designing processes that make it easy to do the right thing every time. Patients, and their knowledge and experience, should be incorporated in the process, to ensure that changes made match patient preferences and needs.

Hospital management takes control

The tradition in healthcare has been for hospital executives to focus on finances and productivity, while quality and patient safety were delegated to clinical leaders and a separate quality department. Their job included launching initiatives and programmes in the organisation, e.g. ensuring that the requirements of the Danish Healthcare Quality Programme were met in hospital departments.

With the new improvement approach, work is now organised differently. The hospital executives takes control – more so than before – and assumes responsibility for quality and safety. They actively request information about the quality status of the organisation (e.g. about

patient harms and preventable death occurrence), set the overall goals for quality and patient safety, and actively support healthcare professionals in delivering services of the highest possible quality.

The quality department used to have the ungrateful job of monitoring staff compliance with various regulations and project requirements; but this department now has a new role. The department resources are now used to teach and give guidance to management and clinicians in improvement methods; in addition, the department helps provide data for improvement work and carries out analyses and interpretations of data.

Monitor own processes

Everyday improvement work is an integral part of patient care. Using the model for improvement, ideas and new initiatives are being tested and adapted.

Each department and each ward carries out ongoing monitoring of their own processes and keeps tabs

on the outcome of the care their patients receive. This is done by means of local data collected daily or weekly. Deficiencies and inappropriate work processes become visible immediately and can thus be improved. In quality improvement, data are collected but only to the extent required for the improvement work, i.e. often few, simple data items. The need for data is adjusted and adapted on an ongoing basis.

Based on the progress made towards the overall goals and sub-goals of the organisation, executives focuses on improvement work by identifying problem areas and prioritising efforts. In order to clearly signal to the organization that patient safety is on top of the agenda and to support improvement work, hospital managements perform patient safety rounds regularly. Here they meet with front line staff in order to discuss how they work on improving patient safety and to help remove any barriers to this work. ■

The Danish Safer Hospital Programme

The Danish Safer Hospital Programme was launched in 2010 at five hospitals in Thisted, Horsens, Kolding, Næstved, and Hillerød. The core of the Danish Safer Hospital Programme was to help these hospitals develop the capacity and competencies for quality improvement.

The programme was based partially on international experience with similar projects, including the Safer Patients Initiative in the UK, and partially on Danish experience with the Operation Life Campaign, which from 2007-2009 increased the knowledge of patient safety and of improvement methods at all Danish hospitals.

The Danish Safer Hospital Programme was a four-year demonstration project, the purpose of which was to show how much progress could be achieved by applying a number of improvement methods. Over the course of the four programme years, capacity and competencies were established to take the improvement work forward.

The programme worked with twelve clinical bundles, each with a number of evidence-based elements. The bundles were selected on the basis of international experience and advice and were adapted to a Danish healthcare context. The bundles thus constituted the clinical content

of the programme. In a prioritised, easy-to-grasp form, they outlined best practice. However, the bundles were not the core of the programme.

The core of the Danish Safer Hospital Programme was the improvement methods: The model for improvement with frequent small-scale tests of improvement ideas, gradually being scaled up; the use of real-time data to measure and guide the improvement work and motivate healthcare professionals; new management methods with more attention and higher ambitions from executives regarding quality and patient safety; close contact between executives and the improvement teams, combined with openness regarding quality and patient safety issues and data.

The Danish Safer Hospital Programme worked with a faculty of international improvement experts from the Institute for Healthcare Improvement, IHI, which has experience with supporting improvements in healthcare in a number of countries, including the US, England, Scotland, and Sweden. They taught and guided executives and improvement teams at the five hospitals in how to accelerate improvement and sustain a new level of quality. They challenged traditional thinking and inspired new work processes. Consequently, the Danish Safer Hospital Program-

me was based on experience from leading hospitals in the world as regards patient safety.

Improvement teams, middle managers, and executives of the five hospitals have shared experiences with their improvement efforts in a collaborative with semi-annual learning sessions, mutual hospital visits, conference calls, etc.

At the outset of the Danish Safer Hospital Programme, the goal was for each hospital to reduce overall hospital mortality by 15% (measured with the hospital standardized mortality ratio, HSMR) and harm by 30% (measured with the IHI Global Trigger Tool). These goals were to be reached by achieving certain sub-goals, e.g. reducing the number of cardiac arrests, eliminating hospital infections, reducing the occurrence of pressure ulcers, preventing errors in connection with surgery and medication. A number of these ambitious goals were reached before the official end of the programme in December 2013. All goals were met at at least one of the five hospitals. As the programme progressed, it became clear, however, that the use of both HSMR and the Global Trigger Tool presented some challenges (cf. page 10). ■



Bente Ourø Rørth, CEO, Hillerød Hospital

On how discussions internally in the executive team and between the executive team and middle managers at the hospital changed from 2010 to 2014:

“I think discussions have changed fundamentally. We now discuss data and whether we will reach our goals in a much more qualified way. We look at whether we have improved – not in competition with others, but whether we have improved relative to our own starting point. It is possible to make improvements without getting anywhere close to the best, but still these improvements can be a great success. We call this “Close-to-the-clinic leadership”: executives do patient safety rounds and spend much more time in departments. It is much more legitimate now to say that this is part of our leadership role. The distance between what we decide and what we see is much shorter.



