



Strategies to Improve Vaccination of Aging Adults in Latin America

Project Report: Updated Sept. 5, 2017

**Workshop on the Vaccination of Aging Adults in Latin America
Americas Health Foundation
Lima, Peru, April 22, 2017**

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INTRODUCTION

Infectious diseases continue to represent an important cause of morbidity and mortality in adults older than 60 years in Latin America. A significant number of cases are preventable by vaccination.

Population aging is a public health challenge. Available data and estimates by the World Health Organization on the trends in demographic changes indicate a clear increase in the geriatric population. For instance, in the early 1990s, this segment represented 9.2% of the total population, and in 2013 it increased to 11.7%. Estimates predict that by 2050 almost one fourth of the global population will be made up of older adults.

The demographic changes described above result in a greater number of the geriatric-age population demanding health services due to immunosenescence, comorbidity and physiological frailty, which makes the population more vulnerable to various complications of acute diseases, particularly those of infectious origin. Such is the case with influenza virus infection, post-influenza bacterial respiratory infections mainly caused by pneumococcus and commonly associated with severe outcomes, which are the principal cause of mortality ($\pm 70\text{--}90\%$) in patients with severe influenza.

Aging that is healthy and free of disability is closely linked to childhood health and health conditions as young adults. A life-long immunization program needs to be implemented. Vaccination at any age in life is associated with a reduction in the burden of vaccine-preventable diseases, due to community, or "herd," immunity.

The gap in vaccination at middle-age (particularly among health workers) has a significant impact on subsequent health, especially in non-vaccinated populations of older adults.

The general objective of the workshop convened by the Americas Health Foundation (AHF) was to recognize vaccination of aging adults as an issue requiring urgent attention from a public health perspective in Latin America. The specific objectives were to establish a conceptual framework as an expert group on vaccination in aging adults; discuss the current state of vaccination programs for aging adults in the region and the barriers and obstacles in reaching goals; review the most appropriate way to measure the attainment of vaccination goals for this age group in the various countries; produce recommendations for developing strategies to strengthen vaccination programs for aging adults; and describe the magnitude of the challenge in Latin America.

WORKSHOP PARTICIPANTS:

Ana Paulina Celi	President of the Asociación Panamericana de Infectología (Pan-American Association of Infectious Disease) Vaccines Committee of the Asociación Panamericana de Infectología	Ecuador
Jaime Torres	Head of the Infectious Disease Section, Instituto de Medicina Tropical (Institute of Tropical Medicine) Universidad Central de Venezuela Moderator for ProMED-ESP, International Society of Infectious Diseases	Venezuela
Eduardo Gotuzzo	MD, FACP, FIDSA Lead Professor of Medicine. Universidad Peruana Cayetano Heredia (UPCH) Director of the Alexander von Humboldt Institute of Tropical Medicine, UPCH	Peru
Renato Kfoury	Infectious Disease Specialist Vice President, Brazilian Society Immunization	Brazil
Diego García	MD Pediatrician Universidad del Rosario de Colombia Immunizations Expert	Colombia
Ernesto Isaac Montenegro Renoier	Epidemiologist of the Gerência Técnica de Incorporação Científica e Normatização (Technical	Brazil

	Administration of Scientific Inclusion and Standardization) General Coordinator of the Programa Nacional de Imunizações (National Immunizations Program) Departamento de Vigilância das Doenças Transmissíveis (Communicable Diseases Surveillance Department, DEVIT) Secretariat of Health Surveillance, Ministry of Health (SVS/MS)	
Juan Del Canto y Dorador	Ministry of Health Head of Older Adulthood	Peru
Cristian Biscayart	Infectious Disease Specialist Dirección de Control de Enfermedades Inmunoprevenibles (Administration for the Control of Vaccine-Preventable Diseases) Ministry of National Health	Argentina
Alejandra Macchi	Infectious Disease Specialist Coordinator, Infectious Disease Service of Hospital Federico Abete Infectious Disease Specialist, Sanatorio Las Lomas Member of the Steering Committee and Vaccination Commission of SLAMVI	Argentina
Paola Casas Vásquez	Institute of Gerontology, Universidad Peruana Cayetano Heredia	Peru
Carlos Espinal, Scientific Adviser, AHF	M.D. Director Global Health Consortium Department of Health Promotion & Disease Prevention Robert Stempel College of Public Health & Social Work Florida International University	US
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SUMMARY OF PRESENTATIONS

