

# An educational framework for managing and supporting medication adherence in Europe

SIMON WHITE<sup>1\*</sup>, WENDY CLYNE<sup>2</sup>, COMFORT MSHELIA<sup>3</sup>

<sup>1</sup>*School of Pharmacy, Keele University, Staffordshire, ST5 5BG, United Kingdom.*

<sup>2</sup>*Applied Centre in Health and Lifestyles Interventions, Coventry University, Coventry, CV1 5FB, United Kingdom.*

<sup>3</sup>*Nuffield Centre for International Health and Development, University of Leeds, Leeds, LS2 9JT, United Kingdom.*

## Abstract

**Introduction:** Decisions about taking medicines ultimately lie with patients, so health professionals need to engage with patients to manage and support medication adherence. Health professionals need appropriate education to do this. We aimed to develop an educational framework for health professionals in Europe for managing and supporting medication adherence.

**Description of the framework:** The resulting educational framework comprises a competency framework, a curriculum, a diagnostic tool for competence assessment and a reading list.

**Quality assurance:** Framework development started from a 2007 competency framework for shared decision-making. A literature review and a Europe-wide consultation were conducted and the ABC research team acted as a reference group.

**Implementation:** The educational framework was distributed to schools of pharmacy, medicine and nursing in 16 European countries and 70 health profession organisations. Its wide distribution and easy availability should make it easier for learning about medication adherence to be incorporated into existing curricula.

**Keywords:** *education and training, health professionals, medication adherence*

## Introduction

Encouraging patients to get the most out of their medicines is essential to avoid unnecessary ill health, and to reduce waste and unnecessary cost. Since the decision to take a medicine or not ultimately lies with the patient, it is crucial that health professionals engage with patients to manage and support adherence to medication. To do this health professionals need appropriate education and development.

However, there do not appear to have been any competency frameworks, curricula, guidance, standards or consensus statements specifically concerned with the education and training of health professionals on medication adherence published in the peer reviewed literature. Consensus statements exist for communication with patients, a crucial aspect of managing and supporting medication adherence, for example von Fragstein *et al.* (2008). Studies have identified learning activities related to medication adherence in courses provided by schools of pharmacy in various countries (Schneider & Aslani, 2010), which is useful for comparison but they do not outline learning outcomes or competencies that could facilitate harmonization of education in Europe.

In other documents concerning health professional education at European and national level, medication adherence appears to be embedded within other broad topics, learning outcomes or objectives. At a European level these documents include European Commission (EC) directives such as 2005/36/EC on reciprocal recognition of qualifications, and EC funded project outputs concerned with medicine and pharmacy (*e.g.* MEDINE and PHARMINE). At a national level there are policy documents, guidance and consultations from nationally

funded organisations such as the United Kingdom (UK) National Institute of Health and Clinical Excellence (NICE) and standards produced by regulatory bodies responsible for the education of particular health professions (NICE, 2011). There are also non-peer reviewed reports from independent organisations, including for example Just What the Doctor Ordered (Interstate Postgraduate Medical Associate *et al.*, 2008), which maps perceived professional practice gaps in the United States of America with educational objectives and strategies. Other reports are positioned at a policy level rather than being specifically concerned with education of health professionals, for example the Cribb report (Cribb, 2011).

Hence, as part of an EC Framework 7 programme funded project (Ascertaining Barriers to Compliance [ABC]: Policies for safe, effective and cost-effective use of medicines in Europe, FP7 Theme Health 2007-3.1-5, grant agreement no. 223477), we aimed to develop an educational framework for health professionals in Europe for managing and supporting medicines adherence.

## Description of the framework

The ABC educational framework is of relevance to all health professions that are involved in medication adherence, particularly pharmacists, doctors and nurses. It comprises four parts: a competency framework describing the skills, knowledge, attributes and behaviours of health professionals in supporting patients with medication (Figure 1); a curriculum for educational organisations to guide education and training; a diagnostic tool to assess competence; and a

\*Correspondence: Dr. Simon White, School of Pharmacy, Keele University, Staffordshire, ST5 5BG, United Kingdom. Tel: +44 (0)1782 734772. Email: [s.j.white@mema.keele.ac.uk](mailto:s.j.white@mema.keele.ac.uk)

