HOW PHARMACISTS CAN CONTRIBUTE TO PATIENT AND MEDICATION SAFETY AS PART OF THE HEALTHCARE TEAM?

Professor Marja Airaksinen, PhD, MSc (Pharm)

Clinical Pharmacy Group

Division of Pharmacology and Pharmacotherapy

University of Helsinki, Finland

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GOAL OF THIS PRESENTATION

A case study on integrating research-based practice development, education and cooperation in policy-making

SOCIAL PHARMACY AND CLINICAL PHARMACY AT THE UNIVERSITY OF HELSINKI

- 2003: Professorship in Social Pharmacy (2005: Pharmacoeconomics)
- 2004: Division of Social Pharmacy
- 2014: Division of Social Pharmacy -> Clinical Pharmacy Group as part of Division of Pharmacology and Pharmacotherapy
  - Social Pharmacy
  - Pharmacoeconomics
  - National specialization programme in hospital and health center pharmacy (since 2009)

SOCIAL PHARMACY AND CLINICAL PHARMACY AT THE UNIVERSITY OF HELSINKI

- Professor (Marja Airaksinen)
- 2 university lecturers (Marika Pohjanoksa-Mäntylä, Raisa Laaksonen)
- 2 university instructors (Niina Mononen, Katja Pitkä)
- 4 researchers with external funding (Social Insurance Institution, Finnish Medicines Agency, The Foundation for Municipal Development)
- 10 adjunct professors/docents (working outside the Faculty)
- 30 PhD students (working outside the Faculty, 3 international PhD students)

SYSTEMS APPROACH TO MEDICATION SAFETY

Focus on processes and medications exposing to safety risks in the Finnish healthcare system

CLINICAL PHARMACY SERVICES

- Development, implementation and evaluation of clinical medication reviews and other clinical pharmacy services
- Focus on geriatric patients
- Primary care and hospitals

MEDICINES INFORMATION

- Accessibility and quality
- Coordination between stakeholders
- Development, implementation, and evaluation of national medicines information strategy

MEDICINES POLICY

- Medication safety initiatives
- Integration of pharmaceutical services to health and social services system

COMPETENCE AND CURRICULUM DEVELOPMENT

- Core contents and teaching methods applicable to teach patient-oriented clinical pharmacy practice and support lifelong learning

PATIENT AND MEDICATION SAFETY: INVOLVEMENT IN POLICY MAKING SINCE 2004 (Airaksinen et al. 2012)

Medication Safety as Part of Patient Safety: Initiatives and Research in Finland

➤ **Marja Airaksinen**
PhD
Professor
Division of Social Pharmacy
University of Helsinki, Finland
E-mail: marjaairaksinen@gmail.com

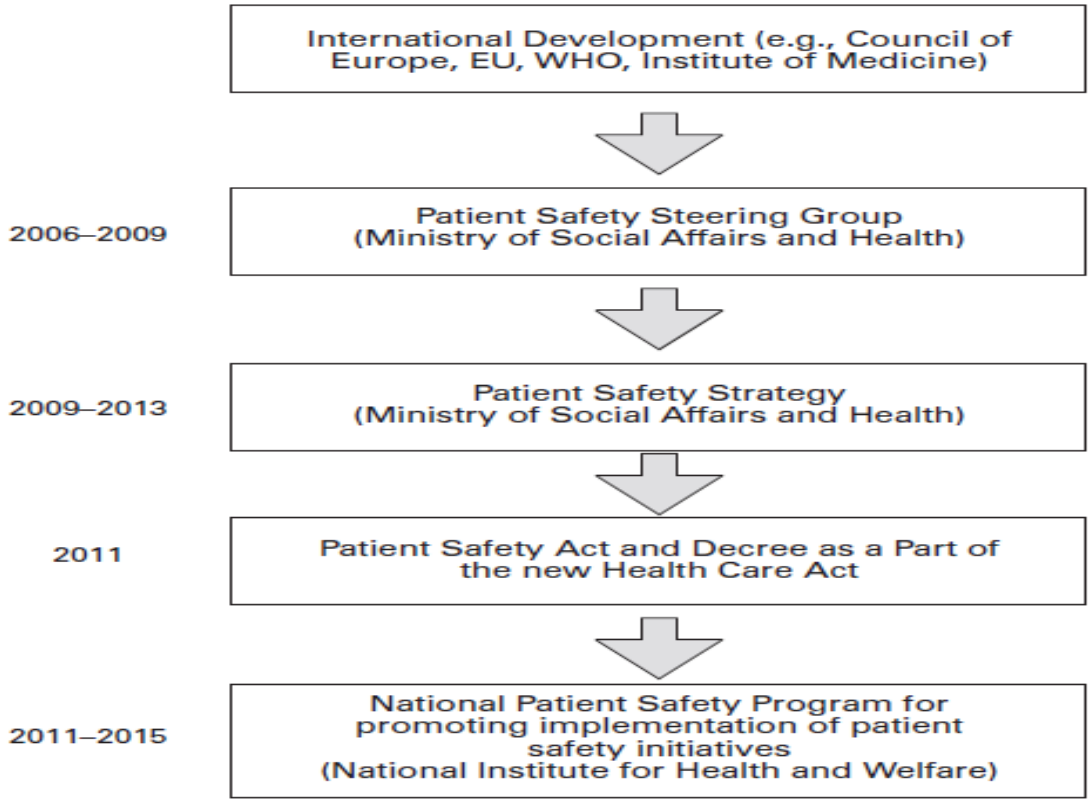
➤ **Carita Linden-Lahti**
MSc (Pharm)
Education Planner, PhD Student
Hospital Pharmacy Specialization Program
Division of Social Pharmacy
University of Helsinki, Finland
E-mail: carita.linden@helsinki.fi

