PHAR-QA

by PHARMINE

Quality Assurance in European Pharmacy Education and Training.

The Newsletter



October, 2015

PHAR-QA Quality Assurance in European Pharmacy Education and Training.

The PHAR-QA newsletter

October, 2015.

http://www.phar-qa.eu/

Quality Assurance in European Pharmacy Education and Training: the PHAR-QA project

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Contents.

Partner 9: Carol Davila University of Medicine and Pharmacy

Page 2

The M32 PHAR-QA meeting in Athens, May 2015 Page 5

The second European round of the Delphi run on the competence framework

Page 12

The final meeting of PHAR-QA in Brussels, 10 & 11/2/ 2016

Page 33



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Partner 9: Carol Davila University of Medicine and Pharmacy.

The Carol Davila University of Medicine and Pharmacy is a state-run health sciences University in Bucharest, Romania. It is the largest institution of its kind in Romania with over 2,865 employees, 1,654 teachers and over 4,800 students. The University also uses the facilities of over 20 clinical hospitals all over Bucharest.

It was initially established in 1857 under the name of the "National School of Medicine and Pharmacy" by the physician of French origin, Carol Davila. In 1869 it was incorporated as a department in the newly created University of Bucharest. The first doctoral degrees were granted in 1873, and the doctoral degree of pharmacy became the *de facto* graduation in 1888.

George Emil Palade, who started his academic career as an anatomist in the "Carol Davila" School of Medicine is the first Romanian scientist to be awarded the Nobel Prize. He has been described as "the most influential cell biologist ever". In 1974 he was awarded the Nobel Prize in Physiology and Medicine, together with Albert Claude and Christian de Duve, for his innovative work in electron microscopy and cell fractionation, the most notable discovery being the description of endoplasmic reticulum ribosomes. He was for many years the honorary president of the university.

The modern Carol Davila Publishing House has already edited specialized monographs as well as an international periodic journal "The Journal of Molecular and Cellular Medicine".

The School of Pharmacy was founded in 1889 and it was renamed, as the Faculty of Pharmacy in 1923. The faculty is now the largest education provider in the pharmaceutical domain in Romania (1,200 students). The education of students is organized as a five years bachelor-master integrated cycle, and a 4 years Ph.D. cycle.



The main building of the Carol Davila University of Medicine and Pharmacy The mission of the Faculty of Pharmacy can be summarized as follows:

 university training of pharmaceutical sciences in accordance with the current level of knowledge;

- assurance of continuous postgraduate training of specialists in pharmacy;

- promotion of scientific research as a core activity of teachers through national and international collaboration.

The degree course is divided into years, each year being attributed 60 credits (ECTS). Graduates have the right to practice immediately after the licensing examination.

Postgraduate Residency – a local form of specialization lasting three years with theoretical and practical training in Clinical Pharmacy and Pharmaceutical Laboratory Techniques – is still taught,

in spite of the absence of European recognition level.

Ph.D. STUDIES.

Ph.D. academic studies represent a form of academic education offered to graduates with a bachelor degree who wish to obtain supplementary competences in the field of scientific research. A doctorate facilitates:

- the student's knowledge of and ability to apply research methodology and techniques
- familiarization with the exercise of communication and publication, at the highest level, of research results
- the assumption of the responsibility to develop a research program
- as well as the ability to consider the achievements of other researchers from a critical perspective.

In the spirit promoted within the Bologna process, doctoral studies represent the rational way to train a young student as a scientific researcher, where progress is achieved through the effort of knowledge, personal involvement, and constructive dialogue.

RESEARCH ACTIVITIES.

In the period 2000 – 2004 the faculty put a stronger accent on research and development, in cooperation with industry and other faculties, and with research institutions.

The faculty has advanced to the first place in Romania in terms of the number of research grants awarded in the medical and pharmaceutical fields.

This has resulted in a significant increase in financial resources, a modernization of the laboratory equipment, an increased number of books and journals available in the faculty library, and an increased number of participations at international meetings.

The faculty were national coordinators for Romania in the European Projects:

- COST Actions B15 (Modelling in Drug Research, 1999-2004)
- B25 (Physiological Pharmaco/Toxico-Kinetics and Dynamics 2005 2009)

In the last three years increased participation and success in European competitions allowed provision of support for a large number of doctoral and postdoctoral students.

The faculty has organized a series of international meetings in the field of bio-pharmacy, pharmacokinetics and other areas:

- International symposium on Bioavailability, Pharmacokinetics and Toxicokinetics in Drug Development, November 8 and 9, 1999, Bucharest, in collaboration with the EUROPEAN FEDERATION FOR PHARMACEUTICAL SCIENCES (EUFEPS)
- NATO Advanced Research Workshop on Nuclear, Bacteriolologic and Chemical Risks, April 1998, Bucharest
- 5th Balkan Workshop on Drug Metabolism and Toxicity of Xenobiotics, May 2002, Constanta, in collaboration with IUPHAR, Section of Drug Metabolism and COST B 15 European Project ("Modelling in Drug Research")



The Botanical Garden of the Faculty of Pharmacy

- International Symposium on Scientific and Regulatory Aspects of Dissolution and Bioequivalence, Bucharest, December 2003, in cooperation with AAPhS and Federation of Pharmaceutical Sciences (FIP)
- Hands-on Dissolution, Bucharest, October 2005, in cooperation with AAPhS and FIP
- Collaboration with ECVAM Scientific Advisory Committee, JRC Ispra, 2006 2009
- "School of Advanced Studies: Biowaivers, development of *in vitro-in vivo* correlations and quality generic drug", 2014, July 9 -11, Bucharest", in cooperation with AAPhS and EUFEPS.

