Overview of new PhDs in the Nordic Countries

Title: Self-administration of medication during hospitalisation - Patient involvement, medication errors and health economics

Candidate: Charlotte Arp Sørensen

University: Faculty of Health, Aarhus University, Denmark

Abstract: The aim of this Ph.D. thesis was to investigate whether patient involvement in medication management during hospitalisation affects the number of dispensing errors, participants’ perceptions regarding medication and participant satisfaction, and whether self-administration of medication (SAM) offers health economic advantages.

Study 1 was a feasibility and pilot study about methodological, procedural and clinical uncertainties concerning the intervention and study design. This study showed that it was feasible to perform a pragmatic randomised controlled trial (RCT) on SAM’s effects. Only minor adjustments to the intervention, exclusion criteria, recruitment procedure and outcome measures, including time measurements, were needed. Recruitment was considered satisfactory, outcome-measurement methods worked as expected and the intervention was well-accepted among patients.

In Study 2, we performed a pragmatic RCT that investigated whether SAM during hospitalisation affected the number of dispensing errors and participants’ perceptions regarding medication and satisfaction. Modified disguised observation was used to observe nurses and participants when they dispensed medication. The Beliefs about Medicines Questionnaire was used to explore participants’ perceptions regarding medication. Altogether, 250 participants were recruited, and just over 1,000 opportunities for errors were observed in each study group. The study found statistically significantly fewer dispensing errors in the self-administering group; thus, letting patients self-administer their medication during hospitalisation did not compromise safety related to medication dispensing. At follow-up, participants from the intervention group perceived fewer concerns about their medication, generally found medication to be less harmful and were more satisfied with the way they received medication during hospitalisation compared with the control group. Also at follow-up, fewer deviations existed in the medication list in the intervention group compared with that of the control group.

In Study 3, we performed a cost-consequence analysis of SAM. We performed a cost analysis at micro-costing level using a hospital perspective with a short-term incremental costing approach. Resource use and cost data were collected alongside the RCT study, including a study of nursing time used on dispensing, administration, SAM start-up and discharge preparation. Results from the RCT study and information on the number of readmissions and general practitioner contacts within 30 days after discharge were selected as consequences. The cost analysis showed, on average, a lower total cost per participant in the intervention group compared with that of the control group. As SAM favoured the intervention group with respect to most outcomes, the intervention was suggested to be cost-effective.

Based on these studies, SAM during hospitalisation seems promising. Implementation of SAM as clinical practice among capable patients may be relevant for some departments. Possible further research could include SAM as part of discharge
planning, nurse competencies for self-management support, SAM’s long-term effects and a health economic evaluation from a healthcare sector perspective.

Title: Economic evaluation, screening for prostate cancer, and ‘value for money’?
Candidate: Neill Booth
University: Faculty of Social Sciences, University of Tampere, Finland

Abstract:
Health-economic evaluation, or simply ‘economic evaluation’, has now been applied to healthcare for over 50 years, sometimes to good effect, sometimes for ill. This Ph.D. thesis seeks to give an understanding of what ‘economic evaluation’ can offer decision-makers, but also sets out to acknowledge its problems and pitfalls. In addition, it applies one data-driven approach to economic evaluation, utilising records available from the Finnish Randomised Study of Screening for Prostate Cancer (FinRSPC) after 20 years of follow-up. Started in 1996, the FinRSPC is a pragmatic population-based study investigating invitation to prostate-specific antigen (PSA) -testing as a basis for mass screening to detect prostate cancer, and includes investigation of some of the effects and healthcare costs for men in the trial.

One main finding from this study is that the language and terminology surrounding economic evaluation is often ambiguous and it often oversells what research can credibly offer. A second main finding is that the data-driven approach to economic evaluation used here revealed some of the major uncertainties surrounding the evaluation of the impacts of prostate-cancer mass screening. Due to major challenges in conducting successful evaluative trials on this topic, there should be humility about our ability to adequately evaluate prostate-cancer screening using health-economic evaluation.

This thesis provides a rationale for assessing the qualities of all economic evaluations: their credibility should always be checked. Such quality assessment should look carefully at the uncertainties surrounding the evidence base relating to ‘costs’, ‘effectiveness’ and ‘cost-effectiveness’, including any medico-industrial influence. Every stakeholder should bear responsibility for appropriate interpretation of the available evidence, given that interventions may have consequences which are complicated, complex, or are simply not amenable to quantification or robust evaluation. Health-economic evaluation does not always provide ‘value for money’ in practice, it typically produces only partial and incomplete analysis. Judging the appropriateness of the information from economic evaluation to any policy question should be approached with humility about what is, or can be, known with any certainty about the ‘costs’ or ‘effectiveness’ of any intervention.

