The role of implementation science in healthcare improvement efforts

Investigating three complex interventions

Anna Westerlund

Department of Public Health and Clinical Medicine
Epidemiology and Global Health
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Getting an audience is hard. Sustaining an audience is hard. It demands a consistency of thought, of purpose, and of action over a long period of time...

Bruce Springsteen
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Abstract

For decades, scholars have found significant gaps between the knowledge available and the knowledge applied in healthcare. Many potential benefits of adequate knowledge based interventions are therefore never achieved. A considerable body of knowledge has evolved on how to promote a better uptake of evidence-based knowledge into routine use. Even so, the actual impact and usefulness of implementation research findings among healthcare practitioners have not been extensively studied.

Accordingly, the overall aim of this thesis is to contribute to the understanding of how the implementation of complex interventions into healthcare can be improved. This is done by investigating whether some of these efforts do correspond with available scientific knowledge on implementation.

The thesis is based on three cases contributing to four studies. The cases studied are: the National Perinatal Patient Safety program (NPPS), the Dynamic and Viable Organisation initiative (DVO), and the International Child Development Program (ICDP). All studies focus on the early stages of implementation.

A mixed methods approach was adopted, involving both qualitative and quantitative methods. Data collection consisted of interviews, questionnaires, observations, and process diaries. Qualitative content analysis (conventional and directed), descriptive and non-parametric statistics were used. The focus was on implementation strategies used by healthcare actors in relation to factors influencing implementation processes and outcomes. More specifically, healthcare actors perspectives on such factors and whether they were addressed by the strategies used, was investigated. A process evaluation of implementation outcomes was also part of the thesis.

The healthcare actors in focus were the adopters, i.e. practitioners expected to change their work practices, and implementation facilitators. The latter refer to actors with a more or less explicit responsibility to implement new practices or interventions aimed at improving the quality and effectiveness of the provided health services.

Variation was found regarding how the implementation strategies used in the three cases corresponded with available scientific knowledge on implementation. In Case NPPS, the implementation facilitators planned, designed, and ensured that the core interventions of the implementation strategy were executed in a rational manner. Several important implementation factors were addressed by
the strategy. The process evaluation of effects on readiness for change by the development of a team mental model among adopters showed positive results.

In Case DVO a strategy was used that evolved over time, partly based on raised questions and feedback from staff and managers involved. The strategy can be described as an intuitive ‘socially accomplished activity’. This strategy involved addressing ‘Implementation Process-related factors’ in order to affect motivation and increase the tension for change among adopters.

In Case ICDP, the results reflected a shortage of strategies during the early stage of implementation. The main intervention was the stepwise ICDP-education. A more comprehensive implementation strategy covering implementation factors highlighted as important among adopters was not developed. The process evaluation revealed vague directives on what was expected regarding the use and adaptation of ICDP to current practice versus preservation of fidelity to the original ICDP. This situation resulted in a rather large variation in how the changes in work practices were perceived among the health centres involved. No health centre practiced ICDP in its original form.

A new knowledge-practice gap is discussed based on the findings in this thesis: a gap between the scientific knowledge on implementation and the actual implementation strategies used in practice during improvement efforts initiated by healthcare actors. The findings show that correspondence between scientific knowledge on implementation and what is actually done in order to accomplish change in practice might be more random (or implicit) than systematic. The question of how to transfer scientific knowledge on implementation into user-friendly resources for practitioners is discussed. A tentative model is suggested, which contributes to existing determinant frameworks by focusing on relations among factors. The model may be used in healthcare practice, to guide the design of an implementation strategy (or as a pathway for tailored implementation interventions) and aid the assignment of responsibilities in relation to factors that are known to affect implementation processes and outcomes.

The question of how to transfer models and frameworks into user-friendly resources needs further attention. It is suggested that action oriented research aiming at further developing and establishing the concept of ‘practical implementation science’ should be conducted. This could be a way of bridging the knowledge-practice gap in healthcare.
## Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CFF</td>
<td>Change Facilitating Function</td>
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<td>CFIR</td>
<td>Consolidated Framework for Implementation Research</td>
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<td>CHC</td>
<td>Child Healthcare</td>
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<td>DVO</td>
<td>Dynamic and Viable Organisation</td>
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<td>EBM</td>
<td>Evidence-based Medicine</td>
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<td>HC</td>
<td>Healthcare Centre</td>
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<td>ICDP</td>
<td>International Child Development Program</td>
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<td>ISF</td>
<td>Interactive Systems Framework</td>
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<td>NPPS program</td>
<td>National Perinatal Patient Safety program</td>
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<td>QIF</td>
<td>Quality Implementation Framework</td>
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<td>QIT</td>
<td>Quality Implementation Tool</td>
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<td>RE-AIM Framework</td>
<td>Reach Efficacy – Adoption Implementation Maintenance Framework</td>
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<td>TDF</td>
<td>Theoretical Domains Framework</td>
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<td>TMM</td>
<td>Team Mental Model</td>
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Original papers


Prologue

Before starting my doctoral studies, I had the opportunity to work as a research assistant for several years, first, immediately after I graduated in 2004 at the Work and Organizational Psychology Unit at Umeå University, and some years later in projects at the Epidemiology and Global Health unit at the same university, in close collaboration with Karolinska Institutet. The research projects I have been involved in have all concerned organizational development, change efforts and implementation of new interventions in different settings within the Swedish healthcare system. All the projects were conducted in rather close collaboration with the actors at the focus of the research. Another common characteristic was the complexity of both the settings and the interventions studied.

Two underlying questions have intrigued me and inspired the focus of my research. The first concerns why so many improvement efforts are being initiated in healthcare without resulting in sustainable changes. A plan for systematic follow-ups was often lacking, which at the time surprised me. The fact that time-consuming and effort-demanding changes were decided upon and that few people involved seemed concerned to evaluate the actual realization of the intended changes in behaviours, treatments, routines or the like – nor the effects of these changes on patients – bothered me.

Over the years, my interest in the literature in the upcoming field of implementation science increased. So, over time, the question of how practical change interventions or practical implementation efforts in healthcare harmonized with the existing and emerging theories on implementation started to interest me more and more. Therefore, ever since I started working at the Work and Organizational Psychology Unit I have borne the first of these questions in mind. I have with curiosity observed practice in order to find out “what are they actually doing out there when they decide upon and seek to accomplish change – and do they succeed or not, and if so – why?” Thereafter, I started to link (in my head) such observations of mine to existing scientific knowledge on how to promote the uptake of new knowledge into routine use. A wish to investigate whether such knowledge was represented in the world of practice started to grow strong. I began to search for some ‘theoretical support’ for the ways healthcare managers and practitioners act in order to successfully implement new working methods. My underlying concern was – what if it is not represented? What implications does this have? Is there something that can be done about it that could increase adoption and the use of interventions designed to promote people’s health? These are the questions from which my PhD project has taken off – finding out whether and how scientific knowledge on implementation is used in practice when efforts are made to change and improve healthcare.
1. Introduction

From a global perspective, it has been argued that, while many advances have occurred in medicine and technology over recent decades, healthcare systems continue to perform below desired levels with respect to addressing patient needs and ensuring patient safety (Baker, 2001). A concern over the quality and outcomes of care has increased at many places in the world (Ferlie & Shortell, 2001). Sweden’s healthcare system has a reputation of being among the best in the world. However, the challenges currently facing health services, such as ageing populations, chronic diseases and new endemics, tend to require more complex solutions. Thus, Sweden’s ability to continue delivering high-quality care is being put to the test (OECD, 2013) and there are still several areas and aspects in great need of improvement. The complex interventions required to address complex healthcare problems also pose great challenges with regards to their implementation and how they can be evaluated. Evaluation of complex interventions needs to focus not only on clinical outcomes but also on how those outcomes are reached.

It has been concluded that many efforts to improve the quality of care in different healthcare settings fail to reach their set goals (Burnes, 2009; Higgs & Rowland, 2000; Hughes, 2011). The difficulties related to realization of improvement in healthcare settings are well documented. The uptake of scientific knowledge on best healthcare practice into routine use has proved to be challenging. For decades, scholars have found considerable gaps between the knowledge available and that actually applied in healthcare (Campbell et al., 2007; McQueen, 2001; Vernez, Karam, Mariano, & DeMartini, 2006). Furthermore, it has been concluded that rates of adoption and levels of sustainability of public health interventions are often low, with success-rates of 5–15 percent (Vernez et al., 2006). The ‘knowledge-practice gap’ indicates that people are not always treated in accordance with best practice, and ultimately this implies that many potential health benefits of adequate, knowledge-based intervention are never achieved (Asch et al., 2006; Bhutta, Darmstadt, Hasan, & Haws, 2005; Gluckman & Hanson, 2004).

Alongside efforts to produce and bring forth knowledge concerning best healthcare practices and efforts to improve the quality of care in accordance with such knowledge, a knowledge base on how to implement improvements has evolved. Implementation science focuses on how to promote a better uptake of evidence on best practice into routine use in healthcare and thereby come to terms with the knowledge-practice gap (Eccles & Mittman, 2006).
The questions in focus in this thesis are: 1) How do healthcare professionals undertake the challenge to implement complex improvement interventions in different healthcare settings?; and 2) What role does available knowledge that could inform and aid implementation play in such improvement efforts? The remaining parts of this chapter include a brief introduction of the Swedish healthcare system (1.1). Thereafter, an introduction to perspectives and approaches related to how to improve and optimize healthcare is given. Some challenges related to complex improvement interventions are also further described (1.2). Finally, the theoretical frame of reference used in this thesis is presented. The latter part moves from factors known to influence implementation efforts, via knowledge of stages in (the process of) implementation and strategies used by actors engaged to facilitate implementation to ways of evaluating implementation (1.3).

1.1 The Swedish healthcare system

Healthcare in Sweden is largely decentralized and tax-funded, a system aimed to ensure everyone equal access to healthcare services (Anell, Glenngard, & Merkur, 2012). The responsibility for health and medical care is shared by the national government, County Councils/regions, and municipalities. Sweden is divided into 290 municipalities and 20 County Councils, 13 of them are nowadays called regions as they have increased responsibility for regional development. The Health and Medical Service Act regulates the responsibilities of the national government, County Councils and the municipalities. The role of the national government is to establish legislations, principles and guidelines in the country. The responsibility for organizing and providing healthcare is delegated to the county councils and, in some cases municipal governments at the local level. The needs for adaption to socio-demographic and geographic differences have introduced variation in the organisation of healthcare across the country (Anell et al., 2012; Blomqvist, 2007). Most County Councils separate primary healthcare (e.g. child health services) and specialized healthcare (e.g. psychiatry, surgery, obstetric care). Highly specialized healthcare are regionally centralized (e.g. cancer centers). Services such as home healthcare, special housing for elderly or for people with disabilities are the responsibilities of municipalities.

Via the National public health policy the Swedish government has committed to create societal conditions that will ensure good health, on equal terms, for the entire population (Linell, Richardson, & Wamala, 2013). This is an important premise for the National Board of Health and Welfare (NBHW), a government agency in Sweden under the Ministry of Health and Social Affairs. NBHW’s role is to produce and develop statistics, regulations and knowledge for the government and for those working in health and medical care and social services (www.socialstyrelsen.se). Moreover, the Public Health Agency of Sweden has a
national responsibility for public health issues; to develop and support society's work to promote health, prevent illness and protect against various forms of health threats to ensure good public health (www.folkhalsomyndigheten.se). Furthermore, health promotion and prevention is by law a healthcare responsibility regardless of level of care. Most such efforts, however, are undertaken in primary healthcare. Public health in Sweden has continued to improve over time. This is mirrored in a steadily increased life expectancy over the last decades.

1.2 Improving healthcare

**Different points of departure for change**

The endeavour of optimizing healthcare is shared by various parties, disciplines and actors, and there are several different perspectives and approaches related to how to establish and deliver ‘best practice’ (Grol, Wensing, Eccles, & Davis, 2013). Many insights into optimal care and best practice can be derived from research. The global ‘evidence-based medicine’ (EBM) (and evidence-based practice) movement strives for care providers and policy makers to, when possible, base their clinical decisions on the best available scientific evidence. EBM has exercised a strong influence over healthcare development over the last decades (Sackett, 1997). The overall aim of EBM is to make health practices more effective, safer, and more equal and beneficial. Methods to facilitate access to research and evidence have been developed. One of the most commonly used approaches for introducing evidence in an easily accessible form is clinical practice guidelines (Lohr, Eleazer, & Mauskopf, 1998). Through guidelines, different interventions with proven effects have been made available for diagnostic, preventive, curative and palliative healthcare.

Still, there is good scientific evidence for only a minority of current clinical actions and decisions. The Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU) – an independent national authority, has established a database including identified ‘scientific uncertainties’ (knowledge gaps) in healthcare and social services. A method or practice is a scientific uncertainty if systematic literature reviews find that there is no conclusive evidence of benefits and harms, or if no systematic literature reviews can be identified. These identified scientific uncertainties are intended to help researchers pinpoint topics where new knowledge is needed. Areas in which several scientific uncertainties have been identified and listed concern, for instance, medical technology, prevention, psychiatry and psychology (SBU, 2017). Several parental support programs, aiming at preventing mental illness among children, are listed as scientific uncertainties, and further effects studies of such programs are called for. In 2016, SBU also presented a systematic map
showing that there were several scientific uncertainties related to the prevention of birth injuries (SBU, 2016).

Most interventions and change efforts in healthcare practice are not a result of scientific findings or guidelines that have been introduced. The driving force behind many improvement efforts in healthcare is simply that existing practice is not satisfying, i.e. does not lead to intended results, or that working methods are considered inefficient or unsafe (Grol et al., 2013). Thus, many interventions implemented in healthcare do not rely on evidence, i.e. lack a proven effect.

Furthermore, the ways of viewing or assessing evidence for different interventions are not unambiguous across different areas of healthcare. The nature of a problem obviously affects the design of solutions (interventions) to it, the ways and methods by which these can be evaluated, and thereby also the possibility of gaining scientific support for a given solution (intervention). To implement a single, well-defined curative intervention targeting an obvious problem or disease and then to evaluate it scientifically does not always have to be difficult. A clear scientific base for addressing more complex problems has however, proved to be hard to establish (McQueen, 2001; Rittel & Webber, 1973).

**Complex interventions in healthcare**

Healthcare is characterized and affected by complexity, including multifaceted medical conditions, age, frailty, socio-economic realities and issues related to culture, the environment, behaviour and systems. As mentioned above, many challenges facing health services naturally require highly complex responses (Hallberg, 2015). Complex interventions are often contrasted with ‘simple interventions’, frequently referring to medical interventions. These are seen as having simple pathways, linking the intervention to its outcomes in a linear way (Petticrew, 2011). But, it has also been stated that there is no sharp boundary between simple and complex interventions and that few interventions are truly simple (Craig et al., 2008; Hallberg, 2015). Public health interventions have been defined as promoting behaviours that improve mental and physical health (Eldredge, Markham, Ruiter, Kok, & Parcel, 2016). Such interventions are often of a complex nature (Campbell et al., 2007; McQueen, 2001). ‘Complex interventions’ can be defined as interventions consisting of more than one active ingredient, containing several components which, when implemented, may produce a range of possible outcomes (Hallberg, 2015). Complex interventions targeting large and sometimes vaguely defined problem areas present new challenges. Initiators of a complex intervention may seek to change the ways that people think, act and organize themselves in healthcare, or they may seek to initiate a process with the intention of creating a new outcome (May et al., 2007). Challenges concern how to implement such interventions and what designs and
methods can be used to support and evaluate them. Besides finding ways to evaluate intended clinical outcomes of such interventions among the target population (patients), it is crucial to evaluate and understand why the intervention worked (or not). This includes whether the intervention was delivered as planned (i.e. with fidelity to core elements of an intervention), and how different factors influenced its implementation (Moore et al., 2015).

Thus, the points of departure for the realization of improvements might differ (new scientific findings or needs identified in practice), as well as the types of knowledge they are actuated by (research evidence, experience, best practices from other places etc.). Hence, the initiators of improvement may also differ. Improvement efforts in healthcare may be decided upon at a national level or a higher management level, i.e. top-down initiatives introduced by, for instance, policy designers. Or they may be steered from practice, i.e. bottom-up improvement, based on staff and managers noticing opportunities for improvement in their daily work. Furthermore, the characteristics of the improvement intervention pose different challenges with regards to its implementation and how it can be evaluated. As stated above, difficulties related to the realization of improvements in order to optimize patient care, are well documented. Persistent low rates of adoption and use of improvement interventions in healthcare is an ongoing problem.

1.3 Implementation science – Different ways to understand, support and evaluate implementation

Achieving change in healthcare organisations has historically been extensively studied in many different research fields. Organisational Development evolved in the 1950s as an attempt to apply some of the values and insights of behavioural scientists to entire organisations. Quality Improvement originally concentrated on industrial processes (see e.g. Shewhart, 1980[1931]), but over recent decades it has had an increasing impact across the healthcare sector (Varkey, Reller, & Resar, 2007).

A relatively new and emerging research field, concerning how to enhance the realization of improvement in healthcare, is implementation science. It seeks to explain the processes and factors associated with successful integration of (primarily evidence-based) interventions within a particular setting. The term implementation originates from the Latin ‘implementum’, which translates as ‘employ’ or ‘fill up’. In everyday speech, implementation is used synonymously with terms such as ‘realize’, ‘complete’ or ‘put into effect’. In science, ‘implementation’ is a concept that has been defined as “the process of putting to use or integrating EBIs (i.e. evidence-based interventions) within a specific setting” (Brownson, Colditz, & Proctor, 2012, p. 229). With its strong connections
Some terms and fields closely related to the concept of ‘implementation’ and implementation science are ‘knowledge translation’, ‘knowledge transfer’, ‘knowledge exchange’, ‘knowledge integration’ and ‘research utilisation’ (Graham et al., 2006), which all deal with the translation of knowledge into practice and concern the knowledge-practice gap. ‘Diffusion’ and ‘dissemination’ are other concepts also related to, and sometimes used interchangeably with, implementation. The three concepts of diffusion, dissemination and implementation have been distinguished as progressively more active steps in the process of translating knowledge into practical use (Lomas, 1993). ‘Diffusion’ refers to a passive spread of innovation, while ‘dissemination’ implies an active effort to encourage the adoption of an innovation or intervention (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Lomas (1993) states that local implementation activities capitalize on diffusion and dissemination by enabling and subsequently reinforcing the desired behaviour change. Overall, the field of implementation research shares similar problems to any emerging research field regarding language and constructs: they are often imprecise and subject to considerable discussion, and concepts might be used in different ways, referring to different things, in different studies (Proctor et al., 2009). The creation of a common lexicon of implementation terminology has been called for. It has been stated that the development of frameworks and models in the field of implementation science has been hampered by a diverse terminology and inconsistent definitions of central concepts (Ellis et al., 2003).

Early implementation research was driven by empirical questions, without much attention to theory (Davies, Walker, & Grimshaw, 2010; Eccles & Mittman, 2006; Nilsen, 2015). During the last decade, the need to consolidate knowledge in the field and to establish the theoretical basis of implementation and strategies to facilitate implementation has become widely recognized (Nilsen, 2015). Today, implementation science builds on a mix of theories borrowed from disciplines such as psychology, sociology and organisational theory and also the theories, models and frameworks that over time have emerged from within implementation science (Nilsen, 2015). At present, over 60 such theoretical based implementation frameworks and models exist, developed to guide scholars in their studies of implementation of various healthcare interventions (Tabak et al., 2015). Theoretical approaches, differing in many ways and with different purposes central to implementation research, have recently been classified (Nilsen, 2015):
1) Classic theories provide understanding and explanation of aspects of behavioural changes and implementation, for instance social cognitive theories, theories concerning cognitive processes and decision making, and organisational theories.

2) Determinant frameworks often have a descriptive purpose, pointing out factors (often clustered in classes or domains) believed or proved to influence implementation. Examples of commonly used determinant frameworks are the ‘Conceptual Model for Considering the Determinants of Diffusion, Dissemination, and Implementation of Innovations in Health Service Delivery and Organisation’ (henceforth referred to as ‘the Greenhalgh framework’) (Greenhalgh et al., 2004), the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009) and the Theoretical Domains Framework (TDF) (Cane, O’Connor, & Michie, 2012).

3) Process models seek to describe and guide a process of translating knowledge into practice. Examples of such ‘how-to-implement’-models are the Quality Implementation Framework (QIF) (Meyers, Durlak, & Wandersman, 2012), the Knowledge to Action framework (Graham et al., 2006), Fixsen’s model of stages of implementation (Fixsen, Naoom, Blase, & Friedman, 2005) and Grol et al.’s ‘Implementation of change model’ (Grol et al., 2013).

4) Evaluation frameworks, such as the Reach, Efficacy, Adoption, Implementation, Maintenance (RE-AIM) framework (Glasgow, Vogt, & Boles, 1999), aim to specify aspects that should be evaluated in order to determine implementation success (implementation outcomes). Implementation outcomes (also often referred to as ‘output’) denote effects among health practitioners, while clinical outcomes describe the intended effects of ‘treatment’ on, for instance, satisfaction, function and symptomatology (Proctor et al., 2011). ‘Implementation outcomes’ have been defined as “the effects of deliberate and purposive actions to implement new treatments, practices, and service” (Proctor et al., 2011, p. 58).