In the field of pharmacokinetics, the faculty participates in a network, together with the faculties of pharmacy of Athens, Ankara and Budapest, that is the leader of domain in Europe.

WP3 QPLN.

The the "Carol Davila" University of Medicine and Pharmacy (partner P9) leads WorkPackage 3: Quality Plan (QPLN) in the PHAR-QA project. This concerns the quality assurance of the methods, practices, records, and final results and their accordance with predefined deliverables.



Professor Constantin Mircioiu Manager, P9. The activities of WP3 QPLN consist in:

- monitoring, timely audit reporting, corrective actions and follow-up
- assuring effective communication between advisory board and QPLN
- checking that compliance documentation is reviewed in time
- evaluating the extent to which the results and methods of WP3 QPLN

can be applied to future developments of in the field of quality assurance in pharmacy education and training

The final deliverables for WP3 QPLN are:

• increasing the number of responders in surveys by using different dissemination techniques/networks (dissemination in faculties and to professional organizations, publishing articles *etc.*)

- applying a mosaic of methods for analyzing and interpretation of data
 - changing the type of questions
 - surveying different target groups

As well as the participation of the P9 team to the elaboration of the common papers of the consortium, the team has published:

a "dissemination" paper

Cristina Rais, Valentina Anuţa, Flavian Rădulescu*, Irina Prasacu, Dumitru Lupuleasa, Jeffrey Atkinson, Bart Rombaut, Constantin Mircioiu, Quality Assurance PHAR-QA - Erasmus Project I. Contribution of "Carol Davila"University of Medicine and Pharmacy Bucharest, FARMACIA, 2014, Vol. 62, 2, 236-244



Professor Christina Rais , Researcher, P9.

 and a paper concerning the statistical aspects of evaluation of quality plan reports

> Irina Prasacu, Constantin Mircioiu, Valentina Anuţa, Flavian Rădulescu, Roxana Sandulovici, Dumitru Lupuleasa, Jeffrey Atkinson, Bart Rombaut, Cristina Rais, Ionela Belu, PHAR-QA Quality Assurance – Erasmus Project Ii. Gauging Effectiveness of Quality Assurance Activities in Phar-QA "Kickoff" Meeting. FARMACIA, 2014, Vol. 62, 4, 642-648.

A third paper, concerning all the statistical aspects of the evaluation of Delphi rounds of responses to questionnaires and particularly the concept of "consensus" is in preparation for publication.

PHAR-QA M32 meeting with EAFP

Athens 16th May 2015

Kristien De Paepe - Vrije Universiteit Brussel - PHAR-QA P1 - administrator

Participation

Partners:

- K. De Paepe (P1), L. Noël (P1)
- J. Atkinson (P2)
- A. Sanchez-Pozo (P3)
- D. Rekkas (P4)
- D. Volmer (P5)
- J. Hirvonen (P6)
- B. Bozic (P7)
- A. Skowron (P8)
- C. Mircioiu (P9), C. Rais (P9)
- A. Koster (P10), A. Marcincal (P10)

Advisory Board: M. Rouse, K. Wilson.

Stakeholders & Other participants: <u>see attendance list attached (total attendance: 31 with</u> stakeholders from Australia and the USA amongst others).

Programme and meeting report

09h10 Jeffrey Atkinson (JA) – welcome and general introduction.

All partners are present for the PHAR-QA M32 meeting.

- QPLN form "approval of the minutes", this concerns the minutes of last year in Ljubljana. (C. Mircioiu)

- This is our final year – we need to finish before the end of March 2016.

- Consensus on second round of the Delphi – to propose a competence framework. This will not be the first one. It is rather unique in its approach with an evaluation in 40 countries and 6 different groups of professionals.

- Once the project is finished – it is important to have the agency convinced of our efforts – and exploitation must be successfully taken over by EAFP.

- All WP's (WP1 MNGT; WP2 IMP; WP3 QPLN; WP4 DISS; WP5 EXP) have to be successful in the end, there is no mechanism of compensation, so one weak WP might take the whole output down; therefore problems have to be anticipated in time.

09h15 Kristien De Paepe (KDP). Introduction & budgetary affairs.

- PHAR-QA financial overview is given. The current balance, subject to further operating cost and receipt last 20% of the grant is 63.670 €

- A. Sanchez-Pozo – do we have to send in any documents? – not for the moment; just send in your hotel and travel costs of this M32 meeting to Lea Noël.

09h25 Presentation by Howard Davies. EUA – European University Association.

Competence frameworks in professional healthcare training.

Competences as defined by EUA provoke a shift towards student-centred learning.

