



American University of Armenia

Հայաստանի Ամերիկյան Համալսարան

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CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT

SCHOOL OF PUBLIC HEALTH

Garo Meghriyan Institute for Preventive Ophthalmology

2014 Annual Report



Prevent Avoidable Blindness

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Executive Summary

The Garo Meghriqian Institute for preventive Ophthalmology (Meghriqian Institute) is part of the Center for Health Services Research and Development (CHSR) of the School of Public Health, American University of Armenia (AUA). Meghriqian Institute's mission is to prevent avoidable blindness in Armenia.

This Annual Report highlights the main activities and accomplishments of the Meghriqian Institute in 2014, including eye screenings among socially disadvantaged children and among adult population in Hadrut Artsakh, ophthalmic research among people with cataract surgery, paper publication in the Journal of Aging and Mental Health and abstract presentation at the European Public Health Conference.

In March 2014 Meghriqian Institute launched its annual eye screening program among socially vulnerable children. The staff of the Meghriqian Institute visited Achapnyak Social Care Center and examined 98 children out of 107. Free eye glasses and medication were distributed to the children in need.

In June 2014 Meghriqian Institute published a paper on visual impairment and depression among socially vulnerable older adults in Armenia in the international peer-reviewed Journal of Aging & Mental Health. The found that having visual impairment, living in retirement homes and having at least one non-communicable disease were independent predictors of depression among socially vulnerable older adults in Yerevan.

Meghriqian Institute completed a project aimed at reducing the incidence of avoidable blindness and visual impairment among socio-economically disadvantaged population in Hadrut province of Artsakh in July 2014. Meghriqian Institute implemented free eye screenings among 251 people living in Hadrut and distributed 168 eye frames to those in need.

In October 2014 Meghriyan Institute celebrated the World Sight Day by launching the project “Visual impairment and vision - related quality of life among patients with cataract surgery in Sevan Regional Ophthalmic Unit (ROU), Gegharkunik marz”. The project included free eye screenings among patients who underwent cataract surgery at ROU in Sevan, and the assessment of their vision-related outcomes and quality of life. Meghriyan Institute screened 211 patients in 2014. The screenings have been completed in Sevan, Gavar, Martuni, Vardenis, and Tchambarak towns of Gegharkunik marz as well as Hrazdan and Charentsavan towns of Kotayk marz.

The researchers at Meghriyan Institute submitted the abstract to the EUPHA conference entitled “Refractive errors and nutritional status among socially vulnerable school children in Yerevan, Armenia, in 2011”. The abstract was accepted for pitch presentation. Meghriyan Institute Project Coordinator presented the abstract in the EUPHA conference. The abstract was published in the European Journal of Public Health in 2014.

Meghriyan Institute continued its collaboration with the Lions Regional Ophthalmic Unit (ROU) in Sevan in organizing outreach visits to the poorest and most remote villages of Gegharkunik and Tavush marzes. These visits helped to detect eye pathologies among those who have low access to ophthalmic services. Overall, 109 patients underwent free ophthalmic examinations by the Meghriyan Institute. They received free ophthalmic consultation; those who needed more advanced care were referred to the ROU.

In 2014 Meghriyan Institute provided eye screenings to 669 patients in Armenia and Artsakh, and distributed 6 free eye glasses and 168 eye frames to the population in need.

Introduction

The Garo Meghriyan Institute for Preventive Ophthalmology (Meghriyan Institute) is part of the Center for Health Services Research and Development (CHSR) of the School of Public Health, American University of Armenia (AUA). Meghriyan Institute's mission is to prevent avoidable blindness in Armenia.

The main objectives of the Meghriyan Institute are to:

- Conduct scientific investigations of ophthalmic epidemiology to increase understanding of eye disease in the community;
- Link ophthalmologic services with expertise in organizing, financing and delivery of services to increase the utilization of ophthalmologic care in Armenia;
- Educate eye care providers and the general public on scientific advances in detecting, preventing, and treating eye disease and in translating these advances into nationwide clinical practice;
- Establish an ophthalmic care and prevention network to expand service delivery to underserved populations in need of affordable, accessible, and high quality eye care services for prevention and treatment of blindness at all levels;
- Develop partnerships with organizations that are interested in blindness prevention and are capable of furthering the achievements of Meghriyan Institute's goal;
- Train the future professionals for blindness prevention activities in Armenia;
- Establish a regional blindness prevention network for the Caucasus, emphasizing underserved areas and minority populations.

This report highlights the main activities and accomplishments of the Meghriyan Institute in 2014.

Activities and accomplishments

1. Meghrigian Institute completed annual eye screenings among socially disadvantaged children

In March 2014, AUA's Garo Meghrigian Institute for Preventive Ophthalmology (Meghrigian Institute) launched its annual eye screening program among socially vulnerable children.