The rapid development of implementation science has partly depended on scholars testing and elaborating on implementation strategies based on the above mentioned theories, models and frameworks. Such studies have been conducted in order to determine the extent to which a certain strategy is successful and/or to develop new or existing theories, models or frameworks aiding an understanding of and providing guidance to implementation processes (e.g. Birken et al., 2017a; Cane et al., 2012; Lawton et al., 2016). Further empirical
research has been called for in order to explain how, and to what extent, the use of implementation theories, models and frameworks contributes to more effective implementation strategies in different contextual conditions or circumstances. How the current theoretical approaches can be further developed to better address implementation challenges has also been recognized as important (Nilsen, 2015).

**Determinant frameworks – factors found to affect implementation processes and outcomes**

“Implementation principles are like gravity – they are always present and working whether they are used intentionally or not. Unfortunately, attempts to use evidence-based interventions or other innovations are made without a lot of attention to implementation principles. Consequently, 5–15% success rates are typical for interventions that rely on people interacting with other people (changing behaviour of practitioners who interact with intended recipients).”

Dean Fixsen, PhD, Senior Scientist, Co-Director, National Implementation Research Network University of North Carolina at Chapel Hill, US. Personal communication presented in Milde Luthander (2016, p. 45)

In general, successful implementation depends on many factors (Kitson, Harvey, & McCormack, 1998; Milat, King, Bauman, & Redman, 2012; Rycroft-Malone et al., 2004). The determinant frameworks found in the implementation literature present such factors hypothesized to explain implementation outcomes, often clustered in domains. One of the more well-known determinant models is the one Greenhalgh and her colleagues presented in 2004 (Greenhalgh et al., 2004). Their model is based on a review of studies addressing factors that influence the spread of innovations in health services, and the authors state that the studies included in the review often focused on only a few of the factors. The authors commented on the small number of empirical studies that explicitly set out to investigate the complexities of disseminating and sustaining innovations by including a wider range of factors. Others have also argued that more knowledge in this area could aid decision-makers in their attempts to ensure successful implementation. For example, Jack Walker, Armenakis, and Bernerth (2007) investigated factors found to be common to many change efforts and reached the conclusion that further knowledge on relations between factors could aid understanding and execution of implementation processes.

There are four domains that are commonly represented in several determinant frameworks (e.g. CFIR (Damschroder et al., 2009), the Greenhalgh framework (Greenhalgh et al., 2004), TDF (Cane et al., 2012): 1) Characteristics of the Intervention (which refers to the implementation object, i.e. a new practice being implemented); 2) Characteristics of the Adopters (i.e. the healthcare practitioners
who are supposed to change their work approach in accordance with the intervention (also commonly referred to as target-users of the intervention, target audience or end-implementers)); 3) System- or Organisation/Context-related factors; and 4) Implementation Process-related factors (Figure 1).

![Figure 1. Four domains often found in determinant frameworks (Nilsen, 2015) in implementation literature.](image)

Some examples of more specific factors related to the four domains outlined in Figure 1 and commonly occurring in determinant frameworks are:

1) **Characteristics of the Intervention (implementation object).** The intervention’s relative advantage, its compatibility with existing norms and values; the possibility of adapting the intervention to current practice and context and the intervention’s degree of complexity, trialability, which refers to the extent to which the intervention can be subjected to trial (Rogers, 2010).

2) **Characteristics of the Adopters.** Constructs stemming from classic psychological theory and theory on behavioural change, e.g. tension/need for change, motivation, and learning styles.

3) **System or Organisational context.** Managerial support, workplace attitudes (climate), funding and time, and structures for decision making and communication.

4) **Implementation Process factors.** Hands-on support, external and internal collaboration, use of change agents (facilitators), plan of action, communication/information and feedback.
The process of implementation

Process models outline phases or stages of an implementation and change process in order to provide practical guidance in the planning and execution of implementation efforts. Overall, it can be concluded that these ‘how-to-implement’ models over time emphasize the importance of careful, deliberate planning in the early stages of implementation efforts (Nilsen, 2015). This includes to analyse the target setting, assess readiness and acquire the resources needed. In a next step, the focus is on building capacity (providing training, developing implementation teams, etc.) and deciding upon implementation strategies and forms for external support. Thereafter, the execution of the implementation plan takes place and strategies might be adapted along the way towards a phase where the intervention or program is being applied in its target setting. Here the fidelity aspect, i.e. the degree to which the intervention is delivered as intended, with respect to core elements of the intervention, is highlighted. In order to achieve full effectiveness of an intervention or program this needs to be implemented with fidelity. Fixsen et al. (2005) synthesized the literature on implementation. They asserted that the understanding of implementation components and factors promoting the effectiveness of implementation must increase as a means to bridge the gap between knowledge and practice in healthcare. Fixsen et al. (2005) described the process of implementation in six stages: 1) Exploration, 2) Program Installation, 3) Initial implementation, 4) Full operation, 5) Innovation, and 6) Sustainability. They state that there are few studies focusing on the stages of implementation in order to evaluate the impact of different factors across stages.

Implementation strategies

Strategies related to implementation have been studied, classified and categorized in recent decades. In 1990, van Woerkom created a model based on mechanisms for achieving effects on users, primarily sorting strategies according to how compelling or voluntary a strategy is (van Woerkum, 1990). Based on a systematic review of 102 studies, Oxman, Thomson, Davis, and Haynes (1995) developed a taxonomy of strategies to influence health professionals. This taxonomy then became the basis of the so-called EPOC classification (Mowatt, Grimshaw, Davis, & Mazmanian, 2001). The Effective Practice and Organisation of Care Group (EPOC) is a Cochrane Review Group, formed in 1994 with the aim of undertaking systematic reviews of interventions designed to improve professional practice and the delivery of effective health services. The EPOC classification contains four main categories: 1) Continuing education and quality assurance, 2) Financial interventions, 3) Organisational interventions, and 4) Regulatory interventions.
The concept ‘implementation intervention’ is commonly used when referring to a single activity to enhance implementation. A strategy, on the other hand, implies the use of more than one such activity (in the implementation literature this is commonly called a single versus a multifaceted implementation intervention). It has been concluded that studies investigating the effects of different implementation strategies are often inconclusive and that the degree of impact of different strategies (single or multifaceted) is hard to distinguish (Squires, Sullivan, Eccles, Worswick, & Grimshaw, 2014).

**Tailored implementation interventions**

“Once barriers to change have been identified, the next step is to link specific interventions to these barriers. This process is similar to the tailoring of a clinical treatment to a diagnosed health problem” (Wensing, Bosch, & Grol, 2010, p. 87)

There is broad agreement that factors (determinants) at different levels influence the success of implementation efforts, and that the impact of such factors might vary over time. It has been argued that the implementation success rate would improve if such factors were addressed and used appropriately (Jäger et al., 2016). ‘Tailoring’ is a systematic approach to improve the design and effectiveness of interventions by selecting strategies explicitly to address specific, previously identified determinants of practice. The potential in using so-called ‘tailored interventions’, has come under closer scrutiny.

Baker et al. (2015) reason that, if the determinants that might hinder implementation are identified and strategies that have been designed to address these determinants are used it would appear reasonable to expect a higher level of implementation success. However, in their review of 32 studies they conclude that tailored implementation interventions can be effective, but the effect is variable and tends to be small to moderate. It has also been discussed that there is insufficient knowledge of the most effective ways of tailoring, including how determinants should be identified, how decisions should be made on which determinants that are most urgent to address and how implementation interventions should be selected (Baker et al., 2010). Furthermore, it is difficult to pinpoint which determinants, if targeted by an implementation strategy, would maximize change (Baker et al., 2015). At present, there is no single, standard method for tailoring implementation interventions to identified factors, and the authors suggest that further research is needed.

‘Implementation strategy’, as exemplified above, has been defined as “a purposeful procedure to achieve clinical practice compliance with a guideline recommendation” (Mazza et al., 2013, p 1). In general, this view of strategy emphasizes a rational model of human behaviour, i.e. to be able to decide on or plan behaviour in advance and to create a rational model over the
implementation process. A wish to broaden the view of strategy as a concept established a new field of research in 2009: strategy as practice (Jarzabkowski & Paul Spee, 2009). Within this field, ‘strategy’ has been defined as “a situated, socially accomplished activity, while strategizing comprises those actions, interactions and negotiations of multiple actors and the situated practices that they draw upon in accomplishing that activity” (Jarzabkowski, Balogun, & Seidl, 2007, p. 7-8). This implies that the term ‘strategy’ might be defined as a set of activities used with the intention to enhance implementation, where the extent to which the intentions of such activities are explicit (defined beforehand) or more implicit (constructed over time or retrospectively) is unknown. This somewhat challenges the inclusion of the term ‘purposeful’ in the definition of implementation strategy made by Mazza et al. (2013).

The role of implementation facilitators

Any attempt to implement an intervention needs to be lead, managed and/or facilitated by someone. It has become increasingly important to understand how the actors or functions that are assigned the mission to facilitate implementation processes actually understand and perform their task. Facilitation has been described as the enabling of the mobilization of knowledge into practice (Dogherty, Harrison, Graham, Vandyk, & Keeping-Burke, 2013). It relies on a designated role encouraging others to reflect on their current practices in order to identify gaps in performance, introduce change and improve the outcomes of service provision (Harvey et al., 2011; Harvey et al., 2002; Höög, 2014; Rycroft-Malone et al., 2002).

Facilitators can take on several roles, ranging from task-focused project management restricted to a certain development area, to more holistic and process-oriented approaches involving individuals, teams and several organisational levels (Harvey et al., 2011; Höög, 2014). Thus, the role approach used, and the formal structure and position (internal/external) of facilitating roles, can vary, as well as the setting in which facilitators operate. Although research on change facilitation has a long tradition, the lack of empirical organisational behaviour research on this has been highlighted (Lessard et al., 2016). To examine what facilitation roles/teams actually do in practice to support change has been suggested as a means of expanding the limited knowledge of teams acting as change facilitators (Lessard et al., 2016). This can be expanded into understanding how different external and internal actors, responsible for or highly involved in the implementation of complex interventions to improve healthcare, act to facilitate the implementation process.

In a situation of change, ‘implementation facilitators’ may not necessarily solely refer to actors explicitly assigned a designated role to facilitate. This concept is useful in the investigation and description of any actors deciding upon, leading
or having an (explicit or more implicit) responsibility for putting to use the new practice/intervention in order to improve the quality and effectiveness of health services and care.

**Evaluating implementation**

“If there is no implementation or partial implementation of an intervention, the expected outcome is unlikely to occur, or, if it does occur, it cannot be fully attributed to the intervention”. (Vernez et al., 2006, p. 31)

As implied above, the process from designing interventions based on knowledge aiming at improving quality of healthcare, to the anticipated effects on health is long. Nyström, Höög, Garvare, Weinehall & Ivarsson (2013), illustrated this process (Figure 2). It is important to understand the nature of such a process in order to interpret an evaluation of the effects of an intervention.

![Figure 2. A model of change and development processes involved in a health promotion program. Presented in Nyström et al. (2013).](image)

The type of evaluation most commonly requested and conducted is clinical outcome evaluation (see box ‘Health improvement?’ in Figure 2). Assessment of the effectiveness of a certain program or intervention measured in the target population (in this case patients) has been stated to be over-emphasized in relation to process evaluations. Process evaluation aims at documenting,
evaluating and understanding the process and outcome of a programs’ implementation (Glasgow et al., 1999).

Process evaluation

Process evaluation has become an important issue of interest, especially in relation to complex interventions. While other studies of outcomes focus on the clinical and cost effectiveness of complex interventions, process evaluations help to understand how those outcomes are reached (or why they are not reached), and the factors that promote or hinder them (May et al., 2007).

Implementation outcomes (as per the definition above) denote effects among health practitioners (see box ‘Receiving actors 1. Practitioners, staff’ in Figure 2). Implementation outcomes are of importance in several ways as they serve as indicators of implementation success. Thus, they serve as intermediate outcomes in relation to clinical outcome and it has been concluded that, unless implemented well – interventions will not be effective (Proctor et al., 2011). It has been emphasised that process evaluations and ensuring implementation outcomes, must be done before one can draw trustworthy conclusions on the effectiveness of an intervention (Proctor et al., 2011; Vernez et al., 2006). However, to conceptualize and measure the successfulness of implementation is still under discussion in the field of implementation research. Attempts have been made, by the use of widely varying approaches, to measure how well a new treatment, program or service is implemented. Proctor et al. (2011) suggest that further work is needed so as to conceptualize and measure implementation outcomes. This would contribute to an advanced understanding of implementation processes, enable comparisons on effectiveness of different implementation strategies and overall enhance efficiency in implementation research.

A crucial aspect of evaluating implementation outcomes concerns the fidelity of new practices to the core elements of an intervention. Fidelity concerns whether the intervention is delivered as intended. Naleppa and Cagle (2010) conclude that greater attention needs to be paid to fidelity in intervention research. As implied above, an intervention may have a limited impact at target population level because it is not properly implemented (Steckler, Linnan, & Israel, 2002), but it has also been proven that positive outcomes can be achieved even when an intervention is not fully used as intended (Moore et al., 2015). Thus, to gain an understanding about what works, process evaluation usually aims to capture fidelity and dose (Steckler et al., 2002). Capturing how an intervention is carried out in practice, in relation to core elements of the intervention, can enable evaluators to distinguish between adaptations to make the intervention fit different contexts, and adaptations that challenge intervention fidelity (Bumbarger
Assessing fidelity in a complex intervention is a challenge due to the nature of such interventions.

The ‘Reach Efficacy – Adoption, Implementation, and Maintenance (RE-AIM) framework’ was developed to meet the need of a comprehensive and appropriate evaluation framework in the field of health promotion (Glasgow et al., 1999). The framework focuses on five dimensions: 1) Reach into the target population, 2) Efficacy, 3) the degree of Adoption by the target settings or institutions, 4) Implementation as the fidelity and consistency of delivery of intervention, and 5) Maintenance of the intervention over time. The individual level and the organisational level are both incorporated in the framework. The RE-AIM framework encourages evaluations that cover multiple indicators. Thus, the framework is not solely focused on health effects in a target population or on organisational dimensions of implementation and constitutes a suitable tool for process evaluation.

As described in this chapter, attempts to improve the quality of care are on-going in various forms. Interventions (often complex) based on different types of knowledge on best practice and scientific knowledge on how to implement improvement interventions are evolving simultaneously. Despite the rapid growth of the field of implementation science, the difficulties of changing healthcare and challenges of reducing the knowledge-practice gap still remains. To aid further understanding of this gap, the question of impact and the usefulness of current evidence on implementation in the world of practice should be examined further. In this thesis, three separate cases of complex interventions implemented in different Swedish healthcare settings have been investigated.
2. Aims

The overall aim of this thesis is to contribute to the understanding of how implementation of complex interventions in healthcare can be improved. This is done by investigating whether some of these efforts do correspond with available scientific knowledge on implementation.

The specific aims are:

- to investigate strategies used by implementation facilitators to achieve changes in work practices,

- to investigate healthcare practitioners’ (adopters’) views on factors affecting implementation processes and outcomes,

- to investigate whether and how the strategies used in the cases addressed such factors, and

- to evaluate implementation outcomes in relation to the strategies used.
3. Overview of the thesis

This thesis is based on three empirical cases (NPPS, DVO, ICDP) contributing to four studies (Studies 1–4), each presented in an appended paper (Papers I–IV). Table 1 presents an overview of how the specific aims of the thesis are linked to the cases, the appended papers, and the main theoretical approaches.

Table 1. Overview of the specific aims of the thesis (1–4) and their relations to the three cases, appended papers (I–IV), and theoretical approaches used

<table>
<thead>
<tr>
<th>Specific aims</th>
<th>Case NPPS¹</th>
<th>Case DVO²</th>
<th>Case ICDP³</th>
<th>Main theoretical approach used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigate strategies used by implementation facilitators to achieve changes in work practices.</td>
<td>Paper I</td>
<td>Paper II</td>
<td>Paper III</td>
<td>Paper IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Theories on implementation strategies and change facilitation</td>
</tr>
<tr>
<td>Investigate healthcare practitioners’ (adopters’) views on factors affecting implementation processes and outcomes.</td>
<td>Paper II</td>
<td>Paper III</td>
<td>Paper IV</td>
<td>Determinant frameworks</td>
</tr>
<tr>
<td>Investigate whether and how the strategies used in the cases addressed such factors.</td>
<td>Paper I</td>
<td>Paper II</td>
<td>Paper III</td>
<td>Paper IV</td>
</tr>
<tr>
<td>Evaluate implementation outcomes in relation to the strategies used.</td>
<td>Paper I</td>
<td>Paper IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Classic theories</td>
</tr>
</tbody>
</table>

¹) NPPS = National Perinatal Patient Safety program, ²) DVO = Dynamic and Viable Organisation, ³) ICDP = International Child Development Program

Further clarification is also needed of concepts known to be imprecisely defined or used in different ways in implementation research. Below follow a further description of the thesis focus and of how key concepts are defined and used in this thesis.

Key actors involved in the improvement efforts are referred to either as ‘adopters’ or ‘implementation facilitators’. The term ‘adopters’ refers to healthcare practitioners expected to change their work practice. ‘Implementation facilitators’ refers to actors deciding upon, leading, or having an (explicit or more implicit) responsibility for putting to use a new practice/intervention so as to improve the quality and effectiveness of health services and care. As can be seen in Table 1, the focus of this thesis is on implementation strategies used by implementation facilitators, i.e. on investigating what happens in practice when healthcare actors decide to implement complex interventions to improve quality.
of care. Specific attention is paid to factors influencing implementation processes and outcomes, how they are perceived to affect implementation (Papers II–IV), and whether they are addressed by the implementation strategies used (Papers I–IV). Henceforth, these factors will be referred to as ‘implementation factors’. This concept is used interchangeably with ‘determinants’, i.e. implementation factors investigated in this thesis represent determinants in determinant frameworks in the implementation literature. The concept of ‘strategy’ is used with the definition presented above, i.e. strategy is conceptualized as a set of more or less explicitly intentional activities used to facilitate implementation.

Implementation outcomes are also addressed in this thesis (Paper I & IV). Implementation outcomes have, as described above, been approached by the use of a wide variety of approaches. Today there is no consensus on how to conceptualize and measure implementation success. Results related to each of the four specific aims could, in fact, be viewed as important insights into the progress of the studied implementation processes, i.e. as measures of implementation success. In this thesis, however, ‘implementation outcomes’ refers to effects among adopters that occur during the implementation process. Implementation outcomes are conceptualized as effects on the readiness for change by the development of a team mental model among the adopters (Paper I), and as changes of/effects on work practice (including the fidelity aspect) and adopters (Paper IV).

The overall aim of this thesis includes investigating whether improvement efforts in healthcare practices correspond with available scientific knowledge on implementation. Thus, parts of the data and results related to the specific aims are analysed and presented in relation to models and frameworks originating in the implementation literature. The main theoretical approaches (theories, models and frameworks) used are presented in Table 1.

Finally, the concept of ‘intervention’ refers to a new practice to be implemented, which is equivalent to the concept ‘implementation object’ or ‘innovation’. In the implementation literature, the term ‘intervention’ can refer to a facilitating activity used to enhance or promote implementation. When referring to such an activity, the term ‘implementation intervention’ will be used.
4. The three cases

In this chapter, the cases are further presented. A summary of key information regarding each case is provided in Table 2 in the last part of this chapter. Methodological aspects related to the case studies are presented in Chapter 5.

The subjects of the study (i.e. cases) were chosen based on three aspects: 1) common characteristics, 2) availability, and 3) variation. The common characteristics were the implementation of rather large, complex interventions in their early stages, targeting multiple professional groups. The three cases also shared an overall aim of improving health services and quality of care, and the interventions studied all had a preventive scope, more or less strongly expressed. The three cases were also chosen based on their availability, meaning that access to them and organisations involved was granted through negotiations with existing contacts, either via national actors or from within the organisations. The variation included differences in healthcare contexts, the interventions or implementation objects, key actors involved, and target populations.

The intention was to provide insight into the implementation strategies used by different actors (implementation facilitators) in different change initiatives and in different settings. The assumption was that, together, the selected cases would provide a more comprehensive view of how improvement efforts might take shape in healthcare practice.

4.1 Case NPPS: The National Perinatal Patient Safety program

Despite the fact that Sweden has an excellent record of perinatal care, some children are still suffering from unnecessary birth injuries. In a Swedish study concerning perinatal care, substandard care was found during labour in two thirds of the infants born with the main reasons for substandard care potentially being reducible, in theory (Berglund, Pettersson, Cnattingius, & Grunewald, 2010).

The nationwide National Perinatal Patient Safety (NPPS) program (in Paper I called Safe Delivery) was initiated in 2008 to improve patient safety practices in perinatal care in all 46 delivery units in Sweden. The programs’ overall objective was to reduce the incidence of delivery-related asphyxia. The NPPS program was managed by the professional associations of obstetricians, neonatologists, and midwives, in collaboration with all obstetric units in Sweden. The Swedish County Councils’ mutual patient insurance company (the Swedish abbreviation is Patientförsäkringen LÖF) contributed with financial and administrative support.
An expert group consisting of an obstetrician, two midwives and a neonatologist set out to identify gaps between best and current practice related to the delivery process (with a focus on safety for the infant). Risks were identified in the following categories: organisation, communication, competence, drug administration, medical technique, documentation and follow-up. The NPPS program consisted of three core components or implementation interventions: a self-assessment, a peer-review process, and a mutual agreement for change. After those efforts, local teams were expected to work with identified improvements and report back to national program actors. The local teams at each unit consisted of local management and representatives of front line staff: midwives, assisting nurses, obstetricians, neonatologists, and anaesthesiologists.