This thesis concludes with three propositions. Firstly, that economic evaluation should continue almost unchanged, with an important exception being that the current overselling of economic evaluation, both in principle and in practice, should be discouraged. Secondly, attempts to improve the estimation of the likely costs and effects of interventions should continue, but with increased humility about the extent to which costs and effects can, in the foreseeable future, ever be ‘measured’ or estimated in a comprehensive manner. Finally, and perhaps most importantly, given that economic evaluation may easily neglect many important impacts of an intervention such as prostate-cancer screening, those wishing to use information from economic evaluations should always engage in thorough critical assessment of its qualities.
Title: Nutritional status in a functional perspective. A study in a cohort of older people in home health care

Candidate: Stina Engelheart
University: Department of medical science, Örebro university, Sweden

Abstract:
High age is a risk factor for most acute and chronic diseases, injuries and function disabilities, and hence, an important risk factor for nutritional problems. A great deal of elderly health care in Sweden are performed in the patient’s home environment and home health care has been transformed to more advanced medical care the last decades. The aim of this thesis was to comprehensively describe the nutritional status and its change over time in a population of older people receiving home health care. The aim includes to propose a framework for investigating and analysing the nutritional status in older people. Nutritional status was studied at enrolment in home health care and regularly followed up for three years. Patients that were 65 years or older and needed home health care for at least three months between 2012 and 2017 were asked to join the study, resulting in 69 participants (64% women). Data collection and analysis of the nutritional status was based on the proposed model for assessing the nutritional status in a comprehensive functional perspective (paper 1). The model comprises four domains that affect the nutritional status and functional outcome in a bidirectional way. In paper 2 we concluded that malnutrition, sarcopenia, frailty and dehydration are highly prevalent in the population and the most important indicators were loss of appetite and dehydration. This was confirmed in paper 3, where nutritional status was analysed with a statistical approach. A total of 103 indicators of nutritional status were reduced to 19 that were suggested to be primary investigated. Also, the paper empirically confirmed the relationship within as well as between the domains suggested in paper 1. Finally, we studied meal pattern, being a part of one of the domains (paper 4). We found indications that presence of at least one large meal (high energy intake) per day had more impact on the total daily energy and protein intake than more eating occasions during the day.

Title: Promises and pitfalls of value-based reimbursement in healthcare: A mixed method health economic approach

Candidate: Thérèse Eriksson
University: Department of Health, Medicine and Caring Sciences (HMV), Linköping University, Sweden

Abstract:
Financial incentives can be an effective tool to influence behaviour in almost any context and healthcare is no exception. The healthcare market is, however complex, characterised by uncertainty, information asymmetry and multiple agency connections. Some argue that financial incentives increase efficient use of scarce resources, while others voice that it provides a hotbed for unintended and unethical behaviour. A well-functioning value-based reimbursement programme (VBRP) should facilitate alignment between financial incentives and professional values to secure both efficient and equitable healthcare. This thesis explores the promises and pitfalls of value-based reimbursement in the context of elective spine surgery in Region Stockholm, Sweden.
By using mixed methods, the thesis explores what incentives arise from introducing a value-based reimbursement programme and how these incentives affect the provision of healthcare services. Paper I examines the performance of healthcare providers on patient-reported outcome measures and potential effects on case mix regarding clinical and socio-economic factors. Paper II examines how a value-based reimbursement programme affects the cost of elective spine surgery to a third party payer. Paper III explores how the intended incentives of the reimbursement programme was perceived by healthcare providers. Paper IV explores the role of different professional groups in how the value-based reimbursement programme is institutionalised.

The results show that the VBRP had no effect on patient-reported outcome measures but decreased the mean cost per surgery. The removal of a production ceiling allowed healthcare providers to surgically treat more patients than was previously possible. The volume increased by 22 per cent, and the total cost increased by 11 percent. No indications of discrimination against sicker patients were found. A higher value was generated in elective spine surgery after the introduction of the VBRP. The idea of a VBRP was aligned with professional values. However, not all incentives were perceived as intended. The focus on minimising costs of post-discharge care was perceived to have a negative impact on quality aspects of physiotherapy and nursing.