**Figure 1: the competency framework for managing and supporting medication adherence with patients**

<b>COMMUNICATING WITH PATIENTS ABOUT MEDICATION</b>	
<b>1. LISTENING</b> <i>Listens actively to the patient</i>	<b>2. COMMUNICATING</b> <i>Helps patients to interpret information in a way that is meaningful to them</i>
<ol style="list-style-type: none"> <li>1. Helps patients feel at ease and feel that you have time for them</li> <li>2. Gives the patient the opportunity to express their views</li> <li>3. Listens to the patient's views and discusses any concerns</li> <li>4. Encourages the patient to ask questions about their condition</li> <li>5. Allows time for questions</li> <li>6. Treats the patient as an equal partner</li> <li>7. Respects diversity</li> <li>8. Expresses willingness to be flexible</li> </ol>	<ol style="list-style-type: none"> <li>1. Identifies barriers to communication and responds appropriately</li> <li>2. Shares knowledge and information in a way that the patient understands</li> <li>3. Explores and confirms the patient's understanding</li> <li>4. Checks own understanding of the patient's viewpoint</li> <li>5. Uses aids to help understanding (e.g. decision aids and question prompts)</li> <li>6. Recognises the importance of non verbal communication and responds appropriately</li> <li>7. Uses questions to elicit information</li> <li>8. Maintains appropriate eye contact</li> <li>9. Displays a non judgemental attitude</li> </ol>
<b>3. CONTEXT</b> <i>With the patient, defines and agrees the purpose of the consultation</i>	<b>4. KNOWLEDGE</b> <i>Has up-to-date knowledge of area of practice and wider health and social services</i>
<ol style="list-style-type: none"> <li>1. Reviews patient information prior to the consultation</li> <li>2. Introduces and explains own role</li> <li>3. Establishes how involved the patient wants to be in decisions about their treatment</li> <li>4. Clarifies the timing, boundaries and expectations of the consultation</li> <li>5. Ensures that the consultation takes place in an appropriate setting and minimises interruptions</li> <li>6. Keeps focused on the agreed aims of the consultation</li> </ol>	<ol style="list-style-type: none"> <li>1. Knows own limitations</li> <li>2. Maintains up-to-date professional knowledge and skills appropriate to own role</li> <li>3. Knows when and how to seek further advice</li> <li>4. Refers on to other health professionals and social services as required or as requested</li> <li>5. Works in partnership with colleagues</li> <li>6. Shares up-to-date information with patients about specialist support and community resources</li> <li>7. Is aware of practical resources to help patients</li> </ol>
<b>MANAGING AND SUPPORTING MEDICATION ADHERENCE</b>	
<b>5. UNDERSTANDING</b> <i>Recognises that the patient is an individual</i>	<b>6. EXPLORING</b> <i>Discusses illness and treatment options, including no treatment</i>
<ol style="list-style-type: none"> <li>1. Seeks to understand the patient's current circumstances and previous experiences (including, for example, age, gender, disability, mental health, lifestyle, health literacy and socioeconomic status) that may impact on treatment</li> <li>2. Is aware of whether the patient's cultural, religious or societal beliefs impact on treatment</li> <li>3. Explores what the patient thinks about medicines in general</li> <li>4. Respects the patient's expertise and knowledge of their condition</li> </ol>	<ol style="list-style-type: none"> <li>1. Explores what the patient has been doing to deal with symptoms / illness and what the patient understands about their treatment</li> <li>2. Discusses with the patient their expectations and concerns about their illness and treatment</li> <li>3. Provides full, accurate and understandable information about the patient's symptoms / illness and the benefits, effects, risks (e.g. side effects) and uncertainty of all treatment options</li> <li>4. Discusses prognosis and likely health outcomes</li> <li>5. Establishes whether the health professional and the patient have similar or different views about the patient's symptoms / illness</li> <li>6. Discusses any misunderstandings about illness or treatments</li> <li>7. Encourages the patient to express positive and negative views about treatment and no treatment options</li> </ol>
<b>7. DECIDING</b> <i>Decides with the patient the best management strategy</i>	<b>8. SUPPORTING</b> <i>Supports the patient with medication taking</i>
<ol style="list-style-type: none"> <li>1. Discusses the patient's preferred option for treatment, negotiates treatment goals and decisions, but accepts the patient's final decision</li> <li>2. Gives the patient time to consider the information before making a decision, if appropriate</li> <li>3. Maintains appropriate professional records about decisions that are made and their outcomes</li> <li>4. Explores the patient's ability to undertake the agreed plan</li> <li>5. Checks that the patient knows what medicines they are taking and why</li> <li>6. Discusses when treatment will be reviewed (and what this entails), changed or stopped</li> <li>7. Ensures that the patient knows what to do if their symptoms change, do not improve, or if a problem arises (e.g. a side effect)</li> </ol>	<ol style="list-style-type: none"> <li>1. Recognises non-adherence (identifies patients at risk of non-adherence, assesses patients' adherence, for example by asking if they have missed any doses of their medication, and recognises the effects of non-adherence)</li> <li>2. Identifies reasons for / causes of non-adherence, and barriers to future adherence</li> <li>3. Manages adherence by providing effective practical support where the patient needs / wants help with adherence</li> <li>4. Supports patients by providing ongoing information and feedback (including encouraging patients to come back with any questions), and monitors adherence</li> </ol>
<ul style="list-style-type: none"> <li>• Managing and supporting medication adherence with patients may also involve others, e.g. family members, carers and advocates</li> <li>• Health professionals clearly need a wide and variable range of competencies in their consultations with patients. This framework concentrates on the competencies that any health professional might need when engaging with patients in managing and supporting medicines adherence and should be used in conjunction with other professional and organisational frameworks</li> </ul>	

reading list. The framework has been designed to be flexible and adaptable by not being overly prescriptive, which allows it to be accessible to a wide audience and future-proofed as far as possible.

