eMED-PASS - a cultural adaptation of learning tool
for ensuring the development of medication competence of graduate nurses

Strode Iveta, Dupure Ināra, Grauduma Aiga

The eMedication Passport – cultural adaptation of learning tool for ensuring the development of medication competence of graduate nurses (eMed-PASS)

Erasmus+ project "The eMedication Passport – cultural adaptation of learning tool for ensuring the development of medication competence of graduate nurses (eMed-PASS)" started in September 2017. During first meeting in Tartu Health Care College were set up main strategy and tasks of involved partners – Tartu Health Care College (Estonia), Turku University of Applied Sciences (Finland), Kauno kolegija/UAS (Lithuania) and P.Stradins Medical College of the University of Latvia (Latvia). Project period is 01.09.2017. – 31.08.2020.

The ultimate goal of eMed-PASS project is to increase patient and medication safety by developing the educational preparation of nurses. The aim of this project is to modify, implement, and evaluate the feasibility of electronic Medication Passport for ensuring the medication competence and adequate working life skills of the graduating nurses.

On the first project phase partners were analysing national study results of Nursing Students` Medication Competence in Finland, Estonia, Latvia and Lithuania. What and how was done in each countrie before project activities. In addition, the literature review gives an overview of the research activities carried out in the countries participating before the project. A questionnaire developed in Finland was used to collect research and background data.

All partner countries have their own national recommendations that guide the curriculum of a certain school. Curriculums of all partner countries are competence-based and curricula are guided by the requirements of the Directive of European Parliament and Council 2005/36/EU, recognition of professional qualifications, 7.09.2005 cet. Latvia and Lithuania have a national curriculum for nursing education, Estonia and Finland do not.

In Finland, Lithuania and Estonia nursing education is a bachelor-level higher education, the undergraduate program is a 3.5 years full-time course with seven semesters. Bachelor or professional higher education degree requires 210 ECTS (European Credit Transfer and Accumulation System) credits. In Latvia general nurse education is a 1st level of the professional higher education, the undergraduate program is a 3 years (180 ECTS) full-time course with six semesters. To continue general nurse education, students have the possibility to study for one year at the University, to get bachelor's degree (60 ECTS). In all countries nurse can continue master's level studies after graduating with a bachelor's degree or professional higher education degree. Composition and duration of master's studies vary from country to country.

As project is about students' mediation competences and knowledge, it was important to clarify how many ECTS are devoted to medication education (incl. pharmacology, medication calculation, medication administration). Average of ECTS varies from country to country. For example Finland has 10 ECTS, Estonia has 8 ECTS, Latvia has 10 ECTS and Lithuania has 3 ECTC. In Finland, Estonia, Latvia and Lithuania components of medical administration are also included in additional subjects.

Medication education of nurses varies quite a lot in partner countries. It's not possible to evaluate conclusively the amount and sufficiency of medication education based on available data. There are no national guidelines for minimum requirements for acquiring proficiency, except in Finland. In Estonia, Latvia, and Lithuania no research has been done to evaluate the issue.

In Latvia and Lithuania there weren`t carried out any researches of nursing students' medication competences. In Estonia, one research has been carried out to describe drug-related knowledge and skills, as well as the level of risk of medication errors of second and fourth year nursing students at Tartu Health Care College, and to clarify links between students' background factors, their knowledge, skills, and the level of risk of drug-related errors (Bruus 2016). In Finland there were carried out many researches (doctorate, master and bachelor degree level) related to nursing students' medication competences. Two limitations were made: only doctorate and master level studies was accepted and time limitation of twenty years was set for this overview.

In Sulosaari (2016) study the average result in the overall medication competence evaluation of nursing students (n=666) was 70% correct answers over the semesters, 68% for the 2nd semester (n=328) and 72% for 7th semester students (n=338). The nursing students achieved on average 72% correct answers in a knowledge test, in medication calculation tasks 74%, and in patient vignettes 57% correct answers in deciding the best possible solution.

However, the minimum acceptable score was achieved by 84 % of the students. The core elements of medication competence were significantly interrelated (Sulosaari et al. 2016).

It was necessary to improve medication competences for nursing students' to increase patient and medication safety. Results of the first project phase led to the next step.

On the 2nd phase of EMED-PASS, partners task was to refine and implement cultural adaptation model of Medication Passport, translate and culturally validate the MCAF instrument for evaluation of nursing students medication competence, plan the data collection with MCAF and create electronic MCAF questionnaires. In this project the cultural adaptation is done by using the modified version of the guidelines by Beaton et al.(2000).

Project partners translated tool to national languages. The base of eMedication Passport was English version developed by Finnish partner. Expert panels (pharmacology and nursing lecturers at the educational institution, nurses – nursing mentors at the hospital, hed-nurses at the hospital where students carry out their practice, in each Baltic partner country evaluated the cont: of translated national Medication Passport, measuring clarity, relevance and importance to the national system. All correction were done according to each country health care system. The MCAF tool for evaluation of nursing students' medication competence in each country was reviewed by the national expert panels as well.

On the 3rd phase of project the focus has been on creation of ePlatform for eMedication Passport. Turku University of Applied Sciences has been guiding the work of FNS. Final testing of MCAF test has been done in October, 2018. To ensure qualititive work, was produced user's manual together with FNS. Manual was made and translated for teachers and mentors. ePlatforma for eMedication was created in Estonian, Lithaunian and Latvian. http://laakehoitopassi-stage.fns.fi/ Turku University of Applied Sciences supported the implementation of the eMedication Passport in the Baltic countries, as they have experience in it and they are using tool in their study process.

In three Baltic countries (Lithuania, Latvia, Estonia) the piloting was done in 2019 spring (in Estonia in March, in Latvia and Lithuania in May - June) with 2nd year nursing students. In Turku University of Applied Sciences piloting of the eMedication Passport was not conducted since the English Degree program students had it already in use and there were not suitable international exchange students during the pilot testing period.

Data collection and analysis with the MCAF test has been done by the end of May in the partner institutions, Turku University of Applied Sciences have analysed the pre-implemenation data on nursing students medication competence.

Feedback questionnaires for students, nurse mentors and teacher were finished after the transnational meeting in Kaunas, April, 2019, final translations in June and data collection is ongoing.

In Estonia 30, in Latvia 71, in Lithuania 57 second year nursing students have participated in piloting eMedication passport. The overal oral feedback about the eMedication passport instrument from the mentors from Baltic countries was that it is a interesting useful tool to evaluate the student knowledge and skills, and that it can be oficially included into the study subject content. Tasks in the eMedication Passport help for setting the goal in learning the pharmacology and medication administration in clinical practices by giving a clear overview of what students must be able and whatk kind of knowledge they have to gain in in clinical practices regarding to pharmacology and medication administration. Although it is quite long and some statements/ skills can be joined together, also that it took more time to look over it and adapt at the first time.

From all the Baltic countries students' the feedback was that the instrument is useful, relevant learning tool for learning and practicing the pharmacology and medication passport in clinical practices. Also all countries students' mentioned that sometimes, formulation of sentences (tasks) were too long and therefore a little bit unclear in the content of the eMedication Passport, some statements/skills are very similar and could be joined, as it was for the first time, students needed more information to explain criteria.

4th phase of project is ongoing in Autumn semester, when post-evaluation of MCAF test will be conducted. Data collecting of feedback about using eMedicaton Passport ePlatform is on process.

The e-Medication Passport is considered to be a solution to create common quality standards for undergraduate nursing student medication competence in Finland and Baltic Countries. It helps in each partner instituition to improve medication competences of nursing students' and inrease collaboration among education institution and clinical practice placements.

References

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