Taken together, a well-designed VBRP has the potential to promote a holistic healthcare perspective through 1) the level to which healthcare providers are held accountable for healthcare provision that increase the willingness to collaborate across healthcare providers and medical disciplines, 2) a better overall picture of patients healthcare utilisation and 3) challenging the traditional structures and ideas within healthcare that quality foremost depends on the performance of physicians. However, there are also challenges that needs to be addressed, 1) functioning routines for communication and follow-up between healthcare providers and the regional health authority, 2) to get different professions within a traditional hierarchical organisation to cooperate on equal terms, and 3) to create IT systems that create transparency and an understanding of the reimbursement programme. Continuous communication between healthcare providers and the regional health authority is therefore crucial to make the incentives of the reimbursement programme meaningful.

Title:  Eliciting preferences for allocation of health care - Three empirical contributions
Candidate:  Lise Desireé Hansen
University:  Danish Centre for Health Economics, Department of Public Health, University of Southern Denmark, Denmark
Abstract:  Alongside maximisation of health gain equity is an important objective to consider in priority setting in publicly financed health care sectors (Costa-font & Cowell, 2019; Lane et al., 2017). The health economics literature describe equity as a multidimensional concept involving the act of measuring and judging inequalities related to the distribution of health care (Bobinac et al., 2012; Culyer, 2001; Lane et al., 2017; Williams & Cookson, 2000). In finding equitable health care distributions, decision makers must often handle inevitable trade-offs between maximisation of health gains and limiting inequalities (Olsen, 1997, Ahlert and Schwettmann, 2017). To guide decision makers on how to find equitable distributions of health care, a branch of the health economics literature applies stated preference (SP) experiments to elicit the public’s equity preferences for distributing
health care. Despite an increasing literature, there are still gaps to explore and issues that need clarification (Dolan et al. 2003, Gu et al. 2015, Lane et al. 2017, Costa-Font and Cowell, 2019; Shah et al. 2018).

Paper 1: This study examines the public’s distributional preferences for explicitly stated distributional objectives in the allocation of scarce health care resources to heterogeneous patient groups. Specifically, we consider the objectives of ensuring equal access (no priority), severity concern alongside limitation of inequality in health states, equality in health gains and maximisation of health gains. Results suggest that respondents are willing to prioritise resources to specific patient groups. The support for maximising total health gain over more equitable distributions depends greatly on the price of equity in terms of loss in total health gain.

Paper 2: Previous literature has mainly exclusively focused on inequality aversion, ignoring risk aversion as a separate motive for equal distributions of health care. This study compares the preferred allocation of health care when applying a split-sample stated preference experiment eliciting equity preferences in two contrasting settings. The aim of the experiment is to explore the extent to which risk aversion and inequality aversion are the underlying motives for preferring more equal distributions of health care. Results suggest that individuals’ risk preferences represent a stronger argument for distributing health care more equally than does inequality aversion.

Paper 3: Whether health gains for patients at end-of-life (EoL) should be given priority over other health gains, has been debated in many countries. Several stated preference studies have examined the public’s support for an EoL premium - so far with no clear evidence. This paper extends the literature by using a simple stated preference approach to examine both individual and social preferences for different types of health gains including health gains obtained at EoL.

Overall, we do not find support for an EoL premium using neither an individual nor a social perspective.

Title: Price sensitivity and regional variation in health care
Candidate: Naimi Johansson
University: Institute of medicine, University of Gothenburg, Sweden

Abstract:
Understanding the consequences of current health policy is important in order to design and develop a health care system suitable for future challenges. The purpose of this thesis is to bring evidence on the determinants of regional variation in health care and on individuals’ responsiveness to patient out-of-pocket prices in Sweden. The papers included in the thesis are longitudinal register based studies, using representative samples of the Swedish population, with data obtained from national and regional databases. The analyses are primarily based on econometric methods drawing on quasi-experimental approaches to estimate causal effects.

The results in Paper I show that regional level mortality and demographics explain a large part of regional variation in visits to specialists, but has limited association with regional variation in visits to primary care physicians. In Paper II, the results show that the relative effect of individual level characteristics outweighs the effect of region-specific characteristics as the drivers of regional variation in pharmaceutical expenditures. The findings in Paper III show that young adults are price sensitive and reduce their use of primary care services after the introduction of patient out-of-pocket prices, with especially
strong effects among low-income groups and women. In Paper IV, the findings show that older adults respond to an upcoming elimination of patient out-of-pocket prices by delaying primary care visits in the months before the policy change, but the results show no evidence of a persistent increase in primary care use after the out-of-pocket price elimination.

