



MEDICINES AUTHORITY REGULATOR AND INDUSTRY PERCEPTIONS OF BIOSIMILAR INTERCHANGEABILITY

Druedahl, Louise C.; De Bruin, Marie L.; Hoogland, Hans; Minssen, Timo; van de Weert, Marco; Sporrong, Sofia Kalvemærk; Almarsdóttir, Anna Birna

DOI:

[10.1016/j.sapharm.2019.09.006](https://doi.org/10.1016/j.sapharm.2019.09.006)

Publication date:

2019

Document version

Publisher's PDF, also known as Version of record

Document license:

[CC BY](#)

Citation for published version (APA):

Druedahl, L. C., De Bruin, M. L., Hoogland, H., Minssen, T., van de Weert, M., Sporrong, S. K., & Almarsdóttir, A. B. (2019). *MEDICINES AUTHORITY REGULATOR AND INDUSTRY PERCEPTIONS OF BIOSIMILAR INTERCHANGEABILITY*. E45-E46. <https://doi.org/10.1016/j.sapharm.2019.09.006>



9th Nordic Social Pharmacy Conference 2019. Conference abstracts

ATTITUDES TOWARDS DEPRESCRIBING IN OLDER ADULTS WITH LIMITED LIFE EXPECTANCY: TWO SYSTEMATIC REVIEWS

Alaa Burghle^{a,b}, Carina Lundby^{a,b}, Jesper Ryg^{c,d}, Jens Søndergaard^e, Anton Pottegård^{a,b}, Trine Graabæk^{a,b}, Dorthe Nielsen^{f,g,h}. ^aHospital Pharmacy Funen, Odense University Hospital, Odense C, Denmark; ^bClinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, Odense C, Denmark; ^cDepartment of Geriatric Medicine, Odense University Hospital, Odense C, Denmark; ^dGeriatric Research Unit, Department of Clinical Research, University of Southern Denmark, Odense C, Denmark; ^eResearch Unit of General Practice, Department of Public Health, University of Southern Denmark, Odense C, Denmark; ^fMigrant Health Clinic, Odense University Hospital, Odense C, Denmark; ^gCentre for Global Health, University of Southern Denmark, Odense C, Denmark; ^hHealth Sciences Research Center, University College Lillebælt, Odense M, Denmark
E-mail address: alaa.hassan.burghle@rsyd.dk (A. Burghle).

Background: Deprescribing of unnecessary medications is particularly relevant in older adults with limited life expectancy, as they have a considerable use of drugs and are more susceptible to the potential harms of multiple medications.

Objectives: To explore the attitudes of health care professionals (HCPs), as well as patients and their relatives towards deprescribing in older adults with limited life expectancy by performing two systematic reviews.

Methods: We conducted a systematic literature search from inception to December 2017 using MEDLINE, EMBASE, and CINAHL. Quantitative and qualitative studies were included if they concerned older people with limited life expectancy, including older people residing in aged care facilities, or were based on vignettes. Studies concerning HCPs' attitudes towards deprescribing were analyzed with inspiration from Joanna Briggs Institute's method for synthesis of qualitative data in systematic reviews. Results from studies concerning the attitudes of older adults and their relatives were obtained by narrative synthesis.

Results: Eight studies concerning HCPs' attitudes towards deprescribing in older people with limited life expectancy were included. The studies mainly concerned the views of general practitioners and other physicians. Factors that influenced HCP's decisions regarding deprescribing related to four overall themes: Patient and relative involvement, The importance of teamwork, HCPs' self-efficacy and skills, and The impact of organizational factors. Six studies regarding the attitudes of older people and their relatives were included. A number of facilitators and barriers to deprescribing in older people with limited life expectancy were identified. Facilitators included discussing deprescribing with HCPs and weaning off the medications, while barriers included fear of deterioration and lack of current harm.

Conclusion: We have identified multiple and interdependent barriers and facilitators for deprescribing among older adults with limited life expectancy. Initiatives to facilitate deprescribing practices within this population should target several of the possible issues identified

PATIENT'S INFORMATION SEEKING BEHAVIOUR PRIOR TO COMMUNITY PHARMACY VISITS: A DANISH COMMUNITY PHARMACY SURVEY

Alaa Burghle^{a,b,c}, Bjarke Abrahamsen^d, Carina Lundby^{a,c}, Rikke Nørsgaard Hansen^d, Charlotte Rossing^d, Lotte Stig Nørsgaard^e, Anton

Pottegård^{a,c}. ^aHospital Pharmacy Funen, Odense University Hospital, Odense, Denmark; ^bOPEN, Odense Patient data Explorative Network, Odense, Denmark; ^cClinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, Odense, Denmark; ^dResearch and Development, Danish College of Pharmacy Practice, Hillerød, Denmark; ^eSocial and Clinical Pharmacy, School of Pharmacy, Copenhagen University, Copenhagen, Denmark
E-mail address: alaa.hassan.burghle@rsyd.dk (A. Burghle).

Background: Patients are increasingly seeking information, e.g. via the internet, to inform themselves on their disease and treatment options

Objective To quantify and describe patients' information seeking prior to community pharmacy visits.

Methods: Community pharmacies (n=6) were recruited via the Danish Network for Research and Development of Pharmacy Practice and each pharmacy collected data via an online survey for five days during November 2018.

Results: Of 3464 patients asked, 77% (n=2663) agreed to participate. Of these, 14.5% (n=386) had sought out information. Information seeking was more frequent among younger compared to older patients (<40 years: 22%; ≥60 years: 10%), and for women compared to men (17% vs 11%). The main reasons for obtaining information was to gain information about self-management (42%), the medical product (34%), and how others might help (34%). Information was obtained from official sources of health and drug information (43%), Google (42%), health care professionals (27%) and non-health care professionals (10%). The information was generally confirmed or otherwise integrated into the counselling by pharmacy staff (70%) and only rarely disconfirmed (5%).

Conclusion: Only 14.5% of patients have sought information before visiting a community pharmacy. Those who did used credible sources and the information was used during counselling

MEDICATION ERRORS IN HOSPITALIZED PATIENTS IN NORWAY: FINDINGS FROM THE NATIONAL INCIDENT REPORTING SYSTEM

Alma Mulac^a, Ellen Hagesæther^b, Anne Gerd Granås^a. ^aUniversity of Oslo, Department of Pharmacy, PharmaSafe research group; ^bOslo Metropolitan University
E-mail address: alma.mulac@farmasi.uio.no (A. Mulac).

Background: The medication management process in hospitals is highly complex, involving multiple stages such as transfer, organizational interactions, and human judgements. Medication errors (ME) are the main cause or contributor of preventable patient harm. However, to be able to implement changes and improvements to the medicines management system and unsafe practice, one has to report and learn from present errors. In Norway, such reports are, until recently, reported to the Norwegian Directorate of Health.

Objective: The aim of the study is to give an overview of medication errors in Norwegian hospitals.

Methods: The material in this study consists of 3,558 medication related incidents reported to the National Incident Reporting System (NIRS) in 2016 and 2017. The incident reports contain patient age, date, weekday, free text descriptions of the medication errors, possible causes, consequences to the patient, and suggestions for real-time and future preventive measures. It also contains supplementary comments from the

caseworkers at the Directorate of Health.

Results: The majority of medication errors happened during administration (63 %) and prescribing (25 %). The most common types of errors were related to dosing, omissions and wrong drug. The top three medication classes involved in medication errors were Analgesics, Antibacterials and Antithrombotic agents. Most of the medications (36 %) caused no patient harm, however a small proportion caused severe harm (5 %) or death (<1 %).

Conclusion: The majority of reported medication errors occur during administration and prescribing. About one in twenty reported errors cause severe patient harm. The NIRS material provides detailed information from health personnel directly involved in medication errors, and should be further analyzed to prevent future medication errors causing patient harm.

PATIENT INVOLVEMENT IN MEDICATION MANAGEMENT IN NURSING HOMES

Amber Damiaens, Annelies Heylen, Marijke Vanbillemont, Veerle Foulon. *KU Leuven, Faculty of Pharmaceutical Sciences, Department of Clinical Pharmacology & Pharmacotherapy*
E-mail address: amber.damiaens@kuleuven.be (A. Damiaens).

Background: Research has shown that interdisciplinary case conferences (ICC) are effective in optimizing medication use of nursing home residents (NHRs) (1–4). This has recently also been confirmed in the COME-ON study, a RCT in Belgian nursing homes that investigated the impact of a medication review performed by the GP, pharmacist and nurse. The study also identified the (sub-)processes of the medication management pathway. Although the intervention was patient-centered in its aim, it wasn't in its approach, since neither NHRs nor informal caregivers were present during the ICC. Likewise, NHRs nor caregivers were involved in the identification of the different steps of the medication management pathway.

Objectives: To investigate the experiences and expected level of involvement of NHRs and caregivers in the medication management pathway and more specific in ICC.

Methods: Focus groups with NHRs and caregivers were organized. Questions about experiences and needs with regard to communication about (changes in) medication and interest in participating in ICC concerning their medication were asked. Thematic framework analysis was performed on the transcripts.

Results: Four focus groups with a total of 52 residents and four with 23 caregivers were performed by students. Trust in the GP was a key element for NHRs, resulting in a kind of resignation. However, NHRs expected clear communication about medication changes. Residents expressed concerns for participation in ICC, regarding the language that would be used and the time management of the GP. For the informal caregivers it seemed important that information about medication is shared spontaneously. They strongly felt the need to be more informed about (changes in) medication of the resident they care for, and showed some willingness to participate in ICC.

Conclusion: Both residents and caregivers want to be informed about medication changes. Concerning participating in ICC, caregivers are more in favor than NHRs themselves.

TRANSLATION, CULTURAL ADAPTATION, AND PSYCHOMETRIC PROPERTIES OF THE DANISH VERSION OF THE REVISED PATIENTS' ATTITUDES TOWARDS DEPRESCRIBING (rPATD) QUESTIONNAIRE

Carina Lundby^{a,b}, Trine Simonsen^{b,c}, Jesper Ryg^d, Jens Søndergaard^e, Anton Pottegård^f, Henrik Hein Lauridsen^g. ^aUniversity of Southern Denmark; ^bOdense University Hospital; ^cHospital Pharmacy Funen; ^dOdense University Hospital, Department of Geriatric Medicine; ^eUniversity of Southern Denmark, Department of Public Health, Research Unit of General Practice; ^fUniversity of Southern Denmark, Department of Public Health, Clinical Pharmacology and Pharmacy; ^gUniversity of Southern Denmark, Department of Sports Science and Clinical Biomechanics, Research Unit for Clinical Biomechanics
E-mail address: carina.lundby.olesen@rsyd.dk (C. Lundby).

Background: In order to carry out effectively deprescribing, information

about patients' preferences and treatment goals regarding medical treatment is needed. The revised Patients' Attitudes towards Deprescribing (rPATD) questionnaire is an instrument which captures older patients' beliefs and attitudes towards deprescribing.

Objective: To translate and culturally adapt the English version of the rPATD questionnaire into Danish and subsequently validate the Danish version in a cohort of nursing home residents.

Methods: The rPATD questionnaire was translated and culturally adapted during five stages of forward and backward translation. Hereafter, the pre-final questionnaire was pilot tested through semi-structured interviews with eleven nursing home residents and ultimately adjusted into a final version. The validation of this final version was carried out among nursing home residents in the Region of Southern Denmark

Results: The rPATD questionnaire was successfully translated into Danish, and the subsequent pilot test showed that the Danish version was acceptable to the nursing home residents. 159 participants were included in the validation (median age of 82 years; 39% males). More than half of the participants believed that they took a large number of medications (63%; n=100), and 27% (n=43) felt that they took one or more medications which they no longer needed. Further, 44% (n=70) of the participants would like to try stopping one of their medications to see how they would feel without it, and 86% (n=137) were willing to stop taking one or more of their regular medications if their physician said it was possible. Despite this, 93% (n=148) of the participants reported not having troubles taking their daily medications. Psychometric testing will be conducted during the spring 2019.

Conclusions: We have successfully translated and culturally adapted the rPATD questionnaire into Danish. The current results from the validation suggest that Danish nursing home residents believe their use of medication is extensive and that they are open to deprescribing. Pending psychometric testing, the Danish version of the rPATD questionnaire can be used in future studies.

ATTITUDES TOWARDS DEPRESCRIBING AMONG DANISH OLDER ADULTS WITH LIMITED LIFE EXPECTANCY AND THEIR RELATIVES: A QUALITATIVE STUDY

Trine Graabæk^{a,b}, Carina Lundby^{a,b}, Jesper Ryg^c, Jens Søndergaard^d, Anton Pottegård^e, Dorthe Nielsen^f. ^aOdense University Hospital; ^bHospital Pharmacy Funen; ^cOdense University Hospital, Department of Geriatric Medicine; ^dUniversity of Southern Denmark, Department of Public Health, Research Unit of General Practice; ^eUniversity of Southern Denmark, Department of Public Health, Clinical Pharmacology and Pharmacy; ^fUniversity of Southern Denmark, Centre for Global Health
E-mail address: carina.lundby.olesen@rsyd.dk (C. Lundby).

