Advancement of pharmacy education in Europe – for the new generation in pharmacy

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SEE Quality in Pharmacy Summit, 23-24 October 2015, Belgrade (Serbia)
Pharmacy Education

- Pharmacy curricula need to prepare students for the role(s) they will play in society after graduation.

- Broad guidelines are given in worldwide, European or national contexts, but further specification is necessary to accommodate differences in position and professional profiles of pharmacists in different countries.
  - FIPEd Global Competency Framework (2012)
  - EU directives 2005/36/EU, 2013/55/EU
  - Phar-QA project (2013-2016) → European Competency Framework

- Specification of competencies can be used to guide the construction of new curricula or the ‘re-engineering’ of existing curricula.
Competency-based education (CBE): Why?

- Preparation for professional life: effective treatment, patient safety
- Accountability: It is considered no longer acceptable to simply assume that competence is automatically reached by education and training
- Explicit demonstration of competence is required to satisfy accreditation and/or governing bodies
- The concept of competency-based education is developing since the 1960’s for professional (and vocational) higher education:
  - teacher education  Whitty & Wilmott (1991)
  - medicine  Frank et al. (2010)
  - dentistry  Spielman et al. (2005)
  - psychology  Falender & Shafranske (2012)
  - pharmacy  Bates & Bruno (2008)
What is professional competence?

- Psychology: “the overall or integrated professional abilities”

- Medicine: “The array of abilities across multiple domains or aspects of physician performance in a certain context. Statements about competence require descriptive qualifiers to define the relevant abilities, context, and stage of training”

- Competence is multi-dimensional, dynamic, contextual and developmental. It changes with time, experience, and setting.

- Competence is progressive: For each aspect or domain of competence, the spectrum of ability varies from novice to mastery. At any given point in time, and in a given context, an individual will demonstrate greater or lesser ability.
European Competency Framework

- Several projects, sponsored by the European Union and EAFP

- Pharmine (finished)
  - Databank of universities and organizations
  - Country profiles (Pharmacy and Pharmacy Education)
  - Position papers: Atkinson J et al.

- Phar-QA (running): Quality Assurance
  - Delphi process (> 1200 respondents)
  - Description of (ranked) competencies → available 2016
  - Database of educational experts
  - Summerschool ‘Pharmacy Education and Training’

- Phar-IN (running)
  - Competencies for industrial pharmacists in the field of biotechnology
  - Online courses in biotechnology
The Phar-QA project (2013-2016)

- **Project management**
  - Jeffrey Atkinson, Nancy
  - Kristien de Paepe, Brussels

- **Project partners, advisers**
  - Antonio Sanchez Pozo, Granada
  - Dimitrios Rekkas, Athens
  - Daisy Volmer, Tartu
  - Jouni Hirvonen, Helsinki
  - Borut Bozic, Ljubljana
  - Agnieszka Skowron, Krakow
  - Constantin Mircioiu, Bucharest
  - Annie Marcincal (EAFP), Lille
  - Andries Koster (EAFP), Utrecht
  - Keith Wilson (EAFP), Birmingham
  - Chris van Schravendijk (Medine), Brussels
Phar-QA: competences

- Personal competences
  - learning and knowledge
  - values
  - communication and organizational skills
  - knowledge of the science of medicines
  - understanding of industrial pharmacy

- Patient care competences
  - patient consultation and assessment
  - need for drug treatment
  - drug interactions
  - provision of drug product
  - patient education
  - provision of information and service
  - monitoring of drug therapy
  - evaluation of outcomes
Phar-QA competences: 1\textsuperscript{st} round

1\textsuperscript{st} round (2014): 1245 respondents

2\textsuperscript{nd} round (2015): running
Community, industrial, student pharmacist

Personal competences
1-7 learning and knowledge
8-12 values, ethics
13-23 communication and organizational skills
24-37 the science of medicines
38-42 understanding industrial pharmacy

Patient care competences
43-52 consultation, guidance
53-57 drug providing
58-63 information, education
64-68 monitoring, evaluation
Curriculum design for CBE

1. Identify the required competencies and professional requirements
   - Collaborate and discuss with stakeholders inside and outside academia

2. Explicitly define the required learning outcomes and their domains
   - Take into consideration differentiation and specialization

3. Define ‘milestones’ along the developmental path for the competencies
   - Consider the extent of integration of knowledge, skills and attitudes

4. Select feedback and assessment tools to measure progress of students along the predefined milestones

5. Select teaching-learning activities, student experiences and instructional methods. Consider constructive alignment with assessment

6. Evaluate whether intended outcomes are realized (iterative process)
Learning outcomes: design of TLE

- The teaching-learning environment comprises all components in the teaching system:
  - the curriculum and its intended outcomes
  - the assessment tasks
  - the teaching methods
  - the physical environment and the regulations

- Use constructive alignment to design students’ assessment, learning activities, focusing on level-3 teaching

**Level 3. Focus: what the student does**
Learning is the result of students’ learning-focused activities, resulting from their own perceptions and inputs, and of the total teaching context. Focus must be on all components in the systems.
Quality of teaching and teachers?

- Quality of teaching?
  - Are our accreditation systems aligned with the idea of competency-based education?
  - National and/or regional differences or similarities?
  - Efficiency of accreditation for smaller countries?

- Teacher competence?
  - Are our (University) teachers prepared and able to develop and implement competency-based education?
  - Is teacher competence part of the accreditation system?
  - Training and coaching for teachers?

- Teaching qualifications?
Teacher quality (Utrecht)

Quality assurance (QA)

- University requirement: all teaching staff must hold a relevant teaching qualification (basic or senior)
- Utrecht University offers a program for educational leadership (Centre of Excellence for University Teaching, CEUT)

Continuous professional development (CPD)

- CPD is stimulated by monthly informal ‘Teacher-for-teacher’-meetings, a Journal Club and training for problem- and project-based teaching
- Educational (action) research projects
Teacher quality: role for EAFP?

- Information (www.eafponline.eu):
  - member institutions, previous conferences
  - Pharmine, Phar-QA, Phar-IN projects
- Exchange: Annual conference
  - May 12-14, 2016: Chatenay-Malabry (Paris)
- Coaching:
  - Summer course ‘Pharmacy Education and Training’
  - July 18-22, 2016: Utrecht, the Netherlands
  - www.utrechtsummerschool.nl (course M47)
- Guidance, support:
  - Phar-QA: European Competencies (February 2016)
  - Consultancy Agency (foreseen for late 2016)
Conclusion

Specification of learning outcomes can be very helpful for the design and evaluation of competency-based curricula.

Constructive alignment of all aspects of the teaching-learning environment (outcomes, assessment, teaching formats) will allow pharmacy students to become competent practitioners and/or pharmaceutical researchers.

EAFP can and wants to play a role in enhancing curriculum and teaching quality by providing information, exchange, coaching, guidance, support.

Important references
Thank you for your attention ....

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