Leadership at Danish Hospitals

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Ph.D. Degree 2018
Ph.D. Thesis: Leadership at Danish Hospitals

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Financial support
The University of Southern Denmark, Hospital of Southern Denmark and the Region of Southern Denmark – Centre for Quality funded the study.
Acknowledgements

Working on a PhD project has been very exciting and enriching for me, and I am very grateful to the people and institutions that have helped and supported me during the process.

First of all, thank you very much to the University of Southern Denmark, the Hospital of Southern Jutland and to the Centre for Quality in the Region of Southern Denmark for financing my project.

I owe my former boss Michael Skriver Hansen many thanks for encouraging me to do this project and making it possible for me to write a protocol for the project.

My sincere gratitude goes to my main supervisor, Erik Hollnagel. It has been very inspiring to work with you. You have opened my eyes to new approaches to organisational research that I hope I can continue working with after I finish my PhD.

Another vote of thanks goes to my co-supervisors. First, to Egon Stenager, who helped me begin my PhD, put me in contact with Erik, and for having been a big help through the whole process. Furthermore, Egon is a physician, and thanks to his background, he has given me valuable information about everyday work in a hospital. Second, thanks to Christian von Plessen, as Christian is also physician, he always has another perspective on my research, which has resulted in interesting discussions and me being more aware of my own standpoints and methods.

I also owe my thanks to my co-supervisor, Svend Erik Thomsen, who was a part of the supervisory team for the first two years of my project. You were very good at helping me keep focus and I am grateful for the help you gave me, especially at the beginning of the project when I needed to find direction in my work.

To Andreas Granhof Juhl, my other co-supervisor, who stepped in when Svend Erik left, thank you very much for joining the team on such short notice. We have had some interesting talks and I am very grateful for the insights you can give from the ‘real world’, combined with your research experience.

My utmost gratitude goes to the three departments that agreed to participate in this project and a very big thank you to all staff and leaders who participated in the interviews, and to the leaders for allowing me to take up the valuable time of your staff.
A very big thanks to Jan Jonassen and your research team in Haugesund. You planned a very interesting visit for me, meeting many different researchers with different views and approaches to safety research.

Also a special thanks to the Learning and Research House at the Hospital of Southern Jutland, thanks to my colleagues for always helping me on practical matters, finding literature etc.

I am very grateful to my colleagues at the Centre for Quality. Thank you for showing interest in my project and for being open for discussions and input on my project. My especial thanks go to Søren, Caroline, Christina, Marianne, Donna and Morten. I thank you very much for creating good and happy days at the office, for always being helpful and for the professional discussions, we have had.

I offer my warmest gratitude to my family for helping out whenever needed. It meant a great deal to us. Also a special thanks to my son Jakob and my daughter Anna for putting up with a busy mom and for nice distractions from work.

Finally, thank you so much to my beloved husband Christian. I am very grateful for your support during this project, and I appreciate your interest in my work and your patience with me during all the hours where you took care of the house and our family. I could not have done it without you!
# Table of Contents

Supervisors .................................................................................................................. 1
Financial support .......................................................................................................... 1
Acknowledgements ........................................................................................................ 2
Table of Contents ........................................................................................................... 4
English Summary .......................................................................................................... 6
Dansk Resume ................................................................................................................ 8

## Chapter 1: Introduction .............................................................................................. 10

Introduction: Why this project, background and purpose ......................................... 10
The context ...................................................................................................................... 10
Aim of the project .......................................................................................................... 11
Work-as-done and work-as-imagined ......................................................................... 12
Three cases ................................................................................................................... 13
Structure of the thesis ................................................................................................. 16

## Chapter 2: Methodology .......................................................................................... 17

Definition of leadership .............................................................................................. 17
The history of leadership research ............................................................................. 18
The Danish health care sector and the history of leadership ...................................... 19
The hospital as a socio-technical systems and a complex adaptive system ............ 20
Case study ..................................................................................................................... 21
My role as a researcher ............................................................................................... 26

## Chapter 3: The first two studies .............................................................................. 27

Study 1 ........................................................................................................................... 27
Study 2 ........................................................................................................................... 33
Discussion ...................................................................................................................... 41
Limitations of the research ......................................................................................... 42
Conclusion ...................................................................................................................... 42
Conclusions from the first two studies ....................................................................... 43

## Chapter 4: Decision-making and implementation .................................................. 44

## Chapter 5: Study 3 ..................................................................................................... 49

A change of focus ......................................................................................................... 49
Resilience ....................................................................................................................... 49
Preconditions for acting resiliently ............................................................................ 51
Chapter 6: Interdisciplinary cooperation: Is there a difference from speciality to speciality? ........................................................................................................ 57
Chapter 7: ........................................................................................................ 59
  Summary of the studies .................................................................................. 59
  Discussion and future directions .................................................................. 60
  Limitations of the research .......................................................................... 62
References ........................................................................................................ 63
Interview guides............................................................................................... Appendix 1
Study 1.............................................................................................................. Appendix 2
Study 2.............................................................................................................. Appendix 3
Study 3.............................................................................................................. Appendix 4
English Summary

Since 2007, there have been big organisational changes in the health care sector in Denmark. At some hospitals, these changes have led to the reorganisation of departments, and in two cases, this has resulted in changes to the way the leaders were organised—a changed leadership set-up.

This thesis will analyse the three different ways to organise leaders that are used at three different hospitals in Denmark. The aim is to analyse if the leadership set-up can affect interdisciplinary cooperation among staff, and to understand the basis for such leadership set-up choices.

In two of the wards analysed the leadership teams were challenged by internal conflicts within the team and the absence of members due to sick leave. A further aim of the project was to assess how staff on these wards worked together, and what made them capable of acting resiliently.

This is a qualitative study based on semi-structured interviews with the leaders and staff of the three departments. Furthermore, internal documents have been analyzed.

The project was divided into three main studies that will be described in the following chapters. The first two studies focused on the leadership set-up, and the third on how staff handled their everyday work. The first study investigated the hospital that had a set-up with two leaders sharing their tasks and responsibilities. The literature defines this system as dual leadership. The aim of the study was to analyse how dual leadership works in practice. Study 1 concluded that power balance, personal relationships and agreeing on the decision-making process are important factors that make dual leadership work.

The aim of the second study was to analyse if one leadership set-up is better than the others on the basis of patient satisfaction, clinical quality, interdisciplinary cooperation and leader legitimacy. Due to a lack of data, the study did not find a clear relationship between leadership set-up and patient satisfaction or clinical quality, or with interdisciplinary cooperation. However, it did find that the dual leadership set-up was not working the way it was meant to, as the leaders did not have legitimacy across professions. At hospitals where the staff only referred to a leader from their own profession, the leaders had legitimacy. Furthermore, Study 2 showed that clinical specialty can influence a leader’s legitimacy.
The aim of the third study was to understand how the staff of the two wards with challenged leadership teams coped with their everyday work. Furthermore, the aim was to assess how the staff worked and what made them capable of acting resiliently. Study 3 showed that the staff of these wards acted resiliently. This was made possible by having clear role structures that made sense in their everyday work. These clear role structures also made it possible for the staff to know where to seek help and who to help. Furthermore, having strong emotional ties and being prosocially motivated made it easier for staff to help each other and to know when help was needed.

Finally, a small quantitative study investigating whether clinical specialty might be a predominant factor in developing interdisciplinary cooperation was conducted. The study indicated that clinical specialty is a predominant factor in achieving interdisciplinary cooperation.

This thesis shows that on its own, leadership set-up does not greatly affect interdisciplinary cooperation in everyday work. However, clinical specialty influences interdisciplinary cooperation. Additionally, this study shows that engaged staff were acting resiliently and put considerable effort in to managing their tasks, regardless of problems in their leadership teams. Finally, it shows that the decisions about changing the leadership set-up seem to be based on assumptions about how the set-up will work in practice. In many aspects, these assumptions did not meet ‘work-as-done’ criteria, resulting in unintended consequences at the hospitals, which is why it is essential that decision-makers are aware of the differences between ‘work-as-done’ and ‘work-as-imagined’.
Dansk Resume

Siden 2017 har der været store organisatoriske ændringer i den danske sundhedssektor. På nogle sygehuse har disse ændringer medført organisationsændringer internt på sygehuset, hvor afdelinger er blevet slået sammen, nye afdelinger er etableret og nogle afdelinger er nedlagt. I to tilfælde har organisationsændringerne også medført en ændret ledelsesorganisering – et ændret leder set-up.

Denne afhandling analyserer tre forskellige måder at organisere ledelsen på, som er anvendt på tre forskellige sygehuse i Danmark. Formålet er at vurdere om ledelses set-up kan påvirke graden af tværfagligt samarbejde på afdelingerne, og at forstå grundlaget for valget af disse ledelses set-up.

I to af de afsnit der er blevet studeret på sygehusene, var de to leder-teams udfordret af interne konflikter i teamet og fravær på grund af længerevarende sygdom. Et yderligere formål i projektet var derfor at vurdere hvordan personalet på disse to afsnit arbejdede sammen, og hvad der gjorde dem i stand til at agere resilient.

Afhandlingen er et kvalitativt studie baseret på semi-strukturerede interviews med ledere og medarbejdere på tre sygehusafdelinger. Endvidere består afhandlingen af en analyse af interne dokumenter fra de tre sygehuse.

Projektet er opdelt i tre primære studier. De første to studier fokuserer på ledelses set-up, og det tredje på tværfagligt samarbejde på afdelingerne. Det første studie omhandler alene ét af de tre sygehus, der havde et ledelses set-up med to ledere, der delte ledelsesopgaven og ansvaret. I litteraturen defineres dette som ”dual leadership”. Formålet med studiet har været at undersøge, hvordan ”dual leadership” fungerer i praksis. Studiet konkluderer, at magtbalance, personlige relationer og enighed om beslutningsprocessen er afgørende faktorer for at ”dual leadership” kan fungere.

Det andet studie har til formål at vurdere om ét ledelses set-up er bedre end de andre i forhold til opnået patienttilfredshed, klinisk kvalitet, tværfagligt samarbejde og lederlegitimitet. På grund af manglende data kan studiet ikke identificere en sammenhæng mellem leder set-up og patienttilfredshed eller klinisk kvalitet. Studiet finder heller ingen sammenhæng mellem leder set-up og graden af tværfagligt samarbejde, da der på alle afdelinger var en høj grad af tværfagligt samarbejde. Studiet viser dog, at organiseringen med ”dual-leadership” ikke
fangete efter hensigten, da de enkelte ledere ikke havde legitimitet på tværs af faggrupper. På de sygehuse hvor personalet kun refererede til én leder fra deres egen faggruppe, havde lederne legitimitet. Endvidere viser studie to, at det lægefaglige speciale kan påvirke lederens legitimitet indenfor faggruppen.

Formålet med det tredje studie har været at forstå, hvordan personalet på de to afsnit med udfordrede leder-teams håndterede det daglige arbejde og hvordan de kunne agere resilient. Studiet viser, at det var muligt for personalet at agere resilient, på grund af de meget klare rolle-strukturer, der var på afsnittene, og som personalet fandt meningsfulde i håndteringen af de daglige opgaver. De klare roller gjorde også at personalet vidste, hvor de kunne søge hjælp og også hvem der havde brug for hjælp. Endvidere betød gode sociale relationer blandt personalet og ”prosocially motivation”, at det blev lettere for personalet at hjælpe hinanden, og vide hvornår der var brug for hjælp.

Endelig er der lavet et mindre kvantitativt studie der på baggrund af MTU data undersøger, om klinisk speciale har indflydelse på graden af tværfagligt samarbejde. Studiet indikerer, at klinisk speciale er en afgørende faktor for graden af tværfagligt samarbejde på en sygehusafdeling.

Afhandlingen viser endvidere, at beslutningerne om at ændre leder set-up på de to sygehuse synes at basere sig på formodninger og antagelser om, hvordan det enkelte set-up vil fungere i virkeligheden. På mange områder matchede disse formodninger ikke virkeligheden – ”work-as-done”, hvilket resulterede i at de ændrede leder set-ups havde utilisigtede konsekvenser. Derfor er det essentielt at beslutningstagere er opmærksomme på forskellen mellem virkeligheden og den forestillede verden – ”work-as-done” og ”work-as-imagined”.
Chapter 1: Introduction

Introduction: Why this project, background and purpose

This PhD project had its starting point in my previous position, where I was employed at a hospital in Denmark that, along with other reorganisations, chose to change the way it organised its leaders—its leadership set-up. At the same time, another hospital (and actually a whole region in Denmark) chose a different leadership set-up. The rest of Denmark’s hospitals mainly kept the traditional leadership set-ups that have been widely used in Danish hospitals. As the public hospitals in Denmark all have the same mandate—to treat and care for patients according to clinical standards, best practice and evidence, it made me question why one hospital and one region chose to organise their leadership teams differently, and also, whether one way was better than the others.

Therefore, this thesis will analyse the three different ways leaders are organised in three different hospitals in Denmark. Analysing the three different leadership set-ups gives us a unique opportunity to understand why the different set-ups were chosen, evaluate how they work in real life, and determine if one is better than the others.

The main focus will be on interdisciplinary cooperation, as this was argued by the hospitals to be an important reason for the new leadership structure. Furthermore, interdisciplinary cooperation has been shown to be important in health care to achieve better treatment and care (Gittell, 2012).

The context

Denmark has a population of 5.7 million people (Statistik, 2017). The country has a developed public health service, and the public hospitals, which are owned by the regions, are financed by general taxes (Kirkpatrick et al., 2011). The system is based on the principles of free and equal access to hospitals and other health services. In 2014, 30% of public expenditure was used for health care, and in 2013 the public health care expenses were 8.8% of GDP private health care expenses were 1.6%) (Health, 2017b). Physicians and nurses working in the hospitals are salaried public servants (Moran, 2000). General practitioners, who are also financed by general taxes, refer patients to the public hospitals (Health, 2017a)
Since 2007 there have been major organisational changes in the health care sector in Denmark. In 2007, the owners of the public hospitals changed from the 14 counties to the five regions, which meant that the regions became owners of more hospitals than the counties had been. Following this change, the Danish Health Authority announced recommendations to the regions to organise their acute care in fewer hospitals where more clinical specialties were present. This resulted in the construction of ‘Fælles akutmodtagelser’ (acute care centres), where the most important clinical specialties were represented and where all acute patients were sent before they entered the specialised departments in the wards (Sundhedsstyrelsen, 2007).

In connection with these organisational changes, some hospitals chose to make internal changes to merge certain departments or create new departments because of changes to patient flow and a focus on patient pathways. These changes have resulted in changes in how two Danish hospitals organise their leadership teams.

In this thesis, departments at three different hospitals are analysed: one that retained the leadership set-up traditionally used in Danish hospitals, and two that changed their organisational structure and leadership set-up. Thus, three different leadership set-ups are analysed. According to internal documents from the hospitals, these organisational changes and the changed leadership set-ups should, among other outcomes, generate better interdisciplinary cooperation among leaders as well as among staff. At one of the hospitals that changed their leadership set-up they referred to Gittell, arguing that relational coordination is a more appropriate way to handle interdependent tasks and the dependencies between staff to achieve better treatment and care.

**Aim of the project**

The aim of this project is to determine whether different forms of leadership set-ups can contribute to more or better interdisciplinary cooperation, and to understand the basis for such leadership team set-up choices.

Interdisciplinary cooperation is essential because health care is a complex system that one single practitioner cannot handle (Mitchell and Crittenden, 2000). A hospital consists of many independent units, but better cooperation between units, and especially between nurses and physicians, can generate more efficient treatment (Glouberman and Mintzberg, 1996).
 Furthermore, Gittell (2012) argues that it is not sufficient for hospitals to have good and dedicated staff; staff must also be able to continuously cooperate and coordinate—also called relational coordination. According to this author, an increased level of relational coordination between professional groups can produce improved clinical results in terms of shorter length of stay, increased patient satisfaction, fewer patients with post-operative pain and better mobility after surgery (Gittell, 2012).

As shown, the literature argues that interdisciplinary cooperation can lead to better patient treatment and care. However, we do not know if one leadership set-up is better than another in achieving interdisciplinary cooperation. This begs the question of what the possible relationships are between various forms of leadership set-up and the quality of interdisciplinary cooperation.

Consequently, the focus in this thesis will be on the following three research questions:

- How do the leaders at the three departments actually work as compared to how they were intended to work?
- To what degree do the three leadership set-up promote interdisciplinary cooperation—including how do they contribute to creating a common language, common goals and respect among professions?
- Can one leadership set-up be recommended to increase interdisciplinary cooperation?

Work-as-done and work-as-imagined

The reason for focusing on how the leaders actually work compared to the intentions of the hospital or the chief executive officer (CEO) is that work-as-imagined (WAI) and work-as-done (WAD) are usually different (Hollnagel, 2015).

WAI is the way work is planned and thought of before it takes place or after it has taken place. Those who make WAI (in this case the CEOs and other decision-makers, who have decided to change the organisations and leadership set-ups) are distant from the daily work of the organisation, they do not take part in the day-to-day work, and therefore they do not know enough about daily practice to know how WAD is carried out. Additionally, the further away the decision-makers are from the day-to-day work of their organisation, the more delay there will be in the feedback they get according to the decisions they have made (Hollnagel, 2015). In everyday work; i.e., WAD, staff must adjust their work to balance efficiency and
thoroughness according to the demands of their surroundings (Hollnagel, 2009), such as time, money, etc. When these adjustments are made, there will usually be a difference between WAI and WAD.

Because WAI and WAD often are different, it is likely that the defined leadership set-ups are different from how the leaders operate during their everyday work. Consequently, the first step in this PhD is to analyse what characterises WAD in the three different leadership set-ups.

**Three cases**

The project focuses on three cases. These cases were chosen as they represent three main leadership set-ups in Denmark. Hospitals 1 and 2 have instituted new ways to organise their leaders, while Hospital 3 has a leadership set-up that is very common in Denmark.

The different leadership set-ups are shown in Figure 1 below. Each case is explained further in the following.

**Figure 1: Forms of leadership at the departmental level of three Danish hospitals**

![Diagram of leadership structure for three hospitals](image)

Figure 1 in the second article

**Hospital 1**

Hospital 1 is a small hospital with around 400 beds. According to internal documents, Hospital 1 chose to organise its leaders into leadership teams at both the ward and
departmental levels, with each team having shared leadership responsibility and all professions, including nurses and physicians, reporting to both leaders at the same time.

In another internal document, it was stated that the leaders at the departmental level were responsible for the operations and resources of the department, while the leaders at the ward level were responsible for creating good patient pathways, everyday planning, quality optimisation and staff. This document showed that the hospital regarded leadership as something that creates value for patients. A team of two leaders sharing the responsibility was thought to create a sum that was greater than that of two leaders alone, and therefore also to create more value for the patients. In another internal document, which was agreed to by the CEOs of the hospital and the group of department managers, it was stated that the board of managers jointly led and made decisions. This was also the case for the department leaders and ward leaders. At all levels, the hospital has shared leadership teams that make joint decisions. The reason for choosing shared leadership is:

- **We organise ourselves according to patient pathways and not clinical specialties**—shared leadership creates flow and security in the patient pathways.
- **Efficient use of resources**—coordination of shared resources calls for a shared leader contribution.
- **We want the patient to experience cohesion in treatment and care and also to have influence**—interdisciplinary problem/task solving is easier when the leaders have a shared responsibility; are a leadership team.

As shown in Figure 1, Hospital 1 has two health professionals as leaders at both the department and ward levels. The two leaders share the leadership tasks, are mandated without a power difference and are held jointly accountable for the results of the department. Staff at Hospital 1 refer to both leaders, which means that the hospital does not have a leader for each profession. Nurses, physicians, secretaries and other staff are led by both leaders at the same time.

**Hospital 2**

Hospital 2 is also a small hospital and has around 300 beds. After the national changes and the recommendations to create acute care centres, Hospital 2 also changed its organisational structure and how it organised its leaders. According to internal documents, this hospital chose another way to organise its leaders. The reason for changing the organisation in general,
and the choice of leadership structure in particular, was to achieve a greater focus on patient pathways and more cohesive procedures. This was thought to be best achieved by relational coordination, among other things, where the leaders should ensure effective coordination. Therefore, the leaders are required to create and coordinate relations between staff and leaders; relations between the professions and the different units; and relations within the hospital or department.

The departmental leadership consists of three leaders; a chief and two deputies. The chief has the final responsibility and the two deputies each have an area of responsibility. One is responsible for all staff and the budget, and the other is responsible for creating better patient pathways.

The leaders at the ward level refer to all three leaders depending on the issue, but mostly to the human resources leader concerning leader development, staff problems, budget, etc. The leaders at the ward level are a nurse and a physician. They share the responsibility for running the ward according to quality, economy, development etc.; but each leader leads their own group of staff—nurses and secretaries or physicians, respectively.

Hospital 3

The third hospital is a large teaching hospital with around 1,200 beds. The department at this hospital is larger than at the other two hospitals, and has more research and highly specialised functions.

At Hospital 3 there have been no major organisational changes within the last few years. The leaders are organised as they have been for a long time, with a nurse and a physician as head of the department, while at ward level a nurse leads the nurses and a physician having professional responsibility for the physicians. The leader of the physicians is also the physician leader at the department level.