Below are the most relevant aspects of the presentations and discussions carried out by the participants at the event:

“Changes in the Population Dynamics of Latin America: The Impact on Chronic Diseases” Carlos Espinal

- Changes in the structure of the population pyramid also impact the profile of chronic diseases in Latin America.
- The dynamics of demographic changes has altered the public-health paradigm, reflecting steady increases and epidemiological transitions associated with non-communicable diseases and chronic disorders.
- Burden of health
 - There is a clear trend worldwide toward population aging, with an expected 2.1 billion people > 65 years by 2050. The fastest growing segment of the population will be those > 80 years. In Latin America, this trend has been figuratively described as the arrival of the “silver tsunami.” By way of illustration, it is stated that in 2015, 48.8% of deaths in Mexico occurred in individuals 70 years of age or older. There is an increasing prevalence of chronic diseases due to diabetes and cardiovascular disease. Inevitably, changes in the population dynamics will pressure an increased demand for health services.
 - The new paradigms resulting from changes in the worldwide population structure include efforts to reduce disease, morbidity (disability) and mortality in the older adult population, in addition to providing more years to life, adding in turn a better quality of life and well-being.
 - There is a trend toward disorganized urbanization in Latin America in which 80% of the current population lives in urban centers. This phenomenon of urban overpopulation in the region is associated with poor urban planning and inadequate infrastructure. Internal displacement and regional migration play a significant role in this regard.
 - Current average per capita global health investment is \$1,060, and this is lower in some countries in our region, where on average only between 6.0% – 8.0% of the GIP is invested in health. Consequently, more health prevention programs are needed; otherwise, there will be a lack of investment to cover the growing needs.
 - High investment in spending does not necessarily translate into increased life expectancy, as illustrated in the case of the United States, which invests 17% of its GDP, reflecting the system's inefficiency.
 - Accumulated losses in Latin America due to chronic diseases, cancer, diabetes and mental disorders are estimated to be at \$46 trillion.
 - In Colombia, Mexico, Argentina and Brazil, more than \$13.540 million is spent on costs associated with cardiovascular diseases, diabetes and cerebrovascular accidents.

- Vaccination can reduce the use of unnecessary antibiotics and microbial resistance.
- Worldwide, of the 57 million deaths in 2008, 36 million were due to non-communicable diseases.
- The economic return and burden of disease prevention by vaccination in aging adults needs to be determined.
- Universal health, key aspects: covering people, covering services, and financial protection.
- Challenges: new demographic and epidemiological patterns, increasing costs, compartmentalization of health investment, empowerment of the people.
- How to accelerate the adoption of new technologies in disease prevention.

“Review of Recommendations for Adult Vaccination Published by the Asociación Panamericana de Infectología” Ana Paulina Celi

- Presentation and discussion of the updated recommendation on the 2017 *Manual de Vacunación en el Adulto* (Guide for Adult Vaccination) by the Asociación Panamericana de Infectología (API) on the vaccination of this population age-group.
- It was suggested to make an active online edition available, which could be quickly updated according to changing epidemiological situations and new recommendations, incorporating as well considerations on the vaccination of travelers in response to new evolving situations.
- Various immunization schedules in the region were examined, taking into account the general status of vaccination for adults and aging adults, and the specific status of those who are immunocompromised, hemato-oncologic patients, and those who use biologic drugs that may make them immunocompromised, which is a frequent occurrence among the elderly.
- The increase in the prevalence of HIV in the population 50 years and older in Latin America was highlighted.

