

# Enhance It - Enhancing Hospital Laboratory Standards for Continuing Professional Development: Transnational Evaluation of a Novel CPD Activity for Biomedical Scientists

Jan Martin<sup>1\*</sup>, Dorianne Buttigieg<sup>2</sup>, Josef Silhavik<sup>3</sup>, Zlata Flegar-Meštrić<sup>4</sup>, Alison Adkins<sup>5</sup>, Visnja Gasljevic<sup>6</sup>, Tomáš Šálek<sup>3</sup>, Attila Horvath<sup>7</sup>, Charles Borg<sup>2</sup>, Mladen Jakovcic<sup>6</sup>, Adrienn Adonics<sup>7</sup>, Zsófia Szlamka<sup>7</sup>, Ian Brincat<sup>2</sup>, Noel Ciantar<sup>2</sup>, Anna Lisa Sciortino<sup>2</sup>, Tracey Bennett<sup>8</sup>, Kirstie Rice<sup>9</sup>, Yvette Taylor<sup>10</sup>

<sup>1</sup>University of Wolverhampton United Kingdom

<sup>2</sup>Mater Dei Hospital Malta

<sup>3</sup>Tomas Bata Regional Hospital Czech Republic

<sup>4</sup>University Hospital Merkur Croatia

<sup>5</sup>University of Birmingham, UK

<sup>6</sup>Croatian Metrology Society Croatia

<sup>7</sup>Horvath and Dubecz Consulting Ltd Hungary

<sup>8</sup>Shrewsbury and Telford Hospital United Kingdom

<sup>9</sup>Cross Hospital United Kingdom

<sup>10</sup>Birmingham Children's Hospital United Kingdom

\*Corresponding author: [j.martin@wlv.ac.uk](mailto:j.martin@wlv.ac.uk)

Received November 01, 2014; Revised November 17, 2014; Accepted November 24, 2014

**Abstract** A project which has received funding of over 100,000 euros from the European Union's Lifelong Learning Leonardo Program is developing good practice in continuing professional development (CPD) for Biomedical Scientists. The Partnership is developing an EU-toolkit for delivery of high quality CPD activities provided by European hospital laboratories. This paper reports on the first stage of the project which is transnational evaluation of a novel European CPD activity by hospital laboratories in Croatia, Czech Republic, Malta and the United Kingdom.

**Keywords:** continuing professional development, training, medical laboratory science, biomedical scientist

**Cite This Article:** Jan Martin, Dorianne Buttigieg, Josef Silhavik, Zlata Flegar-Meštrić, Alison Adkins, Visnja Gasljevic, Tomáš Šálek, Attila Horvath, Charles Borg, Mladen Jakovcic, Adrienn Adonics, Zsófia Szlamka, Ian Brincat, Noel Ciantar, Anna Lisa Sciortino, Tracey Bennett, Kirstie Rice, and Yvette Taylor, "Enhance It - Enhancing Hospital Laboratory Standards for Continuing Professional Development: Transnational Evaluation of a Novel CPD Activity for Biomedical Scientists." *American Journal of Educational Research*, vol. 2, no. 11 (2014): 1110-1114. doi: 10.12691/education-2-11-18.

## 1. Introduction

Continuing professional development (CPD) is of the utmost importance to biomedical scientists for maintaining their professional recognition. Many different types of CPD activities are appropriate for inclusion within a biomedical scientist's professional CPD portfolio and where these activities are delivered by a recognised vocational education and training (VET) provider they are usually subject to appropriate quality standards. This is in contrast to those CPD activities which are delivered locally by hospitals. In all partner countries, what is missing is a system for ensuring quality provision of locally delivered CPD activities. This project addresses that gap [1].

This project addresses the priorities of Education and Training (ET) 2020 [2] which recognises 'that high-quality VET are fundamental to Europe's success' and that 'lifelong learning needs to be a priority'. The consortium aims to support the long-term strategic objectives of EU education and training policies by improving the quality of biomedical scientists' CPD training. Whilst the goal of the project is to develop a common quality framework toolkit for locally delivered hospital pathology CPD activities, the project will be carried out in accordance with Article 149 of the EC Treaty [3] by 'encouraging co-operation' and respecting the prohibited 'harmonisation of the laws and regulations of the Member States'. The project supports the EU Directive 2005/36/EC [4] on the recognition of professional qualifications and the free movement of professionals, with associated future economic success via a more mobile workforce as

biomedical scientists are already motivated to practice in different EU countries and are among the top 25 most mobile of the regulated professions [5]. As a mobile profession there is a need for recognition of an individual's CPD across the EU which will be achieved in part by harmonisation of locally delivered hospital based CPD activities within a common EU quality framework.