Bologna process (ministerial meeting May 15, 2015 – Yerevan)

Main points (no report published as yet):

- Revised standards and guidelines on quality assurance.
- Revised ECTS users' guide.
- European approach for QA.
- Strong emphasis on competences.

We need to ensure that all needs are met - employability.

Good balance between theoretical and practical components – international mobility for study and placement.

Competence in the 2015 revision of the "Standard guidelines in the European Higher Education Area (ESG)" of ENQA (European Association for Quality Assurance in Higher Education.

2009: importance of high level of teacher competence in the transmission of knowledge.

2015: the teacher's role is essential in creating a high quality student with the required experience and enabling the acquisition of knowledge, competences and skills.

Greater focus on student-centred learning, with reference to Bologna Tools.

Standards = agreed good practice

Guidelines = indications on implementation

Not legally binding, but governments are free to legislate.

The amended DIR 2013/55/EU

What are the relevant new features?

- ECTS becomes a supplementary way of expressing duration in pharmacy basic training.
- Three new mandatory activities.
- Morgenbesser ruling on work placements is incorporated.
- In the General System, competence becomes a necessary consideration in the calculation of compensatory measures.

Amended DIR: common training frameworks (CTFs).

- At least 10 MSs may agree curricula based on common sets of knowledge, skills and competences.
- Must be aligned with European Qualifications framework (EQF).
- May be specialist postgraduate or basic training.
- See EAHP (website) common training framework (very detailed framework)

<u>Note by J. Atkinson</u>: B. Rombaut and J. Atkinson discussed this with DG Internal Market several years ago regarding the creation of "speciality" in primary practice. This could be taken up by EAFP.

Annex V of the DIR

Lists 14 mandatory bodies of knowledge for pharmacy.

- Details the relevant basic training qualification and the delivering institution.

Other sectoral professions,...

- Doctors: Medine2 has already used the Delphi methodology to identify consensus on competences

- Dentists: ADEE /CEAD have agreed 28 core competences

- Veterinarians EAEVE /FVE jointly run an evaluation and accreditation scheme; they have applied unsuccessfully for membership of ENQA

- Nurses: DIR contains a new set of 8 competences; EFN mapped its own competency framework onto these and sought to incorporate the resulting tabulation into Annex V

Final considerations

- It is essential to articulate competences (defined as targets by curriculum designers) and learning outcomes (defined as the validated achievements by students).

- In the context of (a) scientific progress and (b) the integration of the EU healthcare workforce, it is important to consider the role of multidisciplinary and cultural competences.

-In the framework of CPD, the individual's key competence is the reflective competence.

http://www.eua.be/eua-work-and-poly-area/building-the-european-higher-education-area/bologna-and-professional-qualifications.aspx

10h00 Discussion

Sandra Hocevar (EPSA): comment on cross border qualifications (still voluntary) – common training framework

Antonio Sanchez-Pozo / Howard Davies: commission is responsible for the delegated acts.

Sandra Hocevar: there are still many things undefined

J. Atkinson: next PHAR-QA meeting: it would be a good idea to invite nurses, veterinarians, dentists, together with Chris van Schravendijk (Medine2) and profit from their experience with competence frameworks. Do we have the budget for this?

10h10 J. Atkinson (JA): The PHAR-QA project: Quality Assurance in European Pharmacy Education and Training. Results of the European network Delphi round 1.

Good overall agreement between groups (industrial – red – lower scores for patient related competences)

A) Scores are high for the patient care competences. Suggestion by JA: in the second version, we accept these competences with minor changes ; just taking into account the comments made on the first version, merely language based; adjusting terminology.

- JA tells about the April meeting (small working group) – sending second survey (Delphi progress); for the patient care competences we do not change the ranking – we suggest you to accept this – only with two questions (1) is there something we forget?; (2) in which level (stage) at the university would you suggest this competence should be met?

- Antonio Sanchez-Pozo: suggests keeping an open box at the end of each question.

- Andries Koster: regarding (2) make sure it is clear that the questions deal with reaching the competences at the end of a 5 year education (too much confusion between definition of bachelor, master, undergraduates, pre-graduates, etc). He thinks that asking for stages of developing during education is very confusing for the respondents.

- Borut Bozic: second round – competences after 5 years of education – not sooner, but also not later – you cannot ask for competences for which you need more than 10 years of experience – no, indeed, but also the first survey was already focussing on basic competences.

- Antonio Sanchez-Pozo: now we are going to work on the framework – this is somewhat different. How are people thinking about it?

- Andries Koster: Grading of importance of a competence. There are differences between the countries.

- Constantin Mircioiu: pay attention to the research.

JA continues with presentation of results.

B) The questions with the low scores in group 10 (knowledge) – personal competences (plant and animal biology; physics, pharmacognosy,...) These are not competences – how would we judge them anyway – but rather course lectures. They come out of the directive and they are rather old. Suggestion to drop question 10 all together:

- Borut Bozic: conflict of approaches; out of the directives. Give HEI the freedom to organise this the way they want.

- Keith Wilson: this is indeed the knowledge (learning outcomes) you need to obtain the required competences.

- leva Stupans: what students can do at the end of their studies; learning outcomes.