The implementation of the NPPS program was carried out in three, partly overlapping, sequences with 13–14 delivery units in each 1½-year long sequence. The first sequence started in September 2008, the second sequence in January 2009 and the third sequence in September 2009.

Paper I covers the first and second sequence. As shown in Table 1, this study concentrates on the implementation strategy used and implementation outcomes identified via process evaluation, focusing on readiness for change through the development of team mental models within the teams. In this case results are based on interviews with representatives from all 46 local teams that were to initiate and support changes in work practices in the delivery units.

4.2 Case DVO: The Dynamic and Viable Organisation

The empirical base for Case DVO was a county’s section of specialized medical care, which included over 30 clinics/units or medical centres (i.e. units with departments in several hospitals) at three regional hospitals.

In 2007, the County Council managers decided to implement an initiative called “the Dynamic and Viable Organisation” (DVO) in its section for specialized medical care. During its initiation 26 clinics participated. The stated purpose of the DVO initiative was to build a multi-level support structure (see Process structure in Figure 3), communication arenas, and competence within the organisation that would enhance continuous systematic quality improvement and organisational learning. This included the building of teams at multiple organisational levels and also to strengthen the competence of managers to motivate, set goals, coordinate, support and follow-up improvement attempts. First, unit-based development groups at the meso management level were created at each clinic. These development groups often included members of the units’ management teams or participants who had special responsibilities. The development groups were envisioned to support the improvement teams that
were formed at staff level at each clinic, with a special responsibility for working with continuous improvement or with specific improvement themes. Higher-level managers and staff with strategic functions formed a strategic group in order to support and coordinate ongoing improvement efforts initiated by development groups or improvement teams, and also to introduce mandatory improvement efforts (see Figure 3). An interactive structure for communication and learning which included learning seminars for improvement teams and recurring strategic forums for all the development groups and the strategic group, was designed.

Figure 3. The formal structure of the County Council organisation in relation to the DVO communication structure.

In Paper II, the investigation of roles and strategies of an intra-organisational development unit, a type of Change Facilitating Function (CFF), is presented in relation to the implementation of the DVO initiative. This unit had evolved during the 1990s and had existed in its’ present form since 2000. Its’ stated purpose was to help achieve desired results and outcomes using a combination of structural and dynamic facilitation approaches. At the time of the study, the unit had ten employees working as coordinators, trainers or mentors. During the previous decade, the development unit had worked with smaller organisational teams or units and a new challenge with the DVO initiative was to simultaneously work with micro, meso and macro organisational levels.

More specifically investigated in Case DVO are views of involved clinic/unit members (development groups, improvement teams) on factors that needed to be addressed, and how the CFF related to these factors during the implementation process.
4.3 Case ICDP: The International Child Development Program

Increasing mental health problems, especially among young people, have become a major concern in many countries (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Kessler et al., 2005; Kim-Cohen et al., 2003). Parental support programs have been suggested as cost-effective means to prevent these problems (Marmot et al., 2008). Studies have shown that programs focusing on developing a positive interaction between parents and their children provide the greatest impact (Kaminski, Valle, Filene, & Boyle, 2008). One such parental support program is the International Child Development Program (ICDP), directed towards parents and other caregivers.

The ICDP is offered at a universal level and is based on theories of developmental and humanistic psychology with a focus on empathy and sensitive adult adjustment (Sherr, Skar, Clucas, Tetzchner, & Hundeide, 2014). The ICDP core elements consists of: three dialogues, eight interaction themes, and seven principles for sensitization (Sherr et al., 2014), focusing on both the content and the approach used in the ‘deliverance’ of parental support by ICDP.

The implementation of ICDP in the county started in 2010, and it is still ongoing. The overall aim is to improve parenting skills and promote good mental health among children in the whole county. The county has about 40 Healthcare Centres (HCs) at which antenatal and child healthcare are provided. Practitioners, i.e. midwives and child health nurses, work together on shared premises, sometimes together with open pre-school teachers and social workers. A central Child Healthcare unit (CHC unit) has the overall mission to support, supervise, and develop child healthcare in the county. The County Council has a history of systematically working with health promotion and preventive public health interventions originated from the Public Health unit. In 2005, ‘Salut’ was initiated, a multi-sectorial child health promotion program aimed at children, adolescents, and their parents (Edvardsson et al., 2011; Nyström et al., 2013; Höög, Garvare, Ivarsson, Weinehall & Nyström, 2013).

In 2008, a national strategy, including development of parental support in Swedish communities, was decided on. In the county, a local initiative called “Development of local strategies for parenting support” started, with financial support from the former National Institute of Public Health (nowadays called the Public Health Agency) during 2010-2011. As a co-applicant, Salut actors applied for implementation of the ICDP in the region with support from the central CHC unit. The aim was to improve parental care competence, parent-child interactions and attachment patterns. The ICDP implementation started in ten HCs, located in different municipalities in the county. By participating in an ICDP education,
HC practitioners’ work practices, including the performance of parental support groups, were assumed to be improved.

The ICDP education consists of three levels. The aim of the first two levels is to inspire and train professionals to become certified ICDP counsellors. The third level is needed to become a certified advisor of ICDP and teach at levels I–II. In this thesis the focus is on the time period around ICDP education levels I and II. The HC practitioners were divided into five groups, and each group started at different times in a sequential manner between November 2010 and March 2011. Besides the practitioners that were supposed to practice ICDP, staff with strategic or facilitating roles was involved, including HC managers from the ten HCs, psychologists from the CHC unit, and actors from ‘Salut’ at the Public Health unit. Altogether 92 people were directly or indirectly involved in the implementation process. As shown in Table 1, Case ICDP studies cover different actors’ perspectives on implementation factors and implementation strategies used during the early stages of the implementation effort (Paper III), and implementation outcomes in terms of potential effects on adopters’ attitudes and work approaches (Paper IV).
Table 2. Interventions, settings, implementation facilitators and adopters in the studied cases.

<table>
<thead>
<tr>
<th></th>
<th>Case NPPS¹</th>
<th>Case DVO²</th>
<th>Case ICDP³</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interventions/Implementation objects</strong></td>
<td>Improved work routines to prevent risks of birth injuries for the infant. Address risks in areas of organisation, communication, competence, drug administration, medical technique, documentation, and follow-up.</td>
<td>A multi-level support structure with communication arenas, teams at multiple levels and better competence for quality improvement and learning.</td>
<td>A universal parental support program to promote mental well-being among children.</td>
</tr>
<tr>
<td><strong>Settings</strong></td>
<td>All 46 delivery units in Sweden.</td>
<td>The section of specialized medical care in one County Council where 26 were participating in initial phases out of 30 clinics/units in three hospitals.</td>
<td>Child healthcare centres in one County Council.</td>
</tr>
<tr>
<td><strong>Implementation facilitators</strong></td>
<td>Members of the Swedish Society of Obstetrics and Gynaecology; the Neonatal Section of the Paediatric Society; the Swedish Association of Midwives; and the Swedish County Councils’ Mutual Insurance Company Patient Insurance.</td>
<td>The intra-organisational development unit, a type of Change Facilitating Function (CFP)</td>
<td>Actors from the multi-sectorial Salut child health promotion programme and staff from the county’s central Child Healthcare unit (CHC unit).</td>
</tr>
<tr>
<td><strong>Adopters</strong></td>
<td>Obstetricians, midwives, assisting nurses, anaesthesiologists and neonatologist.</td>
<td>Managers and staff.</td>
<td>Midwives, child health nurses, open preschool teachers and social workers.</td>
</tr>
</tbody>
</table>

¹ NPPS = National Perinatal Patient Safety program, ² DVO = Dynamic and Viable Organisation, ³ ICDP = International Child Development Program
5. Methods

This thesis includes two qualitative studies (Studies 1–2) and two mixed-methods studies (Studies 3–4) based on three cases (NPPS, DVO and ICDP). In this chapter, methodological frameworks and choices are described. After this, a description of methods for data collection and analysis used in each of the four studies is presented. Table 3 provide an overview of methodological choices and informants in the different studies.

5.1 Methodological approaches

Case study and mixed methods approaches

This thesis is mainly based on case study and mixed methods approaches. An extensive amount of qualitative data was collected, including subjective data from interviews, questionnaires, and process diaries, and data stemming from documents. Quantitative data were also included, mainly based on questionnaires, while a few summative analyses of qualitative data also produced quantitative elements, mainly as frequencies.

In contrast to experimental designs that ideally try to control for any external interference case study designs are often used to explore contemporary social phenomena within its natural context (Thomas, 2011). Case studies often benefit from the use of theories and frameworks to guide data collection and analysis but differ somewhat in terms of focus and relation to established theory (George & Bennett, 2005). The configurative case study is characterized by its use of existing theories to explain a case, while the theory-testing case study sets out to evaluate or validate theory. There are also so-called building block case studies which consist of several studies of a phenomenon to identify patterns.

A combination of multiple data sources is often used in case studies, sometimes described as case study design with a mixed methods approach. In health services research, there has been an increasing interest in combining qualitative and quantitative methods. There have been discussions on how such mixed-methods research can be used and why this approach is applicable (e.g. Brannen, 2017; Bryman, 2003). In 2007, O'Conchaithe and colleagues concluded that comprehensiveness was the main driver for using a mixed-methods approach when researchers wanted to address a wider spectrum of issues than quantitative methods alone could allow (O'Conchaithe, Murphy, & Nicholl, 2007). Six basic mixed methods designs are described by Creswell and Clark (2007): the convergent parallel design, the explanatory sequential design, the exploratory sequential
design, the embedded design, the transformative design and the multiphase design.

The four case studies presented in this thesis are mainly configurative, but Studies 2–4 also share elements of a theory-testing case study, which sets out to evaluate or validate theory. While Studies 1 and 2 are based on qualitative data, Studies 3 and 4 have a convergent parallel mixed methods approach (Creswell & Clark, 2007). Qualitative and quantitative data have been gathered and analysed during the same phase, but separately from one another. Thus, the goal was not to use results from one data source as guidance for the design or execution of data collection by the other. Instead, the goal was to triangulate findings from the two types of data sources in order to compare and cross-validate results.

This thesis can be viewed as a so-called building block case study (i.e. based on several studies of a phenomenon to identify patterns). It is also based on an embedded mixed methods design, since quantitative data are included within an otherwise qualitative construction. Data and results from the different studies are triangulated. The aim of triangulation was to cross-validate overall findings (analyse consistency of findings) and to gain a broader understanding of the empirical cases in relation to the overall aim of the thesis.

**Data analysis**

In this thesis, a combination of conventional, directed and summative content analysis of qualitative data, and statistical analysis of quantitative data, has been used.

Qualitative content analysis refers to a set of analytical approaches ranging from impressionistic, intuitive, interpretive analyses to systematic, strict textual analyses (Rosengren, 1981). It is viewed as highly flexible, since it provides the possibility of choosing the type of content analysis based on the phenomenon studied and the researcher’s theoretical and substantive interests (Weber, 1990). Hsieh and Shannon (2005) described three distinct approaches to content analysis: conventional, directed, and summative. The main difference between the three approaches centres on how initial codes are developed and the role of theory in the data analysis process. In a *conventional content analysis* (partly used in Studies 1, 2 & 4), codes and categories are derived from the data during data analysis. This approach enables the researcher to gain a rich understanding of the phenomenon being studied. With a *directed content analysis* (used in Studies 1–4), prior research or theory guides the analysis and initial codes and code schemes are created based on such theories, prior to the analysis of data. During the analysis, additional codes are usually developed and the initial coding scheme is then revised. This type of approach enables the researcher to test,
extend or refine existing theory. With the *summative approach* (used in Study 1), the researcher does not analyse the data as a whole, but instead approaches the text focusing on single words or smaller units of text in relation to particular content and a contextual meaning. Here, summative or sometimes quantitative descriptions (e.g. counting frequencies) can be obtained by analysing patterns. In the latter sense, content analysis has been described and used as a type of quantitative research method, with text data coded into explicit categories and then described using metrics and statistics. This approach is sometimes referred to as quantitative analysis of qualitative data (Morgan, 1993).

The quantitative data in this thesis consist of estimations made by questionnaire respondents on 5-point Likert scales (from ‘not at all’ to ‘a very high degree’). Non-parametric statistics (Wilcoxon’s signed rank test and the Mann Whitney U test) have been used to analyse response patterns in data (described in further detail in Paper III and IV).

Parts of the results presented in this thesis are based on further analysis of the data and results presented in Paper I–IV. These analysis concern how empirical findings correspond to available process models and determinant frameworks. Directed content analysis of case study data was used. Key activities related to different stages in Fixsen’s process model (Fixsen et al., 2005) were used as predetermined categories. The analysis focused on determining whether or not such key activities were carried out in the three cases. The same approach was used for Case NPPS, to determine whether implementation factors were addressed as part of the chosen implementation strategy. The main source of data for Case DVO and Case ICDP was interviews with adopters and implementation facilitators. These results are also partly presented in Papers II–IV. Regarding Case NPPS activities, core intervention components and the stated purpose of the NPPS program was used as a basis for analysis so as to determine whether and which implementation factors were addressed by the strategy used.
## Table 3. An overview of cases and methods in Studies 1–4.

<table>
<thead>
<tr>
<th>Case &amp; study</th>
<th>Study purpose</th>
<th>Study design</th>
<th>Informants</th>
<th>Data collection</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case NPPS</strong>&lt;sup&gt;1&lt;/sup&gt; <strong>Study 1</strong></td>
<td>To elucidate how the main interventions of self-assessment, peer review, feedback and written agreement for change affected the teams and their mental model of patient safety, and thereby their readiness for change.</td>
<td>Configurative case study.</td>
<td>27 delivery units. Local teams, usually including the manager, head midwife and senior consultant in obstetrics (n=80).</td>
<td>Semi structured telephone interviews.</td>
<td>Conventional and summative content analysis.</td>
</tr>
<tr>
<td><strong>Case DVO</strong>&lt;sup&gt;2&lt;/sup&gt; <strong>Study 2</strong></td>
<td>To investigate the role of an intra-organizational CFF in relation to a multi-level development initiative to build a sustainable quality improvement structure in a healthcare organization and study different actors’ views on important factors to address in a change process.</td>
<td>Configurative case study.</td>
<td>Middle management level (n=77 questionnaires), staff level (n=52 questionnaires) and members of the development unit i.e. change facilitating functions (n=10).</td>
<td>Questionnaires with open ended questions, and process diaries.</td>
<td>Conventional and directed content analysis.</td>
</tr>
<tr>
<td><strong>Case ICDP</strong>&lt;sup&gt;3&lt;/sup&gt; <strong>Study 3</strong></td>
<td>To investigate the involved actors’ views on factors that are likely to affect implementation and if and how these factors were managed during the program’s early stages.</td>
<td>Theory testing case study and convergent parallel mixed method.</td>
<td>HC&lt;sup&gt;+&lt;/sup&gt; practitioners; midwives, paediatric nurses, pre-school staff, social service staff. Strategic actors: Salut&lt;sup&gt;5&lt;/sup&gt;, CHC&lt;sup&gt;6&lt;/sup&gt; psychologists and managers, HC managers (n=82).</td>
<td>Semi-structured interviews. Questionnaires – quantitative data.</td>
<td>Directed content analysis- Wilcoxon’s signed rank test.</td>
</tr>
<tr>
<td><strong>Case ICDP</strong>&lt;sup&gt;3&lt;/sup&gt; <strong>Study 4</strong></td>
<td>To investigate whether implementation of ICDP led to changes in work practice, and to study conditions for implementation and fidelity to core elements of the program.</td>
<td>Configurative case study and convergent parallel mixed method.</td>
<td>Same as study 3.</td>
<td>Semi structured interviews Questionnaires – quantitative data. Archive data.</td>
<td>Conventional and directed content analysis. Wilcoxon’s signed rank test &amp; Mann Whitney U test.</td>
</tr>
</tbody>
</table>

<sup>1</sup>NPPS = National Perinatal Patient Safety program, <sup>2</sup>DVO = Dynamic and Viable Organisation, <sup>3</sup>ICDP = International Child Development Program, <sup>4</sup>HC = Healthcare Centre, <sup>5</sup>Salut = a county-wide multi-sectorial child health promotion program aimed at children, adolescents, and their parents, <sup>6</sup>CHC = Child Healthcare.
5.2 Procedures used in Studies 1–4

In what follows, details regarding the procedures for data collection and analysis are presented for the Studies 1–4.

Study 1

For the NPPS program sequences I and II, three respondents per delivery unit were asked to participate in interviews: the management director and two other key team members, usually the head midwife and a senior consultant in obstetrics. In Sequence I with 14 participating units, all 43 eligible respondents was reached. In Sequence II, with 13 participating clinics, 38 out of 39 potential respondents were reached. All management directors, except for one in Sequence I and two in Sequence II participated in the study. In total, 80 of 81 respondents were interviewed (a response rate of 99%).

Two interviewers conducted semi-structured telephone interviews. The same questions were asked to investigate each of the three implementation interventions (self-assessment, peer review and written agreement for change): how each intervention was perceived, whether it had had any kind of immediate impact at the delivery unit and whether any effects (practical or other) were perceived during the process. The interview guide also contained an open question concerning any kind of reflections regarding the process. The interviews lasted between 15 and 30 minutes.

Data underwent a conventional content analysis (Hsieh & Shannon, 2005) followed by a summative content analysis (Morgan, 1993). First, all interviews were transcribed verbatim and read through several times. During this process, categories, based on theories on mental models, took shape and explicit rules for coding were established and pilot tested. Then, each segment of text in each interview that contained a coherent statement of content was separated, coded and categorised, based on the inductively established categories.

A hypothetical pattern – an ‘ideal model’ – for how each intervention should have influenced respondents, in order to achieve a shared team mental model (TMM) and activate actions to promote a successful patient safety system was created. This approach hypothesised that a certain pattern of text segments was desirable and would indicate the development of a team mental model. Analyses of variation were conducted in relation to this ideal case. The text segments that contained information related to the three interventions were analysed and compared to the anticipated results, focusing on the ideal pattern when calculating proportion of agreement.
**Study 2**

The assigned implementation facilitators from the County Council’s strategic development unit participated in the study (referred to as CFF in Paper II). The adopters were members of the development groups (managerial level) and improvement teams (staff level) in five clinics/units of the specialized healthcare section. The units were chosen to represent the variation in size, specialty, complexity and previous experience of quality improvement projects.

A questionnaire with open-ended questions focusing on experiences of the system-wide DVO implementation was used. Representatives of the development groups (meso management level) and improvement teams (staff level) from clinics/units in specialized healthcare participated. Questions focused on: perceived context factors relevant to the change process; views on the planned and on-going implementation process; the expected effects of DVO; and other aspects of importance. The questionnaire was distributed five times during 2008–2009, with the number of respondents per clinic/care unit answering varying from one to seven on each occasion. A total number of 77 questionnaires from managerial level and 52 from staff level were analysed.

Eight implementation facilitators from the development unit (CFF members) reported on activities and reflections related to DVO in individual process diaries. The respondents were asked to take weekly notes on five areas and reflect on and write down: 1) important events during the week, 2) decisions, 3) implementation barriers, and/or 4) facilitators discovered, and 5) other reflections of importance. Eight weekly diaries were analysed. Interviews were conducted with ten implementation facilitators (CFF members) in February–March 2009. The questions concerned perspectives on the essence of the DVO initiative (the innovation) and on anchoring of DVO at different management levels, on staff level and internally within the development unit.

Qualitative data were analysed by a combination of conventional and directed content analysis (Hsieh & Shannon, 2005). Greenhalgh’s determinant framework (Greenhalgh et al., 2004), was chosen for organizing and analysing data during the initial phase of transcribing and reading through all the data. In a second step, a directed content analysis was conducted using framework categories (domains) and sub categories (factors). Coherent statements were identified and coded according to selected categories. This was done both to enable pattern comparison of perceptions regarding the importance of implementation factors and to identify implementation strategies and activities aimed at addressing different factors.
Study 3

A total of 82 informants participated in the study by answering questionnaires, participating in interviews, or both. They were either adopters (practitioners) at the HCs (i.e. midwives, paediatric nurses, preschool personnel, social service secretaries) or implementation facilitators, i.e. actors with a strategic role for the implementation of ICDP (Salut actors, CHC psychologists and managers, HC managers).

Data were collected between November 2010 and May 2011, during the initial stages of implementation. In the questionnaire the informants were encouraged to reflect upon the entire period, from being introduced to the ICDP up to the present day (Fixsen’s stages 1–3) (Fixsen, et al., 2005).

The questionnaire was distributed twice, targeting all HC practitioners (n= 66) participating in level I education. The response rates were 100% for the first distribution and 82% for the second. The 14 statements in the questionnaire concerned implementation factors that were related to the:

1) System/Organisational Context – managerial support, dedicated time for implementation, anchoring of the ICDP implementation on relevant organisational levels, and workplace attitudes towards learning new things.

2) Adopter – HC practitioners’ motivation to apply the ICDP and their perceived need to develop work practices.

3) Implementation Process – a comprehensive plan of action for the ICDP implementation, the presence of key change agents, hands-on support, forums for sharing experiences, and systematic follow-ups.

4) Intervention – compatibility between the ICDP and current workplace values and culture and the possibility to adapt the ICDP to the local context and current practice.

Informants were instructed to indicate on a 5-point Likert scale (from ‘not at all’ to ‘a very high degree’) the degree of importance of a specific implementation factor and to what extent the same factor was currently being addressed or manifested.