Hospitalsbesøg med Institute for Healthcare Improvement, IHI på Hillerød Hospital, 2011.

Overall goals of the Danish Safer Hospital Programme

In the Danish Safer Hospital Programme, a reduction of mortality and harm was chosen as overall goals. When measuring mortality, the hospital standardised mortality rate, HSMR, was used, while the IHI Global Trigger Tool was used to measure harm. The goal for the individual hospitals in the Programme was to reduce HSMR by 15% and the harm rate by 30%. Both measures turned out to be difficult to use in practice.

HSMR

The purpose of HSMR is to make it possible and meaningful to compare mortality at a hospital with the national average and with the hospital itself over time (but never with other hospitals) by standardising certain patient characteristics. Due to organisational changes, like merging of hospitals or changes in electronic patient record systems, the use of HSMR in the Danish Safer Hospital Programme has turned out

to be problematic when it comes to monitoring over time.

Nonetheless, hospitals found it very meaningful to monitor mortality, so several of them began using the unadjusted mortality rate or the absolute number of in-hospital deaths instead.

IHI Global Trigger Tool

IHI Global Trigger Tool (GTT) is currently the only method providing a measure of harm in a general hospital, which is why it was chosen as an overall measure in the Danish Safer Hospital Programme. The development of the method is well described. However, when the Danish Safer Hospital Programme began, there was only little experience in using GTT as a measure over time.

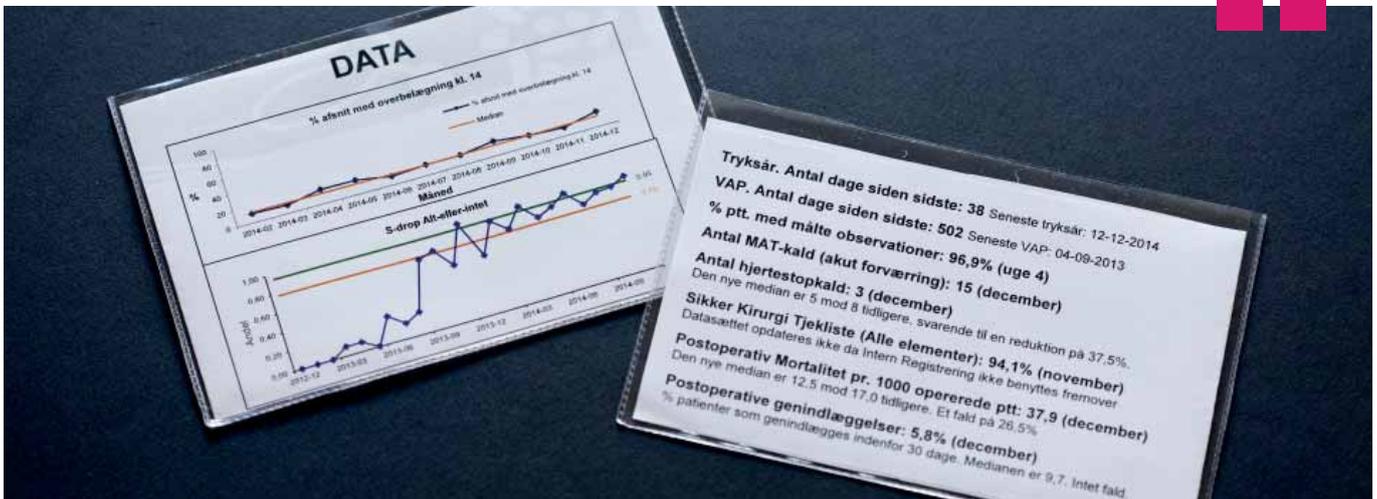
The usefulness of the method proved to be limited. The review teams making the monthly GTT

reviews gradually increased their ability to identify triggers and harm. At the same time, as part of the improvement work, focus on certain types of harm such as pressure ulcers increased and there was more awareness that such events had to be documented in the patient record. These factors combined meant that the review teams found more and more harm of the lowest degree of seriousness.

The experience gained in the Danish Safer Hospital Programme is that GTT is not suitable as a quantitative tool for measuring harm rates over time in an improvement programme. However, the method has proven useful when it comes to honing in on quality deficiencies, i.e. areas where improvement work is needed.



Learning seminar, Danish Safer Hospital Programme.



How good are we? Each month, at Thisted Hospital, a selection of significant data relating to the current focus areas is collected. When the focus of improvement changes, this is reflected in the choice of data presented. Hospital executives receive data in the form of pocket cards. In addition, the data is sent as PDF files to several internal and external recipients. The example above is from spring 2015, when the data presented was a follow-up on the Danish Safer Hospital Programme and from the new programmes.



Lisbeth Holsteen Jessen, CEO,
Horsens Hospital

On the use of patient stories:

We use patient stories, and they make a strong impression. It is a very powerful instrument. At first, we had to get used to it. Some of the objections I heard were, “Isn’t this a bit American?”, “Why are we talking about emotions and feelings?” and “Why don’t we stick to evidence and hard facts?” However, clinicians became clinicians to make a difference to people. And patient stories make an impression. However, we must also remember the positive stories and acknowledge staff for doing a great job. Remember to pass on praise, because we get a lot of praise from patients who make the effort of writing to us.

