

## Impact case study (REF3b)

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| <b>Institution:</b> University College London  |
| <b>Unit of Assessment:</b> 3B - Allied Health Professions, Dentistry, Nursing and Pharmacy: Pharmacy   |
| <b>Title of case study:</b> Developmental frameworks for professional pharmacy education improve the quality and safety of pharmaceutical health service delivery around the world   |
| <p><b>1. Summary of the impact</b></p> <p>In response to growing calls for competence-based continuing professional development across healthcare professions, Professor Ian Bates and colleagues at the UCL School of Pharmacy have led multi-disciplinary collaborative research to develop frameworks for the professional development of pharmacists. These have been adopted across the UK, and are now the norm for pharmacist development. In addition, the cumulative evidence base was used by the Department of Health to establish the first NHS Consultant Pharmacist posts in England. The frameworks are increasingly being adopted for use in different countries around the world and, most recently, have underpinned a global framework for practitioner development under the auspices of the World Health Organization and UNESCO.</p>   |
| <p><b>2. Underpinning research</b></p> <p>The 2001 Kennedy Report into children’s heart surgery at the Bristol Royal Infirmary highlighted the need for all healthcare professionals to “undergo appraisal, continuing professional development and revalidation to ensure that [they] remain competent to do their job.”<sup>1</sup> In response to this, Bates and colleagues established a multi-disciplinary collaborative – the Competency Development and Evaluation Group (CoDEG) – to systematically tackle these national imperatives in the area of pharmacy. The group initially published a series of influential discussion papers, and identified a number of drivers now regarded as fundamental for post-registration development of pharmacists. These incorporated prior research by academic members of the group which had shown that traditional provision of postgraduate clinical programmes in pharmacy was largely not fit for purpose and had difficulty demonstrating competence and performance outcomes <b>[1]</b>.</p> <p>CoDEG concluded that existing provisions for education and training did not meet the post-registration needs of NHS practitioners. In particular, the collective CoDEG output identified:</p> <ul style="list-style-type: none"> <li>• A lack of systematic competency-based approaches to development;</li> <li>• Inequity of accessing support;</li> <li>• No demonstrable links between formal education and practitioner development;</li> <li>• Little engagement with NHS employers;</li> <li>• No clear linkage with the patient safety agenda;</li> <li>• A danger that Pharmacy was losing relevance and losing touch with other professions.</li> </ul> <p>There were two parallel strands to our response: creating and testing practitioner development frameworks which would help to train a first-rate pharmaceutical workforce for the nation; then developing an innovative overall model for post-registration practitioner development.</p> <p>We constructed and tested a series of practitioner development frameworks using evidence-based educational methods: the General Level Framework (GLF) for foundation and early year pharmacists and the Advanced Level Framework (ALF) for advanced career pathways. The evidence was published as a series of advances <b>[2, 3, 4]</b> including one of the very few controlled trials published in educational practice <b>[5]</b>. This latter work, using CoDEG’s first validated version of the GLF <b>[2]</b>, recruited 30 NHS Trusts into the study and showed, by comparison with control Trusts, that using an evidence-based framework design, practitioner competence across a defined scope of practice could be both accelerated and improved.</p> <p>The research foundations of the frameworks used a mixed methodology of grounded qualitative</p> |

<sup>1</sup> Bristol Royal Infirmary Inquiry (2001) Learning from Bristol: the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984 -1995. Command Paper: CM 5207

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analysis, Delphi approaches for consensus building, controlled trial methodology and advanced statistical applications such as HOMALS and a translational application of Kaplan-Meier techniques.

In the parallel stream, the frameworks and evidence were incorporated by the research group into new models for formal post-registration professional education. Innovative workplace education models, a completely new approach using competence and performance-based methods, were subsequently developed by the CoDEG and UCL team, as a partnership with NHS employers, and received a HEFCE Strategic Development Fund grant of £1.3 million in 2006, establishing the Joint Programmes Board (JPB). This set the scene for national reform of post-registration education, which was linked, for the first time, with workforce capability.

More recently, this evidence and application have been further extended to develop a professional recognition (credentialing) model [6] which is now a central core of the Royal Pharmaceutical Society's Faculty whereby advanced levels of practice can be identified and peer reviewed; the historical evidence produced by CoDEG, and the translation into new models of workforce development, are now being used to create a new royal college for the profession in 2013.