Semi-structured interviews were conducted in order to provide information on the informants’ views on important factors as well as on potential factors not covered by the questionnaire, and to identify strategies used to address these
factors or other information of importance. The interviews were conducted during the later stage of the education period (February–May 2011). The interview guide consisted of themes that corresponded to the questionnaire (System-, Adopter-, Implementation Process-, and Intervention-related factors) and the questions were chronologically ordered to follow the implementation process. Twenty-one informants were interviewed, including six out of ten HC managers, both of the CHC-unit managers, four out of eight CHC psychologists, and four out of six Salut facilitators.

Directed content analysis (Hsieh & Shannon, 2005) was used to analyse interview data using beforehand established categories. Factors from the Greenhalgh framework (Greenhalgh et al., 2004) were used not only to structure questions in the questionnaires and interviews but also constituted the code scheme for data analysis. The first three program stages according to Fixsen et al. (2005) were investigated: 1) Exploration and Adoption, 2) Program Installation, and 3) Initial Implementation.

Questionnaire data were analysed by focusing on the differences between reported levels of importance and levels of manifestation and on the differences between the measurement occasions. Paired differences between importance and manifestation for each individual factor were analysed using Wilcoxon’s signed rank test. To quantify differences between importance and manifestation, standardized effect sizes were calculated (Cohen, 1990). Paired differences between the two measurement occasions were analysed using Wilcoxon’s signed rank test.

**Study 4**

The key healthcare actors participating in Study 4 were the same as in Study 3, i.e. HC practitioners, CHC psychologists and Salut actors.

Data collection was performed between November 2010 and June 2016 as a follow-up on Study 3. Some data presented in Paper IV were gathered during Study 3. The focus was on two parallel issues (Glasgow et al., 1999): 1) the ICDP intervention’s impact on work practices and on the content of parental support groups (using RE-AIM dimensions Efficacy and Implementation/fidelity for analysis), and 2) progress and strategies related to the implementation of ICDP (using RE-AIM dimensions Reach and Adoption for analysis).

To suit the study purpose, all five RE-AIM framework dimensions used for analyses focused on the organisation and the actors involved. The ultimate target population of ICDP, the parents and children, were not included in the study, as there was a lack of knowledge of to what extent ICDP had really been
implemented. The ultimate target population of ICDP, the parents and children, were not included in the study, as there was a lack of knowledge of to what extent ICDP was really implemented. The operationalization of the five RE-AIM dimensions used is provided in Table 4. As in Study 3, a mixed methods approach was adopted, and data from questionnaires, semi-structured interviews, archives and observations were gathered. The questions posted in questionnaires and interviews were aimed at capturing changes in work practices and the fidelity of these changes to core elements of the ICDP. These questions were constructed based on literature provided by the ICDP-foundation (education course books and material), and on a quality assurance questionnaire developed by the ICDP foundation. The questionnaire also included the same questions as those used in Study 3 (regarding implementation factors). Descriptive statistics was used to analyse data on changes of work practices and fidelity. In the same manner as in Study 3, paired differences between importance and manifestation for each individual factor were analysed. A combination of conventional and directed content analysis was used to analyse qualitative data (Hsieh & Shannon, 2005).
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Original RE-AIM definition (Glasgow, et al., 1999)</th>
<th>Definition in this study</th>
<th>Outcome variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach</td>
<td>The number, proportion and representativeness of individuals who participated in a given initiative.</td>
<td>The number and representativeness of the previously selected practitioners that participated in the ICDP initiative.</td>
<td>Among adopters The number and representativeness of beforehand selected HC-practitioners that participated and completed ICDP education. Adherence to the original plan for participation and dissemination of the ICDP.</td>
</tr>
<tr>
<td>Efficacy</td>
<td>Effects of an intervention on important outcomes, including potential negative effects, quality of life, and economical outcomes.</td>
<td>Effects on practitioners’ performance (work practices) and attitudes.</td>
<td>Effects on work practice, attitudes, or other effects after education (adopters’ perspective).</td>
</tr>
<tr>
<td>Adoption</td>
<td>The absolute number, proportion and representativeness of settings and intervention agents who are willing to initiate a program</td>
<td>The willingness and motivation of HC practitioners to offer/practice ICDP and strategic actors activities to support implementation of ICDP.</td>
<td>Adopters self-reported attitudes regarding willingness to include ICDP in their work practice. Adopters and implementation facilitators’ perspectives and activities related to implementation factors.</td>
</tr>
<tr>
<td>Implementation</td>
<td>At the setting level implementation refers to the intervention agents’ fidelity to the various elements of an intervention’s protocol.</td>
<td>Fidelity to the core elements of ICDP and their use.</td>
<td>ICDP ‘fidelity’. - Education content, intention and applicability. - Adopters’ application of ICDP (seven principles, three dialogues and eight interaction themes) in parental support groups.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>The extent to which a program or policy becomes institutionalized or part of the routine.</td>
<td>Two issues evaluated over time: 1) The implementation process, i.e. changes in perceptions and activities among healthcare actors regarding factors influencing implementation. 2: The ICDP in practice i.e. changed work practice over time.</td>
<td></td>
</tr>
</tbody>
</table>
6. Results

This chapter presents findings related to the three case studies. The findings are organized according to the specific aims of the thesis and based on descriptions provided in the four papers appended. The first part (6.1) presents strategies used by the implementation facilitators in the cases studied (summarized in Table 5 and 6). The second part (6.2) presents adopter perspectives on different implementation factors in Case DVO and Case ICDP (summarized in Table 7). The third part (6.3) summarizes findings concerning whether or not important implementation factors were addressed by the implementation facilitators (by the use of tailored implementation interventions) (Table 8). Finally, results on implementation outcomes, based on process evaluations, for Case NPPS and Case ICDP are presented. Findings reflect early stages of the implementation process.

6.1 Implementation strategies used in the three cases

Different implementation facilitators were involved in all three cases studied. These actors had a more or less clearly stated mission to facilitate the implementation processes of the different interventions. This section presents findings regarding the implementation strategies, defined as the set of more or less explicitly intentional activities, used (by implementation facilitators) to facilitate implementation.

The results are also related to Fixsen’s model of stages, focusing on the three initial stages of implementation; Exploration, Program Installation and Initial Implementation (Fixsen et al., 2005). According to Fixsen, the stage Full implementation is reached when 50% or more of the intended practitioners, staff, or team members are using an effective intervention with fidelity and good outcomes. This thesis and its studies focus mainly on the early stages of implementation. The full implementation stage is yet to be reached in the studied cases.

Case NPPS: The National Perinatal Patient Safety program

The implementation strategy used to develop work routines aiming for increased patient (infant) safety was embedded in the design of the NPPS program. The strategy consisted of three core implementation interventions used to enhance the implementation of new work routines. Prior to the execution of these implementation interventions, representatives of the NPPS steering committee visited the delivery units to give a structured program introduction and present the local procedures to unit managers and staff representatives. The core interventions are listed below (a–c).
a) The first intervention was a *structured self-assessment procedure*. A self-assessment instrument with 26 questions connected to seven previously known risk areas was used to illuminate relevant aspects and gaps between ideal situation and present procedures. Two main questions were recurrently asked throughout the self-assessment for each area: 1) What measures, guidelines, or routines relevant to patient safety are currently in place at your unit?, and 2) How do you/does your unit ensure that these patient safety measures are adhered to? The involvement of all professional categories was stated as a prerequisite for the self-assessment procedure. The main purpose with the self-assessment was to discern strengths and weaknesses in current practices in a structured way, where the results would provide a base for prioritizing improvement actions and to create opportunities for sharing experiences and to support a holistic perspective.

b) The second intervention consisted of a *peer review process*. The delivery units were visited by a peer-review team two to three months after the self-assessment. Senior obstetricians, midwives and neonatologist had been carefully selected and asked to serve as peer reviewers by the professional organisations. They obtained detailed instructions on the peer-review process and on their role and peer-reviewers at a two-day seminar. A document based on questions used in the self-assessment procedure served as support for a structured review process. In this document, new or updated information identified during the visit or in dialogue with the clinic staff was noted. The peer review process aimed both at acknowledging and strengthening or adding new input to the representation of the situation already established by the delivery unit team themselves.

c) A *formal agreement on actions* was the third intervention. The peer-review team presented a *written feedback report* on their views on strengths and weaknesses, prioritized areas for improvement and proposed improvement measures. Ultimately, *a written agreement* with a detailed plan of action was produced jointly by the delivery unit team and the peer-review team. These written agreements were supposed to create a positive pressure for change at the delivery units.

In addition to interventions a)–c), a *financial incentive* related to fulfilment of measures/actions was used. Six months after the improvement actions, a written report from the delivery units was evaluated by the reviewers in order for them to decide on the financial incentive. National actors involved in the NPPS program also developed a web-based *cardiotocography (CTG) education* (on how to interpret cardiotocography) that was offered to staff in delivery care.

The strategy used by implementation facilitators in Case NPPS summarized in these interventions may be described as an explicit and ‘purposeful procedure’ that was defined beforehand. The implementation facilitators planned, designed
and ensured that the core interventions of the implementation strategy were thoroughly executed. The implementation facilitators were situated on a national level, not ‘present’ in the local situations (delivery units) where changes were supposed to occur. Peer-reviewers were used to reach the units (in some cases the implementation facilitators acted as peer reviewers themselves).

**Case DVO: The Dynamic and Viable Organisation**

In Case DVO, the role and strategies used by an intra-organisational change facilitating function (CFF), i.e. the County Council’s internal development unit, were investigated. Involving a team of facilitators can be considered to be an important part of an implementation strategy per se. Paper II provides empirical findings on what these facilitators actually did in practice to support change, especially whether and how the CFF addressed factors highlighted by clinic members as being important to address (6.3).

The CFF’s role and mission in relation to the DVO was not defined before the start of the DVO implementation. Instead, the role and strategy were formed by the CFF-members over time. They emphasized that top management had shown strong support for the DVO intervention, but also that, even if top managers initiated and enforced DVO, they were less clear about what really constituted the intervention, how it should be implemented, and what the expected outcomes were. Accordingly, they did not provide any guidance. Thus, the results indicate an uncertainty within the CFF group regarding the facilitation assignment and what the County Council’s top management wanted them to support. The CFF members presented many reflections regarding their role and capacity to manage the DVO implementation:

“It is a constant balancing act between being a supporter/facilitator on the one hand and being a promoter/driving force/leader and carrier of the DVO vision on the other. The latter ought not to have been included in our assignment to the extent that it is”.

A major concern for the CFF at the early stage of the DVO implementation was how best to launch the intervention. Focus was on increasing adopter motivation by presenting advantages of the DVO intervention and communicating implications to clinic members, but there were challenges:

“A common understanding of DVO among us and top management is needed before we can launch it at the hospital clinics. It is important that we convey the same message; otherwise this will be a complete mess. The more or less explicitly expressed obligation to participate does not do wonders for staff motivation”.

Another implementation intervention was the creation of teams at staff level and meso management level, and the establishment of communication arenas, e.g. learning seminars and other means of communication and collaboration. CFF
members also stated that encouraging the improvement teams themselves to define for relevant areas of improvement was part of the implementation strategy (to enhance adopter motivation). Results show that the CFF members sought to provide hands-on support during the implementation in order to increase competence and capacity to work with systematic improvement.

The CFF members experienced role ambiguity and an unclear definition of what constituted DVO. In this case, the implementation facilitators were part of the organisation’s support-structure and involved in the development of DVO, and present (in clinics/units) where improvements were supposed to occur. The strategy used can best be described as a ‘socially accomplished activity’. The strategy was developed over time, partly based on questions raised and feedback from staff and managers involved. In this case, the implementation strategy became closely interlinked with the part of the stated intervention aim expressed as: to build a multi-level support structure with communication arenas and teams at multiple levels.

**Case ICDP: The International Child Development Program**

Studies 3 and 4 (Paper III and IV) reflect a situation in which the strategy of implementing ICDP was unclear to respondents, especially at the earliest stages of implementation (Paper III). The ICDP education was the major implementation intervention. Results show that the initial plan for this education was created by Salut actors and aimed at offering the Level I education to as many of the healthcare practitioners as possible, based on the grant obtained. When planning this effort, the overall format of the ICDP education (three different levels) was unknown to the Salut actors and other implementation facilitators:

“The education concept was outlined on the web-site, but it is really hard to comprehend what is stated there. The program sequences, in relation to what you actually purchase …and then get. It all looks beautiful but is fuzzy and not that clearly written.”

Over time, the format of the education (three levels) became clearer to the Salut actors. Two years into the implementation, a more long-term plan was developed. The plan, presented in documents, was expressed as:

“All child healthcare staff will be educated on ICDP at Level I, starting with 10 HCs. At least one staff-member from each HC will be educated at ICDP Level II, and thereby become a certified ICDP counsellor. At least three psychologists from the CHC unit will be educated at ICDP Level III, to become certified ICDP advisors and be able to educate the staff at ICDP Level I and II (and thereby disseminate ICDP countywide).”

No specific time-schedule for this plan was documented (Paper IV). Results indicate a high degree of adherence to the initial plan for education. All those from the first round of the ten HCs in the region who were invited to participate
in Level I education did so. Two HCs dropped out before Level II education was initiated, resulting in a total of eight participants from eight HCs starting and finishing Level II education. All psychologists at the CHC unit participated in both Levels I and II. In 2014–2015 three of the psychologists went through Level III education, thus becoming certified ICDP-advisors able to teach at Levels I and II. Analysis of questionnaires and archive data showed that all categories of HC practitioners were represented (Paper IV).

Besides the stepwise educational intervention, the implementation facilitators all described that careful considerations had been made before deciding to implement ICDP, focusing on the intervention’s compatibility with the existing practice. One CHC psychologist stated following:

“When we looked into the possibilities, the ICDP seemed to be the method closest to the existing practice in child healthcare.”

ICDP was considered by all implementation facilitators as a promising way to promote children’s mental wellbeing. However, all informants stated that discussions across groups regarding visions and expected outcomes, especially among HC managers, were insufficient. Interviews with HC managers indicated that their involvement and commitment with ICDP were limited, if not entirely absent, and this was exemplified by statements like:

“What are you talking about? That we have decided to engage in what? ICDP?”

No comprehensive plan or strategy for implementation seemed to have been developed at the early stages of the ICDP implementation. Confusion regarding roles and responsibilities was expressed by several implementation facilitators. One statement provided by one of the Salut actors describes the situation:

“We are struggling with our role in relation to the CHC unit in terms of how we should see ourselves and what our mission is in relation to theirs. We wish that everything we do will eventually be “owned” by them.”

Other actors from Salut claimed that HC managers were the natural key actors and owners of the implementation:

“I would say that the manager at each health centre should be responsible for “making things happen” at his or her health centre.”

Results from the later interviews with implementation facilitators (Paper IV), indicated that a division of responsibilities had been created over time. The main responsibility for ensuring further implementation (after education) was allocated to the CHC unit. A plan for ensuring intervention sustainability and dissemination had also taken shape, by letting three psychologists at the CHC fulfil the ICDP Level III education so that they would be able to educate HC-practitioners at Level I & II. On the other hand, the HC-practitioners’ (adopters’) perceptions presented in questionnaires and interviews, imply that the
implementation facilitators’ decisions and activities had not yet reached the HC-practitioners in 2014. The interviews with HC-practitioners at a later stage of the implementation process indicated that hesitation in using the ICDP in parental support was attributable to a lack of information or directives on what was expected of them after the Level I & II education, but also due to a lack of time and the absence of follow-ups (Paper IV). Thus, besides the long-term plan for education, the HC-practitioners’ participation in the first-level education, and the careful considerations made when choosing the intervention, few activities were conducted specifically directed at facilitating the ICDP implementation at the early implementation stages (Papers III and IV).

Some implementation facilitators argued that inadequacies of the implementation process were partly due to the short time frame, a restriction put in place by the external funding agency. This resulted in a limited time for preparation and anchoring activities:

“In an ideal world, we would have had the time to plan this effort differently and prepare for the implementation. If only we had not been in such a hurry.”

This situation, in addition to the fact that conditions built into the ICDP education format was not clear from the beginning, rendered in a vague, non-comprehensive strategy.
Summary of findings

For a better overview the core implementation interventions identified in each case have been summarized in Table 5.

Table 5. Summary of identified strategies in cases NPPS, DVO and ICDP, including core implementation interventions.

<table>
<thead>
<tr>
<th>Case NPPS¹</th>
<th>Case DVO²</th>
<th>Case ICDP³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-assessment – to illuminate gaps.</td>
<td>The use of team of change agents (CFF) – to enhance implementation by involving experienced facilitators.</td>
<td>Thorough investigations and considerations when choosing intervention ICDP – to match the intervention to current needs, values and methods in child healthcare.</td>
</tr>
<tr>
<td>Peer review – to examine and contribute to a plan of action, based on self-assessment.</td>
<td>Creating teams on different levels and devolving decision-making to these teams.</td>
<td>Creating and executing a long-term plan for the ICDP-education – in order to achieve countywide dissemination.</td>
</tr>
<tr>
<td>Written agreement for change – to further enforce action.</td>
<td>Building and providing communication arenas such as ‘learning seminaries’</td>
<td></td>
</tr>
<tr>
<td>Financial incentive – to further motivate actions.</td>
<td>Encouraging small-scale testing of improvements – to develop skills related to work with continuous improvements.</td>
<td></td>
</tr>
<tr>
<td>Developing and providing education concerning the use of cardiotocography – to develop relevant competence.</td>
<td>Providing adequate information and hands-on support – to induce motivation among adopters and further strengthen relevant skills.</td>
<td></td>
</tr>
<tr>
<td>- Explicit, defined beforehand</td>
<td>- Socially accomplished activity, developed over time</td>
<td>- Vague</td>
</tr>
<tr>
<td>- Multifaceted</td>
<td>- Multifaceted</td>
<td>- Single faceted</td>
</tr>
</tbody>
</table>

¹NPPS = National Perinatal Patient Safety program, ²DVO = Dynamic and Viable Organisation, ³ICDP = International Child Development Program

A summary of how the strategies used in the three cases correspond with key activities or ‘how-to’ advice provided in Fixsen’s process model (Fixsen et al., 2005) is provided in Table 6.
Table 6. Summary of key activities related to different stages of implementation (Fixsen et al., 2005) and whether strategies used in the three cases corresponded to these stages.

<table>
<thead>
<tr>
<th>Stages 1-3</th>
<th>Case NPPS¹</th>
<th>Case DVO²</th>
<th>Case ICDP³</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exploration and Adoption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Acquisition of information and exploration of options</td>
<td>unknown</td>
<td>mandatory</td>
<td>yes</td>
</tr>
<tr>
<td>- Assessing and creating readiness</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>- Assessing fit between interventions and needs</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Program Installation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Selecting staff</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>- Identifying sources for training and coaching</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>- Providing initial training for staff</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>- Define outcome expectations and how they should be assessed</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>- Assuring access to space, materials and equipment</td>
<td>unknown</td>
<td>unknown</td>
<td>no</td>
</tr>
<tr>
<td><strong>Initial Implementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- External support for change at the practice level</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>- Develop the staff competencies required</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>- Adjust organisation roles and functions to align with the program</td>
<td>unknown</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

¹ NPPS = National Perinatal Patient Safety program, ² DVO = Dynamic and Viable Organisation, ³ ICDP = International Child Development Program

### 6.2 Adopters views on implementation factors

In Case DVO and ICDP, the adopters’ perspectives on the importance of different implementation factors and their manifestation were investigated. More specifically, whether factors perceived as important in relation to the implementation were also addressed or ‘in place’. In Case DVO, a more inductive approach was used, whilst in Case ICDP a primary deductive approach was adopted (see also section 5.2). A vast majority of the factors that were reported by the respondents can also be found in the implementation literature and existing determinant frameworks. Regarding findings from both cases, the factors presented in this section (summarized in Table 7), are presented in relation to the domains outlined in Figure 1 and labelled in accordance with existing determinant frameworks.
Case DVO: The Dynamic and Viable Organisation

The most frequently mentioned factors were related to the Intervention domain. The relative advantage of the intervention was the factor most frequently commented on by development group members and that often occurred in comments by improvement team members as well. DVO was perceived by almost all respondents as being advantageous. Development group members did not find DVO to be too complex, while improvement team members were more likely to report this as a problem. Trialability (the small-scale testing of improvement) was valued positively by development group members.

Factors reported on in the System/Context domain were dedicated time and resources, which were mainly stated by development group members as being not manifested, while improvement team members had the opposite experience. Management support was overall stated to be manifested. Overall, the clinic/unit members described the organisational context as receptive to change, with visionary staff, a climate open to experimentation and risk-taking, and a system with an absorptive capacity for new knowledge and resting on a solid basis of skills, abilities and a learning culture. The proportion of negative statements was comparably higher regarding structural factors, e.g. size and formalization. These factors were more often referred to as not manifested, but were also described as neutral conditions.

Factors related to the clinic/unit members themselves, i.e. Adopter-related factors such as tension/need for change and motivation, were highlighted as important by all clinic members. Tension for change was a commonly described factor, but seen as not manifested. Statements related to the Implementation Process domain concerned communication to a high degree. The clinic/unit members described communication and information regarding the implications of DVO as important. While a majority of the development group members stated that this was a manifested factor, the improvement team members were more negative. The clinic/unit members had varied views on the creation of teams/groups. Improvement team members had few comments on this, but, when they did comment, they were always negative and questioned the value of the team composition. Development group members were more positive. The hands-on support provided in this case by the CFF was mainly valued as manifested by the development group members, whilst improvement team members to a greater extent expressed a lack of support. Clinic/unit members were continually invited to participate in learning seminars to spread ideas and share DVO experiences, which was mainly perceived as positive. Development group members experienced a lack of monitoring and feedback.
Case ICDP: The International Child Development Program

The HC-practitioners’ perceptions of the degree of importance and manifestation of different implementation factors during the ICDP implementation was investigated. This was done using the three initial stages in the process model of Fixsen et al. (2005): 1) Exploration and Adoption; 2) Program Installation, and 3) Initial Implementation.