Getting out from behind my desk

Interview with CEO Bente Ourø Rørth, Hillerød Hospital

Before, being an executive mainly meant administration. Today, it is about leading quality improvement at all levels of the organisation. There has been a paradigm shift for the executives of Hillerød Hospital. To CEO Bente Ourø Rørth, there are four aspects of the new leadership model, which in the Danish Safer Hospital Programme has been called “close-to-the-clinic leadership”: management by objectives and measures, whiteboard meetings and huddles with frontline staff, improvement science, and patient engagement.

“I get out from behind my desk much more, and I now know the departments and the whole hospital much better,” says Bente Ourø Rørth. Each Tuesday, all executives at the hospital huddle with department leaders and middle managers in each individual department. These huddles revolve around data and outcomes on quality and patient safety, but also about other aspects, e.g. finances, or absenteeism due to illness.

“This is where we get a full understanding of how a department is doing. At these meetings, we discuss the latest data and make plans for the improvement work of the coming week. We check how far the departments have come with the goals we

have agreed on and whether there has been any improvement since last week. If, for example, our goal is that the discharge summary must be written within three days and data show that a department takes five days, we discuss ideas for solving this problem, and we plan how to test these ideas, using PDSA cycles and the improvement model. At the next huddle, we check whether our initiative has had any effect by looking at data.”

“Compared with the previous situation, all executives here at Hillerød Hospital have much better in-sight into the outcomes we deliver for patients, as well as the challenges we face. We have also learned how to be role models. It takes competencies to be at the whiteboard leading the huddle. You must understand data. You must be able to create a story. You must focus on patient experiences.”

Both the attitude towards data and data availability have changed significantly in recent years. Hospital executives receive the overall data from the region’s joint executives information system, while a lot of patient safety data are gathered locally in everyday clinical work.

“The possibility of close-to-the-clinic leadership, data-based management is almost in place. If you have no data or if you spend time discussing whether the data is

correct or if you try to find excuses for why data shows what it does, you will not be making any improvement”, says Bente Ourø Rørth.

“It is also about familiarizing yourself with the everyday work of your staff. Staff members are very busy; this is the biggest barrier to improvement. As executives, we can help by setting priorities and removing barriers. What are we focusing on right now? We cannot focus on everything at once; if we do, we achieve nothing. We go for a specific area and work on it, until we reach our goal. Then we move on to the next one.”

“Our being present expresses the attention, recognition, and backing of the hospital executives. We used to work at a distance from the clinicians. Now, we nurture important personal relationships. Relational management – we have been missing that.”

One challenge for executives is that once you have introduced close-to-the-clinic leadership and weekly huddles, they become an obligation.

you will be paying regular visits, you have to be loyal to the agreements made. You have to follow up all the time and ask for data. They expect you to come, and it does not take much negligence before they think, “Oh, well, she probably wasn’t all that serious about it anyway.” ■



Dorthe Gylling Crüger, CEO, Kolding Hospital

On building capacity:

All newly-hired physicians and nurses attend mandatory courses in improvement methods, run by people who have been involved in this work from the very beginning. We also sent staff members abroad for training – three to the Scottish Fellowship Programme, several to the IHI Improvement Advisor Programme, and some to the Nordic Improvement Agent Programme. We have organised our own courses in improvement methods for middle managers, and we have our own quality staff who teach statistical process control. We do a lot to ensure that the right courses are available.

Each year in April, we attend the International Forum for Quality and Patient Safety organised by IHI and BMJ. We go there on a regular basis with 30-40 people, including department leaders, each year. This helps us keep up the spirits, showcase our results, and get inspiration. We had a team presenting at the conference on good results achieved with early detection of sepsis.



Photo from Næstved Sygehus.

Bundles promote a systematic approach

Interview with Lene Hamberg,
Managing Head Nurse at the
Neurology Department,
Hillerød Hospital

"Bundles promote a systematic approach to work and make it easier for us as healthcare professionals to carry out processes that are often highly complex and need to be done in the right sequence to achieve the best result", says Lene Hamberg, Managing Head Nurse at the Neurology Department, Hillerød Hospital.

"The guidelines describing our clinical procedures have gradually developed to become as long as a thesis. They are difficult to put into practice. A bundle makes it easier for healthcare professionals to remember everything in their busy everyday work situation".

The five hospitals in the Danish Safer Hospital Programme have adopted the bundle concept and have started developing their own bundles in order to work with improvements in a number of new areas. In Lene Hamberg's department, they are developing a fall prevention bundle.

"We have worked with fall prevention for many years, and even if we rarely have serious falls, we have never really cracked the code for

how to avoid them completely. So, to take things forward, we decided to design a bundle".

The new fall prevention bundle is based on thorough literature search. Evidence is required for all elements of the bundle. Furthermore, designing the bundle has given the department the opportunity to discuss current processes and work flows and develop a number of new ones.

"There is a higher fall risk when fall-prone patients are reluctant to ask for help, either because they do not want to disturb the nurses, or because they have forgotten that – due to their condition – they cannot walk like before. They try to get a glass of water or their mobile phone charger on the table, even if they risk falling.

"We are trying to solve this problem with a new work procedure. We round on patients frequently and systematically ask them a number of questions: Are you in pain? Are you comfortable in your seat? Do you want a drink? Something to eat? Anything else I can do for you? The last question in particular is often relevant. There are often little things that patients need help to do."