In conclusion, the findings show that the determinants of regional variation differ within the same health care system, which suggests that the specific institutional settings by type of care are key in understanding regional variation. Further, the results imply that policymakers need to consider heterogeneity and forward-looking behavior in individuals’ sensitivity to out-of-pocket prices when developing health care policy.

Title: Post robotic investment: Cost consequences and impact on length of stay for women with endometrial cancer
Candidate: Malene Korsholm
University: Research Unit of Gynecology and Obstetrics, Odense University Hospital in collaboration with Danish Centre for Health Economics (DaCHE), Department of Public Health, University of Southern Denmark. Department of Clinical Research, Faculty of Health Sciences, University of Southern Denmark, Denmark.

Abstract: The overall aim of this PhD thesis is to evaluate the costs and consequences of a nationwide introduction of robotic surgery in women with early-stage endometrial cancer. Paper I is a systematic review evaluating the methodological design employed in 32 studies of resource use and costs related to robotic surgery within gynecology.

The objectives of the study were:
- To evaluate different methodological choices that may influence the validity of the cost analyses related to robotic surgery in gynecology
- To assess if the reporting quality complied with the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) statement
- To evaluate if guiding principles and standards increasing transparency and quality of cost analyses.

Paper II and III were based on a quasi-experimental design including all women in Denmark who underwent surgery for early stage endometrial cancer during the years 2008 to 2015 starting from the year robotic surgery was introduced in Denmark.

The objectives of the studies were:
- To evaluate the long-term resource use and costs of introducing robotic surgery in Denmark using a societal perspective (paper II)
- To evaluate production loss due to sickness absence or earlier exit from the labour market after surgery (paper II)
- To isolate the costs associated with surgery by applying the Difference-in-Difference analytical strategy to evaluate the costs and resource use for each patient in a pre-treatment period of 12 months before and 12 months after the date of surgery. (paper II and III)
- To identify the long-term resource consequences of robotic surgery in the primary and secondary health care sector (paper II and III)
- To evaluate if the costs of robotic surgery in the short-run are reduced by beneficial long-term effects in obese women (paper III)
Findings: The introduction of robotic surgery in Denmark does not generate any long-term cost savings in women with early stage endometrial cancer. The additional costs of robotic surgery are primarily driven by the index surgery. The number of bed days related to the index surgery was reduced in the group exposed to robotic surgery but adjusting for time trends outweighed any difference between the group exposed to robotic surgery and those who were not. Obesity in women with early stage endometrial cancer reduces the additional costs of introducing robotic surgery in Denmark compared to normal- and overweighted women (non-obese group). Furthermore, obesity in women with endometrial cancer generates cost savings from primary sector one year following surgery. Hence from a long-term cost perspective, robotic surgery may be more beneficial among obese women.

Title: Essays on policy instruments and incentives in health care in Norway
Candidate: Anastasia Mokienko
University: Department of Health Management and Health Economics, Institute of Health and Society, Faculty of Medicine, University of Oslo, Norway

Abstract:
Equal access to quality health care services, efficient resource use and cost containment are Norway’s health care policy objectives. To reach these goals, policymakers use financial incentives and organizational structures. Efficient use of these policy instruments requires that policymakers understand how health care providers and users react to them. This thesis contributes to this knowledge.

The first two papers present research into financial incentives. In 2008, policymakers changed the reimbursement scheme for radiology providers to cut costs. Paper 1 examines how the change supplemented the general practitioner gatekeeping role. Paper 2 evaluates how the change affected the provision of radiology at the municipality level in different regions and centralities, depending on difference in travel time between private and public radiology providers. Paper 3 studies the organizational structure of the Norwegian regular general practitioner scheme where patients can change general practitioners twice a year. This paper identifies patterns in disenrollment among patients with chronic diseases. Such patterns could indicate otherwise unobserved care quality.

Paper 1 concludes that the payment system for specialist providers might serve as a rationing tool and supplement gatekeeping. Paper 2 indicates the reimbursement change contributed to reduced services for populations with only private providers nearby, patient reallocation from private to public providers, and a reduction in the difference between municipality centralities in their consumption pattern, but an increase in the difference between Regional Health Authorities. Paper 3 suggests that most patient groups tend to remain with general practitioners with a greater share of arthritis, asthma, and depression patients, which can indicate high quality care. The results are relevant for both researchers and policymakers interested in policy instrument development.