The HC practitioners offered consistent descriptions of the initial phase of implementation. Results from the repeated questionnaire (three occasions) show that a vast majority rated all Implementation Process-related factors as being ‘not at all’ or ‘only slightly’ manifested, while the estimated importance of the same factors were rated as ‘relatively high’ or ‘very high’. Implementation Process-related factors showed the highest degree of discrepancy between importance and manifestation. The most common estimations were ‘very high’ for the degree of importance and ‘not at all’ for the degree of manifestation. None of the individual Implementation Process factors results differed much from this pattern.

A majority of the informants viewed the importance of System/Context-related factors as ‘high’ or ‘very high’, while the estimations of the manifestations of these factors were more varied. The work-place climate factor (questionnaire statement: “There is a positive attitude towards learning new things to add to existing practice at my workplace”) stands out as being estimated more positively regarding manifestation than the other System/Context-related factors. If this factor is excluded from the analysis, the resulting overall pattern becomes more negative because the discrepancy between the importance and manifestation of this type of factors then increases.

Among the Adopter-related factors, both ‘motivation’ and ‘need for change’ were viewed as ‘highly important’, and their manifestations were also rated high. Similar patterns were seen regarding the Intervention-related factors. These results show that both of these categories contain factors that the informants stated to be both important and manifested. Few significant changes between measurement occasions (stages) were found, indicating that few changes in perceptions over time did occur.

The interview findings were consistent with the questionnaire results in terms of discrepancies between the factors’ importance and their manifestation. All HC practitioners offered a consistent description of the early stages of implementation. The HC practitioners expressed concerns (mainly when referring to the Initial Implementation stage) that Implementation Process-related factors, such as ‘communication and information’, ‘hands-on support’ and ‘a comprehensive plan of action’, were not manifested or addressed by anyone:
“We really don’t know what is going to happen next because we felt from the beginning that we have not received any information ... so we do not know what form this process will take.”

The HC practitioners stated that these deficiencies led to confusion and irritation. Furthermore, they did not perceive that there were any actors responsible for facilitating the implementation. No clear expectations of what was to be done after the ICDP-education were mentioned and the HC practitioners expressed ambiguity regarding how they were supposed to transfer what they had learnt into their work practice:

“Is it up to us now to do what we want with this new knowledge? Shall we offer parental groups according to the ICDP, or should we just let what we’ve learned inspire us in our daily meetings with parents and children?”

Factors perceived to be well manifested through all stages were motivation, relative advantage of the intervention itself, the need for change and the interventions’ compatibility with current practice and norms:

“From the very beginning, we could see the benefits of this.”

**Summary of findings**

Table 7 provides an overview of whether the adopters in Case NPPS and Case DVO perceived the implementation factors pointed out to be important, as also being manifested. Factors brought up by respondents that are not (to the best of my knowledge) represented in the currently available determinant frameworks in the implementation literature are highlighted in italics in Table 7.
6.3 Implementation factors addressed by the strategies used

The strategies – the set of activities – used by implementation facilitators in the three cases have been presented above (6.1). Several factors that might hinder or enhance implementation, stemming from (and labelled in accordance with) frameworks in the implementation literature, have also been presented from the perspectives of adopters in Case DVO and Case ICDP (6.2). In this section, the focus is on presenting whether and how the implementation strategies used
addressed factors known to affect implementation, i.e. whether tailored interventions were used.

In general, tailored interventions, as an implementation strategy, consist of an investigation of case-relevant factors (hindrances and enablers), followed by design of a strategy to target these factors (Wensing et al., 2010). No such explicit investigation of case-specific factors was carried out by the implementation facilitators in the cases studied. Instead, it was part of what was investigated in Studies 2–4.

Case NPPS: The National Perinatal Patient Safety program

The main focus of Study 1 was to evaluate implementation outcomes of the implementation strategy as described above (6.1). Focus was on the adopters’ ‘readiness for behavioural change’, defined in this case as a readiness to change work practice in order to increase patient safety. To achieve this readiness, a development of a team mental model of the gaps between current practices and ideal patient safety routines among actors involved in the delivery process was important. Thus, the study of Case NPPS differs somewhat from the other studies regarding the focus of the investigation.

In Case NPPS, the results indicate that several domains and factors known to affect implementation were addressed by the core implementation interventions and activities of the NPPS program. A form of tailored interventions, with the aim of facilitating the implementation of new patient safety procedures, was used and embedded in the design of the core components of the NPPS program.

Case DVO: The Dynamic and Viable Organisation

In this case, patterns in the perspectives on implementation factors among participating actors at meso management and staff levels have been presented above (6.2). In addition, CFF-members views of implementation factors, their importance and the way they were strategically addressed (or not) by the CFF, were investigated.

Most of the factors brought up by the clinic department members were also mentioned by the CFF members. The CFF respondents referred to some of these factors as something they were responsible for, i.e. they described on-going activities or action plans to address these factors. The CFF respondents also referred to some factors as important to address, but that addressing them was not their responsibility. Analysis of the CFF interviews also indicated that the CFF members related factors to each other when describing them in reasoning. Besides describing factors that were directly addressed, the indirect effects this could have on other factors were expressed. The analysis of the CFF statements reveal a focus on enhancing the Adopter-related factors (motivation, tension/need for change, learning styles, etc.) by addressing (‘using’) the
Implementation Process-related factors (such as communication/information and hands-on support).

The CFF role and mission in relation to DVO was not defined before the start of DVO, and the role and strategy was formed by the CFF members themselves over time (see 6.1). Considering the range of factors related to different domains that were highlighted as important by clinic members, the evolving CFF strategy left some factors unattended.

**Case ICDP: The International Child Development Program**

All healthcare actors (implementation facilitators and adopters) involved in the implementation of ICDP offered consistent descriptions of the early stages of the ICDP implementation. Overall, results show a clear discrepancy between perceived importance and perceived manifestation, especially for the Implementation Process- and System/Context-related factors. Factors manifested through all stages were: motivation, relative advantage of the intervention itself, tension/need for change, and the interventions compatibility. The Implementation Process factor ‘assessment of implications of the intervention’ was also addressed in the sense that thorough investigations and careful considerations were made when choosing the parental support program to be implemented (ICDP). Case ICDP provides a description of several implementation factors and barriers to implementation that were not addressed, even though they were perceived as being important by the actors involved, for example plan of action, hands-on support, managerial support and follow ups-feedback on progress.

**Summary of findings**

The results presented above are based on data from all the three cases and sum up some of the findings presented in 6.1 and 6.2. In Table 8, the results are summarized and related to the adopters’ views on implementation factors presented above for Case DVO and Case ICDP (6.2). The factors listed in Table 8 indicate that they are mentioned either by adopters, implementation facilitators or both. The factors are presented within domains outlined in Figure 1 and labelled in accordance with existing determinant frameworks.
Table 8. Important implementation factors in Cases NPPS, DVO and ICDP, as perceived by adopters and whether they were addressed by the strategies used.

<table>
<thead>
<tr>
<th>Adopters views – factors important to address</th>
<th>Factors addressed by the implementation strategies used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Case NPPS¹</td>
</tr>
<tr>
<td><strong>System/ Organisational context</strong></td>
<td></td>
</tr>
<tr>
<td>Managerial support</td>
<td>yes</td>
</tr>
<tr>
<td>Work-place attitudes (climate)</td>
<td>no</td>
</tr>
<tr>
<td>Funding and time</td>
<td>yes</td>
</tr>
<tr>
<td>Vision and goals</td>
<td>yes</td>
</tr>
<tr>
<td>Structural determinants</td>
<td>no</td>
</tr>
<tr>
<td><strong>Adopter characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>no</td>
</tr>
<tr>
<td>Prior knowledge</td>
<td>yes</td>
</tr>
<tr>
<td>Learning style</td>
<td>no</td>
</tr>
<tr>
<td>Tension/need for change</td>
<td>no</td>
</tr>
<tr>
<td><strong>Implementation Process</strong></td>
<td></td>
</tr>
<tr>
<td>Communication/information</td>
<td>yes</td>
</tr>
<tr>
<td>Assessment of implications</td>
<td>yes</td>
</tr>
<tr>
<td>Hands-on support</td>
<td>yes</td>
</tr>
<tr>
<td>Plan of action</td>
<td>yes</td>
</tr>
<tr>
<td>Division of roles and responsibilities</td>
<td>yes</td>
</tr>
<tr>
<td>External and internal collaboration</td>
<td>yes</td>
</tr>
<tr>
<td>Follow ups-feedback on progress</td>
<td>yes</td>
</tr>
<tr>
<td>Use of change agents</td>
<td>no</td>
</tr>
<tr>
<td>Anchoring on all relevant levels</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Intervention (implementation object)</strong></td>
<td></td>
</tr>
<tr>
<td>Relative advantage</td>
<td>yes</td>
</tr>
<tr>
<td>Compatibility</td>
<td>yes</td>
</tr>
<tr>
<td>Low complexity</td>
<td>no</td>
</tr>
<tr>
<td>Possibility to adapt</td>
<td>yes</td>
</tr>
<tr>
<td>Trialability</td>
<td>no</td>
</tr>
</tbody>
</table>

¹ NPPS = National Perinatal Patient Safety program, ² DVO = Dynamic and Viable Organisation, ³ ICDP = International Child Development Program
6.4 Implementation outcomes from process evaluations

The studies of Case NPPS and Case ICDP partly focused on the effects occurring during the implementation process among adopters. In Case NPPS, effects on the readiness for change by the development of a team mental model among the adopters were investigated (Paper I). In Case ICDP, the effects on and changes in work practices (including the fidelity aspect) and the effects on adopters (Paper IV) were investigated. These results will be related to the implementation strategies used in Case NPPS and Case ICDP.

Case NPPS: The National Perinatal Patient Safety program

A main focus of Study 1 was to explore the impact of the core components of the NPPS program on ‘readiness for behavioural change’, by the development of a team mental model among team-members. The qualitative data was analysed based on the hypothesized pattern of desirable text-segments related to each of the core components of the NPPS program. Thus, an ‘ideal model’ of responses in interviews related to the core implementation interventions were created, that would indicate the development of a team mental model. Proportions of agreement with the ideal model were calculated.

Results from analysing the divergence and consistency in relation to this hypothesized pattern show that the impact of the self-assessment corresponded closely to the ideal model. A total of 88 percent of the respondents described in interviews a content that corresponded with the ideal case to 50 percent or more. The results on the self-assessment process show that it illuminated areas for improvements, but also showed strengths that the team or the delivery unit possessed:

“*The self-evaluation process gave us a chance to elucidate what is really being done and not done*”.

New knowledge structures and a mutual reference, a team mental model, emerged during the process and became more or less internalised by the participants. Moreover, many teams had already taken action to correct minor, non-complex problems during this first intervention. Most respondents expressed positive experiences providing new insights.

“*It started an ongoing discussion, and a process in which we all started thinking explicitly about what we are doing and why when we perform our day to day activities.*”

Although the peer review did not render in anticipated effects, the intervention was appreciated by a majority of the participants. The peer review visit was viewed as enjoyable. It was described as an exchange of knowledge and experiences that gave encouraging feedback and confirmed the teams’ own ideas:
“The panel encouraged us to explain ourselves further, which made the picture even clearer for everyone”.

Thus, results indicate that the peer-review panel strengthened and confirmed the participants’ own conceptions rather than adding new ones, especially in Sequence II. The respondents also expressed some negative views and less positive experiences concerning this intervention.

The formal agreement/written contract strengthened and confirmed established conceptions. The contract, if signed, provided motivation for action:

“The signing of the contract really pushed actions ahead”.

General comments regarding the entire NPPS program and its potential future development were separated and summarised. These comments show that most respondents in general saw the project as being very positive and greatly appreciated. The fact that the project was initiated by the professional organisations was noted as being very beneficial. The few explicitly negative comments relate to questioning the use of a project format when working with safety issues, or doubting sustainability of the effects. Three main issues frequently arose in the interviews: 1) suggestions or requests to share knowledge about procedures and solutions across delivery units (general outlines or guiding principles nationwide), 2) requests also to include a maternal perspective (maternal safety issues) in this kind of project, and, 3) the view that this type of intervention series ought to be conducted continuously. Another positive side-effect was the dissemination of knowledge that also occurred as peer reviewers brought back valuable impressions and ideas to their own workplaces. Some answers indicated that one would not have done such thorough work on self-assessment without the planned follow-up and visit from a peer review panel.

**Case ICDP: The International Child Development Program**

In Study 4, the effects of the implementation strategies on HC-practitioners’ work practices were investigated and measured in the dimensions Efficacy and Implementation/Fidelity. In terms of questionnaire results (Paper IV), the HC practitioners’ application of the core elements of ICDP appeared to be sufficient. On the other hand, overall results indicate that the question of which behavioural changes and changes in work practices/approaches that were expected and crucial, remained unanswered during the Level I education. The answer to this question became clearer for participants during the Level II education, but it was still not obvious to them when returning to their ordinary work.

There were many perceived similarities between the core elements of ICDP and the approach and work practices already used in child healthcare. The HC-practitioners themselves rated their degree of adherence to ICDP core elements
(fidelity) as high even before entering education Level I. Interview data (Paper IV) showed that, at some HCs, the use of ICDP over time had increased and become established, while at others ICDP had more or less faded out over time. There was a large variation in how (well) knowledge gained during Level I and II education was transferred to the HC settings. At some HCs, the practitioners stated that their work practices had become “inspired” or “influenced” by ICDP, while at other HCs, a more stringent way of practicing ICDP was described, both in parental support groups and in daily contacts with parents and children.

At the time of the study, none of the HCs investigated offered the ICDP-program in their parental support groups in its original form. Instead ICDP was integrated to various degrees into the ordinary parental support group format. Results from interviews with implementation facilitators indicated that there was no intention to implement ICDP in its original form. Instead, the intention was to integrate ICDP with the already existing approaches, procedures, and content used in the local child healthcare practices. How, and to what extent, this integration should take place was not clear among the implementation facilitators and consequently not communicated to the adopters (child healthcare practitioners). This ambiguity resulted in confusion at some HCs, while at other HCs practitioners took charge of the inclusion of ICDP elements into their work practice themselves.

Overall, it can be concluded that uncertainties related to the intervention itself along with incomplete implementation strategies, and the neglect of important implementation factors, negatively affected the uptake and use of ICDP. The question of how to transfer core elements of ICDP from the educational setting to practical settings was not answered and outcome expectations were not defined.
7. Discussion

The overall aim of the thesis was to contribute to the understanding of how implementation of complex interventions in healthcare can be improved. This aim was approached by studying cases of complex improvement interventions within the Swedish healthcare system, and by investigating whether the efforts made to support these implementations correspond to scientific knowledge on implementation. In this chapter, the role of implementation science in healthcare improvement efforts will be discussed in the light of the four studies in the thesis.

The specific aims were to investigate three cases of complex improvement interventions with a focus on four aspects: strategies used by implementation facilitators; perspectives among adopters on factors affecting implementation processes and outcomes; whether the strategies used addressed implementation factors; and implementation outcomes in relation to those strategies.

7.1 Main findings

Case NPPS

The strategy used by implementation facilitators in Case NPPS was multifaceted and designed in advance. Implementation facilitators planned, designed, and ensured that core implementation interventions of the implementation strategy were executed in a rational manner, i.e. based on a rational model over the implementation process.

The strategy used in NPPS may be described as a ‘purposeful procedure’. First, thorough communication and information activities directed towards intended adopters (staff at delivery units) and education and training of peer-review teams were carried out. Thereafter, core components of the strategy were executed (self-assessment, peer review and written agreement for change). The designated implementation facilitators were situated at a national level, not ‘present’ near intended adopters at the local delivery units where changes were supposed to occur.

Several important implementation factors related to all four domains (System/Context, Adopter, Intervention and Implementation Process) were targeted by the implementation strategy. The evaluation of implementation outcomes (measured as effects on readiness for change by the development of team mental models among intended adopters) indicated positive results. Team mental models and a mutual frame of reference emerged among the intended adopters. Over time, these team mental models and frames of reference became more or less internalized by the intended adopters. Moreover, many teams of
intended adopters had taken action to correct minor, non-complex problems even during the self-assessment intervention. More comprehensive changes were decided upon through the contract/written agreement.

**Case DVO**

In Case DVO, the results show that the designated implementation facilitators (CFF) struggled with role ambiguity and an unclear definition of what really constituted the intervention. The implementation facilitators were all working at an internal support unit (also involved in the development of DVO) and regularly interacted with actors at the clinics/units where improvements were supposed to occur.

In contrast to Case NPPS, the strategy used in Case DVO can be described as more of an intuitive ‘socially accomplished activity’. It was developed over time, partly based on questions raised by and feedback from staff and managers involved. Over time, the planned implementation strategy became closely intertwined with that part of the stated intervention aim expressed as: “to build a multi-level support structure with communication arenas and teams at multiple levels”.

Intended adopters perceived several factors to be important in relation to the implementation of DVO within the four domains: Intervention, System/Context, Adopter, and Implementation Process. CFF members referred to factors as being related to one another when describing their course of action to enhance implementation. Besides describing the factors that were directly addressed, the indirect effects that addressing a certain factor could have on other factors were described. Considering the range of factors in different domains that were highlighted as important by clinic members, it could be concluded that the evolving CFF strategy did not cover all the relevant factors described. The focus of the CFF was mainly on Adopter-related factors (motivation, tension/need for change, dedication, learning styles, etc.) by the use of Implementation Process-related factors’ (hands-on support and communication/information). The aim to embrace a more holistic perspective (taking the whole system into account), stated to be part of their assignment in relation to DVO, was not completely fulfilled.

**Case ICDP**

Regarding Case ICDP, results reflect a shortage of planned strategies during the ICDP implementation at its early stage. The main implementation intervention was education of staff.

There was no development of a more comprehensive implementation strategy covering the implementation factors in different domains that were highlighted
as important among adopters. Still, adopter motivation was retained over time, despite the lack of strategies planned beforehand and the confusion and irritation that followed as a consequence. The lack of a comprehensive implementation strategy negatively affected the implementation of ICDP. Vague directives and unclear expectations regarding whether and how ICDP should be adapted to fit current practices, or whether fidelity to the core elements of ICDP should be preserved, added to the hesitant implementation. A rather large variation was found in terms of changes in work practices among the involved HCs. At the time of Study 4, no healthcare centre was practicing ICDP in its original form. Further, the fidelity to core elements was difficult to measure, since there were great similarities to traditional work approaches at the healthcare centres.

7.2 The role of implementation science in healthcare improvement efforts

Despite the rapid progress of implementation science, many consequences of the knowledge-practice gap, and difficulties in changing healthcare practices, still remain. In Chapter 1, it was stated that questions of impact and usefulness of current scientific knowledge on implementation in healthcare practice need further examination. In the following, insights related to the question of whether the investigated improvement efforts correspond to scientific knowledge on implementation are discussed. This includes discussing the potential impact of an improved transfer of implementation science findings into practical use.

Theory - practice correspondence

Adopters’ perspectives on implementation factors

Intended adopters’ perceptions regarding implementation factors were found to be similar in the cases studied. Questionnaire results from Study 3 showed no significant difference in the respondents’ perceptions regarding the degree of importance of various implementation factors across stages of implementation. Interview results though, showed that the Implementation Process-related factors were emphasized as being of great importance during stage 3, Initial Implementation. When referring to this stage, factors related to the Implementation Process domain were frequently mentioned by the interviewees. There was an obvious frustration among the intended adopters at the fact that these factors were not addressed.

Domains and factors perceived as being important by the intended adopters matched those previously presented in the literature on determinant frameworks (Damschroder et al., 2009; Greenhalgh et al., 2004). This could be interpreted as indicating that available knowledge on implementation (i.e. determinant frameworks) is relevant for healthcare practice.
Strategies used and whether they involved addressing implementation factors

Results on whether and how the investigated improvement efforts correspond to available scientific knowledge on implementation have been presented above. Identified adherence in practice to available ‘how-to’ advice has been summarized in Table 6. Results on whether factors affecting implementation processes and outcomes were addressed in the three cases are summarized in Table 8.

The interpretation outlined above – that knowledge of implementation is relevant for healthcare practice – is strengthened by findings from the process evaluations of implementation outcomes in Cases NPPS and ICDP. A comprehensive strategy, by which a vast majority of factors known to affect implementation are addressed, was used in Case NPPS and seems to have resulted in a desired outcome regarding a readiness for behavioural change. There was also a high degree of correspondence between activities carried out, and the ‘how-to’ advices provided in Fixens’ process model (Fixsen et al., 2005) in Case NPPS. Several of the delivery units involved also started changing their work routines shortly after participating in the core intervention components of the strategy. Findings from Case ICDP indicate that a majority of the investigated implementation factors deriving from determinant frameworks were not addressed or manifested. There was low correspondence with key activities outlined in Fixsen’s model. The evaluation of implementation outcomes, in terms of changed work practice and fidelity to core elements of ICDP, shows that this negatively affected the implementation and use of ICDP.

