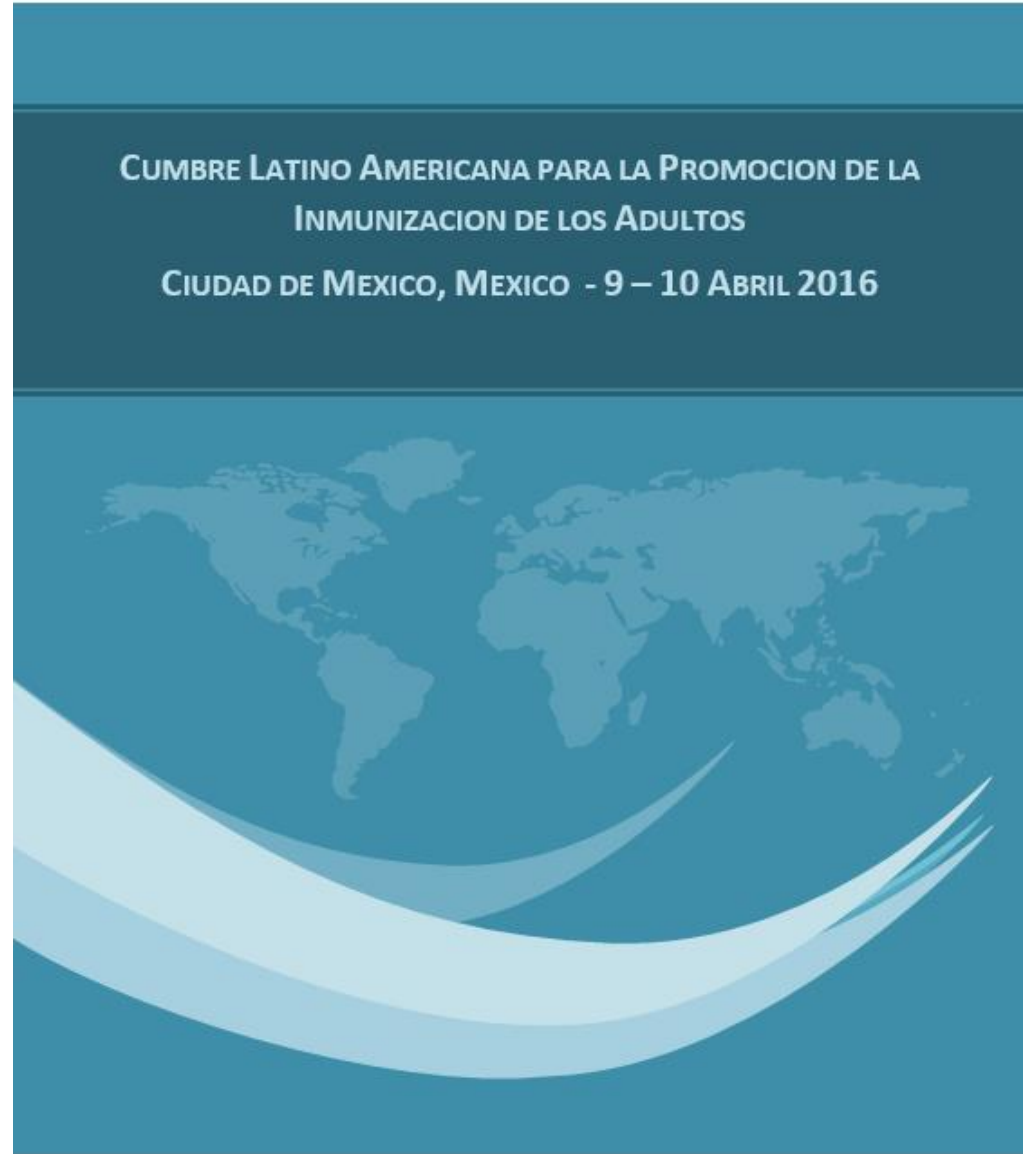
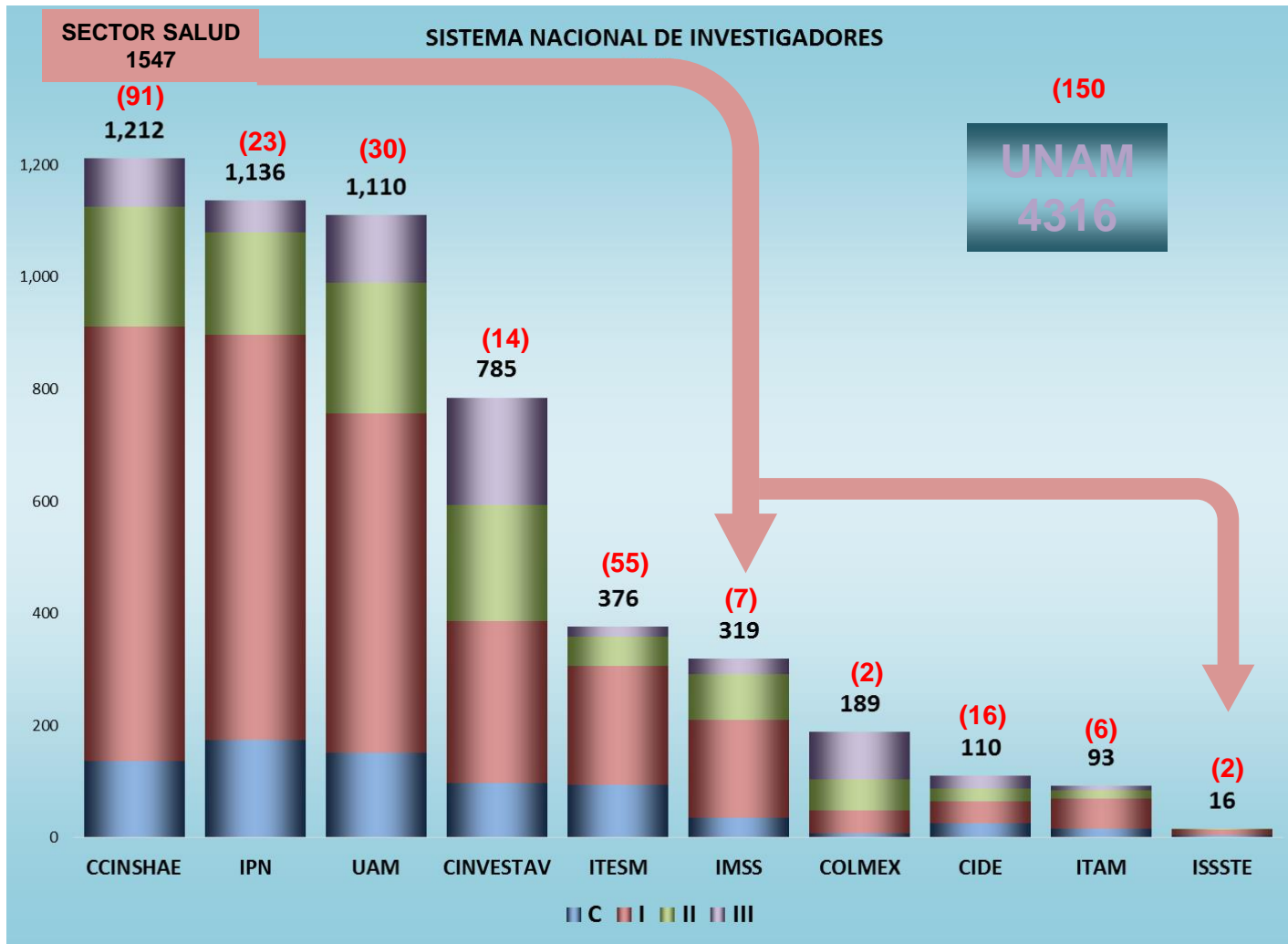