➤ **Anna-Riia Holmström**
MSc (Pharm)
Program Manager
National APILA Program – Promoting
Medication Safety in Finnish Pharmacies
PhD Student
Division of Social Pharmacy

Correspondence:

➤ **Marja Airaksinen**
PhD
Professor
Division of Social Pharmacy
University of Helsinki, Finland
E-mail: marjaairaksinen@gmail.com

MAJOR PATIENT SAFETY INITIATIVES IN FINLAND SINCE 2006



igure 1. Sequence of governmental actions to initiate systems-based patient safety work in Finland

DOSIS VOL. 28 n:o 3/2012 - 216 -

CRUCIAL FOR THE DEVELOPMENT IN FINLAND: COUNCIL OF EUROPE RECOMMENDATIONS FOR PATIENT AND MEDICATION SAFETY 2006

Partial Agreement
in the Social and Public Health Field
Accord Partiel
dans le domaine social et de la santé publique

COUNCIL OF EUROPE CONSEIL DE L'EUROPE

Creation of a better medication safety culture in Europe:
Building up safe medication practices

Expert Group on Safe Medication Practices (P-SP-PH/SAFE)

(2006)

http://www.coe.int/t/e/social_cohesion/soc-sp/Medication%20safety%20culture%20report%20E.pdf

UNIVERSITY OF HELSINKI ACTIVITIES IN MEDICATION SAFETY

- Council of Europe: Expert Group on Safe Medication Practices 2003-2006 (Recommendations as part of patient safety)
- Involvement in national policy initiatives in patient and medication safety (Airaksinen et al. 2012)
- WHO Patient Safety Curriculum Guide 2011
- Social pharmacy curriculum at the University of Helsinki with the emphasis on medication safety 2004 ->
- National hospital pharmacy specialization training program with the emphasis on medication safety 2009 ->
- Research and development of tools (e.g., Leikola 2012, Dimitrow et al 2014)
- Medication safety program for community pharmacies (2011-2015)

Council of Europe Recommendations and Their Implementation in Finland (2006->)

- Initiated a long-lasting cooperation with authorities
  - Development of the glossary of key concepts (2006)
  - Guidelines for hospitals for safe medication practices (MoH 2006)
    - Follow-up studies on implementation
    - Audit tool to assist self-evaluation of practices, based on ISMP self-assessment tool (Celikkayalar 2008)
  - Working group on safe geriatric pharmacotherapy (MoH 2006)
    - Recommendations to municipalities (2007)
    - Emphasized collaborative practices, e,g., medication reviews
    - Established guidelines for geriatric pharmacotherapy and an electronic database for potentially inappropriate medicines for the aged

CONCEPTUAL FRAMEWORK (Product Safety vs. Process Safety)