The aims of this project are to share and develop good practice in continuing professional development for biomedical scientists and from this to collaboratively develop an EU-toolkit for delivery of high quality continuing professional development activities provided by European hospital laboratories.

The concrete objectives of the partnership are to:-

- identify core elements of good practice by the comparison of approaches to CPD used within partner organisations and countries
- define European quality standards and criteria for accreditation and evaluation of local hospital CPD activities
- develop a framework for inclusion of reflective practice in CPD activities
- produce guidelines for European hospital laboratories on managing and organising quality CPD opportunities for laboratory staff
- devise exemplar hospital laboratory CPD activities for provision on a new European hospitals CPD providers Community of Practice network.

## 2. Methods

The partner organisations taking part in this project are: Croatian Metrology Society (Croatia), Regional Hospital T BataInc (Czech Republic), Horvath and Dubecz

Consulting Ltd (Hungary), Mater Dei Hospital (Malta) and University of Wolverhampton (United Kingdom). Transnational meetings will be held in each partner country [6].

The project has received funding of over 100,000 euros from the European Union's Lifelong Learning [7] Leonardo Partnership [8] Program and will run for two years from July 2013 to June 2015.

An EU-Toolkit [9] will be developed containing the following five sections:

**Toolkit Section 1 (Objective 1)** A Collaborative Review by all Partners which compares and contrasts the approaches to CPD used within Partner Organisations and Countries and Identifies Core Elements of Good Practice

**Toolkit Section 2 (Objective 2)** Report which defines European quality standards and criteria for accreditation and evaluation for local hospital CPD activities

**Toolkit Section 3 (Objective 3)** Framework for inclusion of reflective practice in CPD activities

**Toolkit Section 4 (Objective 4)** Guidelines for hospital laboratories on managing and organising quality CPD activities for laboratory staff

**Toolkit Section 5 (Objective 5)** Hospital laboratory CPD providers Community of Practice network with exemplar hospital laboratory CPD activities.

CPD activities will be provided on a newly developed hospital laboratory CPD providers Community of Practice network and will be evaluated by all European partners.

- First CPD activity (provided by UK)
- Second CPD activity (provided by Croatia)
- Third CPD activity (provided by Czech Republic)
- Fourth CPD activity (provided by Malta)
- Fifth CPD activity (provided by Hungary)

**Table 1. Reflective Learning Questions and Evaluation Questions**

No.	Reflective Learning Question	Response Type
1	What did you do?	Opportunity for comment
2	What did you learn?	Opportunity for comment
3	How have you applied or will you apply the learning in your future work?	Opportunity for comment
4	Future development possibilities.	Opportunity for comment
No.	Evaluation Question	Response Type
1	Do you feel that the photo exercise is useful &/or appropriate to your scope of practice?	5 point Likert scale With opportunity for comment
2	Is the format of this exercise new to you?	5 point Likert scale With opportunity for comment
3	How long did it take to complete this exercise?	Answer box
4	Do you feel that this is relevant CPD? Please explain why/why not?	Yes/No With opportunity for comment
5	Were instructions easy to follow/ understand? If not what would have helped?	Yes/No With opportunity for comment
6	Was the discussion element useful to your scope of practice?	Yes/No With opportunity for comment
7	Was the discussion element useful to your CPD?	Yes/No With opportunity for comment
8	Was the reflection/reflective sheet useful to your CPD?	Yes/No With opportunity for comment
9	Overall how would you rate the complete CPD exercise?	Opportunity for comment
10	How could this exercise be improved?	Opportunity for comment

An innovative CPD activity was designed to facilitate participation by Biomedical Scientists in all partner countries. The topic of Health and Safety was chosen to enable maximum European participation as it is a multi-

disciplinary topic of relevance to all Biomedical Scientists in all partner countries. A series of thirty images of either good or bad laboratory practice in Health and Safety were provided to participants who were required to state

whether the photograph depicted good or bad practise. If bad practise was shown Biomedical Scientists were asked to explain what further actions would be taken including reporting procedures. On completion of the exercise, Biomedical Scientists took part in a discussion group, completed a reflective learning sheet and filled in an evaluation questionnaire (questions shown in Table 1). Subsequently, in order to contextualise the CPD activity within their own laboratories participants will be asked to note any poor practice in their laboratory, discuss with colleagues, develop an action plan, repeat at monthly intervals and report on Health and Safety improvements.