# Vaccination Status with a Life Course Perspective in Latin America: Adults and Older Adults

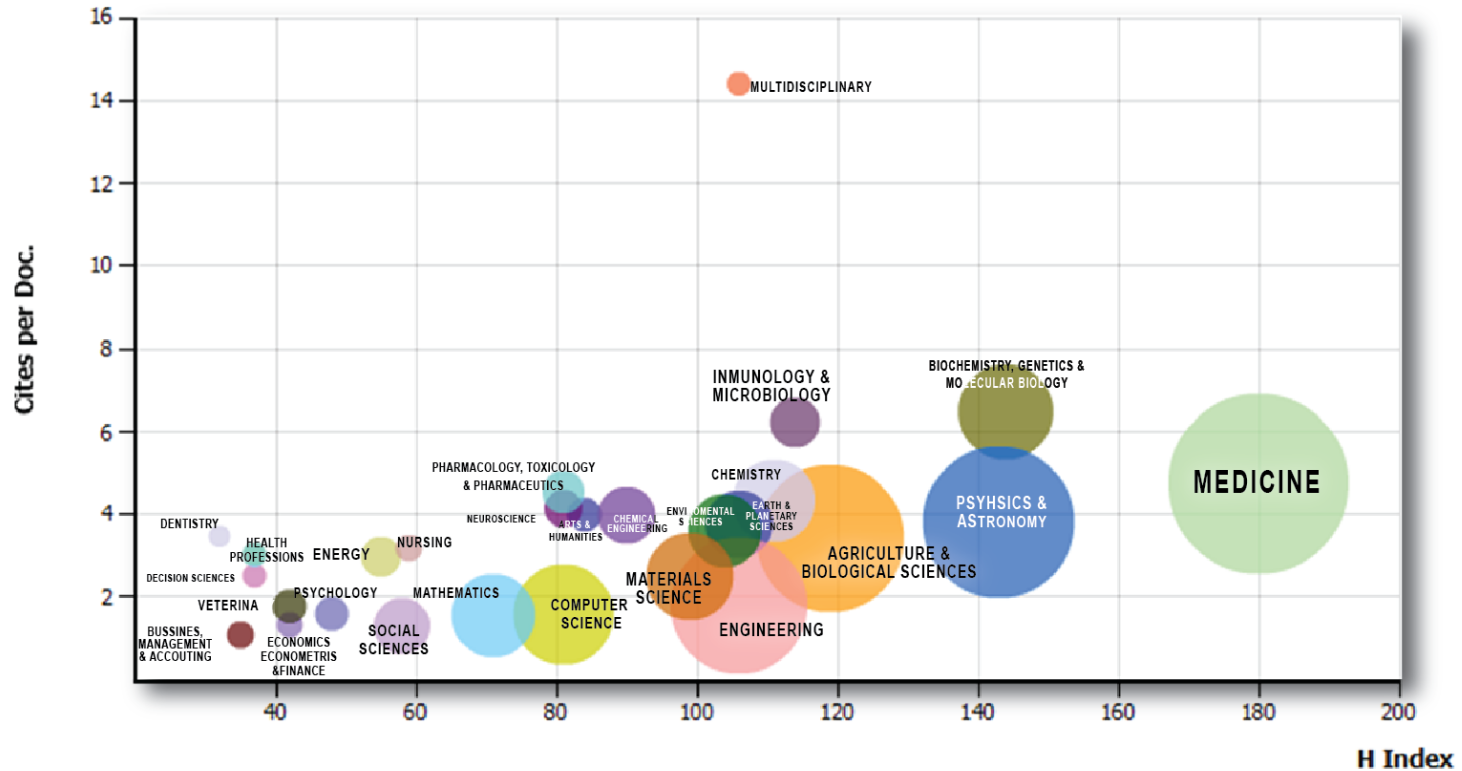
Dr. Luis Miguel F.  
Gutiérrez Robledo

CUMBRE LATINO AMERICANA PARA LA PROMOCION DE LA  
INMUNIZACION DE LOS ADULTOS  
CIUDAD DE MEXICO, MEXICO - 9 – 10 ABRIL 2016

