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Tuesday 3 February

Oral Presentations

Implementation in Practice

Implementation of guidelines: reviews of systematic reviews

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**Background:** The Norwegian Directorate of Health is responsible for developing national guidelines and contributing to implementing the guidelines. Adherence to guideline recommendations is often suboptimal. Studies have identified a variety of barriers that could explain this. The Norwegian Directorate of Health has asked The Norwegian Knowledge Centre for the Health Services to summarize evidence to inform the efforts to implement guidelines.

**Aim:** To conduct systematic reviews on:
1. Tailored interventions
2. Other interventions for implementing guidelines
3. Interventions to implement guidelines on diagnostics

**Methods:** We will develop two systematic reviews and two overviews of systematic reviews, adapted to the Norwegian healthcare setting:
1. We will describe the logic behind tailored interventions and develop an overview in Norwegian of three systematic reviews from the EU-project: “Tailored implementation for chronic diseases” (TICD):
   - A systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice (determinants of practice)
   - A systematic review and assessment of approaches used to identify determinants of practice
   - An updated Cochrane review on effectiveness of tailored interventions
2. We will conduct an overview of systematic reviews of effect of interventions to implement guidelines. The review will build on an overview which is currently being developed for low-income countries.
3. We will prepare two reviews on implementation of diagnostic guidelines, with a special focus on guidelines on diagnostic imaging:
   - A systematic review on determinants of adherence to diagnostic guidelines
   - A systematic review on interventions to optimize use of diagnostics

**Results:** We will present a summary of the overviews and reviews at the conference.

**Conclusion:** Efforts to improve the implementation of guidelines should be informed by awareness of factors that may impede or facilitate implementation and the best available evidence regarding effectiveness of implementation interventions.
Clinical pathways at Swedish intensive care units: a retrospective study of the implementation process

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Background: Clinical pathways (CPs) are a methodology to support quality improvement and integration of evidence-based practice (EBP). Globally CPs are gaining in importance but the CP-methodology is still infrequently utilised within intensive care. Of Sweden’s 84 intensive care units (ICUs) only 17 (20%) are using CPs and the quality of the CPs vary. As high quality CPs may enhance EBP, a further progress has the potential to benefit both patients and health care providers. However, CPs are complex interventions and in order to facilitate a progress further understanding of the factors that affect the implementation process is needed.

Aim: To explore the implementation process of CPs within ICUs.

Methods: A mixed method retrospective exploratory design was used. Quantitative data from ICUs utilising CPs (n=15) were collected using a CP-survey including all Swedish ICUs (completed 2012), and qualitative data were collected thru interviews with key-informants (n=10). Data were processed using descriptive statistics and qualitative content analysis, and the findings were integrated.

Findings: Implementation of CPs was conceptualised as a process directed at realising the usefulness and creating new habits. Enthusiasm, support and time were required. Multiple factors, related to six main-categories and fourteen sub-categories, were found to affect the process. Although the evaluations of the CPs sometimes were insufficient, most implementations were perceived as successful.

Conclusions: Bottom-up initiatives, inter-professional project-groups and small ICUs seem to enhance successful implementation of CPs while inadequate electronic health record systems, insufficient support and time constrains can be barriers. To ensure quality improvement further effort should be taken to evaluate implemented CPs. Support from centralised units at the hospitals and national guidance and cooperation, have the potential to facilitate the progress of CPs. However, further research is needed to expand the understanding of staff perspective, inter-professional interactions and roles of leadership in the implementation process.
Implementing evidence-based practices in an emergency department flow culture

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Background: Hospital emergency departments (EDs) have experienced an increase in acute admissions, causing pressure on ED clinicians, who face a constant flow of patients. Still, they are expected to be updated on the latest research advances and ascertain that their practice is evidence-based. There is an increasing recognition of the relevance of the organisational culture on implementation of EBP since the shared assumptions, beliefs, values and norms among members of an organisation can have a strong influence on how individual clinicians think, feel and behave in relation to the use of research in clinical practice.

Aim: The aim of this study was to explore how the flow culture in a Danish ED influenced nurses’ use of evidence-based clinical guidelines and a research-supported screening routine. By applying the Cultural Historical Activity Theory (CHAT), which focuses on identifying disturbances in the ED activity system, we investigated what might influence the implementation of EBP in this setting.

Methods: The study was designed as an in-depth ethnographic inquiry based on fieldwork and semi-structured interviews. Subsequently a thematic analysis and a contradictions analysis were conducted.

Results: The contradictions analyses yielded five contradictions that were observed in the ED. The main contradiction was that the evidence-based screening routine and clinical guidelines provided a flow stop. This contradiction was associated with four others contradictions in the flow culture: I) insufficient time to implement a large number of guidelines, II) bad conscience due to perceived non-adherence to EBP, III) newcomers had different priorities in the ED, and IV) conflicting views of what constituted being a professional in the ED.

Conclusion: This study contributes to expand the knowledge on how ED practitioners weight the use of evidence-based clinical guidelines and a screening tool. The creation of patient flow has consequences for the degree of compliance with guidelines and screenings. In managing the patient flow, ED guidelines and screening tools are invisibly socially included and excluded depending on whether they secure flow or not. Guidelines and screenings that do not secure the flow are perceived as flow-stops and will thus not be used and implemented.
What conditions are required when occupational therapist’ in collaboration with researchers of implementing complex interventions in clinical practice?

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Background: There is a strong consensus within the healthcare professionals about the difficulties and the complex processes it means to implement science into clinical practice, where incidents, cause and effect, actions and reactions affect the process.

Aim: The aim of this study was to identify and describe over time, how clinicians implement a new complex intervention in close collaboration with researchers. What aspects influence the implementation process based on the participating occupational therapists' experiences?

Methods: A qualitative longitudinal study. 44 occupational therapists participated in the implementation of a client centred ADL-intervention (CADL) for persons with stroke. Before implementing the intervention, the participants took part in workshops intended to learn how to integrate new knowledge, theories and concepts forming the basis of the new intervention. After completing the workshops the implementation of the intervention started with clients who were included in a randomized controlled trial. The focus group interviews, conducted 2, 6 and 12-month after completion of workshops were analysed by using a grounded theory approach.

Result: Three categories emerged from the coding process: (1) included in the scientific world, (2) involved as an actor of science, and (3) integrated with respect in a partnership. From these three categories, a core category emerged: the process of the fusion of science and practice through implementing client-centered intervention. In the interactions between researchers and practitioners the participants initially felt like outsiders with limited knowledge and experience in research in general and to the implementation of the intervention, more specifically. During the process they become more involved with increased equality and shared responsibility and finally confirmed in a partnership with an integrated understanding of the importance of each other’s expertise.

Conclusion: During the process, the participants felt included in the scientific world, involved as an actor of science and integrated with respect in a partnership with the researchers. This findings could be used in order to develop a model for implementing result from research into clinical practice.
Implementation of best practice recommendations on pressure ulcer prevention in acute care hospital in Finland

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\textbf{Background:} Pressure ulcers (PU) are common and expensive problems in hospitals. By using preventive actions it may be possible to reduce their incidence and improve the quality of care.

\textbf{Aim:} The aim of the project was to implement PU prevention practices based on best practice recommendations as part of daily patient care on thirteen acute care wards in one hospital district in Finland.

\textbf{Methods:} The project started in 2013. A modification of the Model of Consistent Practices developed by The Finnish Centre for Evidence-Based Health Care was used in the implementation process. The model contains four phases: 1) Evaluation of the present practices and information retrieval of the best practices, 2) Comparison of the present practices and the best practices, 3) Development of the new practice and increasing competencies, and 4) Testing and evaluation of new practices.

Nursing staff’s competence and training needs related to the prevention and care of PUs were assessed and consented in-hospital adult patients were clinically studied.

\textbf{Results:} The mean value of the nurses’ knowledge test points was 25.9 (possible max 35). The best-known area comprised factors related to development of PU while knowledge of classification of PU was poor. The nursing staff (370 nurses) were trained to use the Braden risk assessment tool. Pressure ulcer prevalence was 8.7\% (20 out of 229 consented (97\%) patients). An education package and locally modified instructions were planned and implemented. Recording practices related to PUs were also planned and implemented. Finally, educational material was produced in e-learning environment.

\textbf{Conclusion:} Only adequate acknowledgement of the problem of pressure ulcers in health care settings can lead to key preventive practices. The project continues: in the future, the effectiveness of staff education leading to reduction in the number of PUs will be recorded.
Investigating the implementation of an internet-based patient-provider communication service into clinical practice using the CFIR framework

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**Background:** Internet-based patient-provider communication services (IPPC) provide patients and their health care providers (HCP) the opportunity to have secure email contact over the Internet, and can be a valuable supplement to traditional health services. Despite growing evidence that use of IPPCs has positive outcomes, studies also report challenges when making use of IPPCs in clinical practice.

**Aim:** To investigate the implementation process of an IPPC into five different units at a university hospital, to identify antecedents for successful implementation.

**Methods:** Patients undergoing one of five diagnoses or treatments (liver transplantation, testicular cancer, autologous stem cell transplantation, advanced cancer and participating in a clinical drug trial, type 1 diabetes) were offered an IPPC to ask questions to HCPs at their treatment unit after discharge. The service was used by about 20% of the patients to whom it was offered. We conducted a qualitative study with retrospective exploratory design using individual interviews or written feedback from twelve nurses, six physicians and a nutritionist who had answered messages from the patients via IPPC. Data were deductively analyzed using qualitative content analysis, guided by the Consolidated Framework for Implementation Research (CFIR).

**Results:** There were differences between the five units with respect to perception of the patients’ needs, the HCPs tension for change, the compatibility of IPPC with HCP’s own values, relative priority and leadership engagement. Some of the HCPs were critical, but the majority highly recommended the IPPC and expressed surprise and to some extent disappointment that it was so little used by the patients.

**Conclusion:** This study offers insight into antecedent factors that play an important role in the implementation of an IPPC into clinical practice, and how uses of seemingly identical interventions evolve differently at different units.

Nordic implementation conference in evidence-based practice February 3-4, 2015, Bergen, Norway
Facilitators for the use of research evidence in Finnish physical activity policies

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**Background:** There is a recognized gap between research evidence and policy making. REsearch into POlicy to enhance Physical Activity (REPOPA) is a 5-year project aiming to explore how to improve integration of research evidence in policy making. One of the aims of the project was to map and analyze use of research evidence in selected national, regional and local health enhancing physical activity (HEPA) policies in six countries. This paper focuses on facilitators for the use of research evidence in three national, one regional and one local level HEPA policies in Finland.

**Methods:** Policy document analysis, followed by semi-structured interviews with key stakeholders involved in the policy making processes, were carried out. Data was analyzed with content analysis.

**Results:** Having an impact on policy making processes, researchers should timely supply information in simple and short format, proceed with clear and swift communication and maintain continuous proximity to policy making process and policy makers. Researchers and policy makers need increased interaction to communicate and understand each other’s better and make policy process more evidence informed. Communication and familiarity of policy making processes facilitated the use of research evidence in physical activity policies by public sector officers and other stakeholders. Nevertheless, media, networks, communication styles and access to research database and internet resources seemed to interact seamlessly for the use of research evidence in policy making. Factors which may facilitate the use of evidence are the availability of relevant evidence applicable to local context, stakeholder involvement, expertise, knowledge transfer procedures and knowledge management within the organizations involved.

**Conclusion.** The use of research evidence in all policy making levels can be improved. One of the facilitators seems to be a common platform (in national language) to integrate research evidence and knowledge to local policy context.
Shared Decision Making

Generic production of decision aids from trustworthy systematic reviews and guidelines for the clinical encounter

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Background: Although traditional decision aids help communicate evidence to patients, their production is time consuming and often not based on current best evidence. Linking decision aids to evidence summaries from trustworthy systematic reviews and recommendations, such as those using the GRADE framework (Grading of Recommendations Assessment, Development and Evaluation), could both overcome these limitations and enhance dissemination of the evidence at the point of care.

Aims: Our objectives were: 1) to test the feasibility of automatically translating evidence summaries into generic and interactive decision aids accessible on tablet computers; 2) perform user-testing to refine the decision aids and evaluate how they can enhance shared-decision making during the clinical encounter.

Methods: We developed a framework consistent with the International Patient Decision Aid Standards for translating evidence summaries from systematic reviews and recommendations using the GRADE framework into decision aids, in collaboration with the DECIDE project (www.decide-collaboration.eu). We have implemented this framework in the MAGIC (MAking Grade the Irresistible Choice – www.magicproject.org) application – a prototype electronic guideline authoring tool and publication platform, developed by our group, that can automatically display recommendations in multilayered formats. We are refining the presentation formats for the decision aids using an iterative process of brainstorming, stakeholder feedback, and user-testing in real clinician-patient encounters.

Results: Our prototype can automatically translate a large number of GRADE evidence summaries from systematic reviews and recommendations into electronic, multilayered and interactive decision aids. User-testing in real patient-clinician interactions shows that these tools can enhance shared-decision making by facilitating communication of treatment effects, confidence in these effects, and practical consequence, resulting in decisions consistent with patients’ values and preferences.

Conclusion: This study provides a proof-of-concept that evidence summaries using the GRADE framework can be automatically translated into interactive decision aids for the clinician encounter. These tools offer an innovative method for enhancing shared decision-making.
The decide evidence to recommendation framework applied to a potential extension of the Tobacco Act in Sweden

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**Background:** Quality of evidence alone is seldom sufficient to make a recommendation on public health interventions. Other sources of information, e.g. ethical considerations, cost effectiveness and implementability, complement the scientific quality. The DECIDE (Developing and Evaluating Communication Strategies to Support Informed Decisions and Practice Based on Evidence) evidence to recommendations framework capture such criteria in a structured manner.

**Aim:** The aim was to apply the DECIDE framework to a government assignment, given to the Public Health Agency of Sweden, regarding an extension of the Tobacco Act to include outdoor public areas.

**Methods:** Available data on the DECIDE criteria: seriousness of the problem, number of people affected, quality of evidence, size of benefits and adverse effects, resource use, value for money, impacts on equity, feasibility, acceptability, individual autonomy and method sustainability were gathered and inserted in a DECIDE form. This information was discussed and assessed in a DECIDE panel meeting. The panel consisted of experts and stakeholders in the public health field, particularly regarding tobacco, and representatives from the civil society.

**Results:** The five experts and stakeholders in the panel believed that desirable consequences clearly or probably would outweigh undesirable consequences in most settings if the Tobacco Act would be extended to include outdoor public areas, and consequently recommended the option. Two participants from property and hospitality organisations believed that undesirable consequences would outweigh desirable consequences and voted against extended regulations. The result from the DECIDE panel will form a part of the response to the Swedish Government regarding an extension of the Tobacco Act.

**Conclusion:** The DECIDE framework appeared to be a useful instrument in order to compile and assess relevant criteria during investigations regarding changes of public health regulations. The DECIDE framework seemed to facilitate structured input from key actors and may support national decision making.
Communication and dissemination strategies to facilitate the use of evidence based practice

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Background: Clear communication and active dissemination of evidence to all relevant audiences in easy-to-understand formats are critical to increasing awareness, consideration, adoption, and use of evidence. By analysing communication techniques and dissemination strategies, this study informs efforts to make evidence reports summarizing current research both more easily accessible for evidence translators, health educators, patients, and clinicians and more likely to be used to influence individual decisions, change practice, and inform future research.

Aim: This review examined how to best communicate and disseminate evidence, including uncertain evidence, to inform health care decisions.

Methods: We searched MEDLINE, the Cochrane Library, Cochrane Central Trials Registry, PsycINFO, and the Web of Science. We used a variety of medical subject headings (MeSH terms) and major headings, and used free-text and title and abstract text-word searches.

Results: Different communication and dissemination strategies will be presented. From previous research, we found that investigators frequently blend more than one communication strategy in interventions. It was also found that compared with single dissemination strategies, multicomponent dissemination strategies are more effective at enhancing clinician behavior, particularly for guideline adherence. Furthermore, evidence on communicating overall strength of recommendation and precision was insufficient, but certain ways of communicating directness and net benefit may be helpful in reducing uncertainty.

