Plan

- Clinical pharmacy and competencies
  - WHO/FIP standards
  - ASHP/ACCP standards
  - European standards
- Clinical Pharmacy and Education
  - Pre-grad., post-grad., and continuing education
  - Recommendations (WHO, FIP, ACCP, ASHP, ESCP...)
- Examples and ideas from different countries
- Facilitators and barriers
- Perspectives

Role of the pharmacist in pharmacy practice (WHO/FIP 2006)

- The role of the pharmacist has changed towards a provider of services and information and patient care
- Clinical pharmacists provide patient-oriented rather than product-oriented services
- Development of the concept of Seven-star pharmacist to fulfill this obligation

Part I
Clinical Pharmacy and Competencies

International level: WHO / FIP
North American level: ACCP, ASHP
European level: ESCP

Clinical Pharmacy and Competencies

International level: WHO / FIP
North American level: ACCP, ASHP
European level: ESCP
The Role of the Pharmacist in the health care system (WHO)

A Seven-Star Pharmacist:

- Care-giver
- Decision-maker
- Communicator
- Leader
- Manager
- Life-long learner
- Teacher

Definition of clinical pharmacy (ACCP)

- "That area of pharmacy concerned with the science and practice of rational medication use"
  - Discipline in which pharmacists provide patient care that optimizes medication therapy and promotes health, wellness and disease prevention.
  - The practice embraces the philosophy of pharmaceutical care, it blends a caring orientation with specialized therapeutic knowledge, experience, and judgment for the purpose of ensuring optimal patient outcomes.

Definition of pharmaceutical care (FIP)

- "The responsible provision of drug therapy for the purpose of achieving definite outcomes that improve or maintain a patient's quality of life"

Pharmaceutical care (EAFP)

- "EAFP - Report of the Task Force for implementing Pharmaceutical care into the curriculum, May 1999. Obtainable via EAFP: fvdkelen@vub.ac.be"
Competencies of a clinical pharmacist (WHO/FIP 2006)

- Clinical pharmacy requires:
  - expert knowledge of therapeutics
  - knowledge of pharmaceutical products
  - good understanding of disease processes
  - solid knowledge of the medical terminology
  - ability to assess and interpret physical and laboratory findings
  - strong communication skills
  - drug monitoring skills
  - therapeutic planning skills

Core competencies of a clinical pharmacist (ACCP 2004)

- cares for patients in all health care settings
- applies evidence and evolving science, as well as legal, ethical, social, cultural, and economic principles
- assumes responsibility and accountability for achieving therapeutic goals
- manage therapy in direct patient care settings (involved in direct interaction with, and observation of, the patient)
- practice both independently and in consultation - collaboration with other health care professionals

What about Europe?
Definition of clinical pharmacy (ESCP)

“Clinical pharmacy is a health specialty, which describes the activities and services of the clinical pharmacist to develop and promote the rational and appropriate use of medicinal products and devices. The term “clinical” does not necessarily imply an activity implemented in a hospital setting. Clinical pharmacy is more oriented to the analysis of population needs with regards to medicines, ways of administration, patterns of use and drugs effects on the patients.”

ESCP: What is clinical pharmacy? http://www.escpweb.org/site/cms/contentViewArticle.asp?article=1712#definition

Principle activities of a clinical pharmacist (ESCP)

- Consulting
- Selection of drugs
- Drug information
- Formulation and preparation
- Drug use studies and research
- Pharmacokinetics/ therapeutic drug monitoring
- Clinical Trials
- Pharmacoeconomy
- Dispensation & Administration
- Teaching & Training

Competencies of the clinical pharmacist

- Expert in therapeutic use of drugs
- Provides evidence and scientifically valid information on drugs
- Provides therapeutic recommendations, therapeutic drug monitoring
- Works in collaboration with other health care professionals
- Contributes to improve health care

ESCP: What is clinical pharmacy? http://www.escpweb.org/site/cms/contentViewArticle.asp?article=1712#definition

Common competencies of the clinical pharmacist (USA – EU)

- Patient carer
- Selection of drugs
- Formulation & preparation
- Drug use studies, research, clinical trials
- Pharmacoeconomy
- Dispensation & Administration
- Teaching & Training

