

PEER REVIEWED

New Optometry Education in Eastern Europe: The four-year optometry program in Moldova augments visual health care

Irene Langeeggen, Jan Richard Bruenech

Abstract

Absence of spectacles and visual aides are both major causes of vision problems and unnecessary blindness. A modern society expects inhabitants to see at any distance and all day long. General education depends on visual capabilities and correct spectacles. Optometry is a young profession in Moldova. The educational program mirrors the Optometry Diploma in Europe. The challenge is to build a sustainable professional optometry program, enabling optometrists to work independently to enhance visual health care. Today the bachelor program aims to graduate students to fulfil the World Council of Optometry's definition of an optometrist.

Keywords

eye health competencies, knowledge transfer, optometry education

Introduction

In July 2021, the UN adopted the resolution "Vision for Everyone: accelerating action to achieve the Sustainable Development Goals."¹ The resolution is recognized by 193 countries and deals with eye health and good vision as an important contribution to accelerating measures to achieve sustainable development. The optometric profession is important in reducing unnecessary blindness caused by missing spectacles and uncorrected refractive errors.²⁻⁴

The society expects you to see and vision is an important sense. Reduced accessibility of spectacles and vision aids are the primary reason of vision problems and unnecessary blindness.⁵⁻⁸ In Moldova, there are 830,000 people with severely reduced vision, of which 19,000 are blind.⁹ Eye health services have a direct impact on sustainability goals.^{10,11} Low-cost countries experience challenges with vision problems affecting general education, professional practice,⁶ illness¹² and quality of life¹³.

There are significant variations in Europe when comparing vision health services and vision aids. This is present in scope of practice of the optometric profession (ECOO Blue Book | ECOO).¹⁴ Norwegian optometrists are authorized to diagnose ocular disorders, use diagnostic medications, and treat children as well as elderly patients. Scope of practice include vision assessment for driving, low vision care, fitting contact lenses including advanced care, health promotion, visual ergonomics, to mention some areas of health responsibilities. Norwegian optometry education follows national guidelines¹⁴ and is accredited according to the European Diploma through the European Council of Optometry and Optics (ECOO).¹⁵ Norwegian bachelor's, master's and doctoral educational programs within optometry are internationally

recognized. The University of South-Eastern Norway (USN) is the only one in Norway with an optometry program. The courses promote a complex professional practice and are highly rated by ECOO (European Diploma in Optometry | ECOO).¹⁴

In 2015, ophthalmologists were the only profession providing eye health care in Moldova and they treated ocular diseases. There were zero registered optometrist.¹⁶ There was a need to strengthen the vision health service and improve access to qualified healthcare personnel with competences in vision examination and prescription of spectacles. The training for the ophthalmologists was at the State University of Medicine and Pharmacy "Nicolae Testemitanu" (MD-USMF). Moldova recognized optometrist in 2015 through the "Clasificatorul Ocupa?iilor Din Republica Moldova, 2014?". However, the country and region did not provide an academic education for optometrists.

Moldova is one of Europe's poorest countries, with reduced resources, limited health services and an aging population. In 2015, the eye health services consisted of 214 ophthalmologists, who were to look after a population of 2.8 million.¹⁷ The aim of the project was to establish an education to improve the population's access to eye health services and vision aids, as well as better vision conditions for students, employees, and safer driving conditions. Through the education, MD-USMF would gain a new health profession education, opportunities for international cooperation and recognition. USN will have the opportunity to contribute with knowledge transfer and an international academic network.

The Norwegian ministry of education presented in 2015 a call through Directorate for higher education and competence (HK DIR)¹⁸ to build capacity of professions between institutions. At USN, staff members have worked to build network and skills in international collaborations.

The Eurasia program of HK DIR was launched in 2015 with the aim of cooperation between educational institutions, increasing respect for human rights, competence building, active student participation and employee exchange. USN and MD-USMF was granted "CPEA-2015/10066 – Moldova – Norwegian collaboration program in optometry. Enhancing primary eye health care in Moldova", a 4-year long project.