Background: Deprescribing is particularly relevant in older adults with limited life expectancy since many medications can no longer be expected to provide clinical benefit at this point in life. Many relatives are involved in or even have the full responsibility for these patients' medication. To effectively carry out deprescribing in this population, it is important to understand the perspectives of the affected patients as well as their relatives.

Objective: To explore attitudes towards deprescribing among Danish older adults with limited life expectancy and their relatives.

Methods: Semi-structured individual interviews were used to explore attitudes towards deprescribing. Older adults with limited life expectancy were recruited from nursing homes. Informants were asked to point out their closest relative for interview. Interviews were audio recorded and transcribed verbatim. Results were analyzed using systematic text condensation.

Results: A total of ten older adults (median age of 87 years; four males) and nine relatives (median age of 60 years; four males) accepted to participate. Three main themes reflecting the perspectives of the older adults and their relatives were identified: 1) Concerns and well-being: If relatives interfered with the resident's medication, the relatives were sometimes afraid to affect the relation between the resident and staff; 2) Responsibility for medication use: Some residents were involved in their medication, whereas others had ceded the responsibility. Most of the residents did not have regular contact with their physician, and both residents and relatives were in doubt as to where to go with questions

about medication; and 3) Wishes and attitudes: Medication use should enhance the quality of life for the residents, otherwise it should be deprescribed. However, most of the residents and relatives did not consider the present medication use to be excessive.

Conclusions: Older Danish adults with limited life expectancy and their relatives are open to deprescribing. However, the process may be hindered due to several factors, including limited contact with the residents' physician.

PATIENTS' VIEWS ON SELF-ADMINISTRATION OF MEDICATION DURING HOSPITALISATION: A MIXED-METHODS STUDY

C.L. Bekker^a, N. Cornelissen^a, H. van Onzenoort^b, L. van Herpen-Meeuwissen^{a,c}, B.J.F. van den Bemt^{a,d}. ^aRadboud university medical center, Department of Clinical Pharmacy; ^bAmphia, Department of Pharmacy; ^cElisabeth-TweeSteden hospital, Department of Pharmacy; ^dSint Maartenskliniek, Department of Pharmacy
E-mail address: charlotte.bekker@radboudumc.nl (C.L. Bekker).

Background: Self-administration of medication by patients during hospitalization could positively affect medication safety, medication adherence, patients' understanding about their medication, and medication waste. Successful implementation of self-administration of medication strongly depends on patients' willingness thereof.

Objectives: To identify patients' views towards self-administration of medication during hospitalization.

Methods: A qualitative study was conducted among adult hospitalized patients in three Dutch hospitals between December 2018 and April 2019. Semi-structured interviews were conducted with patients to identify their views towards self-administration of medication, including (dis)advantages and preconditions that should be met. Interview transcripts were subjected to thematic-content analysis.

Results: Nineteen hospitalized patients (mean [SD] age 61.0 [13.4] years; 52.6% male) were interviewed. Most patients had a positive view towards self-administration of medication during hospitalization. Reported advantages included recognition of medication, increased knowledge on medication, awareness about medication management, autonomy, trust in pharmacotherapy, time saved by nurses, and medication waste reduction. Few disadvantages were identified, which included safety concerns when patients are not capable of self-administration and lower medication recognition by nurses. According to patients, preconditions that should be met were assessing patient's eligibility for self-administration (based on health condition), having a choice to participate in self-administration of medication, and monitoring of medication intake by nurses.

Conclusions: patients have positive views towards self-administration of medication during hospitalization if several requirements are met

CO-DESIGN OF A NEW TEXT MESSAGE INTERVENTION WITH PATIENTS AND PROFESSIONALS TO SUPPORT MEDICINES ADHERENCE

Gemma Donovan^a, Nicola Hall^a, Jonathan Ling^a, Felicity Smith^b, Scott Wilkes^a. ^aUniversity of Sunderland; ^bUniversity College London
E-mail address: gemma.donovan@sunderland.ac.uk (G. Donovan).

Background: It is estimated that 30% - 50% of patients do not take medicines as prescribed. Medication taking can be described as a behavior, at which behavior change techniques (BCTs) can be applied. Text messages have been highlighted as a potential tool to support medicines adherence and could incorporate BCTs to support adherence. It is important that stakeholders and intended recipients of new interventions are involved in any design process.

Objectives: To co-design a personalised two-way automated text messaging intervention to support medication adherence, delivered from community pharmacies.

Methods: A human centred design (HCD) approach was used. Six prototypes were developed based on a systematic review. These included a personalisation questionnaire and patient information leaflet; videos of an introduction to the intervention and medication review; diagrammatic representations for personalising the intervention and the implementation process. Nominal group technique was used as a framework to gather feedback for the co-design process, using focus groups with patients and

professionals.

Results: Nine patients and 21 healthcare professionals (pharmacists, nurses, general practitioners) were included in the co-design process across five focus groups. The design concept was positively received by all participants. There was agreement that a pharmacy setting and a review by a pharmacist was desirable by both patients and professionals. Patients found the questionnaire to personalise the intervention and patient information leaflet easy to understand. An important change suggested by patients was to ensure that recipients understood that communication was automated. Professionals liked the range BCTs included in the intervention, especially the support for habit formation. However, they felt uncomfortable with the use of more negatively framed BCTs and wanted more support included for patients to use home monitoring equipment.

Conclusions: HCD methods were effective for supporting a co-design process to assess initial acceptability of a new behavioural intervention to support medicines adherence.

HOW IS MEDICATION MANAGEMENT COMMUNICATED DURING PATIENT-PHYSICIAN CONSULTATIONS IN PRIMARY CARE?

I. Adelsjö^a, L. Nilsson^a, A. Hellström^a, M. Ekstedt^a, E. Lehnbo^b. ^aLinnaeus University, Faculty of Health and Life Sciences, Department of Health and Caring Sciences; ^bUiT The Arctic University of Norway, Faculty of Health Sciences, Department of Pharmacy
E-mail address: igor.adelsjo@lnu.se (I. Adelsjö).

Background: Polypharmacy is common among patients over 65 years of age. It may, however, be challenging to understand medication information, remember what the different medications are for and when to take them. Failing to manage complex medication regimens as prescribed may lead to suboptimal patient outcomes such as adverse drug events or death. Well-informed patients that are actively engaged in their own care may achieve better health outcomes.

Objective: To explore how medication management is communicated during patient-physician consultations in primary care.

Methods: Ten physicians working at two primary care centres in southeast Sweden agreed to participate in the study. A total of nineteen patient-physician consultations in primary care centres were observed and audio-recorded. Recordings from the consultations were transcribed verbatim and are currently being analysed using qualitative content analysis.

Results: Preliminary analysis of six of the observations indicate that there is a difference between the patient's knowledge (knows that measuring blood sugar levels is important) and the patient's understanding (what happens if a dose is missed). Physicians sometimes provide incomplete information, especially in conversations about unwanted results or unwanted drug effects, which may have a negative impact on patient activation. Several patients were non-adherent to their medication regimens but for different reasons. During most of the observed consultations, patients were invited to participate in the planning of their own care, while in some cases patients' wishes were ignored.

Conclusions: Managing patients with complex care needs in primary care is challenging, especially since no two patients are alike. It may be unrealistic to expect that physicians during short consultations are able to diagnose, explain treatment options to patients, consider their wishes, and provide enough information so patients can make informed self-care decisions.

DEVELOPMENT AND EVALUATION OF INFORMATION LEAFLETS ON ORAL ANTICANCER DRUGS FOR PATIENTS AND HEALTH CARE PROFESSIONALS

Ilyse Kenis^a, Lise-Marie Kinnaer^a, Charlotte Vermeersch^a, Ann Van Hecke^b, Veerle Foulon^a. ^aKU Leuven, Faculty of Pharmaceutical and Pharmacological Sciences, Clinical Pharmacology and Pharmacotherapy; ^bGhent University, Faculty of Medicine, University Center for Nursing and Midwifery
E-mail address: ilyse.kenis@kuleuven.be (I. Kenis).

Background: Patient education, combining verbal and written information, is key to a successful treatment with oral anticancer drugs (OACD).

However, standardized written information for patients and for healthcare professionals (HCPs) is lacking.

Objectives: To develop, evaluate and optimize OACD dedicated written information leaflets for patients and for HCPs.

Methods: Written information leaflets were developed in co-creation with patients and HCPs from four hospitals in Belgium. Via e-mail, patients and HCPs were asked to choose the most suitable and user-friendly format out of three different templates (two booklets, one pictogram-based). Further, based on the feedback, on the usefulness, completeness and comprehensibility, a complete set of leaflets was developed for patients and HCPs. All tools are currently being pilot-tested in one hospital and evaluated through observations of their use in patient contacts.

Results: 13 HCPs (doctors, nurses and pharmacists) and 4 patients provided feedback on the format. All respondents were satisfied with the initiative. Due to the concise format and the perceived user-friendliness, the majority of respondents preferred the pictogram-based leaflets, for both patients and for HCPs. Today, information leaflets for patients and for HCPs have been developed for each of the 69 OACD that are currently on the market. The leaflets are being pilot-tested in a combined nurse/pharmacist-led consultation. Based on intermediate feedback from a pharmacist, information for HCPs was further elaborated on. Preliminary results from the observations demonstrate that information is mostly being read to patients with limited tailoring to the specific situation of the patient.

Conclusion: The development of clear written information on OACD was highly appreciated by patients and HCPs. Further study is needed to gain insight into the usability of the leaflets, both for patients and for HCPs, and on the integration of the leaflets in counselling sessions.

THE TECH GIANTS ARE COMING AFTER THE HEALTHCARE SECTOR -WHAT DOES IT MEAN FOR PHARMACY?

Janine Marie Traulsen. *University of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, The Social and Clinical Pharmacy Group*
E-mail address: janine.traulsen@sund.ku.dk

Background: Health costs are skyrocketing; patients are demanding quicker access to healthcare and health technology (including pharmaceuticals). The payers - national health services; private insurance companies and individual patients are unable to keep up. The healthcare sector is under tremendous pressure. There are however “new players” entering the field who see this pressure as a business opportunity to create new lucrative markets. They are the “tech giants”, Apple; Amazon; Microsoft and Google. Because Amazon is moving faster into healthcare than the others, a case study of Amazon’s entrance into healthcare is adopted to gain insights into this phenomenon.

Objective: The objective of this study is to track the development and strategies of the tech giants as they enter into healthcare. The study explores the effects of these developments for the healthcare sector in general and for pharmaceuticals, the pharmaceutical industry, pharmacy practice and pharmacists in particular.

Method: A qualitative analysis of documents dealing with the strategies, plans and activities of the tech giants is ongoing. Sources of data include scientific, popular and grey literature as well as news broadcasts and documentaries.

Results: Preliminary results reveal a fast-paced activity among the major tech giants who are developing apps, devices, products and services targeted at the healthcare sector. Amazon stands out because they have a long-term strategy, offering a broader spectrum of health products and services than the others. Examples of their activities include: investing in a cancer detection company; acquisition of an online full-service pharmacy; they are reviewing electronic health record data, for commercial health insurers, to point out errors and misdiagnoses.

Conclusion: The tech giants are moving rapidly into the healthcare sector. Their innovations are ubiquitous, creating new market and value networks. This movement will irrevocably change the existing healthcare sector, displacing established market leading firms, products, services and alliances. The entire pharmaceutical sector will be affected.

PRESCRIBING BIOSIMILARS BY FINNISH PHYSICIANS - PROMOTING AND INHIBITORY FACTORS

Kati Sarnola^a, Merja Merikoski^b, Johanna Jyrkkä^a, Katri Hämeen-Anttila^a. ^a*Finnish Medicines Agency, Assessment of Pharmacotherapies;* ^b*Finnish Medicines Agency/City of Kuopio, Finland*
E-mail address: kati.sarnola@fimea.fi (K. Sarnola).

Background: Biologic medicines have improved the treatment of rheumatic, intestinal and skin diseases as well as diabetes during the past decades. Simultaneously, high costs of biologics have contributed to increased medical costs globally. Biosimilars are highly similar to originator biologics with same standards on the quality, safety and efficacy, but are less expensive. The uptake of biosimilars can lead to healthcare cost savings and better patient access to costly biologic therapies. Prescribing decisions of biologic medicines can be either policy driven or made by individual physicians. There is a need to critically assess this topic.

Objective: The aim of this study was to study factors that promote and inhibit the prescribing of biosimilars by Finnish dermatologists, gastroenterologists, rheumatologists, and diabetologists.