- JA: these are also not in the Medine framework.

- Andries Koster: agrees to leave this out. It was to compare; just a tool for the curriculum designers – but it does not help in our survey; because you cannot be specific (for instance: physics; but what kind of physics, how much, how to be taught in depth – leave that to the universities.

- <u>Note KDP</u>: apparently everybody agrees – question 10 goes out.

- 10h40 Coffee break
- **10h55** JA continues with presentation of results.

C) Ranking of research question 6 – was very low by the pharmacists

Was also very low in Medine. Do we learn from them? Do we reformulate? Or do we leave it out?

- Constantin Mircioiu would leave it in but reformulate. He comes back to the knowledge questions – would keep them in, but better define the subject – find a good formulation to express. Also for the research (for Medine1 it was not included; that was why it was taken up in Medine2).

- <u>Note KDP</u>: The 'knowledge question' is not discussed anymore.

- Andries Koster: Research can be interpreted in a different way by pharmacists – also pharmacy practice; guidelines... include research. When we keep the question in, it should be better described – what type of research is meant?

- Borut Bozic: is also in favour of keeping the question in – research capabilities also by community pharmacists.

- Antonio Sanchez-Pozo: difference between understanding the research instead of being the director of a research project. Also questioned by Mike Rouse: it is sufficient that are students just understand the context and principles, rather than performing

- Keith Wilson: it will be better when it is emphasized that we focus on competences for a 5-year degree course (as fixed by the DIR).

- Note KDP: Keith Wilson and Jeffrey Atkinson will reformulate these questions.

D) Same discussion on the industrial pharmacy questions. They are more postgraduate competences, suggestion to leave this question out.

- Jouni Hirvonen: would not like to take it out – it should stay in. A lot of their pharmacists go to industries.

- Borut Bozic: when you take it out – only pharmacy services are left – we should keep this in hand. Maybe the titles of those questions should be changed. He suggests moving those 5 competences towards other section where they would be better understood by the respondents.

- Keith Wilson: also thinks it is better to keep it in – but rewording is necessary, the way it is now formulated – refers almost to the competences of a PhD.

- Antonio Sanchez-Pozo: risk of losing the drug development skills – this would be a pity.

- JA concludes:

- rephrase those competences (research and industry) and look at better sections to place those questions.
- JA and Keith Wilson will rework the Delphi 2 survey place it on BaseCamp all partners are requested to answer quickly and formulate their comments/remarks.
- end of June / mid-July sending out by the regional representatives
- survey should be finished somewhere during Fall.
- Results should be ready before March 2016

11h20 Presentation by Mike Rouse; ACPE – USA

How competences achieved by graduates impact QA issues.

Pharmacy practice today and how will it looks like in the future. US Joint Commission on Pharmacy Practice: vision of pharmacy practice.

Needs-base education model (needs, services, competences, education).

Globally connected / quality assured / locally determined / socially accountable.

From product to patient... a continuum of competences

Are there core competences? Who decides?

5 pillars of quality (context, structure, process, outcomes, impact) FIP global framework, 2nd Ed. 2014

Article: Am J Pharm Education 2015, 79(3) article 45

Pillars and Foundations of Quality for Continuing Education in Pharmacy Arijana Mestrovic, Michael J. Rouse What outcomes do we need to achieve competences of graduate in order to have the desired impact? Explanation of the different pillars.

And three bases:

Science, practice, ethics. Mike Rouse thinks 'ethics' not always get the attention as it should deserve.

UNESCO's pillars about education are very similar.

Structure of ACPE standards 2007.

Standards directly impacted by competences of graduates.

ACPE standards 2016.

(Foundational knowledge, essentials for practice and care,... inter-professional education)

11h45 <u>Time for discussion</u>

- Antonio Sanchez-Pozo: how do you combine the flexibility that is demand by the competences of a pharmacist – and the rigidity of the accreditation institutions?

- Mike Rouse: application of standards and needs / core principles and competences. In a very diverse market you need to be flexible. Not always possible and the problem is that the profession is moving on.

11h50 JA: QPLN and DISS - Daisy Volmer and Constantin Mircioiu have already to think about the relevant sections in the final report to EACEA.

Presentation by Agnieszka Skowron

Tool for testing the PHAR-QA model exploitation.

The aim of consultation agency

-to give professional support

-to advance scientific expertise

-to advice institutions and organizations

CA could be organized as a 'virtual institution'

Exploitation: expert (teacher) via database ; HEI (institution) by agency – pharmacist can check whether he has the necessary competences. List of competences is in the center.

The consultation agency: documents

-staff: board / office staff / scientific committee / technical support

-experts: members of scientific committee – expert database (an interactive tool at EAFP website and a base for CA in the future)

There is already a basic version of the tool. (demo by Agnieszka Skowron)

What is needed?

-the content (competences and domains,...)

-expert (skills, CV,...)

What we need,... to resolve it

-official incorporation

-administrative staff

-financial matters

How to disseminate? Let people know about the CA

-who will be interested

-what will be a consultation fee

-who/what will give a financial support CA what can we do? -action plan – what is needed to establish this CA?