ESCP: What is clinical pharmacy? http://www.escpweb.org/site/cms/contentViewArticle.asp?article=1712#definition

USA (ACCP)

- Patient carer
- Responsibility for achieving therapeutic goals
- Routinely provides therapeutic recommendations and manages therapy in direct patient care
Part II
Clinical Pharmacy and Education

International level: WHO, FIP
North American level: AACP
European level: EAFP

Educational outcomes (WHO)

- Educational outcomes related to a 7-star pharmacist
- Special attention on the knowledge, skills, attitudes and behaviours
- Focus on educational methods over content

HOWEVER no single formula for curriculum

To advise other healthcare professionals on safe and rational use of medicines, and accept responsibility for this, the role of the pharmacist

- Must be supported by legislation and changes in the basic and continuing education of pharmacists
- CPD: lifelong commitment for every practising pharmacist
- No single, best model on a world-wide basis
- Conceptual framework for the design, implementation and assessment (common concepts, principles and practices)

International Pharmaceutical Federation
Fédération internationale pharmaceutique
PO Box 84205, 2508 AE The Hague, The Netherlands

FIP STATEMENT OF POLICY ON GOOD PHARMACY EDUCATION PRACTICE

USA Educational outcomes (AACP)

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
Center for the Advancement of Pharmaceutical Education

Educational Outcomes
2004

http://www.aacp.org/
USA Educational outcomes (ACCP)

**Educational Outcomes**

1. **PHARMACEUTICAL CARE** Provide pharmaceutical care in cooperation with patients, prescribers, and other members of an interprofessional health care teams based upon sound therapeutic, principles, and evidence-based data, taking into account relevant legal, ethical, social, economic, and professional issues, emerging technologies, and working pharmacological, biomedical, sociobehavioral, and clinical sciences that may impact therapeutic outcomes.

   - Provide patient-centered care
     
      1. Design, implement, monitor, evaluate, and adjust pharmaceutical care plans that are patient-specific and evidence-based
     2. Communicate and collaborate with prescribers, patients, care givers, and other involved health care providers to engage a team approach to patient care
     3. Analyze, analyze, and interpret the professional, lay, and scientific literature to provide drug information to patients, their families, and other health care providers
     4. Apply evidence-based evidence in decision making
     5. Carry out duties in accordance with legal, ethical, social, economic, and professional questions
     6. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may impact patient-specific therapeutic outcomes

   - Provide population-based care

EAFP Task Force Recommendations

- Each country will approach PC from the perspective of their own health service and university structure, but the fundamentals should be the same for all undergrads:
  - the pharmacist should adopt the role of a carer
  - pharmaceutical care is a fundamental concept, not an optional subject
- Recommendations on teaching methods and curriculum outline for pharmaceutical care

EAFP Task Force Recommendations

- Laboratory-based sciences at the beginning
- Patient-based sciences towards the end
- Pharmaceutical care mandatory for all pharmacy students
- Adopt multidisciplinary approach to teaching
- Combine classroom, workshop, and practice-based experience
- Teach with a combination of academic pharmacists and practitioners
- Main Pharmaceutical Care Module = minimum 50 teaching hours
Part III
Where is clinical pharmacy taught and practiced in Europe?
Examples and ideas from different countries
UK, Belgium, Germany, France, Serbia, Turkey, Switzerland

Common aspects in Europe
- Pre-graduate education = 5 years
- Curriculum is becoming more patient-oriented
- Offer more student-centered teaching, PBL, interactive teaching, etc…
- Offer an internship (mostly mandatory in community pharmacy and elective in hospital)
- Bologna process promotes a uniform change in pregraduate curriculum

Common aspects in Europe
- Postgraduate education, not specifically in clinical pharmacy
- Most EU countries do not train official clinical pharmacists, but hospital or community pharmacists who acquire their additional degree in clinical pharmacy abroad
- Clinical activities are implemented locally, through pilot projects, and individual initiatives (pioneers)
- Most countries have no definition of clinical pharmacy (no national society)

Societies of Pharmacy in Europe
- Clinical Pharmacy
  - France
  - Germany
  - Spain (Cataluna)
  - Turkey
  - United Kingdom
- Hospital Pharmacy
  - Austria
  - Belgium
  - Estonia
  - Ireland
  - Italy
  - The Netherlands
  - Spain
  - Sweden
  - Switzerland
  - …
Postgraduate training opportunities

- MSc or certificates in clinical pharmacy
  - UK + Scotland
  - Belgium (Bruxelles, Louvain)
  - Germany (Bonn, Tübingen)
  - Sweden (Uppsala)
  - Turkey (Ankara)
  - Serbia
  - Spain
  - Switzerland (Sion)
  - Others?