The three hospitals are organised in three different ways, and their leadership set-ups are also different. Hospitals 1 and 2 have changed their organisational structures and leadership set-ups in an attempt to provide better treatment and care for the patients. Both hospitals believe that the new leadership set-ups can support and generate improved coordination and interdisciplinary cooperation, which they find important to achieve better patient treatment
and care. Hospital 3 has kept the traditional leadership set-up and their original organisational structure.

**Structure of the thesis**

The thesis consists of seven chapters, where the first is the Introduction.

Chapter 2 describes the methodology of the project. It gives a definition of leadership and it briefly sketches the developments in leadership research and an overview of the history of leadership in the Danish health care sector. It also describes the methods that are used in this study and explains why they were chosen.

Chapter 3 outlines the findings from the first two studies and draws conclusions on them.

Chapter 4 is an analysis of how the decision-making and implementation at Hospitals 1 and 2 took place, and the effects of these processes.

Chapter 5 outlines the findings from Study 3 and explains the change of focus in the research on reaching Study 3. Chapter 6 is an analysis of interdisciplinary cooperation and whether clinical specialty is a predominant factor in interdisciplinary cooperation.

Chapter 7 gives a summary of all the studies and a discussion of the conclusions and suggestions for future directions.
Chapter 2: Methodology

Definition of leadership

The literature is rich in descriptions of management and leadership and their differences. Mintzberg (1973) described leadership as one of ten managerial tasks that co-exist. Others see leadership and management as hard to combine in one person. According to Zaleznik (1977), leadership and management are two different things; where leaders tolerate chaos and try to understand problems, managers seek control and to resolve problems. Zalesnik (1977) sees leaders as being more creative than managers are.

Kotter (1990) mentioned these differences and argued that management focuses on order and stability, while leadership concentrates on making constructive change and improving the organisation. Managers do planning and budgeting, organising and staffing, controlling and problem-solving, while leaders establish direction, align people and motivate and inspire them. Kotter argued that both roles are needed and that it is important to balance the roles correctly according to the situation (Kotter, 1990). Capowski’s (1994) definition is in line with that of Kotter, as Capowski writes that a leader is visionary, creative, innovative and flexible; whereas a manager is rational, consistent, problem-solving and tough-minded (Capowski, 1994).

Another way to describe the differences is that ‘Leadership theorists have relied primarily on organicism to describe the role and responsibilities in complex organizations while mechanism has been the theory of choice used to describe the role and responsibilities of managers’ (Terry, 1995). Furthermore, management can be defined as a function while leadership is a relationship between the leader and the staff, and that relationship can energise the organisation (Maccoby, 2000).

In this thesis I do not distinguish between leadership and management. I focus on the leadership set-up and if it has an effect on interdisciplinary cooperation. By set-up I mean the way the leaders are organised and how the structures for their tasks are designed; meaning which tasks and responsibilities do they have? Who do they lead? Who do they refer to? Furthermore, the study was carried out in a Danish setting, and the Danish language does not make the distinction between leader and manager that the English language does. The Danish language does distinguish between these tasks and the effects of them, but the leaders
interviewed handled both leadership and management tasks and did not themselves distinguish between leadership and management. Additionally, there was no explicit distinction between management and leadership in the internal papers and documents from the hospitals that were analysed.

Therefore the words ‘leader’ and ‘leadership’ are used to describe both management and leadership. The term ‘leader’ is used as describing the person who is in charge of a ward or a department, and ‘leadership’ is used to describe the acts of the leader. In both cases it also covers management tasks.

The history of leadership research

In the beginning of the 20th century leadership studies focused on the leader as a person and the leaders’ personality, motives and skills (Yukl, 2013). ‘Leader’ and ‘leadership’ were seen as two sides of the same coin and associated with unique, strong individuals (Sergi, 2017).

In the early 1950s focus shifted from the traits of the leader to what the leader was actually doing (Yukl, 2013). Researchers focused on specific leader activities and their behaviour. They analysed the amount of time spend on leader activities and how leaders handled their activities. This focus was also mentioned in behavioural theories (Yukl, 1971).

Following the period of behavioural theories, the focus in leadership research changed again and took a different path and acknowledged that leadership was about relationships: the relationship between a leader and their staff and the power influence and persuasion from the leader to their staff (Van Seters and Field, 1990). Although these studies focused on relationships, they still had a leader-centred approach in that the leader would influence their followers, and the followers would act as they were supposed to (Yukl, 2013).

Having investigated both the leader and their subordinates, the next period in the leadership literature also acknowledged the context, such as the characteristics of the staff, type of organisation and how the external environment could influence leadership. This led to the theories of transactional leadership (Yukl, 2013), which were based on rewards for the performance provided (Avolio et al., 2009). A contrast to transactional leadership was transformational leadership, which is a form of leadership where the focus is on morale and ethics (Yukl, 2013). This approach was further developed in the 1990s by Bass (1996), who explained that transformational leadership motivates the follower by creating trust, respect
and awareness of the needs of the organisation, thereby minimising opportunistic behaviour (Bass 1996).

According to Denis et al. (2012) ‘the transformational approach to leadership broke with more traditional perspectives where the role of followers was limited to execution. Through their attitudes and behaviors, transformational leaders develop the leadership potential of followers and consequently favor the emergence of more plural forms of leadership and superior organisational performance’. (Denis et al., 2012a)

Most studies on plural leadership emerged after the transformational approach in the 1990s and 2000s (Pearce and Conger, 2003, Denis et al., 2012d). However, studies of different constellations of leadership had been analysed earlier, as Hodgson (1965) and Etzioni (1965) had already argued in 1965 that a division of tasks at the leader level could optimise the executive role constellation. However, from 1965 and until the 1990s there was little focus on this approach.

According to Denis et al. (2012b) more knowledge is needed regarding plural leadership. These researchers suggest that more attention be given to the dynamics of plural leadership, which will be addressed in this thesis. A more detailed overview of the historical development of the literature on plural leadership is given in Study 2.

The Danish health care sector and the history of leadership

Denmark, among other countries, introduced New Public Management (NPM) in the 1980s (Kirkpatrick et al., 2011, Dent, 2003) and much more attention was paid to management and how to manage the public sector, including the management of hospitals. In 1984 the Danish Ministry of Internal Affairs recommended that the counties introduce shared leadership in their hospitals to strengthen the general management. This recommendation was made as a reaction to the lack of agreement between clinical leaders and financial–administrative leaders. Moreover, there were financial problems in Danish hospitals. By introducing shared leadership the Ministry believed it would be easier to solve general problems in these organisations and achieve agreement between clinical and financial leaders (Danish Ministry of Internal Affairs, 1984).

The counties, which owned the hospitals at the time, implemented shared leadership, although to different degrees (Sognstrup, 2003), and in the following years all counties implemented
shared leadership at the CEO level, with a physician, a nurse and a general manager sharing these responsibilities (Zeuthen Bentsen, 2000). At the departmental level only a few counties tried to introduce shared leadership, but by the 1990s it was widespread practice for most departments to have both a physician and a nurse as leaders, with shared responsibility but divided tasks, and the physician being in charge of the treatment decisions. In 1997 the Ministry of Health argued that shared leadership did not create clear lines of accountability, and instead they suggested that only one person should be in charge. Over the following years, different models of shared leadership with one leader being primarily responsible were tested in the counties, with mostly physicians having the primary responsibility. In the new millennium the government has had a lesser focus on the leadership set-up, but overall, Danish hospitals still have shared leadership at both the departmental and hospital levels (Kirkpatrick et al., 2011).

The hospital as a socio-technical systems and a complex adaptive system

In this thesis, hospitals are understood as socio-technical systems. The concept of socio-technical systems dates back to the early 1950s, when the Tavistock Institute did some research on coalmines and found that both social and technical factors and the relationships between them influenced the work at the coalmines (Trist, 1981). A socio-technical system is a human–machine system, where humans can adapt to cope with the complexity of the real world (Hollnagel, 2006). The term ‘machine’ or ‘technical’ can also be described as an artefact, meaning that it could be a machine, but also an organisational process (Hollnagel and Woods, 1983). The term ‘human’ or ‘socio-’ shows that the system is intelligent and can use its knowledge and experience for making decisions (Hollnagel and Woods, 1983). This means that humans in socio-technical systems can adapt to new situations or demands. According to Hollnagel (2009), humans make trade-offs between efficiency and thoroughness, which is one way to adapt and which causes variations in the system.

Another term for systems where human adaptations are important are complex Adaptive Systems (CAS) (Schneider and Somers, 2006). CAS consist of interactions and interdependencies in the system that can only be understood as a whole and not as individual elements. According to Ellis and Herbert (2011), humans can reflect and use their experience to find new solutions or paths and thereby adapt to the demands of their surroundings. The system consists of complex interactions and interdependencies that can only be understood as
a whole, and not broken down into pieces (Ellis and Herbert, 2011). Health care can be defined a CAS as it is ‘an open large, and broadly effective system characterised by herding, emergent behaviour and adaptation over time’ (Braithwaite et al., 2013).

Seeing health care and hospitals as socio-technical systems and CAS means that I recognise the human influences on these systems and the possibility to adapt. This is also the explanation for the focus on WAI/WAD as explained in Chapter 1, because these human adjustments and adaptations are important for how the work is done.

Case study

The departments at the three hospitals were investigated as three individual cases and the study was set up as a case study (Flyvbjerg, 2006). ‘…the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political and related phenomena’(Yin 2013 b). Case studies can be used when we are analysing ‘…contemporary events, but when the relevant behaviors cannot be manipulated.’(Yin 2013 c). This is what defines this study, as the leadership set-up and its effect on interdisciplinary cooperation is a contemporary event that I had no control over.

Before being able to undertake a case study, I needed to find hospital departments that wished to take part in the study and were able to set aside time for their staff to be interviewed and give me access to relevant documents. To gain insight into the three different leadership set-ups I had to focus on three different hospitals. Because of the time limitations in a PhD project, I chose only to study one department at each hospital. This of course causes limitations, as one department does not represent a whole hospital and the leadership set-ups are likely to have developed differently and work in different ways in other departments. Therefore, this study only contributes a limited insight into how the different set-ups work.

However, I have used pattern matching (Yin 2013a) to try to explain some of the patterns that were found by using the existing literature in the field. This means that I cannot generalise from my studies, but I can argue that there seems to be—or not to be—certain connections that are also described in other studies and by other theories.

In having to choose only one department at each hospital, I found it important that these departments were within the same clinical specialty to reduce the influence of the different cultures and work procedures related to the different tasks each specialty requires. As the
hospitals, departments, wards and all respondents that I interviewed were promised anonymity, which is why the specialty is not mentioned here. However, it is a common specialty, having both highly specialised and more common functions, and is found in many hospitals in Denmark.

I contacted the leaders of the chosen departments to ask if they would consider taking part in my project. They all agreed to a meeting where I could explain the project and the amount of time I expected to use at their department. After the initial meeting, I had a subsequent meeting with the leaders of each department to explain the project, learn about their department and make arrangements for future interviews. The leaders of each department made appointments with their staff and selected who I should talk to. Of course this selection might have influenced who I interviewed, as the leaders may not have given me access to the most critical staff. However, as the leaders had to ensure that the everyday work was done and that the right persons were present, this was the only way to do it.

I focused on two staff groups: nurses and physicians. This limitation was primarily due to time constraints, but also because these groups are dominant in Danish hospitals (Kragh Jespersen, 2005).

The approach to the case studies was to first analyse the internal documents from each hospital concerning their leadership set-ups and their guidelines and policies on leadership. Each hospital gave me access to internal documents regarding their leadership policies. Hospital 1 allowed me access to internal documents on why they chose the new structure and what the purpose of the new structure was, and access to the job descriptions of the leaders at the ward and department levels. The documents from Hospital 2 consisted of a regional decision paper describing the new organisational structure and the aim of the changes. Additionally, I was given access to internal documents at the departmental level concerning the collaboration between leaders, job descriptions of the leaders, their decision-making processes and their division of tasks. Hospital 3 did not have as many documents as the other two hospitals, although I was given their leadership policy, which also described the shared leadership model they were using.

I used an inductive approach to analyse these documents as my first aim was to determine why the two hospitals had changed their leadership set-ups, and to understand what they hoped to gain from the new set-ups. The documents from both Hospital 1 and Hospital 2
stated that the changes in their leadership structures had been made primarily to ensure better coordination and interdisciplinary cooperation. Reading the internal documents on the organisational changes and the new leadership set-up, I did not find a clear explanation of why their chosen leadership set-up should create better interdisciplinary coordination. Therefore, the intent was to analyse if one set-up allowed better interdisciplinary coordination.

Individual interviews were carried out with all 13 leaders at the ward and department levels in all three departments. I chose to use interviews as they give a large amount of information quickly, and using more respondents provides a wide variety of information. Moreover, it is possible to follow up with respondents and make clarifications (Marshall and Rossman, 1995). Furthermore, interviews give a picture of the interviewee’s everyday lived world (Kvale, 1996), which I was interested in getting in this study.

The interviews were semi-structured (Kvale and Brinkmann, 2009) and lasted for approximately one hour each. An interview is a conversation between the respondent and the interviewer where knowledge is produced (Brinkmann, 2014b) ‘In a semi-structured interview the researcher provides some structure based on her research interests and interview guide but works flexibly with the guide and allows room for the respondent’s more spontaneous descriptions and narratives’ (Brinkmann, 2014a) I chose to use semi-structured interviews because I was aware of some topics that I wanted to ask the respondents about with regard to leadership and interdisciplinary cooperation. At the same time, I wanted to be open to learn about their picture of everyday work in their jobs and what was on their minds.

The interviews were inductive to clarify how the leaders experienced the leadership set-up and its consequences for the employees and the organisational outcomes. The interview guide is given in Appendix 1, and shows that the focus of the interviews was on how the leaders were working, which tasks they found most important, how they shared their tasks and how they cooperated, among other things.

Focusing on interdisciplinary coordination among hospital staff, I found that it would be very informative to undertake a social network analysis. Social networks are relationships between actors in social systems. Organisations are structured as networks and the hypothesis in network theory is that one’s position in a social network determines the opportunities a person
has. Furthermore, social networks are a determinant factor in how groups and teams work (Borgatti et al., 2013).

Social network analysis can be used to obtain a picture of who staff collaborate with and who they socialise with. This could help to clarify if there were more connections and greater cooperation at a particular hospital, as well as if there was a relationship between cooperation and socialisation. For that task, my first step was to visit the departments and talk to the leaders of each department regarding how I could contact the physicians and nurses from the relevant wards. Two different leaders from Hospital 1 both explained that it would be impossible for me to get the physicians to answer the questions unless I paid them, and even if they were paid, the leaders did not think I could get many answers. Thus, even though a social network analysis would have been very informative in this project, I chose not to attempt it, but to rely on the interview data I would collect. Keeping that in mind, during the interviews I was very aware of the need to ask questions about who staff would cooperate with and who they would interact with.

The approach to gathering the interview data was deductive, as I knew the focus was on interdisciplinary cooperation. Having read and analysed the documents, I searched the literature and found that Gittell (2012) (who was also referred to by Hospital 2) had described interdisciplinary cooperation—or as she names it, relational coordination—and also described what is needed to achieve relational coordination. Gittell developed seven survey items to measure relational coordination. The items are about having shared goals, shared knowledge, mutual respect, frequent communication, timely communication, accurate communication and problem-solving communication (Gittell, 2012).

As Gittell had already constructed items for a survey to measure the level of relational coordination, it was very tempting to use her questions for a similar survey in the Danish hospitals. However, given the reluctance of the physicians to answer questionnaires, I did not think this would be achievable. Furthermore, I felt I would gain a deeper understanding of how things were working at each hospital if I collected data in semi-structured interviews (Kvale and Brinkmann, 2009). As my goal was to analyse how different types of leadership set-up can contribute to more or better interdisciplinary cooperation, I also needed to have an understanding of what actually happened and not just if, and to what degree, the departments showed interdisciplinary cooperation. Therefore, I used the items Gittell had identified to
structure my interviews with staff and developed an interview guide that was structured on the basis of Gittell’s (2012) survey items. The interview guide is given in Appendix 1.

I chose to interview both the leaders and the staff in all three departments, and Table 1 shows who was interviewed at each hospital.

Table 1: Interviews

<table>
<thead>
<tr>
<th></th>
<th>Hospital 1</th>
<th>Hospital 2</th>
<th>Hospital 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Department</td>
<td>Ward</td>
<td>Staff</td>
</tr>
<tr>
<td>Number of interviews</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Interview form</td>
<td>Individual</td>
<td>Individual</td>
<td>Individual</td>
</tr>
</tbody>
</table>

As the table shows, the interviews were largely individual. The intention was to run focus group interviews with staff divided into groups of nurses and physicians at all three departments, as I was interested in the group perspective and to understand the group dynamics (Frey and Fontana, 1991). Focus group interviews are efficient compared to individual interviews and they offer the possibility to gather data on the specific topic of interest. Furthermore, focus groups are less controlled than individual interviews as discussion and interaction in the group are dynamic (Morgan, 1996).

Unfortunately at Hospitals 1 and 3, it was not possible for them to manage without that number of staff at any one time due to the demands of their day-to-day work, and so individual interviews were held at these hospitals. All interviews were done using a semi-structured approach with open-ended questions (Kvale and Brinkmann, 2009). The respondents at Hospital 2 were interviewed in focus groups of 4–7 participants, divided into nurses and physicians. The interviews lasted for 60–90 minutes. At Hospitals 1 and 3 the individual interviews lasted between 20 minutes and one hour. All interviews with the leaders were individual and lasted for approximately one hour. All in all, three focus group interviews and 30 individual interviews were carried out. Two of the respondents asked to see the quotations that I would chose to use, which I agreed to. This has only been relevant for one respondent, who I contacted to obtain approval of the citation, which was given.
The number of interviews was decided in cooperation with the department leaders, as they were concerned about the need to continue the everyday work of their departments during my visits.

**My role as a researcher**

Before starting this PhD project, I had been employed as an administrative staff member at one of the three hospitals. Therefore, I had a certain amount of insight into this hospital, but I may also have had unconscious prejudices against the persons I have interviewed or the data I have analysed from this hospital. Therefore, I have been very aware of the need to conduct the interviews based on the same guide in all the hospitals and have also analysed the interviews in the same way. However, I may still have been influenced by my knowledge of the hospital and the persons I have interviewed.

My background is within economics, leadership and organisational science and I had been working on tasks in these areas at the hospital. My background at the hospital may also have affected how the respondents answered me, particularly the leaders, who I had worked with previously.

For all respondents, however, my professional background was important, as not being either a nurse or a physician gave me an opportunity to see their work and routines from another perspective. At the same time, having an organisational and economics background may have affected their perceptions of me and this project.
Chapter 3: The first two studies

In the following chapters, the first two studies in this PhD project will be presented. To understand how different forms of leadership set-up can contribute to more or better interdisciplinary cooperation, it was important to develop an understanding of how the set-ups were working in real life. Therefore, the first study focuses on Hospital 1 to gain an understanding of their leadership set-up and how it works in real life. The second study focuses on all three hospitals, how their leadership set-ups work, and if and how these leadership systems influence the everyday work in their departments.

Study 1

As mentioned in Chapter 1, Hospital 1 has a leadership set-up where two leaders shared the leadership tasks and responsibilities, and all staff refer to both leaders. This form of leadership system is characterised as dual leadership, which is a subset of pooled leadership. It is found when two or more leaders are working as co-leaders. Dual leadership is often found in knowledge-based organisations (Denis et al., 2012d). The aim of Study 1 was to analyse how dual leadership works in practice in a hospital setting and also to develop a categorisation tool to characterise how dual leadership teams work.

Study 1 is described in more detail in Appendix 2 which is a paper that was published in Leadership in Health Services in 2017.

Understanding dual leadership

In the paper, dual leadership is defined as ‘a setting where two leaders are mandated without any power difference or specified task division to have executive roles or duties and are held jointly accountable for the company’s or unit’s results’ (Thude et al., 2017).

The advantages of dual leadership are that it is easier to balance multiple goals, especially if the challenges are complex. Furthermore, the leaders complement each other and can provide different perspectives to the leadership task (Bhansing et al., 2012, Fjellvær, 2010, O Toole et al., 2002, Reid and Karambayya, 2009, Alvarez and Svejenova, 2005, Agle et al., 1999, Sognstrup, 2003, Houghton and Neubaum, 1994, Hodgson et al., 1965). The disadvantages of dual leadership are that it may lead to anarchy, and it increases the potential for conflict and lack of focus. Furthermore, if both leaders do not have the same information, there may be a

As research so far has found both advantages and disadvantages to dual leadership, it is important to clarify how dual leadership works in practice and investigate ways that determine what makes dual leadership work.

**Theoretical framework for analysing dual leadership**

The theoretical framework for the analysis is based on Sally’s (2002) research on how and why the Roman republic could practice dual leadership for more than 400 years. What Sally found was that an equal power balance between the co-leaders was essential, and this power balance is based on principles that Sally has outlined in ten lessons to learn from the Roman republic:

1. Co-leaders arrive and depart together
2. Co-leaders must have no chance of immediately and permanently ascending to solo leadership
3. Co-leaders’ assignments must be ‘lot-worthy’
4. There may be two leaders, but there is one office, which they share
5. Co-leadership is part of a system of general power sharing
6. A co-leader has formal veto power over any decision
7. When called upon, co-leaders have to sacrifice ‘their own’
8. A co-leader never speaks ill of the other to an audience of any size
9. Successful co-leaders capitalise on their duality
10. A co-leader must practice a certain degree of self-denial and humility (Sally, 2002)

The first nine lessons focus on organisational structures and guidance for leaders’ decision-making, whereas the 10th lesson is about the personality of the leaders. The lessons from the Roman republic show us that it is important to have the right leader and an equal power structure to establish dual leadership.