Methods: The data was collected by semi-structured interviews (n=45) in January–September 2018. The analysis was conducted with NVivo by using content analysis and quantifications of mentions of each factor in the interviews. Results were reflected against four-level healthcare system model (Ferlie & Shortell 2001, Reid & Compton 2005).

Results: multiple society-, organization-, care team- and patient-related promoting and inhibitory factors influenced biosimilar prescribing. Promoting factors that support the prescribing of biosimilars were typically related to society- and organization, such as cost savings for the society, organizational culture and tendering. Inhibitory factors that decrease biosimilar prescribing were typically related to care team and patient, such as physicians’ desire for prescribing autonomy and use of originator products and the patients’ desire to be treated with originator.

Conclusions: Society and organization policies can be regarded as major promoters of biosimilar prescribing. Thus, instructions and regulation may come into question in order to increase the uptake of biosimilars. On the other hand, inhibitory factors which decrease biosimilar prescribing relate to individual physicians and patients. More information targeted to physicians and patients on biosimilars may be needed to reduce incorrect conceptions on biosimilars. This study is limited to a group of Finnish specialists and cannot be generalized to all Finnish physicians.

THE USE OF Z-HYPNOTICS IN NURSING HOME PATIENTS: A FIVE YEARS LONGITUDINAL STUDY

Kjell H. Halvorsen^a, Anne Gerd Granås^b. ^a*UiT The Arctic University of Norway;* ^b*University of Oslo, School of Pharmacy, Pharmasafe research group*
E-mail address: kjell.h.halvorsen@uit.no (K.H. Halvorsen).

Background: The use of z-hypnotics in nursing home patients: a five years longitudinal study Background Sleeping disorders is a prevalent health complaint in older adults. The prevalence of sleeping disorders in older adults is 50%. Although behavioural therapy is the recommended approach to treat these symptoms, pharmacological treatment is typically used. According to the Norwegian prescription database, 90% of those receiving z-hypnotics are prescribed zopiclone. Information about use of z-hypnotics among nursing home residents is not thoroughly studied.

Objective: To examine the use of z-hypnotics in nursing home residents from 2009 to 2013 in relation to prevalence, type of medicines, dosages, persistence, inappropriate use and differences between genders and age groups.

Methods: We received automated drug dispensing data for a cohort of nursing home residents (n=311) for five consecutive years from 2009 to 2013 from Farmaka AS. We calculated an average yearly dose. Average doses >5 mg for both zopiclone and zolpidem was considered potentially inappropriate. Logistic regression analysis was performed to assess the association of factors (gender, age, number of medicines) and inappropriate medicine use in a crude and an adjusted model.

Results: The mean use of multi-dose dispensed medicines (SD) changed from 7.04 (3.07) medicines in 2009 to 5.83 (2.85) medicines in 2013. Totally, 103 residents (33.1%) used z-hypnotics during the period; 90.3% used only zopiclone and 5.8% used only zolpidem. The mean dosage of zopiclone use by women decreased from 6.47 mg to 6.00 mg ($p=0.110$) and by men increased from 6.25 mg to 6.38 mg ($p=0.857$). The proportion of residents receiving these medicines dropped from 24.1% to 18.3%.

Conclusions: Almost 1/10 of the residents received z-hypnotics on a daily basis. Positively, the total yearly prevalence and the average prescribed dose decreased during the period. In terms of prescribing quality, an adjustment towards more appropriate use of these medicines was found.

ESTABLISHING AN INTER-PROFESSIONAL COLLABORATION BETWEEN HOSPITAL AND COMMUNITY PHARMACISTS IN DENMARK

Laura Victoria Jedig Lech^a, Gitte R. Husted^b, Charlotte Rossing^b, Trine Rune Høgh Andersen^c, Anna Birna Almarsdóttir^a, Lotte Stig Nørgaard^a. ^aUniversity of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, The Social and Clinical Pharmacy Group; ^bPharmakon, Danish College of Pharmacy Practice; ^cRegion Zealand Hospital Pharmacy
E-mail address: laura.lech@sund.ku.dk (L.V. Jedig Lech).

Background: Hospital and community pharmacists are increasingly involved in interventions related to transition of care from hospital to home and community pharmacy. These interventions may enable pharmacists to collaborate across sector boundaries. However, little is known about pharmacists' views on intra-professional collaboration across healthcare sectors and what affects the establishment of such collaboration.

Objective(s): To explore what affects the establishment of an intra-professional cross-sectorial collaboration between hospital and community pharmacists.

Methods: An explorative qualitative study was conducted with the use of focus group interviews. Participants were hospital and community pharmacists. The pharmacists were invited to participate if they worked in a community or hospital pharmacy in the Zealand region in Denmark. The focus groups were audio-recorded and transcribed verbatim in Nvivo (version 10), which also supported the analysis of data. The focus groups were analyzed using theoretic thematic analysis using a framework based on existing collaboration theory.

Results: Two focus groups were conducted in June 2017 and consisted of a total of six community pharmacists and five hospital pharmacists. The pharmacists were in average 36 years old, the majority were females, and they had at least two years' experience within their current organization. Pharmacists are highly context-driven, when it comes to establishing a new collaboration. The collaboration should fit into daily routines, taking into account limited resources. Additionally, they are highly affected by the doctor, who is a focal point in their daily work, but whom they have limited access to. Individual factors seemed to affect the collaboration less.

Conclusions: Both hospital and community pharmacists find the context in which the collaboration has to be established important, while individual factors seemed less important. This might be explained by the homogeneity of the professionals who are involved in the collaboration and the heterogeneity of the two organizations the professionals come from.

PATIENTS' PERCEIVED SATISFACTION WITH INFORMATION ABOUT MEDICINES

Lise-Marie Kinnaer^a, Ann Van Hecken^b, Veerle Foulon^a. ^aKU Leuven, Faculty of Pharmaceutical and Pharmacological Sciences, Clinical Pharmacology and Pharmacotherapy; ^bGhent University, Faculty of Medicine, University Center for Nursing and Midwifery
E-mail address: lisemarie.kinnaer@kuleuven.be (L.-M. Kinnaer).

Background: Treating cancer patients with oral anticancer drugs (OACD) causes a shift in responsibilities from the oncology team to the patient. Patients should know how to take these drugs correctly and how to deal

with potential side effects. Receiving adequate information on OACD is therefore an essential element in oral anticancer treatment. However, information on patient satisfaction with information about OACD is currently lacking.

Objectives: To investigate the level of patient satisfaction with provided information about OACD during counseling with health care professionals (HCPs) in the hospital.

Methods: A multicenter cross-sectional investigation using the 16-item Satisfaction with Information about Medicines Scale (SIMS) was set up. All patients, aged 18 years or older, who started an oral anticancer treatment for the first time, were requested to complete the SIMS three days after the start of the therapy. Patients following an adjuvant hormonal treatment were excluded. Scores per item (0 = not satisfied; 1 = satisfied) and sum scores were calculated. Overall satisfaction was calculated as well as satisfaction on the subdomains "action and usage" and "potential problems". Data were presented using descriptive statistics.

Results: In total, 78 patients were invited to participate, of which 60 patients completed the questionnaire. The overall scores on the SIMS showed that 50.8% of patients were dissatisfied about the provided information about their oral anticancer therapy. Patients were most often dissatisfied. > 25% indicated having received no or too little information) on the following elements: how long it will take before the drug works, duration of the treatment, risk for side effects, interference with sex life and alcohol, drowsiness, interference with other medicines and what to do in case of a missed dose (7 out of 16 items).

Conclusion: A considerable number of patients reported that the information on OACD was not sufficient. To overcome this barrier, dedicated patient leaflets that structure the consultation and training in counseling competencies in healthcare professionals might be helpful. This is currently being tested in a before-after study in four hospitals. No distinction was made during analysis between the treated hospitals, treating physicians, type of cancer and type of OACD. This might be of interest in further research combined with a larger sample.

MEDICINES AUTHORITY REGULATOR AND INDUSTRY PERCEPTIONS OF BIOSIMILAR INTERCHANGEABILITY

Louise C. Druedahl^{a,b}, Marie L. De Bruin^{a,c}, Hans Hoogland^d, Timo Minssen^e, Marco van de Weert^f, Sofia Källemark Sporrang^b, Anna Birna Almarsdóttir^b. ^aCopenhagen Centre for Regulatory Science; ^bSocial and Clinical Pharmacy, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark; ^cUtrecht Institute for Pharmaceutical Sciences, Utrecht University, Utrecht, the Netherlands; ^dLEO Pharma A/S, Ballerup, Denmark; ^eCentre for Advanced Studies in Biomedical Innovation Law, Faculty of Law, University of Copenhagen, Copenhagen, Denmark; ^fDrug Delivery and Biophysics of Biopharmaceuticals, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark
E-mail address: louise.druehdahl@sund.ku.dk (L.C. Druedahl).

Background: The EU and the US define interchangeability as ability to switch or automatically substitute one medicine for another, respectively. The FDA requires switching studies between reference and biosimilar products to designate a biosimilar interchangeable, which are not required in the EU. Interchangeability is not decided by the EMA, but at the Member State level.

Objective: Assessment of appropriateness of current EU and US frameworks regulating interchangeability of biosimilars as perceived by EU medicines authority regulators and representatives from the pharmaceutical industry.

Methods: Semi-structured qualitative interviews were conducted with 6 EU regulators and representatives from 5 pharmaceutical companies with marketed originator biologics and/or biosimilars. Content analysis was applied.

Results: Preliminary results indicate varying opinions on interchangeability among the interviewees. The opinions differed about biosimilars being switchable or substitutable at pharmacy level. However, the differing definitions of interchangeability between US and EU jurisdictions complicate the discussions. The interviewees supported the underlying

scientific rationales for switching studies, but doubted that such studies would capture product differences unseen in biosimilar equivalence clinical trials. Overall, it was argued that the EU should not adopt switching studies. The term interchangeability was viewed as unclear in the EU because it refers to perceptions of both the regulatory approved product as highly similar regarding efficacy and safety and the de facto interchangeability decisions in individual Member States. Some interviewees argued that the EMA should officially speak on regulatory interchangeability for biosimilars, simultaneously most interviewees argued that de facto interchangeability should remain a Member State decision.

Conclusion: Considerations are needed for resolving the uncertainties arising partly from the difference between regulatory and de facto interchangeability for biosimilars in the EU, and partly from switching studies and differentiation between biosimilars and interchangeable biosimilars. In addition, harmonization of definitions between US and EU may aid understanding of interchangeability of biosimilars

IMPROVING APPROPRIATE USE OF ANTIBIOTICS: TESTING AN ETHNIC-SENSITIVE INTERVENTION AMONG ETHNIC MINORITY WOMEN RESIDING IN DENMARK

Lourdes Cantarero Arevalo, Sabrin Khaled Kassem, Sara Rezak Al-Saudi. *Social and Clinical Pharmacy, University of Copenhagen, Denmark*
E-mail address: lou.cantarero@sund.ku.dk (L.C. Arevalo).

Introduction and objective: Misconceptions regarding antibiotics are seen to be a main reason for inappropriate use of antibiotics including skipping of doses, reuse of leftovers and failure to complete treatment, which can lead to antimicrobial resistance. Knowledge about antibiotics has significantly improved by previous interventions in several countries. This is especially the case of verbal or graphic education in combination with written material. Other factors such as differences in norms and values can have an impact on attitudes, therefore, and ethnic-sensitive education program aiming at improving participants' knowledge and attitudes towards antibiotics was designed, tested and evaluated.

Methods: Snowball sampling in addition to personal communication was used to recruit 402 Arabic-speaking women aged 45 years and over who completed a pre-survey. Forty-five women participated in the program and 42 women completed the post-intervention evaluation survey. The pilot-education program took place in a mosque in Copenhagen and was taught in Arabic. For this purpose, the researchers used the Shannon and Weaver model of communication. The satisfaction of the education program and the pamphlet was evaluated by a questionnaire and a qualitative focus group interview. The quantitative evaluation was assessed by using a five-point Likert scale, while the mean values were determined with 95 % confidence interval.

Results: Knowledge and attitudes towards antibiotics improved as a result of the intervention. Women expressed satisfaction with the education and the pamphlet; they were more satisfied with the education as the mean value was 4.76 for satisfaction compared to the mean value (3.95) of the pamphlet. The focus interview evaluation generally showed positive feedback of the educational program.

Conclusion: The designed ethnic-sensitive education program generated a positive effect on participants' knowledge and attitudes regarding antibiotics. The quantitative and qualitative evaluations showed that participants were satisfied with the educational materials and the process.

POST-MARKETING RISK COMMUNICATION: HOW DO DANISH GPs READ LETTERS FROM REGULATORS AND INDUSTRY ABOUT EMERGENT RISKS?