The strategies used varied from being purposeful, planned in advance and executed in a rational manner, i.e. in line with the definition provided by Mazza et al., (2013), to be more of social constructions (Jarzabkowski & Paul Spee, 2009), based on intuition, created over time via interaction with those involved in the improvement effort. In Case ICDP, findings indicate a non-comprehensive, vague strategy and low correspondence with available scientific knowledge on implementation. The different strategies can be described as being mainly planned and proactive; constructed and interactive; and passive and reactive. The correspondence of the planned/proactive strategy with the scientific knowledge on implementation seemed greater compared to the constructed/interactive strategy. This is in line with the more rational view represented in the implementation field, while a constructed/interactive strategy corresponds more closely with the improvement science field. The passive/reactive strategy is hard to relate and showed no correspondence with scientific knowledge on implementation.

It could be argued that variations identified among the cases studied regarding their correspondence with available scientific knowledge on implementation reflect a general situation in healthcare practice and implementation efforts made.
therein. Variations with regards to degree of complexity of different interventions in healthcare naturally affect how one seeks to implement these interventions, but also contextual aspects affect implementation efforts (Baker et al., 2010). Furthermore, a variation in experience of facilitation of change efforts among the implementation facilitators involved can be assumed. Where the implementation facilitators are situated (internal or external) in relation to the context of the improvement effort is likely to affect the choice of strategy and its focus.

Determinant frameworks and process models originating from the implementation literature have generic qualities (Moullin, Sabater-Hernández, Fernandez-Llimos, & Benrimoj, 2015). Some implementation factors highlighted as important to address in the literature and some of the ‘how-to’ advice provided in theory on implementation are likely to come to mind to anyone engaged in a change effort (e.g. secure management support for the proposed change). Thus, findings presented in this thesis that indicate consistency between ‘theory and practice’ do not necessarily mean that the chosen strategies are based on healthcare actors being explicitly informed by the implementation literature. The extent of correspondence in the cases studied does not reveal the extent to which the correspondence is a result of conscious, theoretically underpinned decisions made by the healthcare actors involved. Identified correspondences might have been random rather than systematic. As described above, there may be several natural causes of variation in strategies used in healthcare improvement efforts. Additionally, this thesis concentrates on the initial stages of implementation. Strategies used in improvement efforts have been found sometimes to vary over time (Nyström et al., 2013). Thus, low correspondence does not mean that key actors involved in implementation work randomly or without a knowledge base. It indicates that it is not easy to describe or obtain a clear declaration of the knowledge and strategies used, especially during the initial phases of implementation.

If these findings represent a wider healthcare environment, it illustrates a more random (or implicit) rather than systematic use of the available scientific knowledge of implementation in healthcare practice. In turn, this implies that there might be a parallel knowledge-practice gap: a gap between scientific knowledge on implementation and implementation strategies used in practice during improvement efforts initiated by healthcare actors.
Implementation science – for whom?

“A person who wants to find a solution to a public health problem has a different task than someone who wants to create or test a theory” (Eldredge et al., 2016, p. 8).

Based on the findings in this thesis, it can be assumed that existing knowledge on implementation is relevant for healthcare practice, but that its impact might vary, be random or non-systematic. The fact that it is relevant does not necessarily mean it is useful in its current form.

Several papers published on implementation contain phrases such as “there are implementation models and frameworks to guide scholars” in the study of innovation implementation” (e.g. Tabak et al., 2015). It appears as if new models and frameworks are developed in order to “advance implementation science” (Damschroder et al., 2009). Implementation science is a relatively young and rapidly growing field, developed by scholars who are building on and expanding a body of knowledge. In this process, they are also making implementation knowledge more and more comprehensible and useful. Thus, the impact of implementation research among implementation researchers seems to be satisfying, while less is known of its impact on healthcare practice and among healthcare actors.

Although less attention seems to have been paid to the question of impact in healthcare practice (i.e. on how to transfer implementation science findings into practical use), some important efforts have been made. The originators of the quality implementation framework (QIF) (Meyers, Durlak, et al., 2012), introduced the concept of ‘practical implementation science’. ‘Practical implementation science’ refers not only to the translation of implementation science into user-friendly resources, but also to research and actions based on this translation. Meyers and colleagues stated that one of their goals was to “outline practical implications for improving future implementation efforts in the world of practice” (Meyers, Durlak, et al., 2012, p. 464). They linked their development of the QIF-framework to the Interactive Systems Framework (ISF) for Dissemination and Implementation (Wandersman et al., 2008). The ISF-model centres on infrastructure and systems needed to carry out activities necessary for dissemination and implementation. ISF operationalizes the role of three interacting systems: the Synthesis and Translation System; the Delivery System and the Support System. Innovations are processed by the Synthesis and Translation System, with the main task of starting from theory and evidence and translating this knowledge into innovations (an idea or practice that is perceived as new by the individuals/organisations) that are user-friendly. The Delivery System consists of the end-implementers of innovations, a crucial system since this is where the innovation is put into practice so that outcomes are likely to be
achieved in real-world settings. In order to ensure implementation and use by the Delivery System, the Support System provides continuous assistance for effective innovation use and aims to build and help maintain capacity in the Delivery System. The QIF framework was developed in order to facilitate the interaction between these systems and provide guidance for the Support System when planning for how to provide support to the Delivery System during implementation.

**User-friendly translation - The Quality Implementation Tool**

Deriving from the QIF-framework, Meyers, Katz, et al., (2012) developed a practical implementation tool – the Quality Implementation Tool (QIT). The aim was to assist practitioners and those providing support to practitioners in implementing interventions with better quality. The authors state that QIT represents a user-friendly translation of implementation science results. However, they also state that it is crucial that the Support System members have knowledge and expertise regarding the innovation, implementation science, and process evaluation so that they can guide the implementation effort effectively. Moreover, the authors suggest that, in order for QIT to be useful, the innovations to be implemented need to be well defined and include specified standards for implementation (e.g. active ingredients, core components, critical features, essential elements).

These conditional circumstances raise some questions in relation to the QIT tool’s general utility, especially for complex interventions. The question of how to create and enable ‘Support Systems’ remains (it is almost equivalent to the question of how to transfer implementation science findings practical use). Furthermore, the cases investigated in this thesis concern complex interventions, and the interventions as well as the problems targeted were characterized by not being well-defined. Core elements and specific active ingredients of the interventions were hard to define. Hopefully this does not mean that efforts to transfer implementation science findings into user-friendly resources are not applicable in these cases.

**Other ways of transferring implementation science findings into practical use**

Formulating guidelines constitutes an example of an effort made to translate clinical research findings on best practice into practical use. Guidelines have ideally been described as bridges between research and clinical practice, as they basically consist of statements on recommendations intended to optimize patient care (Steinberg, Greenfield, Wolman, Mancher, & Graham, 2011). Recently, it has been concluded that models for guideline development could benefit from an early assessment of how the guideline scope will affect the upcoming implementation. It has also been suggested that implementation challenges should be addressed already during the guideline development process (Richter-
Sundberg, Kardakis, Weinehall, Garvare, & Nyström, 2015). Thus, including guidance on how to increase the probability of successful implementation when developing and formulating guidelines could be one way of transferring scientific knowledge on implementation into practical use among practitioners.

Improvement science is an example of a research area related to implementation science. The overriding goal of improvement science has been stated to be to ensure that quality improvement efforts are based as much on evidence as the best practices they seek to implement (Shojania & Grimshaw, 2005). Alongside efforts to identify best evidence on implementation, researchers within this field often adopt action-oriented approaches, collaborative research (Ovretveit et al., 2014) or interactive research (Svensson, Ellström, & Brulin, 2007). This is done in order to contribute to increased value for the world of practice and a more rapid translation of scientific findings into practice. In Case ICDP, researchers were involved due to the initial funding. This funded both intervention activities and research, the latter involving some elements of action research. Early findings from Study 3 were presented to the healthcare actors involved. An awareness of the shortage of strategies for managing central aspects of the ICDP implementation in its early stage emerged over time among the implementation facilitators. There were indications of more conscious implementation interventions in the follow-up Study 4, for instance a division and clarification of roles and responsibilities. Action-oriented approaches in implementation research projects could be a way of providing learning opportunities for healthcare practitioners involved and enabling the transfer of scientific knowledge in implementation into practical use.

7.3 Contribution to determinant frameworks

In this thesis, healthcare actors’ views on important factors to address during implementation have been investigated and related to current implementation models and frameworks. This approach also indirectly opens up the possibility to explore whether and how current theoretical approaches could be further developed. Taking into consideration the previous argumentation presented (see 7.2), it seems relevant to strive for a development towards increased user-friendliness for healthcare practitioners.

Results presented in this thesis indicate that factors summed-up in existing determinant frameworks were perceived as being relevant by the respondents. Saturation when it comes to available frameworks within the implementation literature has been discussed. A need to better understand and improve utilization of current models and frameworks has been stated to be more urgent then to create new ones (Skolarus et al., 2017). It has also been suggested that the identification and understanding of relationships between factors that influence
change efforts could aid the development of change and implementation strategies and ensure change success (Jack Walker et al., 2007). In some determinant frameworks, such relations are depicted, for example in the Greenhalgh framework (Greenhalgh et al., 2004).

In the following, an attempt is made to set out from current determinant frameworks, via data analysed in this thesis, towards a user-friendly representation of important factors and possible relations among them. Thus, an attempt to contribute to existing theoretical frameworks (by focusing on relations among factors) is being made alongside suggesting a model applicable in practice in relation to implementation of different types of interventions, including complex interventions.

**The issue of relations between domains and factors**

Results in this thesis indicates that respondents (primarily the implementation facilitators) often described ‘cause and effect’ relationships and other relations among factors. Interviews and statements included examples of process action-chains that reflect two types of factors – operators and enablers. Causal relations described between operators and enablers were exemplified by statements such as: “if we operate on this factor (e.g. provide hands-on support), we could positively affect another factor (e.g. adopter motivation)”.

Figure 4 is developed from Figure 1 and can be seen as an attempt to illustrate how relationships between domains and factors may be understood. The domains are re-named as follows: Operators (what to do), i.e. factors that can be used or addressed by someone in order to enhance the implementation process by affecting the System enablers (what to gain), i.e. matters and conditions at a system level or organisational level that could enhance implementation directly and/or affect the Adopter enablers (what to gain), i.e. matters and conditions at the adopter level that could enhance the process. The chosen intervention has in itself features – Intervention features – that could enhance the process.

The model presented in Figure 4 may be used as a starting point for further investigations of relations between implementation factors. The model is based on an analysis of how the respondents in Case DVO and Case ICDP related factors to each other in their reasoning during the early stages of implementation (the first three stages according to Fixsen, et al. (2005)).
Implementation science has been accused of being somewhat normative in relation to a reality that is messy, dynamic, multi-faceted, and unpredictable. Furthermore, it has been concluded that the effectiveness of strategies is highly sensitive to context and that it is difficult to pinpoint which determinants/factors that, if targeted by a well-planned and well-executed implementation strategy, would maximize outcomes (Baker et al., 2010). It has also been stated that successful healthcare improvement initiatives frequently fail to spread across settings, with local contextual factors often cited as the cause (Coles et al., 2017).

Nevertheless, several frameworks and models stemming from implementation science have generic qualities (Moullin et al., 2015). Results presented in this thesis show a rather homogeneous perception of different implementation factors among respondents involved. Thus, taking local context into account is important, as well as not diminishing plausible similarities between improvement efforts in different settings.

A wealth of studies has identified and listed barriers and enablers in relation to implementation efforts. Höög (2014) suggests that such barriers and enablers...
should be viewed as ‘important prerequisites’, having the potential to affect an implementation effort in either a positive, a neutral or a negative way.

Figure 4 suggests that conducting the activities listed in the square connected to Operators, increases the likelihood that factors related to the System/Organisation and the Adopters (healthcare practitioners) will enable (as opposed to hinder) the implementation process. Thus, the factors depicted in Figure 4 should be viewed as ‘matters’ that likely will affect an implementation effort positively (enablers) or negatively (barriers), depending on whether or not they are appropriately addressed in a given improvement situation. Figure 4 also suggests that a central part of any implementation strategy is a wise choice of intervention or an active attempt to market and launch the intervention so the adopters perceive it as important.

**Practical implications of the model**

Figure 4 illustrates relations among implementation factors. The model will need further empirical validation, but could be useful in practice when considering and designing an implementation strategy (or a pathway for tailored implementation interventions). The findings presented also highlight the importance of clarifying role expectations and assigning responsibilities to different actors in relation to an implementation effort. Figure 4 could be used as a point of departure when carrying out these assignments. Such clarification procedures may be performed by asking the following questions in relation to the Operators:

- When – when should such activities be conducted (how often)?
- How – what approach should be used to e.g. communicate and provide information or to provide hands-on support and conduct follow ups during the implementation process (might differ depending on stage of implementation)
- By whom – who is responsible for the execution of different activities?

If used in practical healthcare improvement efforts, the squares in Figure 4 (with factors related to different domains) could be used as a starting point. Local context and prerequisites related to the specific improvement effort and intervention would determine the final content in those squares. Further elaboration on the model (see Figure 4) is also needed to facilitate its use as a practical tool for implementation of complex interventions in healthcare practice.
7.4 Evaluation of complex interventions

It has been stated that it is crucial to understand why complex interventions in healthcare work (or not) and whether they are delivered as planned (Moore et al., 2015). In other words, considerations crucial in relation to evaluating complex interventions seem to be three-fold: 1) define and evaluate expected outcomes among target population (patients/health outcomes), 2) determine what types of behavioural (work practice) changes that are expected among healthcare practitioners (implementation outcomes), and 3) consider how these changes are hypothesized, ultimately to render in positive (health) outcomes among target populations. An additional key question concerns how outcomes should be measured at different stages, i.e. alongside deciding on outcome expectations, it is of importance to figure out what evaluation design (indicators, instrument for data collection, etc.) to use. Based on findings presented in this thesis (mainly from Case ICDP) some points are raised in relation to this issue.

Difficulties of evaluating and establishing a clear scientific base for addressing more complex problems in healthcare have been previously highlighted (McQueen, 2001). Case ICDP exemplifies how and why evaluating and gaining evidence for some complex interventions in healthcare may not always be a straightforward process:

The ultimate goal of the parental support program ICDP is to promote mental well-being among children. First of all, transfer of existing knowledge (evidence) on how to promote mental well-being among children into the design of the ICDP intervention would have to be valid. This means that the assumptions on which types of caregiver (parents) behaviours that promote mental well-being would have to be correct. Furthermore, the assumptions of how healthcare practitioners should work to promote such behaviours among parents would have to be valid and adequately transferred into the ICDP intervention. Then healthcare practitioners would have to deliver ICDP to parents and children in the intended way. In Case ICDP, the idea was that this way would be learned from staff participating in the ICDP education and then transferred to practice. As found in the studies, the ICDP education intervention did not fully manage this transfer. Additional strategies for implementing ICDP beyond education were vague and non-comprehensive. How the ICDP education with its form and content was expected to change work practices was not clear to the intended adopters or implementation facilitators. Assuming that this part of the transfer would have turned out more successfully, the next step would have been a further transfer to the target population level (i.e. parents). Healthcare practitioners would have to deliver core elements of ICDP, and this in turn would have had to result in changed parental behaviours and improved parent interaction skills. Only if this were achieved (and ensured) would it be possible to evaluate whether ICDP
promotes mental well-being among children (i.e. to gain evidence for the effectiveness of the ICDP intervention).

Results of implementation strategies used (6.1) show that outcome expectations and how these should be assessed were not considered in Case DVO and ICDP. During the study of Case ICDP, a question was raised within the research group on how to measure outcomes in terms of changed work practices when ICDP was supposed to be adapted to, and merged into, existing work practices. The implementation facilitators had no clear answer to the question of expectations on outcomes. The research team struggled with this vagueness, especially in relation to what fidelity aspects to measure. In Study 4, the question “what are you doing differently today compared to before ICDP?” was also asked several times during interviews with intended adopters. The answers did not provide a clear picture. Results on fidelity from Study 4 are based on core elements of ICDP, identified by the research team via observations of the education and by studying the ICDP literature (e.g. Hundeide, 2009). The indicators finally used to measure fidelity did not seem to fully capture or represent the situation. Thus, the lack of clarity in expectations regarding outcomes of ICDP hampered the implementation as well as the possibility to follow up on it.

Something that further complicates evaluation of health promotion programs such as ICDP is that they are offered at a universal level, i.e. not used exclusively to target or treat a specific problem area. It might be difficult to design and carry out effect studies of ICDP on children’s mental well-being, since participants in such studies may have no or minor problems that need to be changed at a baseline measurement.

It has been argued that evaluation is the key activity in validating choices of work approaches and methods in healthcare, i.e. to gather evidence that such work approaches make a difference to population health (McQueen, 2001). But, as mentioned in the introduction, evidence is not viewed in any straightforward way across different healthcare sectors. There are those who consider the concept of ‘evidence’ as inappropriate to the field of health promotion, and it has been argued that producing evidence is only one of many keys to sound evaluation (McQueen, 2001).

In Case ICDP, the results reflect the value and importance of conducting process evaluations (Proctor et al., 2011). The trustworthiness of follow-up studies of effects of ICDP among parents and children could be threatened, if there are uncertainties regarding the extent to which core elements of the intervention are actually implemented in practice.
7.5 Methodological considerations

The research work underlying this thesis has been designed over time. Seen in retrospective, there might naturally be alternative ways of underpinning the results presented and the conclusions reached. The methodological choices imply both strengths and limitations. The choice to use the case study design and mainly qualitative methods for data collection reflects my perspective on how the essence of the researched phenomenon may best be revealed.

Yin (2011), suggests that a case study design should be considered when (a) the focus of the study is to answer “how” and “why” questions, (b) you do not set out to manipulate the behaviour of those involved in the study, (c) you want to cover contextual conditions because they might be relevant to the phenomenon under study, or (d) the boundaries are not clear between the phenomenon and the context. The studies included in this thesis match these criteria. The case study approach and the natural setting of the studies allowed respondents to present their perspectives on the investigated implementation efforts, and several aspects of these efforts were explored. The study participants were purposively selected based on the assumption that they could provide important perspectives of the investigated improvement efforts.

If considering the cases as samples of efforts to implement complex interventions in healthcare, the question of relevance of the samples may come to one’s mind. The cases chosen constitute a variation of complex interventions, in their initial stages of implementation. The results provide illustrations of how improvement efforts in different settings in the Swedish healthcare system may take shape. Of course, including other or additional cases may have resulted in other illustrations. However, it is not unlikely that the variations found, with regard to ‘theory-practice’ correspondence, represents a real variation in improvement efforts in healthcare.

‘Casing’ – or delimiting cases – has been highlighted as a challenging task (Baxter & Jack, 2008). Miles and Huberman (1994) states that the case is “the unit of analysis” (p. 25). The boundaries of the cases in this research was (is) somewhat difficult to determine, but can be summarized as: the improvement efforts taking place, including the actors involved (their perspectives and activities), in their given context.

In qualitative research, the term trustworthiness has been suggested to define aspects of validity and reliability (Rolfe, 2006). Graneheim & Lundman (2004) suggests that the concepts credibility, dependability and transferability may be used to further define aspects of trustworthiness.
All results in this thesis are based on self-reported data from questionnaires and interviews with information obtained from different healthcare actors. Self-reported data entail a risk of bias, which has to be considered in relation to trustworthiness of findings from this thesis. First of all people tend to report what is socially desirable, thus the findings may be biased due to so called social-desirability bias (Fisher & Katz, 2000). Secondly, data was mainly collected by self-constructed questions in questionnaires and interviews, which entails a potential source of bias due to measurement errors (Gillespie & Chabover, 2013).

Credibility refers to how well methods for data collection and analysis address the intended focus of the study (Polit & Beck, 2004). The difficulties of measuring outcomes in Study 4 have been highlighted and discussed above and the question of how well the instruments for data collection in the different studies captured the relevant aspects of the processes and outcomes remains unanswered. An attempt to increase credibility was made by collaborating on coding and categorization, and by frequently discussing the process of analysis and the emerging findings.

Triangulation of data sources was also used to corroborate and validate findings and the value of using an embedded mixed methods approach (include some quantitative elements in the mainly qualitative thesis) was confirmed. The triangulation of findings enabled comparisons and cross validation of results both within- and across studies and also provided a broader understanding of the empirical cases. The similarity of issues raised by respondents in different data sources and regardless of profession or role in the initiative strengthens the trustworthiness of the results as representations of the implementation processes and outcomes studied.

A limitation related to the analysis of correspondence (use of available scientific knowledge on implementation), is that the type and amount of data for the three cases varied. Whilst Case DVO and Case ICDP were approached with a similar focus (on implementation factors – their perceived importance and whether they were addressed), the focus of investigation in Case NPPS was mainly on evaluating the effects of the implementation strategy. The fact that no data in Case NPPS was collected directly from the perspectives of the implementation facilitators (only from documents) could be considered as a limitation. When it comes to Study 1, it may also be argued that in-depth interviews with extended questioning (at the delivery units) of respondents’ experiences of the three main implementation interventions might have provided further details on the process and effects.

Regarding the quantitative elements included in this thesis, it is important to point out that the main purpose of the quantitative analysis has been to provide
overviews of response patterns. Thus, figures presented should be interpreted with caution.

Despite the effort to collect rich data and the many perspectives reflected in data, one must recognise that the empirical base is limited by the cases and also that a limited part of the implementation processes and outcomes have been investigated. Thus, transferability of the results to other contexts has to be considered with caution.

**Considerations related to the use of implementation science**

An overall consideration concerns the use of theory in this thesis, with the strong focus on knowledge presented in the field of implementation science. First of all, the relation between theory and practice is the main question underlying this thesis. This has implication for the structure and content of the thesis as a whole. To investigate the question of whether and how theory inform (is being used) in improvement efforts in healthcare practice, is embedded in the aim, which means it becomes part of some of the methodological choices made, part of the results presented and hence influences what is being discussed. Thus, the theory-practice relation – which generally constitutes the discussion of research findings – more or less permeate the whole thesis.

