How Digital Health Platforms challenge Interprofessional Practices in Hospitals

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How Digital Health Platforms challenge Interprofessional Practices and Relations in Hospitals

As is the case elsewhere in the world, the healthcare sector in Denmark is challenged in many ways. Currently, politicians implement extensive digitalization efforts such as Digital Health Platforms as a key means to solve some of these major challenges that face the sector. At the same time, initiatives to optimize collaboration between the different professions within the sector are given much attention (Gittell et al.2013). Denmark is divided geographically in five regions now created as administrative entities above the level of municipalities. The regions own all public hospitals in Denmark and the main area of responsibility of the regions is public health service, which accounts for more than 90 % of the regions' expenditure.

From a practice theoretical perspective, we analyze how the implementation of a Digital Health Platform in a specific region in Denmark not only challenges existing practices, but also counteracts interprofessional practices. Through qualitative interviews with physicians, nurses and quality assurance coordinators at selected hospitals in this region, we show how the Digital Health Platform changes existing work practices, division of work relations and cooperation between professionals. In our study, we conducted fourteen semi-structured interviews at different hospitals in the Region just after implementation of a Digital Health Platform. The respondents were mostly middle managers responsible for managing employees. They all had many years of experience in the hospital sector and were all close to the front line of patients.

Theoretical framework

In our theoretical framework, we draw on a practice theoretical approach developed by Theodore Schatzki (2001, 2002, 2006). In this understanding, practices are people's doings and sayings, actions that are carried out in diverse ways in time and space, linked together in constellations that makes them recognizable as specific practices. This means that Heart Surgery practices are dependent on other practices as patient care, cleaning of the equipment and rooms for the surgery, information of the patients, etc. Practices bring actions together in specific ways. A practice is situated in time, space and history. To study a practice is more than to describe what people do and say. More than an activity or an incident. All practices are structured by teleoaffective structures (Schatzki 2006), kinds of open emotional and normative orientations that exist in bundles, nexuses, and configurations of doings and sayings constituting both harmonic and conflicting relations between actors. According to Schatzki , studying practices involves four elements: practical understandings, rules, teleoaffective structures and general understandings. Practical

understandings involves knowing what the practice implies, in which order to do task etc. Basically, it is about a practical understanding of normative understandings of actions as a guideline for what is the right way to do the task and what is wrong. Rules are principles; instructions etc. to link together certain actions in practices as a way to structure and frame the activities. Teleoaffectice structures involves goals and intentions – the directedness of actions. In our study, we explore how activities have a directedness following the ambitions of the physicians and nurses as health professionals. They are not rational calculations, rather emotional oriented. General understandings are how our respondents in their sayings are oriented towards more overall goals, for instance ideological and professional imaginaries about the overall meaning of an activity. In our study, we are not limited to the situated practices. We include other bundles of practices in other parts of the hospital, and we demonstrate how they are configured by rules and material arrangements, such as quality assessment procedures, waiting time guarantees, management systems, educational programs, etc.

The practice theoretical perspective stress that practices have inertia and are thus not easy to change. Therefore, when we investigate the implementation of a Digital Health Platform, we see how this process challenges existing practices and relations between the professionals in relation to collaboration and communication. It does not mean that the health professionals necessarily are opposed to the new practices afforded by the Digital Health Platform, and that management must teach the professionals a more positive attitude to the changes in practices. Instead, it is important to understand that when existing practices are challenged it takes time to establish new practices. Furthermore, practices are often tightly interwoven in bundles of practices, so changing one practice affect all the other practices in the bundle of practices, and potentially even larger constellations of practices.

Unfortunately, we did not have the opportunity to do observations in the field, which would have been preferable according to the practice theoretical approach. Instead, we structured our interviews according to the ´interview to the double´ methodology - an interview method developed by Davide Nicolini (Nicolini 2009). We asked the respondents to pretend that they introduced a new colleague to take care of work the following day. According to Nicolini the narratives told in traditional interviews are often idealized and normative. Interviews to the double helps overcoming this, and thus gives a better opportunity to envision practices.