Conclusion: The lack of comparative research evidence to inform communication and dissemination of evidence, including uncertain evidence, impedes timely clinician, patient, and policymaker awareness, uptake, and use of evidence to improve the quality of care.
Evidence based addiction treatment back to earth: “Community Reinforcement Approach” in a Community Mental Health Setting

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Background: “Community Reinforcement Approach” (CRA) was developed in New Mexico by Azrin and Hunt in the 70ies, manualized by Robert J. Meyers and Jane Ellen Smith 1995 and transferred to Germany in 2006. In several meta-analyses it has proven as one of the best overall concepts for addiction treatment worldwide. In Germany it has been adapted to the German situation combining CRA with community mental health networks.

Aim: Community mental Health philosophy focuses on the individual needs of every patient and respects shared decision making with regard to the respect concerning the free will of every individual. Implementation of evidence based Practices in community mental health can be difficult when aims and strategies of a patient don’t fit to the paradigm of a program. Starting in Bielefeld CRA was taken to transfer principles of evidence based CRA-Treatment into community mental health treatment of people suffering of substance use disorders in regional networks all over Germany.

Methods: The general principles of evidence based CRA Treatment are transferred to several regional networks in Germany. A specific web-side and an annual conference supports exchange and progress of the different teams. Implementation is going to be supported by transferring implementation science into practice. The reader about Implementation science of Dean Fixsen was translated into German and is offered to interested colleagues.

Results: After 7 years of offering CRA as an evidence based addiction treatment to networks of community mental health more and more regional teams decide to qualify their therapists in this promising evidence based practice. It is important to adopt the evidence based manual to every day practice of community mental health if treatment focuses on every patient in need.
Addressing tobacco use in patient with cancer

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**Background:** Staff reflected on whether smoking affects treatment efficacy in patients with cancer and if it is too late for tobacco cessation to provide meaningful benefit. This uncovered the need for a guideline and patient information dealing with cancer treatment and tobacco use.

**Aim:** The purpose is to help patients to take good informed decision making by making the best current knowledge from research available to both healthcare professionals and patients about how smoking affects the efficacy of cancer therapy in relation to treatment outcome, risk of side effects and prognosis.

**Methods:** We have developed an evidence-based guidelines and patient information in accordance with the Appraisal of Guidelines for Research & Evaluation (AGREE). Systematic searches were conducted on the basis of PICO. Recommendation is achieved on the basis of the literature and through consultation with relevant professionals.

**Results:** Smoking affects treatment efficacy in patients with various cancer diagnoses. Cancer patients who quit smoking have a better effect of treatment and total symptom burden equal to non-smokers. Targeted smoking cessation interventions can increase quality of life and increases the likelihood that the treatment is carried out to stipulated time. The best and most direct approach is to announce that tobacco use will reduce the effectiveness of treatment and the most important thing the patient can do is to stop using tobacco. They whom receive professional guidance in combination with nicotine replacement therapy and / or non-nicotine containing products are more likely to succeed than those who try to quit on their own. It is important that patients receive expert guidance to find the right drug and dosage.

**Conclusion:** Continued tobacco use after cancer diagnoses negatively affects treatment and patients outcomes, and there are multiple important benefits from smoking cessation. Guidelines of patients in relation to smoking during cancer treatment will now be based on recommendations that are systematically collected from relevant clinical trials / research articles.
Near Patient Tests and Antibiotics

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Background: In different countries, a varying degree of antibiotics is prescribed for respiratory tract infections. Sweden has a relatively low prescription rate and national evidence based protocols have been created for several respiratory tract infections. Despite these national recommendations, the rate of antibiotic prescription varies significantly between different regions, district healthcare centers and doctors. These domestic deviations cannot be explained in a medical fashion, which is an indication that the treatment recommendations are not being followed.

Different strategies have been discussed in order to decrease antibiotic prescription, including near patient tests that are believed to reinforce diagnostical accuracy and improve respiratory tract infection diagnostics in non-institutional care.

Aim: The aim of the project was to study factors influencing GP’s prescription of antibiotics in connection to respiratory tract infections. Near patient tests was one factor studied.

Methods: The study was performed in 2014 at four Swedish district healthcare centers in two different regions of Sweden. One healthcare center with high prescription rate of antibiotics and one with a more restrictive approach was selected in each region. Mixed methods were used. During two weeks, interviews were conducted with management, doctors and nurses. Observations were made during the period and the GPs were asked to fill out an audit concerning their managing of respiratory tract infections.

Results: Our study showed that healthcare centers with higher prescription rates of antibiotics – and lesser compliance to national protocols – also had a more extensive use of near patient tests, both Strep A and CRP. This was evident in the doctor’s audit and verified in interviews and observations. The interviews and observations revealed that these health care centers utilized tests without a doctor’s prescription more frequently – this was generally believed to be in compliance with the doctor’s expectations. The qualitative material also implied that the usage of CRP coincides with the notion of every bacterial infection being a cause for treatment.

Conclusion: Near patient tests is not a guarantee for neither reduction of antibiotic prescription nor compliance to national protocols. These tests might possibly have a reductive impact if practiced in a context where the overall prescription rate of antibiotics is higher than in Sweden – or initially, as they are introduced under supervised conditions. The long term effect of this is, however, not obvious. Presumably, CRP tests bolsters the idea that all bacterial diagnosis should be treated regardless of evidence for benefit.
Toward a new system of formal decision making in child and youth care of the Netherlands

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Introduction: Professional decisions on providing intrusive or high cost child and youth care interventions are often subjected to formal procedures and criteria. These are thought to improve the objectivity of the process as well as the validity of the professionals’ decisions. For example, in the Netherlands, decision making on measures to be taken in case of child abuse are guided by a procedure called ORBA, a structured method that offers guidelines, criteria, and checklists to assist professional in judging if there is a case of child maltreatment, and if child protection is needed. Our research shows that the value of this method is limited.

Method: In a first study, after ORBA had been implemented in all child and youth care agencies in the Netherlands, 100 case records were analyzed, to see to what extent these records contained relevant information, and to what extent process steps and motivations for decisions could be identified. This was compared with 60 records of three agencies, before ORBA was implemented.

In a second study, we investigated the interrater reliability of a group of 40 professionals trained with ORBA, compared to 40 untrained professionals. Using a blocked design, 16 case vignettes were each judged by 10 trained and 10 untrained professionals.

Results: Analyses showed that after implementation of ORBA, records more often contained relevant information and process steps. However, while after ORBA’s introduction the process has become more systematic and more transparent, it did not lead to more explicitly justifying decisions.

Our second study showed no convincing evidence that structured decision-making leads to better agreement on decisions concerning child abuse and neglect. Both ORBA trained and untrained practitioners showed little agreement on judgments and decisions.

Discussion: Instead of formalizing the cognitive steps of the professional with ORBA-like methods, it may be more fruitful to structure the decision making process as a social event, in which different norms and perspectives of different persons have to be weighted. Team decision-making can contribute to this process, especially if also persons from the family’s social network are involved, as well as civilians that have no personal bounds with the family.
Quality Improvement

Dysphagia screening after acute stroke - a quality improvement project using criterion-based clinical audit

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Background: Dysphagia is common after stroke and a major risk factor for developing aspiration pneumonia. Early detection can reduce the risk of pulmonary complication and death. Despite the fact that evidence-based guidelines recommend screening for swallowing using a standardized screening tool, criterion-based clinical audits have identified a gap between practice and this recommendation.

Aim: To determine the level of compliance to an evidence-based recommendation on stroke and swallow assessment and to take actions to improve practice if a gap was identified.

Methods: We carried out a clinical audit in a small stroke unit at a Norwegian hospital. Patients with hemorrhagic and ischemic stroke and transient ischemic attack were included. A statistical power calculation informed the number of included patients at baseline (n=80) and at re-audit (n=35). Baseline results are reported as percentages with 95\% confidence intervals (CI). We compared the baseline result with the evidence-based criteria. Feedback to staff, brainstorming, a root-cause analysis and implementation-science was used to inform quality improvement actions. A re-audit will provide knowledge about how successful the strategy was.

Results: Among 90 cases, 39\% (95\% CI 30 - 49) had not documented use of a standardized screening tool. Documentation of swallow screening was incomplete for 54\% (95\% CI 44 - 64) and complete for 7\% (95\% CI 2 - 12).

Conclusion: This audit showed a gap between practice and recommendation. The ongoing re-audit will be completed in December 2014 and final results will be presented at the conference.
Clinical audit as a basis for improvements in the field of dual diagnosis - a qualitative study of mental health services

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Background: “National guideline for assessment, treatment and social rehabilitation of persons with concurrent substance use disorders and mental disorders”, launched March 2012 is aimed at a wide range of health services and holds a separate chapter on implementation. A national clinical audit has found a significant gap between recommendation in the guideline and clinical practice. A clinical audit tool for mental health services was made and is the start-point of the implementation-plan, followed by an action schema as guide to chose goals for improvement, select initiatives based on goals, allocate responsibility and describe progress. Then there is an actual implementation phase and evaluation by a new clinical audit and summarizing of experiences.

Aims: This project aims at understanding the process of using clinical audit as a basis for making choices aimed at clinical improvement in the field of dual diagnosis in district psychiatric clinics. The objectives of the study are to describe and explore the implementation-process from the use of clinical audit to change in practice.

Materials and methods: Three different methods will be used, all qualitative, to explore the process: 1) observation of meetings, minutes of meetings etc. from the presentation of results from the clinical audit to a fully described action schema, 2) focus-group interview with participants from each of the included units after second clinical audit, and 3) individual interviews with head of the units after second clinical audit. There is a desire to open up for experiences, perceptions, attitudes and narratives.

The setting is four units at a district psychiatric clinic, one outpatient clinic, two inpatient units, and one psychiatric outpatient emergency team in the south-east of Norway.

Results: First observations are done and analysis pending. Preliminary results may be presented at the conference.
Experiences of learning and applying evidence-based practice related to quality improvement dimensions

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Background: In any clinical practice lack of time for not engaging in evidence-based practice is a socially acceptable reply, but may reflect more complex content. Research and practical experiences suggest that the implementation of evidence-based practice is part of the quality improvement in health care. We believe that relating experiences to quality improvement dimensions could enable health care managers and professionals to further develop implementation strategies for evidence-based practice and thus support quality improvement.

Aim: To study experiences on learning and applying evidence-based practice related to time and quality improvement dimensions.

Method and material: Multi-professional staff (n=138) answers to an open-ended question in a study-specific questionnaire were analysed by descriptive analysis (mentioned time) and by content analysis according to Shortell et al (1998) four dimensions (strategic, technical, cultural and structural) of continuous quality improvement (described barriers and facilitators).

Results: To a high extent staff reported time (n=103), There were also many answers (n=104) “with descriptions” of experiences of barriers and facilitators. These answers contained information representing all four dimensions according to Shortell’s framework of continuous quality improvement.

Conclusions: Time-related answers were as common as in studies in other health care settings. Time-related barriers were physical and mental, indicating the need for different actions when the goal is to overcome the overall lack of time that prevents evidence-based practice. Analysing barriers and facilitators in terms of different quality improvement dimensions provided insight to hands-on ideas and actions that could be used to deal with barriers in order to introduce and promote the implementation of evidence-based practice.
Identifying the knowledge to translate - the example of urinary incontinence in older people

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Background: While urinary incontinence (UI) is a common and worrying issue among older people, promoting the use of evidence to prevent UI onset has rarely been studied. An earlier study that was conducted in nursing homes suggests that UI can be better assessed and managed, but the prevention of UI onset requires attention to the issue by staff within acute care settings.

Aim: To report on the internal facilitators’ (IF) transition, identifying the 'know-do gap' between evidence and practice in UI prevention in orthopaedic care.

Methods: The Onset PrevenTion of Incontinence in Orthopaedic Nursing and rehabilitation (OPTION) pilot was carried out in two Swedish orthopaedic units of different size and location. The pilot project included a programme to support nursing and rehab staff to facilitate knowledge translation (KT). Five IFs were interviewed at baseline, and one and three months after the intervention was completed, and non-participant observations were performed during the KT-intervention. Interviews and observations were triangulated, depicting when and how the IFs identified the present, local UI practice, the evidence on UI, and the know-do gap in preventing UI onset in older patients undergoing hip surgery.

Results: Preliminary results indicate that before the study, neither the IFs nor their fellows at the units were aware that they could prevent UI onset. Rather, through mapping their context and matching the evidence provided by the dialogue with the experts in the KT-intervention, the IFs became aware of which practice was evidence based and which evidence to implement, and how to facilitate KT and promote evidence use.

Conclusion: The OPTION pilot indicates that KT can be promoted by tailored implementation strategies and tailoring evidence, supported by IFs awareness and understanding of the local know-do gap, and strategies to overcome barriers and promote use of evidence.
Tailoring interventions to implement recommendations for the treatment of elderly patients with depression: a qualitative study

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Background: To implement evidence-based guidelines, it is logical to tailor interventions to identified determinants of practice.

Aim: To describe how we tailored interventions to address determinants for the implementation of six recommendations on the management of elderly patients with depression.

Methods: A qualitative study in Norwegian primary care. The research group drafted an intervention plan, based on 23 determinants of practice identified in a previous study. According to a common protocol we conducted group interviews with health professionals, researchers, quality improvement officers, stakeholders and relatives of elderly patients with depression using brainstorming and more structured approaches. We informed participants about the evidence-practice gap and presented prioritised determinants that applied to each recommendation. Participants brainstormed individually and then in a group to suggest interventions to address the determinants. We then presented evidence on effectiveness of strategies for implementing depression guidelines. We asked the participants to prioritise the suggested interventions on the basis of these considerations:
1. impact of the determinant,
2. perceived impact of the intervention,
3. research evidence underlying the intervention and
4. consideration regarding high feasibility/low cost.

Results: Six groups with 29 individuals (3 to 6 participants per group) provided 379 suggestions for interventions to support implementation of the recommendations. Most suggestions could be fit within the premade plan, but with important amendments or additions. We created a logic model that included 52 interventions to implement the recommendations by addressing the determinants. The interventions could be fit within six domains: Resources to develop a collaborative care plan, resources for health professionals, resources for patients and their relatives, outreach visits, educational systems and web-based tools.

Conclusions: Although a pre-made plan covered most aspects that were suggested, subsequent group interviews contributed substantially by introducing amendments and novel suggestions. The number of ideas was abundant and a further prioritisation process was needed.
Process evaluation of a tailored intervention to implement recommendations for polypharmacy

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Background: Recently a primary care guideline addressing polypharmacy in general practice has been published in Germany (1). However, the guideline recommendations are not yet well implemented into routine care. We developed a complex tailored implementation intervention to implement key recommendations of this guideline into German primary care practices. Tailoring comprised the identification of determinants (barriers and enablers) for guideline implementation and strategies to address those previously to the development of the intervention, as well as an individual adaptation of the intervention on practice level in the delivery phase (2). The intervention was evaluated by a cluster-randomized controlled trial and additionally, a comprehensive process evaluation was conducted (3).

Aim: The aim of the process evaluation was to examine the validity of the tailoring process after a tailored implementation intervention has been applied and to assess the experiences of the targeted individuals with guideline recommendations for polypharmacy.

Methods: We will conduct semi-structured interviews with general practitioners, nurses and patients of the intervention group from August – September 2014. Interviews will be audio-taped and transcribed and a content analysis will be performed.

Results: This qualitative study will answer key questions regarding the tailoring process, e.g. whether the most relevant determinants and strategies have been identified and whether the strategies modified the determinants they were meant to address. Furthermore, it will reveal determinants and strategies connected to polypharmacy in primary care.

Conclusion: This study will contribute insights about the validity of methods used for tailoring and provide relevant knowledge for the improvement of medication management in primary care.
Implementation in Education

The effect of an evidence-based practice course on undergraduate nursing students

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Background: International Nursing Institutions and the European Nursing Tuning Project recommended that evidence-based practice (EBP) becomes a core component of the curriculum for nurses. However the impact of EBP training on undergraduate nursing students’ competence remains unclear.

Aims: To evaluate the effect of an evidence-based practice (EBP) course on undergraduate nursing students’ EBP competence.