Mathias Møllebaek^{a,b}, Susanne Kaae^b, Lisa s. Villadsen^c. ^a*Copenhagen Centre for Regulatory Science*; ^b*University of Copenhagen, Department of Pharmacy, Section of Social and Clinical Pharmacy*; ^c*University of Copenhagen, Department of Media, Communication and Cognition, Section of Rhetoric*
E-mail address: mathias.moellebaek@sund.ku.dk (M. Møllebaek).

Background: The direct to healthcare professional communication letter

(DHPC) is the main regulatory instrument to inform prescribers of emergent, post-approval risks, yet it has limited impact on prescribing. Recent research efforts to understand this has not examined the contextual factors which may be involved.

Objective: We examined 1) the everyday clinical context in which Danish general practitioners (GPs) receive and use information about emergent risks, and 2) how GPs respond to and assess a specific letter about an emergent risk; a 2014 DHPC regarding new oral anti-coagulants. The end-goal of this project is to provide recommendations for improving the DHPC.

Methods: We conducted semi-structured interviews including read-aloud protocols of the case-DHPC with 17 Danish GPs in Copenhagen and Zealand regions recruited primarily through chain-referrals. We sought specifically to reduce social desirability bias in the interviews. Verbatim transcripts were analyzed separately for major thematic patterns using nVivo 12 for Mac.

Results: We found that Danish GPs use multiple, interrelated sources of risk information for a range of purposes related to prescribing medicines. The paramount use criteria for risk information was clinical, patient-related usefulness. Among the sources used, the DHPC played a marginal role, if any. In the case-specific protocol analyses, however, we found that most GPs recognized the DHPC as a type of recurrent risk information. Yet, we also found that GPs perceived the letter's recommendations for risk mitigation to be of low clinical relevance, and that the medicine manufacturers role as the sender and signatory of the letter had a deterring effect on GPs' uptake.

Conclusions: The limited impact of DHPCs among Danish GPs can be explained by its low penetration compared to other sources and by the GPs' perception that DHPCs are of low clinical relevance and that commercials interests may bias the information. As a regulatory instrument to minimize emergent post-approval risks in general practice in Denmark, the DHPC should be revised.

THE ADOPTION OF PUBLICLY ACCESSIBLE NONPRESCRIPTION MEDICINES IN DENMARK: AN ANALYSIS OF POLICY RATIONALES AND ARGUMENTS

Solveig Nordahl Jacobsen, Simone Eggert Møller-Jensen, Sofia Kälvmemark Sporrang. *University of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, Section for Social and Clinical Pharmacy*
E-mail address: solveig.nordahl@sund.ku.dk (S.N. Jacobsen).

Background: The area of nonprescription medicines (NPMs) has been regulated numerous times in Denmark throughout the last two decades. In 2000, selected NPMs were released for sales outside pharmacies, but were only allowed to be stored behind the counter. However, an amending act, making publicly accessible NPMs legal was introduced in January 2018.

Objective: The objective of this study was to describe and analyze the rationales and arguments behind the new act on publicly accessible NPMs. Methods: A combination of document analysis of legislative documents and interviews with identified key stakeholders was used. The arguments identified in documents were thematized. Interviews were analyzed using directed content analysis.

Results: In total, 23 parties and organizations argued for or against the new policy (nine for, 13 against and one on both sides). The arguments were categorized into eight overall themes with 26 subthemes. The advocates' main rationale for adopting the policy was better accessibility and arguments were related to freedom of choice, price competition and discretion. The opponents' main rationale for rejecting the policy was consumer safety and arguments were related to counseling, advertising, perception and lack of demand by consumers. Of the many arguments used in the debate, several were used both for and against the policy. Different stakeholder groups had different views; professional- and patient/consumer organizations were mainly negative towards the policy whilst the originator industry was positive. Although economy was not mentioned, the organizations' position and arguments should be viewed in the light of economic interests.

Conclusion: The main rationale behind the adoption of publicly accessible

NPMs was better accessibility for consumers. However, bearing in mind the arguments, the economic interests and previous changes within the area of NPMs, it could be argued that the Government by adopting the policy, to a higher degree favored the industry than the consumers.

CHANGING ATTITUDES TO VACCINATION IN NEW ZEALAND

Susan Heydon^a, Jessica Spence^b. ^a*Social Pharmacy in the School of Pharmacy at the University of Otago in Dunedin*; ^b*University of Otago, School of Pharmacy*
E-mail address: susan.heydon@otago.ac.nz (S. Heydon).

Background: In 2019 the WHO considers the reluctance or refusal to vaccinate despite the availability of vaccines a major threat to global health. Since the nineteenth century opposition to vaccination has existed alongside people's acceptance. Pharmacists in New Zealand are becoming involved in giving vaccinations; however literature detailing New Zealanders' attitudes towards vaccination over time is limited.

Objectives: To document the development of the opposition to vaccination in New Zealand from the nineteenth century to the present day and to analyse the factors underlying this development.

Methods: This historical study (November 2017–September 2018) used a wide range of databases to survey current research and literature. Various search strings were used. Primary sources were then collected from electronic databases containing digitized records or accessed at various archives. Websites, bibliographies and references provided valuable additional material. All sources were manually and critically analyzed using narrative and analytical approaches.

Results: Changes and continuities in public perspectives were identified through responses to vaccines such as smallpox, diphtheria, polio, measles, pertussis, meningococcal B and human papilloma virus. While anti-vaccination ideas were often the same throughout the period since 1863, the demographic of anti-vaccinators, methods of information dissemination and attitudes towards vaccination have changed significantly. Disease prevalence and vaccine-related adverse events, (both internationally and locally) heavily influenced the public's acceptance of vaccination. Social changes, such as the feminist movement in the 1970s, altered the demographics of anti-vaccinators and prompted a resurgence of anti-vaccination activity in New Zealand. Technological advancements, specifically the introduction of the internet, significantly increased accessibility to anti-vaccination information.

Conclusions: Reasons for vaccination opposition are multifactorial, context and often vaccine specific. While influenced by international events and experiences, New Zealand's historical anti-vaccination experience is also unique and provides insight into factors affecting the development of opposition to vaccination.

EVALUATION OF SAFE MEDICATION USE AMONG HOME CARE AND NURSING FACILITIES OLDER PATIENTS IN ESTONIA AND FINLAND

Veera Bobrova^a, Uljana Baburina^a, Jyrki Heinämäki^a, Outi Honkanen^b, Shane Desselle^c, Marja Airaksinen^d, Daisy Volmer^a. ^a*Institute of Pharmacy, Faculty of Medicine, University of Tartu, Estonia*; ^b*PharmaService Ltd, Finland*; ^c*Touro University California College of Pharmacy, Vallejo, CA, USA*; ^d*Division of Pharmacology and Pharmacotherapy, Faculty of Pharmacy, University of Helsinki, Finland*
E-mail address: veera.bobrova@gmail.com (V. Bobrova).

Background: Medication review (MR) is increasingly recognized as an essential element of pharmaceutical care, assessing patients' medications to identify drug related problems (DRPs). There is a growing amount of evidence-based research suggesting older people are at risk of potentially inappropriate medications (PIMs) due to multimorbidity and polypharmacy. Despite the availability of various explicit criteria to reduce DRPs in older patients, they are still prevalent.

Objectives: To investigate the occurrence of PIMs and drug-drug interaction (DDIs) in older patients receiving medications via multi-dose drug dispensing (MDD) and compare outcomes in two different health care settings with resource-limited MR options.

Methods: The EU(7)-PIM list and INXBASE database were used to identify PIMs and DDIs among ≥ 65 years old patients (n=303) living in nursing

homes in Estonia and receiving medications via MDD. The findings of the study were compared with the earlier research outcomes conducted in Finland on the same methodology in home care patients (n=208). For both settings, detached MR at the start of the study and after 6 months was prepared.

Results: The result demonstrated that 56% of older patients in nursing homes had at least one PIM prescribed and 7% of the patients were exposed to clinically significant DDIs. There was a small difference in the outcomes compared to the previous research in home care: 64% and 3%, respectively. However, during six months study period, the number of used medications increased significantly for home care patients (61%), while nursing home patients experienced less changes in treatment regimen through polypharmacy increase (38%).

Conclusions: Despite home care patients received a compulsory MR as a part of MDD service, there was no considerable difference with nursing home patients in the occurrence of DRPs. Further research is needed to find adjustable tools for identification of DRPs among older patients.

CAN FRAIL OLDER PERSONS PARTICIPATE IN A TELEPHONE FOLLOW-UP ABOUT QUALITY OF LIFE AND SATISFACTION AFTER DISCHARGE? – A FEASIBILITY STUDY

Alaa Burghle^{a,b,c}, Anton Pottegård^{a,c}, Lene Ravn-Nielsen^a, Jens-Ulrik Rosholm^{d,e}, Palle Mark Christensen^f, Trine Graabæk^{a,c}. ^a*Hospital Pharmacy Funen, Odense University Hospital, Odense, Denmark*; ^b*OPEN, Odense Patient data Explorative Network, Odense, Denmark*; ^c*Clinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, Odense, Denmark*; ^d*Department of Geriatric Medicine, Odense University Hospital, Odense C, Denmark*; ^e*Geriatric Research Unit, Department of Clinical Research, University of Southern, Denmark*; ^f*General Practice, Otterup, Denmark*
E-mail address: alaa.hassan.burghle@rsyd.dk (A. Burghle).

Background: It can be difficult to use questionnaires among older people after discharge due to problems with delivery, return, seeing and writing. Therefore, telephone calls pose a possibility.

Objectives: We aimed to evaluate the feasibility of measuring health-related quality of life and patient satisfaction by telephone after discharge of older people.

Methods: As part of a study on medication review by clinical pharmacists, we included older people at a geriatric department. At inclusion participants were asked face-to-face about quality of life according to EuroQoL 5 dimension questionnaire (EQ-5D-5L) including a visual analog scale (EQ-VAS; 0 worst possible health and 100 best possible health). Two weeks after discharge, a researcher called the participants by telephone. Participants were interviewed about their satisfaction with the discharge process and asked to complete the EQ-5D-5L and EQ-VAS again.

Results: A total of 176 participants were eligible for the telephone follow-up. The participants had a median age of 82 years (range 65–90). A total of 107 participants were reached at the follow-up. Reasons for losing participants to follow-up (n=69) were, among others, participants having hearing problems (n=4), participants not answering the phone (n=19), researcher missing the follow-up due to busyness (n=11), and participants not wishing to participate (n=10). At inclusion, 102 participants answered the EQ-5D-5L. A total of 14 participants did not answer the EQ-VAS. At follow-up, 103 participants completed the EQ-5D-5L. A total of 55 participants did not answer the EQ-VAS. In total 103 persons completed the interview about satisfaction.

Conclusion: It was possible to reach most of the included older people by telephone. In the conducted telephone interviews, the participants were willing to talk about their hospital discharge experiences. The EQ-5D-5L showed reasonable feasibility, whereas the EQ-VAS was difficult to complete, especially by telephone.

PHARMACIST INTERVENTIONS ON MULTIDOSE DRUG DISPENSING PRESCRIPTIONS

Anette Vik Jøsendal^a, Trine Strand Bergmo^a, Anne Gerd Granås^b. ^a*Norwegian Centre for E-Health Research*; ^b*Department of Pharmacy, University of Oslo*

E-mail address: anette.vik.josendal@ehealthresearch.no (A.V. Jøsendal).

Background: Prescribing errors are a common cause of preventable medication adverse drug events, and community pharmacists play an important role in correcting these errors. In Norway, many patients receive home deliveries every two weeks with multidose dispensed drugs (MDD). Both the prescribing system for MDD patients (paper based vs. electronic prescriptions) and the dispensing process (MDD vs. original packaging) differ from that of ordinary prescriptions.

Objective: Describe the frequency and type of errors community pharmacist detect on MDD prescriptions.

Methods: For two consecutive weeks, 11 community pharmacies used a self-completing form to register errors and interventions on MDD prescriptions linked to drug-related errors (e.g. dose, strength, duration, drug shortages), formal/technical errors (e.g. missing signature, expired prescriptions), or other errors (e.g. missing shipping address).

Results: In total, 551 errors or omissions were registered, with an overall intervention rate of 8.6%. On average, 4.7 minutes was used to correct an error. Formal errors constituted 46% of the errors, of which 27% were rectified before dispensing. However, a high proportion of these prescriptions were dispensed despite formal errors. Only 3% were not dispensed. Drug-related errors constituted 45% of the total errors, of which 17% were due to drug shortages. The main action to resolve an error was to contact the prescriber (54%), a nurse in the home care services (17%), or resolved by the pharmacists using their own professional judgment (17%).