Information collected from several ESCP members, active in the development of clinical pharmacy in their country (questionnaire, phone calls, personal interviews etc...)

Examples from different countries:

- UK (Scotland)
  - Pre-graduate content in clinical pharmacy = 25%
  - Teacher – practitioners
  - Postgraduate education: Diploma/MSc in Clinical Pharmacy at most Schools in the UK (min. 1 year fulltime)
  - Continuous Professional Development: mandatory. A wide range of CPD events and distance learning packages available free of charge (funded by NHS).

Examples from different countries:

- Belgium
  - Pre-graduate education: lectures given by clinical associate from Montréal, training opportunities (clinical pharmacy) in Canada, France, Switzerland
  - Postgraduate education (Fellowships, PhD)
  - Centre for clinical pharmacy (UCL-Bruxelles)
  - Pilot project on the development of clinical activities (hospital)
  - Ministry of health funding for 28 pharmacists

Ideas from other countries:

- UK Clinical Pharmacists Association
- Clinical pharmacy is an integral part of hospital pharmacy
- Community Pharmacy Contract: pharmaceutical care services are part of core contract (Scotland) or as part of special services that community pharmacists may choose to provide for extra income (England and Wales).

M. Kinnear, S. Hudson, personal communication

Ideas from other countries: Germany, University of Bonn
- Context: pilot project, 2 years
- A teacher-practitioner from USA was hired
- Clinical pharmacy professor and teacher-practitioner developed curriculum for students
- Choice of a hospital to be the « laboratory »
- Very positive feedback from students, medical doctors, wards, etc.
- But no financial resource to pursue the project!

Ideas from other countries: France
- 3rd/4th year: “enseignements coordonnés” lectures on the management of pathologies (e.g. diabetes)
- 5th year at hospital: students must spend minimum 6 months on a clinical ward (morning)
- Interactive teaching (5th year): students presenting different pathologies
- Development of a measurement tool for clinical pharmacy activities (valorisation and intervention quotation)
- Development of the Patient Centered Teaching course in France

Ideas from other countries: Serbia
- Funding from the European Agency for reconstruction → medicine management in Serbia
- Curriculum reform with the 5th year exclusively clinical pharmacy-oriented
- Development of a Master in Pharmaceutical Care (based on the MSc of the Robert Gordon University)
- In 2005, the first 65 specialists in clinical pharmacy graduated (European scholarship)

Ideas from other countries: Turkey
- Pharmacists training abroad
- Implementation of pharmaceutical care in the pregraduate curriculum in Turkey
- Instruction to other pharmacists (teachers)
- Development of a MSc and PhD in clinical pharmacy
- Clinical pharmacy practiced in community pharmacies and some private hospitals
Ideas from other countries: Switzerland (Genève-Lausanne)

- Chair of « pharmacy practice »: community/hospital
- Pharmaceutical care introduced in the 7th semester
- 5th year = practice year
  - 1 week training at hospital (mandatory)
  - 12 months of practice (community +/- hospital)
- Postgraduate training
  - hospital pharmacy (including clinical pharmacy)
  - community pharmacy (including pharmaceutical care)
  - clinical pharmacy: ESCP accredited programme in Sion (13 months, hospital based)
- Inclusion of clinical activities in the legal definition of the mission of hospital pharmacists (*Directives valaisannes*)

Key factors for the development of clinical pharmacy

- Motivation, enthusiasm
- Training opportunities
- Close faculty – hospital collaboration
- Definition of the “clinical pharmacist's job description”
- Local support (authorities)
- Creation of clinical pharmacist positions
- Reimbursement systems
- Role models

SWOT: Strengths

- Clinical Pharmacy and Pharmaceutical Care is spreading all over Europe
- Increased knowledge about drug-related problems
- Increasing interdisciplinary activities, collaboration
- Highly motivated pharmacists
- Launching of specialized programmes in clinical pharmacy
**SWOT: Weaknesses**