MEDICATION SAFETY

Quality and Safety of Pharmacotherapy

PRODUCT SAFETY

- Adverse Drug Reactions (ADRs)
- Marketing authorization
- Pharmacovigilance

FDA, EMA, NAMs, TGA

PROCESS SAFETY

- Medication Errors
- Systems approach (Reason)
- Reporting/monitoring

Local, national, international level

Source: Medication Safety Coordination Group under the National Center for Pharmacotherapy Development ROHTO 2006

Council of Europe Recommendations and Their Implementation in Finland (2006->)

- Patient Safety Steering Group (Ministry of Social Affairs and Health 2006-2009)
  - Established the first Patient Safety Strategy 2009-2013
  - Patient safety network
  - Incorporated patient safety in the new Healthcare Act (2011)
    - The key is the organization-based patient safety plan
  - Guidelines for reporting adverse events (including medication errors)
  - Tools development (e.g., enhancing patient involvement, ask and tell about your medications)

Council of Europe Recommendations and Their Implementation in Finland (2006->)

- Patient Safety Steering Group (Ministry of Social Affairs and Health 2006-2009)
  - The key experts of the Steering Group established Patient Safety Society in 2010
    - Medication safety section
    - National Patient Safety Conferences (first ones, currently training events on selected topics)
- Since 2011: National Institute for Health and Welfare coordinates implementation of patient safety initiatives (special implementation program 2011-2014)

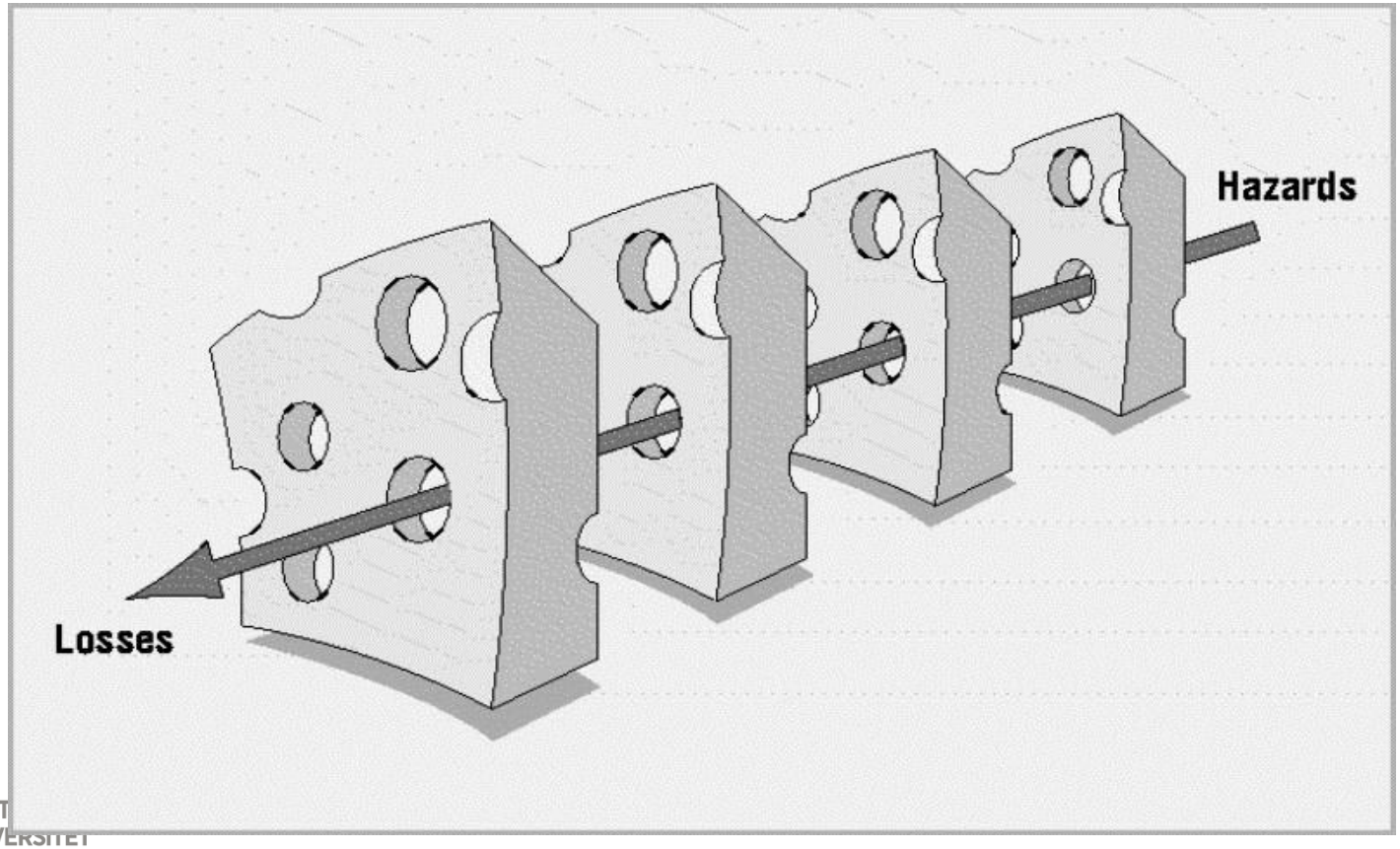
Council of Europe Recommendations and Their Implementation in Finland (2006->)