12h05 <u>Time for discussion</u>

- Antonio Sanchez-Pozo: how to validate the outcomes?

- Agnieszka Skowron: it is an expert database. But we have to decide what we want. - Andries Koster: Long term perspectives are in the hands of EAFP, also financial matters. What now is presented; is what we can achieve within the timeframe of Phar-QA. We will start with connecting people; who need the support, with people who can give this support,...

12h15 Closure of the meeting by JA It was a successful, constructive meeting. - Note KDP: We need to decide about a possible date for the Phar-QA Brussels meeting in December 2015? It cannot be combined with the next EAFP ExCo meeting because that one will be organized in Granada.

Minutes written by: Kristien De Paepe – Vrije Universiteit Brussel – P1

The second European Delphi round on the PHAR-QA competence framework.

Following the 3 Delphi rounds within the PHAR-QA consortium, the first European Delphi round of the **PHAR-QA questionnaire on a competence framework** has now been successfully finished.

We have already published a substantial part of the work:

- Pharmacy 2013, 1, 3
 - www.mdpi.com/journal/pharmacy
 - Project Report
 - A Description of the European Pharmacy Education and Training Quality Assurance Project

Jeffrey Atkinson, Bart Rombaut, Antonio Sánchez Pozo, Dimitrios Rekkas, Peep Veski, Jouni Hirvonen, Borut Bozic, Agnieska Skowron, Constantin Mircioiu.

- Pharmacy 2014, 2, 17-26
 - www.mdpi.com/journal/pharmacy
 - Review

Systems for Quality Assurance in Pharmacy Education and Training in the European Union

Jeffrey Atkinson, Bart Rombaut, Antonio Sánchez Pozo, Dimitrios Rekkas, Peep Veski, Jouni Hirvonen, Borut Bozic, Agnieska Skowron, Constantin Mircioiu, Annie Marcincal and Keith Wilson.

• Pharmacy 2014, 2, 161-174

www.mdpi.com/journal/pharmacy

Review

The Production of a Framework of Competences for Pharmacy Practice in the European Union

Jeffrey Atkinson, Bart Rombaut, Antonio Sánchez Pozo, Dimitrios Rekkas, Peep Veski, Jouni Hirvonen, Borut Bozic, Agnieska Skowron, Constantin Mircioiu, Annie Marcincal and Keith Wilson.

• Pharmacy 2015, 3, 137-153

www.mdpi.com/journal/pharmacy

Article

Does the Subject Content of the Pharmacy Degree Course Influence the Community Pharmacist's Views on Competencies for Practice?

Jeffrey Atkinson, Bart Rombaut, Antonio Sánchez Pozo, Dimitrios Rekkas, Peep Veski, Jouni Hirvonen, Borut Bozic, Agnieska Skowron, Constantin Mircioiu, Annie Marcincal and Keith Wilson.

Copies of the above are available on the PHAR-QA website at:

http://www.phar-qa.eu/delphi/

Four other manuscripts are in preparation.

The work has also been presented at several international conferences and has stimulated a great deal of interest in our colleagues in the USA, Canada, Australia, New Zealand and the Middle East.

In the light of the above, it is obvious that the PHAR-QA framework is in the process of becoming a major element in European and world-wide pharmacy education.

We are now in the final stages of this project and hereby invite you to evaluate our revised version of the PHAR-QA competence framework. This is the second Delphi round at the European level. In all, the framework will have been subjected

to 5 rounds – 3 within the consortium and 2 at the European level. It is thus the result of extensive consensus amongst the major players in European pharmacy.

The revision is based on the ranking of, and comments on, the first European version. The first version and some of the data obtained are available at: <u>http://www.phar-ga.eu/delphi/</u>

The major changes are:

- Questions have been simplified especially regarding matters of treating one topic per question and English expressions
- The section on the subject areas as given in the directive 2013/55/EU (physics, biology...) has been removed as these
 were not considered finally as "competences"
- Questions on research and industrial pharmacy have been reworked given the level for which this framework is
 intended: 5-year pharmacy degree not postgraduate specialisation. The emphasis is on "being aware of" rather than
 "capable of doing". Thus by "knowledge" we mean "being aware of", and by "ability" we mean "capable of doing".
- This version includes an open-ended question for your suggestions on matters not treated and other comments.

As with the first European round, PHAR-QA will contact academics, students and professionals – pharmacists working in a community, hospital or industrial environment, and pharmacists working in other areas.

Further information can be obtained from Jeffrey ATKINSON, executive director of PHAR-QA.

Jeffrey.atkinson@univ-lorraine.fr

Thank you for participating in this survey.

The interactive version of the second European round of the survey is available at:

https://www.surveymonkey.com/r/pharqa2

A hardcopy version is available below.

Lifelong Learning Programme

The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

The PHAR-QA survey of competences for pharmacists.

We hereby invite you to evaluate our revised version of the PHAR-QA competence framework. The revision is based on the ranking of, and comments on, the previous version. The previous version and some of the data obtained are available at: http://www.phar-qa.eu/delphi/

The major changes are:

 Questions have been simplified especially regarding matters of treating one topic per question and English expressions

 The section on the subject areas as given in the directive 2013/55/EU (physics, biology...) has been removed as these were not considered finally as "competences"

• Questions on research and industrial pharmacy have been reworked given the level for which this framework is intended: 5-year pharmacy degree – not postgraduate specialisation. The emphasis is on "being aware of" rather than "capable of doing". Thus by "knowledge" we mean "being aware of", and by "ability" we mean "capable of doing".