How the Digital Health Platform challenges the overall meaning of practicing as a physician

The Digital Health Platform was invented in order to gather many smaller IT-systems in one common system, to ensure data quality and to promote efficiency and productivity. For many years, this has been an issue, but unfortunately, the intervention has created many new problems. Especially the physicians complained not having time enough for the patients, delay in treatments, errors in medicine ordinations, and incorrect data quality. Furthermore, the implementation has resulted in changes in existing work practices, changes in practical understandings, rules and overall changes in relations between the professional groups. One example is the new demands for how to document work in the Digital Health Platform. The physicians describe that they now must share their attention between digital documentation, digital ordinations, and digital work in general with taking care of the patients. This is a big challenge for the overall meaning of practicing as a physician.

One physician describes it in this way:

“To sit and talk with the patient and examine the patient takes the same time as earlier. But if the result is surgery, you can easily spend an hour with booking the patient in the Platform. Today we do work we have

never done before. Work that could be done much better and faster by others. Previously, you could focus on the patients and afterwards make your dictation. It hardly takes any time to make a dictate dictation".

The obligation for the physicians to document their work in The Digital Platform is a new practice in several ways. Earlier they dictated their discharge summary using a Dictaphone and afterwards the secretaries typed it out. A discharge summary is the physician's document to other physicians reporting important information about the patient. Now they have to write the discharge summary at once in the Platform in specific places ´helped´ by smart texts. Furthermore, they must order blood tests, make appointment for further treatments of the patient, etc. All new practices for the physicians to do as other professional groups performed them earlier. For this reason, many secretaries have been discharged. They were the ones who wrote the records, made appointments, and so on. Today the physicians have to do it all. The argument from the management is that it is much more appropriate to complete each patient at once in one process and performed by the physicians. One of the chief physicians see it as an effort to make everything more efficient, but without understanding how complex a hospital is. He says "… the hospital is not a candy factory, where you just start the assembly line and then it just runs. We do not have one day like the day before…"

All in all, it means that the practical understandings of the physicians need to be changed in many ways, e.g. the order in which they do the tasks; who performs the tasks, and when; the normative understandings of what is wrong and what is right; the focus on the patient and the relations to colleagues and patients. But it worries the physicians that the productivity declines, so patients must wait longer, because the Digital Platform still takes too much time to handle and still more tasks must be solved involving the Platform.

Another physician complains:
"Before we could see 3 patients per hour. Now we ´write´ and click into the Platform ourselves, and it takes time. So today we only see 8 patients a day, because we at the same time have to order some further treatment, and it takes time. So many things are much more difficult today, so we only see 2 patients per hour and not longer 3, as we used to."

The physicians express a professional direction towards goals and intentions as a Healthcare professional at a hospital giving time and best treatments to the patients. The patients and their need for professional treatment are the primary concern. This does not make documentation, discharge summaries, ordering medicine, appointments for further treatments, etc. unimportant. But as an exponent for the doctor profession they express goals and ambitions spending time with the patients – the teleoaffective structures – as primary in the ideological and professional presupposition about the overall meaning of their activity – the general understanding.

The problems with data quality was another issue that worried both the physicians and the nurses. The aim with the Digital Health Platform was to ensure the data quality, but, at the time we made the interviews, the reports from many of the records were misleading. At the end of an interview with the head nurse she looked at her screen and made this comment to the reported data from her department:

"The IT platform was sold on data you could trust. It has its own dashboard where you can have a look at quality data, management data, patient safety data, etc. So e.g. at 11.30 you can see how many patients have not appeared today in our ambulatories and for what reason. Or how many patients have not yet had

preliminary nursing assessment. You can follow these documentations completely rigorous. But at the moment it does not work. When I look I notice we have 269 no-shows and 300 dead, and this is not true."

To rely on an IT- Platform, which is not reliable, and furthermore have a management instruction, not allowed to make your own notes as a precaution, is a foolish decision, the nurse complained, because you need reliable information to take care of the patients. This undermines the professionalism and seriously challenges the goals and intentions about being a health professional in many emotional ways.