- Medication safety strongly emphasized in
  - National Medicines Policy 2020 (MoH 2011)
    - Indicator work in 2011-> (Finnish Medicines Agency)
  - Strategy of the Finnish Medicines Agency 2020 (2011)
  - National Medicines Information Strategy 2020 (Finnish Medicines Agency 2012)
    - Medicines Information Network with several working groups for implementation (also research WG)

Understanding Basic Concepts

- What is meant by
  - Systems approach to medication safety
    - We have applied Swiss Cheese Model to illustrate systems approach
  - Medication errors
    - Definition by NCC MERP is a good starting point
  - Preventive actions
    - E.g., clinical medication reviews, medication counseling, risk-assessment tools

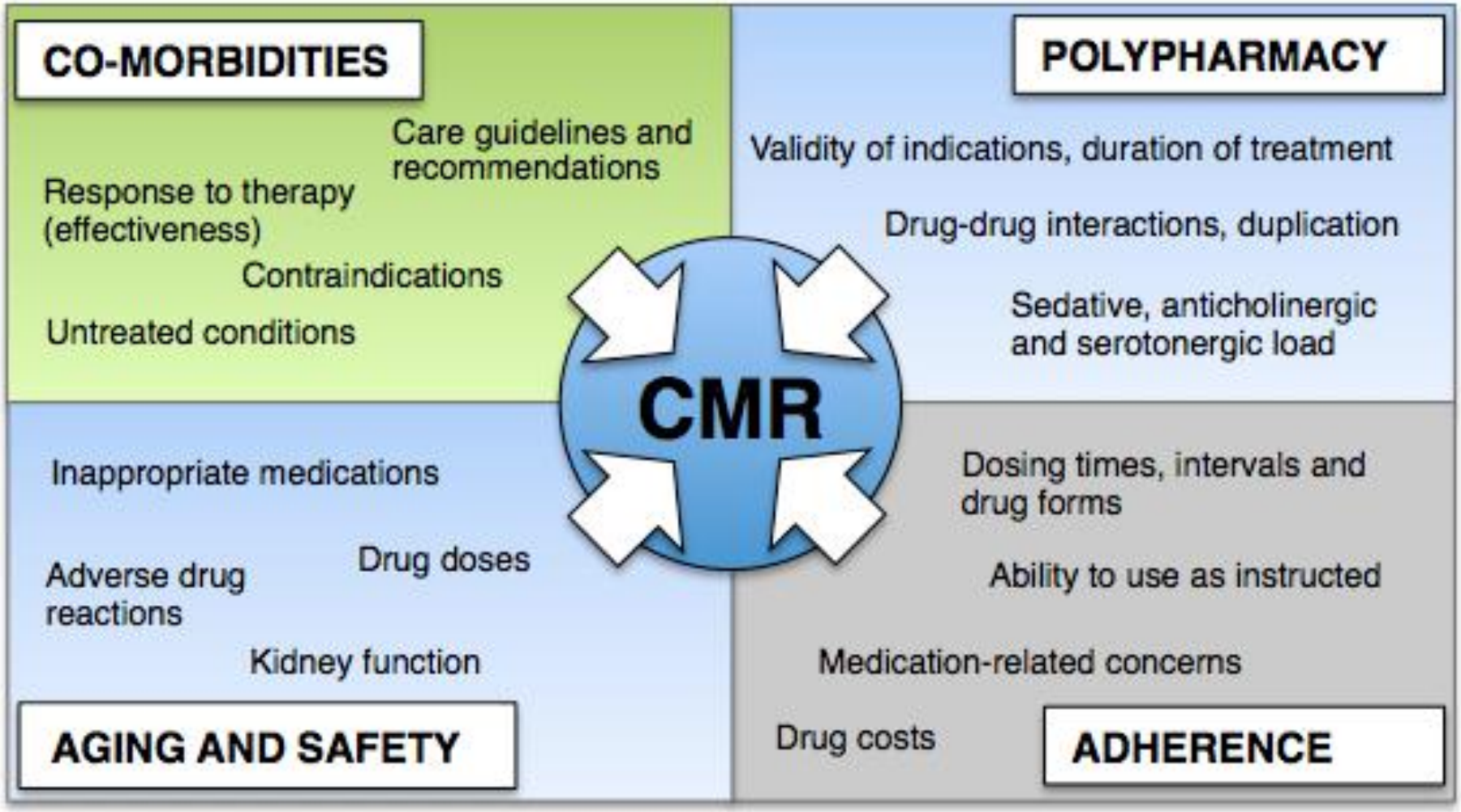
Human Error – the Swiss Cheese (Reason)