Methods: Design: Quasi-experimental study carried out on non-randomised intervention and control groups. Settings: This study was conducted during 2009-2010 in a Public University in Spain. Participants: We approached 420 undergraduate nursing students, and 75 studying the EBP course and 73 who were not studying the course agreed to take part. Intervention: The educational intervention consisted of a 15-week course designed to teach specific EBP skills. The Evidence Based-Practice Competence-Questionnaire was used to collect the data before and after the intervention. Repeated measure ANOVA was used to compare the intervention group score with the control group scores before and after the EBP course.

Results: Undergraduate-nursing students from the control group scored poorly before and after the intervention. In comparison, the intervention group recorded significantly better mean scores after the EBP course than before, on attitude dimension (3.33 before and 4.28 after), knowledge dimension (2.82 and 3.92) and skills dimension (2.75 and 4.01). Repeated measure ANOVA showed a significant effect of the Time x Group interaction for global competence and of the three dimensions of the questionnaire.

Conclusions: Undergraduate nursing students experience positive changes in knowledge, skills and attitude as a result of a 15-week educational intervention of EBP. The EBP course showed in this study could be a good example to the educators and policymaker of other Nursing Schools about how to integrate the EBP teaching into the nursing curricula.
A model (CMBP) for collaboration between university college and nursing practice to promote research utilization in students’ clinical placements: A pilot study

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Background: In the theoretical part of the nursing education in Norway the students are trained in reading and analyzing research but in their clinical placements they do not always meet nurses who are using research knowledge in their daily work. A collaborative project was initiated in Norway between a university college and a hospital in order to improve RNs’ and nursing students’ research utilization in clinical placements.

Aim: This pilot study aimed at describing nurses’ and students’ experiences of the CMBP related to collaboration, facilitation, learning, and impact on nursing care.

Methods: Thirty-eight students from the second and third year of nursing education, and four nurses answered questionnaires with closed and open-ended questions. In addition two of the nurses wrote diaries. Data were subjected to qualitative and quantitative analysis.

Findings: Almost all participants reported that collaboration between nursing college and nursing practice had been beneficial. Most students and all nurses reported about valuable learning, increased understanding of research utilization, and improved quality of nursing care. Both students and RNs recommended the CMBP to be used in all clinical placements to support academic learning and increase research utilization in clinical practice.

Conclusion: Despite study limitations the findings indicate that the CMBP has a potential to be a useful model for teaching RNs’ and students EBP.
Impact of a training program in evidence-based practice on clinical instructors' knowledge, skills, beliefs and behaviour: a non-randomized controlled study

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Background and aim: For clinical instructors (CIs) to role model evidence-based practice (EBP) they need EBP competence. The aim of this study was to evaluate the short and long term impact of an EBP program on the knowledge, skills, beliefs and behaviour among CIs.

Methods: We invited 38 CIs, physiotherapist at Norwegian hospitals, to participate in a non-randomized controlled study to assess the impact of a 6-month interactive and clinically integrated educational program in EBP. The study was carried out from September 2008 to November 2009. Three self-administered questionnaires were used pre- and post-intervention, and at 6-month follow up: 1) The Adapted Fresno test, 2) the EBP Belief Scale and 3) the EBP Implementation Scale. The analysis approach was linear regression modeling using Generalized Estimating Equations.

Results: In total, 29 CIs agreed to participate in the study: 14 were allocated to the intervention group and 15 to the control group. One in the intervention group and five in the control group were lost to follow up. At follow up, the group difference was statistically significant for two of the outcome measures: the AFT (mean difference=30.7; P=0.002) and the EBP Beliefs scale (mean difference=7.6; P=0.005). Comparing measurements over time, we found a statistically significant increase in mean scores related to all outcome measures for the intervention group only.

Conclusions: A multifaceted and clinically integrated training program in EBP demonstrated significant improvements over time with regard to knowledge, skills, beliefs and behaviour among CIs. Future research is required to investigate if CIs are able to transfer their EBP competence to supervisory situations with their students.
Evidence-based practice: knowledge dissemination

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Background: Within occupational therapy as within many health care professions, there is a growing need to work evidence-based. Occupational therapy, together with Physiotherapy and Nursing, as still young in an academic sense, and therefore there is still somewhat limited scientific evidence available. In order to change this situation and strengthen the evidence in praxis, we are developing a manual, describing how to develop clinical evidence from own collected data. The manual is being developed for practicing occupational therapists in our county, with information on how to implement a structured work process to collect data, in order to build clinical evidence. The PICO structure is being used as the main structure in the manual as it is being prepared. The process must be easy to understand and use for occupational therapy clinicians as they evaluate their clients before and after interventions. After the process is described, a software will be created in order to easily pick out statistics and other results for presentation to staff and leadership.

Aim: The aim of the project is to develop a manual on how to collect clinical data in order to develop clinical evidence.

Methods: Building on previously developed occupational therapy programs, the manuals is developed with a similar structure and including the PICO base. The implementation will start with a frequently seen patient/client population, suggest common measures of outcome to be used before and after intervention. Interventions will be defined and clearly described, structured and documented.

Results: A preliminary version of the manuals is available during the end of 2014, and implementation will start in 2015.

Conclusion: A structured process for data collection before and after intervention as well as documentation of implemented intervention with common and frequently seen patients/clients, will develop clinical (applied) evidence for reference and reports to clients and staff as well as organizational leadership.
Master social work students’ orientation toward the evidence-based practice process: a comparison with social workers

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Background: In the Netherlands, social workers are now increasingly being urged by policymakers to engage in EBP (Evidence-based Practice). However, we found that Dutch social workers have a relatively low acceptance of and engagement in the EBP process (Van der Zwet, Beneken genaamd Kolmer, & Schalk, in press). In 2009, a new Master Social Work (MSW)-program was initiated, to create new professionals who focus on the effectiveness of interventions. Until then, we only had Intermediate Vocational Education and Higher Vocational Education.

Aim: Recognizing that the EBP process can only be successfully implemented if social workers believe it is both important and feasible, the current study assesses whether MSW students are more oriented to the EBP process and are more engaged in the EBP process than social workers.

Methods: Data were collected from 341 Dutch social workers and from 32 MSW students. The survey included several background / demographic questions and Dutch translation of the original EBP Process Assessment Scale (EBPPAS) (Rubin & Parrish, 2011), which includes five separate subscale constructs: (1) familiarity/self-efficacy with the EBP process, (2) attitudes toward the EBP process, (3) perceived feasibility to engage in the EBP process, (4) intentions to engage in the EBP process, and (5) actual self-reported EBP behaviors.

Results: MSW students are more strongly oriented toward the EBP process than social workers, they have more positive attitudes toward EBP, they are more familiar with it and have more intentions to engage in it. However, MSW students are less positive about the feasibility of implementing EBP in practice than social workers. Although MSW students are more engaged in the EBP process, there is a need for improvement.

Conclusion: We recommend policymakers to consider focusing on MSW level social workers when developing future initiatives to improve the implementation of the EBP process in practice.
Wednesday 4 February

Oral Presentations

Implementation in Practice

EBP and SDM - a manual for social work

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Background: During several years different efforts have been made to increase the work with EBP in social care. Several articles and tool-kits for supporting implementation have been made by The National Board on Health and Welfare (SoS) in promoting EBP. Other organizations, for example the Swedish association of local authorities and regions (SALAR), is also interested in increasing the use of EBP.

EBP has one of its basis in involving the client and there have been some issues in finding systematic ways to put involvement of clients into practice. During the last years has the benefits of user involvement in healthcare been highlighted. One model is Shared decision making (SDM).

Aim: The aim of this project is to develop a step-by-step manual including a check-list for professionals in social care and then to conduct a study to explore the feasibility of implementing the manual.

Methods: We combined different EBP-models into one manual including one checklist. The manual is based on five main steps in EBP and several stages related to every step. Two different groups of social workers have participated throughout the work which has strengthened the relevance of the manual, and adapted the text to real situations.

Results: The manual is currently tested in 20 different local authorities, mainly focusing on usability and if the client involvement increases. The local authorities were randomly assigned into two groups; one with an introduction of the manual and the other without. The study will focus on eight general areas that are proposed of most relevance in feasibility studies.

A follow up survey focusing on client involvement is currently being developed, and the questionnaire will be ready to use in late fall.
Preliminary results from the study will be presented at the conference.
Barriers of implementation of an antibiotic checklist

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Background: The increasing antimicrobial resistance rate (AMR) is one of the most important health care problems at this moment. To help control AMR, a better use of the current agents is necessary. Guideline-based quality indicators (QIs) have been developed to define and measure appropriate antibiotic use for the treatment of bacterial infections in the hospital. A checklist based on these QIs can be a useful tool to stimulate appropriate use.

Aim: To identify barriers for the implementation of an antibiotic checklist for all suspected bacterial infections that are treated with intravenously antimicrobial therapy in the hospital.

Methods: We developed a questionnaire based on literature to determine barriers concerning the checklist, the professional, the social setting and the organisation. It consisted of 23 statements, and professionals were invited to add comments. The questionnaire was sent to specialists and residents in seven hospitals in the Netherlands (n = 1127). If ≥25% of the participants indicated that the determinant hindered use of the checklist, this determinant was a barrier.

Results: 214 doctors completed the questionnaire. Seven barriers were identified, namely: low expectation of improvement of own antibiotic use; low expectation of patient’s satisfaction for checklist use; low expectation of colleagues’ checklist use; low estimated supervisors’ and nurses’ expectation of checklist use; negative previous experiences with checklists, and financial disincentives. A comparative analysis showed that the feasibility of the checklist was significantly lower according to the surgeons than to the medical doctors. 580 comments were given about details of the checklist.

Conclusion: Although we have not found a barrier concerning the use of the checklist itself, restructuring of the contents is necessary to make the checklist workable and more feasible, especially for surgical patients. Implementation activities will also have to focus on teamwork and education about the possible improvement of antibiotic use.
Barriers and facilitators to a screening tool for older medical patients in an emergency department: an analysis based on the theoretical domains framework

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Background: Many older medical patients are acutely admitted to the Emergency Department (ED). More than 35% are readmitted within 90 days after discharge. A screening tool for identification of elderly at high risk of functional decline and readmission has been developed for the use in an ED. As a part of designing the implementation process, we examined the barriers and facilitators for implementation of the new tool.

Aim: The aim of the study was to determine perceived barriers and facilitators as perceived by health care professionals to qualify the implementation of a new evidence-based screening tool for identifying re-admission and functional decline in older medical patients.

Methods: Four focus group interviews with practitioners (nurses, doctors, physiotherapists) from a Danish ED and five semi-structured interviews with their leaders were conducted. The Theoretical Domains Framework (TDF) formed the basis of data collection and analysis.

Results: We identified the following domains as the main barriers and facilitators: Professional role and identity, Goals, Environment and resources, Optimism, Knowledge and Beliefs about consequences. Preliminary analysis suggests that all informants considered screening older patients for readmission risk a good idea. However, each group of professionals found the tool to be more useful in another profession than their own. E.g. the nurses suggested the tool was relevant for the physiotherapists, which in contrast, considered the tool too superficial for their use. Further, everyone agreed that in order for implementation to succeed more resources were needed.

Conclusion: TDF has shown useful in identification of main barriers and facilitators related to implementation of a new tool. Results from the study have been taken into consideration in designing the implementation process.
Tailored implementation of evidence-based practice in the community care for the aged - initial experiences in a collaborative project in the city of Gothenburg, Sweden

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Background: Evidence-based practice (EBP) appears promising in order to strengthen both interprofessional team work and the client’s involvement in his/her care processes. It is therefore of interest to implement EBP in the community care for the aged. But implementation is not always a simple and straightforward process; it may face resistance or difficulties. Factors such as usability, adaptations, barriers, fidelity, and anticipated impact need to be studied when implementing EBP in a new context.

Aim: To evaluate the implementation of EBP in community health and social care for the aged in a Swedish setting. This includes the study of the implementation process as well as the impact of EBP on interprofessional teamwork and the care receivers' experiences of care quality.

Methods: An explanatory case study in two urban districts in the city of Gothenburg, Sweden, where the implementation of EBP is delivered as a collaborative project with a tailored multifaceted implementation strategy. Data will be collected through documentary information, observations, focus groups, interviews, and a survey, and analyzed using both qualitative and quantitative methods.

Results: The collaborative project is on-going with three facilitators using a multifaceted implementation strategy including cooperation between researchers and users, education/learning, and facilitation. Data collection has commenced. Initial experiences reveal that the introductory phase, containing time for persons involved in the collaborative project to get to know each other, each other’s areas of expertise and respective organizations, took longer than expected. Also, different care-professions have experienced thus far conducted educational activities in different ways, and some express limited ability to prioritize project activities.

Conclusion: The future results of this explanatory case study may be useful for gaining knowledge of and understanding the implementation of EBP in community care for the aged, and to improve the quality of care, support and rehabilitation of older persons.
Evidence-based care plans; how nurses provide the best care for patients by developing and using evidence-based practice

Anita Øvre Doblog and Helene Sundmoen Bjerkestrand, Sykehuset Innlandet HF

Background: Evidence-based practice is one of the leading focus areas in Norwegian hospitals, in our national nursing association NSF, in our hospital trust region and in Innlandet Hospital Trust. We use care plans (Veiledende behandlingsplaner, VBP), a tool that is evidence based developed by expert nurses and approved by patients organizations.

Aim: Sharing Innlandet Hospital Trust’s experiences about the development of evidence-based care plans (VBP) for nurses in their practice.

Method: Innlandet Hospital Trust has its own procedures for evidence-based approach of evidence based care plans. By using these procedures, the AGREE II tool and the guidance of an advisor, the expert groups develop evidence-based care plans for the patient groups. AGREE II describes the method and reference list show what evidence is used. This makes it easy to verify the process and the findings of the evidence. By doing so evidence-based practice is implemented.

Results: We believe that nurses can use evidence-based care plans as excellent tool for planning nursing care to their patients based on best practice. In addition, we have guided many nurses in the evidence-based practice process, thereby spreading the knowledge.

Innlandet Hospital Trust’s have 80 evidence-based care plans, and more are under development. These are a part of the pathways as well as evidence-based procedures.

Conclusion: Through our method of developing evidence-based care plans, the nurses in clinic are introduced to evidence based practice. By doing so implementing evidence-based practice is implemented in a practical way. The patients will receive quality assured nursing, based on the latest evidence, nursing experience and patient preferences.
Implementation in Education

Learning opportunities in rheumatology practice: a qualitative study

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Background: As rheumatology practice becomes more complex, there is a growing need to go beyond formal training to develop new skills and competencies. Many implementation scientists consider that learning in health care is key to achieving a more evidence-based practice and designing interventions to attain this goal. Human resource management traditionally focuses on formal education, but modern theories about learning in the workplace propose that learning at work is informal, dominated by learning through experience and interactions.

Aim: To explore the perceptions of professionals working in specialized rheumatology on learning opportunities and the learning activities they use in practice.

Methods: Thirty-six practitioners from different professions were interviewed. Data were analyzed using conventional qualitative content analysis with a directed approach, and a typology of formal and informal learning.

Results: The analysis confirms workplace learning theories. Interaction with others in the workplace, for the most part with professional peers, provided opportunities for learning through informal meetings. Recognized learning opportunities such as continuing professional education and regular participation in rheumatology-specific courses and conferences were perceived as lacking by many, and time for reflection and updating knowledge was short. Research and teaching roles were the drivers for more generic updating of knowledge.

Conclusion: The study confirmed that informal workplace learning is an important part of clinical learning in rheumatology. Further studies are needed to clarify how informal and formal learning in the rheumatology clinic may be supported in workplaces with different characteristics.
**Streamlining services for vulnerable families - a rapid assessment of the evidence**

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**Background:** *Streamlining* is the process by which services and service providers from different organisations work together to provide children/families with integrated service planning and delivery. The objective is to ensure a holistic service provision, avoid gaps or overlaps in services, create clear and smooth referral pathways from primary prevention to secondary and tertiary services, and to improve access to universal primary prevention services for vulnerable families. As part of a whole of government project in the state of Victoria aiming to streamline services for vulnerable families with children aged antenatal-four, an evidence assessment was commissioned to examine the current evidence for the effectiveness of streamlining approaches in the work with vulnerable families.

**Aim:** The aim of the study was to examine the current evidence for the effectiveness of streamlining approaches in the work with vulnerable families. The focus was on how services across the preventative, early intervention and targeted service systems work together. It includes how they plan, collaborate and partner with each other in the service planning and delivery to families and promote a comprehensive, integrated, coherent and coordinated system of support.