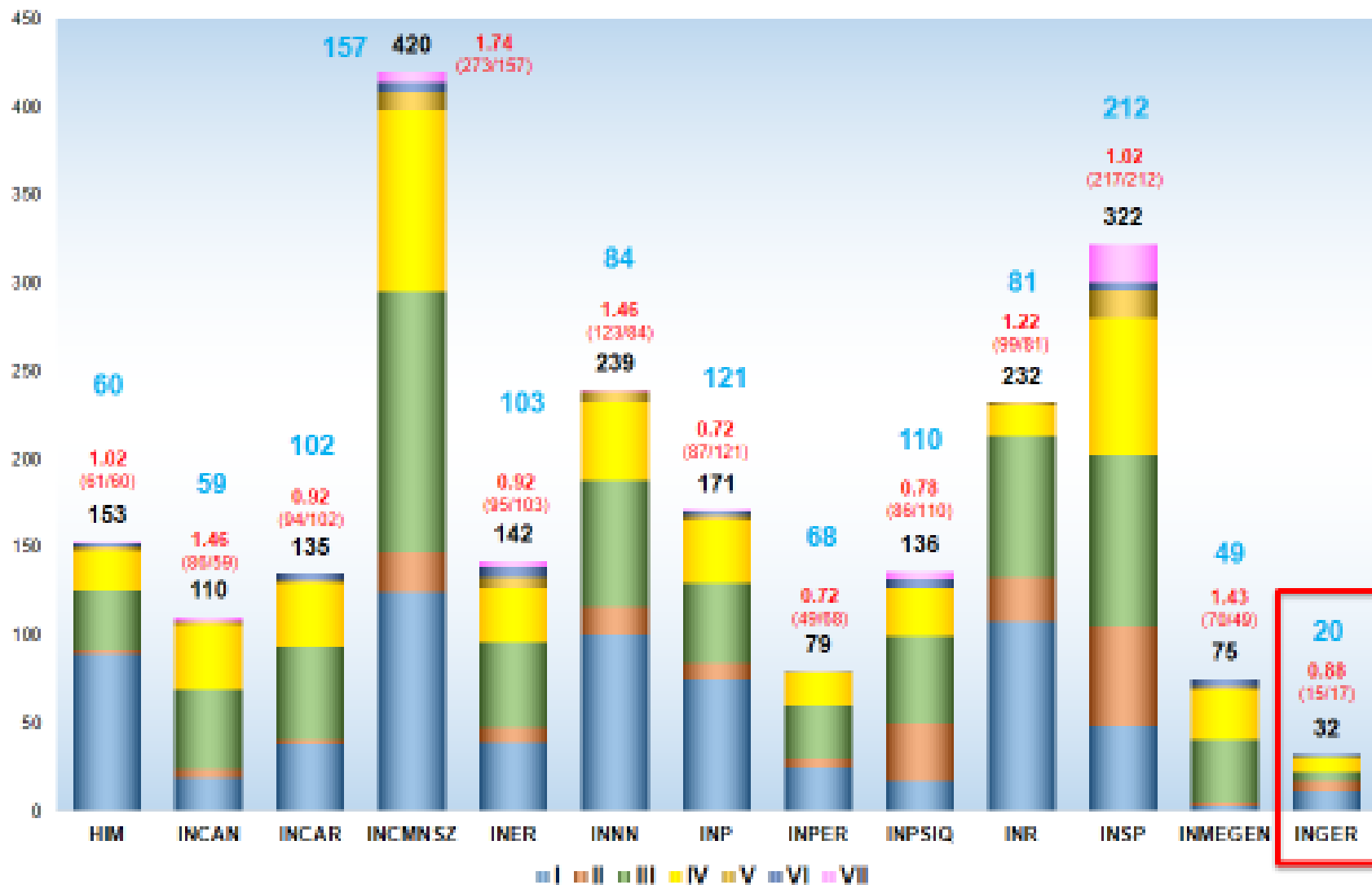




## Índice H por áreas del conocimiento México 2012-2013



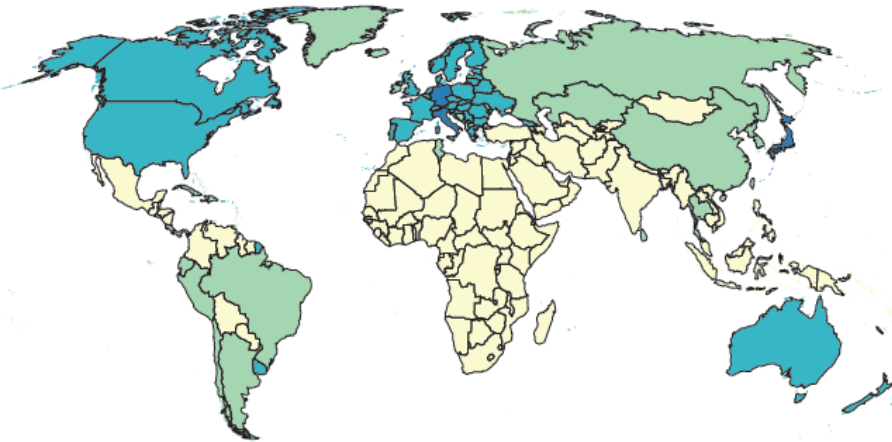
## IN Salud Publicaciones e Índice de Impacto (III-VII / SII Vigentes) 2015



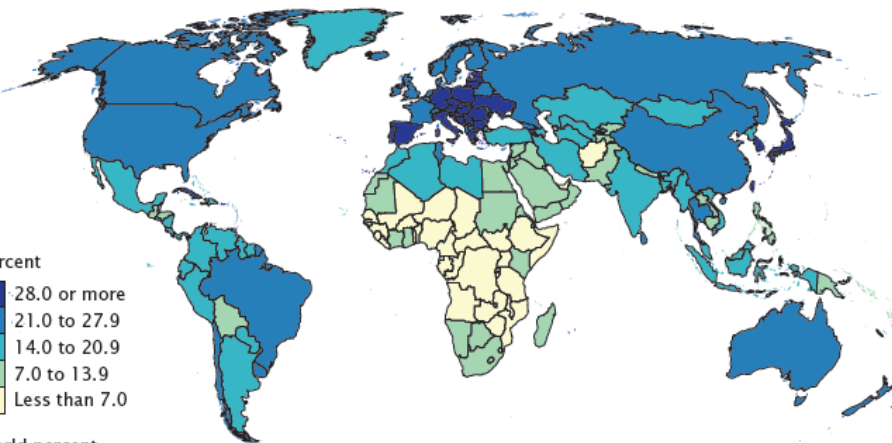
# Plan of the Presentation

- Demographic change
- Need for a paradigm shift
- The public health perspective
- Immunization schedules force in the regions
- Determinants of vaccination probability
- Barriers to vaccination
- Expected benefits
- Public policy objectives

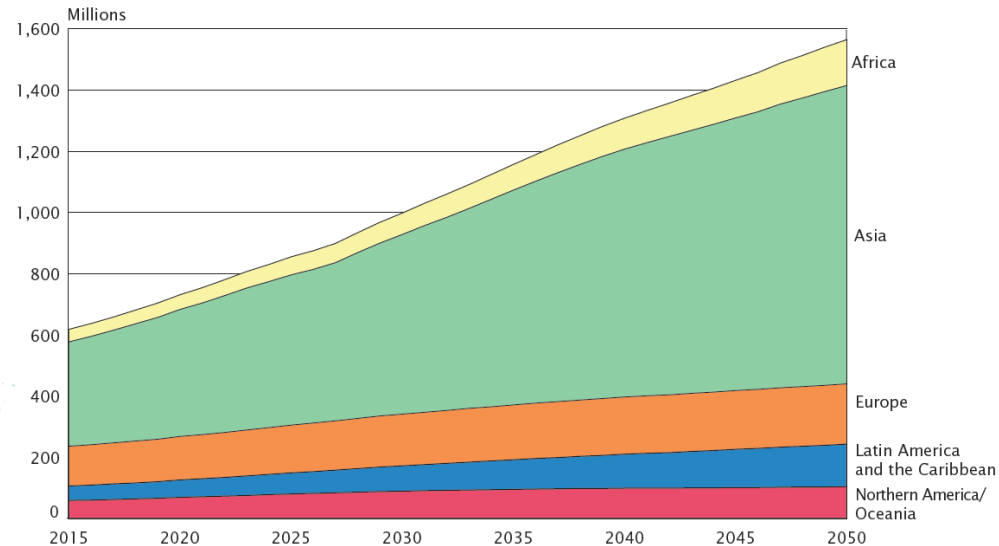
2015



2050



# % of the population > 65 years old: 2015 and 2050



Source: U.S. Census Bureau, 2013; International Data Base.

World percent  
2015: 8.5  
2050: 16.7

Sources: U.S. Census Bureau, 2013, 2014a, 2014b; International Data Base, U.S. population estimates, and U.S. population projections.

## Population > 65 years of age per region: 2015, 2030, and 2050

Region	Population (in millions)			Percentage of regional total population		
	2015	2030	2050	2015	2030	2050
Africa . . . . .	40.6	70.3	150.5	3.5	4.4	6.7
Asia . . . . .	341.4	587.3	975.3	7.9	12.1	18.8
Europe . . . . .	129.6	169.1	196.8	17.4	22.8	27.8
Latin America and the Caribbean . . . . .	47.0	82.5	139.2	7.6	11.8	18.6
Northern America . . . . .	53.9	82.4	94.6	15.1	20.7	21.4
Oceania . . . . .	4.6	7.0	9.5	12.5	16.2	19.5

Source: U.S. Census Bureau, 2013; International Data Base.