“Impact of Vaccination in Aging Adults on Hospitalization due to Infectious Diseases in General and Vaccine-Preventable Diseases” Jaime R. Torres

- Information was presented on the impact of proper vaccine coverage against influenza and pneumococcal disease on the reduction of the use of antibiotics in general, as well as on the reduction of the emergence of resistance due to lower use of antibiotics. In addition, benefits on the prevention of hospitalization and deaths resulting from vaccination against influenza and pneumococcal disease in the population of aging adults were discussed.
- The need to review the denominators in the estimation of regional coverage rates (by PAHO) was raised.

- More data is needed in Latin America regarding the impact of vaccination in adults in general and in aging adults in particular.
- It is important to consider issues per the different regions within each country.

“A road map proposal to strengthen vaccination programs for aging adults in Latin America” Renato Kfour

- With regard to the situation in Brazil, the dissemination of information and recommendation guides by various associations to their members, and educational efforts for the public and health representatives was presented. (Information is available on the website of the Sociedade Brasileira de Imunização, www.sbim.org.br).
- How to approach the various medical and scientific societies in order to develop cooperative action and implement vaccination efforts among the various specialties was discussed.

“A Road Map Proposal to Strengthen Vaccination Programs for Aging Adults in Latin America by Country” Eduardo Gotuzzo

- Options were proposed for getting physicians of various specialties to participate in aging adult vaccination efforts.
- It is estimated that approximately 22% of malignant neoplasms in developing countries are associated with infectious diseases that could benefit from vaccination.
- The significance of losses related to family spending and the loss of productivity due to cases of vaccine-preventable infections was highlighted.
- Specifically, aspects related to the vaccination of yellow fever in aging adults was discussed. The risk of vaccine-associated viscerotropic disease in men older than 60 years of age is low; most cases are seen in women between 25-50 years. It is important to understand the weight of recent occurrences in Brazil.
- In Brazil, persons older than 60 years are not being routinely vaccinated against yellow fever. The adoption of special considerations according to the magnitude of the risk and the potential benefit is recommended.
- Contingency plans to use subcutaneous fractional doses without reinforcement depending on the course of the epidemic.
- The need to examine separately the case of travelers and of residents in areas of transmission in older adults. The recommendations for primary prevention against yellow fever among travelers > 60 years are still unclear.

CONCLUSIONS

- The need to discuss the impact of pediatric vaccination with 10-valent versus 13-valent pneumococcal vaccine in Latin America on the occurrence of herd immunity and potential impact in the elderly population was raised.
- A review of the recommendations made in the API's 2017 *Manual de Vacunación del Adulto* (Adult Vaccination Guide) was suggested, which recommends vaccinating at-risk patients against pneumococcal disease only when they have more than one comorbidity.
- A paradigm shift from health spending to health investment is needed.
- The controversies and persistent resistance due to disinformation surrounding the advisability of aging adult vaccination was discussed. In Brazil, the Ministries of Health and Education have joined in promoting general vaccination and the vaccination of special groups.
- Concentration on some of the emblematic vaccines available, such as the flu vaccine, to improve coverage levels and demonstrate the potential benefits was recommended, in order to encourage the introduction of new vaccines to this population.
- The relationships between the academic institutions and health authorities must be strengthened, in order to disseminate information on vaccination coverage and missed opportunities.
- Information on vaccination in adults must be included in the academic training curricula of the various health professions.
- Missed opportunities: What strategies can be used to minimize them? Improve enforcement of adult vaccination standards in work environments.
- Possibility of adding an electronic vaccination card or booklet for aging adults. Offer the option of other vaccines to aging adults during flu vaccination campaigns.
- The need to harmonize the recommendations with national vaccination schedules, for which the health authorities need to be encouraged to adopt this opportunity. The possibility of more extended use of open radio and television as a means of dissemination in the communication strategies aimed at the aging adult population. The inclusion of vaccines as a means of improving quality of life and prolonging life with well-being, in order to encourage immunization of this population. Highlight the benefits of vaccination versus the potential risks.
- Develop mechanisms to get physicians who are not specialists in infectious disease and pediatricians to prescribe the vaccines (led by medical societies of various specialties).