• This version includes an open-ended question for your suggestions on matters not treated and other comments.

As in the previous version you are asked to rank the importance of all the competences. The ranking scale is as follows:

1. Not important = Can be ignored.

2. Quite important =Valuable but not obligatory.

3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.

4. Essential = Obligatory.

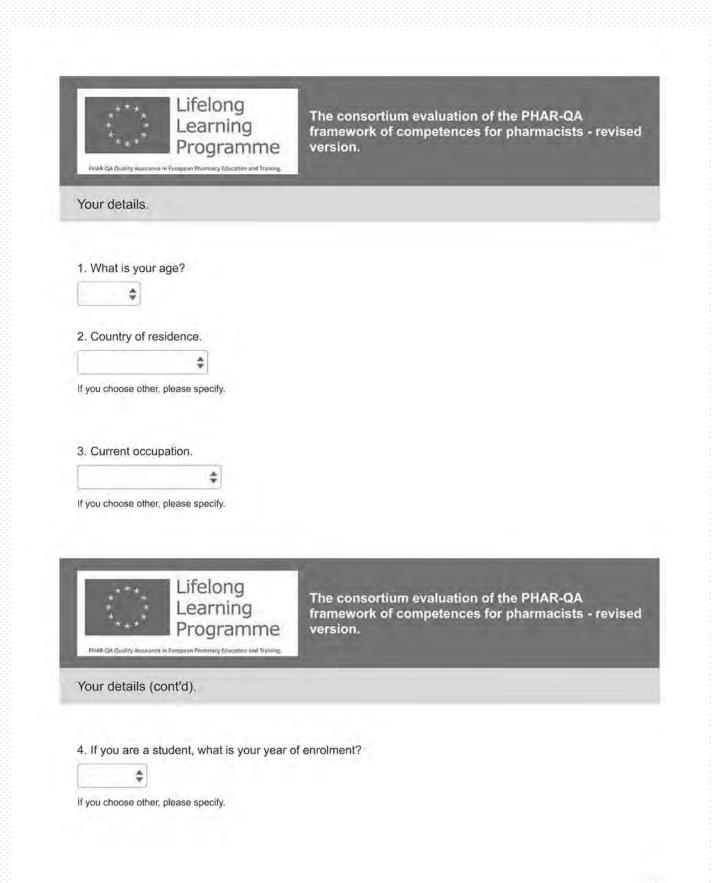
5. I cannot rank this competence.

If you wish to change your ranking for one or several competences click on the "Previous" button to reach the relevant page(s) before the final validation of your replies.

Further information can be obtained from Jeffrey ATKINSON, executive director of PHAR-QA. Jeffrey.atkinson@univ-lorraine.fr http://pcn-consultants.com.

nup://pen-consultants.com.

Thank you for participating in this survey.



5. If you are a professional (licensed practitioner, academic staff...), how long have you been practising?

\$

6. Job title



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

3

Personal competences: learning and knowledge.

7. Personal competences: learning and knowledge. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence.
1. Ability to identify learning needs and to learn independently (including continuous professional development (CPD)).	ō.	-		¢	
2. Ability to apply logic to problem solving.	0	0	a	Q	0
3. Ability to critically appraise relevant knowledge and to summarise the key points.	Ċ.	0	Ó	e	0

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence.
4. Ability to evaluate scientific data in line with current scientific and technological kriowledge.	a	Ō	O	Ö	0
5. Ability to apply preclinical and clinical evidence-based medical science to pharmaceutical practice.	0	0	¢	Q	0
B. Ability to apply current knowledge of relevant legislation and codes of pharmacy practice.	Q	Q	Q	Ő	Ó

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Personal competences: values.

8. Personal competences: values.

4

According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important	Quite important	Very important	Essential	I cannot rank this competence.
1. A professional approach to tasks and human relations.	0	Q	0	Ċ.	Q
2. Ability to maintain confidentiality.	0	Ø	a	0	Ø
3. Ability to take full responsibility for patient care.	0	Q	Q.	C	Q
 Ability to inspire the confidence of others in one's actions and advise. 	Ø	O	Q	Q	Ø
 Knowledge of appropriate legislation and of ethics. 	0	0	O	C	Q

If you have any further comments about the above competences or think we have missed anything please respond below.

Lifelong Learning Programme

The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

PHAR-DA Quality Assurance in European Pharmacy Education and Training.

Personal competences: communication and organisational skills.