According to Alvarez and Svejenova (2005), human relations are also important for the dual leadership to work. They argue that the following three principles are present in successful partnerships:
1. The duo is made of good human material, which means the members share values, share a vision for the company, and have healthy egos that allow for power to be shared rather than contested.

2. The relationships that binds the two individuals is based on trust and good communication.

3. The pairs speak with a single voice to internal and external constituents (Alvarez and Svejenova 2005).

Based on the lessons from both Sally (2002) and Alvarez and Svejenova (2005), a framework of nine principles that are conditions for having equal power balance and good personal relations was constructed, and is shown in Table 2.

Principles 2 and 5 from the Roman Republic were deselected because it is hard to achieve in a modern society. The same is the case for the first principle from the Roman Republic, however, the intent of arriving and departing together was to ensure that the leaders had the same level of experience, and that principle was retained as ‘No difference in leader experience’ as it can be an important factor in the power balance. Principle 10 from the Roman Republic was deselected because the same principle is found in the principle from Alvarez and Svejenova on good human material.

Table 2: Principles of the theoretical framework

<table>
<thead>
<tr>
<th>Principles for theoretical framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  No difference in leader experience</td>
</tr>
<tr>
<td>2  Interchangeable assignments</td>
</tr>
<tr>
<td>3  Two leaders are sharing the same office</td>
</tr>
<tr>
<td>4  A co-leader has veto power</td>
</tr>
<tr>
<td>5  Co-leaders have to sacrifice ‘their own’</td>
</tr>
<tr>
<td>6  A co-leader never speaks ill of the other</td>
</tr>
<tr>
<td>7  Successful co-leaders capitalize on their duality</td>
</tr>
<tr>
<td>8  Good human material</td>
</tr>
<tr>
<td>9  The relationship must be based on trust and good communication</td>
</tr>
</tbody>
</table>

Data collection

Three leadership teams from Hospital 1 were interviewed to analyse how the dual leadership set-up in the hospital was working. The interviews were then coded by using the nine principles listed in Table 2.
The first team consisted of the department leaders, who stated that they trusted each other, shared an office and therefore had opportunities for dialogue and could coordinate throughout the day. Most tasks seemed interchangeable and the leaders had veto power for important decisions.

The second team were leaders at the ward level. This team also shared an office and would help each other if necessary. The nurse leaders was a full-time leader and the physician leader a part-time leader. Their tasks were divided between their professional groups and therefore they did not have much dialogue. The leaders had never had a conflict, but as the nurse leader explained, it was very easy to agree when the ward only consisted of nurses: ‘well if I had physicians as employees there might be some conflicting interests...’

The third team was also a team of leaders at the ward level. This team did not share an office, but they had a scheduled meeting once a week, although it was sometimes cancelled. The nurse leader was an experienced leader working full-time in a leadership role, while the physician leader was a new leader who only worked part-time in that role. Their ideas of leadership were different, and the nurse leader explained: ‘when we have to cooperate as dual equal leaders and we do not have the same view on leadership, we do not have the same take on leadership’. The physician leader said: ‘we do not have the same view on leadership’.

Another experienced leader from another ward also had leadership tasks in this team. All three leaders explained that it was a very difficult set-up to work in, as no one knew what the others did. The team had had many conflicts, and the physician leader explained that the ward staff were ‘like children of divorced parents’ because of the conflicts within the leadership team.

**Results**

Table 3 gives an overview of the three teams and how they fulfil the nine categories in the theoretical framework.
Table 3: Overview of the three teams and the leadership categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pair 1</th>
<th>Pair 2</th>
<th>Pair 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 No difference in leader experience</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2 Interchangeable assignments</td>
<td>Yes for the most part</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3 One office</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4 Veto power</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
</tr>
<tr>
<td>5 Sacrificing their own</td>
<td>Yes</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>6 Never speaking ill of the other but speaks in a single voice</td>
<td>Yes</td>
<td>Tries to</td>
<td>Tries to</td>
</tr>
<tr>
<td>7 Capitalize on duality</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>8 Good human material</td>
<td>Yes for the most part</td>
<td>?</td>
<td>No</td>
</tr>
<tr>
<td>9 Trust and communication</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

? means the answer is not known, or that it was not possible to answer yes or no to the question.

As shown in the table, the teams work in very different ways, even though they have the same organisational set-up.

Analysing the interviews revealed that the decision-making process was important in all three leadership teams. Team 1 had an agreement to make minor decisions individually, but when the decisions had an impact on the department, they would take time to discuss them. In the second team they did not have many common assignments or responsibilities and therefore made most decisions individually. Joint decisions were made only when they involved financial matters. The third team had not agreed on a decision-making process. One leader would make decisions individually and quickly; as she explained, ‘I solve the tasks, also because sometimes I do not have time to wait for the shoelaces to be tied. We have to move and then I do it myself’. The other leader needed more time and discussion.

The results of the analysis showed that decision-making is another important aspect in dual leadership that should be used when categorising it. Therefore, the principles in the categorisation tool were extended with a 10th principle: agreeing on the decision-making process, as shown in Table 4.
Table 4: The extended categorisation tool

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pair 1</th>
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<tr>
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<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3 One office</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4 Veto power</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
</tr>
<tr>
<td>5 Sacrificing their own</td>
<td>Yes</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
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<td>Tries to</td>
<td>Tries to</td>
</tr>
<tr>
<td>7 Capitalize on duality</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>8 Good human material</td>
<td>Yes for the most part</td>
<td>?</td>
<td>No</td>
</tr>
<tr>
<td>9 Trust and communication</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>10 Agreeing on decision process</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

? means the answer is not known, or that it was not possible to answer yes or no to the question.

The table shows that the interviews did not reveal any clear differences in the categories ‘sacrificing their own’, ‘never speaking ill of the other’ and ‘capitalising on duality’ either because of lack of data or because the answers where the same for all three leadership pairs. Therefore, these principles were not considered important categories to distinguish the leadership teams from each other, and they were removed from the tool. This led to a categorisation tool with seven categories, as shown in Table 5.
Conclusion

The power balance, personal relationships and decision-making process are important factors to make dual leadership work. These factors can be described by using a categorisation tool with the seven principles introduced in this article.

By using these principles to analyse dual leadership, it is possible to find differences in how dual leadership is practised and organised. The principles can be used to describe differences in dual leadership teams and possibly also as indicators for what it takes to make dual leadership efficient. Furthermore, the categorisation tool can be used in hospitals and other organisations to analyse which areas to focus on if dual leaders have trouble in creating efficient dual leadership.

Study 2

Denis and colleagues have argued, that ‘there is more to be learned about when and where dual or multiple leadership groups are likely to be most in demand and more or less effective’. (Denis et al., 2012b) By analysing three different leadership set-ups, this study contributes to the literature in this area. The study resulted in a paper that has been accepted by the journal Leadership in Health Services in December 2017, which is attached here as Appendix 3.

As the study focuses on all three leadership set-ups, we focus on pooled leadership at the top, where ‘a structurally plural group can become a collective source of leadership for people outside it’ (Denis et al., 2012c). The set-ups are different, but they all consist of a group of leaders that lead people outside the group. At Hospital 1, this group can be defined as dual leadership, but at Hospitals 2 and 3 we refer to the groups as pooled leadership.

Table 5: The seven categories of leadership

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Seven categories for dual leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No differences in leader experience</td>
</tr>
<tr>
<td>2</td>
<td>Interchangeable assignments</td>
</tr>
<tr>
<td>3</td>
<td>One office</td>
</tr>
<tr>
<td>4</td>
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</tr>
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<td>5</td>
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Theoretical framework


- Logic of appropriateness focuses on the relations between roles and situations in the sense that the obligations of a role are achieved in a specific situation. Behaviour is determined by an understanding of necessity and not because of a preference. In this logic, identity is highly prioritised (March and Olsen, 1989a). As March and Olsen express it: ‘when individuals enter an institution, they try to discover and are taught the rules. When they encounter a new situation they try to associate it with a situation for which rules already exist’ (March and Olsen, 1989b). And when rules are followed, it is because individuals expect these rules and they see them as natural and legitimate (Goodin et al.).

- Logic of consequentiality describes a behaviour where preferences and consequences determine the behaviour. ‘Behavior is willful, reflecting an attempt to make outcomes fulfill subjective desires…Within such a logic, a sane person is one who is ‘in touch with reality’ in the sense of maintaining consistency between behavior and realistic expectations of its consequences’ (March and Olsen, 1989b).

These logics can exist at the same time depending on the organisation and context. Some of the literature also argues within both logics. In Table 6 the arguments for either logic of consequentiality or logic of appropriateness are shown.
As both categories are relevant in the literature, the data for both categories was analysed. For the logic of consequentiality category, patient satisfaction, clinical quality and interdisciplinary cooperation was analysed, while leader legitimacy was analysed for the logic of appropriateness category.

### Table 6: Categorisation of arguments

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Logic of appropriateness</th>
<th>Logic of consequentiality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hodgson et al.</td>
<td>1965</td>
<td>Focus on possibilities for dividing tasks and responsibilities</td>
<td>Focus on possibilities for dividing tasks and responsibilities</td>
</tr>
<tr>
<td>Etzioni</td>
<td>1965</td>
<td>The expressive leader's job is to socialise members, which is a way of maintaining legitimacy</td>
<td>Focus on possibilities for dividing tasks and responsibilities</td>
</tr>
<tr>
<td>Denis et al.</td>
<td>2001</td>
<td>Focus on legitimacy of leaders</td>
<td>One person cannot possess all the competencies required to face the numerous demands within complex organisations.</td>
</tr>
<tr>
<td>Farrell</td>
<td>2001</td>
<td>Two leaders are able to accomplish more than one leader</td>
<td></td>
</tr>
<tr>
<td>O'Toole et al.</td>
<td>2002</td>
<td>One person cannot possess all the competencies required to face the numerous demands within complex organisations.</td>
<td></td>
</tr>
<tr>
<td>Sally</td>
<td>2002</td>
<td>Legitimacy as a cause for instituting co-leadership in Republican Rome. A pressure for team structure at all levels. Co-leadership in modern families - to reflect the 'real world' companies must also have co-leadership. To give the picture that a merger is a real merger and not a take-over, co-leadership can be a necessity.</td>
<td>Specialisation makes communication between groups difficult and co-leaders can improve the communication.</td>
</tr>
<tr>
<td>Alvarez and Svejenova</td>
<td>2005</td>
<td></td>
<td>One person cannot possess all the competencies required to face the numerous demands in complex organizations.</td>
</tr>
<tr>
<td>Fjellvær</td>
<td>2010</td>
<td>Competing logics in an organisation can be addressed by different leaders</td>
<td>Being able to use fewer practices is a way of being effective</td>
</tr>
<tr>
<td>Bhansing et al.</td>
<td>2012</td>
<td>Cognitive heterogeneity observed by stakeholders is a way of legitimizing the organisation and leaders.</td>
<td>If dual leaders have different beliefs and attitudes the organization can benefit from the duality.</td>
</tr>
</tbody>
</table>
Patient satisfaction gives an understanding of the patient’s experience of the service and treatment they receive during their hospital stay/visit. Clinical quality is a way to measure clinical processes at the hospital, while interdisciplinary cooperation is a process goal for the provision of better care and treatment. Furthermore, both Hospitals 1 and 2 have stated in their arguments for rearranging their organisational and leadership set-ups that this should lead to better interdisciplinary cooperation. Finally, leader legitimacy is defined as staff voluntarily following the leader.

First, the three leadership set-ups were analysed using the tool developed in Study 1. Even though Hospital 2 and Hospital 3 cannot be categorised having a dual leadership system, the categorisation tool can be used to clarify differences in their leadership set-ups and also to explain differences in the achievements of the two departments.

**Data collection**

The data for this study were gathered in individual interviews with all leaders of the wards and departments. The data were used to analyse how the leaders were working. Furthermore, interviews were carried out with staff from the departments, and the collected data used to analyse interdisciplinary cooperation and leader legitimacy. The analysis is based on existing national quantitative data on patient satisfaction and clinical quality.

**Analysis**

The leadership teams were analysed according to the categorisation tool developed in Study 1. Hospital 1 is described in Study 1, so here only detailed descriptions of the leadership teams at Hospitals 2 and 3 are given.

**Hospital 2**

At the departmental level the leadership team comprised three leaders, with one (a physician) in charge. The leadership tasks were divided into individual areas of responsibility. The leaders would meet every Monday to discuss departmental matters and coordinate their activities. Even though the leaders did not have veto power, they had always agreed on the decisions they made, and they all stated that they trusted and respected each other.

At the ward level there were two leaders; a nurse and a physician. They had shared responsibility for the ward but had each their own areas of responsibility, as the nurse led the nurses and the physician the physicians. Both leaders in this team had been away on sick
leave for long periods; however, new leaders were now in these positions and they had only been in the job for a very short while when the interviews took place. The leaders had so far not experienced any disagreements. They both said that they trusted and respected each other.

Hospital 3

At Hospital 3 there were two very experienced leaders in the department, who had shared responsibility for the department. They would meet every morning and would make decisions concerning the budget and the department as a whole together. They had divided their tasks and areas of responsibility, and both expressed respect for each other.

The second team was at the ward level. A nurse leader was responsible for the nurses, while the physician leader had professional responsibilities and no staff, but would cooperate with the nurse leader concerning development and changes in the ward. The two leaders met many times during the day and said that they had a good relationship.

The third team was also at the ward level, and consisted of a nurse who led the nurses, and a physician who did not have any staff but held professional responsibilities, and would also cooperate with the nurse concerning the development of, and changes in, the ward. The two leaders would meet once every month, but they did not express much confidence in each other.

As discussed above, the different teams acted and cooperated in very different ways. Table 7 shows how the leadership teams fulfil the categories of dual leadership. The categories in Table 7 show where the teams differ in terms of their power balance, human relations and agreeing on decision-making processes.
Table 7: Categorisation of all leadership teams

<table>
<thead>
<tr>
<th>Teams 1</th>
<th>Small Hosp. 1</th>
<th>Small Hosp. 2</th>
<th>Large Hosp. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal leader experience</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Interchangeable assignments</td>
<td>?</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>One office</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Veto power</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Good human material</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Trust and good communication</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Agreeing on decision process</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teams 2 and 3</th>
<th>Small Hosp. 1</th>
<th>Small Hosp. 2</th>
<th>Large Hosp.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Team 2</td>
<td>Team 3</td>
<td>Team 2</td>
</tr>
<tr>
<td>Equal leader experience</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Interchangeable assignments</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>One office</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Veto power</td>
<td>?</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Good human material</td>
<td>?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Trust and good communication</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Agreeing on decision process</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
</tr>
</tbody>
</table>

? means the answer is not known, or that it was not possible to answer yes or no to the question.

In the following sections, whether these differences result in differences in departmental/ward achievements in terms of patient satisfaction, clinical quality, interdisciplinary cooperation and leader legitimacy will be examined.

**Departmental achievements**

The intention was to analyse each department’s achievements using existing quantitative data on patient satisfaction and clinical quality. However, it was not possible to obtain sufficient data in the both categories. For patient satisfaction, was only possible to obtain data at the departmental level. These data show that the department at Hospital 2 did best, followed by Hospital 1 and finally Hospital 3. However, as there are no data at the ward level, it is not possible to draw any conclusions based on the leadership set-up and its influence on patient satisfaction.
In terms of clinical quality, it was very difficult to find data that were comparable, as data were only available for some of the wards and only on one of the treatments given on the wards. The available data show that Hospital 1 did best, while Hospital 2 was second and Hospital 3 third. However, as the data are very limited, again they do not give a complete picture of the wards or each department as a whole. Thus it has not been possible to use existing data on patient satisfaction and clinical quality to definitively analyse the achievements of the wards.

Interdisciplinary cooperation was analysed via interviews with staff concerning shared goals, shared knowledge, respect and communication. In all departments and wards the staff explained that they had good communication and they also had shared knowledge, meaning that they knew their tasks and knew how to use their colleagues from their own or other professions to get the task done. Furthermore, staff at all departments were aware of the working conditions of the other profession; for example, if they were overloaded with work, etc. Both nurses and physicians said that they could not do without each other, and more nurses explained that the interdisciplinary cooperation was better in this specific department that in any other departments they had worked in previously. One physician, who was also an education mentor for all physicians in all clinical specialties, explained that the students were very fond of this specific specialty as there was a good working climate where staff would help each other at all times, which was not the case for all specialties. However, at Hospital 3 one physician mentioned that he was independent and did not have much use for the nurses. That might be the case, but it is difficult to know if his tasks could have been handled better in cooperation with a nurse or other professional. Therefore, a high level of interdisciplinary cooperation was evident in all the wards analysed. However, this it may not have reached all staff in Hospital 3.

These departmental achievements are all aspects within the logic of consequentiality. To understand the effects of pooled leadership at the top concerning the logic of appropriateness, leader legitimacy was analysed.

**Leader legitimacy**

The analysis of leader legitimacy is based on interviews with staff from all three departments. At Hospital 1, which had dual leadership and therefore relied on leader legitimacy across professions, it was found that each ward leader only had legitimacy from their own
Both nurses and physicians were aware that they officially had a second leader, but they did not use the other leader and they did not perceive him or her to be their leader. Furthermore, the physician leader in Team 2 was challenged by a more experienced leader who the staff would use in some situations. Therefore, the physician leader did not have legitimacy from the nurse group, and only partly from the physicians.

At the department level, clinical specialty was also found to be an important factor in gaining legitimacy, especially among physicians, as the physicians mentioned that the leader of the department had a lack of understanding of their clinical specialty.

At Hospital 2, it seemed as though the ward leaders had legitimacy in the staff group of their own profession, even though they had not been leaders for long. However, two of the department leaders were not recognised as leaders the staff would follow. Because they were from another clinical specialty, according to staff, they did not understand the work procedures and routines in the ward.

At Hospital 3 the leaders had legitimacy in their own professional groups. The nurses did not respect the physician leader of the ward, but as she was not leader of the nurses, she did not need legitimacy from this group. The physicians did not relate to the nurse leader of the ward, but again the nurse leader was only leader for the nurses and did not need legitimacy from the physicians.

As shown in Figure 2, overall it was found that not all leaders on ward level had legitimacy, but were compelled to lead by formal authority. Therefore we argue that legitimacy cannot be taken for granted, but still is a precondition for dual leadership to work efficiently. When legitimacy is not given to both leaders, dual leadership is not achieved.
**Discussion**

The analysis showed that the leadership teams investigated in this study were organised and worked differently. Due to a lack of data, a clear relationship was not found between how the teams were working and patient satisfaction and clinical quality. When planning the study, it was identified that the measures of patient satisfaction and clinical quality were good indicators of the logic of consequentiality. As these were the only existing data, and are also used to evaluate Danish hospitals, it was considered reasonable to use these data in this analysis. However, they may not be the right measures to evaluate the effect of leadership. Furthermore, the data were sparse or non-existent at the ward level, so they were not informative about the effects of the leadership set-ups.

No relationship was evident between the different leadership set-ups and interdisciplinary cooperation, as there was a high level of interdisciplinary cooperation at all three hospitals. Thus, it appears that interdisciplinary cooperation was not driven by the leadership set-up; but rather, by other aspects, such as a wish to help one’s colleagues and the patients.

The only aspect where differences were found between the wards concerning the leadership set-ups was leader legitimacy. At Hospital 1 staff were supposed to refer to two leaders—a nurse and a physician, but would only use the leader from their own profession. Thus, the dual leadership set-up was not working the way it was intended to, as the leaders did not have legitimacy across professions. At the hospitals where staff only referred to one leader from
their own profession, the leaders had legitimacy. Furthermore, clinical specialty was also found to influence a leader’s legitimacy. This was only relevant at the departmental level, because at Hospitals 1 and 2 the physician leader of the department was from another clinical specialty.

**Limitations of the research**

During the study it was found that the existing data available were not usable to analyse the leadership set-up. There are no data in the Danish health care sector to evaluate how leadership set-ups at the ward level influence patient satisfaction and clinical quality. Data concerning budgets, amount of activity, sick leave etc. are available at the ward level, but they are not relevant when looking at departmental achievements, which in the end must be the product or service they provide their patients.

Data concerning interdisciplinary coordination are all based on staff perceptions. If staff are happy with the way things are, they may state that there is a high level of interdisciplinary cooperation and good communication. However, by only using staff perceptions to assess this it is difficult to determine whether one ward has a higher degree of interdisciplinary cooperation, as staff might be content in all wards. Therefore, observations at the wards would have been very valuable in this study, as this would have made objective assessment of how staff were communicating and relating to each other possible.

Many factors influence complex organisations. This study has only focused on a few aspects, but factors like staff skills, finances, culture, among others, could also influence the department achievements and leaders’ legitimacy.

**Conclusion**

As the available data were too sparse, no relationship was found between the leadership set-up and patient satisfaction or clinical quality. Neither did we find a relation between leader set-up nor level of interdisciplinary cooperation as we at all wards got an impression of a high level of interdisciplinary cooperation.

Interestingly, a relationship was identified between leadership set-up and leader legitimacy. The data showed that where staff only referred to one leader from their own profession, the leader had legitimacy, but where they referred to leaders from two professions, only the leader from their own profession had legitimacy. Furthermore, clinical specialty was found to be an
important factor in determining legitimacy, and at the two departments where the physician leaders were from another specialty, the leaders’ legitimacy was challenged.

