

# Medication Safety Forum



## Increasing medication safety through eLearning in Eastern Finland

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Eastern Finland aims to standardise continuing education through eLearning, now that this is compulsory to keep the licence to practice.

The Finnish Ministry of Social Affairs and Health has drawn up national Safe Pharmacotherapy guidelines. Their purpose is to clarify the division of responsibilities between healthcare professionals as well as to define minimum requirements for the provision of pharmacotherapy. Continuing education is now compulsory and the responsibility of the employing social or healthcare institution.

An eLearning environment has been developed in Eastern Finland in res-

ponse. Kuopio University Hospital and the North Karelian Central Hospital created the content with a multidisciplinary team weighted towards pharmacists. The eLearning environment includes four consecutive courses, the basics of pharmacotherapy (compulsory for all staff engaged in pharmacotherapy) IV medications, epidural medications and blood transfusions (the last three compulsory only for nurses). See Table 1 and Table 2.

The theory courses support practical training. Participants have to pass both theory

and practical exams for each course. Nurses are given three months in which to complete the courses. Depending on the institution, from 8 to 10 hours of learning time can be used for eLearning during the working day over this period.

Since the courses started in March 2008, 2,000 nurses in Kuopio and Joensuu have done the courses and passed the exams. The feedback has been mainly positive. Many say that this is the best thing to happen in hospital concerning medication and education. Now, the knowledge base and good practice are set for the region while courses are arranged locally. The new rules and licence requirement initially caused some apprehension, which has been allayed.

Hospitals around Finland are interested in our eLearning program and five of them have already bought the content. It is hoped that elements of this project will be adopted nationally, to equalize licensing practices and that further interesting content will be developed.

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Table 1: The content of the eLearning courses

<b>The basics of pharmacotherapy</b> <ul style="list-style-type: none"> <li>• medicines law and legislation</li> <li>• the pharmacotherapy process and professional responsibilities</li> <li>• drug formularies</li> <li>• dosage forms and dosing</li> <li>• drug interactions and adverse reactions</li> <li>• the action of drugs and pharmacokinetics</li> <li>• factors influencing the pharmacotherapy</li> <li>• vaccines</li> <li>• drug calculations.</li> </ul> Exam 1: Theory of pharmacotherapy, 10 questions, 80% pass mark Exam 2: Drug calculations, 5 questions, 100% pass mark	<b>Intravenous medication</b> <ul style="list-style-type: none"> <li>• basics of IV medication</li> <li>• body liquids and electrolytes</li> <li>• acid/alkali balance in the body</li> <li>• drugs used intravenously</li> <li>• equipment, handling and dilution</li> <li>• cannulation of peripheral veins (+ video)</li> <li>• how to recognise and manage risk situations</li> <li>• the liquid equilibrium, planning, action and follow up.</li> </ul> Exam 1: Theory of IV medication, 10 questions, 80% pass mark Exam 2: Drug calculations, 5 questions, 100% pass mark
<b>Epidural medication</b> <ul style="list-style-type: none"> <li>• basics of epidural analgesia</li> <li>• performing epidural analgesia</li> <li>• nursing in epidural drug treatments</li> </ul> Exam: 80% pass mark	<b>Blood transfusions</b> <ul style="list-style-type: none"> <li>• the Finnish Red Cross ABO-eLearning package including the exam</li> <li>• rules for performing blood transfusions</li> </ul>

Table 2: The creation of a pharmacotherapy knowledge base

Medication safety hospital multidisciplinary group	Sets good pharmacotherapy practice guidelines and minimum requirements and guidelines for licensing and knowledge assessment
Pharmacists	Shared responsibility for the eLearning content and support of the students
Social and healthcare managers	Local organisation
Nurses and other professionals who practice pharmacotherapy	The licence to practice is now compulsory. If a theory exam is not passed at the third attempt a manager has to decide whether the employee is able to continue practicing pharmacotherapy. Another three attempts are usually allowed. After passing the theory exams, good medication practice has to be demonstrated to a senior nurse. After practical examinations and a <i>viva voce</i> , licences are awarded by the doctor responsible for the unit