9. Personal competences: communication and organisational skills. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	competence.
1. Ability to communicate effectively - both oral and written - in the locally relevant language.	Q	0	0	Ó	Q
2. Ability to effectively use information technology.	0	O.	Ø	0	Q
3. Ability to work effectively as part of a team.	0	Ō	Q	0	0
4. Ability to implement general legal requirements that impact upon the practice of pharmacy (e.g. health and safety legislation, employment law).	Q	0	O	0	O
5. Ability to contribute to the training of staff.	0	0	0	0	C

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence.
6. Ability to manage risk and quality of service issues.	Ô	Ō	Ō	0	0
7. Ability to identify the need for new services.	0	0	Ō	Q.	Ō
8. Ability to understand a business environment and develop entrepreneurship.	O	Q	0	0	Ō

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

PHAR-QA Quality Assurance in European Pilarmacy Education and Training.

Personal competences: research and industrial pharmacy.

10. Personal competences: research and industrial pharmacy. According to your experience how would you rank each competence?

The ranking scale is as follows:

1. Not important = Can be ignored.

2. Quite important =Valuable but not obligatory.

3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.

4. Essential = Obligatory.

5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence.
1. Knowledge of design, synthesis, isolation, characterisation and biological evaluation of active substances.	Ō	Q	0	0	Ō
2. Knowledge of good manufacturing practice and of good laboratory practice.	0	0	Q	0	0
3. Knowledge of European directives on qualified persons.	Q	0	0	0	0
 Knowledge of drug registration, licensing and marketing. 	0	0	0	Q	0
5. Knowledge of the importance of research in pharmaceutical development and practice.	Ø	0	Q	Ō.	Q

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

9

Patient care competences - patient consultation and assessment.

11. Patient care competences - patient consultation and assessment. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of' rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
1. Ability to interpret basic medical laboratory tests.	Ō	0	0	Ø	4

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
2. Ability to perform appropriate diagnostic tests e.g. measurement of blood pressure or blood sugar.	a	Ō	O	Ö	0
3. Ability to recognise when referral to another member of the healthcare team is needed.	0	0	0	0	۲

If you have any further comments about the above competences or think we have missed anything please respond below.

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The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Patient care competences - need for drug treatment.

12. Patient care competences - need for drug treatment. According to your experience how would you rank each competence?

The ranking scale is as follows:

1. Not important = Can be ignored.

10

- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
1. Ability to retrieve and interpret information on the patient's clinical background.	0	0	0	¢	Q
2. Ability to compile and interpret a comprehensive drug history for an individual patient.	Ø	Ø	,Q.	đ	Ø
3. Ability to identify non- adherence to medicine therapy and make an appropriate intervention.	0	<u>o</u>	<u>e</u>	¢	ø
 Ability to advise to physicians on the appropriateness of prescribed medicines and - in some cases – to prescribe medication. 	Ø	0	D.	0	0

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Patient care competences - drug interactions.

13. Patient care competences - drug interactions.According to your experience how would you rank each competence?

The ranking scale is as follows:

1. Not important = Can be ignored.

2. Quite important =Valuable but not obligatory.

3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.

- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this comptence
1. Ability to identify and prioritise drug-drug interactions and advise appropriate changes to medication,	0	Ō	O.	ø	Ø
2. Ability to identify and prioritise drug-patient interactions, including those that prevent or require the use of a specific drug, based on pharmaco-genetics, and advise on appropriate changes to medication.	0	O	Ø	0	Ø
3. Ability to identify and prioritise drug-disease interactions (e.g. NSAIDs in heart failure) and advise on appropriate changes to medication.	a	0	Q	Ó.	ø

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Patient care competences: provision of drug product

14. Patient care competences: drug dose and formulation. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
1. Knowledge of the bio- pharmaceutical, pharmacodynamic and pharmacokinetic activity of a substance in the body	0	Ó	Q	0	0
2 Ability to recommend interchangeability of drugs based on in-depth understanding and knowledge of bioequivalence, biosimilarity and therapeutic equivalence of drugs.	Ø	Q	D	Q	Q
3. Ability to undertake a critical evaluation of a prescription ensuring that it is clinically appropriate and legally valid.	Ó	0	0	Ç	Q
4. Knowledge of the supply chain of medicines thus ensuring timely flow of quality drug products to the patient.	Ö	Q	Ø	Q	Q
5. Ability to manufacture medicinal products that are not commercially available.	0	0	0	•	0

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Patient care competences - patient education.

15. Patient care competences - patient education. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of' rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
1. Ability to promote public health in collaboration with other professionals within the healthcare system.	Q	0	0	Ö	0
2. Ability to provide appropriate lifestyle advice to improve patient outcomes (e.g. advice on smoking, obesity, etc.).	Q	Q	Q	Q	Q
3. Ability to use pharmaceutical knowledge and provide evidence-based advice on public health issues involving medicines.	0	Q	Q	¢.	0

If you have any further comments about the above competences or think we have missed anything please respond below.



The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

Patient care competences - provision of information and service.

16. Patient care competences - provision of information and service. According to your experience how would you rank each competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
1. Ability to use effective consultations to identify the patient's need for information.	0	0	Q	0	Ø
2. Ability to provide accurate and appropriate information on prescription medicines.	O	0	a	đ	Ø
3. Ability to provide evidence-based support for patients in selection and use of non- prescription medicines.	Q	Q,	Q.	¢	0

If you have any further comments about the above competences or think we have missed anything please respond below.

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The consortium evaluation of the PHAR-QA framework of competences for pharmacists - revised version.