- Lack of specific education and training
- Lack of local research proving the benefits
- Administrative workload
- Lack of resources (financial and human)
- Lack of authority in drug recommendations
- Human attitude

**SWOT: Opportunities**

- Aging population
- Increased medication risks
- Need for a better continuum of care
- Political change for drug reimbursement
- Smaller drug budgets
- High workload of physicians
- Local funding opportunities
- New, challenging opportunities for the profession

**SWOT: Threats**

- Resistance from physicians, competition with other professionals
- Lack of authority inside system
- No reimbursement, no financial incentives
- Decreased quality of traditional tasks?

Part V
Perspectives
Perspectives

On the European Level
- Define the core competencies of the clinical pharmacist
- Develop a framework for the implementation of teaching and practice of clinical pharmacy (EAFP framework)
- Create enthusiastic professionals
- ESCP to offer support to members & platform for networking

In each Country
- Universities
- National professional societies
- Existing structures
- Health authorities

Adapt to local environment

Development of clinical pharmacy

Educational aspects:
- Training, knowledge, communication skills, career, CPD, EAFP framework

Recognition:
- Added values, acceptance, local support, reimbursement, networking

Political and legal aspects:
- Faculty collaboration, new positions, core competencies, authority

Highly motivated pioneers

Thanks…

Estonian Society of Hospital pharmacy for their invitation
ESCP members who shared their experiences: A. Bayraktar, M. Bouvy, O. Bugnon, S. Hudson, D. Jonjic, M. Kinnear, H. Kreckel, B. Mijikovic, T. Olivar Rivas, A. Rieutord, A. Spinewine, F. van Mil

ROUNDTABLE DISCUSSION
The situation in the Baltic countries
- Societies of Clinical Pharmacy?
- Clinical Pharmacy in pre-graduate education?
- Post-graduate training in Clinical Pharmacy?
- Who can teach clinical pharmacy?
- Continuing education?
- Where is clinical pharmacy practiced?

Where to start?
- Fundamentals (before going on the ward)
  - Have the correct attitude (professional, humble, communicator, open-minded, …)
  - Know how to read a patient profile
  - Know where to find and how to interpret laboratory findings
  - Basic knowledge of the therapeutics of the specific area
  - How? Readings, workshops, problem-based learning, role plays, case studies …

Where to start?
- NO START, NO END, some key points
- Structure
  - Approval from direction
  - Support from medical staff
  - Time (on top of regular business)
  - Activity indicators, documentation
- Knowledge – Skills – Attitude
  - Shouldn’t be barriers for implementation
  - Balance between theory and practice
  - Hard to acquire attitude and skills in books

Where to start?
- Centralized activities
  - Drug information centre
  - Allows to gather data, document activities
- Which ward?
  - General Medicine
  - General Surgery, Orthopaedics
  - Geriatrics
  - Specialties: Intensive Care, Paediatrics, Oncology, Gynaecology, Transplant unit, …
What activities? (examples)

- Centralized activities
  - Drug utilization reviews
  - Tools for physicians (guidelines) or nurses (IV compatibility table)
- Activities on the ward
  - Search for interactions in patients with strong CYP inhibitors or inducers
  - Medication profiles of all patients (specific ward)
  - Antimicrobial prophylaxis in surgical patients
  - Switch from IV to oral antibiotics
  - Medication profile at entrance, discharge counselling, medication reconciliation

The way towards implementation: Document your activities!

- Classification of activities (PCNE, SFPC)
- Process indicators:
  - Time, number, type (DRPs, discharge counselling)
- Impact (accepted or not)
- Investment
- Publication
- Authority and recognition → more Rx positions
- Clinical and economic impact

« The future success of pharmaceutical care models is increasingly dependent on our ability to provide compelling evidence of the value of clinical pharmacy services and to articulate that value to financial decision makers. »


On the other hand...

« While the paired t test and a p value of 0.05 or less are important for a peer-reviewed journal, they may not be important to a CEO who wants results next month... Supporting data to persuade the decision-maker may not require an academic exercise. »


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Welcome to WorldHSS 2007!

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