Secondly, the implementation science field has a strong connection to evidence-based practice (and evidence-based medicine). Although complex interventions that are not based on robust evidence are in focus, I have chosen to reflect my empirical cases against knowledge stemming from this field. In many ways, my research shares the same overarching goal as that expressed in the improvement science field: that processes of improvement should be based on evidence. Improvement work should be an evidence-based practice, to the very same degree as the practices it seeks to implement. This raises questions regarding the quality of the available scientific knowledge on implementation. Is it appropriate to assume that the knowledge produced and presented in this field represents evidence on implementation? It has been concluded that the field is still struggling to identify which implementation strategies work best, for which organisations, and under what conditions (Lewis et al., 2015). In 2005, Shojania and Grimshaw reviewed problems with research approaches in the field of Quality Improvement (QI) with the aim of outlining the steps required to make QI efforts based on evidence. They concluded that there was a need for empirically derived models to inform the decision and to select implementation strategies (Shojania & Grimshaw, 2005). The choice of using knowledge produced in the field of implementation science in the way I have done in this thesis is not primarily based on a strong conviction that this knowledge should be treated and regarded as evidence. It is based on the fact that the models and
frameworks presented in this body of literature are in fact empirically derived (Nilsen, 2015). It is also based on the generic qualities of these models and frameworks. As a science, implementation science states as part of its mission, an explicit goal of developing knowledge that can be widely applied, beyond the individual system under study (Bower, et al., 2015). These qualities imply that models and frameworks, in a translated/operationalized format, have the potential to come to use in implementation of complex interventions in healthcare practice.

How to choose and use models and frameworks when studying different interventions in healthcare practice is another issue relevant to the studies underlying this thesis. This matter has recently been debated and it has been concluded that the selection of implementation theories used is often random or driven by convenience or prior exposure (Birken, et al., 2017b). I have approached process models and determinant frameworks as different types of theoretical approaches – each including several models/frameworks with different originators, but with many common constructs and features. The Greenhalgh framework (Greenhalgh et al., 2004), Fixsen’s process model (Fixsen et al., 2005) and the RE-AIM evaluation framework (Glasgow et al., 1999) have been used more explicitly, but focus has been on describing and using the common constructs and features of determinant frameworks (such as domains and common factors) and process models (commonly divided into stages and activities similar to Fixsen’s model). Consequently, the frameworks and models used have been adapted, meaning that no single implementation framework or model has been used entirely in its original form.

Implementation frameworks, models, and theories have been developed to target a diverse array of interventions and naturally not all frameworks and models include the full range of factors and aspects involved in implementation (Moullin et al., 2015). In a similar way, results presented in this thesis do not exhaust the area of potential implementation factors that can influence implementation in different settings. In Study 3 for example, interviews took place between two rounds of questionnaires. There is a possibility that the respondents were affected by the content of the questionnaire (in which factors were listed). Thus, although interview data added some new information, a possible limitation of the more deductive approach used in this study could be an unintentional exclusion of other issues of relevance for the implementation. On the other hand, the more inductive approach used in Study 2 did not result in finding new determinants/factors not captured by previous models or frameworks in the implementation literature.

Scholars in the field of implementation science are continuously testing and comparing implementation strategies based on theories, models and frameworks,
in order to validate or develop strategies as well as models. In most such studies, the scholars have decided upon one or several implementation strategies. This is done in order to test and compare effectiveness empirically by an introduction in a specific practical setting. In the studies of the cases in this thesis, implementation interventions and strategies applied were chosen by healthcare practitioners themselves. Thus, the cases were studied in a natural setting not influenced directly by the research team. Furthermore, I as a researcher have not been part of selecting the interventions to be implemented. Hence, I have not set out to assess whether the implementation objects decided upon (by practitioners) in the three cases are scientifically proven to be effective (are evidence based).

Finally, conceptualization has been a difficult part of the research performed. The fact that I use the concept ‘intervention’ synonymously with ‘implementation object’ and ‘innovation’ may be confusing. When going through literature, it seems as if the concept ‘complex intervention’ sometimes refers to the improvement effort as a whole – i.e. the new work practice alongside the interventions/efforts carried out to establish these practices. I have striven to distinguish the ‘interventions’ studied from the ‘strategies’. It could be argued that it would have been wiser to use the concept ‘implementation object’ or ‘innovation’. Overall, not finding a clear and common implementation terminology (Ellis et al., 2003) posed a challenge in terms of deciding on and defining how concepts should be used in the research.

7.6 Ethical considerations

Informed consent was the basis for all data collection related to this thesis. Participant confidentiality has been given priority when the material was made public. All four studies have been given approval or alternatively a statement that ethical approval is not needed for the particular study by the Regional Ethics Committee at Umeå University or by the Regional Ethics Committee at Karolinska Institutet in Stockholm: Paper I [Dnr 2010–1603 31–4], Paper II-III [Dnr 2010-306-32Ö], and Paper IV [Dnr 08-168Ö] (see attached documents).

Study participants received written and/or oral information regarding the research projects and their over-arching goals and study purposes, information on how answers would be processed, how data would be handled, and were informed that the presentation of results would be done on group level and in such way that individuals could not be identified. The results of the studies have been reported back to the participating organisations and have been made publicly available through publications in scientific journals and project reports. Paper I, II and III have been presented at national and/or international conferences.
Based on analyses of ethical guidelines presented by nine social sciences research associations, Bryman and Bell (2007) suggest ten principles of ethical considerations:

1. Research participants should not be subjected to harm in any ways whatsoever.
2. Respect for the dignity of research participants should be prioritized.
3. Full consent should be obtained from the participants prior to the study.
4. The protection of the privacy of research participants has to be ensured.
5. Adequate levels of confidentiality of the research data should be ensured.
6. Anonymity of individuals and organisations participating in the research has to be ensured.
7. Any deception or exaggeration about the aims and objectives of the research must be avoided.
8. Affiliations in any forms, sources of funding, as well as any possible conflicts of interests have to be declared.
9. Any type of communication in relation to the research should be done with honesty and transparency.
10. Any type of misleading information or representation of primary data findings in a biased way must be avoided.

The work on this thesis has been a process of inquiry in which people have invested their time, effort and trust to help me fulfil my ambitions. I believe that I have borne this in mind at every step, and I have approached points 1–6 outlined above with great wariness and caution. When reading points 7, 9–10, some deeper introspection was inevitable. Despite the striving to always be un-biased and not exaggerate when processing data, communicating and presenting findings, it is almost impossible, with a great degree of certainty, to declare an absolute absence of the impact of one’s own pre-conceptions, prior understanding, preferences and also ambitions. Furthermore, when the research project concerning the implementation of ICDP started, one of the stated purposes was to also evaluate effects among parents and children (and thereby contribute to strengthening the evidence base for the program). This purpose was communicated at early stages to healthcare practitioners involved. As time and implementation went by, it became clear that such a study was not feasible within the project time, due to the hesitant implementation of the program. This might be viewed as a case of misleading information and also an exaggeration about the aims. Additionally, when going into the study of the Safe Delivery intervention series, the purpose was not entirely defined, and this ambiguity might also be considered as an ethical problem.

Besides the importance of bearing in mind the ten suggestions presented above when conducting research, I would like to highlight the importance of persistently reflecting upon how, why and for whom the research will be beneficial. A strong
incentive for me (as of likely the vast majority of members of the research society) to conduct research at all, is the potential to positively affect the world of practice. In reality though, I have – at best – accomplished a small but positive contribution to the people and organisations participating in my studies, in their current or up-coming efforts to improve the quality of care. If so – I am highly satisfied and I see this as a way to ‘reimburse’ them for their confidence in- and their contribution to my work.
8. Conclusions

It can be concluded that if healthcare actors involved in the implementation of complex interventions fail to clarify outcome expectations and develop strategies to address implementation factors during initiation and early implementation, the intended goals of improvement efforts may not be achieved (Paper II, III & IV).

From the perspectives of the involved healthcare actors, it is confirmed that the domains and factors presented in current determinant frameworks are important to address during improvement efforts (Paper II & III). Furthermore, findings indicate that healthcare actors relate factors to each other, rather than seeing them as separate entities (Paper II). The importance of defining role expectations and assigning responsibilities in relation to the wide range of factors that need to be addressed during implementation of complex interventions in healthcare is also highlighted (Paper II, III & IV). Factors and their relations, based on findings in two cases, were further elaborated and a model is proposed for further investigations. This model, presented in Figure 4, may be used in healthcare practice to guide the design of an implementation strategy (or a pathway for tailored implementation interventions). It may also be used in discussions of role expectations and the assignment of responsibilities in relation to factors affecting implementation processes and outcomes.

The difficulties of defining and measuring various outcomes of complex interventions and especially the importance of monitoring during the entire process, is highlighted (Paper IV). It can be concluded that if some intermediate implementation outcomes do not occur, further measures of outcomes or effects might be useless or misleading. For example, the trustworthiness of follow-up studies of an intervention at a target population level (patients) is dependent on evaluations of effects among adopters and the intended changes in work practices (Paper IV).

The three cases showed that implementation strategies can vary substantially. Strategies may be proactive, planned in advance and executed in a rational manner (Paper I), or be interactively constructed over time, based on intuition and input from those involved in the improvement effort (Paper II). Some improvement efforts though, are carried out by strategies that best can be described as passive and reactive and consequently they have a very low correspondence to available scientific knowledge on implementation (Paper III & IV). Based on the results from the process evaluations conducted it may be argued that using an implementation strategy that corresponds with scientific knowledge on implementation to a high degree, enhances the possibility to reach important
intermediate outcomes among adopters during the early stages of the implementation process (Paper I).

The starting point of this thesis is related to the well-documented knowledge-practice gap, between scientific knowledge produced within the fields of medicine, nursing and health services and actual healthcare and clinical practice. An overall conclusion of this thesis, based on the cases, is that the findings indicate a parallel knowledge-practice gap, between scientific knowledge on implementation and the implementation strategies used in practice during improvement efforts initiated by healthcare actors. The findings show that correspondence between scientific knowledge on implementation and what is applied in health care improvement efforts to accomplish change might be more random (or implicit) than systematic.

A more conscious and systematic use of scientific knowledge on implementation in improvement efforts in healthcare practice could help increase adoption and the use of interventions designed to increase the quality of care. Thus, the transfer of scientific knowledge on implementation into practical use may bridge the knowledge-practice gap in healthcare.
9. Future perspectives and personal reflections

This thesis and the three cases cover a very small part of the healthcare system in Sweden and the practical implementation efforts therein. More investigations of other cases of complex interventions will be needed to further confirm the parallel knowledge-practice gap addressed in this thesis. Assuming the results from these cases reflect a more general situation in healthcare, some suggestions on future perspectives are made:

I would like to suggest that action-oriented research should be conducted, aiming at further developing and establishing the concept of ‘practical implementation science’. Interactive approaches, with healthcare practitioners as collaborating partners, would enhance learning and the transfer of implementation science findings into practical use.

The question of how to transfer models and frameworks into user-friendly resources needs further attention, with a focus on the understanding of relations among factors. This issue perhaps needs to be specifically illuminated in relation to the type of complex interventions investigated in this thesis.

Conducting further studies of the role of different types of implementation facilitators in relation to different types of improvement efforts is also suggested. In particular, the shifts of responsibility for change between managers and implementation facilitators need to be studied further.

Finally, I also suggest that further attention should be paid to the question of how to define and measure implementation outcomes of complex interventions targeting sometimes un-defined problem areas. Perhaps with a certain focus on health promotion interventions by which the intended changes in healthcare practitioners’ work practice are supposed to be integrated with and adapted to current practice.

The reason for collecting evidence on best healthcare practice is obvious – we wish to provide the best possible and most equal care to those who need it. Worries related to the fact that this evidence seems to be difficult to transfer to the practical settings are indeed relevant, as well as the efforts seeking to promote a better uptake of them. One could even ask: why else produce this evidence?

The same type of question could be raised with regard to the important efforts made to shed light on the transfer problem, i.e. all the answers produced on how to go about promoting the uptake of research findings or other types of knowledge
or ideas. How do we transfer *this* type of knowledge to practical settings? And if this is not done, then why is it produced? Knowledge concerning how to implement implementation knowledge among healthcare actors and systems that are supposed to put (evidence-based or other) interventions into practice in order to improve the quality of care and reach positive health outcomes, needs to be further developed.

In the future I wish to shed some further light on these issues. I see this thesis as a starting point.
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Eva Eurenius. Tack Eva, för så många år av inspirerande samarbete. Du har alltid haft så positiva förväntningar på mig och det har stärkt mig och betytt mycket! Många gånger under avhandlingsarbetet har ett upplyftande mail kommit från dig precis vid den tidpunkt jag som bäst behövde det.
Till min examinator Anna-Karin Hurtig, vill jag också rikta ett varmt tack! Du har lyssnat på mig och kommit med kloka råd som har haft stor betydelse under resans gång.

Till de personer och organisationer som bidragit med sin tid och sina berättelser i de fyra studierna som ingår i denna avhandling vill jag också rikta ett stort tack. Särskilt mycket har jag uppskattat de samtal som uppstod med Salutmedarbetare och medarbetare vid centrala enheten BHV i samband med mina studier av implementeringen av ”Vägledande Samspel”. Det är så tydligt att ert starka engagemang för barns (och föräldrars) bästa är den drivkraft som styr hur ni utformar och utövar era uppdrag. Imponerande och upplyftande!

I also want to thank everyone at the Epidemiology and Global Health department at Umeå University!

Ett särskilt tack till Karin Johansson och Ulrika Harju, som erbjudit praktisk hjälp och lugnande stöd varje gång jag insett att jag missat någon viktig praktisk puck. ”Ingen fara – det här fixar sig!” Tack!


Stort tack till Helen Johansson, Linda Sundberg, Mia von Knorring, Birgitta Bernspång, Hans K:son Blomquist och John Kinsman som varit mina granskare vid antagnings- mitt- och slutseminarium. Era engagerade bidrag gav riktning vidare. Special thanks to you John, for being brilliant in the art of delivering bad news in an emotionally intelligent way. Our discussion at the kappa-seminar became such an important turning point in my work with this thesis.

Linda! ”Hand-hållning eats handledning for breakfast”, som jag brukar säga ibland! Utan din hand hade det kanske inte blivit någon avhandling alls. Och din hand vid omslaget också – så himla fint det blev! Jag vill tacka dig för så mycket Linda. Kanske allra mest för din genuina värme och omtanke, för alla våra samtal, förtroenden och alla skratt!

Elisabet. Du är en av mina förebilder, ända sedan du undervisade mig på grundutbildningen. Jag ser upp till ditt seriösa och nyanserade förhållningssätt till det vi håller på med, din livsåskådning, din klokskap, ditt föräldraskap... Du har så mycket i dig som jag skulle vilja vara – även om min grundpersonlighet motarbetar mig och vi förblir olika på många sätt. Du räddade mig så helgjutet i Dublin, just på grund av de vis på vilka vi är lika och olika och för att du är en sann vän!
Till sist vill jag tacka de som funnits utanför kärnarbetet, men bredvid mig hela vägen:

Nina, Johanna och Malin (i åldersordning) - kanske mina längsta kärlekar. Att mina barn ihärdigt vidhåller att de nog ändå är kusiner med era barn säger en del om hur jag ser på er och vad ni betyder för mig. Mitt allra varmaste tack för att ni finns i mitt och vårt liv. För att ni delar allt mitt vardagsljus och mörker, och för att ni är så oooooehört bra på att sätta guldkant på tillvaron ihop, till och med när allt var som värst med denna avhandling.

Sussi, Erik, Caroline & Richard. Tänk att man kan ha så tur att man får riktiga vänner för livet i sina ”svärsyskon”! Jag har delat så mycket av livets svåra och härliga stunder tillsammans med er. Tror mig veta att ni alltid skulle ”backa mig” och det har ni verkligen gjort i denna period av mitt liv. Särskilt tack till dig C, som också korrekturläst avhandlingen & transkriberat en massa intervjuer åt mig.


Pappa och mamma som alltid lätit mig veta att jag är bra precis som jag är, men samtidigt lärde mig att värdesätta känslan av att göra mitt bästa. Som aldrig någonsin pressat men alltid fått mig att tro att det jag vill uppnå är möjligt. Jag bär den grundkänslan som en trygghet genom livet och inte ens i avhandlingsarbetets svåraste stunder vek den känslan ned sig. Så mycket svårare det hade varit – avhandlings-slitet och livet som det är – om ni inte hade planerat mig så och fortsatt att vattna. TACK!

References


role and function of facilitation. *Journal of advanced nursing, 37*(6), 577–588.


Appendixes

App. 1: Study 1, Interview guide used in Case NPPS

App. 2: Study 2, Interview guide and themes in process diaries used in Case DVO

App. 3: Study 2, Questionnaire used in Case DVO

App. 4: Study 3, Interview questions used in Case ICDP

App. 5: Study 3 and 4, Questionnaire used in Case ICDP

App. 6: Study 4, Interview questions used in follow-up interviews Case ICDP

App. 7: Study 4, Questionnaire used in Case ICDP
Tacksam om du vill och har möjlighet att ställa upp på en telefonintervju angående projektet ”Säker förlossningsvård”


När det nu är dags att börja utvärdera projektet för att se hur väl upplägget fungerar vänder vi oss till dig, som är en av dem som deltagit i den första omgången.

Projektets utvärderingsgrupp har gett Karolinska Institutet, LIME/MMC, i uppdrag att, som ett första steg i den samlade utvärderingen, genomföra telefonintervjuer med tre nyckelpersoner på varje klinik. Intervjuerna kommer att genomföras av Anna Westerlund, se nedan.

De områden som kommer att beröras i intervjun är:
A. Självvärderingen
B. Revisorsbesöket
C. Revisorernas återföring och överenskommelsen om åtgärder

Intervjupersonerna utses av verksamhetschefen på respektive klinik och bokningen sker genom att Du fyller i och mejlar bifogade schema till torbjorn.schultz@patientforsakring.se (projektadministratör). Du blir sedan upprörd av Elisabet på den utsatta tiden, till det telefonnummer som Du angett. Om Du får förhinder eller vill byta telefonnummer var vänlig och meddela Elisabet (se kontaktinformation nedan). Intervjun beräknas ta 30 minuter.

Vi bifogar frågorna så att Du kan förbereda dig före intervjun. Dina svar kommer att behandlas anonynt så att aktuell klinik inte kan avläsas och förvaras så att inte obehöriga kan ta del av dem.

Tack för din medverkan!

Kontaktperson:
Monica Nyström PhD, Lektor
Medical Management Center (MMC), Institutionen för Lärande, Informatik, Management och Etik (LIME)
Karolinska Institutet, SE-171 77 Stockholm
Tel: 08-52483620
E-mail: monica.nystrom@ki.se
I frågorna försöker vi få en inblick i hur berörda personal på kliniken uppfattat de aktiviteter som genomförts i ett inledande skede i projektet.

**A) Arbetet med självvärderingen**

1) Hur upplevde ni på kliniken arbetet med självvärderingen?

2) Påverkade arbetet med självvärderingen verksamhet medan det pågick? (Om ja hur?)

3) Har ni sett några effekter av arbetet med självvärderingen inom er verksamhet? (Om ja vilka?)

4) Har du några generella reflektioner kring att arbeta med självvärdering?

**B) Revisorsbesöket**

5) Hur upplevde ni på kliniken revisorsbesöket?

6) Påverkade revisorsbesöket verksamhet på något sätt redan i det skedet? (Om ja hur?)

7) Har ni sett några effekter av revisorsbesöket inom er verksamhet? (Om ja vilka?)

8) Har du några generella reflektioner kring att få ett revisorsbesök?

**C) Revisorernas återföring och överenskommelsen om åtgärder/utveckling**

9) Hur upplevde ni på kliniken revisorernas återföring och överenskommelsen om åtgärder?

10) Har revisorernas återföring och överenskommelsen om åtgärder givit någon direkt effekt på er verksamhet? (Om ja hur?)

11) Har du några generella reflektioner kring att få en skriftlig återföring och en överenskommelse?

12) Förekommer det något annat patientsäkerhets- eller utvecklingsarbete inom organisationen eller kliniken som påverkar eller berör arbetet med projektet Säker förlossningsvård (kompletterar, konkurrerar)?

13) Finns det något i övrigt Du vill tillägga när vi nu utvärderar projektet Säker förlossningsvård så här långt?
APPENDIX 2

Intervjuguide/Teman Memeologen

Livskraftig organisation
Klargörande av begreppsbilden:

→ livskraftig organisation
→ specialiserade sjukhusvården

1. Vad är målet med Memeologens arbete i Livskraftig organisation - specialiserade sjukhusvården?

2. När ni är "klara" – vad ska finnas kvar?
→ hinder
→ underlättare

3. Hur ser du på läget i utvecklingsprocessen i Livskraftig organisation?
→ vilka faser finns
→ vilken fas befinner sig processen i?

4. Hur har det tänkta arbetssättet i Livskraftig organisation fungerat? Hur har det sett ut?

Memeologen

5. Vad har det inneburit att jobba i det stora perspektivet specialiserad sjukhusvård – som memeolog?

6. Vad krävs för att kliva på som memeolog
→ erfarenhet
→ kunskap
→ egenskaper
→ hur "fyller man på" sin kompetens
→ hur bibehåller man sin kompetens?