**Conclusions from the first two studies**

The overall conclusion from the first two studies was that the dual leadership set-up was not yet fully implemented, as the leaders at the ward level did not work as dual leaders. Furthermore, each of the leadership teams interacted and worked differently. The point of departure for this PhD project was that there were three main leadership set-ups, but the analyses revealed that in reality, the leaders were working in many different self-defined ways that did not fit the pre-defined set-ups. Thus, WAD and WAI were different.

In terms of WAD, the goal was to find if there was a relationship between leadership set-up/the self-defined way of working in the leadership team and interdisciplinary cooperation and leader legitimacy. No relationship was found between the leadership set-up and interdisciplinary cooperation. This is interesting, as the leadership set-up at Hospitals 1 and 2, among others, were chosen because the hospitals considered that these set-ups would lead to a higher degree of interdisciplinarity. Thus, it cannot be argued that the leadership set-up is the predominant factor involved in creating interdisciplinary cooperation.
Chapter 4: Decision-making and implementation

Going through the internal documents from Hospital 1 and Hospital 2, no documentation was found for why one specific leadership set-up should be better than another. The decision to institute a particular system seemed based on the assumption that if the leaders cooperate and focus on interdisciplinary cooperation and patient pathways, their staff will also work with a high level of interdisciplinarity.

At Hospital 2, under the new leadership structure, the leaders were to be responsible for their budgets and their staff, which were traditional tasks for leaders at this hospital. However, under the new set-up they would also be responsible for coordination to ensure that everyone would work towards the same goal. The staff were also organised in teams to allow better relational coordination, and each team was expected to take responsibility for ensuring that the other team members had good conditions for completing their tasks. At Hospital 2 the decisions related to organisational structure were based on the recommendations of a consultancy report prepared for the organisation. The report referred to Gittell (2009) in its argument for why interdisciplinary cooperation was desirable. However, there was no documentation for why this exact leadership set-up should be better than another to encourage relational coordination or interdisciplinary cooperation.

According to the internal documents, the decisions to change the leadership set-ups at both hospitals were described as rational decisions that should have a certain outcome (Berg-Sørensen, 2011); namely, a higher degree of interdisciplinary cooperation, among others. Hospital 1 argued that ‘interdisciplinary problem/task solving is easier when the leaders have a shared responsibility; are a leadership team’. Moreover, Hospital 2 wrote that the new organisational structure and leadership set-up would promote good continuity of care and treatment, and that having coordination as a leadership task would better support this.

As the CEOs and decision-makers at the hospitals were not interviewed, the internal documents were the only information source and why these two hospitals chose this specific leader set-up is not known. However, by analysing the documents it appears that the theory of ‘muddling through’ (Lindblom, 1959) could provide an explanation of how these decisions were made. According to Lindblom (1959), ‘muddling through’ is a systematic way of making decisions regarding complex problems. Lindblom (1959) argues that muddling through can be a way to reach agreement on a decision. The chosen decision might be the
only one that could be agreed upon, even though a rational analysis of the problem or solution has not been made. Furthermore, according to Lindblom (1959), it can be very time-consuming to conduct a rational analysis of a problem and identify potential solutions, and it may also not be possible to access the information that is needed. Therefore, decision-makers can be forced to make decisions without knowing the effects of the decision and without changing everything, but by trying to base their decisions on existing conditions.

Both hospitals continued to have some sort of shared leadership and used clinically-educated staff as leaders, which has been the model in Denmark since the 1990s (see section ‘The Danish health care sector and the history of leadership). At Hospital 2, the consultancy report stressed that more of the new leader figures had a lot in common with traditional leader figures, but that they were not totally alike.

Muddling through can be the best way to make decisions depending on the situation. At both hospitals, it seems like the decision-makers had a poor understanding of WAD as the decisions were made at the top level, but concerned what was happening ‘on the ground’. This can be a risk in terms of creating unanticipated consequences, which will be discussed later.

The assumptions at both hospitals about how a particular leadership set-up would affect the everyday work can be seen as myths or common assumptions about the benefits of a specific leadership set-up. It is interesting to consider how these may have been created. Schein (1994) writes about common assumptions in his definition of an organisational culture. He argues that in a culture, common assumptions become unconscious knowledge and are not questioned (Schein, 1994). Assumptions become unconscious, and after they have been shown to work in different situations, they become common assumptions. As the leadership set-up at the two hospitals had not been tested before the decisions to institute them were made, they have not become common assumptions as a consequence of how they worked in real life. However, they might have been shown to work in the imagined idea of the everyday work—in WAI. Whether that is the case at these hospitals is unknown. However, it seems plausible that there have been common assumptions about the leadership set-up, and these assumptions may not have been questioned since none of the hospitals have presented arguments for why they chose their exact leadership set-up. It appears that there have not been any doubts on their own assumptions.
Another way to understand these common assumptions is the ETTO (Efficiency-Thoroughness Trade-Off) principle. Perhaps the assumptions did not start out as unconscious knowledge, but they may have been accepted as the best decisions made within an acceptable time limit. According to Hollnagel (2009), this way of making decisions is called ‘sacrificing’, meaning being aware of how much time you sacrifice on one decision. The common assumptions about the effects of the leadership set-up may have made it seem unreasonable to spend time being thorough and analysing and testing the decision, as the time spent on that process could have could been used for other decisions and tasks.

According to Merton, purposive social action, such as reorganising an organisation or a leadership set-up, can have unanticipated consequences due to:

- Ignorance of the situation
- Ignorance of information
- Error in the analysis of expectations
- Having expectations based on habit
- Having a dominant interest in a certain field
- One’s own influence on the action
- Complexity

Merton argues that as a result of complexity: ‘“Chance consequences” are those which are occasioned by the interplay of forces and circumstances which are so complex and numerous that prediction of them is beyond our reach’ (Merton, 1936).

Merton’s studies are from the 1930s, when organisations were arguably less complex or intractable than those of today. Therefore, it can be argued that Merton’s observations are even more relevant today and decision-makers need to be even more aware of potential unintended consequences.

At both Hospital 1 and Hospital 2 unanticipated consequences of the changes in the leadership set-up were identified, such as conflict between leaders, lack of leader legitimacy, frustrated staff and leaders not working as they were intended to. These are the unanticipated consequences found by focusing on the leader perspective, but it also seems plausible that there could be unanticipated consequences in other areas.
High reliability organisations, such as airlines, nuclear power plants and hospitals, where mistakes can have catastrophic outcomes are characterised by their ability to ensure reliable outcomes (Weick et al., 2000). A way to ensure these reliable outcomes is organisational mindfulness, which according to Vogus and Sutcliffe (2012) consists of ‘regularly and robustly discussing potential threats to reliability ..., developing a nuanced and current understanding of the context by frequently questioning the adequacy of existing assumptions and considering reliable alternatives ...; integrating these understandings into an up-to-date big picture ...; recognizing the inevitability of setbacks and thoroughly analysing, coping with and learning from them...’ (Vogus and Sutcliffe, 2012). Here, the importance of questioning one’s own assumptions is stressed. This is particularly the case if assumptions are made by decision-makers who only consider WAI. It is essential to check if WAD is in accordance with the assumptions and the imagined picture of the everyday work. A way for decision-makers to questions own assumptions could be to undertake a pilot study, which also would identify unanticipated consequences and provide an understanding of the implications of the decision for the everyday work of the organisation. I am not aware of any test studies of the new set-ups at either Hospital 1 or 2.

Having an up-to-date picture and recognising setbacks furthermore calls for a focus on how the decision is being implemented. This study did not focus on implementation, and therefore does not clarify how the organisational changes were implemented. However, in Hospital 1 in particular, it seemed that the leadership set-up was not working as intended, and therefore I conclude that it had not been implemented properly. However, strategies can be difficult to implement, especially if those designing the strategies do not have a good understanding of the daily work (Pfeffer and Sutton, 1999), which again leads us back to WAI and WAD (Hollnagel 2015). Having CEOs, administrative staff or consultancy companies design the new organisational structure and leadership set-up creates the risk of unanticipated consequences, as the decision-makers—particularly consultants—are very distant from the everyday work.

Some of these unintended consequences, such as lack of leader legitimacy and leaders not working as a dual team, might have been avoided by ensuring a well-planned and conducted implementation as having prepared to change, having capacity for the implementation. The most important capacity of any organisation is argued to be its staff. Close cooperation between management and staff facilitates implementation. Furthermore, cultural and
structural factors such as inter- and intra-professional hierarchies can be important in the implementation process, which is why an understanding of these factors also is important (Braithwaite et al., 2014). This study’s findings of frustration in the staff group and lack of leader legitimacy would indicate that there have been cultural and intra-professional factors that influenced the implementation of the new leadership set-ups. It would be very interesting to analyse how these factors were dealt with during the implementation. However, as this was not the main topic of this study, it was not analysed further.
Chapter 5: Study 3

A change of focus

The objective of this PhD project was to analyse how different forms of leadership set-up can contribute to more or better interdisciplinary cooperation, and to understand the basis for different leadership set-up choices. As no relationship was identified between leadership set-up and interdisciplinary cooperation, it was not possible to draw conclusions on how different forms of leadership set-up can contribute to more or better interdisciplinary cooperation. Furthermore, due to a lack of data, no conclusions could be drawn on the relationship between leadership set-up and departmental achievements such as patient satisfaction and clinical quality.

However, during the data collection it became clear that there were two wards—one in Hospital 1 and one in Hospital 2—where the leaders were challenged by either conflict within the leadership team or absence in the leader team because of sick leave. Analysing the data from these two wards was thought to be potentially useful to gain insight into the factors that influence how staff work when their leaders face challenges.

Therefore, the purpose of Study 3 was to develop an understanding of how staff coped with their everyday work with a leadership team that was facing challenges, and whether they handled these challenges in a resilient way. From not being able to conclude on how the different leadership set-ups influenced interdisciplinary cooperation, the focus will now shift to a bottom-up perspective on how staff handle their everyday work.

Resilience

It is relevant to focus on resilience as it is a positive way to see organizations arguing that organizations can adjust and adapt in challenging conditions (Sutcliffe and Vogus, 2003). This means that it might be possible for staff on these two wards to handle their everyday work in an acceptable way, despite the challenges within their leadership teams.

Resilience was first mentioned in the early 19th century as a characteristic of materials. Later, in the 1970s it was used as a definition of an ecological system’s ability to absorb change (Hollnagel, 2018a), and from the beginning of the 1990s the term was used to describe psychopathology in vulnerable children, and also became a term used in organisational
studies (Sutcliffe and Vogus, 2003). In this thesis the focus is on organisational resilience, where many definitions are to be found.

According to Sutcliffe and Vogus (2003), resilience is ‘the capacity to rebound from adversity strengthened and more resourceful’ (Sutcliffe and Vogus, 2003) In 2005, Lengnick-Hall and Beck argued that resilience enables firms to move beyond survival and actually prosper in complicated, uncertain and threatening environments (Lengnick-Hall and Beck, 2005)

Woods defined resilience as how well a system can ‘handle disruptions and variations that fall outside of the base mechanisms/model for being adaptive as defined in that system’ (Woods, 2006).

In 2007, Vogus and Sutcliffe defined resilience as ‘the maintenance of positive adjustment under challenging conditions such that the organisation emerges from those conditions strengthened and more resourceful’ (Vogus and Sutcliffe, 2007) while in 2008 Weick and colleagues noted that it is not only about bouncing back, but also about using change as an advantage (Weick et al., 2008).

Resilient systems forestall and mitigate failure, and make the failure less disruptive (Fairbanks et al., 2014).

In the health care context Hollnagel et al. (2013) have defined resilience as ‘the ability of the health care system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required performance under both expected and unexpected conditions’ (Hollnagel et al., 2013). In acting resiliently, the system is able to ‘continue functioning, rather than simply to react and recover from disturbances, as well as the ability to exploit opportunities that arise rather than simply survive threats’ (Hollnagel et al., 2013)

According to Lengnick-Hall and colleagues (2011), the literature on organisational resilience can be divided into two groups, one that sees resilience as the ability to rebound and pick up where the organisation was left, and one that ‘looks beyond restoration to include the development of new capabilities and an expanded ability to keep pace with and create new opportunities’ (Lengnick-Hall et al., 2011).

These definitions differ in the way they relate to challenging conditions and adversity, or if resilience also is about changing conditions that require adjustments. In the latest definition of
resilience from Hollnagel (2018), resilient performance also covers everyday situations: ‘Resilience is an expression of how people, alone or together, cope with everyday situations—large and small—by adjusting their performance to the conditions. An organisation’s performance is resilient if it can function as required under expected and unexpected conditions alike (changes/disturbances/opportunities).’ (Hollnagel, 2018b) Further, Hollnagel (2018) argues that resilience is more than just recovering from stress, it is being ‘able to perform as needed under a variety of conditions—and to respond appropriately to both disturbances and opportunities’ (Hollnagel, 2018c).

In the third study, the concept of resilience is used to analyse the work of the staff in a situation where their leaders are challenged and the situation is different from the norm. Therefore, resilience here is used in the sense of adjusting to disturbances and challenging conditions.

Being aware of the different definitions of resilience, it would have been interesting to further analyse if the challenges were used as an advantage and also if staff on the other wards, who represented everyday situations, at least in terms of their leaders’ capacity, were acting resiliently. However, due to time constraints this was not possible in this study.

**Preconditions for acting resiliently**

The literature is rich on definitions of resilience, as well as investigations of the preconditions necessary for organisations to act resiliently. Here, the focus will be on elements that were found relevant on the basis of the interviews with the staff of these two wards.

According to Weick (1993), sense-making and role structure are important factors that support employees being able to act resiliently. Sense-making is a contextual rationality and organisational structure, and organisational roles can rebuild sense and provide meaning and order when acting in response to large and contradictory demands (Weick, 1993).

Another key factor for supporting employees to act resiliently is slack or redundancy (Gittell et al., 2006, Johannessen et al., 2015). Slack can be found in different areas:

- **Resources**: time, money and personal resources
- **Control**: individual freedom to act within the frames of the organisation
• Conceptual: making room for divergent perspectives in the organisation (Schulman, 1993).

Slack can be planned by the organisation, or it can be opportunistic, which means that it arises in informal initiatives (Saurin, 2015). Here, the focus is on informal slack, and particularly control and conceptual slack. Resource slack is not relevant in this study as none of the interviews gave the impression of wards or departments having resource slack.

Mindful organising is another way to promote resilient performance (Weick and Sutcliffe, 2007a). In this case, mindful is defined as ‘... when people act, they are aware of context, of ways in which details differ..., and of deviations from their expectations’ (Weick and Sutcliffe, 2007b). Prosocial motivation is an essential factor in mindful organising. Individuals that are prosocially motivated focus on the benefit for the organisation and are motivated to work for the benefit of others; they are aware of their colleagues and if anyone needs help (Vogus et al., 2014).

Resilience can also be affected by social ties, as close ties permit clearer thinking (Weick, 1993). In an analysis of firefighters in a fire disaster where many firefighters died, Weick (1993) found that when formal social structures collapse, the only thing left to rely on is social ties. Obviously, the context at a hospital is not comparable to the one the dying firefighters experienced. However, the formal structures at Hospital 1 and 2 were changed, and in some cases did not function as they were intended to, and thus the social ties between the staff might have contributed to them being able to work effectively.

Finally, self-organising can have a positive influence on organisational resilience. Laloux (2015) has analysed organisations around the world, within different industries and in both public and private settings. In his study he found that the companies that were structured and led via self-organisation had good results. An example is a Dutch homecare organisation that was self-organised and operated with very good results. They had less need of nursing per patient, rapid recovery and one-third of acute admissions were avoided (Laloux, 2015).

Keeping WAI and WAD in mind, self-organizing has the advantage that decisions are made where the work is done. Not having to consult a leader, but being able to make decisions oneself makes it easy to make adjustments as soon as necessary to reflect changes in the environment.
Study 3

Aim of the study

Study 3 focused on the two wards where the leadership teams were facing challenges; one in Hospital 1 and one in Hospital 2. The aim of the study was to understand how the staff of these wards coped with their everyday work and whether the way staff handled the challenges was resilient.

The full study has been submitted as an article to an international journal, and is attached in Appendix 4.

Methodology

The study was based on semi-structured interviews (Kvale and Brinkmann, 2009) with the staff of the two wards. The interviews were originally done for another study—described here as Studies 1 and 2—focusing on leadership set-up and interdisciplinary cooperation, and thus the interview guide and questions do not reflect the aim of this study and whether the ward staff were acting resilently. Therefore, not all the respondents have touched on themes related to resilience and not all themes are covered equally.

The approach to the analysis was to read through the interview transcripts to identify the themes that emerged, and then go back to the literature to find any previous writing on that theme. The literature was also scanned, and the data examined for themes previously identified in the literature. This process was repeated many times, and the themes from both the literature and the interviews were sorted by placing Post-It notes on a wall to give an overview of what the data revealed. This process ended up with five themes: Sense-making and role structure, informal leadership redundancy, prosocial motivation, emotional ties and finally self-organising and advice-seeking.

Even though the data analysed were not collected for this study, they provided rich information on certain areas related to resilience. However, whether other aspects of resilience played out in the wards is not known, as there were no other data available and staff were not questioned directly on the subject. Therefore, this study only gives a limited picture of if, and how, the staff acted resilently.
Findings

Sense-making and role structure

From the perspectives of sense-making and role structure, the staff of both wards knew their everyday role structure and could make sense of it. The daily working structures appeared well established, and everybody knew what to do and who to ask for help or advice. In both wards, staff would go to their colleagues for dialogue and coaching. Thus, both wards had a structure for their everyday work which meant that staff knew how to respond to their everyday tasks without consulting their leaders. However, signs of frustration were evident in the ward in Hospital 2. One nurse explained ‘...we feel that we are not noticed in the same way as we were before ... there is much more frustration among the leaders and physicians and because there is more absence according to illness ... I think it is because it is no longer possible to make a decision on your own... ’ Both physicians and nurses seemed dissatisfied with the new structure, where some of their competencies had been removed. The leaders and physicians in particular had experienced change in their roles and areas of influence. These changes did not make sense to them, and this seemed to cause frustration.

Overall, the role structures for their everyday work made sense to the staff of both wards, which meant that they knew who to ask for help and how to do their job. On the strategic level, in the ward in Hospital 2 the new structures did not make sense, but led to frustration.

Informal leadership redundancy

Conceptual slack was found in both wards. Staff would listen to each other’s observations and arguments. As a physician from Hospital 1 explained when speaking about cooperation with the nurses ‘we have a lot of conversation about what kind of patient has arrived ... And I depend on the observations the nurse makes.’ At Hospital 2 a nurse explained ‘We have a very equal relationship with the physicians and we cooperate on equal terms when we are at the consultation.’ Dialogue with colleagues and listening to observations is here seen as indicators of staff listening to each other and using each other’s the competencies, giving a picture of two wards using conceptual slack.

Little data was available on control slack; however at Hospital 2 there were indications of control slack as both physicians and nurses felt some of their autonomy had been removed, which frustrated them because they wanted to make decisions themselves. At the same time,
certain nurses indicated that they had been in situations where control slack had been requested, but was not available at the time.

Overall, the data indicate that there was conceptual slack in both wards, which supported cooperation in the wards. However, data on control slack was not available for Hospital 1, and was ambiguous for Hospital 2.

**Prosocial motivation**

Staff from both wards were found to be prosocially motivated. One nurse commented, ‘we all want it to work. We are here for the sake of the patient, so it is important that it works in the best possible way’. A physician said, ‘I feel that it is a mutual goal [the patient treatment and care]. I think the nurses take responsibility for the patients as much as we do...’ In both wards, staff would work for the benefit of their colleagues, as well as and for the benefit of their patients. Their prosocial motivation made them willing to help each other to help their patients.

**Emotional ties**

The same picture was seen again in both wards, in that staff had developed emotional ties with their ward colleagues. Staff found it important to relate to and know their colleagues, both in their own profession and across professions. One physician said, ‘...if you do not know the others there will be a lot of misunderstandings. It is much easier to call someone and ask if they can handle a patient when you know them...’ In both wards, nurses and physicians had lunch together, which gave them a setting where they could chat about personal topics and get to know about each other’s families, etc.

The data indicate that there were good social relations between the staff at both at Hospital 1 and Hospital 2. The wards were small, and everyone knew each other in both wards, which might explain the good relations. However, the staff seemed to have a desire have a wish to get to know each other.

**Self-organising and advice-seeking**

None of the wards were self-organised. However, there were indications that to a certain extent, the staff worked as if they were self-organised. As mentioned earlier, the staff from both wards cooperated and helped each other. This also means that they would go to their
colleagues for advice. One nurse explained that she would not ask the nurse leader for advice; instead, she would ask her colleagues. There were indications that the staff from the ward in Hospital 2 wanted to self-organise and take responsibility for themselves, and that they were frustrated that some of their responsibilities had been taken away from them.

**Conclusion**

In both wards, the staff were found to handle their day-to-day work in a resilient way, given the challenges that their leaders were facing. They had a role structure they knew and could fit in to; they used informal leadership redundancy, and they cooperated to help each other get their tasks done. Staff from both wards were able to self-organise, although some staff wished to self-organise while others preferred to have a leader nearby. Having strong emotional ties at both wards may have strengthened their cooperation, self-organising and informal leadership redundancy.