The staff of the Meghrigian Institute visited Achapnyak Social Care Center, which currently serves 107 children of school age. Ninety eight children participated in detailed eye screenings. Out of them, 15 children were found to suffer from refractive errors including nearsightedness, farsightedness, and astigmatism. Six children were prescribed eye glasses which were distributed to them for free by the Meghrigian Institute. Other eye conditions such as infections, allergic conjunctivitis, and accommodation spasm were diagnosed in 11 children at the Center. All children with eye diseases received medical assistance from the Meghrigian Institute.





2. Garo Meghrigian Institute for Preventive Ophthalmology Published a Paper on Visual Impairment and Depression Among Socially Vulnerable Older Adults in Armenia in the International Peer-reviewed Journal of Aging & Mental Health

Aida Giloyan, MPH (2007), Research Associate/Program Coordinator of Meghrigian Institute of the AUA School of Public Health (AUA SPH), Tsovinar Harutyunyan, MPH, PhD, Assistant Professor of the AUA SPH, and Varduhi Petrosyan, MS, PhD, Associate Professor and Associate Dean of the AUA SPH published an article “Visual impairment and depression among socially vulnerable older adults in Armenia” in the Journal of Aging & Mental Health in June, 2014. The article investigates the link between visual impairment and depression among socially vulnerable older adults in Yerevan, Armenia. The link between visual impairment and depression is important, because depression in older adults is a widespread but largely under-recognized and under-treated medical condition.

The study found that having visual impairment, living in retirement homes and having at least one non-communicable disease were independent predictors of depression among socially vulnerable older adults in Yerevan. The prevalence of visual impairment was 13.3% among the residents of retirement homes and single older adults living in households who were included in the study sample. Almost 4.0% (11) of the study participants were blind. The rate of visual impairment among the residents of retirement homes was substantially higher than the rate among those who lived in households. The study concluded that timely screenings for eye

problems in vulnerable population groups could facilitate early detection of visual impairment and helps to prevent visual loss and associated mental health problems in Armenia and other countries with similar background.

The article is available at:

<http://www.tandfonline.com/doi/pdf/10.1080/13607863.2014.920298#.U5ofqvmSyhc>

3. Meghrigian Institute Completed Eye Screenings among Adult Population in Hadrut Province of Artsakh

In July 2014, AUA's Garo Meghrigian Institute for Preventive Ophthalmology completed a project aimed at reducing the incidence of avoidable blindness and visual impairment among socio-economically disadvantaged population in Hadrut province of Artsakh. This project targeted population living in Hadrut, as well as population living in Ukhtadzor, Togh and Tumi villages. A total of 251 patients underwent detailed eye examination and received free ophthalmic consultation; 168 eye frames were distributed to those in need. Meghrigian Institute plans to have eye screenings among people living in other regions of Artsakh such as Askeran, Martuni, Martakert and Shushi in the coming years.





3.1 Visual impairment and vision related quality of life among population living in Hadrut, Nagorno Karabakh (Artsakh)

The project team conducted a cross-sectional interviewer-administered survey along with free eye screenings among adult residents of Hadrut to explore visual impairment and vision related quality of life among adult population living in Hadrut, NGK. A total of 251 residents participated to the project. Face to face interviews with adult population living in the target areas were conducted using a structured questionnaire containing questions about demographic data, education, socio-economic status, marital status, eye disease history, non-communicable diseases, use of eye care services and vision related quality of life. To assess vision-related quality of life the investigators used National Eye Institute Visual Functioning Questionnaire – 25 (NEI VFQ-25). The research team members translated the instrument into Armenian. It has several subscales including General Health, General Vision, Near Vision, Distance Vision, Driving, Ocular Pain, Role Difficulties, Dependency, Social Function, Mental Health, Color Vision and Peripheral Vision.

The study team is currently working on the data analysis and reporting. The findings will be described in the paper “Visual impairment and vision related quality of life among population living in Hadrut, Nagorno Karabakh”, to be submitted to the Journal of Ophthalmic Epidemiology in 2015.

4. Celebration of World Sight Day (WSD) 2014

Meghriyan Institute Focuses on Vision Related Quality of Life

Eye examinations among patients who underwent cataract surgery at Sevan Regional Ophthalmic Unit in Gegharkunik marz.

In October 2014, Meghriyan Institute celebrated the World Sight Day by launching the project “Visual impairment and vision - related quality of life among patients with cataract surgery in Sevan Regional Ophthalmic Unit (ROU), Gegharkunik marz”. The project included free eye screenings among patients who underwent cataract surgery at ROU in Sevan, Gegharkunik, and assessment of their vision-related outcomes and quality of life. Meghriyan Institute screened 211 patients. Meghriyan Institute screened 211 patients in 2014. The screenings have been completed in Sevan, Gavar, Martuni, Vardenis, and Tchambarak towns of Gegharkunik marz as well as Hrazdan and Charentsavan towns of Kotayk marz.

