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## Succeskriterier og barrierer i Sundheds-it udvikling

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### Description:

Success criteria's and barriers in eHealth development

A case study of the EHR planning process in the North Denmark Region with a focus on end-user involvement

During the past two decades replacement of paper based patient records with electronic records (EHR) have been a major issue at Danish hospitals because of the paper-based patient record not longer meeting the requirements of patient safety considerations within the health care sector. However, experience has shown that besides benefits, the introduction of the EHR often brings with it a number of organizational problems. Well-known success criteria's in eHealth development in general are: positive clinical benefits as a result of the implementation of the new system and joint-ownership of the decisions made during the development process. Well-known prerequisite for achieving both is real end-user-involvement, the best possible representation of all groups of clinicians and early involvement of clinicians. Experience has shown that, when it comes to successful implementation of the EHR, physicians are a very important group of clinicians, because their acceptance is crucial to whether or not the EHR is brought into use in the intended way. On this background the focus was on physicians.

This book is based on a research study of the EHR planning phase in the North Denmark Region (NDR), conducted from 2003-2006. The overall objective was - focusing on physicians in the EHR procurement process in the NDR - to study success criteria and barriers to the development of EHR systems that meet the physicians' professional needs and interests and thereby support their every-day clinical practice. The interactions going on between three groups of actors (physicians, IT-professionals and administrators) were studied in both the present- and the historic perspective in order to study both present- and historic conflicting interests between the three groups.

The study showed with regard to the present perspective that none of the well-known preconditions for achieving a successful implementation of the EHR were met. Besides, a new precondition appeared during the process: the importance of workload reduction. The no existing possibility of workload reduction was the main barrier to equal participation in the process for the physicians, hence to participate on an equal footing with the other groups. This meant that the physicians' interests to a large degree were taken care of by IT-professionals and other non-physicians, and that the selection of the EHR system was based mainly on the interests of the IT professionals, i.e. based on technical and economic criteria. In the historic perspective, physicians and administrators have had/still have different interests in- and perceptions of the purpose of the patient record. They have both fought for the right to define this purpose during time. To date, the administrators have won the fight because of the balance of power being in their favour. The conclusion is that this "inherited" balance of power - especially between physicians and administrators - was the major reason for the approach chosen for the planning process in the NDR. It explains the working conditions set up for the EHR working group by the IT-Board during the procurement process. These conditions led to the role of physicians being reduced to one of clinical consultants - rather than real participants.

In conclusion, by combining and developing existing theories and methods, the study provided an improved method to collect more detailed information on the actor groups participating in eHealth development in general and in EHR development in particular and on the interaction between these groups during the development process. This allows eHealth management to explore new avenues in order to support, facilitate, and improve real end-user participation.

### Abstrakt på dansk

#### Baggrund

Indførelse af elektroniske patientjournaler (EPJ) på danske sygehuse har fyldt meget i debatten i de sidste to årtier, såvel blandt politikere, myndigheder og klinikere som i medierne. Den medicinske og teknologiske udvikling har medført, at den papirbaserede patientjournal ikke længere lever op til de krav, der af *patientsikkerhedsmæssige* hensyn stilles til infrastrukturen indenfor sundhedsvæsenet. Samtidig har den informationsteknologiske udvikling medført, at en elektronisk patientjournal (EPJ) kan være en løsning på mange af de problemer, der er forbundet med en papirbaserede patientjournal. Erfaringer har imidlertid vist, at indførelse af EPJ ofte fører en række nye problemer med sig af bl.a. organisatorisk natur, herunder manglende understøttelse af klinikernes daglige arbejde, hvilket har ført til modstand mod EPJ fra klinisk side. Mange undersøgelser har vist, at succeskriterier for en vellykket udvikling og implementering af EPJ er, at klinikerne opnår *positive kliniske gevinster*, og at der opnås *medejerskab* blandt klinikkerne til de beslutninger, der træffes i løbet af EPJ udviklingsprocessen. Medejerskab og positive kliniske gevinster er betinget af *tidlig involvering* af klinikere i udviklingsprocessen, bedst mulig *repræsentation* af relevante klinikergrupper og *reel indflydelse* på beslutningsprocessen. Mange erfaringer viser også, at *lægerne* udgør en meget vigtig klinikergruppe med hensyn til udvikling og implementering af EPJ, da deres accept ofte er altafgørende for, om EPJ bliver taget i anvendelse - på den tilslåede måde - eller ej. Som følge heraf var hovedfokus i forskningsprojektet bag denne bog rettet mod *lægernes* deltagelse i EPJ-udbudsprocessen i Nordjyllands amt / Region Nordjylland (NJA/RN). Udover lægerne var fokus også på IT-professionelle og

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