Staff at Hospital 2 could not make sense of the decisions that had been made at the strategic level, and they experienced a loss of autonomy and their ability to self-organise, which frustrated them.

In both wards, the staff managed their everyday work by cooperating and seeking advice from their colleagues. Thus, even though at the time of data collection their leadership teams were challenged, the established role structures for the everyday work of the wards nevertheless made it possible for staff to carry on by accepting the responsibility to ‘get the job done’ and to help each other.

Strong social ties appear to be important to enable staff to act resiliently, as they strengthen the possibilities for cooperation, self-organisation and informal leadership redundancy, all of which are aspects of acting resiliently.

Furthermore, it was found that not being able to make sense of the decisions and role structures at a strategic level can lead to frustration, as can a reduction in autonomy. Therefore, to increase the resilience in an organisation leaders and CEOs should prioritise the need to establish strong emotional ties in their staff groups and to ensure role structures that make sense for the everyday work. For some staff this may mean room to self-organise, while for others, it may mean having leader close by. Finally, leaders and CEOs should be aware that decisions on a strategic level must also make sense in everyday work.
Chapter 6: Interdisciplinary cooperation: Is there a difference from speciality to speciality?

So far, this study has shown that there was good interdisciplinary cooperation within the wards at all three hospitals, and the staff had commented that they enjoyed a higher degree of cooperation compared to that in other departments. These findings may indicate that clinical specialty could be a predominant factor for developing interdisciplinary cooperation.

To examine this hypothesis, a quantitative analysis was carried out based on data from a satisfaction survey of the staff at all hospitals and clinical specialties in a region in Denmark. The region has a population of around 1 million inhabitants, or approximately one-fifth of the country’s total population, and the data was kindly provided by the region on the condition that the region was not identified and that the relevant staff at the region could read the conclusions and check the analysis before publication.

The data relevant to this project were on social capital. However, not all the data in that area were relevant, only that focusing on interdisciplinary cooperation within the wards. Therefore, data on the following items were analysed:

- I experience good cooperation in my department
- I experience good interdisciplinary cooperation in the unit
- We are satisfied with the help we give each other when handling emotionally stressful situations

To analyse the data, the clinical specialties were divided into the following groups:

- Surgery and orthopaedic surgery
- Medicine
- Paediatrics
- Psychiatry
- Specialties containing both medicine and surgery
- Emergency departments

To ensure the anonymity of the wards and departments analysed in this project, it can not be revealed which clinical specialty that is being analyzed. Consequently, the specialties are mentioned in a random order unrelated to that shown in Table 8.
Data from each specialty, ranging from 1 to 100 in each category, were compared to the mean value for all specialties. A linear model was applied to estimate the association between the three staff satisfaction items (dependent variables) and the six specialities (the independent variables) using Stata, release 15.0 (StataCorp, College Station, TX, USA). The analysis was performed as a mixed-effects model to allow adjustment for heterogeneity at the hospital level. P-values < 0.05 were considered statistically significant.

As shown in Table 8, the clinical specialty that is the focus this thesis—Number 1—has significantly better self-reported cooperation and significantly better perceived interdisciplinary cooperation than the other clinical specialties, as well as a significantly better perception of what they do to help each other in emotionally stressful situations.

Table 8

<table>
<thead>
<tr>
<th></th>
<th>Departmental collaboration</th>
<th>Interdisciplinary cooperation</th>
<th>Help in stressful situations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contrast to mean (95% CI)*</td>
<td>Contrast to mean (95% CI)*</td>
<td>Contrast to mean (95% CI)*</td>
</tr>
<tr>
<td>1</td>
<td>3.79 (0.11;7.46)</td>
<td>4.16 (1.23;7.08)</td>
<td>4.97 (1.49;8.46)</td>
</tr>
<tr>
<td>2</td>
<td>-0.73 (-2.51;1.05)</td>
<td>-0.51 (-1.98;0.97)</td>
<td>-1.39 (-3.07;0.28)</td>
</tr>
<tr>
<td>3</td>
<td>-1.01 (-2.94;0.91)</td>
<td>-1.28 (-2.85;0.30)</td>
<td>-3.57 (-5.38;-1.75)</td>
</tr>
<tr>
<td>4</td>
<td>-1.75 (-4.16;0.65)</td>
<td>-1.61 (-4.55;1.32)</td>
<td>0.48 (-1.53;2.50)</td>
</tr>
<tr>
<td>5</td>
<td>1.45 (-0.88;3.79)</td>
<td>-0.91 (-2.80;0.98)</td>
<td>0.86 (-1.35;3.07)</td>
</tr>
<tr>
<td>6</td>
<td>-1.74 (-5.71;2.24)</td>
<td>0.15 (-3.02;3.32)</td>
<td>-1.36 (-5.13;2.41)</td>
</tr>
</tbody>
</table>

Bold values indicate significant results

OR, Odds Ratio; CI, confidence interval;
* Based on a linear mixed-effect modelling

The study indicates that clinical specialty is a predominant factor in achieving interdisciplinary cooperation. The reasons for these differences are not known, it may be due to different working structures and routines in different specialties, different cultures and possibly also differences in number of staff per patient etc. However, it seems to be a very important perspective for further research.
Chapter 7:

Summary of the studies

The aim of this project was to assess whether different forms of leadership set-up can contribute to more, or better, interdisciplinary cooperation and to understand the basis for these leadership set-up choices.

The study found that both Hospital 1 and Hospital 2 indicated in their internal documents that their leadership structure decisions were rational and would, among other things, lead to better interdisciplinary cooperation. However, there were indications that the decisions were made by ‘muddling through’ and might have been the only ones possible in that situation. Furthermore, the decisions seem to be based on assumptions about the everyday work in the hospital that did not match the reality.

Additionally, the study showed that the leadership set-up is not the main determinant of the degree of interdisciplinary cooperation. All respondents that were interviewed talked about good communication, respect and cooperation across professions, and there appeared to be a high degree of interdisciplinary cooperation at all three hospitals, regardless of the leadership set-up. Thus, the degree of interdisciplinary cooperation was driven by factors other than the leadership set-up, and one of these factors seemed to be the wish to help the patients.

By analysing data across all hospitals in one Danish region, which includes about one-fifth of the Danish population, the study showed that clinical specialty is a predominant factor determining interdisciplinary cooperation. The specialty that was the focus of this study was shown to have significantly better self-reported interdisciplinary cooperation than any other clinical specialty. This might also be the explanation for why all interviews gave the impression that staff that were cooperating across professions.

In the second study, the intention was to determine whether there was a relationship between leadership set-up and departmental or ward performance, as determined by measures of patient satisfaction and clinical quality using existing quantitative data that are gathered to measure hospital performance outcomes. However, due to a lack of data, it was not possible to find a relationship.
Hospital 1 had instituted dual leadership as their new leadership structure. Study 1 showed that dual leadership depends on an equal power balance in the team. Further requirements for effective dual leadership are good human material, where team members have shared values, as well as the ability to share power. Finally, agreement on decision-making processes also influences how well dual leadership functions.

However, dual leadership also depends on leader legitimacy, and having legitimacy from staff groups other than one’s own. Study 2 showed that leader legitimacy was hard to gain from other staff groups, and neither nurses nor physicians would use the leader that was not from their own profession. Additionally, clinical specialty was important in gaining legitimacy, as leaders from other clinical specialties were perceived to have little understanding of the exact specialty investigated in this study, its culture and its work routines.

Changing the perspective from top-down to bottom-up, Study 3 showed that the staff of two wards with leadership teams that faced challenges were able to act resiliently. Clear role structures and social ties were some of the conditions that made this possible. However, a lack of sense-making of the organisational changes and the new leadership set-up led to frustration among the staff of Hospital 2.

**Discussion and future directions**

Much money, resources and energy is spent on organisational change. This thesis shows that leadership set-up does not make a big difference in terms of promoting interdisciplinary cooperation in the everyday work of hospitals. Both Hospitals 1 and 2 changed their leadership set-up, along with other organisational restructures, while Hospital 3 retained a traditional set-up. However, this study did not identify any differences in interdisciplinary cooperation at the three hospitals.

Interestingly, this study identified that clinical specialty can be a dominant factor in determining the degree of interdisciplinary cooperation. Why this is the case is not known, and no other studies were identified regarding these findings. Therefore, further research concerning the influence of clinical specialty on interdisciplinary cooperation is recommended. Furthermore, it would be very interesting and valuable for hospitals to know why the clinical specialty is a determinant factor, as this would create possibilities to learn from certain clinical specialties.
Additionally, this study shows that engaged staff were acting resiliently and put considerable effort into managing their tasks, regardless of problems within their leadership team. This is an important finding that should be noticed by leaders and CEOs, in that staff continually strive to ‘make things work’ and ‘get the job done’, and it is important to support staff in this by having clear role structures, facilitating the establishment of emotional ties and ensuring that decisions make sense to staff.

Internal documents from the hospitals showed that the decisions about changing their leadership set-ups at the two hospitals that did so seem based on assumptions about how the leadership set-up would work in practice. These assumptions influenced the choice of leadership set-up, as they limited other perspectives and input. Furthermore, the assumptions were made at the top level of the organisation and/or in cooperation with a consultancy. In both cases, the ones who made the assumptions were distant from the WAD. Therefore, decision-makers only know that their assumptions work in theory, but not if they work in practice, or if they only might work in some settings and not in others. Therefore, there are risks involved in making decisions based on the assumptions of decision-makers far from WAD. In this study, the assumptions that leaders would be recognised by professions other than their own, that leaders would always cooperate, and that the leadership set-up would influence interdisciplinary cooperation were not met in WAD.

These decisions were made using muddling through, which can be an effective decision tool in many situations. However, it also reduces the number of alternatives and does not allow much room for other perspectives. Assumptions and muddling through limit the perspective of decision-makers. Using a consultancy company to find appropriate solutions can furthermore limit the perspective, as consultants can be even further away from WAD.

As a result, when using muddling through in a decision process, it is very important to seek knowledge about the day-to-day work and be aware of unanticipated consequences. Therefore, it is recommended leaders and decision-makers be more thorough in planning any organisational change and carry out pilot studies before introducing changes throughout a whole organisation. Furthermore, focusing on the actual implementation is important, particularly since the implementation may identify where any unintended consequences arise early on in the implementation process.
Therefore, leaders must be mindful and frequently question their own assumptions about how standardised solutions will work and constantly seek an up-to-date picture of the context. When assumptions are based on WAI, there is a risk that this will result in unintended consequences, as the assumptions rarely match the everyday work in an organisation. Consequently, it is essential that decision-makers are aware of the differences between WAI and WAD and they look for ways to reconcile WAI and WAD.

**Limitations of the research**

Throughout this thesis different limitations of this research have been mentioned. Having finished the studies, I regret, that I did not make any direct observations. Observations would have been very informative to supplement the interviews, as observations would have given another—and more objective—picture than the information gained from an interview. Furthermore, they may have given me a better understanding of the everyday work in the different departments and thus encouraged different questions.

Furthermore, the information on interdisciplinary cooperation is only based on interviews and a regional survey of self-reported satisfaction about cooperation. It would have been very enriching to make observations on the wards to assess how the interdisciplinary cooperation worked in the daily routine, how staff would talk to each other, how often they would meet etc., and thereby gather objective parameters to compare the departments with.

However, that was not done, and therefore the findings reported in this thesis are very much based on subjective information.
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YIN, R.K. 2013b. Case study research: Design and methods; Safe Publications; Thousand Oaks;CA, pp. 4


Appendix 1

Interview guide leaders

- Can you describe the most important aspects of your leader task?
- How would you describe the cooperation with your leader partner / partners?
- How does your cooperation work in the everyday? How do you coordinate tasks, responsibility etc.?
- Can you describe some successful experiences you have had in your leaderteam within the last week?
- What do you do if you have disagreements in the leader team? When do you disagree – is it on special topics? Why do you disagree?
- Can you describe pros and cons concerning the leader set-up you have today?
- What is good / bad about leading in a team?
- What are your goals at the department? What are your goals as a leader?
- What do you think your employees experience a goal for their work?
- How often are you in contact with staff? Is it important to be in contact with staff? If so – why?
- Do you often have to interfere with staff? When and why?
- How is the cooperation between professions at the ward? Can you describe how it works, specific examples. Is it important that they cooperate? Why?
Interview guide staff

- What is important to you in your job?
- How do you work – try to describe a normal workday for a physician / nurse. What are the tasks and when do you need to contact other professions to solve the tasks?
- Do you always have a clear division of responsibilities between professions? How does it work?
- When do you need the competencies from a physician / nurse? What do you do when you need a nurse / physician? Are they always available?
- In what situations does a nurse / physician need you. Is it possible to get a hold of you? How and what do you do to be available for other groups of staff?
- What is the tone among staff like? Is the tone among one profession different to the tone between professions – how? Explain?
- Can you describe you communication at the ward / department – and describe it concerning if it is precisely and on time
- How is the cooperation among nurses and physicians? Does the cooperation differ from how it is in your own professions? If so – how?
- How is the cooperation among nurses and physicians when problems arise? How do you handle problems?
- Do your leaders focus on interdisciplinary cooperation? If so – how?
- Do your leaders cooperate? How
- Do your leaders have a common goal and common tasks or do they work on separate areas?
Appendix 2

Study 1
Leadership in Health Services
Dual leadership in a hospital practice
Bettina Ravnborg Thude, Svend Erik Thomsen, Egon Stenager, Erik Hollnagel,

Article information:
To cite this document:
Permanent link to this document:
https://doi.org/10.1108/LHS-09-2015-0030
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Dual leadership in a hospital practice

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Abstract

**Purpose** – Despite the practice of dual leadership in many organizations, there is relatively little research on the topic. Dual leadership means two leaders share the leadership task and are held jointly accountable for the results of the unit. To better understand how dual leadership works, this study aims to analyse three different dual leadership pairs at a Danish hospital. Furthermore, this study develops a tool to characterize dual leadership teams from each other.

**Design/methodology/approach** – This is a qualitative study using semi-structured interviews. Six leaders were interviewed to clarify how dual leadership works in a hospital context. All interviews were transcribed and coded. During coding, focus was on the nine principles found in the literature and another principle was found by looking at the themes that were generic for all six interviews.

**Findings** – Results indicate that power balance, personal relations and decision processes are important factors for creating efficient dual leaderships. The study develops a categorizing tool to use for further research or for organizations, to describe and analyse dual leaderships.

**Originality/value** – The study describes dual leadership in the hospital context and develops a categorizing tool for being able to distinguish dual leadership teams from each other. It is important to reveal if there are any indicators that can be used for optimising dual leadership teams in the health-care sector and in other organisations.

**Keywords** Health care, Leadership, Hospitals, Categorization, Dual leadership

**Paper type** Research paper

Leadership is one instrument to create good and effective patient treatment and care in hospitals. Dual leadership is found in several industries such as banking, journalism and high-tech businesses. In Denmark, several hospitals practice dual leadership, where a nurse and a physician share the leadership task. Yet, there has been surprisingly little research on dual leadership. This article analyses dual leadership in practice and presents a characterization of dual leadership.
Definition of dual leadership

Dual leadership is a subset of pooled leadership, defined as two or more leaders working as co-leaders. Dual leadership is often found in knowledge-based organizations where a team of leaders mutually lead others (Denis et al., 2012).

Even though the literature is sparse, there are several definitions of dual leadership, such as a setup with two managers of equal rank (De Voogt, 2006; Reid and Karambayya, 2009) or:

[…] when two leaders of roughly equal rank divide the executive leadership roles and functions between them so that each is responsible for and held accountable for clearly allocated domains within the organization (Fjellvær, 2010).

Alvarez and Svejenova (2005) defined a professional duo as two executives who perform the top job together in a coordinated fashion and are held jointly accountable for the results.

In this study, dual leadership is defined as a setting where two leaders are mandated without any power difference or specified task division to have executive roles or duties and are held jointly accountable for the company’s or unit’s results.

Advantages of dual leadership

Hospitals, newspapers, universities and cultural organizations are pluralistic organizations that have to balance multiple goals that sometimes are incompatible (Bhansing et al., 2012). Multiple goals can be difficult to manage (Fjellvær, 2010), and two leaders can be better than one when the challenges are so complex that they require a skill-set too broad to be possessed by one individual (O’Toole et al., 2002). Many pluralistic organizations use dual leadership where each manager has a separate functional role (Bhansing et al., 2012). In the performing arts organizations in Canada, for instance, leaders have separate roles as artistic director and executive director (Reid and Karambayya, 2009). Because the leaders complement each other, dual leadership can be highly resilient and can provide different perspectives to the leadership task (Alvarez and Svejenova, 2005).

Different stakeholders can also be represented in dual leadership (Agle et al., 1999). At hospitals, both physicians and nurses are very strong stakeholders (Sognstrup, 2003), whose interests are taken care of by the dual leadership.

Managers usually remember and focus on topics within their own areas (Houghton and Neubaum, 1994). When each leader focuses on their topics, a broader view may be represented than if there had only been one leader. Research from 1965 shows that two leaders can have different tasks, for instance, that one leader looks after the boundary processes of the organization while the other looks after its internal dynamics (Hodgson et al., 1965).

Disadvantages of dual leadership

The idea of having stakeholder representation in the leader team may be positive, but it can also have the opposite effect, which was the case in the Russian factory committees in 1917 (Jensen, 2012). It led to anarchy, and was devastating to the production (Avrich, 1963).

According to Reid and Karambayya (2009), there are arguments in favour of a unitary executive leadership: “Organizations need a single person to generate a coordinating vision. Conflict between the two or more executive leaders renders the vision incoherent and ineffective” (Reid and Karambayya, 2009). De Voogt (2006) acknowledges that while dual leadership can be used to resolve a management impasse, a leadership couple may be logically problematic because it creates possibilities for conflicts so that the “dual” becomes a “duel”, a battle for leadership.
Mintzberg (1989) has also argued that if the leadership task is divided, then a leader might miss some information which influences the decisions: “two or three people cannot share a single managerial position unless they can act as one entity” (Mintzberg, 1989).

To summarize, leaders in dual leadership may complement each other and represent different stakeholders. But dual leadership may also increase the potential for conflict, lack of information and lack of focus. It is therefore important to clarify how dual leadership works in practice and investigate ways to determine what makes dual leadership work.

**Dual leadership and power balance**

The Roman Republic practised dual leadership for more than 400 years. The co-leaders consisted of nobles and common people (Sally, 2002). The fact than the practice lasted for more than four centuries means that it, in many ways, must have been a success. Sally (2002) outlines ten lessons from the Roman Republic that made co-leadership work:

1. Co-leaders arrive and depart together.
2. Co-leaders must have no chance of immediately and permanently ascending to solo leadership.
3. Co-leaders' leaders' assignments must be “lot-worthy”.
4. There may be two leaders, but there is one office.
5. Co-leadership is part of a system of general power sharing.
6. A co-leader has formal veto power over any decision.
7. When called upon, co-leaders have to sacrifice “their own”.
8. A co-leader never speaks ill of the other to an audience of any size.
9. Successful co-leaders capitalize on their duality.
10. A co-leader must practice a certain degree of self-denial and humility.

According to Sally’s description, leadership in the Roman Republic corresponds to the dual leadership definition used in this paper. The leaders are mandated, share responsibilities and have no power difference.

The purpose of having leaders to begin and end at the same time is to avoid power asymmetry because one is more experienced and knows the organization better than the other. In the following, this principle is referred to as having no difference in leader experience. The necessity of maintaining a power balance is also an argument for the other lessons: no one should have a chance to ascend to single leadership, because it may be an incentive to disagreement and a contest between the leaders. The assignments must be aleatoric or determined randomly, as this reinforces the shared nature of responsibility and decision-making. In the following, this principle is referred to as having interchangeable assignments. Leaders in the Roman Republic shared one set of emblems as a symbol for their office. Sharing the same office can also be perceived as a symbol of shared leadership, which creates physical proximity and similarity. Sally (2002) argues that co-leadership can only work in organisations using power sharing throughout the organisation.

To encourage negotiation and agreement, the Roman Republic had a law according to which “no” always trumped “yes”, meaning that each leader had the right to veto the other. Neither should a co-leader speak ill of the other but rather should capitalize of their duality. Both lessons deal with acceptance of duality and that leaders can benefit from it despite the costs of negotiation and coordination. This can only happen if leaders refuse to take all the credit on their own, but are humble enough to share (Sally, 2002).
The first nine lessons from the Roman Republic were about the organisation and structures of the institution, that were intended to avoid power asymmetry. Lesson number 10 was about personality of leaders. The Roman Republic told us that having the right leader and power structures was essential for dual leadership to work. Furthermore, it demanded certain personalities to be part of a dual leader team and to maintain power balance.

104

Human relations and dual leadership

Alvarez and Svejenova (2005) focused on human relations. They analysed professional partnerships where, e.g., two CEOs shared the chair position. They argued that the following three ingredients are necessary for professional partnerships to work, and that these ingredients (lessons from professional partnerships) could be extended to other executive pairs:

1. The duo is made out of good human material, which means the members share values, share a vision for the company and have healthy egos that allow for power to be shared rather than contested.

2. The relationship that binds the two individuals is based on trust and good communication.

3. The pairs speak with a single voice to internal and external constituents.

Furthermore, Alvarez and Svejenova (2005) found that complementarities – both on task and emotional domains – are important for duos to function effectively, i.e. having a certain division of labour and roles while still sharing particular responsibilities. Trust was also found to be an important factor to overcome differences in dual leadership (Reid and Karmambayya, 2015). Being aware of emotional conflicts is also essential, as these can be destructive for the organization (Jehn, 1997).