As a starting point for improvements, the department reported all falls as adverse events for a long period of

time. Now, the department's patient safety board has data on falls as well as, for example, the number of pressure ulcers.

"We study the data to see if special circumstances, e.g. specific times of the day or night or periods around change of shifts, resulted in a particularly high fall risk. Our conclusion was that the time of day or night was not that important. Risk relates very much to the individual patient."

This individual approach is reflected in the new bundle:

"In connection with the initial nursing assessment, we carry out fall screening of patients; for patients who are risk-prone, a fall prevention plan is prepared.

This plan addresses the question of whether the patient has cognitive difficulties, e.g. the patient cannot remember that he is paralysed on one side and thus should not try to get up on his own. In this situation, frequent, systematic checks on the patient may be the solution. Other patients understand that they have a risk of fall. Here, other measures may be required, such as sensible footwear and easy movement around the room without any obstacles." ■



"In our view, this new era that started with the Danish Safer Hospital Programme is the most important thing to have happened in Danish healthcare for many years. Our traditional way of thinking has been challenged, also by international experts working on the programme in the form of consultants from the Institute for Healthcare Improvement, IHI, and colleagues from Scotland, which is one of the world's leading countries when it comes to improvement work in healthcare."

*From a feature in Politiken (Danish national newspaper)
by the five hospital managements*



Site visit at Thisted Hospital, January 2013.

The learning network in the Danish Safer Hospital Programme

In the Danish Safer Hospital Programme, more than 200 clinicians and hospital managers and executives have developed competencies for improvement work through semi-annual learning sessions where the hospitals have been taught by Danish and international experts and through practical application of improvement science. In addition, a programme manager from each of the five hospitals has attended IHI's Improvement Advisor Programme.

At the semi-annual two-day learning sessions, hospital management, programme managers, and teams get together. Experience is shared between hospitals and specialties, and personal relationships are established, which makes it easier to help one another with solutions and ideas for solving problems across organisations. The learning sessions played a big role in establishing learning networks in the programme.

The teams and hospital executives have also established professional relationships with the international

faculty from IHI and with the staff members managing the programme in Danish Society for Patient Safety. Furthermore, a faculty of Danish physicians and nurses with experience in improvement work helped guide executives and staff at the hospitals involved.

At the learning sessions, teams and hospital executives also met with the faculty from IHI and the Danish faculty and were taught about improvement methods and given guidance by the experts.

During the periods between the learning sessions, the action periods, the IHI faculty and the Danish improvement experts regularly visited the hospitals and entered into a dialogue with hospital executives and teams about barriers and successes in their improvement work.

Conference calls have been held regularly, where the teams have been able to coach each other and discuss with resource persons in the programme management and

the Danish faculty of improvement experts.

The hospitals have also visited each other. Furthermore, teams have gone abroad to find inspiration and participate in international conferences. International visitors have attended the learning sessions and visited clinical departments at the hospitals. Many of the departments in the five hospitals have achieved such outstanding results that they have been invited to present these at scientific conferences. There was a special focus on the programme at the annual International Forum on Quality and Patient Safety conference, organised by the British Medical Journal in partnership with IHI. More than 30 presentations or posters from the Danish Safer Hospital Programme were accepted for the conferences in 2012 and 2013.

The five hospitals in the programme are maintaining their network, e.g. by continuing the series of learning sessions on their own initiative. ■

Data has become transparent and recognisable

Interview with Thomas Hahn,
Head of the Medical Department,
Horsens Hospital

At the Medical Department in Horsens, fewer patients die of sepsis. One of the reasons is that the department uses local, real-time data in the improvement work. This is according to Thomas Hahn, Head of the Department, which has 76 patient beds, 8,000 admission, and 40,000 outpatient visits per year.

To Thomas Hahn, the clinical measurements in particular, the visible data, and the commitment from hospital executives were the most important aspects of the Danish Safer Hospital Programme, while he found attending learning sessions or receiving visits from international improvement experts less helpful.

”Working with real-time data, allowing us to take action here and now. This is what really made a difference. These numbers tell us what happened the same day or the day before. We now use this way of measuring many other contexts as well.”

Clinical data is collected on a daily basis: have all patients had their vital signs measured; have all patients had their peripheral venous catheters (PVC) removed as planned.

”This is simple data, transparent and recognisable to both health-care professionals and department managers. It makes sense and makes people want to collect data and follow-up. For example, this has ensured that we measure systematically whether we have taken vital signs of patients, and a system is now in place specifying what is to be done if the patient’s signs are out of range. Symptoms of sepsis are thus discovered and treated sooner, so the condition will not become critical.”

As an element of the Danish Safer Hospital Programme, Horsens Hospital decided to “go naked”, i.e. outcome measures on quality and patient safety would be visible – both the good and the not so good ones. In the Medical Department, this meant that all staff could see on the whiteboard, which patients had had their vital signs measured, and if some patients still needed to have them measured.

”We discussed the data at staff meetings: ‘Why have we only done what we intended to do for seven out of ten patients? We do agree that it is important’. This also meant that the individual staff member got very keen on improving care. ‘I want to make sure that nothing is missing for my patient’.”

”With the Danish Healthcare Quality Programme* (a national accreditation system), we got some retrospective figures, and it took a lot of digging to find out what they were actually about. With the new way of measuring, the relevance is immediate. These are not just meaningless numbers to be entered to allow others to manage and monitor you. These numbers make clinical sense and can be used to manage your own work procedures.”