Conclusions: Community pharmacists intervene on one in twelve MDD prescriptions. About half or errors on MDD prescriptions are formal/technical in character, and about half are drug-related. Many prescriptions are dispensed despite missing signatures or being expired. Most of the formal errors could be avoided if the prescriptions were electronic rather than paper-based.

IMPACT OF COMMUNITY PHARMACY-LED MEDICATION REVIEW

Bjarke Abrahamsen, Rikke Nørgaard Hansen, Charlotte Rossing, *Pharmakon, Danish College of Pharmacy Practice, Department of Research and Development*

E-mail address: bj@pharmakon.dk (B. Abrahamsen).

Background: Polypharmacy is increasing in a growing elderly population. One way to assess this phenomenon is to perform medication reviews that identify drug-related problems (DRP). Medication reviews of elderly patients' medication can affect many parameters, e.g. adherence and discontinuation of potentially inappropriate medication. The overall impact of a medication review on patients' health is partly dependent on the communication between the patient, the pharmacy and the prescribing general practitioner (GP).

Objective: To investigate the impact of community pharmacy performed medication review on elderly patients with polypharmacy.

Method: In the Southern Region of Denmark 49 pharmacists were recruited from 28 community pharmacies. Pharmacies included patients of age 65 or older; receiving five or more medications; living in their own home without any public help to administer their medication. The following outcomes were registered: number and types of DRP, feedback from GP and rational pharmacotherapy related to discontinuation.

Results: A total of 951 medication reviews were carried out with an equal number of men and women with an average age of 75, suffering from an average of four conditions and using an average of nine medications. 2,032 DRP were identified from 80 percent of the intervention group, with an average of 2.6 DRP/patient. The most frequent DRP were associated with possibly for the inappropriate choice of drug or experienced side effects and altogether 15% were related to discontinuation. Feedback from GPs for 34% of the DRP was recorded. Feedback from GPs for DRP related to discontinuation was 41%. For five of the 28 indicators, the use of the drugs decreased statistically significantly.

Conclusion: Medication reviews led by the community pharmacy, showed that pharmacists can identify relevant DRPs with a majority related to discontinuation of potentially inappropriate medication. To enhance the outcome of medication reviews, collaboration between pharmacies and GPs must be improved.

OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) TEST FOR ASSESSMENT OF OTC COUNSELLING COMPETENCIES AMONG PHARMACY STUDENTS IN ESTONIA

Daisy Volmer^a, Ksenia Petrova^a, Janika Tähnas^b, Liisa Randmäe^c, Veera Bobrova^a, Arijana Mestrovic^d. ^aUniversity of Tartu, Faculty of Medicine, Department of Pharmacy; ^bTartu Town Hall Pharmacy; ^cTartu University Hospital Pharmacy; ^dPharma Expert, Croatia
E-mail address: daisy.volmer@ut.ee (D. Volmer).

Background: Objective Structured Clinical Examination (OSCE) is widely used tool in different healthcare training programs to assess clinical skills in real time counselling situation. OSCEs could be used for interim assessment of basic skills, e.g. communication, patient assessment or for final assessment as a part of entry-to-practice examination.

Objectives: To assess OSCE test as a tool for evaluation of clinical and communication skills of pharmacy students in counselling of self-medication.

Methods: The OSCE tests were organized twice during social pharmacy course on the 8-th semester of the pharmacy program as interim tests. Both OSCE tests consisted of four stations about self-treatment of minor illnesses. Counselling was evaluated by pre-trained evaluators with structured assessment tool in 4-steps scale (0 - information not asked/provided till 3 - full information asked/provided) for clinical (e.g. patient assessment, use of medicines including safety aspects) and communication (e.g. initiation and closing the contact, lay terminology used for communication) skills. After OSCE tests all students (n=24) were asked to fill in the structured feedback form.

Results: In both OSCE tests 75% of the students agreed that during counselling process they could use combined knowledge about minor illnesses, non-prescription medicines and communication skills, and learn about their actual level of expertise in patient counselling. Assessment results correlated with students' feedback about stations being easy or difficult. About 1/3 of the students faced with high stress level before test and complained about limited time for counselling (42% after the first and 17% after the second test).

Conclusions: OSCE test was considered as a relevant tool for evaluation of OTC counselling competencies. In the future the number of topics could be increased and the test could be seen as part of the entry-to-practice examination at the end of pharmacy curriculum.

FEASIBILITY OF FLU VACCINATION AT COMMUNITY PHARMACY – PATIENT FEEDBACK FROM A PILOT STUDY IN ESTONIA

Kristiina Sepp^{a,b}, Carmen Kukk^b, Daisy Volmer^b. ^aEstonian Pharmacies Association; ^bUniversity of Tartu, Faculty of Medicine, Institute of Pharmacy
E-mail address: kristiina.sepp@eestiapteek.ee (K. Sepp).

Background: In Estonia seasonal flu vaccination coverage is poor being the lowest in older age groups (1). An effective way of extending influenza vaccination among the population is inclusion of new healthcare specialist. Community pharmacies are well accessible to get seasonal influenza vaccines. Community pharmacy based flu vaccination in Estonia was first introduced as a pilot project in November 2018 at 14 community pharmacies and there were vaccinated 9098 people. Vaccination was provided by other healthcare professionals than pharmacists.

Objective(s): To evaluate patient perception and experience towards flu vaccination at community pharmacies in Estonia.

Methods: A random sample of community pharmacies (n=5) what participated in the flu vaccination project (n=14) were selected for cross-sectional survey evaluating patients' feedback about accessibility and quality of service at community pharmacy. An Ethics Committee approval was received for this study.

Results: Among survey participants (n=283) 31% were 61 years and older. Of the respondents 55% received flu vaccination first time. Flu vaccination at community pharmacy was considered as convenient (73%) and well accessible (43%) service. Majority of the patients (91%) were satisfied with service quality (immunization and information provided about vaccines and vaccination), would use this service again next year (93%) and recommend it to others (89%). Respondents would consider vaccination of tick-borne encephalitis, hepatitis, diphtheria and tetanus at community

pharmacy in the future.

Conclusions: The flu vaccination pilot project at community pharmacies in Estonia was very successful. Patients were satisfied with accessibility and quality of provided service and would receive this service again at community pharmacy.

SCREENING MODEL FOR IDENTIFYING PATIENTS TO PHARMACIST-LED MEDICATION REVIEW DURING HOSPITAL ADMISSION

Trine R.H. Andersen, *Region Zealand Hospital Pharmacy*
E-mail address: trn@regionsjaelland.dk

Background: The Danish Health Authority national action plan describes a need for ensuring that relevant elderly polypharmacy patients receive medication reviews during hospital admission to reduce the risk of adverse events. Potentially Inappropriate Medications (PIMs) are one of the most frequent causes of adverse events in older people.

Objective: To develop a screening model to identify the patients who may benefit from a pharmacist-led medication review in hospital.

Methods: A screening tool was developed from PIMs described in international literature, and adapted to the workflow of Danish pharmaconomists and clinical pharmacists in hospitals. The screening model comprises ten medication focus points, and demonstrated a specificity of 78% and sensitivity of 80% in detecting the relevant patients when applied to a cohort of elderly polypharmacy patients. The screening model was applied to all elderly polypharmacy patients admitted to hospitals in Region Zealand, Denmark, by pharmaconomists performing top-up service at the wards. When patients fitting the model were identified, the pharmaconomists referred the patient to a pharmacist-led medication review. One of the primary outcomes was the number of PIMs at discharge compared to the number of PIMs at the admission to hospital.

Results: During April–June 2018 17,631 patients were screened using the tool. The pharmaconomists referred 396 patients to the pharmacists (average age 78 years, 52% women). Of these, 229 received a pharmacist intervention regarding PIMs (average of 2.78 interventions/patient). For the 115 patients where a follow-up was possible the average of PIMs/patient was significantly reduced ($p < 0.001$) from 2.02 PIMs at the admission to 1.57 PIMs at the end of hospital admission.

Conclusions: The screening model developed was able to detect relevant elderly polypharmacy patients for a pharmacist-led medication review during hospital admission. The model was easy to implement, low-resource and resulted in a significantly reduced number of Potentially Inappropriate Medications

DISCUSSING DEPRESCRIBING OF LONG-TERM MEDICATIONS WITH PATIENTS: THE VIEW OF GENERAL PRACTITIONERS

Wade Thompson, Peter Haastrup, Jette Vidbæk Le, Line Bjørnskov Pedersen, Jesper Bo Nielsen, Dorte Jarbøl. *University of Southern Denmark, Research Unit of General Practice*
E-mail address: wthompson@health.sdu.dk (W. Thompson).

Background: Patients and prescribers may be faced with the decision to continue or discontinue potentially inappropriate medications. These decisions should be shared and should be based on a discussion between patients and prescribers. There is currently little information on how such discussions take place.

Objectives: Explore (1) how GPs currently discuss possible deprescribing with patients and (2) identify what GPs think is important to discuss with patients.

Methods: We conducted a qualitative study using semi-structured interviews with GPs conducted between March and November 2018 in the Danish regions of Zealand and Southern Denmark. GPs were recruited via personal networks. Our interviews were 1 hour and focused on deprescribing discussions for two situations: proton pump inhibitors (PPIs) in patients with no ongoing indication for use, and statins in patients aged 80+. Interviews were analyzed using systematic text condensation to identify themes and sub-themes.

Results: We interviewed 11 GPs. We identified themes related to how GPs approach discussions with patients, and how such a discussion starts. We noted deprescribing discussions related to PPIs often took place in

consultations for other problems, while statins came up during discussions surrounding medication burden in general. GPs felt it was mostly them bringing the discussion forward. In the discussions specifically, we identified themes related to: (1) rationale for the discussion, (2) planning, (3) the extent of the discussion, and (4) individualizing care. We found variability around the content, detail, and level of shared decision-making involved in discussions. Our data suggested that variability could be due to patient-specific factors (such as clinical status or medication burden).

Conclusions: There is variability in how GPs approach deprescribing discussions with patients, part of which may be explained by how GPs individualize care. Our future work will explore how patients would like to discuss deprescribing. This knowledge can inform how to optimize deprescribing discussions and reach quality, shared decisions.

PRESCRIPTION OF LIPID-LOWERING DRUGS INCREASES FOLLOWING RECEIPT OF A PICTORIAL REPRESENTATION OF PATIENTS' CAROTID ULTRASOUND EXAMINATIONS

Maria Sjölander, Bo Carlberga, Margareta Norberga, Ulf Näslunda, Nawi Ng. *Department of Public Health and Clinical Medicine, Umeå University Department of Epidemiology and Global Health, Umeå University*
E-mail address: maria.sjolander@umu.se (M. Sjölander).

Background and objectives: We evaluated whether a pictorial representation of asymptomatic atherosclerosis based on carotid ultrasound examinations given to the participants and their physicians had an impact on the proportion of participants receiving prescriptions for lipid-lowering drugs during the following 465 days.

The overall aim of the study was to optimize cardiovascular disease (CVD) prevention.

Methods: This study was performed within a CVD screening and prevention program in Västerbotten County, Sweden 2013–2016. 3532 participants were randomly assigned 1:1 to receive or not receive a simplified picture of an ultrasound scan by mail plus a phone call including a health dialogue with a trained nurse. The picture indicated vascular age and the presence of plaques, and was also sent to participants' physicians. The control group received no information about the ultrasound. Data on prescriptions was collected from the County Council database.

Results: During the first 465 days, prescriptions of lipid-lowering drugs were higher in the intervention group compared with the control group among men (34.2% vs 21.3%, $p < 0.001$) and women (25.8% vs 15.2% $p < 0.001$). Corresponding proportions for first prescriptions were 19.2% vs 6.0% ($p < 0.001$) and 16.6% vs 5.7% ($p < 0.001$), respectively. Similar patterns were observed for participants with and without plaque, but with a higher proportion among those with plaque. Cholesterol level, diabetes, prescription of antihypertensives and previous myocardial infarction were in a multivariable logistic regression model associated with first prescriptions. Although prescriptions increased over the study period, 56% of participants with known plaque were not prescribed any lipid-lowering drug.

Conclusion: Provision of pictorial information on vascular age and carotid plaque based on ultrasound examination increased physician prescriptions of lipid-lowering drugs within the following 465 days

FINNISH PHARMACY STUDENTS' PERSPECTIVES TOWARDS PATIENT COUNSELLING IN SELF-CARE

Piia Siitonen^a, Tuulia Vinke^b, Kirsti Vainio^a. ^a *University of Eastern Finland, Faculty of Health Sciences, School of Pharmacy*; ^b *University of Leiden, Leiden University Medical Centre*
E-mail address: piia.siitonen@uef.fi (P. Siitonen).

Background: Patient counselling in self-care is one of the primary roles of pharmacists. They should be able to identify the individual needs of each customer in every unique situation. In order to fulfill this role, positive attitude towards counselling and proper communication skills are needed.