Finally, Alvarez and Svejenova (2005) referred to Aristotle’s dictum that “[...] equality is felt to be an essential element of friendship”. For a professional duo, this means that a lack of power distance can be conducive to its sustainability because it removes power motivation as a potential source of conflict. The power asymmetry is also addressed by O’Toole who found that shared leadership was fragile because “one member of every team is usually more equal than the other” (O Toole et al., 2002).

Theoretical framework

Dual leadership can be characterized by the lessons mentioned above, most of which are relevant today. This leads to the following two lists:

1. Principles that will be used:
   • No difference in leader experience.
   • Interchangeable assignments.
   • Two leaders are sharing the same office.
   • A co-leader has veto power.
   • Co-leaders have to sacrifice their own.
   • A co-leader never speaks ill of the other.
   • Successful co-leaders capitalize on their duality.
   • Good human material.
   • The relationship must be based on trust and good communication.
Principles that will not be used:

- No chance of ascending to solo leadership.
- Co-leadership is part of a system of general power sharing.
- A co-leader must practice self-denial and humility.

Principles 1 and 2 (No chance of ascending to solo leadership and Co-leadership is part of a system of general power sharing) are deselected because they are hard to achieve in a modern society where it often is possible for an individual to rise to another leader position. Principle 3 (A co-leader must practice self-denial and humility) is deselected because the same principle is more thoroughly described in Principle 8 (Good human material). The resulting nine principles shown in the list with the heading “Principles that will be used” are all conditions for having an equal power balance and good personal relations. They will be used as a theoretical frame for categorizing dual leadership.

**Dual leadership in a hospital context**

Public hospitals in Denmark are financed by taxes and regulated by the government. All hospital physicians, nurses, therapists, etc. are employed by the hospitals. Specialists or local GPs can refer patients to the hospitals if the patients are not brought in for acute care by ambulance.

Health-care organizations are complex adaptive systems (CAS) whose behaviour is hard to predict (Braithwaite et al., 2013). Hospitals consist of several interdependent entities that require good collaboration across disciplines and organisation levels (Glouberman and Mintzberg, 1996), and they have to balance many conflicting demands (McAlearney, 2006).

Hospitals are dominated by two professions – nurses and doctors – that have different cultures. Doctors are trained to autonomy and independence, while nurses are trained to participate in a collective culture of dependence and community. The two groups are both interested in defending their own values and in solving common organizational challenges (Casanova, 2008). There are three types of dependency between the two professional groups: division of labour, correlation between the system’s various functions and correlation between clinical interventions and the required resources (Gittell, 2012).

Research on co-leaders at a Danish hospital from 2003 showed that there were big differences in how closely the leaders were working together. The leaders primarily performed leadership tasks related to their own profession. The shared tasks included economic responsibility, human resource management and development of the department. In all cases, the physician defined how the tasks and responsibilities should be shared, and the nurses did not have much say (Sognstrup, 2003). This shows some of the problems in dual leadership if one profession is “more equal” than the other. Yet, according to the definition of dual leadership in this article, there should be no power difference between the leaders, and they would be held jointly accountable for all results of the unit.

**Empirical setting**

The empirical setting is a small Danish hospital that carries out approximately 430,000 discharges and outpatient visits yearly and has around 420 hospital beds. The hospital has a CEO and two co-directors. There are 11 different wards, each with two leaders in a leader team – most often a nurse and a physician. Clinics in each ward are also lead by a leadership duo generally consisting of a nurse and a physician.

The leaders of clinics and wards are part of a team and no leadership tasks are divided in advance. The hospital further states that leaders in teams are interchangeable and that there is no leader for a certain professional group, but the leaders have joint responsibility. This
means that the division of tasks can be aleatoric as Principle 2 (Interchangeable assignments) recommends.
The leaders are mutually obliged to inform each other and must appear as an entity. Some leaders at the hospital share an office which is in line with Principle 3 (Two leaders are sharing the same office). Each ward determines their own decision-making and meeting structure, and it is up to the ward to provide room and structure for these leaders to meet.
The hospital has shared leadership at the CEO, ward and clinic levels. It could therefore be argued that it is a case of general power sharing. But the hospital is also part of a larger organization that does not use dual leadership.

**Data collection and methodology**
Three dual leader teams consisting of six leaders were interviewed to clarify how dual leadership works in a hospital context. All leaders were from the same ward at the hospital. One leader team was the head of the ward, while two teams were leaders of clinics. The article is based on interviews with leaders and analyses of the leaders own perception of dual leadership.

The interviews were semi-structured and lasted approximately 1 h each (Kvale and Brinkmann, 2009). All respondents were interviewed individually and handled anonymously. One respondent asked to approve if any quotes from that interview were used, and an agreement was reached.

All interviews were transcribed and coded. In the coding focus was on the nine of the ten principles mentioned above; the tenth principle was found by looking at the themes that were generic for all six interviews.

**Interviews**
All interviews were carried out approximately two years after the hospital had changed to dual leadership. Some of the leaders had been at the hospital and ward for many years, one came from another ward at the same hospital and one came from another hospital. One of the leaders had only been working as a leader for some months but had been at the ward as a nurse for many years.

The physical setup of the leaders was different. Two leader teams shared offices while another had separate offices 20 m from each other. Because of an organisational change, all leaders had moved to the present offices six month before the interview.

**First team**
In the first team, there was a great deal of trust between the leaders. One leader said:

[…] she is very sensible and gifted. That is what is good about being two leaders, there is someone to share the responsibility with […] and someone to spar with […]. We have close contact and for instance tonight we have a meeting on the phone […] well it is good being two leaders because the co-leader is a very likeable person.

The other leader said: “it is a very friendly person that I have to cooperate together with, so we are able to land [the solutions]”. One of the leaders explained that the most important factor for effective dual leadership is that the leaders can work together: “You can give up everything about dual-leadership if the leaders do not like each other”.

The leaders often had dialogue and coordination during the day. One explained:

[…] it is a challenge, when you are two, you spend a lot of time on coordinating, explaining, agreeing and then the task can take a lot of time. However, at the same time, I think, it gets much more qualified because you are two persons having each your background, your point of view or profession […].
One leader was very happy about sharing offices because it gave an opportunity to coordinate during the day, while the other leader saw it as a weakness because it made it harder to have confidential talks with the staff. Still both leaders found it important to coordinate and communicate during the day, and as one leader said:

[…we are together in thick and thin, and I support [the co-leader] even though I think [the co-leader] made a bad decision. They [the staff] have to feel that we are one […] it is not two separate leaders.

Most of the tasks seemed interchangeable in this team, and one leader said. “when you are in joint leadership you have to be able to manage all tasks”. Still the leaders gave each other veto power:

[…if something is very important to [the co-leader] she has the say, and if something is very important to me […]. There was a case a few months ago that was very important to me, and then she said, well I accept it.

The leaders did not have a long history of working in the ward, but had only been there for one and three years, respectively. One of the leaders came from a different hospital, but both had been leaders for many years. They had different views on the leader task, but they often knew what the other would think and respected their view.

Second team
In the second team, the leaders were sharing office and helped each other if needed. As their tasks were divided in professional groups of nurses and physicians, they did not have a lot of dialogue nor did they spend much time together at the office. One of the leaders was also working as a physician at the ward.

Both leaders respected the other but did not have much use of the other. The physician explains:

It is a weird constellation we have gotten. I am the physician leader together with [the nurse leader] […] but it is only nurses [working at the clinic] and I do not have much to do […] it is [the nurse] who is leading them.

The nurse leader confirmed that in saying:

[…] it is primarily I who takes care of the clinic and the things that are there […] and if I have things I need to discuss, if there are some special things, then I will discuss it with [the physician leader].

The leaders had not had any disagreements, as the nurse said:

[…] well we only have nurses and care assistants in the clinic. I do not have any physicians as employees, and that makes it a little easier to agree on things, I believe. Well if I had physicians as employees there might be some conflicting interests if there had been economic challenges you had to be aware of, but I haven’t experienced any disagreements because of our different professions.

Because they are only dealing with one profession in the clinic, it is hard to say if they would sacrifice their own, but as the nurse mentions, it might give them some problems.

One of the leaders had a long history as a leader and could therefore support the other who had only been leader for a shorter period. Both saw the dual leadership as a setup where they had the opportunity to discuss difficult cases and get each other’s views on the case and being able to support each other.

Third team
In the third team, the leaders had chosen to have separate offices. They had scheduled a weekly meeting to discuss and divide tasks, but the meetings were often cancelled.
Therefore, a great deal of the communication between the leaders would be by e-mail. Both leaders mentioned that their communication could be much better, and one expressed it this way:

I compare our staff to children of divorced parents [...]. It will be much better when we [the other leader and I] get a better communication.

One of the leaders was very experienced as a leader, and the other was new. The new leader was also a physician who worked part time at the ward and therefore did not have the same amount of time for administrative tasks as the nurse leader. The nurse explained that sometimes she was very quick to make her decisions because of her experience and she could not wait for the physician leader to get back in office. As she said: “I solve the tasks, also because sometimes I do not have time to wait for the shoe ties to be tied. We have to move, and then I do it myself”.

The new physician leader was frustrated that the nurse had more time for the administrative tasks and that she could make fast decisions. Both were aware that their cooperation would be better if they could meet more often and if they had the same view on leadership and how tasks should be done. Their thoughts of leadership and how to run the clinic were very different. The nurse leader explained about sharing tasks and responsibility: “when we have to cooperate as dual equal leaders and we do not have the same view on leadership, we do not have the same take off for leadership”. The physician leader said that: “we have different views on how things should work”.

In this team, another experienced physician leader from another clinic did the work schedule for all the physicians and therefore had a great influence on the physicians’ work in the clinic. All three leaders mentioned that it was very difficult to work in this set-up because no one knew what the others did. One of the leaders said that: “it is a mess […] it gives problems”. And another: “well it is very difficult. Who is responsible for what […] it is not easy”. “it is difficult, not only how we share the tasks but also how we work together, so that quick decisions won’t be taken when one is out of office”. One of the leaders said that: “we do not have a good cooperation […] it is personality problems, it is a problem in the cooperation”. Furthermore, they explained that having one leader to plan the other leaders work schedule could cause trouble if it meant that the other leader could not attend meetings because of work in the clinic.

All three leaders mentioned that the division of tasks was a result of how it used to be and the natural professional division. They also agreed on, that is was an advantage to have both a nurse and a physician sharing the leadership even though it was not working right now.

**Results**

The differences in the three teams show that just having a dual leadership is insufficient to make it work. As shown in Table I, the three teams acted and worked differently as dual leaders.

**Decision-making**

The interviews were analysed and coded by using the ten principles mentioned above. During the interviews, it was found that another aspect was important in dual leadership, namely, the decision process. All leaders talked about how they made decisions. In the first team, the leaders took many decisions individually if they thought it was minor decisions, but when the decisions had impact on the ward as a whole, they would take their time to discuss the decision. In the second team, most decisions were taken individually, as the leaders did not have many tasks in common, but some decisions such as economy and budget would be taken together and the leaders would spend time to find the right arguments to
<table>
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<th>Categories</th>
<th>Pair 1</th>
<th>Pair 2</th>
<th>Pair 3</th>
</tr>
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<tbody>
<tr>
<td>1. No difference in leader experience</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Interchangeable assignments</td>
<td>Yes for the most part</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. One office</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Veto power</td>
<td>Yes</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>5. Sacrificing their own</td>
<td>Yes</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>6. Never speaking ill of the other but speaks in a single voice</td>
<td>Yes</td>
<td>Tries to</td>
<td>Tries to</td>
</tr>
<tr>
<td>7. Capitalize on duality</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>8. Good human material</td>
<td>Yes for the most part</td>
<td>?</td>
<td>No</td>
</tr>
<tr>
<td>9. Trust and communication</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>10. Agreeing on decision process</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
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Table I.
discuss the budget with the CEOs. The third team had not agreed on how to make decisions; one leader would make many decisions individually and quickly, while the other leader wanted to have more time and to discuss the ups and downs in the decision.

There seemed to be a prioritizing in how much time one can spend on making a decision and how thorough it has to be or how important it is that the co-leader agrees on the decision. In Leader Teams 1 and 2, the leaders agreed on which decisions could be made quickly and single-handedly. Decisions that only had little impact on the ward were often made individually as quick decisions. Decisions having a big impact took longer, as they were discussed until the leaders agreed on the final decision. In the third team, the leaders did not seem to agree on which category the decisions belonged to. Therefore, they did not agree on which decisions could be made individually and which needed to be discussed.

The results showed that decision-making is another important aspect in dual leadership that should be used in categorizing dual leadership.

How to categorize dual leadership

Table I extends the summary presented above (the ten principles) as per the aspect of decision-making as found during the interviews. Using the information from the interviews, the three examples on dual leadership are analysed in each category to give an overview on how they differ.

As Table I shows, the first team was the one that met most of the principles. Altogether, the first leader team had an equal power balance, a very good personal relationship and agreed on the decision-making process.

The second team divided their tasks to each profession and therefore predominantly acted as two individual leaders, although still trying to communicate to the staff in a single voice. They agreed on the decision-making process and this may be why they did not have many frustrations in their cooperation.

The third team had great challenges, and they did not fulfil many of the ten lessons mentioned above. They communicated badly and had different values and visions. Furthermore, they did not trust each other and did not agree on the decision process.

As mentioned in the three principles in the "Lessons from professional partnerships" list, the interviews did not reveal any clear differences in the categories “sacrificing their own”, “never speaking ill of the other” and “capitalize on duality”. Only some of the categories from the literature could be used to distinguish the leader teams from each other and thereby used for categorization. These seven categories for dual leadership are listed as follows:

(1) No differences in leader experience.
(2) Interchangeable assignments.
(3) One office.
(4) Veto power.
(5) Good human material.
(6) Trust and communication.
(7) Agreeing on decision process.

The seven categories have been shown to be able to categorize dual leader teams and are therefore recommended for use in further research.
Conclusion

Power balance, personal relationships and decision-making process are important factors in dual leadership. These factors can be described by using a categorizing tool consisting of the seven principles introduced in this article:

1. Differences in leader experience.
2. Interchangeable assignments.
3. One office.
4. Veto power.
5. Good human material.
6. Trust and communication.
7. Agreeing on decision process.

By using these principles to analyse dual leadership, it is possible to find differences in how dual leadership is practised and organized. The principles can be used to describe differences in dual leader teams and possibly also as indicators for what it takes to make dual leaderships efficient.

Furthermore, the categorizing tool can be used in hospitals and other organizations to analyse where to focus, if dual leaders have trouble in creating efficient dual leaderships.

References


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Appendix 3

Study 2
# Leadership set-up: Wishful thinking or reality?

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[http://mc.manuscriptcentral.com/lihs](http://mc.manuscriptcentral.com/lihs)
Leadership set-up: Wishful thinking or reality?

Abstract

Purpose and design

Leaders at Danish hospitals are organised in different ways. In a qualitative study based on semi-structured interviews with staff and leaders from wards in three departments we looked at three different leadership set-ups to determine whether one system is better than the others.

Findings

The study found that the leadership set-up did not have any clear influence on interdisciplinary cooperation, as all wards had a high degree of interdisciplinary cooperation independent of which leadership set-up they had.

Instead, we found a relation between leadership set-up and leader legitimacy. In cases where staff only referred to a leader from their own profession, that leader had legitimacy within the staff group. When there were two leaders from different professions, they only had legitimacy within the staff group from their own profession. Furthermore, clinical specialty also could influence legitimacy: if the leaders were from another specialty than the physicians, they might not have legitimacy.

Conclusion

The study shows that leadership set-up is not the predominant factor that creates interdisciplinary cooperation; but rather, that leader legitimacy also should be considered. Additionally the study shows that leader legitimacy can be difficult to establish and that it cannot be taken for granted. This is something CEOs should bear in mind when they plan and implement new leadership structures. Therefore, it would also be useful to look more closely at how to achieve legitimacy in cases where the leader is from a different profession to the staff.

Originality

The study is to our knowledge the only study that has analysed different leadership set-ups and their effects. Our conclusion is valuable to all CEOs that plan a change in their leadership system.
Background

Dual, pooled or multiple leadership is practised in hospitals and other organisations such as newspapers or theatres, among others. However, little is known of how this form of leadership works in practice and if it has a positive effect on the organisation.

Denis et al. (2012) identified four different streams of research on ‘leadership in the plural’: sharing leadership for team effectiveness, pooling leadership at the top to lead others, spreading leadership across levels over time and producing leadership through interactions. This article focuses on pooled leadership at the top to lead others where ‘a structurally plural group can become a collective source of leadership for people outside it’ (Denis et al., 2012a). The leader group can consist of two, three or more leaders (Denis et al., 2012b).

Pooled leadership at the top has been found to be effective in complex pluralistic organisations (Alvarez and Svejenova, 2005, Hodgson et al., 1965, Bhansing et al., 2012, Etzioni, 1965, Denis et al., 2001, Farrell, 2001, O Toole et al., 2002, Sally, 2002, Fjellvær, 2010). Hospitals, newspapers, universities and cultural organisations can be characterised as pluralistic organisations because they have to balance multiple objectives, such as economic and non-economic goals (Bhansing et al., 2012). Though more literature is appearing on plural leadership, Denis et al. (2012) have suggested that more knowledge about the effects, and effective types, of plural leadership is needed.

Categorisation of arguments for pooled leadership at the top

The arguments for pooling leadership at the top fall into two categories. One focuses on outcomes and effectiveness, while the other includes having legitimacy and representing stakeholders. These categories can also be called the ‘logic of consequentiality’ and the ‘logic of appropriateness’ (March and Olsen, 1989, March and Olsen, 2010, March and Olsen, 2011). One logic does not exclude the other; they can exist at the same time, depending on the organisation and the circumstances within it. This article assumes that the two logics exist at the same time and that both are important for the organisation to fulfil its tasks. However, one logic might be dominant.

Dual leadership

Dual leadership is one type of pooled leadership at the top (Denis et al., 2012b). Dual leadership can be defined as ‘a setting where two leaders are mandated without any power difference to have executive roles or duties and are held jointly accountable for the company’s or unit’s results. In this definition a task division has not been specified by the CEO or direct leader’ (Thude et al., 2017b). Dual-leader teams can behave in very different ways. Seven categories are important to make dual leadership work. When these categories are fulfilled in varying ways, there is a risk that the leader teams also perform and cooperate in very different ways (Thude et al., 2017a). The seven categories are:

1. There should be no difference in leader experience
2. The assignments should be interchangeable
3. The leaders should share offices
4. The leaders must have veto power to all decisions
5. There should be good human material\(^1\) — meaning that the leaders are able to share the power and decision making, and they should share the same visions and values for the department.

6. The leaders should trust each other have good communication.

7. The leaders should agree on the decision making process.

One of the leadership set-ups that is addressed here is a dual set-up. The others have some commonalities with dual leadership, but do not fulfil the definition, and we have characterised them as pooled leadership at the top. However, it is interesting to analyse how the other set-ups fit in to the seven categories above, to determine if these categories can explain any differences in the achievements of the departments.

**Pooled leadership at the top at Danish hospitals**

We describe and analyse how different leadership set-ups in three hospital departments in Denmark work in practice, and relate this to interdisciplinary cooperation within the departments and the legitimacy of the leaders.

According to Denis et al. (2012) ‘There is more to be learned about when and where dual or multiple leadership groups are likely to be most in demand and more or less effective’ (Denis et al., 2012c). We address these aspects and analyse three different leadership set-ups in three different hospital departments — all within the category ‘pooled leadership at the top’ to determine whether one set-up is better than the others according to:

- Interdisciplinary cooperation (logic of consequentiality)
- Leader legitimacy (logic of appropriateness)

Interdisciplinary cooperation is here used as a process goal to provide better care and treatment in the hospital departments. Interdisciplinary cooperation is necessary in the health sector because health care today is too complex for individual groups (Mitchell and Crittenden, 2000). Furthermore, it has been found that better cooperation between professional groups, specifically nurses and physicians, can create more effective treatment (Glouberman and Mintzberg, 1996). It is not enough for hospitals to have skilled and dedicated employees; staff must also be able to continuously collaborate and coordinate their work — known as relational coordination (Gittell, 2012). In this article, we use the term interdisciplinary cooperation as we are analysing cooperation between nurses and physicians.

The interdisciplinary cooperation is analysed through interviews with staff in each department, where the focus has been on the cooperation between professional groups, communication between professional groups and having common goals within the department.

Leader legitimacy characterises staff that accept and recognise their leaders, which means that they voluntarily follow their leaders. Followership is an important aspect to leadership, and can be defined in two ways: a) formal hierarchical roles (e.g., followers as subordinates) and b) followership in the context of the leadership in process (e.g., following as a behaviour that helps co-construct leadership) (Uhl-Bien et al., 2014). We understand to follow and to lead as processes as defined in b). The juxtaposition of leadership and followership naturally points to two issues that require further consideration:

- The first is whether there can be leadership without followership. While in some senses one cannot lead without having followers there are two forms of this relationship. One form is leadership with

\(^1\) The term ‘good human material’ was originally defined by Alvarez and Svejenova (2005).
voluntary followership, where the leader has both legitimacy and official authority. In this case, people follow the leader both because they want to and because they have to. The other form is compulsory followership where the leader does not have legitimacy yet is leader by official authority as he or she has been placed in a position and given authority by superiors. In this case, people only follow their leader because they have no other choice.