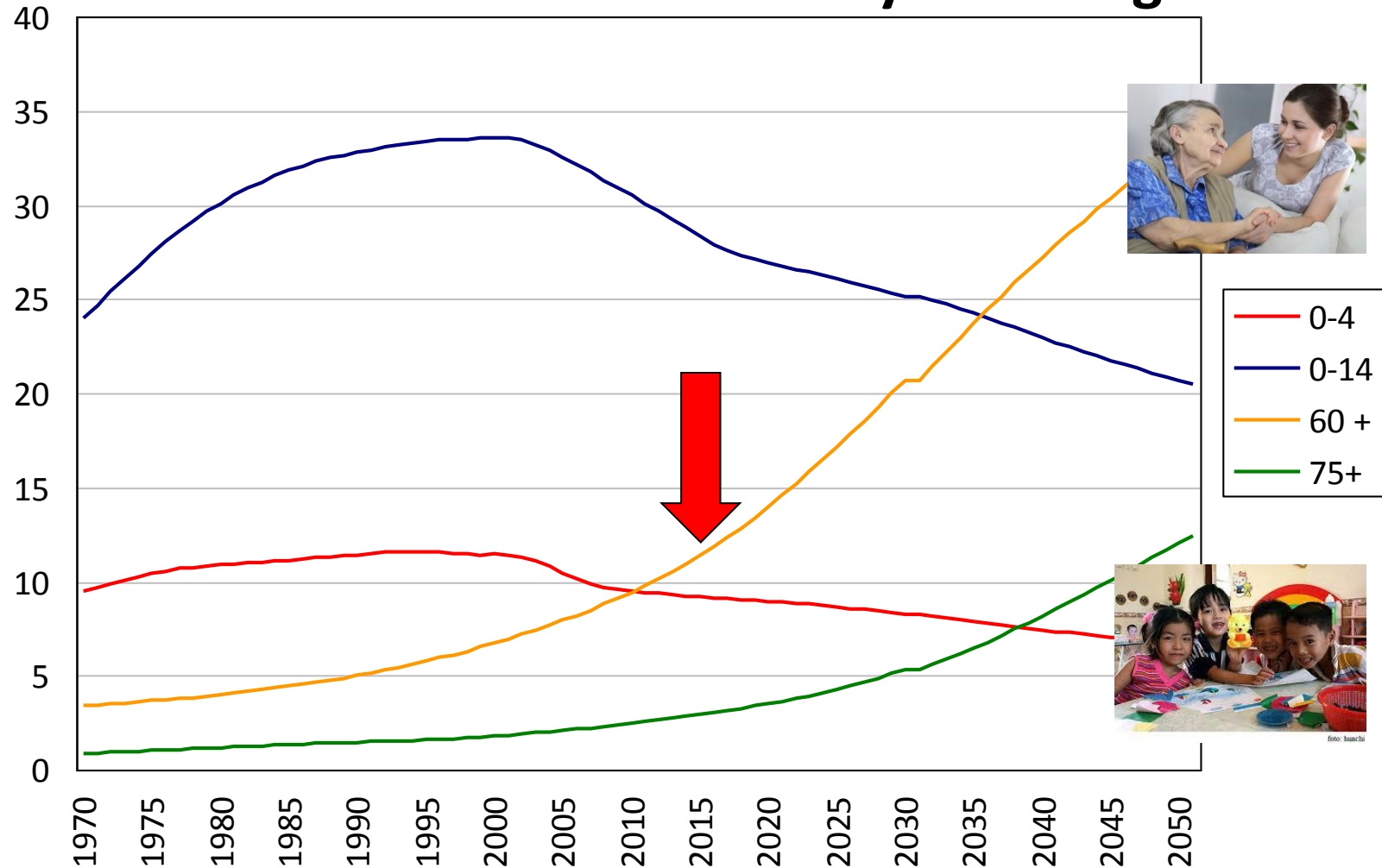
## Countries with % of population > 80 years of age that shall be quadrupling: 2010 – 2050

Africa . . . . .	Cote d'Ivoire, Egypt, Libya, Mauritius, Tunisia
Asia . . . . .	Bahrain, Bangladesh, Brunei, Burma, Cambodia, China, India, Indonesia, Kuwait, Malaysia, Mongolia, North Korea, Qatar, Saudi Arabia, Singapore, South Korea, Syria, Thailand, Timor-Leste, Turkey, Turkmenistan, United Arab Emirates, Vietnam
Europe . . . . .	Bosnia and Herzegovina
Latin America and the Caribbean . . . . .	Brazil, Colombia, Costa Rica, Cuba, Nicaragua, Trinidad and Tobago
Northern America; Oceania. . . . .	Papua New Guinea

Note: The list includes countries with a total population of at least 1 million in 2015.

Source: U.S. Census Bureau, 2013; International Data Base.