### 3. Results

This paper reports on the first stage of the project which is transnational evaluation of a novel European CPD activity by hospital laboratories in Croatia, Czech Republic, Malta and the United Kingdom. Over two

hundred Biomedical Scientists from four different European countries Croatia (n=14), Czech Republic (n=10), Malta (n=158) and UK (n=29) took part in this new CPD activity. Several different grades of laboratory personnel evaluated the activity and indicated (Table 2) that the exercise had been useful and appropriate to their scope of practice (97.8%) and relevant for their own CPD (97%). For over 80% of participants, this was the first time that they had taken part in this novel format of CPD activity. Discussion with colleagues following completion of the activity provided useful enhancement to both scope of practice (92%) and CPD (87%). Subsequent completion of a reflective learning sheet was shown to be beneficial for 86% of participants (Figure 1). Responses to question 10 indicated that some participants felt that a few of the pictures could have had a sharper image, be more focussed on the subject, include a short description to indicate what the scenario was or indicate what aspect the participant had to focus on.

Table 2. Responses to Evaluation Questions

Number	Response	Croatia % n = 14	CZE % n = 10	Malta % n = 158	UK % n = 29
1	Strongly Agree	86	20	54	49
	Agree	14	80	43	45
	Neither Agree nor Disagree	0	0	1	3
	Disagree	0	0	1	0
	Strongly Disagree	0	0	1	0
	Answer Not Given	0	0	0	3
2	Strongly Agree	0	50	21	18
	Agree	100	40	54	42
	Neither Agree nor Disagree	0	10	11	6
	Disagree	0	0	11	21
	Strongly Disagree	0	0	3	10
	Answer Not Given	0	0	0	3
3	Time Taken in minutes (mean)	49	45	57	27
4	Yes	100	90	99	97
	No	0	10	1	3
5	Yes	100	40	97	97
	No	0	60	3	3
6	Yes	100	100	100	67
	No	0	0	0	33
7	Yes	100	80	100	67
	No	0	20	0	33
8	Yes	100	70	94	80
	No	0	30	5	3
	Answer Not Given	0	0	1	17
9	Excellent/Very useful	86	40	84	41
	Good/Useful	14	60	15	52
	Poor/Not Useful	0	0	1	0
	Question Not Answered	0	0	0	7