- The second issue is whether there can be followership without leadership. This may not seem possible in the context of the organisation of human activities. However, if we consider well-known phenomena such as self-organising groups, the issue is less clear-cut. In 1959 the study of the behaviour of ants led to the introduction of stigmergy as a form of coordination through the environment between agents or actions, so that a trace left in the environment by an action stimulates the performance of the next action (Theraulaz and Bonabeau, 1999). More recently, the concept has been extended to other types of activity, including humans in organisations, where stigmergy can be seen as a consensus mechanism of indirect coordination (Borghini, 2017). In such situations, there is no explicit leadership; but rather, what one might call a collective followership.

In our case it is important to focus on voluntary followership as that is what we find gives legitimacy. If the leader has legitimacy, tasks can be performed efficiently and if the leader only has authority, it will be more difficult to perform tasks and to lead. Leader legitimacy has been analysed through interviews with staff in all three departments, with a focus on how staff perceive and use their leaders. The leadership set-ups are analysed using a framework that was developed for categorising dual leadership (Thude et al., 2017a).

**Three cases**

The three cases chosen for this analysis represent different ways to organise the leaders of hospital departments. The different leadership set-ups are shown in the following figure, and each case is explained further in Figure 1.

Figure 1: Forms of leadership at the departmental level of three Danish hospitals

**Hospital 1**

Hospital 1 is a small hospital with around 400 beds. As shown in Figure 1, the hospital has two health professionals as leaders at both the department and the ward levels. The two leaders sharing the leadership tasks are mandated without a power difference and are held jointly accountable for the results of the department. This can also be defined as dual leadership (Thude et al., 2017a). All staff at Hospital 1 report to both leaders, so the hospital does not have a separate leader for each profession and nurses, physicians, secretaries and other staff are led by both leaders at the same time.

**Hospital 2**

Hospital 2 is also a small hospital and has around 300 beds. The departmental leadership consists of three leaders: a chief leader and two deputies. The chief has the final responsibility and the two deputies each have an area of responsibility. One is responsible for managing all staff and the budget, while the other is responsible for creating better patient pathways.

The leaders at the ward level report to all three departmental leaders, depending on the topic, but mostly to the human resources leader concerning leader development, staff problems, budget issues etc. The
leaders at the ward level are a nurse and a physician. They have shared responsibility for running the ward according to quality, budget and development, among others, but they also lead their own group of staff; respectively, nurses and secretaries or physicians.

The organisation of the departmental and ward leaders in Hospital 2 is characterised as dual leadership (Thude et al., 2017a).

**Hospital 3**

The third hospital is a large teaching hospital with around 1,200 beds. The department at this hospital is larger than at the other two hospitals, and has more research and highly specialised functions than the other two departments. The leaders of the department are two health professionals — a nurse and a physician. They share the responsibility for managing the departmental budget, quality and patient satisfaction, among other factors. Furthermore, the nurse is head of the nurse leaders, and the physician is head of all physicians.

At the ward level, they have a nurse who is in charge of the ward and all staff on the ward, including nurses and other staff. The nurse cooperates with a physician leader who is not in charge of any staff, but has responsibility for the quality of treatment and research.

The leaders of the department have a type of dual leadership set-up even though not all areas of responsibility are interchangeable (Thude et al., 2017a). As there is only one leader of the ward who cooperates with a physician without any staff responsibility, this cannot be defined as a pure form of dual leadership. Still, the leaders share responsibilities for work planning and the development of the ward, which is why the set-up is not strictly unitary but also has some dual aspects.

We named the leadership teams at the department level Team 1 and those at the ward level Teams 2 and 3. In the following, we focus our analysis on the leader teams at the ward level. The leaders at the ward level are in direct contact with the staff and have a direct influence on interdisciplinary cooperation, and should therefore show whether there is a relationship between the leadership set-up and interdisciplinary cooperation. Furthermore, the legitimacy of the ward-level leaders depends on the staff, and by focusing on the ward level, we can assess the connection between the staff and their direct leaders.

**Methodology**

Together, the wards from the three departments had ten leaders, who were all interviewed to clarify how the leaders at each hospital experienced the leadership set-up and how they were working under this new system. The analysis is based on interviews with the leaders and therefore analyses the leaders’ own perceptions of their leadership set-up.

The interviews with the leaders were semi-structured (Kvale and Brinkmann, 2009) and lasted for approximately one hour each. The interviews focused on how the leaders cooperated within their team, what they found to be the most important tasks, how they would organise meetings and make decisions and if they trusted each other and agreed on decisions. As shown in Table 1, the interviews were held individually and lasted for approximately one hour.

Table 1. Interviews with leaders at the ward level
Staff from all three departments were interviewed to obtain their views on interdisciplinary cooperation in their departments and on management. The interviews were semi-structured (Kvale and Brinkmann, 2009). The respondents at Hospital 2 were interviewed in focus groups of 4 – 7 participants, separated into nurses and physicians. The interviews lasted for 60 – 90 minutes. The intention was that all interviews with the staff should be focus group interviews as we were interested in the group perspective, rather than the individual focus. However, this was only possible at Hospital 2 as the other two hospitals could not do without that many staff at one time. Instead, we held individual interviews with the respondents at the other two hospitals; these interviews lasted from 20 minutes to one hour, which is also shown in Table 2.

Table 2. Interviews with staff

The first author of this article conducted all interviews with leaders and with staff. All interviews with the leaders were transcribed and coded according to the seven principles found essential for dual leadership (Thude et al., 2017a). Interviews with staff were transcribed and coded according to their perceptions of their leaders and interdisciplinary cooperation. Nvivo was used for coding and analysis. The analysis was performed by the full research team. The first author translated the quotes used in this article from Danish to English, while a colleague back-translated them from English to Danish to ensure an accurate translation.

As the interviews were held during working hours the number of interviews were limited to the number of staff that were assigned by their leaders or were available at the time. Therefore, it was not possible to conduct supplementary interviews. However, after analysing the data we found that the data in the interviews with the same group of staff from the same ward were very similar.
Analysis

The analysis was based on the interviews, using the seven categories of dual leadership (Thude et al., 2017a), to categorise the leadership teams. Some of the teams cannot be defined as dual-leader teams, and therefore not all the categories are relevant here. As we have limited the research to only focus on the leadership set-up at the ward level, we defined the leadership teams as Teams 2 and 3 to make it clear that the teams at department level — Team 1 in each department — are not analysed in this article.

Hospital 1

At Hospital 1, all leaders were in a dual set-up, but the leadership teams functioned differently. Team 2, the ward leaders, did not have many common tasks and therefore did not communicate very much. However, they trusted each other and each leader felt the other was supportive. As they did not have common tasks we do not know if they would give each other veto power or if they had good human material. In Team 3 the leaders did not trust each other; they would hardly communicate and they did not feel that the other leader was supportive. Both leaders found that the other leader was not fulfilling their role as a leader should, and they did not have the same views of leadership.

The differences in the leadership teams at Hospital 1 according to the dual leadership categories (Thude et al., 2017a) are shown in Table 3, in the Small Hospital 1 column.

Hospital 2

The leadership team in the ward at Hospital 2 consisted of a nurse and a physician. Both leaders were new in their positions and did not have any leadership experience. They had shared responsibility for the ward, but they also each had their own areas of responsibility, as the physician was in charge of the physicians and the nurse was in charge of the nurses and secretaries. Because of their shared responsibility, this leadership team is characterised as a dual-leader team. Neither of the leaders had experienced any disagreements yet; both leaders stated that they trusted and respected each other. Even though they had not been working together for long, it seemed that they trusted each other and could discuss different subjects. Most of the leadership assignments were divided beforehand, and therefore they only had to agree on the shared assignments and challenges.

Because the leaders were new in their positions and had not yet experienced disagreements we do not know if they would give each other veto power. Furthermore, they had not discussed the decision-making process and had not had any disagreements over it yet. Therefore, we do not know if they would agree on the decision-making process. This is why there are two question marks in Table 3 in the Small Hospital 2 column, which lists the seven categories the leadership teams at Hospital 2 fulfils.

Hospital 3

At Hospital 3, Team 2 comprised a nurse leading a ward in cooperation with a physician. The nurse was responsible for the nursing staff on the ward and the ward as a whole, and had a full-time leadership position. The physician did not have any staff responsibility, but would cooperate with the nurse leader on tasks concerning the ward, such as development and changes in the ward. The physician leader also had clinical work and was only working part-time (or less) on leadership tasks. The two leaders would meet many times during the day and felt they had a good working relationship, helping each other. The leaders had not had any disagreements in their decisions and as they had divided responsibilities we do not know if they would give each other veto power in certain situations, which is why there are two question marks in Table 3 in the Large Hospital 3 column.
The third team was structured in the same way as the second team. This was another kind of ward and the leaders did not meet during the day. They had a planned meeting once every month, where they would discuss ward issues, such as patient satisfaction, the physical premises and so on. As a result of the specific work on the ward, many decisions would be made by the departmental leaders — Team 1. The leaders did not have the same confidence in each other, and the nurse leader explained that the physician leaders lacked leadership education and understanding of the organisation. At the same time, the physician leader stated that as physicians, they would do whatever it took not to be led. As the leaders did not make many decisions in common, we do not know if they would agree on the decision-making process, which is why this category is marked with a question mark.

As shown, the leadership teams all have different set-ups and work very differently. Table 3 gives an overview of the leadership teams and if they fulfil the demands for dual leadership, as well as how many of the demands each team fulfils.

Table 3. Leadership teams at the ward level at all three hospitals

As Table 3 shows, none of the teams fulfil all categories, and each of the teams fulfils different categories. In the next section, we will focus on whether there is interdisciplinary cooperation on the wards and if one leadership set-up achieves better interdisciplinary cooperation than another does. Furthermore, we will focus on leader legitimacy to analyse if one leadership set-up results in more legitimacy than another.

Interdisciplinary cooperation

To analyse interdisciplinary cooperation we interviewed nurses and physicians from all three departments concerning the two categories mentioned by Gittell (2012) common goals, knowledge and respect and 2) good communication, meaning frequent, timely and precise communication.

Hospital 1

At Hospital 1, we spoke with staff reporting to Team 2 and staff reporting to Team 3. The physicians on the ward reported to Teams 2 and 3. Staff explained that there was good cooperation between nurses and physicians and all other professional groups. The staff all mentioned that they had good communication with others and trusted their colleagues, who all tried to do their best but were under time pressure. As one nurse put it: ‘we cannot complain about the cooperation with the physicians. We know they are under a lot of pressure and they know we are under a lot of pressure. So there is some kind of implicit agreement that we all are doing our best.’ A physician said: ‘it is an interdisciplinary collaboration. And ahh, I cannot do without information from the nurse, because it contributes to the picture I need to have of the patient.’ The nurses reporting to Team 3 were most happy about their interdisciplinary cooperation, while the nurses reporting to Team 2 said that they had very good collaborations with the physicians, but it could be difficult because the physicians did not spend much time on the ward.

Our data indicate that there is good interdisciplinary cooperation in the department at Hospital 1, although it appeared to be better in the ward referring to Team 3.

Hospital 2

At Hospital 2, we spoke to staff referring to Team 2. Both nurses and physicians experienced good interdisciplinary cooperation, and they all spoke about good communication and good relations. The physicians also reported good cooperation with the nurses and said that: ‘...we use each other a lot....I
wouldn’t know what to do without the nurses.’ One physician explained: ‘... you will have to work closely together with someone to know what they are capable of. That is what we do... If you do not work closely together across professions if it is just because you refer to a dietitian then it is not interdisciplinary cooperation. I know the dietitian here and I know her profession and what she can handle. And I can say it would be good if you could see precisely this and this patient...’

Within the ward at Hospital 2 the nurses and physicians, and the other professions, appeared to have good cooperation; respecting each other, maintaining good communication and using the each other’s competencies.

Hospital 3

At Hospital 3, both nurses and physicians explained that they had good interdisciplinary cooperation. One nurse commented that the interdisciplinarity in this specific department was much better than at other departments she had worked in.

The physicians also generally reported good interdisciplinary cooperation, although one physician did not think it was that important to cooperate, as he did not have much use for the nurses — he stated that he could manage tasks himself: ‘I am not that demanding in my every day or in my cooperation with the nurses. It actually works quite well, we have a good climate in the department and a management who expects that we cooperate...sometimes you are a bit more independent and can handle the tasks yourself...’ That might be the case, but it is difficult to know if the task could have been managed better in a more cooperative manner with a nurse or other professional.

Therefore, we obtained a picture of a ward with much interdisciplinary cooperation, but cooperation that might not have reached all staff within the department. The ward at Hospital 3 was the only ward where some nurses and physicians talked about the physicians as having autonomy, and it was the only ward where the same physician leader had been in charge for many years. Whether these aspects influenced interdisciplinary cooperation is difficult to tell, but they stand out from the other departments. Hospital 3 is a large university hospital, and we cannot determine if the size of the ward, department and hospital has an influence on interdisciplinary cooperation.

However, we conclude that in the department at Hospital 3, the nurses and physicians had good cooperation and good communication, although this might not be as widespread as in the other two hospitals.

Our data indicate that the departments at all hospitals showed considerable interdisciplinary cooperation. At Hospital 3, the cooperation may be slightly less than at the two smaller hospitals, but we do not have adequate data to assess this definitively.

Legitimacy

Leader legitimacy was analysed based on interviews with staff from all three departments at the three hospitals.

Hospital 1

At Hospital 1, we got the impression that nurses and physicians from both wards would only use the leader from their own profession and they did not have much, if any, contact with the other leader. One physician explained: ‘I use the physician leader...I have not thought about contacting the nurse leader...’ Another physician said: ‘I do not use the nurse leader unless I have a question that professionally concerns the
leadership in health services

The nurses referring to Teams 2 and 3 did not perceive the physician leader as their leader. One nurse explained that she only had contact with the nurse leader ‘...the physician leader is a physician like all the other physicians. It is not because she [the physician leader] is my leader I do not see her as my leader because she is not my leader.’ The nurses referring to Team 3 met the physician leader every day as he was also a physician on the ward. However, they still did not see him as their leader and they did not contact him as a leader.

Team 1 was hardly mentioned by the respondents, and it seemed as though the staff had very little contact with the leaders of their department. However, one physician was frustrated that the physician leader of the department (Team 1) did not have any understanding of the work on the ward as he was trained in another clinical specialty.

At Hospital 1, the data indicate that each leader had legitimacy only from their own profession. Both professions knew they officially had a second leader, but they did not use the second leader and they did not perceive him or her as their leader. At the department level our data show that clinical specialty can counteract legitimacy, so that a physician might not have legitimacy in the group of physicians if he or she is from another clinical specialty.

Hospital 2

At Hospital 2, the nurses referred to the nurse leader and the physicians to the physician leader. We found there was general frustration among the staff — both nurses and physicians — because the head of the department and one of the deputies in Team 1 was from another clinical specialty and the staff explained that these leaders did not understand the workflow, culture and priorities of the ward. The physicians said: ‘...everything that we need to decide passes through leaders from another clinical specialty...we work in different ways that they do not have an understanding of...’

Both the leader of the nurses and the leader of the physicians in Team 2 had been away from the job for long periods due to illness. When the interview with the nurses took place they still did not have their new nurse leader and they were very frustrated and felt that they needed a leader close by. The physicians were happy to have a new physician leader even though she was caught up in meetings.

At Hospital 2 it seemed that the leaders of Team 2 had legitimacy while the leaders of Team 1 did not because they did not have an understanding of the clinical specialty of the ward.

Hospital 3

At Hospital 3, the nurses from both wards were very happy with their leaders on the ward, and also with the nurse leader of the department. One nurse explained: ‘...[the nurse leader of the ward] is a model for how we talk together and that we have respectful communication...she is always available and she is visible...Practically, she is wearing a uniform like the rest of us and she starts in the morning at the same time as us.’ The nurses did not perceive the physician leader of Team 3 as a leader. They said: ‘she is chief physician, she has a clinical specialty...that is what she spends all her time doing...The physicians at this ward are being lead very autonomously...’

One physician explained: ‘...[the physician leader of the department] has one day a week in ambulatory care...so he still has some clinical work...and not because it is needed to be respected, but it is often the case that some of the colleagues you hear, that if they do not have clinical work they lose their understanding of clinical practice...’ On the question of whether it was important to work ‘hands on’, the physician answered: ‘at least that is the case in the medical profession that to maintain the respect from

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colleagues but also to have knowledge of what is going on, you have to have been a part of the clinical work.’

According to the interviews, the leaders at Hospital 3 had legitimacy. The nurses might not respect the physician leader as a leader, but as she was not the leader of the nurses, she did not need legitimacy from that group.

We found that leader legitimacy can be divided in two areas: profession and specialty. At Hospital 2 both the nurses and physicians were frustrated that two of their leaders of the department, a nurse and a physician respectively, were from another specialty. This was also mentioned at Hospital 1 even though it did not gain much attention.

At Hospital 1, where the staff formally had two leaders, they only used the leader from their own profession, and they did not see the other leader as their leader. At Hospital 3, it was very important that the physicians were led by a physician and that he was still a part of the clinical work. The nurses expressed the opinion that the nurse leader wore a uniform and worked at the same time as the nurses, which was how she also showed that she was connected to the nurse group.

We found that not all leaders had legitimacy but some were compelled to lead by formal authority. By using these terms, we can map the follower approach from each ward as shown in Figure 2:

Figure 2: The leader-follower approach

As Figure 2 shows, the leaders had legitimacy in their own professional groups. At Hospital 1 and within Team 2, one physician leader did not have as much legitimacy as the others because a third and more experienced leader was used instead.

When examining leadership across professions, we saw a different picture. At Hospital 1, where the leaders were required to lead across professions, they did not have legitimacy from the staff in the other professional group, which means that that leader would have to lead by authority, based on the role assigned to them by their superiors.

At Hospital 2, we found that the leaders had legitimacy in the staff group within their own professional group. We did not see much contact from nurses to the physician leader or from physicians to the nurse leader. This was however expected, as the leaders did not have responsibility for both professions.

At Hospital 3 we found that the leaders of Team 2 had legitimacy. However, the physician leader’s legitimacy is shown by a dotted line in Figure 2 as the physicians were supposed to refer to the leader of Team 1, as he had the staff responsibility. Even though they did not have leadership responsibility across both professions it seemed like there was an acknowledgement of the other leader, which is why this perception is indicated as dotted line for legitimacy. The leaders in this team met many times during the day, and the staff would also meet both of them many times during the day. In that regard, the team leaders and staff seemed very tightly knit. In Team 3, the leaders had legitimacy within their own professional group. Again, a dotted line marks the physician leader’s legitimacy as the staff responsibility was placed within Team 1. In this team there was not much contact between one staff group and the other leader, and the leaders were not expected to lead across staff groups.

The differences in legitimacy accorded by the staff to their leaders show us that legitimacy cannot be taken for granted. A precondition to dual leadership, which is practised at Hospital 1 at all levels and at the
departmental level at Hospital 3, is that both leaders have legitimacy from both professional groups. We
found that this legitimacy can vary: sometimes it does not exist, and therefore dual leadership is not
achieved. Our data show us that the intention of having dual leadership, where the leaders have a shared
responsibility and staff refer to both leaders does not work when staff do not accord legitimacy to both
leaders.

Discussion
In the literature, pooled leadership at the top is proposed to have a positive influence on outcomes and
legitimacy. This article has analysed whether there is any relationship between the leadership set-up and
interdisciplinary cooperation and leader legitimacy in the ward.

We found that the leader teams in the three cases we studied were organised differently and also acted
and cooperated differently. We did not find a relationship between interdisciplinary cooperation and the
leader set-up or the behaviour of the leader team. It appears that interdisciplinary cooperation is driven by
other aspects, such as a wish to help patients. We are aware that in more wards, staff explained that in
general, interdisciplinary cooperation was very good within that clinical specialty. As we investigated the
same specialty in all departments, and all departments showed good interdisciplinary cooperation, it would
be interesting to study if the degree of cooperation is related to clinical specialty.

In terms of leader legitimacy, we found differences from hospital to hospital. At Hospital 1, where staff
were supposed to report to two leaders — a physician and a nurse — it did not work that way. Staff would
only refer to the leader from their own profession. This may be because the leader set-up was still new and
the staff were not used to talking to a leader from another profession, or it might be because it is difficult
to gain legitimacy from another profession, or perhaps the leaders did not have any intention to lead across
professions; we do not know. However, we found that the dual leadership set-up was not working in the
way it was supposed to, and that the leaders need to have legitimacy in both groups of staff if dual
leadership is to be achieved.

At the hospitals where staff were only reporting to one leader from their own profession, the leaders had
legitimacy. Furthermore, we found that clinical specialty can influence whether a leader has legitimacy. In
one ward, the leaders in Leader Team 1 did not have legitimacy because they were from another specialty.
Staff in that ward felt that their leaders had no understanding of the workflow and procedures of the ward.
In some cases where the leaders did not have legitimacy, staff would only refer to the other leader, which
was accepted by the leaders. However, at Hospital 2 it was not possible to refer to another leader and the
lack of leader legitimacy lead to frustration in the staff group.

We found that legitimacy is an important factor in how leader teams can expand their leadership.

Limitations of the research
As hospitals are complex organisations, many factors will influence the performance of a department. Here,
the focus has only been on the leadership set-up. Other factors, such as budget, staff skills and culture,
among others, are of course important and can influence the achievements of a department.