”Another important point was that our CEO got involved in a good way. She came to the department asking us if we took vital signs and if we replaced PVC’s on patients. Department management focuses on it, and the CEO comes back to ask again! That really makes a difference. It shows that the organisation is serious about this.” ■

* The Danish Healthcare Quality Programme was introduced in 2005 by the Danish Institute for Quality and Accreditation in Healthcare (IKAS). In April 2015, it was decided to phase out the programme for the hospital sector. It is continued in other parts of the health care system.

Local, real-time data as driver of change

The use of local, real-time data in the daily clinical work has turned out to give healthcare professionals a new understanding. Continual follow-up – often on a daily basis – on the quality of one's own performance motivates staff to do even better. Frequent measurements allow monitoring of improvements and whether these occur quickly enough.

In connection with improvement work, e.g. the work on a new bundle, staff members record their own daily processes: Do we succeed in giving patients the intended treatment? Do we assess patients for harm from pressure? Do we remove the catheter when it is no longer required? Do we take a full set of vital signs on all patients? Outcomes are also measured: How many patients suffered preventable adverse events, e.g. pressure ulcers, hospi-

tal-acquired infections, or unexpected cardiac arrest? Both processes and results are monitored with few, but frequent, measurements to show developments from day to day or week to week.

For each of the clinical areas (bundles) we work on, one or several process measures are defined to enable continual monitoring of compliance, e.g. the proportion of patients who receive all elements of a bundle. In addition, we measure an outcome indicator to document whether the changes made have had the anticipated effect on patients, e.g. fewer pressure ulcers, fewer infections, and fewer incidents of cardiac arrest.

The frequent, real-time data is used as a driver for the improvement process. Once you have shown over time

that you are able to sustain your improvements and have achieved a new status quo, it is not necessary to measure that frequently any longer. You then only need to check once in a while whether the improved processes are still working; often, you only need to measure outcomes.

The quality gap is made visible

Experience from the Danish Safer Hospital Programme shows that local, real-time measurement of quality is an eye opener. As a healthcare professional, you always want to do your best for the patients, and before you start looking at data, you are usually convinced that you deliver a high standard of care and patient safety. However, data might show that processes are not that safe after all. If you look at the share of patients who receive all elements



Learning seminar in Kolding, March 2012.

of a bundle, the initial measurements often show shortcomings in every other or every third patient admission.

This knowing-doing gap is also known from the Danish clinical databases. In many cases, all-or-none indicator data from these databases show that only two out of three patients receive the intended care (in 2014: hip fracture 57%, stroke 61%. In 2013: COPD 68%, diabetes (outpatients) 89%, diabetes (general practice) 67%).

Typically, data from the clinical databases and other central monitoring systems are published once a year or, possibly, each quarter – and with a long delay. Data is aggregated, so it is often impossible to identify data from your own hospital ward, department or unit. Once data gets collected and presented on an on-going and local basis, it provides

entirely different possibilities as a tool for quality improvement.

Close to the clinical process

Data collection for improvement work is often done manually with pen and paper, and data collection is an embedded part of the clinical process, reducing the amount of time spent on data entry. Data may also come from local audits, where healthcare professionals themselves or quality department staff members review a sample of patient records.

Ideally, a lot of data can be harvested automatically from various databases. This data may be very useful to the organisation's management for monitoring goals and the overall development. However, for improvement work in clinical practice, vast amounts of data are often not required, and the need for specific data changes quickly over time, depending on the processes being

improved. Sometimes, it is enough to look at data from a few patients to realise that there is a need to change processes. In this case, there is no need to establish a complicated set-up for data collection.

When process and outcome data is monitored on a daily basis, staff members will immediately see if things move in a wrong direction. If, for example, a patient has not had his blood pressure measured, there is time to do it before handing over to a new shift. Any deficiencies with regard to the patients may be corrected immediately, thereby ensuring a higher quality at once. If a patient develops a pressure ulcer or a hospital-acquired infection, this motivates staff – here and now – to reflect on and learn from the event and to change procedures to avoid a re-occurrence. ■



Lone Sandahl Løndal, Chief Nursing Officer, Thisted Hospital

On the use of data:

We have moved from data in clinical databases only being looked at by administrative assistants to a situation in which data is so close to clinical work that you can respond immediately. If a process needs to be changed, staff will initiate data collection. Before, we tried to make changes without knowing whether they actually helped. If you have no data, you do not know where you stand, or where you want to go. This way of using data has become fully ingrained in the organisation. If you collect data, things will happen, so do not skip data collection.

It has been interesting to observe the same development every time we started working on a new bundle: Staff do not feel they have a problem, but when data is collected and graphs are generated, which show there is a problem, they react. They become focused.



Vagn Bach, Chief Medical Officer, Næstved Hospital

On sustaining improvement:

Sustaining improvement requires ongoing focus on this area. We have started up a major management model with management notice boards, management performance boards where we use Lean, focusing on quality and patient safety as elements. This model clearly shows if things are beginning to move in the wrong direction. We continue to “stay in touch with the good figures”. Some elements we measure at slightly longer intervals, but where things are difficult, we meet weekly; in other areas, we only meet once a month. If something is going wrong, we address it, correct it, and sustain it. Some things are easier to address because they fit better into our culture.