**3. References to the research**

- [1] Quinn J, Bates I, Cox R. Postgraduate clinical pharmacy programmes in the UK: a comparative content analysis. *Int J Pharm Pract.* 1997 Dec;5:209-15. <http://doi.org/dmk4gs>
- [2] McRobbie D, Webb DG, Bates I, Wright J, Davies JG. Assessment of Clinical Competence: Designing a competence grid for junior pharmacists. *Pharmacy Education.* 2001;1:67-76. <http://pharmacyeducation.fip.org/2001/01/assessment-of-clinical-competence-designing-a-competence-grid-for-junior-pharmacists/>
- [3] Meadows N, Webb D, McRobbie D, Antoniou S, Bates I, Davies G. Developing and validating a competency framework for advanced pharmacy practice. *Pharmaceutical Journal.* 2004; 273: 789-92.
- [4] Mills E, Farmer D, Bates I, Davies G, Webb DG. The General Level Framework: use in primary care and community pharmacy to support professional development. *Int J Pharm Prac* 2008; 16: 325-31. <http://dx.doi.org/10.1211/ijpp.16.5.0008>
- [5] Antoniou S, Webb DG, McRobbie D, Davies JG, Wright J, Quinn J, Bates IP. A controlled study of the general level framework: Results of the South of England competency study. *Pharmacy Education.* 2005; 5(314): 201-7. <http://pharmacyeducation.fip.org/2005/09/a-controlled-study-of-the-general-level-framework-results-of-the-south-of-england-competency-study/>
- [6] McKenzie C, Borthwick M, Thacker M, Shulman R, Offord R., Tomlin M., Bates I., McRobbie D. Developing a process for credentialing advanced level practice in the pharmacy profession using a multi-source evaluation tool. *Pharmaceutical J.* 2011; 286: online [http://www.codeg.org/fileadmin/codeg/pdf/ACLF/Critical\\_Care\\_Group\\_PJ\\_Paper\\_April\\_2011.pdf](http://www.codeg.org/fileadmin/codeg/pdf/ACLF/Critical_Care_Group_PJ_Paper_April_2011.pdf)

**4. Details of the impact**

Over the last 10 years, the cumulative evidence from the CoDEG group, in relation to the development of practitioner development frameworks, policy formation and novel professional education models has improved the quality of pharmacy services through the reform of educational provision and the implementation of practitioner development frameworks. Educational research work that aimed to address clear national health service needs to define and assure capable and competent pharmacist practitioners, has grown into a world-wide project that has international recognition from nation states and UN agencies for the impact that the evidence-base and translational developments have had – and are continuing to have – on developing safe and capable clinical pharmacists. The key theme of our work throughout has been the application of research-driven educational enquiry to the development of health service capability, in a manner never before applied in the profession.

## Impact case study (REF3b)

### 1. National impact.

In 2005, ALF evidence was used as a basis for Department of Health guidance to establish the first NHS Consultant Pharmacist posts in England [a]. As a result, over 50 Consultant Pharmacists were in post across England in 2013 [b]. In 2006, the formal JPB partnership described above was set up [c]. This has become the accepted foundation pathway for all early years' practitioners across most of England's NHS Trusts and the GLF has been adopted for use by over 90% of all Band 6 (junior) pharmacists in England. The cumulative research also supported adoption in Wales and Northern Ireland. The royal college for pharmacy is now using this educational approach as the basis for its national foundation standard [d].

The emergence of Medical Education England (MEE [www.mee.nhs.uk](http://www.mee.nhs.uk); and since April 2013, HEE [www.hee.nhs.uk](http://www.hee.nhs.uk)) as the national commissioning agency for all medical, pharmacy, dental and health science education and training means that pharmacy has a national Professional Advisory Board, reporting to HEE on matters of professional development, including initial education and career pathways. In 2012, this professional board – Modernising Pharmacy Careers – commissioned an independent report into the use of practitioner development frameworks for the profession [e]. The report recommended national uptake of both the GLF and the ALF, and the Royal Pharmaceutical Society (RPS) subsequently adopted stewardship of the CoDEG frameworks to enhance professional capability across all health sectors and impact on the quality of health care provision. This is now the national norm for practitioner development, affecting all of the 42,000 registered pharmacists in the UK. In a supporting statement, the RPS say that “*This is a historic time for pharmacy, a first for the Royal Pharmaceutical Society and is based upon the decade worth of evidence generated by CODEG and Professor Bates’ national and international research in this area... The RPS can fully verify the usage of the research work, and the impact of the work which has gone into developing the frameworks*” [f].

### 2. European regional impact.

The evidence base generated by CoDEG was used as a basis for the Europe-wide PHARMINE programme [g]. This multilateral programme, funded in 2009 via the European Commission for €480,000, set out to map foundation level and advanced (“specialist”) competencies for pharmacy. The CoDEG frameworks proved to be the building blocks of the PHARMINE outcomes, which were subsequently endorsed by major European special interest partner groups including:

- EAFP (European Association of Faculties of Pharmacy)
- EAHP (European Association of Hospital Pharmacists)
- EIPG (European Industrial Pharmacists’ Group)
- EPSA (European Pharmacy Students’ Association)
- PGEU (Pharmaceutical Group of the European Union)

### 3. Other Nations

In Australia, Queensland Health, which covers about a third of the population, improved the competency of its practitioners through development of an adapted version of the CoDEG frameworks [h]. This initial work has now been taken up nationally, impacting at both foundation and advanced level practice, using CoDEG evidence and GLF and ALF [i]. CoDEG have acted as advisers on the nationalisation of the original frameworks. In 2012, the Australian authorities published their Advanced Pharmacy Practice Framework for Australia, which acknowledges the CoDEG evidence and work as the basis for this national development [j].