- Create joint recommendations with other societies and specialties, including residents/interns and health professionals in general.
- Push for recommendations on vaccination biosafety to be regulated and enforced, and that they be included in precautionary measures through effective immunization of workers against vaccine-preventable diseases, as well as in prophylaxis with immunoglobulins and medications in the indicated cases. The recommendations must also be promoted as a fundamental component of biosafety standards in the region.
- Include content on the importance of adult vaccination in the training curricula of health professionals.
- Introduce educational materials and mass communication to the consumers of health care services.
- Generate strategies aimed at involving civil society in order to increase the community's participation in activities that promote immunization efforts.
- Create alliances with religious institutions to improve penetration in the community of educational information on vaccination in aging adults.
- Develop mechanisms that allow for the empowerment of the community to get it to participate more actively in decision-making and in the development of strategies aimed at improving immunization levels in the adult population.
- Foster relationships with Associations and Chambers that bring together administrators of geriatric institutions in order to improve vaccine coverage or to sponsor the creation of health regulations to govern these efforts.
- Aim to improve access to personalities with high media impact at the regional or national level to promote vaccination efforts.
- Include pensioner and retiree associations.
- Use the Internet and social networks to directly inform the public and more widely promote vaccination through videos, news, statements, etc.

RECOMMENDATIONS

As a result of the workshop, the following recommendations aimed at promoting aging-adult immunization programs in Latin America were made:

1. Advocate for legislative representatives to change laws or legal regulations to include activities or recommendations that promote the vaccination of this age group.
2. Ensure financing for vaccination programs for aging adults.
3. Include the topic of vaccination in aging adults on the political agendas of the countries.
4. Evaluate the status of vaccination coverage in aging adults through various methodologies and surveys.

5. Encourage discussion in workshops of the potential impact of vaccines on antimicrobial resistance reduction.
6. Increase knowledge about the way the vaccine coverage rates currently used by countries and international organizations in the region are calculated.
7. Improve access for aging adults through messages aimed at the family and create opportunities for vaccination within this population.
8. Produce information about the burden of disease of vaccine-preventable diseases in adult and aging adult populations.
9. Pinpoint the most convenient place to vaccinate aging adults according to the conditions of each country. Define possible strategies for increasing populations of aging adults, keeping in mind their limited mobility, disabilities, etc.
10. Strengthen the paradigm of vaccines as a right and as a strategy to contribute toward a better quality of life and add life to one's years.
11. Request that measurements be adopted for vaccination levels in aging adults and their impact in the countries of the region.
12. Produce data on the impact of vaccination with pneumococcal conjugate vaccine in children on the pneumococcal burden of disease in adults in the region.
13. Form a task force to create a baseline for the levels of vaccination coverage in aging adults by conducting a survey in various countries.
14. Provide greater visibility of the need for vaccination in aging adults in general and at the political level.
15. In light of the limited information available on the impact of vaccine-preventable diseases in aging adults in the region and the true vaccine coverage in this population, it was considered that generating data on it through studies designed for this purpose was a priority.
16. The involvement of representatives of civil society in the decision-making and implementation process of vaccination programs for aging adults is recommended. Civil society must participate in any decision-making for the benefit of aging adults.
17. The creation of a task force is recommended to continue the analysis of the status of vaccination in aging adults in the region, its coverage and impact, recommendations in the countries, and to promote advocacy efforts to expand programs for aging adults. This task force must work with scientific societies, civil society and Ministries of Health to develop and set forth coherent policies on vaccination in aging adults.