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Patient care competences - monitoring of drug therapy.

17. Patient care competences - monitoring of drug therapy. According to your experience how would you rank each for competence?

The ranking scale is as follows:

- 1. Not important = Can be ignored.
- 2. Quite important =Valuable but not obligatory.
- 3. Very important = Obligatory with exceptions depending upon field of pharmacy practice.
- 4. Essential = Obligatory.
- 5. I cannot rank this competence.

By "knowledge" we mean "being aware of" rather than "capable of doing", and by "ability" we mean "capable of doing".

	Not important.	Quite important.	Very important.	Essential.	competence
1. Ability to identify and prioritise problems in the management of medicines in a timely and effective manner and so ensure patient safety.	Ø	0	Ø	Ō	Ø
2. Ability to monitor and report Adverse Drug Events and Adverse Drug Reactions (ADEs and ADRs) to all concerned, in a timely manner, and in accordance with current regulatory guidelines on Good Pharmacovigilance Practices (GVPs).	Q	O.	Q		D

	Not important.	Quite important.	Very important.	Essential.	I cannot rank this competence
3. Ability to undertake a critical evaluation of prescribed medicines to confirm that current clinical guidelines are appropriately applied.	0	Ő,	Q	¢	0
4. Ability to monitor patient care outcomes to optimise treatment in collaboration with the prescriber.	0	o	a	Q	Ø
5. Ability to contribute to the cost effectiveness of treatment by collection and analysis of data on medicines use.	0	Ó	Q	c	Ø

If you have any further comments about the above competences or think we have missed anything please respond below.

The final meeting of PHAR-QA in Brussels, 10-11th February, 2016.

	ırmine	PHAS (A Quilly 2	Learning Programme
and the second second	·QA: Quality / ean Pharmac	Assurance in y Education and Training	
Afternoon	16h00-16h30	Overview; WPs 1/MNGT, 2/IMP	P2/PCN/J. Atkinson
10/2/2016	16h30-16h45	Financial affairs	P1/VUB/K. De Paepe
	16h45-17h00	History of PHAR-QA the early days of the questionnaire	P3/UG/A. Sanchez-Pozo
	17h00-17h15	Use of Delphi methodology in PHAR-QA	P4/UoA/D. Rekkas
	17h15-17h45	PHAR-QA WP4 DISS; final report	P5/UT/D. Volmer
	17h45-18h00	Coffee	
	18h00-18h30	PHAR-QA WP3 QPLN	P9/UMFCD/C. Mircioui & C. Rais
	18h30-19h00	PHAR-OA questionnaire: lessons to be learnt	P6/UH/ J. Hirvonen P7/UL-FFA/B. Bozic
	20h00	Dinner	
10h00-10 10h15-10	09h00-10h00	PHAR-QA WP5 EXP	P8/JUMC/A. Skrowron P10/EAFP/A. Koster
	10h00-10h15	PHAR-QA external report	Advisory board: K. Wilson & C. Van Schravendijk
	10h15-10h30	Coffee	
	10h30-12h00	Summary, discussion and general conclusions for final report	Lead by P1 & P2
	12h00	Cocktail	Consortium, advisory board, stakeholde & guests

With the support of the Lifelong Learning programme of the European Union: 527194-LLP-1-2012-1-BE-ERASMUS-EMCR This project has been funded with support from the European Commission. This publication reflects the views only of the author; the Commission cannot be held responsible for any use which may be made of the information contained therein.





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PHAR-QA: Quality Assurance in **European Pharmacy Education and Training**

Attendees		
P1	K. De Paepe, L. Noel, S. Hou VUB	
P2	J. Atkinson, pcn	
P3	A. Sanchez-Pozo, Granada	
P4	D. Rekkas, Athens	
P5	D. Volmer, Tartu	
P6	J. Hirvonen, Finland	
P7	B. Bozic, Ljubljana	
P8	A. Skowron, Cracow	
P9	C. Mircioui & C. Rais, Bucharest	
P10	A. Koster (Utrecht), A. Marcincal (Lille), EAFP	
Advisory board	C. Van Schravendijk, VUB. K. Wilson, Aston.	
EACEA	G. Gervais, Sanja Bozic, José Matos-Martins	

The following will also be invited: representatives from EAFP ExCo, MEDINE, PGEU, EAHP, EIPG, EPSA, DG int. Market, DG SANCO, FIP, EFPIA, EUFEPS EAFP, EUA, VUB, and university presidents, faculty deans and chamber presidents of consortial member countries.

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On behalf of the PHAR-QA "Quality Assurance in European Pharmacy Education and Training" consortium

Kristien De Paepe, administrator, and Jeffrey Atkinson, executive director

Request the pleasure of your company For a cocktail celebrating the end of the PHAR-QA project

On Thursday the 11th of February, 2016, 12 noon At the Plaza Hotel, Boulevard Adolphe Max 118-126, 1000 Brussels, Belgium.

RSVP before January 15th, 2016 to lea.noel@vub.ac.be





PHAR-QA Quality Assurance in European Pharmacy Education and Training.

PHAR-QA

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Quality Assurance in European Pharmacy Education and Training,