Visibility. At the Thisted Hospital, overall improvement data are presented on a big notice board accessible to the general public. Staff and patients can monitor the results of improvement work at the hospital as a whole. When the individual staff member can see that he or she contributes to improvements in the overall patient safety at the level of the whole organisation, the daily efforts make sense.

Communication as a catalyst

Communicative means may be used actively to support progress and accelerate improvement work. Communication, both internally in the organisation and externally towards the media and the general public, may be used strategically to generate attention, focus, and will for change. The purpose of communication is not only to display and disseminate knowledge, but also very much to create motivation among healthcare professionals, thereby acting as a catalyst for the improvement work.

An active communication strategy may be used in different ways to stimulate the commitment to improvement work.

First of all, it is useful to highlight the successes achieved by improvement work. Milestones can be celebrated locally in departments or by the organisation as a whole, and good results can be reported via internal media and to the local or national press.

Experience from improvement programmes shows that celebrations and positive media coverage are perceived by staff as recognition of their efforts, thereby stimulating their motivation and commitment.

Another part of an active communication strategy deals with creating visibility of the current status of quality and patient safety. Full openness and transparency about clinical outcomes, complications, adverse events, and service deficiencies, as well as openness about the goals

for which the organisation strives, is considered to be a highly effective tool for improvement work by international hospital management experts.

Going naked

When you “go naked” you expose yourself. For example, as an executive of an organisation you have the courage to say, “Last month six of our patients suffered an unexpected cardiac arrest during their admission. Our goal is to reduce the occurrence of unexpected cardiac arrests to half of that number within the coming year. We know from the best in the field of patient safety that this can be achieved.”

When you become aware of the gap between the current quality status and the ambitious goals, commitment and willingness to improve will develop in the organisation.

Transparency is used both internally at the departmental and organisational level and externally towards the general public, the press, patients, and their families. When the need for improvements receives attention, this has a number of effects on motivation and commitment. When executives asks for transparency, it signals high management priority for this area. Furthermore, deficiencies in quality and patient safety become visible, which challenges the pride of executives and staff alike. When a department gives an update each day of the number of days passed since the last time a patient suffered a pressure ulcer, this automatically

enhances the motivation to continue improving processes for pressure ulcer prevention.

Going public with your current data – also the not so good data – and at the same time presenting your more ambitious goals, contributes further to a dynamic improvement work. Openness towards the general public sends a signal that the organisation takes problems seriously and is working to generate improvements. At the same time, a pressure of expectations on the organization from the outside is created. If you go naked, it is nice to be buff. If you have stated that you want to remove pressure ulcers before New Year, you had better put those words into action.

Using communication as an instrument

The most effective way to create commitment is by communicating about feelings as well as common sense. Data may be made relevant by using absolute figures instead of rates or percentages. Put briefly, you could remove the denominator from the fraction.

Putting a face on data in the form of specific patient stories may also do this. These could be success stories that the organisation can learn from, or examples of unfortunate patient admissions, harm, complications, errors in communication, etc. Numbers and data may not make an impression; things are quite different, when we are talking about a specific person. ■

Media coverage enhances professional pride



Celebrating a great result. The ICU at Kolding Hospital celebrates 300 days without a central line-associated bloodstream infection. Celebrations help boost motivation and commitment according to the survey on communication in the Danish Safer Hospital Programme.

Positive media coverage is a direct driver for improvement of patient safety. This is clear from a survey among healthcare professionals, quality staff, and hospital managements of the Danish Safer Hospital Programme.

83% of the respondents have experienced some form of positive media coverage of their efforts in the Danish Safer Hospital Programme, including in national and regional news media, professional journals, hospital and programme websites, and newsletters. The coverage typically address efforts benefiting patients, e.g. in the form of fewer infections, fewer pressure ulcers or fewer cardiac arrests.

According to the study, media reports positively affect staff commit-

ment. When the media – external or internal – tell success stories from the wards, staff members feel that their efforts are being recognised and appreciated. According to the respondents of the questionnaire, this creates a feeling of togetherness, increased joy of work, more professional pride, and motivation to work towards further improvements. Most of all, staff members prefer to have their efforts mentioned in professional journals, though reports in internal media and newspapers, radio, and TV also have positive effects.

The Danish Safer Hospital Programme also encouraged participants to celebrate their results. Just like media coverage, celebrations help strengthen motivation and commitment according to the communica-

tion study made by the Danish Safer Hospital Programme.

The study was conducted as a questionnaire sent to all participants in the fifth learning seminar in November 2012. The questionnaire was sent out in February 2013 to 239 persons. A total of 152 persons responded, a response rate of 65%.