# In Mexico today, there are more people 60 years and older than children under 5 years of age









# Paradigm Shift

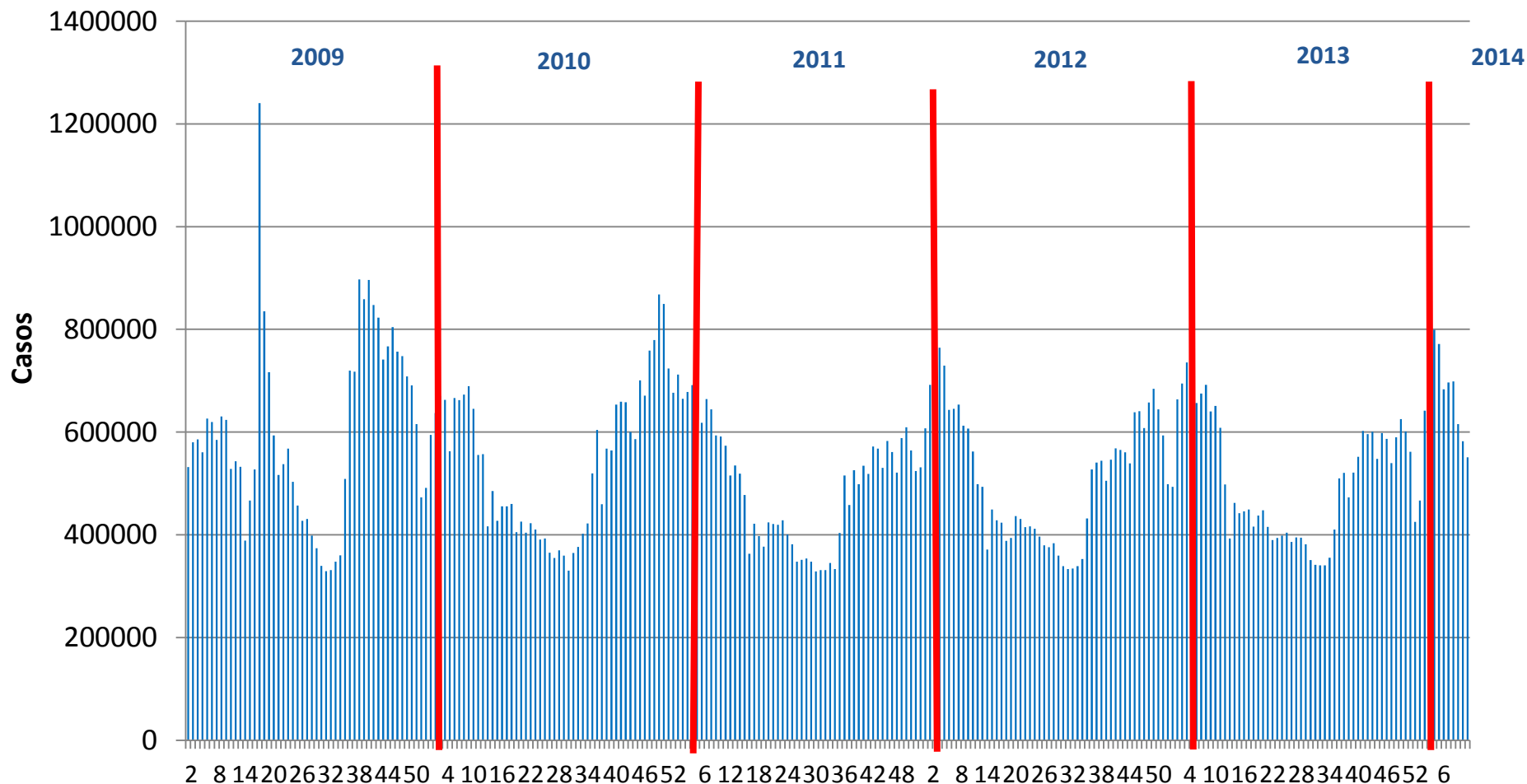
- We need a paradigm shift in our approach to vaccination coverage:

## *A Life Course Perspective*

- For vaccination program to be effective they must be characterized by personal commitment of professionals
- To be viable there needs to be fixed and irrevocable financing