How the Digital Health Platform changes the relations between professionals

The Digital Health Platform is structured in a way so each profession has his/her own entrance to the system. It is not possible for e.g. the nurses, or the secretaries, to get access to the physician's module and they have no longer access to the same information, and do not even know which information connects to which module. The professionals have had no influence on this division, which makes it difficult to get insight in the doings of the other professionals, as they had before. A head nurse explains it this way:

"…..previously we (the different professional groups) could see the same in the system, but now, when the physicians log on, they get different functions and pictures than I get. We cannot work together any more. Previously I could show things to the physicians, I cannot do that any longer, and I know nothing about what they are doing. Now I have to stand behind them and look how the physician's pictures look like, because the physicians have to do everything today. This is absurd."

Both the nurses and the physicians find it frustrating that the Digital Health Platform defines the way the professionals collaborate and the relations between them. They also find it frustrating because it prolongs the treatment of the patients and it is less effective. The head nurse explains further:

"It is a huge discussion in our clinic. The new digital system defines what belongs to the nurse´s module, the physician's module, and the secretary's module, and you can only see into your own group module and not the others. It is a pity that we no longer know what each other do, because this insight was one of the reasons why we could shorten days and hours from the patient treatment, and the patients felt we did something for them."

The nurse relates to how the different groups collaborated with each other and how the relations were before the Digital Health Platform was implemented. The different professional groups in her department had good insight in each other's work. They also had developed mutual understandings and respect for each other through collaborative meetings where they negotiated who was the best to do different tasks. A chief physician describes it this way:

" We collaborate very well with the nurses – we often discuss which tasks are best done by the nurses – which by the physicians. After the new IT system, the discussions and negotiations have become more shrill…."

Before the implementation of the Digital Health Platform there was transparency between the professional groups. This is not the case anymore, and since the IT Platform still is very time consuming to work with, there is no time left for peer-to-peer meetings and negotiations. Another implication is the built-in hierarchy in the IT Platform with the physicians in the top, then the nurses, and so on. Not to say that the biomedical knowledge has been challenged to be the primary at any time, but the IT Platform supports and freezes also the knowledge hierarchy in the traditional way leaving the nurses care work behind as not as

important. It shows how mutable the power relations between the professionals are due to technological changes, political priorities and the development in society in general.

Findings

Our findings show that the Digital Health Platform transforms the practices, as we see it especially in the practices of the physicians. The high demands of documentation and the management decision not to use secretaries, which means that the physicians have to do secretarial work tasks, undermines the profession of the physicians.

Furthermore, the relations between the professionals (physicians and nurses) are more complicated after the implementation of The Digital Health Platform. One big issue due to the choice of an IT platform that does not allow the different professions admission to each other's special modules in the digital platform. They can only see their own module, which means they have to establish new practices for collaboration and relations in a sector where time is very limited and collaboration takes time. At the same time, the IT platform (re)establishes the traditional hierarchy between the professional groups. The interviews give an example of how this leads to discussions and relations between the professional groups that are shriller.

In several of the departments, where we made our study, the relations and collaboration between the professions still were good. They had for years developed a practice based on negotiation, acceptance, and understanding of each other's professional practices leading to better working environment and higher effectivity which also is documented in different international investigations (Lemieux-Charles & Mcguire 2006, Long et al. 2006, Zwarenstein et al. 2009).

But they all mentioned how the Digital Platform disturbed the ways they used to relate to each other, caused conflicts between the professional groups, but first of all changed the relations to the patients due to lack of time. It means that the political initiated initiatives to optimize collaboration between the different professional groups, as mentioned in the beginning of the paper, is overruled by the Digital Health Platform.

Now the Danish Hospital Sector suffers from missing economic and professional resources, which were articulated in several of the interviews. We heard about prominent chief physicians who had quit their position arguing that they did not want to be held responsible for the quality of the treatment of the patients and the working environment for the staff. We also heard that physicians and nurses quit or suffered from stress, because goals, intentions and ambitions being a health professional are no longer in accordance with their professional understanding. The implementation of the Health Platform has in many ways reinforced the problems and the critique from the professionals by taking time and resources from the patients and from time to relate to each other as professionals. A critique we also meet in international evaluations of implementing Health Platforms, e.g. in American hospitals (Davis & Khansa 2016) Implementing new IT at workplaces changes the practices and relations in many ways and it takes time to establish new practices and new relations with new practical understandings, rules, teleoaffective structures and general understandings – whatever they might be.

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