Objectives: Our aim is to describe Finnish second year pharmacy students' attitudes towards patient counselling and their communication skills after their first internship period in community pharmacy.

Methods: Data was collected at the end of the internship period using an electronic form in May–June 2018. Students' (N=100) perspectives about patient counselling and their communication skills were assessed by

statements with a 4-point Likert scale (1=weakest agreement/skills, 4=strongest agreement/skills) including Don't know-category outside of the scale.

Results: 86% of the students strongly agreed that they like to provide counselling in self-care, and 54% perceived that they have enough communication skills to do this. However, only 28% strongly agreed that counselling is easy for them, and 10% perceived that they have enough knowledge about symptoms, illnesses and OTC-medications to provide counselling. The students perceived that their communication skills are strongest in creating contact, listening and asking questions (64%, 65% and 34%, respectively). However, the skills were weakest in justifying and motivating the customer to carry out the recommended self-care (13% and 7%, respectively).

Conclusions: These results show that pharmacy students have a positive attitude towards patient counselling in general. However, after their first internship period, students need more understanding of symptoms, illnesses and OTC-medications. In accordance, students need more training and self-confidence in motivating the customer in self-care. These results give important insights for improving the pharmacy education program

FURTHERING PATIENT-CENTERED COUNSELLING: EXPLORING PHARMACY STAFF'S EMOTIONS DURING PHARMACY ENCOUNTERS

Christina Fogtmann Fosgerau^a, Susanne Kaae^b. ^aDepartment of Nordic Studies and Linguistics, University of Copenhagen; ^bCopenhagen University, Department of Pharmacy, The Social and Clinical Pharmacy Group
E-mail address: fogtmann@hum.ku.dk (C.F. Fosgerau).

Background: If pharmacy staff wants to fulfill their obligations towards society and offer individual counseling to patients around their medicine, they have to communicate in ways that engage patients to express concerns and perspectives on their medication. Studies show however, that such patient-centered counselling rarely happens.

Objectives: In order to reveal aspects that prevent staff from counseling activities, we aimed to study pharmacy staff's emotional experiences during encounters with patients and to explore how such emotional experiences actually shape their ways of interacting in a pilot study.

Method: We employed an introspective interview method new to pharmacy practice research, that of video-stimulated interviewing (VSI). We video-recorded 56 pharmacy encounters at two different community pharmacies. Seven VSIs were then conducted with pharmacy staff. During a VSI, pharmacy staff viewed and commented on their emotional experiences in relation to the video-recorded encounters in which they previously participated. The comments were analyzed using thematic analysis. Following this, we used the method of conversation analysis to explore how their emotional experiences affected their ways of engaging in counselling activities.

Results: Mostly, staff's emotional experiences related to patients' behavior. Impatience, dislike and surprise were the emotional states expressed by staff. Conversation analysis of the interactional sequences showed that these emotional states occurred at moments at which patients expressed or were about to express their personal worries and perspectives. Conversation analysis also showed that staff did not pay attention to or engaged with these patient perspectives.

Conclusion: Pharmacy staff's emotional experiences affect counseling activities. Through VSI it is possible to identify such experiences and hereby detect psychological states that apparently hinder counselling activities. The use of VSI thereby provided new and valuable insight into particular barriers for patient-centered counseling at the pharmacy counter

IMPLEMENTING REFLECTIVE PROFESSIONAL DEVELOPMENT PORTFOLIOS IN PHARMACY EDUCATION

Andy Wallman^a, Maria Gustafsson^a, Elisabeth Helgesson^{a,b}, Åsa Nilsson-Lindgren^c, Sofia Mattsson^a. ^aDepartment of Pharmacology and Clinical Neuroscience, Umeå University; ^bKronans Apotek, Uppsala; ^cDepartment of Chemistry, Umeå University

E-mail address: andy.wallman@umu.se (A. Wallman).

Introduction: This study aims to present an implementation of reflective professional development portfolios in pharmacy programs.

The overall aim with the project is to stimulate pharmacy students' professional development. Reflection can be a way to deal with new knowledge and increase professional confidence and competence. Since the process of learning professional values, attitudes and behaviours starts early, an emphasis on students' development is crucial.

Methods: New written reflective assignments have been introduced in about 10 different courses in the pharmacy programs at Umeå University, Sweden. Students' level of reflection was measured (on a 6-degree level of reflection scale) to establish students' level without any further introduction to reflective thinking and learning in the current curricula.

Results: Preliminary results show low reflection in the first introduction course in the program (mean 3.08, 22% reflective, n=49) and the level has only slightly increased at the 6th semester (mean 3.48, 48.8% reflective, n=66) and on the 10th semester (mean 3.5, 50% reflective, n=46). Interrater reliability was calculated by Cohens kappa k=0.37-0.63. Results from more courses, feasibility, and interrater reliability are going to be evaluated and calculated this spring and presented at the conference.

Conclusions: Umeå University are introducing "Reflective professional development portfolios (RPDP)" as a learning activity integrated in all theoretical courses as writing assignments combined with mentor discussions (4 occasions) and summative portfolios (2 assignments) in the pharmacy curricula. Assessments and feedback on reflective writing of portfolios are planned to occur on several occasions and different levels including level of reflection, discussions on professionalism, and content. This baseline measurement can be used to assess the suggested curricula developments.

PATIENT CHARACTERISTICS AMONG USERS OF PROTON PUMP-INHIBITORS (PPI) IN DANISH PHARMACY SETTINGS

Anne Mette Jørgensen^a, Pernille Borup Windsor^b, Lotte Stig Nørgaard^c, Anton Pottgaard^{d,e}, Rikke Nørgaard Hansen^f. ^aStege Pharmacy, Denmark; ^bSlagelse Svane apotek; ^cCopenhagen University, Department of Pharmacy, The Social and Clinical Pharmacy Group; ^dHospital Pharmacy Funen, Odense University Hospital, Odense, Denmark; ^eClinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, Odense, Denmark; ^fPharmakon, Danish College of Pharmacy Practice
E-mail address: metteigen@hotmail.com (A.M. Jørgensen).

Background: Within recent years it has been documented that long-term use of proton pump-inhibitors (PPIs) can be associated with side effects such as blood clots in the brain, pneumonia and abdominal infections. The use of PPIs is accelerating but the number of patients in treatment is unchanged. This indicates that more patients are using PPIs as long-term treatment, which is not consistent with national recommendations.

Objectives: To characterize the actual use of PPIs among customers with a reusable prescription on PPI in an attempt to estimate the extent of long-term users and provide essential information to new users aiming for a reduction of long-term use of PPIs.

Methods: An interview-based survey was conducted among customers with a reusable prescription on PPIs. Customers were asked whether they used the medicine when needed or continuously and if they had tried to pause the treatment. A written information leaflet was offered to new users of PPIs in addition to oral counter advice. Descriptive analysis was used.

Results: Three hundred and ninety-five (395) interviews were completed in collaboration with seven pharmacy settings in Denmark. Twenty percent used PPIs on demand and eighty percent used PPIs continuously. Forty percent had tried to pause the treatment. One hundred and thirty-one (131) new users were given a written information leaflet in addition to oral counter advice. New users found the information useful.

Conclusion: A large proportion of users of PPIs use their medicine continuously. The leaflet information was a useful tool to provide essential information to new users in addition to oral counter advice.

COOPERATION BETWEEN MUNICIPALITIES AND PHARMACIES ON LOCAL HEALTH PROMOTION

Bettina Friese^a, Gitte R. Husted^a, Louise Andrés^b, Alaa Burghle^c, Nicolaj Holm Faber^b, Charlotte Rossing^a. ^aPharmakon, Danish College of Pharmacy Practice, Hilleroed, Denmark; ^bThe Danish Committee for Health Education; ^cThe research unit at Hospital Pharmacy, Funen
E-mail address: bef@pharmakon.dk (B. Friese).

Background: There is a lack of knowledge on how pharmacies can cooperate with municipalities on health promotion.

Objective: To evaluate a model of cooperation between municipalities and pharmacies to provide health promotion to vulnerable citizens.

Method: A cooperation model for delivering health promotion was developed and evaluated by five municipalities and six pharmacies in Denmark for three months. Telephone meetings were provided every fortnight to support the cooperation.

A realistic evaluation using a mixed methods approach directed the evaluation of the cooperation model. Representatives from municipalities (n=13) and pharmacies (n=12) answered a survey at the end of the study period to investigate challenges and benefits in using the model. Subsequently three municipalities (n=8) and three pharmacies (n=7) participated in three focus group interviews to explore the results from the survey. Quantitative data were analysed in SPSS. Qualitative data were transcribed verbatim and analysed thematically using NVivo software (version 12).

Results: The cooperation model was applied on 54 citizens (female=63%, mean age 63.5 years) who needed healthcare services concerning type 2 diabetes, smoking cessation sessions, chronic pain management, and New Medicine Service. Citizens were recruited in pharmacy settings (82%) vs. municipality settings (18%). The healthcare services were provided in municipality settings (68%) vs. pharmacy settings (32%). The thematic analysis revealed three main themes 1) Ready to start the cooperation 2) The cooperation has been an eye opener – we can help each other for the benefit of our citizens 3) It makes sense to continue the cooperation after the end of project period.

Conclusion: It is possible for municipalities and pharmacies to cooperate on delivering health care services to vulnerable citizens by using the cooperation model. Especially pharmacies seem to be able to reach out to citizens that are difficult for municipalities to get in contact with. The parties wish to continue their cooperation.

DEVELOPING A USER-DRIVEN TEACHING PROGRAMME FOR RELATIVES – DELIVERED AT THE COMMUNITY PHARMACY

Gitte Reventlov Husted^{a,b}, Mira El-Souri^a, Rikke Nørregaard Hansen^a, Charlotte Rossing^a. ^aPharmakon, Danish College of Pharmacy Practice; ^bThe Department of Research and Development for Community Pharmacy
E-mail address: grh@pharmakon.dk (G.R. Husted).

Background: Older people with chronic conditions often depend on support from close relatives to manage their daily medication. It is burdensome and perceived as an enormous responsibility for relatives to carry out alone. Especially taking care of dispensing and administering medication, worrying about side effects of the medicine, getting new prescriptions in time and collecting the medication at the pharmacy.

Objective: To develop a user-driven teaching programme, based on the relatives' challenges to ensure medication safety for the person they take care of, and making the programme deliverable at the community pharmacy.

Method: A participatory research design was chosen to develop the teaching programme. A group of relatives (n=6) and a group of pharmacists (n=4) participated in focus group interviews separately to identify a) relatives' challenges when taking care of the medication, b) pharmacists' experience of relatives' challenges in taking care of the medication. Pharmacists were recruited from the Danish Network for Community Pharmacy. Relatives were recruited from patient associations. Subsequently both groups (n=8) participated in a one-day workshop to develop the

teaching programme. The results from the focus group interviews were presented using the reflecting team approach, which included the participants reflecting on their challenges and suggesting input to the content and dissemination of the teaching programme.

Result: A teaching programme for use in groups of relatives (n=10-12) comprising four sessions, lasting two hours each, was developed. The topics were 1) Who am I – and why participate? 2) Practical use of medication – what to be aware of 3) Same medicine – different names and 4) Where to get local support – what are the possibilities? Teaching materials for each of the sessions were developed to support community pharmacies in taking a user-involvement approach when conducting the programme.

Conclusion: It is possible to develop a user-driven teaching programme for relatives which reflect their challenges and needs in order to ensure medication safety.

NEEDS FOR, AND EXPECTATIONS OF, A POSTGRADUATE PHARMACY PROGRAM

Ilona Niittynen^a, Carita Linden-Lahti^{a,b}, Raisa Laaksonen^a. ^aUniversity of Helsinki, Faculty of Pharmacy, Division of Pharmacology and Pharmacotherapy, Clinical Pharmacy Group; ^bHelsinki University Hospital, HUS Pharmacy
E-mail address: ilona.niittynen@helsinki.fi (I. Niittynen).

Background: Postgraduate pharmacy residency programs exist to raise the competence in specialist clinical pharmacy practice areas. In Finland, the Community and Hospital Pharmacy Specialization Program incorporates such a residency study path (40 ECTS for BScPharm and 60 ECTS for MScPharm) in the University of Helsinki since 2018. The residency study path has been developed to meet individual needs and allows an individual choice of a specialist practice area, currently oncology, neurology and care of disabled people.

Objectives: To identify perceived needs for, and expectations of, the residency study path to develop it further.

Methods: Seven semi-structured individual interviews with all pharmacists participating in the pilot course (n=3, two working in hospitals and one in primary care), their line-managers (n=3), and a representative of the Finnish Pharmacists' Association were conducted and analyzed through inductive content analysis.