This article will describe knowledge transfer within the project and how an innovative ecosystem supported and involved an established optometry program in Norway and one to be developed in Moldova. Aim was to establish an optometry program at a bachelor level which met the European Diploma requirements given by ECOO.¹⁵

Network and collaboration to enhance visual healthcare in Moldova

Norway and other UN countries committed themselves in 2015 to promote and work to achieve the UN's 17 sustainability goals (SDGs) with a focus on education.¹⁹ The goals which deal with poverty, hunger, health, education, equality between the sexes, economic development and environmental considerations must be achieved by 2030. Vision is important to achieve mentioned goals. The UN promote collaboration through SDG #17, with focus on building networks and collaborations. This involves processes that require collective effort from authorities, educational institutions, companies, organizations and other stakeholders at local, national and international level. It emphasizes the importance of establishing strong and effective partnerships to mobilize resources, share knowledge and implement sustainable solutions.

The project aimed to create learning facilities with optometric equipment at MD-USMF and enable teaching of optometry at international level. Teaching and promote research across borders in a cross-cultural environment, became an important assignment for the project members. To avoid misunderstanding, meetings focused on how to avoid cultural and language barriers. We also faced the administrative route of approving a new optometry program, within an established medical university,

MD-USMF health ministry and educational ministry in Moldova. The ecosystem included not only universities, but governmental stakeholders and international professional bodies, like the European Council of optometry (ECOO). The project members created networks nationally and internationally provide knowledge about optometry as a health care profession. Partnerships were essential to enable the formal recognition of the new optometry education within the MD-USMF in Moldova and Ministry of Education.

The World Council of Optometry²⁰ has a definition of the optometrist which presents responsibilities, education and scope of practice in a global perspective.

“Optometry is a healthcare profession that is autonomous, educated and regulated (licensed/registered), and optometrists are the primary healthcare practitioners of the eye and visual system who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis and management of disease in the eye, and the rehabilitation of conditions of the visual system.”

The project has worked according to WCO's definition of optometry, the Vision 2020 resolution²¹ and the UN's sustainability goals.²² A health collaboration agreement between Norway and Moldova was signed in 2014: “MOU Ministry of Health and Care Services of the Kingdom of Norway and the Ministry of Health of the republic of Moldova on the cooperation in the field of health and medical sciences”. The agreement aims to promote cooperation and skills development within health services. The project used this agreement to anchor the overarching aim of exchange of competence and transfer of knowledge, to promote the new optometry program.

The bachelor's program in optometry at MD-USMF was developed in accordance with ECOO's requirements for knowledge, skills and competence for an optometrist. This framework has been established through cooperation between educational institutions and optometric organizations in Europe. The framework together with established subject plans at USN and the medical and ophthalmology education at MD-USMF created the foundation for a new 4-year optometry program. The program allowed for theoretical knowledge, clinical skills and practice, which also met the European Diploma of Optometry. Recognition in Europe was and is important to MD-USMF, to be able to offer an education to students nationally and internationally.

In the beginning of the project period, MD-USMF had only 6-year programs in medicine and pharmacy, education doctors and pharmacists. The challenge by proposing a professional education of 4 years demanded reconstruction of accreditation processes and faculties. Another example of difference in educational level, was the nursing education. The nursing education was at upper secondary level, not at a university level. There was an absence of health educations at the bachelor level. The optometry education became a pilot to proof the need for shorter educational programs.

The optometry program was promoted through MD-USMF committees, at faculty level and centrally at the university boards. The program was discussed and approved by education and health ministries. The program was approved and in 2017 the first nine optometrist students were admitted at MD-USMF.²³ A new faculty was also created to be able to embrace other educations, which should also be raised to university level, for example nursing.

Optometry is an international professional arena and international cooperation must be promoted early in students' education. The project included exchange between the institutions among students at bachelor's (63 students representing both universities), master's (two Norwegian students) and PhD level (two students from Moldova), academic and administrative staff (48 in total).

The optometry program accepted and enrolled 16 students fall of 2017. Since first graduation in 2021, 35 students have graduated as optometrists from MD-USMF.