**Method:** A rapid evidence assessment (REA) of the evidence for streamlining services was conducted. REAs are emerging as superior alternatives to traditional literature reviews when there are time and staffing limitations. REAs are reviews that use methods to accelerate or condense traditional systematic review processes, facilitating the synthesis of evidence in an area within a short time period.

**Results:** After scanning approximately 500 included papers, 39 relevant papers were found to report evaluations of 29 projects that were comprised of at least three streamlining components. Most of the study designs used non-controlled trials. Seven were non-randomised controlled trials and five RCTs. Using a systematic rating scheme, two projects were rated *Emerging*, three were rated *Pending* and twenty-two were found to have *Insufficient Evidence*. No projects were rated *Well Supported, Supported, Promising, Concerning Practice* or *Failed to Demonstrate Effect*.

**Conclusion:** There is no clear evidence pointing to one streamlining approach as being most effective with regard to improving (a) the service planning and delivery quality of a system and (b) outcomes for vulnerable children and families. The evidence for the effectiveness of streamlining remains limited, particularly for improving child and family outcomes.
Contextual influence and effectiveness of an education intervention targeting staff to reduce use of restraint, agitation and psychotropic drugs in nursing home residents living with dementia

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**Background**: Norwegian Health Authorities recently concluded from two supervisions that use of coercion is too frequent in nursing home residents living with dementia.

**Aim**: evaluate the effectiveness of, and contextual implementation conditions for, implementing a standardised education intervention consisting of a 2-day education seminar targeting staff, followed by 1 hour monthly coaching during 6 months to facilitate knowledge application and integration in daily practice.

**Methods**: Using the theoretical framework Promoting Action on Research Implementation in Health Services (PARIHS) prospectively, a mixed-method design combining single blind cluster randomized controlled trial\(^1\), participatory action research and ethnography was used to upscale and evaluate a previous promising intervention from January 2011 to June 2014. Following a randomized list, a total of 24 NHs (n= 83) in the Western Norway Regional Health Authority were recruited; one ward within each NH was selected, with a total of 274 residents living with dementia. Four teams of eight facilitators did parallel observations of how contextual factors in the NHs influenced their education and coaching performance. Post-intervention, ethnographic fieldstudies were performed in eight selected NHs.

**Results**: Restraint-use was significantly reduced in both the intervention group (p = 0.025) and control group (p<0.001), with a tendency to a greater reduction in the control group. Agitation (CMAI) was significantly reduced, while psychotropic drug-use remained insignificant. The PARIHS framework was found relevant in a Norwegian context, and confirmed the framework’s main elements. However, clinical leadership emerged as a pivotal factor meriting some revisions.

**Conclusion**: Education initiatives focusing on person-centered care and the role of clinical leaders may successfully reduce restraint and agitation in nursing home residents living with dementia.

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\(^1\) The trial is registered at Clinical Trials gov. reg. 2012/304 NCT01715506 and formal approval was obtained from the Regional Committee for Medical and Health Research Ethics in Norway.
Increasing the quantity and quality of searching for current best evidence to answer clinical questions: the Macplus FS (MPFS) randomized controlled trial

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Background: Finding current best evidence remains challenging. With 3000 new studies published every day, no single evidence-based resource provides all answers or is sufficiently updated. MPFS addressed this issue by looking in all high quality resources simultaneously, and displaying results in a one-page pyramid with the most clinically useful at the top. Yet, additional logistical and educational barriers need to be addressed to enhance point-of-care evidence retrieval.

Aims: This trial seeks to test 3 innovative interventions, among clinicians registered to MPFS to increase the quantity and quality of searching for current best evidence to answer clinical questions.

Methods: We are conducting a randomized factorial controlled trial among 908 medical doctors currently registered to MPFS at the hospitals affiliated to McMaster University, Canada. Postgraduate trainees (n=431) and clinical faculty/staff (n=477) were randomized to each of the 3 following interventions in a factorial design (AxBxC): (A) a web-based clinical questions recorder/reminder; (B) an evidence retrieval coach composed of 8 short videos embedded in MPFS; (C) a “gamified” audit and feedback based on the allocation of “badges” and “reputation scores”.

Results: The trial is currently ongoing until Fall 2014. Utilization is continuously recorded through individual clinicians accounts that tracks logins and use, down to individual keystrokes. The primary outcome is the rate of searches/month/user at 6 month after the start of the trial. Secondary outcomes, measured through the Impact Assessment Measure questionnaire, include: utility of answers found (meeting clinicians’ information needs), use (application in practice), and perceived usefulness on patient outcomes. Results will be presented at the conference.

Conclusion: Built on effective models for the point-of-care teaching, these interventions approach evidence retrieval as a clinical skill. If effective, they may offer the opportunity to enhance it for a large audience, at low cost, by linking it to most current high quality evidence resources.
Implementation in Organisations

Formulation and implementation of evidence-informed policies: comparing two national efforts for improving health and social care

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Background: Evidence has come to play a central role within health policy, though using evidence in policymaking is inherently complex. Much of the discussion concerns what is considered as relevant evidence, how evidence is presented to policymakers and used in policy formulation. Policies need to be implemented to be effective. Active implementation strategies lead to more successful adoption than passive dissemination approaches. However, there is a need for further studies about active and effective implementation of national policies.

Aim: Investigate how evidence was used in the policymaking process and the implementation of policy in health and social care.

Methods: Two national policy initiatives in Sweden were compared using a longitudinal approach, multiple qualitative sources and methods. A framework for evidence-informed policymaking developed by Bowen and Zwi and a policy dissemination and implementation framework presented by Dodson, Brownson and Weiss were used to analyze the data.

Results: The policymakers used different strategies depending on conditions related to their roles in the health care system. Both initiatives applied an active implementation approach with multiple strategies aimed at several levels. However, central differences were found regarding the sourcing of evidence, the use of evidence and also in the implementation process, where one initiative relied on professional groups while the other focused on organizational structures, e.g. managers and quality developers.

Conclusion: There is potential in identifying restrictions and opportunities for the actors involved in formulating and implementing evidence-informed health policy. Merging two frameworks from separate research areas enabled a comprehensive approach for studying these complex processes.
Coordinated individual plans - implementation of new ways to work in Sweden

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**Background:** In 2010 health care (HSL) and social service (SoL) laws in Sweden became sharpened regarding coordination of interventions between organizations. The laws claim that people with psychosocial illness get support with coordinated Individual Plans (IP) to prevent caught between organizations. Previous attempts to implement IP have been unsuccessful, indicating evidence-based short-comings in clinical practice. Recent research indicates that improvement science with interactive design may be a way to gather knowledge about implementation of best practice.

**Aim:** To explore the function of the implementation of the changed laws and its effect.

**Methods:** An experimental implementation with interactive design is conducted 2013-2014 in collaboration between Jönköping County Council and Regional Development Council of Jönköping County. Staff (n=85) from rehabilitation, medical units, psychiatric units, schools, and social service for children and adolescents (age 0-18) take part. Interactive sessions (n=30) are documented with notes and video-records. Questionnaires will be distributed (about 300 persons) autumn 2014. Self-reported measures show: numbers of IP; knowledge about and confidence with coordinated IP.

**Results:** Analysis indicates that the experimental implementation succeeds. A working-kit (guideline, documents, webpage) has been constructed to support actors. Numbers of IP (conducted vs estimated need) have increased from October 2013 (135-324) to October 2014. Attitudes towards collaboration and coordination have shifted from awaiting and suspicious to curious and expectant.

**Conclusion:** Preliminary findings indicate that the interactive approach contributes with improved attitudes towards inter-professional collaboration and coordination, and increased amount of conducted IP. Professionals’ and users’ space for participation in decision-making and the effect of IP remains to be explored.
Organizational core conditions and activities for an evidence-based practice focusing on client outcome

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**Background:** Until recently, the professional discussion about evidence-based practice has mainly focused on questions concerning the effects and the efficacy of different intervention methods. However, today there is also a growing interest and literature on the importance of contextual factors related to local organizational learning, leadership and individual personnel-based characteristics for the implementation and utilization of an everyday evidence-based practice.

**Aim:** The aim of the project is to identify general organizational as well as individual and client-group specific conditions and activities related to the implementation and utilization of an evidence-based practice.

**Methods:** The project has a mixed-methods approach including theory building and empirical data collection using questionnaires, individual and focus-group interviews and case files concerning the presence or absence and application of such conditions and activities from social workers, managers, and politicians in two of Stockholm’s 14 local social service authorities – one with experience of using Performance Management and one of basic use of evidence-based practice.

**Results:** A tentative comprehensive model has been developed to serve as a tool or map to empirically identify organizational core conditions and professional activities for an evidence-based clinical practice. Preliminary results from questionnaires and focus groups show that some organizational core conditions and activities are more present, such as leadership giving a clear direction and staff members showing commitment, while other such as continuous follow-up and feedback on results are more absent.

**Conclusion:** Several organizational conditions and professional activities are needed to establish an evidence-based clinical practice. Some of these, especially those having a character of normative ambitions, may be easier to establish than those requiring changes in daily routines and modes of working.
Effective support systems for treatment integrity

Pauline, Goense, (Amsterdam University of Applied Sciences, The Netherlands); Co-authors: Leonieke, Boendermaker, (Amsterdam University of Applied Sciences and Groningen University, The Netherlands) and Tom, van Yperen (Groningen University, The Netherlands).

Implementation studies show that youth care interventions are not always delivered as intended and researchers frequently conclude that this may be the cause of disappointing effectiveness of these interventions in the practice field (Schoenwald, Chapman, Sheidow, & Carter, 2009; Sexton, & Turner, 2010; Tennyson, 2009). In order to ensure evidence-based interventions are used with high treatment integrity outside of research settings, research suggests that frequent and targeted support of youth care practitioners is necessary (Kerby, 2006; Mikolajczak, Stals, Fleuren, Wilde & Paulussen, 2009; Schoenwald et al, 2009). However, specific knowledge as to what should be the content of such a support system or what are the standard minimum rules for effective support, is lacking (Beidas & Kendall, 2010).

In order to contribute in bridging the knowledge gap on effective support systems, the authors have performed a review on outcome studies that evaluate the effects of a support system for practitioners of evidence-based intervention on levels of treatment integrity (Goense, Boendermaker, & van Yperen, accepted). We found four articles covering six outcome studies that 1) adequately operationalized treatment integrity procedures and 2) showed sufficient effects of the support on levels of treatment integrity. The results of the systematic review will be discussed in the presentation on the conference. The aim of this presentation is to provide information on the content of effective support for practitioners of evidence-based interventions in order to establish and maintain treatment integrity of planned interventions.
Supervision in evidence based interventions

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For being able to implement interventions, professionals need knowledge about the effective factors of interventions. More specifically: about the common and specific working factors for important problem groups in youth care. The implementation of interventions is not merely a matter of working according to a strategy or applying some techniques, but it requires insight into the how and why of treatment. Knowledge from well-known evidence based interventions shows that training can stimulate enthusiasm and provide members of staff with theoretical background knowledge and beginner skills. Actual *professionalism* is created by actively learning in professional practice (Schoenwald, Garland et al., 2010; Schoenwald, Sheidow, & Chapman, 2009). Well known evidence based interventions usually apply a support system to ensure the implementation of the intervention. Although some information is available, based for instance on publications on Incredible Years and MST (see: Webster-Stratton, 2006; Cunningham, 2006), knowledge as to what should be the content of such a support system or what are the standard minimum rules for effective support, is lacking (Beidas & Kendall, 2010).

Many professionals in youth care practice, at least in The Netherlands, work with practice based interventions within a system with a growing awareness of the need of (cost) effectiveness of their work. This raises the question what should be the content of a support system of practice based interventions. In order to answer this question and gain insight in the actual content of existing support systems, supervisors and therapists of twelve evidence based intervention in the Netherlands for children and young people with behavioural problems were interviewed.

In this presentation we will present the content of *supervision in support systems* and discuss how supervision can play a role in youth care’s daily practice.
Poster Presentations

Perceptions of “research into practice” – experiences from transdisciplinary R&D

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Peter Lundberg, CMIV, Linköping University, Sweden

Utilisation of research knowledge is a multidimensional process. Influential factors are present at individual, organizational and contextual levels and the understanding of the “research into practice” concept differs between professions and disciplinary fields involved in transferring knowledge into new clinical practices.

Implementation is often used in the sense of “research into practice” and funders of research and development (R&D) increasingly request an implementation plan to utilize the prospective research results. This encourages transdisciplinary research aiming to produce healthcare innovations. However, in this context two different definitions of implementation, may be distinguished:[1,2]

1. “the transfer of new understandings of disease mechanisms gained in the laboratory into the development of new methods for diagnosis, therapy, and prevention and their first testing in humans.”
2. “the translation of results from clinical studies into everyday clinical practice and health decision making.”

The first definition is mainly used in medical/biomedical research and refers to a bench-to-bedside transfer of basic and applied research into methods ready to be used in healthcare. The goal is to produce an innovation that can be used clinically and, when appropriate, be commercialized. This concerns areas such as chemistry, biology and physics, and applied technical, medical and clinical research.

The second definition is used especially by researchers and analysts focussing on health and healthcare systems. It refers to the optimal use of new and proven valuable methods/interventions in clinical practice.

<table>
<thead>
<tr>
<th>BASIC RESEARCH</th>
<th>Type 1</th>
<th>NEW KNOWLEDGE, Type 2</th>
<th>CHANGED/ IMPROVED</th>
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<tr>
<td>APPLIED RESEARCH</td>
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The figure represents the main types of implementation in healthcare innovation, transferring research into new clinical methods (Type 1) and taking new methods into everyday clinical practice (Type 2). Experiences from transdisciplinary R&D indicates that both types of implementation activities could exist in parallel for the same implementation object and that type 2 implementation strategies should be commenced at an early stage.
Evidence-based practice: a manual for creating clinical evidence in occupational therapy

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Background: Within occupational therapy as within many health care professions, there is a growing need to work evidence-based. Occupational therapy, together with Physiotherapy and Nursing, as still young in an academic sense, and therefore there is still somewhat limited scientific evidence available. In order to change this situation and strengthen the evidence in praxis, we are developing a manual, describing how to develop clinical evidence from own collected data. The manual is being developed for practicing occupational therapists in our county, with information on how to implement a structured work process to collect data, in order to build clinical evidence. The PICO structure is being used as the main structure in the manual as it is being prepared. The process must be easy to understand and use for occupational therapy clinicians as they evaluate their clients before and after interventions. After the process is described, a software will be created in order to easily pick out statistics and other results for presentation to staff and leadership.

Aim: The aim of the project is to develop a manual on how to collect clinical data in order to develop clinical evidence.

Methods: Building on previously developed occupational therapy programs, the manuals is developed with a similar structure and including the PICO base. The implementation will start with a frequently seen patient/client population, suggest common measures of outcome to be used before and after intervention. Interventions will be defined and clearly described, structured and documented.

Results: A preliminary version of the manuals is available during the end of 2014, and implementation will start in 2015.

Conclusion: A structured process for data collection before and after intervention as well as documentation of implemented intervention with common and frequently seen patients/clients, will develop clinical (applied) evidence for reference and reports to clients and staff as well as organizational leadership.
A survey of nutritional care at a university hospital in Norway

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Background and aim: Evidence-based practice norms and standards are essential for ensuring high quality in health and social care. At Haukeland University Hospital (HUS) updated and evidence-based national guidelines for preventing and treating malnutrition has been implemented. According to these guidelines all patients must be screened for nutritional risk at admittance to hospital, using the screening instrument Nutritional Risk Screening 2002. In addition, all patients identified to be in nutritional risk must have a plan for nutritional treatment and follow up. The aim of this study was to survey and to evaluate if nutritional care at HUS was in line with recommendations in the national guidelines for preventing and treating malnutrition.

Method: A retrospective survey was conducted by collecting data from all patient records from 16 somatic departments at HUS, on a random weekday. Data related to nutritional care during patients’ entire hospital stay was collected. We excluded patients not included in the guidelines: under 18 years of age (children and adolescents), pregnant, breastfeeding and terminal patients.

