



# Developing diabetes nursing support programmes in Estonia, Finland, Ireland and Lithuania

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## Summary

Nurses' knowledge and skill in caring for and educating patients with diabetes is a determining factor in health care outcomes. This report describes DIPRA (DI, diabetes; PRA, practice) – Counselling for Practice: a pilot programme aimed at improving counselling for people with diabetes, that comprises an online study module on patient education and counselling for health care professionals.

A survey was undertaken in four partner countries that informed the development of the web-based course. The study module and materials (databank, online lectures, interactive exercises) were developed in English and translated into Estonian, Finnish and Lithuanian, to maximise accessibility for all professionals in the partner countries. The programme is currently being offered on a pilot basis and evaluation is ongoing. Outcomes of the processes and further evaluation will be reported in the future. DIPRA is a unique online resource for health care professionals and students that is based on authentic learning principles, which aims to develop pedagogical and didactical approaches for online learning. The DIPRA programme will be disseminated at regional, national and international levels, and the aim is to include it as a part of the continuation/specialisation studies in all partner organisations and other Erasmus universities.

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## Key words

diabetes; counselling; education

## Introduction

Diabetes has reached pandemic proportions worldwide.<sup>1</sup> The International Diabetes Federation (IDF) estimates that, across Europe, 53.2 million people (8.4% of the population) live with diabetes.<sup>2</sup> Nurses' knowledge and skill in caring for, and educating, patients with diabetes is a determining factor in health care outcomes for these patients.<sup>3</sup> To address and assist health care professionals in maintaining and updating their knowledge base on diabetes care, a multilateral project within the framework of the Lifelong Learning Programme and the Erasmus Curriculum Development sub-programme was

initiated in 2008. DIPRA (DI, diabetes; PRA, practice) – Counselling for Practice is an online study programme on patient education and counselling for health care professionals and students. Education and counselling play key roles in diabetes management and contribute significantly to improvements in glycaemic control, quality of life and reductions in long-term complication rates. Patient education should include a counselling aspect because knowledge transmission on its own is not adequate or sufficient to empower patients.<sup>4</sup> Both psychological and social support encourages self-management, which in turn leads to better patient outcomes.



	Diabetes prevalence (% of population affected)	Costs associated with treating diabetes (% of health care budget)	Role of the general nurse	Role of the specialist nurse	Undergraduate nursing programmes – level of diabetes education	Postgraduate education
<b>Estonia</b>	9.9	13.7	Care of diabetic patients mainly undertaken by generally trained nurses	Small number of specialist trained nurses (trained abroad)	158 h	No courses
<b>Finland</b>	8.4	11.1 (€857.8 million)	Health education and promotion scheduling appointments	Coordinating and improving diabetes care. Multiprofessional cooperation	24 h, classroom; 36–42 h, self-study	Specialist courses (30–60 ECTS [European Credit Transfer and Accumulation System credits])
<b>Ireland</b>	5.6	6.4 (€580.2 million)	In acute care settings or community; works under supervision of consultant doctor or GP	Clinical and advanced nurse specialists provide professional and clinical leadership and take part in research	38–40 h plus clinical placement	Specialist courses (60 ECTS)
<b>Lithuania</b>	9.7	12 (€18.5 million)	Generalists can become community nurses by completing 480 h, 12-week course	Diabetic specialist nurses work with patients by completing 160 h, 4-week course	20 h (2 h, lectures; 11 h, workshops; 7 h, individual work)	No courses

**Table 1.** Diabetes-related background information from partner countries involved in developing an online patient education and counselling course (DIPRA)

The DIPRA project's main aim is to transfer the acquired knowledge on health promotion, diabetes prevention and patient education and counselling to health care teachers, nursing students (undergraduates and postgraduates) and professionals. With its counselling emphasis, the project will contribute to the overall quality of patient education and counselling in Europe, which will directly contribute to a healthier European workforce. Four European countries are involved in the project: Estonia, Finland, Ireland and Lithuania. Partner organisations in these countries are: Tartu School of Health Care, Estonia; Savonia University of Applied Sciences, North Karelia and Mikkeli Universities of Applied Science, Finland; Catherine McAuley School of Nursing, University College Cork, Ireland; and Kaunas College, Lithuania. To

develop the curriculum for this new study course, a self-reported questionnaire (completed by partner organisations) examined diabetes-related curricula currently offered in the partner countries and outlined the disease prevalence, treatment-associated costs and the roles of general and specialist nurses (Table 1). Analysis of these resources led to the development of the study course, which is the main product of the project.