Respondents were largely equally divided on the five hospitals of the programme: Thisted, Horsens, Kolding, Næstved, and Hillerød. More than half of the respondents had been involved in the Danish Safer Hospital Programme for longer than two years. 55% of the respondents were nurses, 15% physicians, and 20% hospital quality department staff. ■

Communication can be used to motivate improvements by:

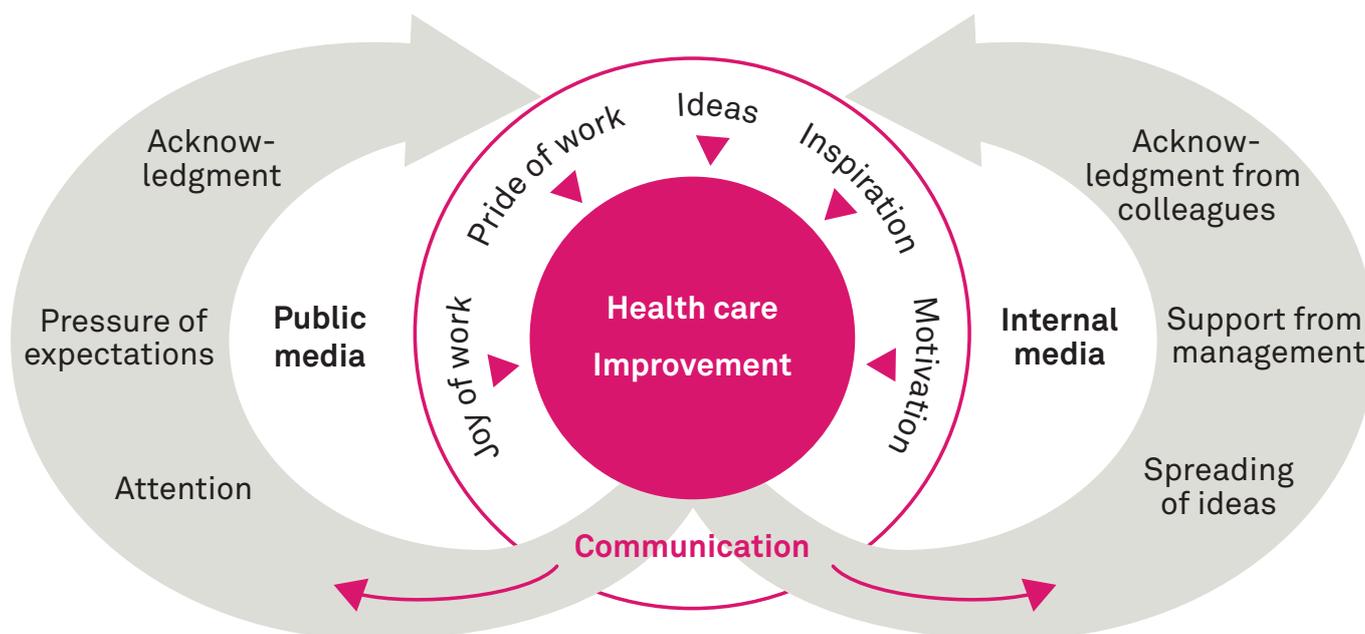
- Clarifying problems and their scope – and the gap between the current status and the goals of the organisation
- Deliberately putting an external pressure of expectations on the organisation by publishing ambitious goals
- Recognising and appreciating improvement efforts through celebrations and media coverage of results and successes
- Contributing to dissemination of ideas and results



“Openness and transparency both internally and towards the general public are a potent force enabling change. When an organisation openly presents its ambitions and its quality and patient safety data, it shows that it focuses on this area and it commits itself to working to improve results.”

From a feature in Politiken (Danish national newspaper) by the five hospital managements

Communication as a driver for improvement



The audience of the communication is internal. You go out to create an internal effect. Communication can create attention, recognition, acknowledgment and pressure of expectations. All of this has a positive effect on the clinical improvement work.

Patient safety becomes visible

The Danish Safer Hospital Programme has had very positive experiences with creating transparency around quality and patient safety. Almost all departments in the programme visibly present data from their improvement work to staff, and some also to patients and their families, typically on a corridor whiteboard. The department makes ongoing updates of the latest data, preferably from day to day. Examples of this could be displaying the number of days since a patient last had a pressure ulcer in the department or a catheter-associated urinary tract infection.

Experience with visible data in departments in the Danish Safer Hospital Programme has been gathered in two different surveys: Firstly, a questionnaire survey in the spring of 2013 showed that visible data has a positive, motivating effect whether it shows positive or negative results. Making data visible to patients and their families has not caused any major problems. In the questionnaire survey, only 2 % of respondents found that patients would feel unsafe when seeing data.

Secondly, focus group interviews in 2014 confirmed that visible data on



Visible patient safety. Example of a whiteboard with improvement data from the ICU at Næstved Hospital. The whiteboard is in the corridor and visible to visitors.

the whiteboards gives rise to reflection on work processes and new ideas for work procedures, etc. This depends on having local, meaningful data, so that staff will relate the figures to specific patients. Data on the whiteboards becomes a hub of improvement work. However, this requires management attention to this work in regard to updating, reflecting, and following up on data.

Furthermore, according to the focus group interviews, the data whiteboards serve as a dialogue tool

towards patients and their families. However, there is work to be done to make the content more easily understandable to people who are not healthcare professionals.

From unavoidable complication to preventable harm

While some types of harm occur as a direct result of error or deficiency in care, e.g. medication errors or wrong-side surgery, other types of harm seem to be unavoidable complications, e.g. pressure ulcers in fragile, elderly patients or pneumonia in critically ill patients on a ventilator. In improvement programmes, it has become clear that some of the harm previously thought to be "unavoidable" complications turns out to be preventable when improvement work is successful.