Results: At the day of data collection 746 patients were admitted. Patients with conditions not included in the guidelines (n=41) were excluded. In total, 705 patients were included. Few patients were screened for nutritional risk (n=105), and even fewer were screened at admittance (n=63). Among patients identified to be at nutritional risk (n=25), only two thirds received a correct nutritional plan with goals and interventions specified (n=17). Follow up of plans were only documented for one patient.

Conclusion: Findings from this survey demonstrated that nutritional care at HUS was not in line with recommendations in the national guidelines for preventing and treating malnutrition. Insight into barriers and facilitators towards an evidence-based nutritional care at HUS is needed to successfully implement these guidelines.
Implementation guides as a tool to support implementations teams, facilitate decision making and reach high quality and sustainable implementation – the experience from the implementation of Early Interventions for Children at Risk (TIBIR) and the development of an implementation guide

TIBIR is an evidence-based program designed to identify children with conduct disorders as early as possible, and to offer tailored interventions as part of the ordinary primary services for families at in Norwegian municipalities. The program is based on the principles of Parent Management Training Oregon (PMTO)

The implementation of TIBIR is part of a nation-wide strategy to prevent persistent adult antisocial behaviour and criminal involvement. Since 2004 the program has been implemented by the Norwegian Center for Child Behavioural Development (Atferdssenteret) in 81 municipalities. Randomized controlled trials have been conducted to evaluate the intervention’s unique effects in real-life settings.

TIBIR is a comprehensive and complex program to implement. It consists of 6 interventions, which are implemented within existing health and social services in municipalities and in multiple settings (e.g. home, school and preschool). Various support tools have been developed to guide the implementation process and monitor the implementation activities. This presentation will focus on the recent development of an implementation guide and show how this tool can facilitate decision making and contribute to a sustainable implementation.

The implementation guide is based on Dr. Dean Fixsen’s Active Implementation Frameworks and Atferdssenteret’s national implementation team’s experiences from implementing TIBIR during the last 10 years. The aim of the guide is to make the complexity of implementation visible, understandable and manageable. It is divided into the 4 phases of implementation and lists all the necessary actions needed, in chronological order, connected to each phase and with links to various helpful checklists, forms and templates. Although the guide is aimed primarily at municipalities implementing TIBIR, this presentation will also serve as an inspiration for others who are implementing complex evidence based programs.
Implementation of evidence-based palliative care in acute care settings: obstacles and opportunities at the political and administrative domain

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Background: In Sweden, a political will on national level to develop and enhance the importance of palliative care can be discerned, when a decision about drafting national guidelines and clinical guidelines in the field were taken by the government. During 2012 two new documents were published, “National Clinical Practice Guidelines for palliative care 2012-2014” from Regional cancer centres in cooperation and a preliminary version of “A national knowledge-based guidance for good palliative care” from the National Board of Health and Welfare. At acute care settings, i.e. health care organizations with the primary mission to cure diseases, there will always be seriously ill and dying patients. Studies show that palliative care in these settings has several problems. An overbridging issue is the problem to identify patients in the transition from the phase of curing to palliative and end-of-life care and subsequent information to the patient and next of kin about the goal for the care.

Aim: The aim was to identify factors and processes that facilitate and/or prevents implementation of evidence-based palliative care in acute care settings in the political and administrative domain.

Methods: Individual interviews were conducted with politicians in six county councils in each region of health care in Sweden and chief medical officers at five different acute care hospitals in the middle of Sweden, during spring 2013. A qualitative, directed content analysis, with a deductive approach based on the Consolidated Framework for Implementation Research (CFIR) was used.

Results: The analysis is currently ongoing and the results will be possible to present at the conference.

Conclusion: This study, focusing on politicians and chief medical officers, will be followed by a study focusing on health care staffs experience of factors and processes that facilitate and/or prevents implementation of palliative care in acute care settings.
The barriers of implementing: therapists’ knowledge and attitudes towards evidence-based practices in mental health services

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The number of evidence-based practices in mental health services is rapidly increasing. However to experience successful implementation of these practices, one must overcome several barriers. This includes therapists’ decision not to adopt them.

The aim of this study was to examine Norwegian therapists’ knowledge of, attitudes towards and use of evidence-based practices; Is openness towards adopting evidence-based practices associated with knowledge, attitude or demographic variables like age, education, experience and workplace?

Participants (approximately 300) were therapists in eight community mental health clinics (1/3) and 22 specialized health clinics in one health trust (2/3). Many of the clinics participated in a project on better coordination of health services. On permission from clinical leaders the paper survey was distributed during spring of 2014. Either the clinics collected the surveys themselves, or the researcher handed out the surveys during a clinical meeting. This resulted in a response rate of approximately 80%. Results from the study will be presented. Examining therapists’ knowledge and attitudes towards evidence-based practices may be an important contribution to what barriers to overcome in the search of designing more appropriate implementation strategies. Both in mental health services in specific, but also in health services in general.
Interventions to improve the uptake of guidelines in nursing homes: a systematic review

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Background: Clinical practice guidelines have the potential to improve professional practice and patient outcomes and can counteract unwarranted variation in health care delivery. However, its translation into daily care routines remains poor. Research on guideline implementation strategies has mostly been conducted in settings which differ significantly from a nursing home setting and is therefore hardly transferable. Thus, the objective of this study is to systematically review the effects of interventions to improve the implementation of guidelines in nursing homes.

Methods: We conducted a systematic literature search in May 2014 to match pre-defined inclusion criteria in the protocol. We searched the Cochrane Library, CINAHL, Embase, MEDLINE, DARE, HTA, CENTRAL, SveMed+ and ISI Web of Science. In addition, we performed a citation search on the references of the included studies, screened their reference lists and the references of relevant reviews. Studies were eligible if they evaluated the effects of any guideline implementation strategy in a nursing home setting. Two reviewers independently identified studies, assessed quality, extracted data, and rated the overall quality of the evidence using GRADE. We classified the included studies according to the EPOC taxonomy of professional, organizational, financial and regulatory interventions.

Preliminary results: We identified a total of 3321 individual references and included four cluster-randomized controlled trials. The overall quality of the documentation was rated low/very low using GRADE. A multifaceted intervention using the theory of planned behaviour and a supervised guideline implementation showed small but significant effects.

Conclusion: There are few studies which can inform practice in nursing homes on how to successfully implement clinical practice guidelines. More implementation research is needed to ensure high quality of care in nursing homes.
Suicide prevention at discharge from a psychiatric hospital. A clinical audit on guideline adherence.

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Background: Each year 500 Norwegians commit suicide. The weeks after discharge from psychiatric in-patient care are critical for suicide risk. The national guideline for suicide prevention in psychiatric care settings has recommendations that could reduce this risk; however, evaluations on guideline adherence are sparse.

Aim: To evaluate a psychiatric hospital’s adherence to the following guideline recommendations:

1) Patients admitted to psychiatric hospital with either suicide attempt or ideation is screened for suicide risk when discharged
2) Patients should be given an appointment to follow-up care at discharge
3) Contact with general practitioners should be established
4) Patients should be given information about who to contact when in need of immediate care or help

Method: A clinical audit was conducted to systematically review a psychiatric hospital’s adherence to the four guideline recommendations.

We revised all admissions (N=530) to the acute psychiatric ward at a University Hospital in the period November-December 2013 and January 2014. Electronic medical records were used to identify admissions who met the audit’s inclusion criteria (N=307). Data were extracted from the discharge summaries at hospital discharge or transfer to a patient unit outside the psychiatric hospital. Descriptive statistical analyses with bootstrapped stratified confidence intervals, and crosstabs were used.

Results: Of the total sample 88.8% (CI: 87.8-89.5) was screened for suicide risk at discharge, 52.8% (CI: 50.6-55.1) received an appointment to follow up care, 20.3% (CI: 19.0-21.6) was put in contact with their GP, and 11.4% (CI: 9.3-13.5) received information about who to contact if immediate care was needed.

Conclusion: The audit reveals guideline adherence to a certain extent. To increase adherence to all four guideline recommendations, we suggest educational meetings for all clinicians focusing on suicide prevention and guideline recommendations. We also suggest reminders in the electronic medical discharge summary for decision support.
Screening for substance use. A clinical audit

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Background: Mental illness and substance use disorder commonly co-occur, but substance use disorders often goes unrecognized in clinical practice. Identification of harmful use of substance is essential for initiating intervention and systematic treatment. “National guideline for assessment, treatment and social rehabilitation for persons with concurrent substance use disorders and mental disorders” recommend routine screening for substance use of all patients attending a general psychiatric outpatient clinic.

Aim: To improve the extent and quality of screening for substance use during new patient registration.

Methods: We carried out a clinical audit as a quality improvement process. Current practice in a psychiatric outpatient clinic in Bergen was compared with criteria based on guideline recommendations. Criteria included recommendations that all new patients must be screened for substance use and that such screening should be done with use of the screening tools AUDIT and DUDIT. Data was collected from medical records of patients (n=187). The gap between recommendations and current practice were addressed by multifaceted interventions based on systematic reviews from implementation research and analysis of barriers in the section. Re-measurement will be performed to compare practice before and after implementation.

Results: Screening for substance use is documented in 73 % (n=136) (95 % CI: 66 - 79) of medical records. Use of recommended screening tools is documented once. The extent of practice for screening is variable. Screening for alcohol is documented in 62 % (95 % CI: 55 - 70) of medical records, illicit drugs in 52 % (95 % CI: 44 - 59) and licit drugs in 44 % (95 % CI: 37 - 51).

Conclusion: This clinical audit identifies a gap between recommendations and current practice in screening for substance. Re-measurement will show whether initiated evidence based implementation strategies improves practice.

Keywords: Screening, substance use, clinical audit, quality improvement, implementation.
Measurement of breathlessness in palliative care: a systematic review

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Background: Breathlessness is a common and distressing symptom for many patients with advanced non-malignant and malignant disease. Due to the subjective nature of breathlessness, patient reported outcome measures (PROs) is required in addition to physical examination and medical history. PROs are defined as standardised, validated questionnaires that are completed by patients to measure their perceptions of their own functional status and wellbeing.

Aim: The aim of this systematic review was twofold. First, we wanted to identify PROs used to measure breathlessness in palliative care. Second, we aimed to synthesise measurement properties of relevant PROs. Instruments had to include dimensions for breathlessness and anxiety to be considered.

Methods: We performed a systematic search for literature using subject headings and text words for the construct, measurement properties and target population. Two reviewers independently screened all identified references for relevance and appraised included studies critically with the COSMIN checklist. One reviewer extracted data on important characteristics such as study population, the structure of each PRO, and measurement properties of the PRO. A second reviewer evaluated the extractions. To summarize the measurement properties of the included PROs, we performed a best evidence synthesis that take methodological quality and the consistency of studies and results into consideration.

Results: We screened 1455 references for relevance, and 13 publications evaluating the measurement properties of four different PROs; CDS, DMQ, SRI and a respiratory symptom checklist were included in this systematic review. The results of the best evidences synthesis will be ready until February 2015.
Swiss quality and outcomes framework (SQOF): quality indicators for diabetes management in Swiss primary care based on electronic medical records

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Background: Most industrialized countries are faced with a growing population of patients with chronic diseases and multimorbidity. Evidence-performance gaps have been recognized in the treatment of this vulnerable patient group. In England, the Quality and Outcomes Framework (QOF) – based on incentivized quality indicators – has been established to narrow the gap.

Objective: We evaluated to what extent clinical data, extracted from electronic medical records (EMR) of Swiss general practitioners, can be used as quality indicators in terms of a Swiss Quality and Outcomes Framework (SQOF) for diabetes care adopted from the QOF of the United Kingdom National Health Service (NHS).

Methods: We searched the FIRE database (Family medicine ICPC-Research using Electronic medical records) for patients suffering from diabetes type 1 or 2. Eligible data were matched with the diabetes indicator set of the NHS QOF and compared with the results in England.

Results: Eleven out of 17 diabetes indicators could be adopted for the SQOF. 46 practices with 1,781 diabetes patients were included. The practices fulfilled the SQOF diabetes indicator set overall with 46.9% with highest compliance for blood pressure measurements (97.8% of all practices), lowest compliance for influenza immunization (45.7%).

Our study practices showed higher variation across all indicators and between practices compared to England but lacking structured data limited calculation of scores and comparability.

Conclusions: Our results show that it is technically feasible to implement a diabetes QOF in Swiss primary care based on EMRs. However, a high amount of missing data made it impossible to evaluate the actual quality of care. As our data document the current routine of medical documentation in a health care setting free from any incentives for structured data capturing, we conclude that standards for electronic medical documentation and EMR use need to be set before a nationwide implementation of a SQOF could succeed.
Implementation of evidence-based practice: When nursing leadership, research and development act, react and interact in clinical practice

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**Background and aim:** Nursing leaders are responsible for developing and securing quality in nursing practice. Participatory Action Research (PAR) and Action Learning (AL) as design has proven to be both suitable and useful in healthcare and nursing science according to development of evidence-based practice and to attain lasting implementation changes in practice. On that background the head nurse in a hematologic department at a Danish hospital employed a nurse specialist post.doc with action research skills and leadership skills to initiate and implement action research and -learning processes in clinical practice and a nurse specialist with development skills to transform and secure the actions in practice. The overall aim is to secure quality in hematologic patients’ care and treatment.

**Methods:**
- PAR
- Dialogue conferences, action learning sessions, ad hoc meetings, field studies, logs
- Participants: Primarily Nursing staff in the department

**Results:**
- The action design has provided individually and collective reflection in and over clinical practice. On this basis there is initiated and implemented various actions both mono- and interdisciplinary according to quality development in hematologic patients’ trajectories – including development of an evidence-based practice.

**Conclusion:**
- PAR and AL are valuable tools for creating development, dynamics and lasting implementations in clinical practice, given that the involved leaders continuous support the PAR- and AL processes.
- It is a continuous managerial challenge to take into account and secure both development and sustainable implementation processes in daily clinical practice by use of PAR and AL, given the bureaucratic and hierarchical health care setting in which nursing practice takes place.
Which knowledge do faculty staff in nursing education need to teach and supervise evidence-based practice for BA students?

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Background: It is required that faculty in nursing education prepares students to work evidence-based. Studies show that training of staff is required to succeed.

Aim: To explore and describe the faculty’s specific learning needs and beliefs towards evidence-based practice (EBP) to teach nursing students to work evidence-based.

Methods: Both questionnaires and focus group interviews were used to collect data from teachers at a Norwegian College. This poster presents the qualitative part of the study. The focus group interviews took place in October 2013. Ten teachers participated in two focus groups. Qualitative content analysis was used to identify themes in the transcribed text from the focus group interviews.

Results: Faculties’ central learning needs regarding EBP were searching the literature, critical appraisal and application. Clinical questions should be a consistent theme.

Conclusion: Training in all major steps of EBP is required for the faculty to develop their knowledge in EBP. The qualitative part of the study specifically identifies the faculty’s specific needs for new knowledge.
Network for evidence based practice (EBP) in health and care service in Oslo and Akershus

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Background: National strategies and health authorities focus on high quality and promotion of implementation of evidence based practice in the health and care service and in higher education. To support and promote this in the Oslo and Akershus region, a network group was established in 2011 by voluntary driving forces. It consists of members from Oslo and Akershus University College (Faculty of Health Science and Learning Center and Library), Specialist Health Care in Oslo and Akershus and Centre for Development of Institutional and Home Care Services in Oslo and Akershus.

Aim: The purpose of the network is to support the development of quality, promoting the use of research results, contributing to quality improvement, competence building among health and care service professionals and in the higher education in these fields by sharing knowledge and experience. The network is a promoter for EBP in the region.

Organization: The network has a small commity that leads the network. The leader of the network is choosen from the commity. The network meets about four times a year

Activities in the network:
- Arranging Regional Day Conferences in EBP
  - Conference 12. februar 2013: Collaboration to Promote Evidence Based Practice
  - Conference 11. februar 2014: Experience with Implementation of Evidence Based Practice
  - Planning: Conference 21. april 2015: Empowerment and shared decision making
- Initiated collaboration with the South-Eastern Norway Regional Health Authority
- Arranging meetings in the network: professional presentations, discussions, sharing knowledge, experience, good ideas and challenges.
Student participation in a collaborative study - teaching evidence based practice in nursing education

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Background: It’s essential for nursing students to be updated on research and to have knowledge of how to implement quality improvements in clinical practice. This is particularly important in today’s increasingly specialized healthcare system where knowledge quickly becomes obsolete.