### Background

Five partnership meetings were held during the project cycle in partners' countries and there were 12 online meetings and continuous online discussion forums. Key activities were scheduled according to work packages and the final flexible work plan for the project was created. This included partnership arrangements,

information provision and coordination within the partnership, and activity management/scheduling. The study programme 'Patient Education and Counselling' will consist of 15 European Credit Transfer and Accumulation System (ECTS) credits, and five independent but integrated courses have been developed (three ECTS each). Each partner country was responsible for developing one course, producing all the course materials and designing the assignments, exercises and online discussion forums.

The course content is outlined in Table 2. Courses are undertaken through several online methods encompassing lectures, web-based learning assignments, interactive exercises, individual and group work, and discussion forums using the 'Moodle' learning environment (Box 1). Course teachers will be



Evidence-based patient education and counselling (3 ECTS)	Professional as a counsellor and patient educator (3 ECTS)	Development of professional's own counselling skills (3 ECTS)	Development in using diverse education and counselling methods (3 ECTS)	Research methods and diabetes management (3 ECTS)
<ul style="list-style-type: none"> <li>Evidence-based practice</li> <li>Concepts and terminology</li> <li>Scientific knowledge and clinical practice guidelines</li> <li>Assessment of practice</li> </ul>	<ul style="list-style-type: none"> <li>Reflection on professional development</li> <li>Assessment of counselling competencies</li> <li>Background factors of counselling</li> </ul>	<ul style="list-style-type: none"> <li>Transtheoretical model of change</li> <li>Sociodynamic counselling</li> <li>Group education</li> </ul>	<ul style="list-style-type: none"> <li>Diverse education and counselling methods</li> <li>Learners with special needs in health care</li> <li>Culture and counselling</li> <li>Technology in education</li> </ul>	<ul style="list-style-type: none"> <li>Research approaches and design</li> <li>Focused literature search strategies</li> <li>Classification of diabetes</li> <li>Therapeutic interventions and holistic nursing care</li> </ul>
<ul style="list-style-type: none"> <li>Education is based on the authentic learning perspective and is provided as online learning with some contact lessons, if needed</li> <li>Virtual, collaborative and individual learning methods focusing on authentic activities are being used</li> <li>Learner participation, teacher support and peer scaffolding are emphasised</li> </ul>				

**Table 2.** Modules of the DIPRA patient education and counselling online course, piloted 2009–2010 (15 ECTS [European Credit Transfer and Accumulation System credits])

present in discussion forums on a daily basis – participating in and monitoring the discussion to check that information is not misleading. The project aims to develop pedagogical and didactical approaches for online learning. In addition to the online study module, a Diabetes Databank has been developed on the project website.<sup>5</sup>

**Advantages and disadvantages of online courses**

The value of online learning has been well documented.<sup>6</sup> The anonymity of online discussion forums allows everyone to participate equally: people from diverse backgrounds can interact enabling different perspectives to emerge. Accessibility and flexibility of online courses enable students to complete assignments at their own pace.<sup>7</sup>

However, online courses have some disadvantages. For example, higher rates of student attrition have been reported due to misconceptions that online courses are easier to complete.<sup>8</sup> Students have also reported that lack of human interaction and absence of vocal and non-verbal cues can lead to a lack of clarity.<sup>8</sup> In the present

course, these issues have been addressed by ensuring that students have access to course instructors through the Moodle website.

**Pilot phase**

The piloting phase of the programme ended in June 2010. During and after piloting, the study module will be modified. Each partner's course is being offered in rotation, with the partner organisation being responsible for course monitoring and maintenance during the implementation phase. Partners are offering the course to students undertaking under- and postgraduate courses in the partner universities.