Title: Essays in Health Economics
Candidate: Mikko Nurminen
University: Department of Economics, University of Turku, Finland

Abstract:
My doctoral thesis studies efficiency in health care provision, with a dual focus on two themes. The first theme studies how the introduction of health information technology affects access to prescription drugs and coordination between providers. The second theme studies competition and mergers and acquisitions (M&As) in the private health care market.

The first essay considers how electronic prescribing (e-prescribing), a technology that is designed to make prescribing and renewal of prescriptions easier and to improve patient monitoring, impacts access to and use of prescription drugs in the Finnish primary health care. We study a class of essential prescription drugs used in the treatment of mental health conditions and insomnia, but which are also highly addictive. We find that e-prescribing increases the use of these prescription drugs in younger patients through the easier renewal of prescriptions. We do not find any improvement in health outcomes, but find a significant increase in prescription drug abuse diagnoses. Easier access without sufficient monitoring may facilitate the overuse of prescription drugs.

The second essay studies how e-prescribing affects coordination between providers and quality of prescribing in terms of harmfully interacting prescriptions. We find that e-prescribing decreases the probability of prescribing interacting prescriptions by 36 percent in rural municipalities, but not in urban municipalities. The decrease is largely explained by decreases in the probability in settings with different prescribers and unspecialized physicians. E-prescribing can enhance coordination, especially when multiple physicians are involved and physicians are less experienced.

The third essay studies the impacts of M&As on physician service markets in Finnish private health care. This essay considers how M&As affects competition between physicians through labor market outcomes, and how this translates to physician prices. We find that prices increase most for gynecologists, a physician group where switching costs and inertia are high. We find that local competition decreases among these physicians through job losses after M&As. This increases the market power of incumbent physicians in the acquired health care units. The essay shows that local competition has a meaningful impact on prices and that labor market outcomes can influence this competition.

The final essay studies how M&As affect diagnostic service prices in the Finnish private health care sector. I study separately three procedures: blood tests, X-rays, and MRIs. I find that M&As increase blood test prices significantly in the acquired health care units but do not meaningfully impact X-ray and MRI prices. I proceed to estimate a patient demand model, which reveals that prices have little impact on the choice of the provider of blood tests. Instead, the referring physician significantly influences the choice. Because of the low sensitivity to prices, firms may be able to increase their price-cost margins after M&As.

Title: The value of social investments: A health economic approach to evaluating parenting interventions
Candidate: Camilla Nystrand
University: Public Health and Caring Sciences, Uppsala University, Sweden.

Abstract: Child mental health problems are current welfare challenges and may be costly to the individual, the family and society at large. The problems may persist and result in adverse outcomes later in life, which also carries a large financial burden. Parenting interventions are effective strategies to prevent or reduce mental health problems in children and are
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potentially cost-effective and even cost-saving. This thesis sets out to fill the knowledge gaps regarding the social investment case for parenting interventions in Sweden. Study I evaluated five indicated parenting interventions compared to a waitlist control. Long-term projections of health-related quality-of-life and cost-offsets related to the reduction of externalising behaviour problems in children were made using an economic decision simulation model. Study II assessed the financial impact of the five parenting interventions, considering the child’s lifetime earnings. Study III assessed whether it was worth the extra spending to provide cognitive behavioural therapy for children, in addition to a parenting program, for the treatment of oppositional defiant disorder in children. A net benefit regression framework was employed to assess the willingness-to-pay needed for the intervention to become cost-effective. Study IV was a trial-based evaluation of a selective intervention delivered to Somali-born parents, valuing the health and economic impact on parents and children simultaneously, compared to a waitlist control. The evaluation merged impacts on parents and children to describe potential scenarios for cost-effectiveness. To provide an overview of the current evidence, Study V systematically reviewed the literature on the cost-effectiveness of parenting interventions, focusing on child outcomes. Results showed that the five indicated parenting interventions were highly cost-effective, and may yield substantial economic returns. Delivery of a parenting intervention in addition to an intervention for children yielded clinically relevant improvements but came at a cost exceeding estimates for the societal cost of children with oppositional defiant disorder. The delivery of a selective intervention generated significantly improved health outcomes, but cost-effectiveness depended on the willingness-to-pay, especially considering multiple effects concurrently. The systematic literature review suggested that parenting interventions were likely to be a cost-effective use of resources, particularly for the prevention of externalising and internalising problems. The findings suggest that parenting interventions may be a cost-effective approach for the prevention and treatment of child mental health problems, especially for externalising problems.