The study was a collaboration between Oslo and Akershus University College and Oslo University Hospital. The EBP model was used as a framework. Student involvement and malnutrition in cancer patients were central aspects of the collaboration.

Aim: To examine the impact on student’s learning outcome by using the EBP strategies in a collaborative study.

Methods: The study had a qualitative descriptive design and was carried out in 2008-2009 by 18 nursing students in the 3rd year of their Bachelor degree. Students, in cooperation with nurses, performed a systematic search and review of literature as basis for implementing nutrition interventions on a ward. Evidence based knowledge was presented and discussed to generate the most feasible interventions. In order to investigate the students’ learning outcome, three focus group interviews were performed after each clinical practice period. Thematic content analysis was performed, considering the group interaction during the interviews. Ethical approval was obtained by the hospital and by the students.

Results: Using the EBP model contributed to a) strengthen students’ academic skills in a clinical setting b) developing a strong professional identity by having updated knowledge c) awareness of barriers in implementing interventions.

Conclusion: The study reveals mutual benefits for students and nurses by using the EBP model. Close cooperation with key persons in the professional field is essential. Nursing education can take a step forward integrating EBP in the curricular realignment.
General practitioners' use of web resources for the management of elderly patients with depression

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Background: We have conducted a cluster randomised trial to implement guidelines for elderly patients with depression. We developed a website targeted at general practitioners (GPs), other healthcare professionals/volunteers, patients/relatives and health-care administrators, available to the 40 municipalities in the intervention group. The content was informed by evidence and tailored to address determinants to implementation of the recommendations. GPs could take an e-learning course and receive CME-credit.

Aim: To assess how GPs utilized electronic resources for the management of elderly patients with depression.

Methods: During 2013/2014 we conducted outreach visits (ORV) to 130 practices in 37 municipalities (293 GPs). We demonstrated the website, informed them about the e-learning course, and presented other material to support the implementation of the recommendations.
We recorded GPs’ feedback and attitudes to the services at the ORVs. We logged the use of the electronic resources. We assessed if use of the website was correlated to the attendance of GPs at the ORVs or the length of the meeting by comparing municipalities who arranged long meetings with municipalities who arranged shorter meetings.

Results: GPs were positive to the electronic resources and found them useful. By August 2014 one GP had completed the CME course, five GPs had completed the e-learning course, and a mean of 32 (range 3-67) visits per month was recorded at the website. The activity was correlated to the proportion of GPs attending the ORV in each municipality. Activity was highest the first month after ORVs, and increased after reminders by phone calls and e-mails. GPs who attended longer meetings used the web-resource more than GPs who attended the shorter meetings.

Conclusion: Although GPs were positive to the electronic resources, they rarely used them. Use of the website was correlated to attendance at the ORVs. Reminders increased activity, but to a limited degree only.

Acknowledgment/funding: This work is part of the collaborative research programme Tailored Implementation for Chronic Diseases (TICD). The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 258837, Innlandet Hospital Trust under grant agreement n° 150204 and Norwegian Knowledge Centre for the Health Services.
The value of contextual data in proving the success or failure of an education intervention in nursing homes

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Background: The presentation will build on a research study called “Modeling and evaluating evidence based continuing education program in nursing home dementia care (MEDCED)” encompassing an education intervention in care staff to prevent use of restraint in nursing home residents with dementia in 24 Nursing Homes of western Norway.

Aim: is to illuminate hindering and promoting factors influencing the success or failure of the education intervention.

Method: A mixed method design combining cluster randomized controlled trial (C-RCT), participatory action research (PAR) and ethnography. The ‘evidence’ was developed by eight facilitators, having participated in an action learning process to develop and revise the teaching materials and methods in the pre-intervention phase. The facilitation of the ‘evidence’ included 2 day staff education and 1 hour monthly coaching during 6 months in two rounds (12 x 2 NHs) performed by four teams. The facilitators function as co-researchers by writing reflection notes and reflecting together with the other facilitators and researchers in focus group related to how contextual factors in the nursing homes influence on their education and coaching. To discover and depict contextual factors two researchers have been doing ethnographic fieldwork in eight nursing homes based on the results of the RCT study.

Results: The RCT- study showed, based on 118 residents in the intervention group and 156 in the control group, that the use of restraint was significantly reduced in both the intervention group and control group, with a tendency to a greater reduction in the control group. However, there are significant differences between the nursing home institutions related to the effectiveness of the education intervention. The differences in success can be explained by differences in contextual factors.

Conclusion: The overall study show that contextual factors and the interrelation between factors such as leadership, staff culture and patient mix is crucial in understanding the success or failure of the education intervention.
Systematic review of the effect of educational interventions for enhancing scientific health-related literacy in youth

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Background: From a young age we are exposed to health claims through news media, social media and commercials or we actively search for information ourselves. Claims can appear reasonable, but may not hold much truth upon further scrutiny. Therefore teaching adolescents to appraise the scientific basis of claims may enable them to make better decisions concerning health.

Aim: To examine the effect of educational interventions on enhancing the scientific health-related literacy in youth.

Method: A literature search was executed to identify studies on interventions administered in a school setting to adolescents (11-18 years), aimed at enhancing the students’ ability to appraise health-related information and claims scientifically. Randomised and non-randomised controlled trials, controlled before-and-after studies, controlled studies with post-measurement only and interrupted time series were included when published in English, Swedish, Norwegian or Danish.

Educational databases (e.g. ERIC and Teacher Reference Center) and health databases (e.g. MEDLINE and Embase) were searched through February 2014. Sources for grey literature and ongoing studies were searched through June 2014.

We use an adapted version of the Cochrane Risk of Bias tool (Ryan et al., 2013) to assess risk of bias in included studies.

Preliminary results: 16266 unique references were identified. After screening of titles and abstracts 266 studies were assessed in full-text. At present four studies (reported in five publications) are included and another two studies are considered for inclusion. We are currently assessing risk of bias in included studies. If possible the results of individual studies will be synthesised in meta-analyses.
Simulation-based training, effect on nurses’ knowledge and skills; a systematic review

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Background: Todays healthcare are offering a more complex and advanced treatment for patients. Therefore highly competent and skilled healthcare providers are needed. One strategy hospitals use for educating their personnel is simulation-based training. Simulation-based training is practicing realistic scenarios using a specialized manikin, computer software or using humans playing role as patient.

Aim: The aim of this project is to summarize research that evaluate the effect of simulation-based training on nurses’ knowledge and skills.

Method: A systematic review of Randomised Controlled Trials (RCT) on the effect of simulation-based training for nurses is preformed. We searched The Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, Health Technology Assessments, Cochrane Central Register of Controlled Trials, CINAHL, MEDLINE, Embase, ERIC and SveMed+. In addition, hand search of Clinical Simulation in Nursing and Simulation in healthcare from year 2013 and 2014 was performed. A librarian validated all searches. Screening of abstracts and full text were independently conducted by two people. Inclusion criteria were: Graduated nurses, Simulation-based training; both high and low fidelity, RCT. Two persons appraised the included studies by the risk of bias tool.

Results: Seven RCT studies met the inclusion criteria’s. Four studies assessed low fidelity simulation, whereas three studies used a high fidelity strategy. Simulation with manikin, versus CD-rom or Computer simulation were compared in three studies. Three studies had low risk of bias, whereas one had high risk. Three studies had unclear risk of bias.

Preliminary findings: The effect of Simulation-based training on nurses’ knowledge and skills varied. Two studies found significant improvements in resuscitation skills and clinical skills for the intervention group, compared to usual care or CD-rom. Three studies found a better but not significant result in the intervention group, whereas two of the studies found no differences between the groups.

Keywords: Simulation, High fidelity, Low fidelity, Nurse, Randomised Controlled Trial, Knowledge, Skill.

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The assessment of the psychometric properties of EBP² – Norwegian version

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Background: To assess health and social care students’ competence in evidence-based practice educational institutions need an instrument validated for a Norwegian setting. The evidence-based practice profile (EBP²) was therefore translated and cross-cultural adapted to Norwegian in accordance with a forward-backward translation proposed by the World Health Organization.

Aim: To evaluate the reliability, validity and responsiveness of the EBP2-Norwegian version.

Methods: Data were collected from January to April 2014 among students at Bergen University College and health and social care workers in a Geriatric Hospital. Social educator students (n=27) and health and social workers (n=26) tested the test-retest reliability. Nursing students (n=96) tested the questionnaires responsiveness. Cronbach's alpha was calculated to determine internal consistency. Test-retest reliability was investigated using the intra-class correlation coefficient (ICC) and standard error of measurement (SEM). Confirmatory factor analysis (CFA) was performed to assess the structural validity of a five-factor model (Relevance, Sympathy, Terminology, Practice and Confidence) using the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). Priori hypotheses on effect sizes (ES) and P-values were formulated to evaluate the questionnaires responsiveness.

Results: Cronbach’s alpha was 0.82 or higher for all domains except Sympathy (test 0.49; retest 0.66). ICC was 0.69 for Relevance, 0.47 for Sympathy, 0.79 for Terminology, 0.45 for Practice and 0.76 for Confidence. SEM values ranged from 0.29 (Relevance) to 0.44 (Practice). The CFA analysis did not indicate an acceptable five-factor model fit (test CFI=0.59, RMSEA=0.09; retest CFI=0.69, RMSEA=0.09). Responsiveness was as expected or better for the domains Relevance, Terminology, Practice and Confidence, but not for the domain Sympathy.

Conclusion: The results of our study indicated that the EBP²-Norwegian version might be a useful tool for measuring the domains Relevance, Terminology and Confidence.
The influence of flow culture on nurses' research use in emergency care: an ethnographic study

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Background: Implementation of evidence-based nursing activities is essential for the delivery of high-quality care. There is increasing recognition within the field of implementation science of the relevance of organizational context and culture, i.e. influences beyond the individual level. Aim: This study provides a perspective on how the local organizational culture in an emergency department in Denmark shapes nurses’ behaviours. Applying the Cultural Historical Activity Theory (CHAT), the aim of this study was to explore how the organizational culture influenced nurses’ priorities with regard to the use of research.

Methods: The study was designed as an in-depth ethnographic inquiry based on fieldwork and semi-structured interviews. After a thematic analysis an activity system analysis was conducted.

Results: Based on the activity system analysis, the concept of flow culture emerged. This culture is defined as a cultural–historical activity system, mediated by artefacts, in which the objective of the nursing staff is primarily to free up beds, thus ensuring a flow of patients.

Conclusion: A flow culture among the nurses leads to a strong focus on securing vacant beds, which affects the nurses’ use of research in everyday clinical practice. This study increasing our understanding of nurses priorities and actions in relation to the use of research evidence in clinical practice.
Two years later - What is left at the ED? Uncovering teamwork sustainability using realistic evaluation.

Mandus Frykman

**Background:** Multi-professional teamwork has been advocated as a promising method to improve healthcare processes and outcomes. Though, sustainability of teamwork has shown to be a challenge and there is limited of research on sustainability. This study aims to uncover the mechanisms influencing the sustainability of behavior changes two and a half years after the implementation of multi-professional teamwork in emergency care.

**Methods:** A realistic evaluation (RE) approach was used to explain how the behavior change interventions used to implement multi-professional teamwork influenced the sustainability of team behaviors in the context of an emergency department (ED). RE was combined with the DCOM® framework, based on the principles of applied behaviour analysis, to categorize the mechanisms of behaviour change into four categories: Direction, Competence, Opportunity and Motivation. Outcome data about the sustainability of team behaviors was collected from non-participant observations. A 3-hour realist group interview with six key informants from the ED was conducted to test which mechanisms were relevant to explain behavior changes observed over time.

**Results:** Teamwork behaviors were not fully sustained. Marginal changes in the context and a substantial fall back in managerial activities to implement and sustain teamwork contributed to reduce direction, opportunity, and motivation. A reduction of direction was visible as staff was unclear about why and how to work in teams. Opportunity deterioration was evident from the lack of problem solving resources resulting in accumulated barriers for teamwork. Motivation from management support and feedback was reduced.

**Conclusions:** Implementation of complex behavior change is not a time-limited activity but rather an on-going process that needs to be continuously adapted and managed. In this study, **Direction** and **Opportunity** were the most important dimensions to sustain teamwork. Implementation of complex behavior change should involve organization and management processes that support the continuous adaptation and integration of new work processes.
Leadership as a determinant of evidence-based practice in health care: a literature synthesis

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Background: There has been increasing recognition of the role of leadership in implementing evidence-based practice (EBP). However, there seems to have been little empirical research on this concept.

Aim: To systematically review published empirical research on leadership as a determinant for the implementation of EBP in health care and to investigate leadership conceptualization and operationalization in the field of implementation science.

Methods: We searched PubMed, the Cochrane Library, and the website of Implementation Science up to November 2013 and manually retrieved literature from reference lists of pertinent review articles. To be eligible for inclusion, a study had to involve empirical research (or a systematic review of empirical studies) and explicitly refer to the construct of leadership and EBP or research use in health care. Data from included studies were abstracted and study quality was assessed with a structured instrument based study design. We conducted a narrative synthesis.

Results: We included 17 articles (15 empirical studies and 2 systematic reviews). We found that leadership was mostly viewed as a modifier for implementation success, acting through leadership support. Yet, there was definitional imprecision and conceptual inconsistency. Studies seemed to inadequately address situational and contextual factors relevant to understand how leadership might affect successful implementation. Although addressed as an organizational factor, the concept was mostly analysed at the individual or group level.

Conclusion: The concept of leadership in implementation science seems to be not fully developed, given inconsistencies in its use, unclear definition and insufficient demarcation of conceptual boundaries. It is unclear whether attempts to tap the concept of leadership in available instruments truly capture and measure the full range of the diverse leadership elements at various levels relevant to implementation success. Only once a more mature concept has been established, should researchers in implementation science proceed to further elaborate operationalization and measurement.
Regional development of evidence-based practice in municipality based activities

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Background: To further establish and make the six year earlier commenced national development issues (financed by Swedish state) sustainable in the county of Jämtland, municipality based regional cooperation arenas, at professional level as well as political level, has made a joint action.

Aim: To build a foundation for development of EBP and systematic improvement knowledge in the area of social care and municipality based health care within the municipalities in the county.

Methods: Creating a regional strategic group with representatives from each of the eight municipalities in the county. Consolidating process within the group and within all municipalities; including consensus about aims and development strategies. Formulating a strategic activity plan based on the needs in the social welfare municipality based organisations. Implementing activity plan in “real life”, integrated in the regular municipality work within the area of social welfare.

Results: Strategic group consisting of representatives from each municipality is created. The group covers all fields in social welfare. The one day booting-meeting focused on aims, fears and hopes regarding partaking in the strategic group, frames and mandate for the group etc. Through two work meetings a regional action plan for EBP and systematic improvement were created, and will be presented for the regional professional and political cooperation- and decisional arenas in autumn 2014.

Conclusion: Strategic and systematic work on regional level can build a foundation for EBP and systematic improvement knowledge. It is too early to conclude long term effects of this process. Nevertheless, during this first year of the process, a positive effect on collaboration and mutual discussion can be noted. Municipalities in the county of Jämtland point out the value of regional support for developing and implementing EBP and systematic improvement in their fields of social welfare.
Studying the implementation of changes in legislation

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Background: All employees in Finland have occupational health coverage. Under the Occupational Health Act, employers are required to arrange, at their own expense, professional-level occupational health services for their employees in order to prevent work-related health risks. Employers can have part of their occupational health expenses reimbursed by the Social Insurance Institution. The Social Insurance Institution also arranges vocational rehabilitation for those whose working capacity is at risk; part of this rehabilitation is mandatory, part discretionary.

Aim: Finnish legislative amendments related to early interventions in prolonged sickness absences from work came into effect on June 1, 2012 and January 1, 2014. The aim of these amendments is to prolong working careers by improving employees’ working capacity and collaboration between occupational health care, employers and the Social Insurance Institution. The Ministry of Health has required that the success of implementation of these legislative changes be evaluated.