Results: Four main categories of the needs were identified: 1) raising the competence in specialist clinical pharmacy practice areas and for developing individual job descriptions to ensure high-quality care; 2) supporting both the student's own and the organization's development; 3) offering lifelong learning; and 4) implementing research into practice. Four main categories of the expectations were identified: 1) through becoming specialists or experts in their own clinical pharmacy practice areas, the students are expected to develop pharmacy in general and their practice areas in particular; 2) the residency study path is expected to foster implementation of new good practices; 3) the residency study path, with the support of mentors, is expected to develop the professional identity and role of the students; 4) the students are expected to be motivated to develop their expertise leading to new developments in practice.

Conclusions: The identified needs for, and expectations of, can be used to develop the contents and processes of the residency study path further.

THE DANISH NETWORK FOR COMMUNITY PHARMACY PRACTICE RESEARCH AND DEVELOPMENT

Lotte Stig Nørgaard^a, Rikke Nørgaard Hansen^b, Lone Søndergaard^c, Kerly Maire Servilieri^d, Susanne Bendixen^e, Anton Pottegård^f, Charlotte Rossing^b. ^aUniversity of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, Social and Clinical Pharmacy research group; ^bDanish College of Pharmacy Practice; ^cAarhus Viby Pharmacy; ^dBrødstrup Pharmacy; ^eCopenhagen Sønderbro Pharmacy; ^fUniversity of Southern Denmark
E-mail address: lotte.norgaard@sund.ku.dk (L.S. Nørgaard).

Background: Denmark has a long tradition for researching and developing community pharmacy practice. For decades, a variety of community pharmacy projects have been run at both national and local levels but sharing knowledge and providing support can be difficult and time-consuming. For this reason, The Danish Network for Community Pharmacy Practice Research and Development was established in September 2016.

Objective: The purpose of the network is to support research and development in community pharmacy through a structured collaboration between researchers and community pharmacies.

Method: The network includes 93 pharmacies as members. The three research institutions in pharmacy practice research in Denmark; University of Southern Denmark, University of Copenhagen and The Danish College of Pharmacy Practice, are also represented. The steering committee consists of four members from community pharmacies and three researchers from the pharmacy practice research institutions.

Results: The network arranges biannual meetings where all practitioners are invited. Pharmacies collect data from practice, and the researchers offer support to community pharmacy staff on project design and methods. In later project stages, support is provided on how to publish results of the projects. Currently, six projects are running under the auspices of the network, and four have been finalized. The presentation describes and discusses the development, content and future of the network. Information on the network can be found on <https://www.pharmakon.dk/apotek-primaer-sundhedssektor/apoteksnetvaerk/>

Conclusion: The network supports knowledge sharing on pharmacy practice research in Denmark, with a strong focus on evidence-based development of community pharmacy in Denmark.

KNOWLEDGE ABOUT NON-PRESCRIPTION ANALGESICS AMONG PHARMACY CUSTOMERS

Vera Stanescu Knutsen^a, Marit Waaseth^a, Oda Oland^b, Karoline Eriksen^b, Lone Holst^b, Beate H. Garcia^a, Marit Waaseth^a. ^aUiT The Arctic University of Norway, Faculty of Health Sciences, Department of Pharmacy, Clinical Pharmacy and Pharmacoepidemiology research group (IPSUM); ^bUniversity of Bergen, Faculty of Medicine, Department of Global Public Health and Primary Care, Research Group in Social Pharmacy
E-mail address: marit.waaseth@uit.no (M. Waaseth).

Background: Pain is among the most common causes for seeking drug treatment. There is widespread use of non-prescription analgesics, and previous studies suggest that the level of knowledge about these drugs is low.

Objectives: The aim of the study was to describe the level of knowledge about non-prescription analgesics among pharmacy customers, thereby identifying population groups in high need of information.

Methods: A questionnaire based, cross-sectional study was conducted among pharmacy customers (>18 years) by pharmacy master students in four Norwegian cities (Oslo, Bergen, Tromsø and Skien). A knowledge score (0–23) was calculated based on 23 statements and categorized as low (≤ 8), medium (9–17) and high (> 17) knowledge. We have performed descriptive statistics, while multiple linear regression analyses are on-going. Factors that will be assessed for associations with analgesics knowledge comprise beliefs/attitudes to non-prescription analgesics and general drug use, health literacy, and health related and socio-demographic factors.

Results: The study included 893 pharmacy customers with a mean age of 49 years, 67% were women. The overall mean knowledge score was 13.1 (3.8 SD), i.e. medium knowledge. Men had slightly lower knowledge score than women (12.7 vs 13.3, $p=0.01$). Statements with particularly low knowledge included “Excessive use of non-prescription painkillers makes them less effective” (5% correct, 78% incorrect), “Non-prescription painkillers can cause addiction” (16% correct, 62% incorrect) and “Paracetamol (Paracet®, Pinex®) is safe to use during breast-feeding and pregnancy” (28% correct, 16% incorrect).

Conclusions: The knowledge about non-prescription analgesics among pharmacy customers seems to be mediocre. On-going analyses will provide information on population groups with a special need for increased knowledge.

HOW PHARMACONOMISTS CONTRIBUTE TO COUNSELLING OF PATIENTS AT DANISH COMMUNITY PHARMACIES

Mira El-Souri, Rikke Nørgaard Hansen, Camilla Lindeblad, Rikke Lundal Nielsen, Charlotte Rossing. *Pharmakon, Danish College of Pharmacy Practice, Hilleroed, Denmark*

E-mail address: mso@pharmakon.dk (M. El-Souri).

Background: Pharmacy technicians (in Denmark: pharmaconomists) are the largest group of staff at Danish community pharmacies. They play a vital role in counselling patients on prescription medication, over-the-counter (OTC) medication and self-care. This is the first study carried out to specifically analyse how pharmaconomists contribute to pharmacies' counselling of patients.

Objective: The objective was to map the pharmaconomists' counselling activities regarding prescription medication, OTC medication and personal care products at community pharmacies and to describe pharmaconomists handle drug-related problems (DRP).

Method: The study is descriptive. 80 pharmaconomists from 40 community pharmacies were recruited from all Danish regions. They registered information about all patient visits to the community pharmacies for five days over a four-week period between January and March 2019. The participating pharmaconomists received training on registration of data during the study period.

Results: 17692 patients were registered. DRPs were identified for 17.8% (n=1917) of patients with only prescription medication, 57.8% of those patients got counselling. 2.4% (n=262) got their medication after correcting their prescription, and for 7.1% (n=944) the medication was not handed over. DRPs were identified for 12.7% (n=352) of patients with only OTC medication or symptoms. 46.3% (n=163) were solved, 20.5% (n=72) were partly solved, 13.1% (n=46) were not solved and 20.1% (n=71) were registered as “don't know” or missing. 18.1% of patients with OTC medication, personal care product or symptoms saved a visit to their GP.

Conclusion: Pharmaconomists contribute to medication safety by handling DRPs, and their counselling saves visits to the GP.

ROUNDTABLES BETWEEN HOMECARE AND COMMUNITY PHARMACY ABOUT MEDICATION TO INCREASE PATIENT SAFETY

Rikke Nørgaard Hansen, Kirsten Pultz, Charlotte Rossing. *Pharmakon, Danish College of Pharmacy Practice, Hilleroed, Denmark*
E-mail address: rn@pharmakon.dk (R.N. Hansen).

Background: A pilot study showed problems with quality and safety in all phases of medication management in homecare. Based on this study, six roundtables between homecare and pharmacy were developed with six different topics. Focus was on medication management in homecare.

Objective: The aim of the roundtables is to increase patient safety through safe medication management in collaboration between homecare and pharmacy. The six roundtables were evaluated in terms of the participants' experienced influence on their daily work, the quality and relevance of the roundtables, time spent and collaboration between homecare and pharmacy.

Methods: Six roundtables were tested in November 2017–February 2018 in five Danish municipalities, with the participation of homecare staff who handle patients' medication and pharmacy staff. The roundtables were based on the homecare staff's daily work and their need for knowledge about medication safety. A combination of quantitative and qualitative data was collected and analyzed using a mixed-methods approach. Survey rating scales (1–10, median) were used in combination with quotes from homecare and pharmacies from survey and telephone meetings.

Results: Four home care units and pharmacies completed 23 roundtables in total. Homecare staff experienced a positive influence of the roundtables on quality and safety in medication management (8.0) and considered the roundtables very relevant (9.0). The manager of the homecare unit and the community pharmacy spent the same amount of time on the roundtables (32 hours), while homecare staff spent less (12 hours). Homecare staff experienced the pharmacies as professional with in-depth knowledge about medication (10.0), good dialogue partners (10.0) and facilitators

(9,0).

Conclusion: The roundtables have a positive influence on quality and safety in medication management and are highly relevant for the daily work in homecare. Pharmacy staff have extensive knowledge about medication and can act as facilitators of the dialogue about safe medication management.

MEDICINES COMMUNICATION AND THE PATIENT PERSPECTIVE - EXPERIENCES FROM A QUALITATIVE PILOT STUDY IN A HOSPITAL SETTING IN NORWAY

Stine Eidhammer Rognan^a, Yvonne Andersson^b, Sofia Kälvevemark Sporrang^c, Liv Mathiesen^d. ^aDepartment of Pharmaceutical Services, Oslo Hospital Pharmacy, Hospital Pharmacies Enterprise, South Eastern Norway; ^bHospital Pharmacies Enterprise, South Eastern Norway; ^cUniversity of Copenhagen, Department of Pharmacy, Research group for Social and Clinical Pharmacy; ^dUniversity of Oslo, School of Pharmacy, Research group for personalized pharmacotherapy and clinical pharmacy
E-mail address: stine.eidhammer.rognan@sykehusapotekene.no (S.E. Rognan).

Background: It is well known that transfer of drug information between health care providers is insufficient (1-5). Insufficient information to patients and health care professionals at discharge, e.g. regarding changes in medication regimen during hospital stay, can lead to adverse drug reactions (ADRs), early readmissions and unnecessary use of health care resources (2, 6-8).

Objective: As a first step when improving the services at discharge there is a need to further understand patients' needs and challenges regarding their drug treatment, and present practice at discharge. In our research group, we plan a qualitative study focusing on these issues.

Methods: A pilot study will be conducted during the spring in order to revise study documents and train observers. Firstly, an observational pilot study will be conducted. The observations will focus on the patient and cover events relevant to medications occurring from the first tentative discharge date is set and until the patient leaves the hospital. The focus will be the communication about medicines between patient and all involved health care staff at the hospital. Secondly, we will visit the same patients at home during the first weeks after discharge to conduct semi-structured pilot study interviews and medication reconciliation according to Integrated Medicines Management (IMM)-procedures. The interviews will focus on how the patients have perceived and understood the drug information received at the hospital. The reconciliation will enable us to detect misunderstandings or challenges experienced by the patients, and the results of the reconciliation will be explored in dialogue with the patients and if necessary, next of kin.

Results: Experiences from the pilot study will be presented at the meeting, both preliminary results and reflections on the design/methods.

Conclusions: Understanding the patient perspective on different discharge processes will contribute to the development of health personnel's "best practice" and thereby enhanced patient safety

PHYSICIANS' VIEWS ON GENERIC SUBSTITUTION AND REFERENCE PRICE SYSTEM IN FINLAND

Hanna Kauppinen^a, Riitta Ahonen^a, Pekka Mäntyselkä^{b,c}, Johanna Timonen^a. ^aUniversity of Eastern Finland, Faculty on Health Sciences, School of Pharmacy; ^bUniversity of Eastern Finland, Faculty of Health Sciences, Institute of Public Health and Clinical Nutrition; ^cPrimary Health Care Unit, Hospital District of Northern Savo, Kuopio University Hospital
E-mail address: hanna.kauppinen@uef.fi (H. Kauppinen).

Background: Medicine expenditures have continuously increased in Finland over the last decades. The introduction of generic substitution (GS) in 2003 and the reference price system (RPS) in 2009 have been essential to restrain the expenditures.

Objective: Explore Finnish primary health care physicians' views on GS and RPS. Additionally, we explored what information physicians provide to patients about interchangeable medicinal products and GS.

Methods: We conducted 19 semistructured interviews among primary health care physicians across Finland during the autumn of 2018. The data were analyzed using qualitative content analysis, using both deductive and

inductive approaches.

Results: Most of the physicians (n = 14) considered GS was a good measure. Almost all physicians (n = 17) shared the opinion that cost savings were the main benefit of the GS. 12 physicians stated that the large assortment of interchangeable products was the main problem of the GS because it can cause confusion among patients. According to the physicians, GS is discussed rarely with patients during the physician practice. Physicians (n = 13) told that regarding the GS, patients most commonly want to discuss the adverse effects of interchangeable medicines. Besides, physicians (n = 12) deemed that for some patients, it may be unclear whether the generic product contains the same active substance than an original one. In addition, 11 physicians told that there might occasionally be discussion about medicine prices.