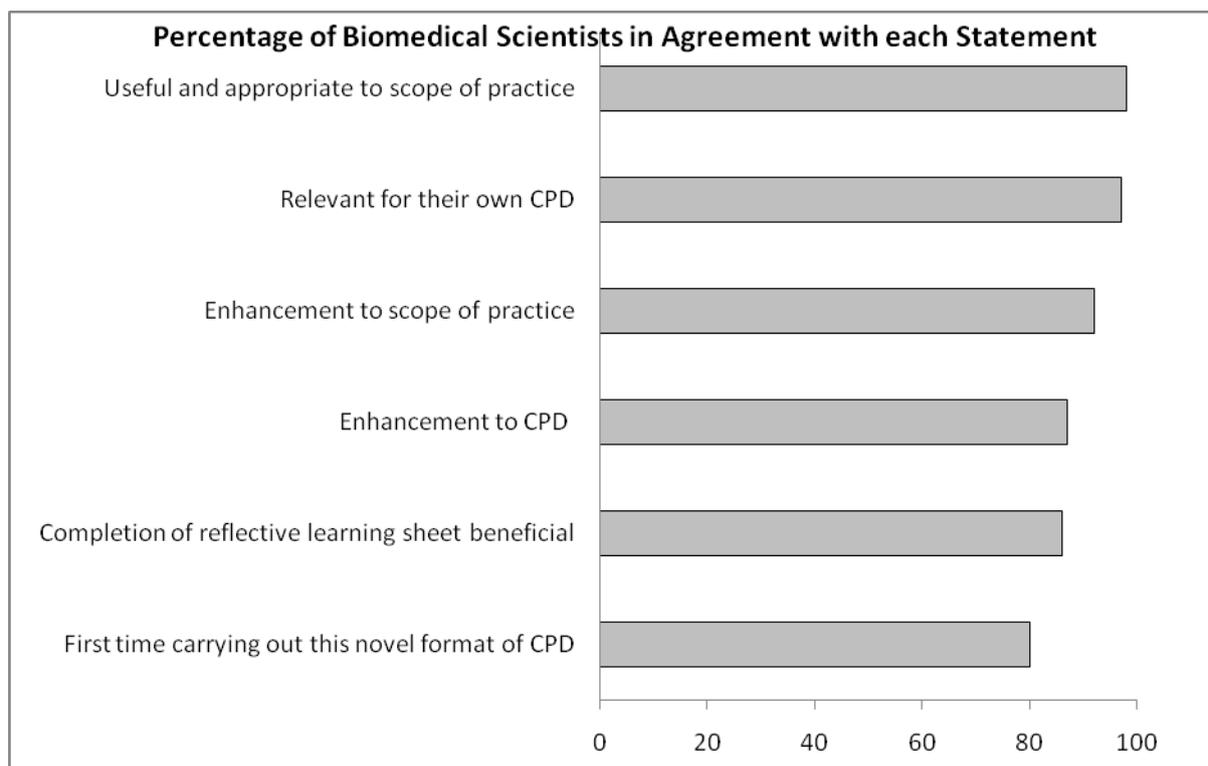


Figure 1. Responses of Biomedical Scientists to Questionnaire

#### 4. Discussion

Reflective learning responses tended to fall within the major categories of being made aware of needing to look at things in a different way:

*'It has given me a more critical view point of my working surroundings'*

*'This showed me that I had become accustomed and desensitised to certain practises and that I need to rapidly re-assess my own practices. I will return to work with a new view and look at each practice more objectively. I will be more critical and question situations instead of taking working practices for granted.'*

*'To look closer at situations sometimes easy not to notice a hidden hazard when looking at the obvious.'*

*'It is useful to undertake these types of exercises since it helps you to address your own practice and work environment and look at it through new eyes and identify any poor practice that needs addressing'.*

*'Some little things can create unnecessary problems that by careful attention these should be eliminated so the worker is safe'*

plus the benefit of this novel type of CPD activity:

*'This learning model is much more interesting and visually makes an interesting tool as future knowledge transfer models in our laboratory. I will certainly apply this specially in the field of safety and health hazard issues'.*

*'A continuous education program is the only possible way of implementing new knowledge and constantly providing personnel with the possibilities for professional development. Finding a good balance between accreditation norm for medical laboratories*

*and new learning methods with quick and useful laboratory implementation is always a challenge'.*

While the majority of responses tended to focus on the immediate impact of the activity on both themselves and their laboratory, responses from some participants indicated that they had found the exercise to be beneficial towards their future development as they were aspiring to become Health and Safety Officers.

#### 5. Conclusions

We conclude that participation in this novel CPD activity which demonstrated a 99.5% overall satisfaction rate, has facilitated enhanced European cooperation between participating hospital laboratories and will provide a platform for future more intensive European co-operation by Biomedical Scientists to work closely together to harmonise their practice and profession throughout the European Union.

#### Acknowledgements

The authors acknowledge the European Lifelong Learning Leonardo Partnership grant for funding the project.

#### References

- [1] Martin J (2014) A European Project to Enhance Continuing Professional Development for Biomedical Scientists. *The Biomedical Scientist*, 58 (3): 155.
- [2] Education & Training 2020 (ET2020): [http://europa.eu/legislation\\_summaries/education\\_training\\_youth/general\\_framework/ef0016\\_en.htm](http://europa.eu/legislation_summaries/education_training_youth/general_framework/ef0016_en.htm).
- [3] Article 149 of the EuropeanCommunity (EC) treaty:

- <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12002E149:EN:HTML>.
- [4] EU Directive 2005/36/EC:  
[http://ec.europa.eu/internal\\_market/qualifications/policy\\_developments/legislation/index\\_en.htm](http://ec.europa.eu/internal_market/qualifications/policy_developments/legislation/index_en.htm).
- [5] Regulated professions database:  
[http://ec.europa.eu/internal\\_market/qualifications/regprof/index.cfm?action=stat\\_ranking&b\\_services=false](http://ec.europa.eu/internal_market/qualifications/regprof/index.cfm?action=stat_ranking&b_services=false).
- [6] Martin J (2014) First Transnational Meeting of a European Project to Enhance Hospital Laboratory Standards for Biomedical Scientist's CPD by Developing a Quality Improvement Toolkit. *The Biomedical Scientist*, 58 (5).
- [7] The European Union Lifelong Learning Programme  
<https://www.lifelonglearningprogramme.org.uk/>.
- [8] Leonardo Partnerships.  
<http://www.leonardo.org.uk/default.asp?section=00010001&sectionTitle=Home>.
- [9] Martin, J(2013) A European Project to Enhance Hospital Laboratory Standards for Biomedical Scientists Continuing Professional Development by Establishing a Quality Improvement Toolkit and an Online Community of Practice. *National Association of Primary Care Review Winter 2013/1429-30*.