Method: Change requires interpretation of the law against existing practice; what is expected to be changed, what are the possible barriers and facilitators. During two evaluation studies, the following methods have been used: registry study, content analysis of medical records, surveys and interviews.

Results: The implementation of legislation amendments required changes in the roles of various stakeholders which took longer than expected. Registries could be used to identify the number of persons on whom the legislation amendments should have had an effect. Evaluation of the changes in clinical reasoning using content analysis of medical records showed that the translation of legislative amendments into meaningful and effective changes in clinical practice and decision making turned out to be difficult and time consuming.

Discussion: When deciding on legal amendments, their practical application has to also be carefully planned. Timing of implementation evaluation is critical; early evaluation can identify the barriers of implementation and not the effects. Our results suggest that the realization of the expected benefits of legal amendments requires identifying the possible barriers and institution of the necessary actions to facilitate a successful implementation process.
ICF as conceptual framework in evaluation of physiotherapists’ and occupational therapists’ implementation of a holistic perspective and research-based evidence in stroke rehabilitation

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**Background:** A biopsychosocial model as WHO’s International Classification of Functioning, Disability and Health (ICF) contributes to a holistic perspective on rehabilitation. There is evidence that ICF offers a comprehensive conceptual framework, structure, and a systematic terminology among health professionals, as well as in the communication between patients, relatives and health professionals. Stroke rehabilitation is a multidimensional process designed to facilitate a supporting restoration and/or adaptation to loss of function where occupational therapy (OT) and physiotherapy (PT) play important parts at hospital stroke units as well as in community care.

**Aim:** The purpose of this study was to explore occupational therapists’ and physiotherapists’ use of ICF as a conceptual framework evaluating the implementation of a holistic perspective and research-based evidence in rehabilitation practice.

**Method:** Between May and December 2012, 134 patients aged 18 years or older with a new-onset stroke were consecutively enrolled. All underwent standard interdisciplinary rehabilitation. OT and PT documentation was collected from the journal notes in four settings and analyzed using deductive content analysis.

**Results:** The therapists’ notes documented assessments, observations, interventions and evaluations. The implementation of research-based evidence was most clearly registered in the use of standardized tests and assessment tools. The notes related mainly to Body Functions and Body Structures. The core foci in assessing the patients’ functioning concerned balance, muscle tone, strength and coordination. The notes and measurements describing Activity and Participation were also extensive. Communication, mobility, self-care and domestic life were attached with importance. Environmental Factors received less attention. Common goal-setting and evaluation with the patients were seldom documented using standardized measures.

**Conclusion:** ICF contributed to common holistic understanding of functioning and disability as multidimensional concepts across settings. Moreover the ICF framework provided useful structure and concepts in the process of evaluating the implementation of research-based evidence.
Case management in oncology rehabilitation (CAMON): the effect of case management on the quality of life in patients with cancer after one year of ambulant rehabilitation

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Background: Tailored multimodal rehabilitation after curative cancer treatment has been shown to improve long-time cancer- and therapy-related symptoms effectively. Case management (CM), as a tool to pilot rehabilitation, assesses individual needs, provides information and emphasizes on self-management.

Aim: To evaluate the benefit of CM on cancer survivors’ quality of life in a randomized controlled trial.

Methods: We included 94 patients who completed a cancer therapy in 11 cancer therapy centers in the Canton of Zurich, Switzerland, between 07/2010 and 07/2012. All of them became usual care. Half of them were randomized in the intervention arm and met the case manager three times to assess their needs and get information and support regarding rehabilitation. Follow-up per phone was provided as long as needed. The outcomes were quality of life (FACT Score) satisfaction with care (PACIC Score) and change in health-related behavior after one year.

Results: After one year, 57% of the patients in the CM group made a change in their physical activity compared to 38% in the control group. The FACT increased by 14.4 points in the CM group and 6.9 in the control group (p=0.001). The PACIC increased by 0.3 points in the CM group and decreased by 0.3 points in the control group (p=0.001)

Conclusion: CM increases quality of life and addresses the need of patients for continuity of care after cancer therapy. In the heterogeneous population of cancer survivors and in a segmented health-care system CM is an adequate implementation strategy to facilitate the access to therapy for cancer rehabilitation.
Assessment of the implementation of a disease management program

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Background: Chronic Obstructive Pulmonary Disease (COPD) is a challenging condition for health care providers. In Denmark disease management programmes (DMPs) have been developed to improve the continuum of care for patients with COPD.

Objective: To evaluate the adherence to COPD DMPs among general practitioners (GPs) and lung specialists with focus on the inter-professional medical collaboration across primary and secondary health care settings.

Methods: The study was based on interviews with GPs and hospital lung specialists from two regions in Denmark. Interviews were analysed using systematic text condensation as described by Malterud.

Results: The following important themes were identified (illustrated by quotes):

1) Utility of DMP: “...I don’t use DMP - I prefer other guidelines”, “...DMPs are enormous and incomprehensible…”

2) Referral from GP to hospital: “...I stick to my gut feeling…”, “...I refer patients - to optimize their treatment…”

3) Handovers from hospital to GP: “...patients always get new appointments in hospital - I could handle follow-up myself…”, “...frail patients being discharged - they should have kept them in hospital…”

4) Communication across settings: “...if I could get in touch with a specific colleague…”, “...it would be nice to have a telephone list…”

5) Cross-setting collaboration in general: “...I experience a lack of responsibility…”, “...nice if they could send news-mails…”

Analyses of results (interviews) indicated that several factors affect the implementation of the DMP. The qualitative design of the study made it possible to suggest reasons for non-compliance to specific recommendations in the DMPs. These reasons included aspects of suitability of the DMP design (size and structure), cultural barriers for implementation and lack of practical means (e.g. it-support) to satisfy the requirements in the DMPs.

Conclusion: To facilitate the implementation of DMPs it is important to incorporate the opinions of the physicians in both development and implementation of the DMP.
Cotransplantation of mesenchymal stromal cells in allogeneic hematopoietic stem cell transplantation – a systematic review

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**Background:** Allogeneic hematopoietic stem cell transplantation (HSCT) is a potential curative treatment for patients with hematological malignancies. Cotransplantation of mesenchymal stromal cells (MSCs) is a relatively new experimental cellular therapy which is considered used during HSCT to enhance engraftment (time until hematopoietic recovery) and decrease the risk of graft-versus-host disease (GVHD).

**Aim:** This review will identify and appraise relevant literature to determine whether patients who have received a cotransplantation of MSCs and hematopoietic stem cells (HSCs) as compared to patients receiving HSCs alone have enhanced engraftment and reduced risk of GVHD, thus providing a clinical benefit to patients receiving HSCT.

**Methods:** We searched MEDLINE, Embase, Cochrane Central Register of Controlled trials, Web of Science and Inspec for relevant clinical studies, by using adapted subject headings and text words. We included randomized and non-randomized controlled clinical studies of adult or pediatric patients with malignant hematological diseases receiving ex-vivo expanded MSCs together with HSCs. Studies using MSCs for other purposes were excluded. Outcomes of interest include engraftment, GVHD, relapse and overall survival for these patients. We are currently critically appraising the included studies by using “The Cochrane Collaboration’s tool for assessing risk of bias (RoB)” and will perform a meta-analysis if studies are found suitable.

**Results:** 3910 references were reviewed and nine studies with a total of 320 participants met the inclusion criteria. Of these nine clinical studies, three were randomized controlled studies and enrolled 100 participants. The systematic review and meta-analyses will be completed before spring 2015.

**Conclusion:** Our study will provide a systematic review of the clinical studies investigating cotransplantation of MSCs and HSCs in patients receiving HSCT. Results from our systematic review will provide knowledge for investigators and clinicians to determine whether this innovative therapy is beneficial or not for patients with hematological malignancies.
Systematic review of the effect of teaching joint attentions skill to children with autism

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Background: Joint attention involves coordinating the attention between at least two people towards an object or an event. The development of joint attention is a milestone in child development and normally starts when the child is between 8 and 15 months of old. Deficits in joint attention skills represent a core problem in young children with Autism Spectrum Disorder (ASD). A child with ASD lacking joint attention skills have fewer opportunities for language promoting interactions and hence decreased opportunities for engagement in meaningful communication. Studies of children with normal development demonstrate that lack of joint attentions skills at a young age predicts poorer language outcomes later in life. These findings have promoted development of specific teaching strategies to help children with ASD learn joint attention.

Aim: Evaluate effects of interventions aimed to increase joint attention skills in children with autism.

Methods: A systematic review of randomised controlled studies was performed. Systematic searches in The Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, CINAHL, ERIC and SveMed+ and a non-systematic search in Norart were done using subject headings and free text words. Reference-lists in relevant systematic reviews were checked and experts in the field were contacted. Inclusion criterions were: the study had to (a) include one group of children with ASD up to seven years of age, (b) focus on teaching joint attention skills, and (c) be a randomised control trail. Two persons selected articles and critical appraised included trails independently and disagreements were solved by discussion.

Preliminary results: Seven studies met inclusion criteria. None had high risks of bias. Five studies reports significant evidence supporting the effect of interventions targeting joint attention when outcome was observed and counted in play, whereas only two studies reports significant effect from experimental situations using validated tools.

Preliminary conclusion: Results on standardized tools will primarily be summarized in a meta-analysis, and if not possible, in a narrative synthesis.

Keywords: autism, autism spectrum disorder, ASD, joint attention, joint engagement

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Effects of using social media in health awareness campaigns to promote healthy lifestyle habits

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Background: The Norwegian health authorities seek to increase effort to prevent illness and to promote health. An important part of this is to facilitate and encourage healthy lifestyle habits. To draw attention to this public awareness campaigns are presented via mass media and lately also via social media. To find out if the use of social media can be effective in such campaigns the Norwegian Directorate of Health commissioned a systematic review from the Norwegian Knowledge Centre for the Health Services.

Aim: To make a systematic review which examine the effects of using social media in health awareness campaigns to promote healthy lifestyle habits.

Methods: Systematic literature searches were performed in the Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, HTA Database, Cochrane Central Register of Controlled Trials, MEDLINE, Embase, PsycINFO, CINAHL, ERIC, SveMed+, and ISI Web of Science. Additional searches were done in Google Scholar. The searches were completed in October 2014. Assessment of potentially relevant studies and critical appraisal of the included studies were done independently by at least two persons. The quality of evidence was considered for each outcome using the GRADE methodology.

Results: Seven studies, four of which were randomised controlled trials, two non-randomised controlled trials, and one controlled before and after study, were included. Three categories of interventions using social media were identified: 1) online social networks such as Facebook, Twitter etc., 2) online social networks combined with other interventions, and 3) video sharing sites such as YouTube etc. These were compared to no information or waiting list, to information given via other channels, or to each other. As many as 51 different comparisons were identified, and there was great variation between studies in interventions, objectives, and outcomes. Because of this heterogeneity it was not considered reasonable to combine the results in meta-analyses. Studies comparing an online social network, such as Facebook or Twitter, to no information or information delivered via other channels showed no or only small effects. Several studies combined an online social network with other interventions. Some of these showed an effect in favour of online social network in combination with other interventions. One study which compared watching motivational videos on YouTube to not watching such videos on YouTube showed small to no effect. The GRADE assessments revealed that the documentation was of low to very low quality, which means that we have limited confidence in these results.

Conclusion: We cannot draw any clear conclusions about whether or not the use of social media in health promotion campaigns is effective. The fact that we are very unsure about the potential effect does not mean that there is no effect, it means that we are unsure about whether or not it there is an effect. Further research about the use of social media in health promotion campaigns must be performed before we can know whether or not it has an effect. To be able to say something about the effect of social media without other interventions, studies examining the effect of social media only compared to no intervention or other interventions should be performed.
Reaching further – implementing computer-based CBT for panic disorder

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Background: Panic Disorder (PD) is a common mental disorder affecting 2.6% of the adult population at any one time. Clinical guidelines states that Cognitive Behavioral Therapy (CBT) should be used for treating PD, yet few patients receives CBT. A national survey in the UK found that only two out of 100 patients received CBT for mental disorders for which this was recommended. Computer-based CBT (CCBT) is a treatment option that can increase availability and utilization of CBT. Based on recommendations from a Swedish guideline CCBT was implemented at a local community hospital.

Aim: To investigate availability and adherence to recommendations for treatment of PD before and after the introduction of CCBT.

Methods: A retrospective audit was performed on two units in a local community hospital among all patients diagnosed with PD in 2013. CCBT was introduced in January 2014. A reaudit is planned in January 2015. Preliminary data is presented for the timespan January to June 2014. The adherence to criteria is reported in number and percentages with 95% confidence intervals (CI). The number of days patients had to wait for treatment is presented as means with standard deviation (SD).

Results: The audit found that 79 (22 individuals of 28) received CBT-based treatment at baseline (95% CI 64.3 – 92.9). Preliminary data for 2014 showed that 80% (12 out of 15) received CBT or CCBT (95% CI 60 - 100).

The number of days patients had to wait for treatment in 2013 was 90.2 (SD= 56.5) compared to 78 (SD= 40.3) in the preliminary data for 2014.

Conclusion: Preliminary data suggested a decrease in waiting time for treatment following the introduction of CCBT. No change was observed in adherence to recommendations for treatment of panic disorder. The reaudit is to take place January 2015.
Remote interpretation for minorities in healthcare – a systematic review

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Background: Most developed countries experience an increase in number of immigrants creating multicultural, multilingual and multiethnic societies. Interpretation services are seen as a key to ensure effective communication between health professionals and patients who lack a common language. To meet the increasing needs of interpretation services in healthcare and to ensure equality and quality in care it is important to gain more knowledge about the different interpreting modalities.

Objective: To systematically review the effectiveness of remote interpretation for minority patients with limited majority language skills in healthcare settings.

Methods: Systematic literature searches were conducted to identify studies that fulfilled the inclusion criteria. Studies comparing remote interpretation with in-person interpretation that reported patient-oriented outcomes were eligible. Population of interest was minority patients with limited majority language skills in healthcare settings. Eligible study designs were randomised controlled trials, quasi-randomised controlled trials, controlled before and after studies and interrupted time series. Two researchers independently selected studies, assessed for risk of bias and extracted data. Any disagreement was resolved by consensus or a third researcher. The study authors were contacted for additional information when reported data were insufficient.

Results: A total of 6 779 references were identified. Four primary studies were included; one randomized controlled trial and three quasi-randomised controlled trials. All four included studies were assessed as at high or unclear risk of bias.

Status: The next step of this systematic review is to analyse the data and to assess the overall quality of the documentation using GRADE. The expectation is to provide an indication of whether remote interpretation is an effective option compared to in-person interpretation.

Keywords: remote interpretation, interpreters, minorities, communication, language barriers, patientoriented outcomes, systematic review
The effectiveness of Picture Exchange Communication System (PECS) in individuals with autism – a systematic review

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Background: Delayed development of language and communication skills is an early and persistent marker of autism. Approximately 50% of individuals with autism never develop language and communication skills. Useful language and communication skills by the age of five is consistently shown to be a strong predictor of later adaptive functioning in individuals with autism. Hence, early and effective therapeutic communication interventions for individuals with autism are viewed as important therapeutic principles in this population. One communication intervention commonly used is the Picture Exchange Communication System (PECS). Studies show that PECS is a promising method but it is not clear whether this method is superior to others.

Objective: To systematically review the effectiveness of Picture Exchange Communication System (PECS) in individuals with autism.

Method: A systematic literature search were conducted by searching several electronic databases. Search for literature were also conducted in other sources such as the reference lists of retrieved relevant studies, citation search, hand search, grey literature and ongoing studies. Randomised Controlled Trials (RCTs) were eligible for inclusion if the study population was individuals with autism, where PECS was compared to any other intervention and where the outcome measures were communication and language skills. Studies were critically appraised using the Cochrane Consumers and Communication Review Group “Risk of bias tool”. Data will be analysed as descriptive analysis or meta analysis and The GRADE approach will be used to assess the quality of the evidence for each outcome in the included studies.

Status: Five studies met the inclusion criteria. The methodological assessment of the studies revealed unclear risk of bias in all the included studies.

Keywords: Autism, PECS, Picture Exchange Communication System, communication, language, systematic review.
Structured risk assessments instruments – a systematic review of implementation determinants

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Background: Violence risk assessment is a required part of the delivery of mental health and correctional services. Several research based structured risk assessment instruments (SRAI) are available today to improve clinical judgements and risk management, and part of evidence based practise standards (EBP). Practical challenges of implementing SRAIs have led to calls for more research to understand the determinants (i.e. barriers and facilitators) influencing this process.