INTEGRATING RESEARCH, TRAINING AND PRACTICE

- First studies (still ongoing research lines)
  - Assessed potential risks for medication errors and ways for their prevention in
    - community pharmacy practice (Teinila et al.)
    - GP practice (Teinila et al.)
    - Collaborative practice in primary care (Teinila et al.)
  - Developed preventive tools, such as
    - Comprehensive medication review and other medication review procedures (still ongoing, Leikola 2012, Dimitrow et al. 2014)
    - Automated dose dispensing in primary care (Sinnemäki et al. 2013)
  - Identified high alert medications and processes in different settings (Linden-Lahti, Dimitrow, Pitkä, Tyynismaa, Wartiainen, Sjöblom)

COMPREHENSIVE MEDICATION REVIEW (Leikola 2012)



INVOLVING PRACTICAL NURSES IN MEDICATION RISK MANAGEMENT OF THE AGED IN PRIMARY CARE

(Dimitrow et al. 2014)

Eur J Clin Pharmacol
DOI 10.1007/s00228-014-1699-5

PHARMACOEPIDEMIOLOGY AND PRESCRIPTION

Content validation of a tool for assessing risks for drug-related problems to be used by practical nurses caring for home-dwelling clients aged ≥65 years: a Delphi survey

Maarit S. Dimitrow · Sanna I. Mykkänen · Saija N. S. Leikola · Sirkka-Liisa Kivelä · Alan Lyles · Marja S. A. Airaksinen

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Abstract

Purpose Home care services are becoming a critically important part of health care delivery as populations are aging. Those using home care services are increasingly older, more frail than previously, and use multiple medications, making them vulnerable to drug-related problems (DRPs). Practical nurses (PN) visit home-dwelling aged clients frequently and, thus, are ideally situated to identify potential DRPs and, if needed, to communicate them to physicians for resolution. This care and pharmacotherapy. An agreement by ≥80 % of the panel on an item was required.

Results The final tool consists of 18 items that assess risks for DRPs in home-dwelling aged clients. It is divided into four sections: (1) Basic Client Data, (2) Potential Risks for DRPs in Medication Use, (3) Characteristics of the Client's Care and Adherence, and (4) Recommendations for Actions to Resolve DRPs.