# Acute Respiratory Infections Mexico 2009 – 2014

27 million cases of IRAs on average per year including pneumonia and influenza

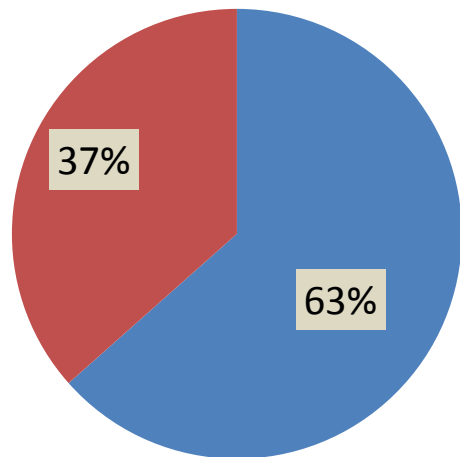


Semanas Epidemiológicas 2009-2014

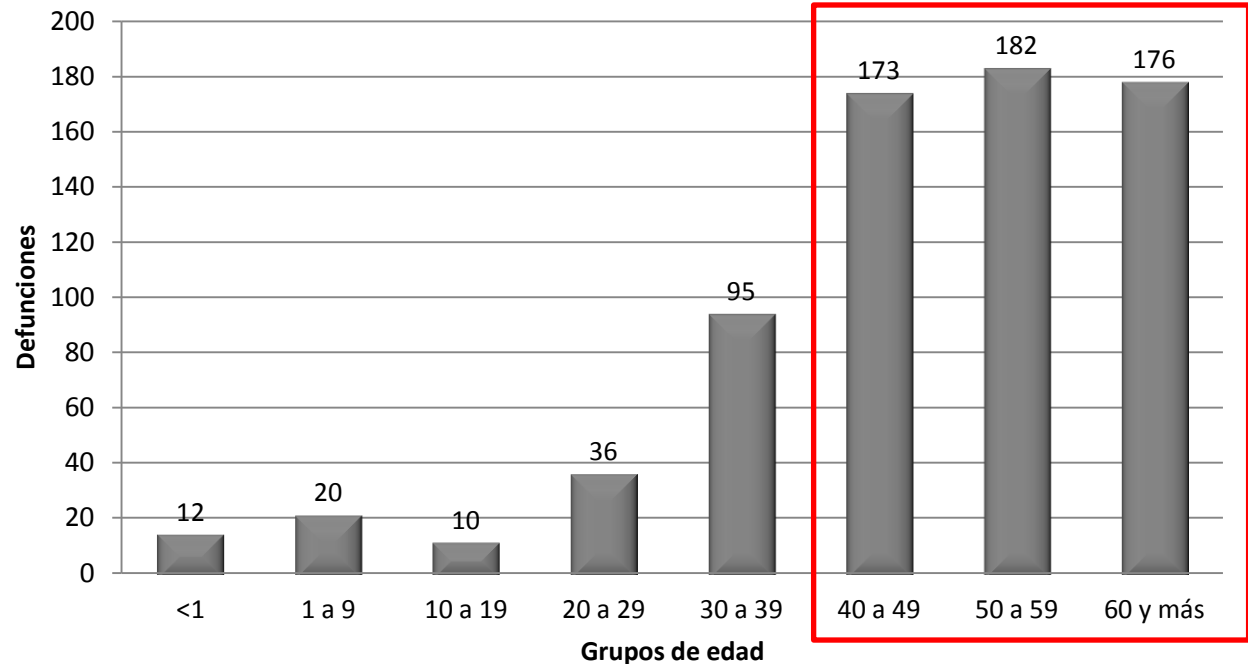
## Epidemiological Analysis of the first 13 weeks of 2014

Deaths by Sex

■ Masculino ■ Femenino



Deaths by Age Group



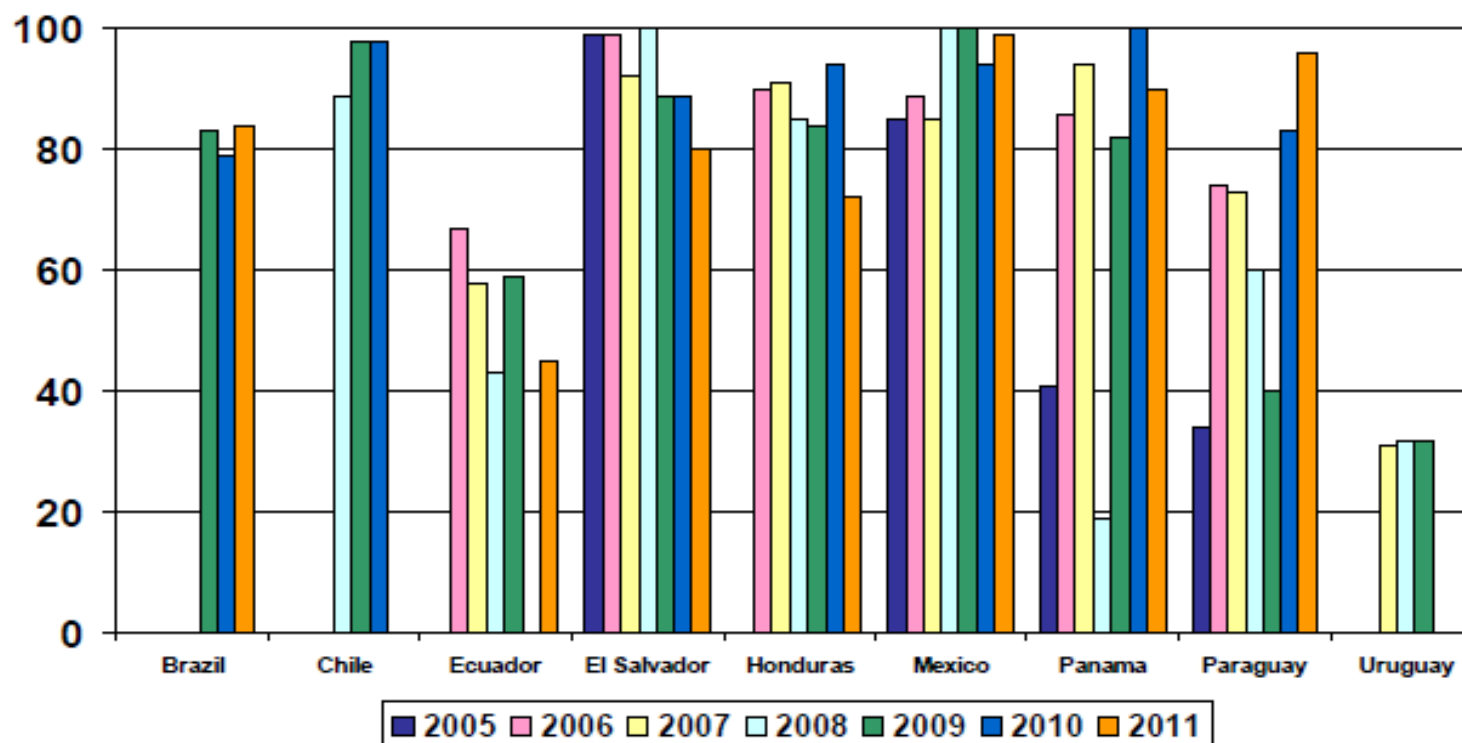
- 68.46% of deaths have one or more comorbidities: mainly obesity and diabetes
- 50.42% of deaths occurred in people between 40-59 years of age
- **90.34% were not vaccinated against Influenza**
- 97% of the patients who dies had comorbidities and/or were not vaccinated