World Sight Day (WSD) is an annual day of awareness to focus global attention on blindness and vision impairment. This year, the “call to action” for World Sight Day has been “No more avoidable blindness”. Since 1999, Meghriyan Institute has focused on eliminating preventable blindness in Armenia. The Institute has been involved in promoting World Sight Day through a number of activities, including eye screenings among socially vulnerable children and older population living in retirement homes and border villages; delivering educational programs to ophthalmologists, ophthalmic nurses, endocrinologists and primary care providers; and donating ophthalmic equipment to ophthalmic offices of primary care facilities in Gegharkunik marz.





4.1 Social support, vision related quality of life and visual impairment among people with cataract surgery at Sevan Regional Ophthalmic Unit (ROU)

Vision loss or blindness is a major public health problem worldwide. The leading causes of chronic blindness include cataract, glaucoma, age-related macular degeneration, corneal opacities and diabetic retinopathy. The burden of blindness is not distributed equally throughout the world: the least developed countries carry the largest portion of avoidable blindness. More than 90% of the visually impaired people in the world live in developing countries, particularly in rural areas of those countries. Blindness decreases quality of life and has great impact on socio-economic development of individuals and society.

Cataract is the leading cause of blindness globally and surgery is the only known measure to deal with it effectively. It has been established that those with poor vision, following cataract surgery in low and middle income countries, are less likely to have an improved quality of life.

Meghrigian Institute for Preventive Ophthalmology (GMIPO) conducted a study to assess vision-related quality of life (VRQL) and visual outcome among patients who underwent cataract surgery at Sevan Regional Ophthalmic Unit in 2012-2013.

The project team conducted a cross-sectional interviewer-administered survey along with free eye screenings among patients who underwent cataract surgery from 2012 to 2013 at Sevan ROU. A total of 211 residents participated in the study to date. About 79 patients from Yerevan will be screened by Meghrigian Institute in 2015. Face to face interviews with adult population living in the target areas were conducted using a structured questionnaire, which consisted of two parts. First part included questions about demographic data, education, socio-economic status, disease history, general health, comorbidities, marital status, employment status, smoking and alcohol consumption, receiving and giving social support; health related quality of life (SF-36) and vision related quality of life (NEI VFQ-25). To assess receiving social support the team used Medical Outcome Study Social Support (MOS-SS) scale (short version, 8-item). Giving social support was measured by a 2-way social support scale (2-way SSS). To assess vision-related quality of life in patients with cataract surgery National Eye Institute Visual Functioning Questionnaire – 25 was used. The study team translated the instrument into Armenian. It has several subscales including General Health, General Vision, Near Vision, Distance Vision, Driving, Ocular Pain, Role Difficulties, Dependency, Social Function, Mental Health, Color Vision and Peripheral Vision.

The study is in data collection and data entry stage. The results will be described in the paper “Social support, vision related quality of life and visual impairment among people with cataract surgery at Sevan Regional Ophthalmic Unit (ROU)”, to be submitted to the Journal of Investigative Ophthalmology and Visual Science in 2015.

5. Presentation at the European Public Health Conference 2014

The research team of the Meghrigian Institute submitted the abstract to the European Public Health Conference entitled “**Refractive errors and nutritional status among socially vulnerable school children in Yerevan, Armenia**”. The abstract was accepted for pitch presentation which was delivered by Aida Giloyan, MD, MPH. The abstract was later published in the European Journal of Public Health in 2014.

Published abstract: Giloyan A, Petrosyan V. Refractive errors and nutritional status among socially vulnerable school children in Yerevan, Armenia. European Journal of Public Health. Volume 24, Supplement 2, page 69, Oxford University Press, 2014.

Presentation: Giloyan A, Petrosyan V. Refractive errors and nutritional status among socially vulnerable school children in Yerevan, Armenia. 7th European Public Health Conference. Glasgow, Scotland, November 19-22, 2014. [Pitch presentation]

6. Lions Regional Ophthalmic Unit

The Meghrigian Institute continued its partnership with the Lions Regional Ophthalmic Unit in Sevan, established earlier through the joint efforts of the Meghrigian Institute and the Ararat Lions Club (ALC), and funded by the Lions Club International Foundation-LCIF. Since its establishment, this Unit has served around 26,343 people and performed 2,802 surgeries. Meghrigian Institute is responsible for preparing annual reports to LCIF headquarters.

The Meghrigian Institute collaborated with the Lions Regional Ophthalmic Unit (ROU) in Sevan organizing outreach visits to the poorest and most remote villages of Gegharkunik and Tavush marzes. These visits helped to detect eye pathologies among those who have low access to ophthalmic services. In total, 109 patients underwent ophthalmic examinations in 2014. Various eye diseases were detected among screened population such as glaucoma, cataract, conjunctivitis (chronic & allergic), diabetic or hypertonic retinopathy, and eye tumor. All patients diagnosed with an eye disease received medical consultation and eye frames. In addition, the patients having diseases other than refractive error or presbyopia were referred to the ROU in Sevan for further diagnosis and treatment.

7. 2014 in numbers

Meghrigian Institute provided eye screenings to 669 patients in Armenia and Artsakh, and distributed 6 free eye glasses and 168 eye frames to the population in need in 2014.