Conclusions The Delphi process resulted in a structured DRP Risk Assessment Tool that is focused on the highest priority

JAGS Systematic Review on PIM Criteria (Dimitrow et al. 2011)

Comparison of Prescribing Criteria to Evaluate the Appropriateness of Drug Treatment in Individuals Aged 65 and Older: A Systematic Review

Maarit S. Dimitrow, MSc (Pharm),[*] Marja S. A. Airaksinen, PhD,[*] Sirkka-Liisa Kivelä, MD, PhD,[†‡] Alan Lyles, ScD, MPH,[§] and Saija N. S. Leikola, MSc (Pharm)[*]*

Because inappropriate prescribing is prevalent in individuals aged 65 and older, various criteria to assess it have been developed. This study's aim was to systematically review articles that describe criteria for assessing inappropriate prescribing in individuals aged 65 and older and to define

Key words: inappropriate prescribing; suboptimal prescribing; measure; criteria; elderly

INTEGRATING RESEARCH, TRAINING AND PRACTICE

- First studies (still ongoing research lines)
  - Evaluated role of medication error reporting systems in medication safety
    - International study to 16 countries on their MER experiences (Holmstrom et al. 2012 and 2015)
    - Several ongoing studies on MER data collected in Finland
      - The goal is to develop loop systems for using the data for learning purposes
      - More than 50% of the reported adverse events in Finland relate to medicines
        - Most commonly reconciliation, dispensing and administration in the wards
      - Joint projects with hospital wards and hospital pharmacies, involving also pharmacy students

CURRENT ACTIONS: PREPARING FOR HEALTH CARE REFORM IN FINLAND

- A new opportunity to integrate pharmaceutical services in health services
- Developing collaborative models and guidelines for safe medication management in different health care settings
  - Special emphasis on the aged
  - Finnish Medicines Agency: Networking and guideline development
  - Several ongoing research projects

CURRENT ACTIONS: PREPARING FOR HEALTH CARE REFORM IN FINLAND

- Medicines information practices
  - Enhancing integration, coordination and collaboration through Medicines information strategy 2020 by Finnish Medicines Agency
- Enhancing integration and collaboration in self-medication
  - a new programme by Finnish Medicines Agency 2015

The New Government's Programme: Clinical medication reviews (May 2015)

27 May 2015

http://valtioneuvosto.fi/documents/10184/1427398/Hallitusohjelma_27052015_final_EN.pdf/f1071fae-a933-4871-bb38-97bdfd324ee6

The Foundation for Municipal Development: Current Journal Issue

riskikohtia liitty
loissa ja avopuol
sitten keskeisiä
kaaos pitää saad
linjaa.

http://www.kaks.fi/in_english

OUR MISSION IN MEDICATION SAFETY

- Competence development
- Tools development
- Practice development (also clinical skills)
- Evidence development
- Enhancing collaboration
- Policy-making

MEDICATION SAFETY CHALLENGE: SUGGESTIONS BASED ON OUR EXPERIENCE

- Cooperation and coordination are key issues at the national and local level
  - Structures, processes and outcomes
  - Competences and tools (also electronic tools)
  - Policy-making (shared, bottom-up policy-making recommended)
  - Partnership and involvement of medicine users
  - Evidence-based practices in medicine use (how to make it happen?)
  - Initiatives needed in hospitals and outpatient care

MEDICATION SAFETY CHALLENGE: POTENTIAL KEY ISSUES

- Every medicine user should have a (pharmaco)therapy plan, including a **medication list** (relates to medication reconciliation)
- Access to medicines information (both healthcare professionals and medicine users)
- Medication-related health literacy -> empowerment
- Understanding root causes of adherence and medication safety

COMPETENCE DEVELOPMENT IN MEDICATION SAFETY

- WHO Patient Safety Curriculum Guide (2011) gives basic understanding on systems approach in risk management in healthcare, including medication safety
- **Would it be possible to develop a supplement focusing on medication safety?**

OUR EXPERIENCE:

Systems approach to medication safety can break barriers between healthcare professionals by focusing on medication management processes instead of blaming each other ☺

LINKS

- Website:
  - http://www.helsinki.fi/pharmacy/pharm/en/Research/Clinical.html
- TUHAT Research Database: Publications and other academic achievements
  - https://tuhat.halvi.helsinki.fi/portal/en/
- International Evaluation of Research and Doctoral Training at the University of Helsinki 2005-2010
  - published May 7, 2012: http://www.helsinki.fi/arviointi2010-2012/eng/
- Evaluation Report of the Medication Safety Group (MS Group)
  - http://www.helsinki.fi/arviointi20102012/eng/rc_evaluations.htm

THANK YOU FOR YOUR ATTENTION!

ANY QUESTIONS?