The competency framework and the diagnostic tool are best used as a starting point for discussion of competencies required by individuals or teams. Specifically, they can be used by education and training providers in the initial education of health professionals and in competency-led postgraduate training programmes, to provide training linked to service provision and to provide the link between training and practice. They can be used by individual students and health professionals to assess own performance and identify gaps in knowledge and skills, to identify education, training and professional development needs, and to demonstrate requirements for service delivery. Employers can use them as aids to appraisals and setting personal development plans.

The common curriculum sets out a series of intended learning outcomes and associated educational content about medication adherence. The curriculum may be adapted for different levels of study and incorporated into existing education and training curricula for health professionals. Specifically, it can be used by education and training providers in the initial education of health professionals and in postgraduate education and training programmes. The educational content outlined in the curriculum may be incorporated into any learning and teaching activities that encourage active student participation.

### Quality assurance

The starting point for producing the educational framework was a robust competency framework for shared decision-making with patients for taking medicines produced in 2007 (Clyne, Granby & Picton, 2007). We have developed and updated it by a review of the literature, a formal consultation and review by the ABC project reference group (not involved in the original competency framework) to form a new educational framework for health professionals in Europe on managing and supporting medication adherence.

Literature searches of EMBASE, MEDLINE and the Cochrane Database were undertaken to identify new evidence published since 2007. Relevant publications in the English language were identified using combinations of the following key words: patient compliance, medication adherence, communication skills, health professional, curriculum, medical education, nursing education, pharmacy education and professional development. Relevant publications included competency frameworks, curricula, guidance, standards or consensus statements on medicines adherence, or the education and training of health professionals on medicines adherence or aspects of managing and supporting medication adherence. The grey literature was also searched using the same key words in online search engines. The results of these searches were discussed in the introduction above.

Over 250 individuals and organisations in Europe were invited through the formal consultation process to comment on how the competency framework should be updated, including: national and European patient groups; national and European organisations representing doctors, nurses, and pharmacists; a random sample of five schools of medicine, five schools of nursing and five schools of pharmacy from each EU member country and all European organisations representing schools of medicine, nursing and pharmacy.

Seven detailed and insightful responses were received from individuals in schools of pharmacy, medicine and nursing, as well as a European patient organisation and a national regulatory body for medicine. Individual statements identified in these responses were carefully considered by the educational framework development team. From these statements, the curriculum development team updated and adapted the framework (an appendix to the framework provides detailed comments on how each statement was considered in relation to developing the educational framework). The competency framework was then mapped to the common curriculum and the diagnostic tool.

The educational framework was reviewed by the ABC project reference group and circulated to the ABC project partners for comment. It was then published in coverflow portable document and iBook formats to increase accessibility by allowing readers to go directly to each of the four parts without having to scroll through the document. The diagnostic tool section is provided in an interactive format, which means that users can assess their competence and then save a version with their answers.

### Implementation

The educational framework was distributed to all University schools of pharmacy, medicine and nursing in 16 European countries and a further 70 health profession organisations and federations. It is freely available online (<http://abcproject.eu/img/ABC%20Project%20Managing%20and%20Supporting%20Medication%20Adherence.pdf>) and the iBook version can be downloaded free of charge from the Apple Store. This wide distribution and easy availability is intended to raise standards, promote consistency of teaching practice across Europe and across professions, and make it much easier for educators to incorporate learning about medication adherence into existing curricula. Further work is warranted to assess the impact of the educational framework.

### References

- Clyne, W., Granby, T., & Picton, C. (2007) A competency framework for shared decision-making with patients (on-line). Available at: [www.npc.nhs.uk/non\\_medical/resources/competency\\_framework\\_2007.pdf](http://www.npc.nhs.uk/non_medical/resources/competency_framework_2007.pdf). Accessed 13<sup>th</sup> May, 2013.
- Cribb, A. (2011) *Involvement, Shared Decision-Making and Medicines*. London: Royal Pharmaceutical Society.
- Interstate Postgraduate Medical Association, University of Cincinnati, Healthcare Performance Consulting and University of Virginia Health System (2008). *Just What the Doctor Ordered: A system approach to assessing patient adherence* (on-line). Available at: <http://www.ipmamed.org/media/46347/adherence.pdf>. Accessed 13<sup>th</sup> May, 2013.
- NICE (2011) *Review of Clinical Guideline (CG76) - Medicines Adherence: involving patients in decisions about prescribed medicines and supporting adherence*. London: National Institute of Health and Clinical Excellence.
- Schneider, M. & Aslani, P. (2010) Adherence policy, education and practice – an international perspective. *Pharmacy Practice*, 8(4), 209-212.
- von Fragstein, M., Silverman, J., Cushing, A., Quilligan, S., Salisbury, H. & Wiskin, C., on behalf of the UK Council for Clinical Communication Skills Teaching in Undergraduate Medical Education. (2008). UK consensus statement on the content of communication curricula in undergraduate medical education. *Medical Education*, 42(11), 1100-1107.