New opportunities with new education

Increasing competence in vision must be mutual. Establishing a completely new education at another university is demanding. Through the project, USN and MD-USMF have gained insight into administrative routines and requirements for cooperation. It takes years to gain insight into internal routines and procedures, since this is related to trust between staff members. Respect for one's own democracy and service path has been strengthened and challenges shared in the partnership. The democratic processes existing at USN is not dependent on ministers or leadership of the country. The democracy at MD-USMF is influenced by leadership and political movements. Years of collaboration with a focus on mutual respect have provided a good climate for cooperation and respect for differences in approval systems of educational programs. The approval of the new optometry program took only 2 years in Moldova. In Norway, a 4-year timeframe is needed to receive approval from authorities and minister of education.

Optometry in Moldova need role models to explore the need of competences and scope of practice of an optometrist in context of own health care system. Exchange of students and staff members were essential to build common understanding of optometry. USN received two PhD candidates from MD-USMF. The PhD students were ophthalmologists who should teach optometry to optometry students at MD-USMF. The unfortunate situation of war and travel restrictions influenced the progress of studies. Graduation plans are for 2025. The PhD candidates promoted research collaboration and skills development. During the collaboration period, several articles²¹ and conference papers have been presented, both nationally and internationally.

The Norwegian bachelor students took part in clinical activities, both as observers at the eye ward. And as teachers for optometry students in Moldova. They should gain perspectives on the role of the optometrist and the requirements for competence to meet people with vision problems in different situations. The experiences increased clinical understanding, but also the meaning of human dignity and dignified living conditions, when caring for peoples' vision. One example was when USN three final year bachelor students and two master students in optometry, together with students from Moldova, assessed vision and provided spectacles to 60 men serving a life sentence in a prison with no attention to vision.²⁴ Alongside of any screening in a community or prison setting, students from both countries worked side-by-side. On exceptional advantage to this project, was to collaborate with Help Moldova or I-Care, Norway, which funded one Norwegian optometrist to travel to Moldova. His aim was to improve low vision care, USN and MD-USMF, to enhance education.²⁵

Going forward, exchange will be ensured through Erasmus Global + funds which were granted in 2021-to 2024.

Knowledge transfer through teaching, observation and experience was useful for showing the competency level of Norwegian and international optometry. The optometry students and lecturers from MD-USMF were taught in Norway, as well as participated in an international vision research conference hosted by USN The optometry program at MD-USMF's ophthalmology department is mainly taught by ophthalmologists. The exchange between professionals from Moldova and Norway, enhanced the scope of practice and acknowledgement of optometry. There is no role model as an optometrist in Moldova, except for a Norwegian optometrist who works extensively with visual rehabilitation of the visually impaired.²⁵ Optometrists must develop professional scope of practice and they need to work with ophthalmologists to care for the patient.

Optometry is a demanding field when it comes to equipment. Through the project, equipment was

purchased for teaching and guidance, that is, several vision examination rooms were arranged at the ophthalmology and optometry department at MD-USMF. This also provided the opportunity for ophthalmologist to use the equipment for patient care. Teaching benefited from students meeting patients from day one. Early patient care experiences were enhanced from day one. Ophthalmologists also recruited patients for demonstrations and grand rounds. This was possible since teaching facilities of the optometrists were located within the facilities of the eye ward.

New optometrists must contribute to new knowledge, skills and competence to prevent eye disorders and provide eye health care to the population. The optometric program needs recognition, acknowledgement and support to enable young students to become optometrists. These young optometrists face the challenge of building a professional organisation and to promote the education in international fora. They must create a profession that is not only known by 75% of the population, but also well recognized in the country.⁹ ECOO are well aware of the education of 240 ECTS and its aim to meet the demands of the European Optometry diploma.¹⁵

Conclusion

The aim of this multifaceted ecosystem including two international universities, was to establish an international recognized optometry program in Moldova. The keys to success were knowledge transfer across borders and building optometric professional awareness through role models. All parties involved have focused on the values of sustainable education and mutual respect. Better vision promotes better health, education and opportunities for collaboration.

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Irene Langeeggen [Irene.Langeeggen@usn.no], Associate Professor and Project Manager of the Moldova – Norway optometry collaboration project, University of South-Eastern Norway.

Jan Richard Bruenech [Jan.Richard.Bruenech@usn.no], Professor and Project Team Member of the Moldova- Norway optometry collaboration project, University of South-Eastern Norway.