Method: A systematic review was conducted to find studies describing determinants for implementation of SRAIs in psychiatric, correctional or community in-patient settings. Findings were analysed according to a framework by Damshroder et al. (2012).

Results: Ten studies that addressed implementation issues regarding SRAIs were found. Four types of main implementation determinants were found in the studies: characteristics of the SRAI, characteristics of the users of the SRAI, characteristics of the inner setting and characteristics of the implementation process. Determinants aimed at limiting the change required by the organization and stakeholders and creating a local fit were frequently stated to facilitate implementation. Determinants directed at creating a understanding of the need for change and giving staff the necessary prerequisites to manage such change were also found to be important. Engaging stakeholders to oversee and manage the implementation and establishing monitoring routines to follow up on the process as it unfolds were emphasized as important implementation strategies.

Conclusions: These finding points to the importance of applying a multifactorial approach to the implementation of SRAIs, suggesting that strategies for successful implementation must account for many different barriers and facilitators. There is a need for more stringent research on SRAI implementation, to obtain more solid evidence of factors that impede or enable this implementation. Constructing and refining shared concepts and definitions of determinants could further aid information transferences and gathering an international body of knowledge.
Implementation of sedation protocol and assessment tools for sedation, pain and delirium in the ICU

(Marja Wanne Hoff, Berit Liland, Sabine Bressa, Anders Pangård, Øyvind Olsen)

**Background:** International guidelines recommend use of sedation protocols and systematic assessment of sedation, pain and delirium. Our ICU lacked a sedation protocol and the tool for assessing level of sedation was of little use. Furthermore we needed tools for assessment of pain and delirium.

**Purpose:** Implementation of a sedation protocol and validated assessment tools for sedation, pain and delirium.

**Method:** The steps in evidence based practice were used as model:

1. Reflection: Our ICU lacked a sedation protocol and the tool for assessing level of sedation was of little use. Furthermore we needed tools for assessment of pain and delirium.
2. Question: Which sedation protocols and tools for assessment of pain and delirium in Norwegian versions are the most valid and reliable for adult ICU patients?
3. Literature: Research literature was searched broadly based on the model of the "Knowledge pyramid".
4. Critical assessment: The literature was reviewed critically. In addition, feedback from experts in the field was obtained.
5. Application: Nurses and doctors were given lessons on the topic, and video clips were used for demonstration. The nurses were given practice in the use of assessment tools by simulation. Resource persons were available in the initial phase. Brief guides are available at each patient bed. Assessment scores are easily documented in the department’s electronic documentation system, which also is used as a reminder.
6. Evaluation: Feedback is provided by means of regularly statistics and updates with new studies and guidelines. Implementation is assessed through discussions in plenary.

**Results:** In April 2014, sixteen months after implementation, 92 % of the ICU-patients were assessed for sedation level, 89 % for pain, and 71 % for delirium. So far we have no statistics on the use of sedation protocol.

**Keywords:** Implementation, evidence based practice, sedation protocol, assessment tools.
Evidence-based in remote monitoring of pacemakers in the short-time

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Project funded by EEA Grants (NILS Movility Project).

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**Background:** Cardiac consultations are overloaded due to the increase in the number of implanted pacemakers during the last years. With the support of remote monitoring systems, this situation is changing. But it is unknown from what moment is cost-efficient regarding to the sustainability of National Health Service.

**Aim:** Examine the Health-Related Quality of Life (HRQoL), reliability and costs of patients using pacemakers compatible with the remote monitoring system.

**Methods:** In this trial we selected consecutive 83 subjects among all patients who had been implanted with a pacemaker in Hospital de Poniente (Almeria-Spain), between 2012 -14 with a follow-up of 6 months/patient. At the same time 2 groups were created: Remote Monitoring Group (RM=30) and Hospital Monitoring Group (HM=53). The same parameters were analyzed in both groups at 2 different moments (months 1 and 6 post-implantation). Effectiveness was assessed through the administration of EuroQol-5D (EQ-5D) and Duke Activity Status Index (DASI). Direct costs were estimated by micro-cost calculation and from National Health Service perspective.

**Results:** No significant differences were found between both groups according to sociodemographic characteristics and effectiveness according to EQ5D and DASI. Hospital visits were reduced in 31,13% ($p=0.015$) in the RM. Personnel costs per patient were 31,55% ($p<0.001$) higher on hospital monitoring mode.

**Conclusion:** Although patients with pacemakers showed a similar rating in HRQoL in both groups, costs were higher in hospital monitoring. This study showed that the remote monitoring of pacemakers was cost-efficient in the short term.
Promoting evidence based practice in home-based rehabilitation in cardiovascular diseases

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\textbf{Background:} Few studies focused on the effectiveness of home-based rehabilitation (RITH) for people with cardiovascular diseases in the healthcare centres in Spain which is relatively recent.

\textbf{Aim:} To describe the most prevalent cardiovascular diseases in 865 patients with chronic diseases referred to home rehabilitation and home physiotherapy units in Almería, Andalusia (Spain).

\textbf{Methods:} We carried out a cross-sectional descriptive study between 2004 and 2012. The variables analyzed were age, gender, main diagnosis, functional capacity (Barthel Index), physiotherapeutic objectives, the treatment applied and the number of sessions.

\textbf{Results:} 374 patients who fulfilled the criteria for inclusion in this study had a medical diagnosis of ischemic heart disease (46.5%) or heart failure (69.8%). The mean age of the patients was 83 years (SD = 7.93 years) and women represented the 58.6%. Initial Barthel index was increased from 39.08\% (SD = 26.28) to 55.76\% (SD = 32.17) after home treatment. The principal aim of the RITH program was to improve patients’ quality of life and functional capacity by improving strength, improving endurance, and motivating the patients to carry out a regular exercise program (73.2\%). The average number of physical therapy sessions for the RITH patients was 13 (SD=11.33).

\textbf{Conclusion:} Due to an increasing number of cardiovascular diseases, we need to investigate how to meet the on-going rehabilitation needs of people undergoing this process. There is increasing emphasis on the cost-effectiveness relation of care, and health systems are currently under strong economic pressure; hence, a reduction in the length of hospital stay has become a priority.
Medicine in a recovery perspective - experiences from a Danish project focusing on the use of medicine in psycho-social rehabilitation

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**Background:** Does medicine control you – or are you in control of your medicine? This question was asked to 30 psychiatric service users who participated in a national Danish development project in 8 social psychiatric settings. If medicine is thought to support a person’s recovery process and not become a treatment goal in itself, it is important that medicine is discussed and adapted to the individual’s needs, hopes and life circumstances. Thus “Medicinpædagogik” – how to use medicine in psycho-social rehabilitation - is a new field emerging that encourage cooperation, coherence and increased dialogue between clinical psychiatry, social psychiatry and the psychiatric service users.

**Aim:**
- to support and adjust medicine use to the service user’s individual needs, wishes and expectations as part of their recovery process, where medication is not an aim in itself but a means to recovery
- to support and enable the service user’s self-determination - to have a say and gain control over their own medical treatment and develop complementary strategies.

**Methods:** The project was designed as a co-productive innovation project where 30 psychiatric service users, 30 social psychiatric staff (support persons for the service user) and 8 leaders participated in the same training program. Together they were introduced to different recovery oriented ideas and methods which they tested, elaborated and adjusted through a period of 2 years (2010-12). Through these co-creative processes different tools and methods were developed.

**Results:** Three different methods were developed in co-production

1) **Group psycho-education in Social Psychiatry**

10 sessions of group psycho-education were developed. The sessions are based on life story narratives and focus on different topics such as: motivation, the good life and medicine. The aim of the sessions is that service users become more conscious of their own medicine use and develop strategies for ‘mastering’ their own medicine through teaching, dialogue and reflection. A facilitator runs the 10 sessions.

2) **Shared Decision Making in ‘The Good Surgery’**

Central to the psychiatric service user, in gaining more influence over their own medicine, is the cooperation between the individual and the health professionals. Different tools eg. a “Medical diary” and a “Guide” were developed to increase insights and support the dialogue in order to put the service users wishes at the top of the agenda. The “Medical diary” was also developed as an application for smart phones and tablets on the initiative of a service user and her farther.

3) **Complementary strategies**

Many patients use other strategies than medicine in their recovery process e.g. physical activities, acupuncture and massage. These strategies are most often not a part of the overall treatment plan. “My Personal Strategy Plan” was developed as a tool to identify the individual use of these complementary strategies. And the social psychiatric settings developed a catalogue of the different activities offered.

**Conclusion:** The active involvement of service users in the development and testing of recovery-oriented methods made them important for the implementation and spread of ‘medicinpædagogik’ - that is how an organisation can work together with service users in using medicine as part of their psycho-social rehabilitation and recovery process.
Nordic workshop in evidence based health care

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Background: The Nordic Workshop in Evidence Based Health Care has been held in Norway 15 times altogether. A total of about 1100 participants have attended since 1996. We aim at clinicians and decision makers at all levels of the health care system, researchers, librarians, educators, journalists and consumers. The workshop is multiprofessional and is in increasing demand. All the last workshops have been overbooked with a waiting list. The five-day workshop is an intense, hands-on learning experience. We use a small-group, problem-based approach to learning with twenty highly experienced tutors.

Aim: To describe characteristics of participants and their experiences from the last five workshops.

Methods: We extracted data from the registration forms and the evaluation surveys.

Results: We have information from 406 participants from the last five workshops. Regarding profession physicians were in majority (25%), 23% were advisors in public sector, 16% nurses, 7% educators and 8% researchers. Only 7% worked in primary care. An increasing number of librarians participated. We have not recruited any journalist this period. The majority of participants were Norwegian, but the workshop has had participants from Finland, Sweden, Denmark, Tanzania, Uganda, Ethiopia, Cameroon, Germany and Croatia. 45% stated that they had some experience in Evidence Based Practice before the workshop. Fourteen consumers attended the last two years. The majority of participants were recruited by “word of mouth”. The evaluation of the workshop has been very positive. –Best course I’ve ever attended! –Keep for future, important. –Very good workshop, high intensity, very good lecturers. –This workshop was structured very well, in terms of the program and plenary sessions. –The exceptionally well educated group leaders. –The possibility to adapt the small groups to group members needs.

Conclusion: The workshop recruits multiple professions and offers a well structured and well received learning environment.
Patrons' needs - librarians' challenges

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Background: Our patrons' needs for librarian support are steadily increasing, as the patrons' student life and workplace is evolving with new demands and challenges. One of the library’s offers is the Book a librarian service. Users at the Medical and Dental Library ask for literature searching with regard to different purposes, from student assignments to clinical procedures, doctoral theses, systematic reviews and research. The Book a librarian service is prioritized because we think it is the most efficient way to meet the specific needs of the individual users.

Aim: The aim is to share our knowledge on how the librarians manage all enquiries with limited staff resources, how we keep updated on databases and search methods used for systematic reviews, clinical procedures, mini-HTAs or other projects.

Results: Despite a limited number of staff at least two librarians are in charge of each type of literature search. We teach students and staff in searching; we support by phone, email, personally, and offer a Book a librarian service. The librarians at the Medical and Dental Library keep updated on database knowledge and searching skills by actively using various channels of information exchange and continuing education. A user survey showed that our users were highly satisfied, and their expectations to the service were met. This is a good motivational factor for the library staff to continue keeping up to date.

Conclusion: We manage to meet our patrons’ needs, whether they work with a student assignment or a Master thesis, a doctoral dissertation, clinical procedure, clinical pathways or mini Health Technology Assessments. Through the Book a librarian service the library contributes to enhance the quality in research, in students’ assignments and clinical work. The variety of searching services provided by the library is a good promotion of the library as a partner in clinical work and research.

Key words: Information Storage and Retrieval; Libraries, Medical; Organization and Administration;
Recruiting medical groups for research: process evaluation of a recruitment procedure in general practice

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Background: Recruiting medical groups for implementation research can be a challenging task. Recruitment problems may change the originally proposed time schedules and even harm external validity. Solberg identified seven R-factors as determinants for a successful recruitment procedure; relationships, reputation, requirements, rewards, reciprocity, resolution, and respect. We have applied the seven R-factors as determinants for recruitment to a study on low back pain guideline implementation.

Aim: The aim of this process evaluation is (i) to evaluate how well we succeeded in designing and adjusting a recruitment procedure during delivery accordingly to the framework of the seven R-factors and (ii) to discuss the usefulness of the seven R-factors in our recruitment procedure.

Methods: This process evaluation is based upon a systematic monitoring procedure of the recruitment of Danish general practices to a guideline implementation study. In the design stage GPs involved in general practice quality work participated in brainstorming sessions and the recruitment procedure was tailored to address determinants for study participation. During the delivery stage barriers for participation were systematically registered by the two recruiters and adaptive changes to the recruitment strategy were discussed on weekly 1½-hours meetings in the study group.

Results: During fourteen months 60 out of 189 possible general practices were recruited. We had underestimated the resources needed to contact possible participants as well as time required for medical groups to decide whether to participate or not. But most importantly extensive involvement of GPs in the development of required technical software might have resulted in more reciprocity and larger acceptance of the introduced changes to clinical procedures.

Conclusions: Our recruitment procedure had successfully addressed five R-factors, but requirements and the reciprocity factors had not been met sufficiently. In this process evaluation the seven R-factors provided us with a useful framework for designing and adjusting a tailored recruitment process.
**GPS' thoughts on prescribing medication and evidence based medicine: the benefit aspect is a strong motivator.**

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**Background:** This work is about general practitioners’ (GPs’) prescribing of medication and evidence-based medicine (EBM). The knowledge on how GPs’ prescription habits can temporarily be influenced is relatively substantial but successful key characteristics have been lacking.

**Results:** GPs’ thoughts on EBM and medication are highly related to reflecting on benefit and results. The thoughts of benefit, that should be prompt and pragmatic, emerged as the most important category. Evidence-based pharmaceutical information requires development to better correspond to prescribers’ thinking.

**Aim:** The purpose of this study was to describe GPs’ thoughts on prescribing and on evidence-based knowledge.

**Conclusion:** Prompt and pragmatic benefit is important to understand GPs’ thinking. How can it be used to improve the use of evidence-based practice?

**Methods:** 1999-2000, the south-eastern part of Västra Götaland, Sweden. A focus-group study, 24 GPs strategically selected and personally invited by mail, 16 participated. Tapes were subsequently transcribed and analysed by the three authors. After several readings the text was divided into meaning units. Units with the same contents were compiled under different themes. The themes were then assembled into categories. One category was more pertinent than the others, included the others and was therefore labelled a core category. The method may be considered qualitative, descriptive although some interpretations may have been at hand. The results were validated by 12 of the 16 informants being asked to assess whether they approved of our designation of the core category in the analysis. In the results section, categories and heading themes are indicated.
Relatives' participation at the time of death: standardisation in pre and post-mortem care in a palliative medical unit

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**Purpose:** The aim of this study was to illuminate the development of standardisation of relatives’ participation at the time death overtime in the Palliative Medical Unit and to explore if implementation of standardisation brought palliative care more in line with its ideology.

**Methods:** A registration form was developed and utilized to registered relatives’ degree of participation at the time of death and filled in by the Palliative Medical Unit nurse in charge of the patient and family. The study consists of two data sets named evaluation 1 and 2. Evaluation 1 includes data collected during the period 01.11.1995 – 31.12.1999, representing 73% of all deaths (N = 244). Evaluation 2 includes data collected during the period 01.01.2003 – 31.12.2009, representing 71% of all deaths (N = 400). The data was analysed in SPSS, mainly covering frequency of participation and correlation between evaluation 1 and evaluation 2.

**Results:** Relatives are more often present at the moment of death and nurses are less present at this moment. Palliative Medical Unit nurses more often informed and discussed relatives’ and their own participation in pre and post-mortem care at the time of death with relatives and made agreements with relatives.

**Conclusion:** Important premises for successful standardisation are fostering Palliative Medical Unit nurses’ knowledge about various aspects of pre and post-mortem care through regular evaluation and an educational program providing staff with necessary, time, awareness and skills.