**Evaluation**

During the piloting stage, continuous assessment and evaluation have taken place. Students have assessed the module using an electronic evaluation form. In addition, teachers, health care professionals and faculty from other institutions have assessed the course content, methods, evaluation and learning environment. All five courses have completed their pilot phase. Evaluations of these courses reveal

Moodle – Modular Object-Oriented Dynamic Learning Environment – is a free and open-source e-learning software platform, also known as a course management system or a virtual learning environment (VLE). Moodle helps educators to create online courses that focus on collaboration and interaction

**Box 1.** The Moodle learning environment

that, overall, students felt they had learned new skills that they were able to use in daily practice. Most students (n=15) did not have technical problems; only five experienced challenges with the online environment. Collaboration and sharing of knowledge and experiences succeeded well online. However, seven students did not like to participate in online discussions. Further evaluation of this course is beyond the scope of this article and will be reported in the future.

**Implications for practice**

The study module and the chosen counselling methodology will be easily adaptable to other conditions besides diabetes care. The study module and all its materials (data



bank, online lectures, and interactive exercises) have been developed in English and translated into partners' national languages (Estonian, Finnish and Lithuanian) to maximise accessibility for professionals in all partner countries. This will help to develop new innovative learning settings by using modern working tools, patient education and counselling methods, according to the patterns provided by authentic learning.

### Conclusions

Patient education and counselling are integral parts of diabetes prevention and care. Individuals living with diabetes, health care providers and the community at large would benefit from provision of education in order to improve the quality of care and management. The development of programmes for continuing education is important for nurses, and the use of internet-

based programmes will provide students with opportunities for knowledge exchange between novices and experts.<sup>1</sup> Teachers in partner institutions will continue to collaborate and the content of courses will be discussed and updated annually. The DIPRA programme will be disseminated at regional, national and international levels, and the aim is to include it as a part of the continuation/specialisation studies in all partner organisations and in other Erasmus universities.

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### Conflicts of interest

There are no conflicts of interest.

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## Book Review

### HbA<sub>1c</sub> in Diabetes, case studies using IFCC units

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ISBN: 9781444334449. Copyright 2010, published by Wiley-Blackwell ([www.wiley.com](http://www.wiley.com)). Price: £21.99

This book is a useful resource for those involved in diabetes care and can be used to facilitate the transition in HbA<sub>1c</sub> units from DCCT percentage to IFCC units now reported in mmol/mol. The book begins with a brief introduction to diabetes and HbA<sub>1c</sub> including situations where use of HbA<sub>1c</sub> is not considered appropriate and details of abnormal haemoglobins included. The authors use 'thermometers' to provide a visual scale of both HbA<sub>1c</sub> percentages and IFCC units and these can also be used to visualise individuals' risk of the various complications of diabetes. The levels of HbA<sub>1c</sub> which could be expected are discussed along with the reasons for needing a reference method of HbA<sub>1c</sub> and the methods used to measure HbA<sub>1c</sub>.

Most of the book is made up of case studies contributed by health care professionals. These are somewhat 'addictive' but also easy to dip into and revisit as necessary. The cases involve a range of patients and cover

a variety of conditions plus treatment plans and follow up. Target levels of HbA<sub>1c</sub> are highlighted in IFCC units which increases the reader's familiarity as they progress through the book. Many of the cases discuss complex issues and indicate the difficult decisions involved in diabetes management. One case discusses balancing the fear of hypoglycaemia with optimal control in pregnancy, detailing results of HbA<sub>1c</sub> on 19 occasions, the challenges in this case are clearly presented but interestingly the possible benefits of measuring fructosamine, as opposed to HbA<sub>1c</sub> during pregnancy are not discussed.

These case studies will be of interest to all those involved in the clinical care of diabetes and although the treatment regimens/decisions made may spark questions about the individual cases, the repeated use of HbA<sub>1c</sub> levels throughout the scenario is a useful means of increasing awareness and familiarity with the new IFCC units.

**Book review by Maggie Shepherd**

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