Singapore has also collaborated with CoDEG to develop a national framework for foundation level practice based on the GLF [k]. This particular work stream has driven reform of practitioner development in Singapore along similar lines to the UK. Other countries where the GLF is being translated and adapted for national use are Ireland (via the Pharmaceutical Society of Ireland), Croatia (via community pharmacy providers), Serbia (via National Expert Panel and community pharmacy providers) [l, m].

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4. Global developments

In 2007, the International Pharmaceutical Federation (FIP – the global professional leadership body representing over 3 million pharmacists and pharmaceutical scientists worldwide) established a Global Taskforce for Education. Subsequent to this, in 2009/10, FIP Education formed partnerships with two UN agencies, the WHO and UNESCO [n]. Practitioner competence and pharmaceutical service capabilities were identified as key missions. The subsequent development of a global framework for practitioner development (the Global Competency Framework – GbCF) used CoDEG evidence and GLF methodology as a basis for development. In 2010, a formal agreement with UNESCO established the UNITWIN programme which has an objective to disseminate best practice using the GbCF, most recently in establishing a six-nation African Centre of Excellence for professional education.

The original work by CoDEG has led from local to global impact on contemporary competency-based approaches to practitioner development which impacts on development of medicines expertise, patient safety, and the quality of pharmaceutical care services. Better training leads to better care.

**5. Sources to corroborate the impact**

- [a] Department of Health. Guidance for the Development of Consultant Pharmacist Posts, 2005. [http://webarchive.nationalarchives.gov.uk/+dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh\\_4107445](http://webarchive.nationalarchives.gov.uk/+dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4107445)
- [b] <http://ejhp.bmj.com/content/19/2/251.3>
- [c] <http://www.jpbsoutheast.org> Email and hard copy correspondence from HEFCE confirming award available on request.
- [d] Copy of *The RPS Advanced Pharmacy Framework (APF)* available on request.
- [e] [http://www.mee.nhs.uk/latest\\_news/news\\_releases/pharmacy\\_post-registration.aspx](http://www.mee.nhs.uk/latest_news/news_releases/pharmacy_post-registration.aspx)
- [f] Letter of support from the Royal Pharmaceutical Society. Copy available on request.
- [g] “Pharmacy In Europe” project ID 142078-LLP-1-2008-BE-ERASMUS-ECDSP <http://www.pharmine.org/>
- [h] Coombes I, Avent M, Cardiff L, Bettenay K, Coombes J, Whitfield K, Stokes J, Davies G, Bates I. Improvement in Pharmacist’s Performance Facilitated by an Adapted Competency-Based General Level Framework. *J. Pharmacy Practice and Research* 2010; 40 (2): 111-118. [http://www.codeg.org/fileadmin/codeg/pdf/glf/Coombes\\_GLF\\_JPPR\\_jul2010.pdf](http://www.codeg.org/fileadmin/codeg/pdf/glf/Coombes_GLF_JPPR_jul2010.pdf)
- [i] <http://cpd.shpa.org.au/scripts/cqiip.exe/WService=SHPACP/ccms.r?PageId=10036>
- [j] <http://www.psa.org.au/archives/7131>
- [k] Rutter V, Wong C, Coombes I et al. Use of a general level framework to facilitate performance improvement in hospital pharmacists in Singapore. *Am J Pharm Educ.* 2012 Aug 10;76(6):107. <http://dx.doi.org/10.5688/ajpe766107>.
- [l] Meštrović A, Staničić Z, Hadžiabdić MO et al. Evaluation of Croatian community pharmacists' patient care competencies using the general level framework. *Am J Pharm Educ.* 2011 Mar 10;75(2):36. <http://europepmc.org/articles/PMC3073111>
- [m] Meštrović A, Staničić Z, Hadžiabdić MO, et al. Individualized education and competency development of Croatian community pharmacists using the general level framework. *Am J Pharm Educ.* 2012 Mar 12;76(2):23. <http://dx.doi.org/10.5688/ajpe76223>.
- [n] FIP-UNESCO UNITWIN Partnership [http://www.fip.org/programmesandprojects\\_pharmacyeducationtaskforce\\_UNITWIN](http://www.fip.org/programmesandprojects_pharmacyeducationtaskforce_UNITWIN) and [http://www.unesco.org.uk/new\\_unesco\\_university\\_twinning\\_network\\_for\\_pharmacists\\_launched](http://www.unesco.org.uk/new_unesco_university_twinning_network_for_pharmacists_launched)