In 2002-2008, Danish hospitals reported that 13 % to 43 % of patients had a pressure ulcer. When considering that hospitals have had guidelines for prevention of pressure ulcers for more than ten years, this is a particularly high occurrence rate. Pressure ulcers were considered an almost natural, unavoidable complication when patients were bed-ridden. Wound-care nurses were busy, and extensive resources were spent on pressure ulcers and the resulting complications. This attitude was also reflected in the first study of the prevalence of adverse events at Danish hospitals in 2001, as pressure ulcers were not even included as an adverse event.

In 2010, the Danish Safer Hospital Programme introduced the Pressure Ulcer Bundle, which set what was seen as an ambitious goal: In the programme period, hospitals were to achieve a 50 % reduction in hospital-acquired pressure ulcers. However, this soon turned out to be unambitious. In 2011, a Welsh expert team from the University Hospital Abertawe Bro Morgannwg, ABM,

visited the Danish Safer Hospital Programme and presented how within a few years they had succeeded in almost eliminating pressure ulcers at the hospital, which has 2,500 beds at four sites.

The secret is a systematic application of the Pressure Ulcer Bundle, using the model for improvement, but also a new zero tolerance. Instead of being seen as a natural complication, pressure ulcers were now seen as a preventable patient harm. If, on a rare occasion, a patient does develop a pressure ulcer, the event is analysed to remedy any deficiencies in work processes.

The five hospitals in the Danish Safer Hospital Programme saw a change in attitudes. The ambition is now no longer to cut occurrences by half, but to completely eliminate this adverse event. For example, Thisted Hospital announced publicly in 2012 that, before the end of the year, it wanted to be a pressure ulcer free hospital. A pressure ulcer is no

longer an unavoidable consequence of being seriously ill – it is an adverse event.

Zero tolerance is spreading

A similar shift in perception has occurred for hospital-acquired infections, such as catheter-associated urinary tract infections, ventilator-associated pneumonia, and central line-associated blood stream infections, and harm related to peripheral venous catheters. The distinction between "complication" and "harm" changes all the time. Zero tolerance is spreading to more and more types of harm.

Hillerød Hospital started focusing on the number of patients who developed constipation, often when treated with opioids. Actually, constipation was among the main reasons for readmission to the hospital in 2010. Constipation is now seen as a preventable harm, and Hillerød Hospital is focused on its prevention, e.g. by ensuring that patients receiving opioids are also given a laxative. ■



Photo from Næstved Sygehus

Cardiac arrest has become an adverse event



International visit to Næstved Hospital by Andrew Longmate, manager of the National Scottish Improvement Programme, April 2013

Cardiac arrest used to be seen as a normal occurrence on a clinical ward, and the hospital's cardiac arrest team, "code blue team", could always be called on to resuscitate patients. In the Danish Safer Hospital Programme, a new attitude has evolved: Cardiac arrest should basically not occur among patients outside intensive care or specialised cardiac care units.

It is not uncommon for terminally ill patients to die in hospitals. These

deaths are expected, and ideally the hospital has agreed with the patient and the family whether resuscitation should be attempted. For all other patients, systematic monitoring of vital signs has been established, which means that deterioration can be diagnosed and treatment can be given before cardiac arrest occurs.

The hospitals in Horsens and Kolding now carry out reviews of all unexpected cardiac arrests; if a certain degree of preventability is seen, e.g.

if vital signs were not measured systematically in the hours leading up to the cardiac arrest, the incidence is reported as an adverse event. ■

We cleaned off our windshield

Interview with Dorthe Crüger, CEO, Kolding Hospital

Every Monday, the executives at Kolding Hospital receives an updated datasheet with current data for patient safety at the hospital. They use this to understand how the hospital is doing in its efforts to reach its overall goals and to get an overview of the most recent events (e.g. the latest pressure ulcers, the latest catheter-associated urinary tract infections, the latest call to the cardiac arrest team). The datasheet is updated weekly. This work procedure has been put in place during the Danish Safer Hospital Programme.

“Our intentions are to care for patients in accordance with best practice; this is all written into our guidelines and directions. However, when we first began measuring whether we actually succeeded in providing the care we intended, it turned out that we did not. There was a wide gap between the care we intended for patients and the actual care we

delivered. With the Danish Safer Hospital Programme, we began a targeted effort to improve our processes,” says Dorthe Crüger, CEO, Kolding Hospital.

Previously, decision-making was often based on quarterly statements or annual figures published with some delay.

“It corresponds to driving on the motorway only using the rear-view mirror,” says Dorthe Crüger. Hospital managements now have a new instrument in the form of real-time data.

“We monitor patient safety on a weekly basis. How many patients had an unexpected cardiac arrest? How many patients died after surgery? How many patients developed pressure ulcers? How many had a hospital-acquired infection? Previously, we did not know because we did not measure it.”

“Now, we monitor the numbers and can see if we improve, or if data sud-

denly appears showing more harm or deaths than expected. If this happens, we can immediately investigate what the reason is. This means that together with staff in the relevant departments we can correct the situation immediately.”

“We no longer steer using the rear-view mirror. We have cleaned off the windshield and have started watching the dashboard. We have become proactive instead of defensive, so we have the potential to improve,” says Dorthe Crüger.

Department management at Kolding Hospital also receives the weekly datasheet as a supplement to their own datasheet, so they get a sense of how their department contributes towards the overall patient safety goals of the hospital. The datasheet is dynamic and can be designed for current and new goals. ■



Site visit at Thisted Hospital.