Title: Tracing the societal impact of variations in health: Three empirical contributions.

Candidate: Maiken Skovrider Aaskoven

University: Danish Centre for Health Economics (DaCHE), Department of Public Health, University of Southern Denmark, Denmark

Abstract:
Health is one of the most important dimensions of welfare. Variations in health will therefore have great societal implications. Adverse health events may impact the individual’s and others’ opportunities and outcomes in life such as education, labour market participation, and overall well-being. Personal characteristics and social circumstances influence individuals’ ability to invest in health, which may make a significant difference when faced with adverse health events. In order to improve societal welfare, there is a need for a better understanding of adverse health events, to what extent they may impact the welfare of the individual and others, and whether there is heterogeneity in ability to cope with such events. These are the aims of the PhD thesis.

To fulfil the aims of the thesis, I utilise available observational data which enables me to approach causal inference in the absence of exogenous shocks. I exploit three comprehensive datasets including both survey data and register data which enables me to overcome some of the shortcomings of the individual data sources. Combining the
versatility of the survey and the comprehensiveness of the registers generates highly enriched data which broadens the scope and quality of the research.

The thesis encompasses three empirical contributions that examine the societal impact of variations in health focusing on: 1) negative spillover effects of parental health shocks on children’s school achievements, 2) the impact of long-lasting health detriments on individual well-being, and 3) the impact of health on individual labour market participation.

Overall, the thesis shows that variations in health impact society’s overall welfare, even in a society with an extended welfare system. Individual well-being and productivity are reduced when faced with health detriments and there are negative spillover effects on the next generation’s human capital. Some personal characteristics drive individuals’ ability to cope with adverse health events. Multiple aspects of health should be taken into consideration when making policy decisions. Both mental and physical health affect welfare, and strength and trajectory of adverse health events modify the impact of such events. Furthermore, when making public policy it is pivotal to remember that individual welfare is more than health. Individuals retire for reasons other than health and when faced with health detriments multiple domains of life are impacted. Finally, the thesis demonstrates how rich observational register data and survey data can be used for policy-relevant research and for inferring plausible causal effects.

Title: Different aspects of municipal rehabilitation and the use of a capability measure – The importance of outcome measures

Candidate: Annette Willemoes Holst-Kristensen

University: Danish Center for Healthcare Improvements, Faculty of Social Science, Aalborg University, Denmark

Abstract:
The burden of chronic illness is increasing in Denmark and across the globe, and we live longer. As populations age, the amount of time that people spend living with a disability and with the consequences of chronic illness increases. This increase affects the healthcare and social care systems. Therefore, a societal focus on the health, quality of life and well-being are essential, and as the Danish population ages and seriously ill individuals survive with disabilities and lower health status levels, the field of rehabilitation becomes increasingly important. Rehabilitation programmes for people with a chronic illness will become increasingly important over the upcoming decades. Therefore, it is crucial to continually assess, evaluate, adjust and develop the programmes offered today so that people with a chronic illness can master their disease and live a meaningful life with good quality of life. This thesis is an attempt to highlight the importance of broad measurement in public health interventions such as rehabilitation programmes. Furthermore, to highlight some of the less explored aspects of municipal rehabilitation. Hence, the research questions of interest are: is the capability approach and the ICECAP-A a potential outcome measure in rehabilitation, and is ICECAP-A a substitute or supplement to the health-related quality of life outcome measures. Lastly, what are the different non-quality of life aspects of municipal rehabilitation in terms of participation and effects of the programme? Based on the results of four scientific papers, this thesis finds the capability approach and the ICECAP-A to be potential outcome measures for use in public health intervention. A reliable, valid and responsive Danish version of ICECAP-A is now available for use in chronically ill populations. The thesis also demonstrated the different reasons for attendance, non-attendance and dropping out of municipal rehabilitation
programmes, resulting in different ‘profiles’ and focus areas for use in everyday work at the healthcare centre. Furthermore, the patients change in health-related quality of life, calculated as quality-adjusted life-years was investigated before and after rehabilitation, and found small positive net effects, with differences across socioeconomic status. In conclusion, the results from this thesis highlight the necessity for a broader view of outcome measurements of public health interventions, where the aim is broader than health. Based on the findings of this thesis, the recommendation is to draw up standardised guidelines for measuring effects and broaden the view on effects. Furthermore, the healthcare centre should continue to focus on the individual characteristics, possible comorbidities and personal objectives with the presented ‘profiles’ in mind.