Furthermore, leader teams are described using a categorisation tool developed to categorise dual
leadership set-ups. In this study not all set-ups can be categorised as pure dual leadership, and therefore
other aspects, such as leader education, time available to focus on leadership tasks and relationship to
superiors might be important for how the leader teams work.
This study is based on qualitative data from one department at three hospitals. As we only have one department from each hospital, the data are not generalisable to the rest of the hospital. We only have a picture of how the situation is perceived by staff and leaders at the time the interviews were held. It would be interesting to see if the same picture was evident at the other departments in each hospital, and if the situations have changed over time and the leadership set-ups work in a different way now compared to at the time of this study.

Conclusion

In terms of interdisciplinary cooperation, we found that all departments had good cooperation between staff members, and that staff respected each other, communicated well and shared the same goal of helping their patients. We did not find a connection between leader set-up and interdisciplinary cooperation. This study does not support the assumption that leader set-up is a primary tool to achieve interdisciplinary cooperation, and therefore cannot recommend one set-up over another. However, it is interesting to consider which other factors may influence interdisciplinary cooperation. Since our interviews showed that clinical specialty might influence interdisciplinary cooperation, we propose that future research should examine if clinical specialty has an impact on interdisciplinary cooperation.

We did find a relationship between leader set-up and leader legitimacy, and the data showed that where staff were only reporting to one leader from their own profession the leader had legitimacy, but where staff were reporting to two leaders from two professions, only the leader from their own profession had legitimacy. This is important knowledge for leaders and CEOs in the health care sector as it shows that they cannot take legitimacy for granted. If CEOs want leaders to lead across professions, they will have to focus on developing leader legitimacy across professions.

Furthermore, we found that clinical specialty also can be an important factor in legitimacy, and in the two departments where the physicians were from another specialty, the leader’s legitimacy was challenged. Therefore, another recommendation for decision-makers in the healthcare sector is that clinical specialty can influence leader legitimacy, and CEOs therefore should also focus on leader legitimacy when they choose leaders to lead staff from clinical specialties other than their own.

We have found that that legitimacy can be difficult to establish and that it cannot be taken for granted. Therefore, it would also be useful to look more closely at how to achieve legitimacy in cases where the leader is from a different profession or clinical specialty to that of the staff.


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Figure 1: Forms of leadership at the departmental level of three Danish hospitals
Figure 2: The leader-follower approach
Table 1. Interviews with leaders at the ward level

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<td>leaders of ward</td>
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Table 2. Interviews with staff

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Table 3. Leadership teams at the ward level at all three hospitals

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<tr>
<td></td>
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<td>Team 3</td>
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<td>Equal leader experience</td>
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<td>Interchangeable assignments</td>
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<td>Good human material</td>
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<td>Trust and good communication</td>
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<td>Agreeing on decision process</td>
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? means that we either do not know or that it is not possible to answer yes or no to the question.
Appendix 4

Study 3
Staff acting resiliently at two hospital wards

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Staff acting resiliently at two hospital wards

Background

The paper focuses on two hospital wards with leader teams consisting of a nurse and a physician. We refer to the wards as Hospital 1 and Hospital 2. On one ward, the leaders were in constant conflict and did not agree on decision processes (Hospital 1). On the other ward, both leaders had, in the last two years, been on leave for longer or shorter periods because of illness (Hospital 2) (1).

The aim of this study is to understand how staff at the two wards with challenged leader teams coped with everyday work, and whether the way in which staff managed the challenges was resilient.

Acting resiliently

Resilience is here understood as Hollnagel et al. have defined it in a healthcare context (2012): “…resilient health care can be defined as the ability of the health care system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required performance under both expected and unexpected conditions” (2).

Using this definition, we assume that “…systems work because people are able to adjust what they do to match the conditions or work.” (3). In acting resiliently, the system is able to: “…succeed under varying conditions, so that the number of intended and acceptable outcomes is as high as possible.” (2)
Methodology

Within the resilience perspective, we have looked at different themes that, in the literature, are all connected to resilience and are seen as preconditions for an organisation to act resiliently.

Staff at the two wards were interviewed using semi-structured interviews (4). At Hospital 1, we conducted individual interviews lasting from 20 to 30 minutes with both nurses and physicians. The intention was to conduct focus group interviews, but it was not possible for the ward to cope effectively with so many staff absent at one time. At Hospital 2, we conducted focus group interviews with nurses in one group and physicians in another. The interviews lasted for one hour.

The interviews were originally conducted for another purpose, focusing on how staff cooperated across professions. The interviews did not have any direct questions according to the themes that we address in this article. However, we do think the data can be used in this context as the interviews contain information about these themes.

During repeated readings of each interview, we started mapping the interviews in themes while simultaneously studying the literature on these themes more intensively. After several back and forth iterations, we found the dominating themes that are described in detail in the following pages.

The hospitals

Both hospitals are small, with 300-400 beds. They both reorganised their department structure and leader set-up 1-2 years before the interviews took place. At Hospital 1, the leadership of the ward consisted of a nurse and a physician who were jointly
accountable for the results at the ward, while, at Hospital 2, the leadership of the ward consisted of a nurse who was leader of the nurses and a physician who led the physicians.

Analysis

Sensemaking and role structure

According to Weick (1993), sensemaking and role structure are pivotal in order for an individual to be able to act resiliently, and organisational structure can rebuild the sense and provide meaning and order when they are faced with large and contradictory demands.

Hospital 1

Analysing the interview data from staff at the ward at Hospital 1, we found that the structure of work was maintained and staff knew what to do in the absence of their leaders. One physician from the ward having leaders in conflict explained: “I think [the leaders act] …unprofessionally and it creates disturbance… you just need that they [the leaders] are united. And then I think, that this causes that you sometimes do what you think yourself… Then you might as well do what you feel is the best way. So, in some way, it gives me a free space.” In this case, the physician still knows her own role and is good at improvising. However, another physician explains that, because of the leader conflict, critical elements are not being aligned, which sometimes impedes the work. Accordingly, improvising might not always be a possibility.

The ability to deal with a crisis situation depends on the structures that have been developed beforehand (5). In this case, both the physicians and nurses knew their job, they knew the structure of the hospital and the division of labour, so they could keep on
doing what they did even though the leaders were challenged. A nurse explained that:

“...[my leader] doesn’t know anything about patientcare... she can’t follow... instead, I use my colleagues.”

The daily working structures at the ward were well established, and, for this reason, physicians and nurses seemed independent of daily leadership and could act independently, by improvising or using colleagues for dialogue and coaching. Therefore, we argue that the ward had a structure and experienced colleagues who knew how to respond to the everyday tasks without their leaders.

Hospital 2

At Hospital 2, the staff did not value the organisational change which they had gone through. The staff could not make any sense of the organisational changes and their new role. The physicians explained: “...earlier we... well as senior physicians, we were a part of the management of the department at that time, that is, we were close to the decisions and we were part of the decisions... Now everything has been taken to another level [in the organisation] and we are still here and the problem is we have no idea of where we are going...” Furthermore, one physician noted that: “...we work very interdisciplinary and we are one of the wards in the country that work most interdisciplinary. And then it is very hard when you get a team of leaders from another specialty [that does not work in the same interdisciplinary manner]. It is very hard to explain to someone who doesn’t have the same mindset...”

Moreover, the nurses observed “...we feel that we are not noticed in the same way as we were before... there is much more frustration among the leaders and physicians... I think it is because it is no longer possible to make a decision on your own... the mid-
level leaders [the leaders of the nurses and physicians at the ward] are on long-term sick leave because of stress.”

Neither the nurses nor physicians could find the contextual rationality in the new organisational structure. In particular, the influence of physicians and leaders had changed alongside the structure, which had seemingly caused more sick leave and frustration in the two groups. The nurses did not seem to be affected in the same way. However, the leaders and physicians had experienced a change in their roles and their influence in the department, which was unfamiliar to them and did not make sense to them.

Stable organisations can fall apart if people are put into unfamiliar roles, some key roles are unfilled, the task is ambiguous, and the role system is discredited (6). We are only looking at the wards in a short-term view, and the way in which the staff talked about frustrations and sick leave led us to wonder if things would look different in a long-term perspective. We did observe people in unfamiliar roles and key roles being unfilled because of sick leave. Whether the task was ambiguous cannot be conclusively determined from the data. While the physicians explained that they did not know where they were going, at the same time, as is shown on the following pages, they had good cooperation with colleagues and managed their everyday job. Therefore, we find that it is on a strategic level that the physicians were confused and did not know the direction.

Informal leadership redundancy

Informal leadership redundancy is when “Slack informal leadership resources are utilized to contain disruptive events” (7). This can be slack in resources such as time, money and personnel. Furthermore, this can be slack in control, meaning the individual
freedom to act within the frames of the organisation, and there can be conceptual slack, which makes room for divergent perspectives in the organisation (8). Slack can be planned by the organisation or it can be opportunistic, which means that it arises in informal initiatives (9). However, in this instance, we are looking at informal slack that has not been planned by the organisation.

According to the two wards, none of them showed any signs of resource slack, but rather quite the opposite. Nevertheless, we found signs of control slack and conceptual slack.

However, because the interviews did not focus on the control aspect, we do not have much data showing if the nurses and physicians felt they were limited by the guidelines, structures, etc., of the ward, or if they felt they had the freedom to act.

Hospital 1

Looking at conceptual slack – having room for divergent perspectives in the organisation, our data indicate that the staff were good at cooperating and listening to each other’s observations and arguments. One physician stated: “We all individually contribute so that we can get on with the treatment. I would not be able to do so without the information from the nurses because it contributes to the picture I need to have of the patient.” Another physician observed that, when they are on call, it is the nurses who receive the patients and that: “...we have a lot of conversation about what kind of patient has arrived, then I see the patient and then it might be that we keep the patient for a couple of hours to make observations. And I depend on the observations the nurse makes.” A nurse explained that they had become better at cooperating and: “...we
depend on each other’s help because everybody is so pressed as they are... we cannot
do without each other...”

We see dialogue with colleagues and listening to observations as being an indicator for
staff using the competencies of each other. This provides us with a picture of the ward
having aspects of informal leadership redundancy and conceptual slack.

Hospital 2

At Hospital 2, the physicians explained, “...we have some nurses that are incredibly
good at working unassisted, which means that I can leave some patients to the
nurses... we use each other a lot... I would not know what to do without the nurses.” We
obtain the same picture from the nurse group, as they described: “We have a lot of
contact to the physicians... we can use the physicians if we need to discuss a patient or
treatment... We have a very equal relationship to the physicians and we cooperate on
equal terms when we are at the consultation...”

Again, our data indicate that the staff cooperate and listen to each other’s arguments and
use the competencies and resources of each other. As with Hospital 1, we see this as
signs of conceptual slack at Hospital 2.

At Hospital 2, we also found data related to control slack. The physicians explained
that, earlier, they were used to planning their own schedules but now their department
leaders would interfere in the planning – which the physicians were dissatisfied about.
The nurses explained that the chain of command had become significantly longer:
“...things like buying [equipment for the treatments] well, we did that on our own and
we just agreed with the physicians and then we ordered ourselves. Today, some kind of
economist or whatever he is [orders the equipment]...”
Our data indicate some control slack that is not being used or recognised, which frustrates the staff.

One nurse explained that the physicians had experienced a hard time because of the absence in their leader team as the physicians were competing to be the new informal leader. For informal redundancy to work “...three conditions must be met: individuals must be available to act, willing to act, and their actions must be accepted by others.” (7). According to the nurses at Hospital 2, the physicians were all willing to act but their actions were not accepted by their colleagues, which created disturbance in the staff group.

Another nurse divulged that the nurse leader had been sick for a period and now they had been given a new leader who could manage the task even though “…she has also been in a situation where no one is called in [on extra duty] and there are too many patients compared to the amount of staff, and she says you will have to manage this on your own. I will throw up if I have to manage it... and those who were left back, well what are we supposed to do?” In this situation, leadership redundancy and control slack might have helped the nurse leader, but it was not to be found at the moment. Furthermore, it seems as though resource slack could have been of help, albeit we have not received extensive data concerning resource slack.

Our data show that there was conceptual slack and informal leadership redundancy at Hospital 2. We also found indications for control slack, but this was not recognised or used by the management or it was not accepted by colleagues. Finally, control slack was requested by the nurse leader, but was not available at the present time.

**Prosocial motivation**
Mindful organising is a way of being able to adapt to unexpected events and to correct errors, which we understand as being able to act resiliently. By mindful, is meant “...when people act, they are aware of context, of ways in which details differ..., and of deviations from their expectations”(10). Prosocial motivation is an important factor for an organisation to be mindful. When people act prosocially they are other-oriented, “...meaning that they are motivated to work for the benefit of others and are more receptive to others perspectives and incorporate those perspectives into their work” (11). In acting prosocially, a person sees his or her action as a contribution to the system independent of personal interest (11).

Hospital 1

As explained earlier, we found that staff at Hospital 1 would listen to each other’s arguments and use the competencies of the each other. Furthermore, one nurse explained: “we all want it to work. We are here for the sake of the patient, so it is important that it works in the best possible way.” In addition, a physician explained that: “I feel that it is a mutual goal [the patient treatment and care]. I think the nurses take responsibility for the patients as much as we do...we are a team of physicians and nurses who manage it...”

Hospital 2

At Hospital 2, our data also indicate staff that listen to each other and incorporate the perspectives of others in their work. A physician furthermore explained: “...we know each other well and know where everybody is, we are easy to get a hold of...” Later on, she explained that they were really good at working interdisciplinarily and said “...I know the dietitian here and I know what she can do, so I can tell precisely that it would
be good if she could attend this and this patient. And I can talk to ...[other professions] and say, I have this and this problem and the patient is like this and this... that is interdisciplinary cooperation...” Moreover, a nurse claimed that “...we feel some kind of responsibility for, I think, that it will work [the treatment and care of the patients]. Yes it is some kind of ownership or something..., so we take care of it... we have a really good interdisciplinary cooperation with physicians, physiotherapists, dietitians and so and... It works really well... we have a task in helping the new physicians who arrive every half year. I think we have a very important role in helping them...”

At both wards, staff show prosocial motivation and work for the benefit of others and the patients.

Emotional ties

Weick (1993) suggests that the “...development of emotional ties keeps panic under control in the face of obstacles. Close ties permit clearer thinking.” Weick also argues that, if formal structures collapse, social ties are what is left to rely upon. In establishing and maintaining social ties, trust, honesty and self-respect must be present in the relation (6). We do not see hospitals as threatening environments creating panic; however, we do argue that the formal structures at the two wards did not work the way in which they were intended, and social ties might have contributed to the staff being able to do their job.

Hospital 1

The interviews indicate that the staff had developed emotional ties. A nurse explained that it was important to know each other: “For me, personally, it means something that I know... what I can say so that they know it is important... And also I feel they listen...”
Another nurse stated that she found the personal relationships important and that colleagues know about each other’s lives: “...we briefly talk about it [private life] over lunch and it means that he is a person to me and I am a person to him... And we get to know each other so that if I come to him having red cheeks and stiff eyes, and I say there is a... [patient] at ward 2 I want you to look at, then he knows it has to be now...”

A physician stated that “... I really think we have a good relationship... and I try when it is possible to have lunch [together with the nurses and the other colleagues]...”

Hospital 2

At Hospital 2, the staff also found that knowing each other was important. The physicians explained: “...if you do not know the others there will be a lot of misunderstandings. It is much easier to call someone and ask if they can manage a patient when you know them that is not easy when they are totally strangers...”

Moreover, the nurses explained “... we have to cooperate so that the physicians get the information they need... I think it also has to do with that we are a small unit and we need each other...we also have good social relationships with the physicians but that might also be because we are a small unit...”

The data indicate good social relationships among staff at both hospitals.

Self-organising and advice-seeking

Laloux (2015) has found that, internationally and in different industries and public organisations, some organisations achieve very good results based on self-organising. One of these is a Dutch homecare organisation, where self-organising has led to less need of nursing per patient, faster recovery, and one third of all acute admissions to the hospital being avoided (Laloux 2015 p. 90).
We argue that self-organising might provide greater opportunities for staff to act resiliently because they are closer to reality and because decisions are made where work is done. In such cases, there is little or no divergence between work as done and work as imagined (12). Not having to consult a leader also makes it easier to make adjustments that fit changes in the environment. Self-organising staff are able to seek advice from affected colleagues and those with expertise and make the decisions themselves rather than have them made by a leader (13). The two wards we looked at were not formally self-organised, but our data indicate that at some points staff did work as if they were self-organised.

Hospital 1

At Hospital 1, a physician explained that, instead of waiting for guidance from a leader, she would make the decisions herself and that both nurses and physicians took responsibility because everybody had to contribute. A nurse explained that she would not use the nurse leader for advice, instead she would ask her colleagues. Another nurse explained that all staff worked for the sake of the patient and all staff were good at cooperating.

Hospital 2

At Hospital 2, staff would cooperate and discuss the patients with each other. A nurse explained that they had a very equal relationship with the physicians and would cooperate on equal terms. At Hospital 2, staff felt that some of their autonomy had been removed and that in some areas it was no longer possible to make decisions independently, which led to frustration.
At both wards, the staff were good at cooperating and seeking advice from each other. Furthermore, our data from Hospital 2 indicate a wish for self-organising as the staff became frustrated when the possibility for making their own decisions was removed.

**Discussion**

We have analysed how staff at the two wards coped with the everyday work having leaders that were challenged, and if staff were able to manage the work in a resilient way. Table 1 shows what we have found within the different themes.
Table 1 Themes in the study

As Table 1 shows, all themes were present on the two wards. We found that sensemaking is an important aspect of coping with new structures and the loss of sense might explain why staff at Hospital 2 were frustrated and might not be able to keep up the good work in the long term.

We found that staff on both wards were acting resiliently, which might be explained by their motivation to benefit others. Our data indicate that staff were very much aware of the patients and were motivated by doing a good job nursing and treating the patients. According to the staff, it was only possible to do a good job by cooperating and listening to the arguments and observations of each other. Therefore, we find that being motivated to the benefit of others could explain how staff could act resiliently under the described circumstances.

Furthermore, we found that there were emotional ties in the staff groups at both wards. According to the staff, knowing each other made it easier to cooperate and respect each other. From this perspective, emotional ties strengthened the ability to be other oriented and work for the benefit of others.

Frustration is an aspect that distinguishes the wards from each other, as we mostly found frustration at Hospital 2. Not being able to make sense led to frustration. The frustration might indicate that staff at Hospital 2 were not able to continue in the way they did, and therefore it might also be an important indicator of how long it is possible to act resiliently and that sensemaking is important for acting resiliently.
Conclusion

We found that staff at both wards were handling the everyday work in a resilient way given the challenges their leaders encountered. Staff on both wards had a role structure they knew and could fit into, they were using informal leadership redundancy, and they cooperated to help each other getting the task done. At both wards, staff were able to self-organise. Having strong emotional ties at both wards might have strengthened the cooperation, self-organising and informal leadership redundancy.

Staff at Hospital 2 could not make any sense of decisions made on the strategic level and they experienced a loss of autonomy and possibility to self-organise which frustrated them.

We found that staff at both wards managed their everyday work by cooperating and seeking advice from their colleagues. Even though the leader teams were challenged, the established role structures for the everyday work made it possible for staff to carry on. We found that staff at both wards acted responsibly to ensure the completion of their work and to help each other.

The results showed that strong emotional ties are important for staff to be able to act resiliently as it strengthens the possibilities for cooperation, self-organising and informal leadership redundancy that are all aspects of acting resiliently.

Therefore, in order to increase the resilience in an organisation, leaders and CEOs should prioritise to establish strong emotional ties in their staff groups, and, at the same time, ensure role structures that make sense in their everyday work. Finally, leaders and CEOs should be aware that decisions on a strategic level also have to make sense in everyday work.
References

Table 1 Themes in the study

<table>
<thead>
<tr>
<th>Theme</th>
<th>The study shows</th>
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<tbody>
<tr>
<td><strong>Sensemaking and role structure</strong></td>
<td>Staff were able to make sense of their everyday work and the role structure in this work. In some situations staff were also able to compensate for missing leader decisions. Staff were handling the everyday tasks within the known role structure that in the everyday work made good sense to them and gave them a possibility to carry on the work despite their leaders being on sick leave.</td>
</tr>
<tr>
<td><strong>Self-organising</strong></td>
<td>Staff were able to self-organise and to help each other in getting the task done. Eventhough staff staff handled their job, not all were happy to self-organise. Staff were able to self-organise and to help each other in getting the task done. Physicians were frustrated because they did not find any sense in the role structure of decisions and in the new way of organising the ward and leaders. Staff had a wish to self-organise and became frustrated when that possibility was limited.</td>
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<tr>
<td><strong>Informal leadership redundancy</strong></td>
<td>We found conceptual slack at the ward and staff would listen to each others arguments and cooperate. We found conceptual slack at the ward and staff would listen to each other's arguments and cooperate. We found indications on control slack that either was not used or was not accepted which led to frustration.</td>
</tr>
<tr>
<td><strong>Prosocial motivation</strong></td>
<td>Staff were very much aware of the patients and were motivated by doing a good job nursing and treating the patients. Staff were very much aware of the patients and were motivated by doing a good job nursing and treating the patients.</td>
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<tr>
<td><strong>Emotional ties</strong></td>
<td>We found emotional ties in the staff group and staff had a desire to know each other, as it made it easier to cooperate and respect each other. We found emotional ties in the staff group and staff had a desire to know each other, as it made it easier to cooperate and respect each other.</td>
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