7. Hur ser du på Memeologens nya roll i organisationen, som verksamhetsenhet?

8. Vilka förändringar innebär det för Memeologen att vara en verksamhetsenhet?
→ Intern struktur
→ Arbetssätt

9. Övrigt om dagsläget i stort?

Frågor/Processdagböcker Memeologen

Fråga A - Viktiga händelser under veckan (inkl viktiga aktörer inblandade)
Fråga B – Viktiga beslut som tagits i veckan
Fråga C – Identifierade hinder (H) eller underlättare (U) för införandeprocessen
Fråga D – Övriga egna reflektioner
APPENDIX 3

Enkätfrågor, öppna svar, utvecklingsgrupp & förbättringsteam

Enkät I & II

a) Vilka aspekter som påverkar din klinik/enhet är viktiga att känna till för att förstå ert nuvarande läge inför utvecklingsarbete.
b) Hur ser du på det planerade upplägget för utvecklingsarbetet
c) Vad tror du det planerade arbetssättet kan få för effekter på din arbetsplats
d) Övrigt

Enkät III-V

a) Samma som ovan
b) Vad har utvecklingsgruppen hittills hunnit göra vad gäller arbetet med att stödja och följa upp förbättringsteam och förbättringsprocesser?/ Vad har förbättringsteamet hittills hunnit göra vad gäller planering och genomförande av aktiviteter?
c) Hur ser du på det planerade upplägget för utv.arbetet
d) Vilka effekter, om några, har Du sett inom Din klinik/enhet av det som ni hunnit introducera av angreppssättet för förbättringsarbetet inom specialiserad sjukhusvård (Livskraftig organisation)?
e) Övrigt
APPENDIX 4

Intervjufrågor omgång 1, ICDP

Strategisk nivå Salut processledning, styrgrupp, VC, BHV

- Utarbetades en helhetsplan för införande? Vilka överväganden gjordes i samband med det? Av vem, och vem fick ta del av den?
- Hur skulle du formulera Salut/BHV:s/vc:s uppdrag i relation till införandet av ICDP?
- Hur marknadsfördes ICDP? Hur synliggjordes ICDP som en del av Salut (en utveckling av det salutogena arbetssättet?)
- Var behovet av en utveckling inom valt område, kartlagt? När? Av vem? Hur såg det resultatet ut? Var resultatet av den kartläggningen i så fall återförd till medarbetarnivå?
- Om du skulle värdera/skatta den strategiska nivåns beredskap för ICDP-satsningen – vad skulle du säga då? Finns det något du tycker man kunde ha gjort annorlunda inför ICDP införandet, som skulle ha kunnat påverka beredskapen?

- Hur har själva införandet gått till så här långt? (vad har din roll varit (salut, bhv, vc)
- Hur har det gått med ICDP-arbetet där ute? (stöd, uppföljning, träning och nätverkande?)
- Varför/varför inte? Hur vet du det?
- Vad exakt förväntas de som deltagit i utbildningen, göra nu?
- Vad är din roll framöver (salut, bhv, vc)? (Vilka har bestämt det/vet om det?)

Personal

- Hur brukar det gå till när nya idéer når dig som personal och du förväntas göra verkstad av det hela så småningom?
- Vad visste du om ICDP innan du påbörjade utbildningen? Hur fick du veta det?
- Hur upplevde du situationen, ditt sätt att arbeta och vad du åstadkom osv., innan du medverkat i ICDP?
- Kände du ett behov av att få utveckla ditt arbetssätt (få tillgång till ny kunskap och nya verktyg?)
- Fick du veta på förhand hur din medverkan skulle "se ut" (tids- och genomförandeplan?)
- Om du skulle värdera/skatta din beredskap för ICDP-satsningen (den möjlighet du fick att tillgodogöra dig nödvändig information osv.) som du hade innan utbildningsdagarna – vad skulle du säga då? Finns det något du tycker man kunde ha gjort annorlunda inför ICDP införandet, som skulle ha kunnat påverka din beredskap? (Vem?)
• Beskriv, som du ser det, hur det direkta införandet av ICDP är tänkt och förankrat på din enhet. (mål-medel) – vad är det tänkt att du ska göra nu efter att du deltagit i utbildningen?
• Det har framkommit i enkäterna att man ser direkt stöd och någon som driver på satsningen som en viktig förutsättning för att det ska bli något av ICDP (håller du med?) – ser du att detta finns idag? Vem? Om inte- vem skulle kunna?
• Finns det ”arenor”/forum där ni kan kommunicera om ert ICDP-arbete och lära av varandra?
• Uppföljning är något annat som påtalats som viktigt i enkäterna, instämmer du? – har någon uppföljning gjorts av ditt/ert arbete med ICDP och har du/ni fått någon feedback på det?
• Vet du vad nästa steg i ICDP-införandet ska bli?
• Vad tror du krävs för att en satsning som ICDP ska bli verklighet? Finns det idag?
APPENDIX 5

Till dig som deltar i utbildningen ”Vägledande samspel”

Denna enkät är en del av det forskningsprojekt som följer införandet av ”Vägledande samspel” (ICDP) inom Västerbottens Salut-satsning. Projektet finansieras av Statens folkhälsoinstitut och ingår i programmet ”Föräldrastöd i samverkan i Umeåregionen” med syfte att förbättra barn och ungas psykiska hälsa genom olika former av föräldrastöd.

Syftet med projektet är att få ökad kunskap om vad som påverkar möjligheterna att nya arbetssätt blir till etablerad praxis. Målet är att resultaten ska kunna komma till nytta och vara användbara för många olika organisationers utveckling.

Din medverkan är frivillig. Dina svar och dina resultat kommer att behandlas så att inga obehöriga kan ta del av dem. Redovisning av resultaten kommer att göras på ett sådant sätt att enskilda personer inte kan identifieras.

Ta gärna kontakt med oss om du har några frågor!

Anna Westerlund
Forskningsassistent
Epidemiologi och global hälsa
Institutionen för folkhälsa och klinisk medicin
Umeå Universitet
901 85 Umeå
Tel: 070-25 67 243
E-post: anna.westerlund@epiph.umu.se

Anneli Ivarsson
Docent och barnläkare
Epidemiologi och global hälsa
Institutionen för folkhälsa och klinisk medicin
Umeå Universitet
901 85 Umeå
Del I. Bakgrundsinformation

1. Kön:
   - [ ] Kvinna
   - [ ] Man

2. Födelseår: 19_______

3. Vilket är ditt nuvarande yrke?

____________________________________________________________________

4. Hur länge har du arbetat i ditt yrke?

____________________________________________________________________

Del II. Ditt arbete idag

På de följande sidorna finner du ett antal aspekter som rör delar av ditt dagliga arbete. För varje aspekt vill vi be dig ta ställning till följande:

a) I vilken utsträckning du arbetar med detta idag.
b) Din eventuella önskan att utveckla detta.
c) Din värdering av aspektens betydelse för att främja gott samspel mellan barn och föräldrar.

Du tar ställning genom att kryssmarkera på en skala från "inte alls" till "i mycket hög grad".

Vänligen sätt endast ett kryss som svar på varje delfråga.

<table>
<thead>
<tr>
<th>Denna del av enkäten rör ditt arbete med föräldrar och barn. Vi är medvetna om att det kan se olika ut när det gäller i vilken omfattning det dagliga arbetet innefattar sådant som tas upp i enkäten. I de fall det känns relevant för dig kan du tänka att begreppen föräldrar och barn inkluderar också blivande föräldrar och det ofödda barnet. Om någon aspekt inte känns relevant för dig, välj då alternativet &quot;ej relevant&quot;.</th>
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Skriv gärna egna kommentarer!
1. Att etablera en positiv och tillitsfull kontakt med de föräldrar och barn jag möter

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<tr>
<th></th>
<th>Inte alls</th>
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Eventuell kommentar:

2. Att visa respekt och empati gentemot de föräldrar jag möter

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Eventuell kommentar:

3. Att lyssna aktivt på de föräldrar jag möter

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Eventuell kommentar:

4. Att använda positiva benämningar av barnet och lyfta fram positiva drag hos barnet

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Eventuell kommentar:
5. Att få föräldrar med en negativ uppfattning om barnet att över tid utveckla en ny och mer positiv uppfattning om barnet

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</table>

Eventuell kommentar:

6. Att tydligt uppmärksamma och kommentera när jag ser positiva samspelemönster mellan föräldrar och barn

<table>
<thead>
<tr>
<th></th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
<th>Ej relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>6a</td>
<td>Jag arbetar i nuläget med detta</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6b</td>
<td>Jag önskar utveckla detta</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspeel mellan föräldrar och barn</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Eventuell kommentar:

7. Att stimulera föräldrar till att dela erfarenheter med andra föräldrar i grupp

<table>
<thead>
<tr>
<th></th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
<th>Ej relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a</td>
<td>Jag arbetar i nuläget med detta</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>7b</td>
<td>Jag önskar utveckla detta</td>
<td>☐</td>
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</tr>
<tr>
<td>7c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspeel mellan föräldrar och barn</td>
<td>☐</td>
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<td>☐</td>
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</tr>
</tbody>
</table>

Eventuell kommentar:

8. Att ha ett personligt och inlevelsefullt förhållningssätt till de föräldrar jag möter

<table>
<thead>
<tr>
<th></th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
<th>Ej relevant</th>
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</thead>
<tbody>
<tr>
<td>8a</td>
<td>Jag arbetar i nuläget med detta</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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</tr>
<tr>
<td>8b</td>
<td>Jag önskar utveckla detta</td>
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<tr>
<td>8c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspeel mellan föräldrar och barn</td>
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</table>

Eventuell kommentar:
9. Att föra samtal med föräldrar och då ta utgångspunkt från mina egna exempel

<table>
<thead>
<tr>
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<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
<th>Ej relevant</th>
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</thead>
<tbody>
<tr>
<td>9a</td>
<td>Jag arbetar i nuläget med detta</td>
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<tr>
<td>9b</td>
<td>Jag önskar utveckla detta</td>
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</tr>
<tr>
<td>9c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspel mellan föräldrar och barn</td>
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</table>

Eventuell kommentar:

10. Att föra en personlig och inlevelsefull dialog med föräldrar om det jag tror att barnet tycker och tänker

<table>
<thead>
<tr>
<th></th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
<th>Ej relevant</th>
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</thead>
<tbody>
<tr>
<td>10a</td>
<td>Jag arbetar i nuläget med detta</td>
<td></td>
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<tr>
<td>10b</td>
<td>Jag önskar utveckla detta</td>
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<tr>
<td>10c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspel mellan föräldrar och barn</td>
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</tbody>
</table>

Eventuell kommentar:

11. Att ge föräldrar hemuppgifter (som rör samspel mellan föräldrar och barn) som de får jobba med mellan de tillfällen vi möts

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<tr>
<th></th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
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</thead>
<tbody>
<tr>
<td>11a</td>
<td>Jag arbetar i nuläget med detta</td>
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<tr>
<td>11b</td>
<td>Jag önskar utveckla detta</td>
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<tr>
<td>11c</td>
<td>Jag anser att detta är viktigt för att främja ett gott samspel mellan föräldrar och barn</td>
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</table>

Eventuell kommentar:

12. Jag tycker idag att jag har kunskap om vad som är gott samspel mellan barn och föräldrar och om hur jag ska främja detta

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<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
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<th>Ej relevant</th>
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<tr>
<td>12</td>
<td></td>
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</tbody>
</table>

13. Jag tycker idag att jag har och tillämpar specifika verktyg/tekniker för att främja gott samspel mellan barn och föräldrar

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<thead>
<tr>
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<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
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<th>Ej relevant</th>
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<tr>
<td>13</td>
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</tr>
</tbody>
</table>
Del III. Förutsättningar

Nedan finns en lista över faktorer som kan tänkas ha betydelse för införandet av ICDP och dina möjligheter att införliva ICDP i ditt arbete.

Vi vill be dig att för varje faktor värdera följande:

1. Hur viktig anser du att den aktuella faktorn är för att ICDP ska kunna införas på din arbetsplats?
2. I vilken utsträckning finns denna faktor i nuläget?

Vänligen sätt endast ett kryss som svar till varje delfråga.

<table>
<thead>
<tr>
<th>Faktor</th>
<th>Inte alls</th>
<th>I låg grad</th>
<th>I någon grad</th>
<th>I ganska hög grad</th>
<th>I mycket hög grad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ett tydligt stöd från min verksamhetschef för införandet av ICDP.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Min motivation att använda mig av ICDP.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
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<td>□</td>
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<td>Finns i nuläget</td>
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<td>□</td>
</tr>
<tr>
<td>Avsatt tid till införandet av ICDP (alla de aktiviteter som ingår).</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
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</tr>
<tr>
<td>En tydlig genomförandeplan för införandet av ICDP i sin helhet (aktiviteter som ska äga rum och inom vilken tidsram).</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
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<td>□</td>
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</tr>
<tr>
<td>Införandet av ICDP är förankrat på flera nivåer i min organisation och passar in i övriga aktiviteter som planeras för min verksamhet.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
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<td>□</td>
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</tr>
<tr>
<td>Tydliga nyckelaktörer som driver införandet av ICDP framåt.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
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</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
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<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Mitt behov av att få utveckla mitt sätt att arbeta.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Möjlighet att anpassa ICDP till min specifika verksamhet.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Överensstämmele mellan innehåll (ICDP) och den kultur som finns på min arbetsplats.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Möjligheter till planerat stöd/handledning mellan utbildningstillfällena.</td>
<td>Hur viktig</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td></td>
<td>Finns i nuläget</td>
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</tr>
<tr>
<td>Faktor</td>
<td>Inte alls</td>
<td>I låg grad</td>
<td>I någon grad</td>
<td>I ganska hög grad</td>
<td>I mycket hög grad</td>
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<td>-----------------------------------------------------------------------</td>
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<td>------------------</td>
</tr>
<tr>
<td>Forum där jag kan diskutera framgångar och misstag i mitt arbete med ICDP.</td>
<td>Hur viktig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>En positiv inställning på min arbetsplats inför att tillgodogöra sig nya arbetssätt.</td>
<td>Hur viktig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Någon i min verksamhet som systematiskt följer upp mitt arbete.</td>
<td>Hur viktig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Finns i nuläget</td>
<td>☐</td>
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</tbody>
</table>

Övriga kommentarer:

Tack för din medverkan!
APPENDIX 6

Intervjuguide personal

Reach

1. Du var en av dem som påbörjade ICDPutbildningen 2010, nivå 1. Fullföljde du den utbildningen?
2. Har du eller någon annan vid din familjecentral också gått ICDPutbildning steg 2?
3. (Om det var respondenten): De som inte gick – fick de på något sätt möjlighet att tillgodogöra sig det du lärde dig på nivå 2? Hur?
4. (Om det var någon annan än respondenten): Fick du och andra på familjecentralen möjlighet att tillgodogöra er det som din kollega lärde sig under nivå 2? Hur?

Efficacy

5. "Tillämpar du ICDP i ditt arbete idag"

Följfrågor som i varje relevant del närmare utreder denna skillnad – och ev icke skillnad (se också fråga 9)

7. Finns det några negativa konsekvenser av att du/ni valde att vara med i ICDP?
8. Jobbar även andra här på familjecentralen jobbar med ICDP på det sätt du beskriver för mig att du gör? /Är det någon här som gör det?

Adoption och implementation

11. Hur ser du på förankring av ICDP i verksamheten som helhet? Din chefs roll i det hela? Vem är "chef" över ICDP? Är det någon som följer/stöttar dig och dina kollegor med utvecklingen av ICDP?
12. Har du fått information om vad som förväntas av dig/er/din familjecentral, vad gäller arbetet med ICDP? Har ni fått direktiv om hur ni ska omsätta den utbildning ni gått i praktisk verksamhet? Av vem (isf)?

Implementation - fidelity

13. Centralt i ICDP-utbildningen var ju det här med tre dialoger och åtta teman för gott samspel. Kretsar innehållet i föräldraträffar/mötet mellan dig och föräldrar-barn kring dessa? Kan du ge något exempel på hur du jobbar kring någon av de här delarna för att utveckla föräldrars kapacitet i det här? (respondenten kan då få peka i bilden och berätta mer konkret hur man eventuellt jobbar kring det centrala i ICDP)
Intervjuguide övriga (Verksamhetschefer, BHV, Salut)

1. 2010 påbörjades ju en satsning på att införa ICDP i barnhälsovården (och i mhv mfl) i hela länet. Kan du kort ge din bild av hur detta tagit form sedan dess? Dvs. de delar du är insatt i.

2. Vilka av familjecentralerna använder sig av ICDP? (om verksamhetschef: Använder sig din hälsocentral av ICDP?)

3. Vad är det man gör då (dvs vad görs nu som skulle saknats om inte ICDP införts)?


7. Är ICDP förankrat på de relevanta ställena i organisationen i dagsläget? Vilka ställen är det? Finns det ytterligare behov av förankring?

8. Vilka är förväntningarna hos dig som har haft/har en roll i det här – i att besluta om det, sjösätta det och i att driva det, på vad som egentligen ska finnas ute i verksamheterna nu fyra år efter att detta sjösattes? = På vilket sätt förväntar du dig att personalen tillämpar ICDP i sitt arbete (vilka är målen med satsningen på ”operativ verksamhetsnivå”)?

APPENDIX 7

Enkät för kvalitetssäkring, ICDP

Introduktion av de 8 samspelstemana och tre dialoger i föräldragruppen.

1. Använde ni er företrädesvis av de **8 temana** eller de **tre dialogerna** i samtalen om föräldrarnas samspel med sina barn?

<table>
<thead>
<tr>
<th>Tre Dialoger</th>
<th>8 samspelstemanan</th>
<th>Båda</th>
<th>Ingen</th>
<th>(Ej svar)</th>
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</thead>
<tbody>
<tr>
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</table>

2. Har jag tillräckligt med kunskap, exempel och jämförelser för att jag skall kunna presentera de **tre dialogerna** med en känsla av “flyt”?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
<th>I hög grad</th>
<th>Ej svar</th>
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</table>

3. Har jag tillräckligt med kunskap, exempel och jämförelser för att jag skall kunna presentera de **8 samspelstemana** med en känsla av “flyt”?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
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Emotionell dialog.

4. Berättade jag och gav exempel på hur betydelsefullt emotionell kontakt är för barnets utveckling?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
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<th>Ej svar</th>
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5. Uppmuntrade jag föräldrarna att berätta om ”gyllene ögonblick” i samvaron med sina barn?

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<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
<th>I hög grad</th>
<th>Ej svar</th>
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6. Uppmuntrade jag föräldrarna att ge sig tid till att ha känsomässig nära kontakt med sina barn dagligen?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
<th>I hög grad</th>
<th>Ej svar</th>
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</table>

7. Uppmuntrade jag föräldrarna att ge positiv bekräftelse och beröm till sina barn?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
<th>I hög grad</th>
<th>Ej svar</th>
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</table>
**Förmedlande dialog. Tema 5 – 7.**

8. Förklarade jag för föräldrarna skillnaden mellan en "torftig" och "fyllig" förmedling och vilken betydelse detta har för barnets kognitiva utveckling?

<table>
<thead>
<tr>
<th>Mycket lite</th>
<th>Ringa grad</th>
<th>Måttlig grad</th>
<th>Ganska hög grad</th>
<th>I hög grad</th>
<th>Ej svar</th>
</tr>
</thead>
</table>

9. Uppmuntrade jag föräldrarna att ge sig tid att uppleva och engagera sig i saker tillsammans med sitt barn?

<table>
<thead>
<tr>
<th>Mycket lite</th>
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</tr>
</thead>
</table>

10. Förklarade jag för föräldrarna hur viktigt det är att tillsammans med sitt barn tala om och berätta om sådant som både de själva och barnet är engagerade i?

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</table>

**Reglerande dialog. Tema 8.**

11. Diskuterade jag och gav exempel på skillnaden mellan en "negativ" och "positiv" gränssättning med föräldrarna?

<table>
<thead>
<tr>
<th>Mycket lite</th>
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</table>
APPENDIX 8
Enkät för kvalitetssäkring, ICDP

Introduktion av de 8 samspeltemana och tre dialoger i föräldragruppen.

1. Använde ni er företrädesvis av de **8 temana** eller de **tre dialogerna** i samtalen om föräldrarnas samspel med sina barn?

<table>
<thead>
<tr>
<th>Tre Dialoger</th>
<th>8 samspels-teman</th>
<th>Båda</th>
<th>Ingen</th>
<th>(Ej svar)</th>
</tr>
</thead>
</table>

2. Har jag tillräckligt med kunskap, exempel och jämförelser för att jag skall kunna presentera de **tre dialogerna** med en känsla av ”flyt”?

<table>
<thead>
<tr>
<th>Mycket lite</th>
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3. Har jag tillräckligt med kunskap, exempel och jämförelser för att jag skall kunna presentera de **8 samspeltemana** med en känsla av ”flyt”?

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Emotionell dialog.

4. Berättade jag och gav exempel på hur betydelsefullt emotionell kontakt är för barnets utveckling?

<table>
<thead>
<tr>
<th>Mycket lite</th>
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5. Uppmuntrade jag föräldrarna att berätta om ”gyllene ögonblick” i samvaron med sina barn?

<table>
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<tr>
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6. Uppmuntrade jag föräldrarna att ge sig tid till att ha känslomässig nära kontakt med sina barn dagligen?

<table>
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<tr>
<th>Mycket lite</th>
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7. Uppmuntrade jag föräldrarna att ge positiv bekräftelse och beröm till sina barn?

<table>
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Reglerande dialog. Tema 8.

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