Conclusions: GS was considered a good measure. Cost savings were the main benefit of the GS. However, the main problem was the large assortment of interchangeable products that can cause confusion among patients. Although GS is rarely discussed during the physician practice, the adverse effects of interchangeable medicines and composition of generic products were most usually discussed

INTEGRATING THE PATIENT PERSPECTIVE IN FORMULATION RESEARCH

Laura Victoria Jedig Lech^a, Ingunn Björnsdóttir^b, Anna Birna Almarsdóttir^a, Lotte Stig Nørgaard^a, Ramune Jacobsen^a, Miia Tiihonen^c. ^aCopenhagen University, Department of Pharmacy, The Social and Clinical Pharmacy Group; ^bUniversity of Oslo, Department of Pharmacy, Section for Pharmaceutics and Social Pharmacy; ^cUniversity of Eastern Finland, School of Pharmacy
E-mail address: ingunn.bjornsdottir@farmasi.uio.no (I. Björnsdóttir).

It is well known that patients experience problems in relation to their drugs. These problems extend from low-tech problems (such as opening a package or swallowing a tablet) to differences in genetic profiles leading to sub-optimal effect of certain drugs (personalized medicine). Patient engagement in the development of new drug is an important way to make future drugs more user-friendly and effective. Social pharmacy researchers master both quantitative and qualitative research methods to capture patients' views and daily experiences with drugs. Thus, it is relevant to discuss in which areas joint projects between formulation scientists and social pharmacy researchers can be established. Nordic POP (patient-oriented products) is a project supported by NordForsk, aiming at providing the scientific foundation for the next generation of pharmaceutical products by strengthening the use of interdisciplinary approaches within Nordic Pharmaceutical Sciences. Thus, this might be an opportunity to collaborate interdisciplinary directly with formulation researchers. Our workshop focuses on social pharmacy research concerning patient engagement into drug formulation development. The aim of the workshop is to gain insight in what is already known about patients' problems in relation to formulation of drugs, what knowledge is missing and how we can make this type of research interesting and important to formulation researchers. The workshop will consist of a small presentation by the presenters, group work, plenum discussion and in the end agreeing on a compiled list of possible joint research areas with formulation scientists. The list is expected to be brought to the second Meeting in NordicPOP in Copenhagen in 2020, and be presented to the NordicPOP group, aiding in the decision about new joint research projects.

The output of the workshop is expected to be a list of areas, where social pharmacy researchers can collaborate with formulation researchers to develop more user-friendly products. This list will be brought to the second Meeting in NordicPOP in Copenhagen in 2020, and be presented to the NordicPOP group, aiding in the decision about new joint research projects. Learning outcomes:

- The participants can share knowledge of and get information about (potential) inclusion of the patient perspective in formulation research, and can contribute to the development of (more) user-friendly formulations/pharmaceuticals by constructive use of the patient perspective.

- The participants can propose possible research cooperation between social/clinical pharmacy scientists and formulation researchers.

HEALTH CARE DELIVERY MODELS - IMPLICATIONS FOR PHARMACY PRACTICE

Janine Marie Traulsen, Sofia Källemark Sporrøng. *University of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, The Social and Clinical Pharmacy Group*
E-mail address: janine.traulsen@sund.ku.dk (J.M. Traulsen).

This workshop addresses two health care delivery models, each claiming to revolutionize the current system where providers are often paid on the amount of services they deliver. These two models are: 1. Value Based Health Care (VBHC) - a model which defines value as the outcomes achieved for patients relative to costs. VBHC stresses a team-oriented approach to patient care and the sharing of patient data so that care can be coordinated and outcomes can be measured easily. The goal is to improve outcomes for patients while utilizing healthcare resources more efficiently. The model was developed at Harvard Business School in the early 2000's. 2. Minimally Disruptive Medicine (MDM) - a theory-based model, that has a patient-centered and context-sensitive approach to care. MDM focuses on achieving patient goals for life and health while imposing the smallest possible treatment burden on patients' lives. MDM aims to address any and all factors that impact the implementation and effectiveness of care for patients with multiple chronic conditions. MDM is novel in that it focuses on the treatment burden and complexity of care. The aim of the workshop is to gain insight into: 1) two different health care delivery models; 2) the underlying philosophical and paradigmatic roots of each model. 3) the implications of each model for pharmacy practice. To achieve this aim, presentations and small group discussions will focus on: • The strengths and weaknesses of VBHC and MDM • The feasibility of the models for pharmacy practice (community as well as hospital) • The overall implications of each model for pharmacy practice Relevant articles will be distributed to participants prior to the workshop.

PHARMACY INTERNSHIP IN THE NORDIC COUNTRIES – STATUS AND FUTURE

Lotte Stig Nørgaard^a, Andy Wallman^b, Ingunn Bjørnsdóttir^c, Kjell H. Halvorsen^d, Anna Bryndis Blöndal^e, Ulla Hedegaard^f, Elin Høien Bergene^g. ^aUniversity of Copenhagen, Faculty of Medical Science, Department of Pharmacy, Social and Clinical Pharmacy Group; ^bUmeå University; ^cUniversity of Oslo; ^dUniversity of Tromsø; ^eUniversity of Iceland; ^fUniversity of Southern Denmark; ^gNTNU
E-mail address: lotte.norgaard@sund.ku.dk (L.S. Nørgaard).

This educational workshop is a reoccurring opportunity to address best practices, content, assessment methods and research projects from pharmacy internship courses in the Nordic countries, providing a collaboration platform for development. The content components will be described and discussed in terms of development, stimulation and assessment in the different settings.

The objective of the workshop is to share experiences from the pharmacy internships and related courses in the Nordic countries. We also want to investigate the opportunity to develop a platform for multicenter pharmacy practice research within the Nordic countries, aiming to improve the internship in each country.

A short presentation from the Nordic countries on internship experiences will be the foundation for the discussion between the workshop participants. A possible joint project about supervisors' skills and competences will be discussed.

Prior to the workshop participants are therefore kindly asked to consider how to answer (some of the questions below):

1. Have you introduced any new methods for stimulating learning activities and assessment methods at the pharmacy internship course in your country?
2. What are the three most successful aspects/components of the pharmacy internship run by your university – and what is the most problematic aspect/component?

3. How is the pharmacy internship evaluated in your university (and why so?) – do you have ideas for changing the evaluation? What other courses (elective/obligatory) are run in your university which builds upon the pharmacy internship (might be clinical pharmacy courses, PhD-courses etc) – and which courses do you plan to run?

4. What are the skills, experiences and competencies of the supervisors today – and what are the competencies needed in the future? Our discussions on this issue will take the starting point from a pre-developed questionnaire that the workshop leaders plan to distribute in all the Nordic countries.

The learning outcomes for the workshop are the following:

- The participants will learn about pharmacy internships and related courses in the Nordic countries in terms of current and planned learning outcomes and formal and summative evaluation.
- The participants will discuss and potentially develop a platform for a multicenter pharmacy practice research studies within the Nordic countries (on supervisor skills and training)

HOW DO WE KNOW IT'S GOOD? – A WORKSHOP ON QUALITY CRITERIA IN QUALITATIVE SOCIAL AND CLINICAL PHARMACY RESEARCH

Sofia Källemark Sporrøng^a, Susanne Kaae^a, Lotte Stig Nørgaard^a, Louise Druedahl^{a,b}, Mohamed Amin^c. ^aUniversity of Copenhagen, Faculty of Health and Medical Sciences, Department of Pharmacy, Social and Clinical Pharmacy research group; ^bCopenhagen Centre for Regulatory Science; ^cBeirut Arab University Faculty of Pharmacy
E-mail address: sofia.sporrong@sund.ku.dk (S.K. Sporrøng).

How do we secure good quality in qualitative health services research? What is lacking in the different existing qualitative data criteria and/or the way they are being applied? How do we understand concepts such as saturation and trustworthiness? How would paying attention to quality help us sharpening our studies to obtain more fruitful and trustworthy results? Why should we consider basic scientific paradigms to fully understand the difference between the different quality criteria in qualitative research?

These and other questions will be addressed in this workshop. With an increasingly stronger focus on patient perspectives and cooperation between different health care professionals, qualitative research (interviews, focus group interviews, observations etc.) is being carried out worldwide to grasp the voices of patients and health professionals. This emphasizes the question of how we conduct high quality qualitative research.

The aim of this workshop is to discuss different views on quality in qualitative research and different views on how to assess quality. We will discuss specific criteria such as trustworthiness, credibility and authenticity – what are the challenges when you assess quality of qualitative research and how the challenges can be dealt with. We will also look at different “criteria lists” and discuss the relevance and applicability of those – both from a researcher and reviewer perspective.

Learning outcomes

- maneuver between different current approaches to assessment of quality in qualitative research
- understand how different paradigms shape perception of quality, as well as to
- reflectively apply this knowledge to your own qualitative research.

Since we the workshop leaders plan to write a commentary together with the participants to a journal based on input from this workshop, we would like to audiotape the workshop

QUALITY INDICATORS IN COMMUNITY PHARMACIES

Kjell H. Halvorsen^{a,b}, Kenji Fujita^b, Noriko Sato^b, Lars Småbrekke^a, Timothy F. Chen^b. ^aUiT The Arctic University of Norway, Faculty of Health Sciences, Department of Pharmacy, IPSUM research

group; ^bThe University of Sydney, Faculty of Medicine and Health, School of Pharmacy
E-mail address: kjell.h.halvorsen@uit.no (K.H. Halvorsen).

Background: The provision of high-quality pharmacy services is a societal requirement that enables people to have easy access to medicines and to advices concerning the use of their medicines. However, how do we know that the services pharmacies provide are of high quality? It is challenging to develop reliable and validated quality measuring tools that will facilitate to achieve and maintain high-quality standards within these services. Quality indicators (QIs) may fill this gap. QIs are well-defined, measurable factors that provide an indirect indication of the quality of the provided healthcare service. We commonly divide QIs in structural, process and outcome indicators.

Objective: The aim of this workshop is to discuss suitable QIs that can measure the quality of community pharmacy services given in the Nordic countries.

Methods: Workshop. We will give a brief introduction to QIs; how they can be defined, and give guidelines for the following group- and plenary discussions. Participants will be allocated into three groups, according to their country of origin and the different QIs.

Results and learning outcomes: Participants will learn about the concept of quality indicators in the community pharmacy setting. Participants will learn about how QIs may facilitate to improve the quality of pharmacy services. Based on active contribution, participants will be informed about possibilities to develop QIs for community pharmacy services across the Nordic borders.

Discussion topics: Similarities, differences, barriers and facilitators related to developing QIs in the Nordic countries.

Keywords: Quality indicators, community pharmacy

MOTIVATIONAL INTERVIEWING: A USEFUL METHOD FOR CLINICAL PHARMACISTS TO CHANGE PATIENTS' HEALTH BEHAVIOUR

Ulla Hedegaard ^a, Lene Juel Kjeldsen ^b. ^aDepartment of Clinical Pharmacology and Pharmacy, University of Southern, Denmark; ^bThe Hospital Pharmacy, Lillebaelt, Hospital, Denmark
E-mail address: uhedegaard@health.sdu.dk (U. Hedegaard).

Negative medication- and lifestyle behaviours are associated with poor health outcomes, and clinical pharmacists have an important role in

helping patients to improve these. Conventional patient counselling, where the pharmacist provides information to the patient, is not very effective in changing behaviour, and therefore more patient-centered methods that focus on patient autonomy, collaboration and patient empowerment have been developed. One approach is motivational interviewing (MI), which was originally developed in the context of addiction treatment, but with growing evidence for change of behaviour related to lifestyle and medication adherence. MI is patient-centered and intends to initiate change by creating dissonance between a patient's status and the target behaviour without making the patient feel threatened or pressured. MI is designed to help patients discover their own resources and solutions. Pharmacists are traditionally taught that they are experts and in charge, and training is therefore needed to adapt to a more patient-centered approach such as MI. This workshop will bring together pharmacists with an interest in communication skills and intervention to improve medication- and lifestyle behaviour. Participants will gain knowledge of MI and be introduced to use of simple techniques of MI.
Content and structure

- Introduction to key principles and the “spirit” of MI
- Use motivational interviewing video clips to demonstrate key principles of motivational interviewing— how to do it and how not to do it
- Introduction to specific techniques, e.g. open-ended questions, reflective listening, affirmation, responding to resistance and summarizing
- Exercise about simple and complex reflections undertaken in subgroups followed by group discussion
- Role play using MI techniques
- Feedback, summary and reflection on learning outcomes After the workshop, participants will be able to:
- Explain the “spirit” and key principles of motivational interviewing
- Differentiate between good and poor performance in motivational interviewing
- Recognise statements from the patient that indicate motivation for change (“change talk”)
- Use some simple techniques of motivational interviewing