# Infection – Hospitalization – Catastrophic Disability

- **Catastrophic Disability**: loss of independence in 3 or more AVD
  - In 72% of those who suffer, it will follow with hospitalization
- Predominant causes of catastrophic disability:
  - EVC
  - ICCV
  - **Influenza and Pneumonia**
  - Coronary Ischemia
  - Hip Fracture



## Cobertura de Vacunación contra Influenza en Adultos Mayores en Países Seleccionados, 2005-2011



Source: Country and territory reports to PAHO

# Argentina

Policies	Vaccination Schedule AM <sup>1</sup>	Vaccination Coverage in the AM <sup>2</sup>	Source
	<ol style="list-style-type: none"> <li>1. Hepatitis B: Complete schedule or is no antecedent vaccination: 1<sup>st</sup> dose at the time of recruitment, 2<sup>nd</sup> dose a month of the first and 3<sup>rd</sup> dose at 6 months of the first (in adults aged 20 years old).</li> <li>2. Tetanus and Diphtheria Toxoid: In adults without vaccination history should be given 2 doses, ranging from 4 to 8 weeks and six months after the 3<sup>rd</sup> dose. A booster every 10 years</li> <li>3. Trivalent Influenza Vaccine: 1 dose annually in over 65 years</li> <li>4. Vaccine 23-valent pneumococcal polysaccharide: In people 65 years and older, 1 dose and for higher risk patients a 2<sup>nd</sup> dose after 5 years from the 1<sup>st</sup> dose</li> </ol>	<p>Trivalent Influenza Vaccine: 90.2% in 2014</p>	<p><sup>1</sup>Dirección Nacional de Control de Enfermedades Inmunoprevenibles (DiNaCEI). Calendario Nacional de Vacunación 2016. Adultos mayores de 65 años. Disponible en la URL:  <a href="http://www.msal.gob.ar/dinacei/index.php/ciudadanos/vacunas-por-etapa-de-vida/312-adultos">http://www.msal.gob.ar/dinacei/index.php/ciudadanos/vacunas-por-etapa-de-vida/312-adultos</a>. Consultado en Marzo de 2016.</p> <p><sup>2</sup>PAHO. Country reports on PAHO/WHO. Disponible en:  <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016.</p>



# Brasil

Policies/Strategies	Vaccination Schedule	Vaccination Coverage	Source
	<p>1. Hepatitis B: For people 60 years and older. Three doses, depending on the vaccination history (with interval of 1 month between the first and second dose and 2 months between the second and third doses) <sup>1</sup></p> <p>2. Tetanus and Diphtheria Toxoid: Three doses given at intervals of 1 month between the first and second dose and 6 months between the second and third doses. A booster every 10 years.<sup>1</sup></p> <p>3. Anti-Yellow Fever: Single dose and a booster every 10 years.<sup>2</sup></p> <p>4. Pneumococcal Vaccine: In people aged 60 years and older, living in hospitals, nursing homes or long-term care facilities.<sup>2</sup></p> <p>5. Influenza Vaccine: An annual dose.</p>	<p>Influenza Vaccine: 86%</p>	<p>1. Ministerio de salud. Calendario Nacional de Vacunación. Disponible en: <a href="http://portalsaude.saude.gov.br/index.php/o-ministerio/principal/leia-mais-o-ministerio/197-secretaria-svs/13600-calendario-nacional-de-vacinacao">http://portalsaude.saude.gov.br/index.php/o-ministerio/principal/leia-mais-o-ministerio/197-secretaria-svs/13600-calendario-nacional-de-vacinacao</a>. Consultado en Abril de 2016.</p> <p>2. Ministerio de Salud. Manual de normas de vacunación. Disponible en: <a href="http://bvsmms.saude.gov.br/bvs/publicacoes/unasa/manu_normas_vac.pdf">http://bvsmms.saude.gov.br/bvs/publicacoes/unasa/manu_normas_vac.pdf</a>. Consultado en Abril de 2016.</p> <p>3. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016.</p>

# Chile

Policies	Vaccination Schedule <sup>1,2</sup>	Vaccination Coverage <sup>3,4</sup>	Source
<ol style="list-style-type: none"> <li>Vaccine Gratuity.</li> <li>Signed agreement for the AM to get vaccinated while paying your pension</li> </ol>	<ol style="list-style-type: none"> <li>Pneumococcal Polysaccharide Vaccine: Adults ≥ 66 years of age, previously unvaccinated.</li> <li>Influenza Vaccine 1 dose annually.</li> <li>Hepatitis B Vaccine: for men who have sex with men and hemodialysis patients.</li> </ol>	<p>Influenza Vaccine: 75.03% in 2014</p> <p>Valent vaccine Pneumo 23: In adults 65 years of age at 26% and people older than 65 years at 2% in 2012.</p>	<ol style="list-style-type: none"> <li>Ministerio de salud de Chile. Calendario de Vacunación 2016. Disponible en: <a href="http://www.enfermeriaaps.com/portal/calendario-vacunas-minsal-chile-2016">http://www.enfermeriaaps.com/portal/calendario-vacunas-minsal-chile-2016</a>. Consultado en Marzo de 2016.</li> <li>Ministerio de Salud de Chile. Campaña de vacunación contra la influenza 2016. Disponible en: <a href="http://web.minsal.cl/vacunacion-influenza-2016/">http://web.minsal.cl/vacunacion-influenza-2016/</a>. Consultado en Marzo de 2016.</li> <li>PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016.</li> <li>Departamento de Estadísticas e Información de Salud-MINSAL.. Disponible en: <a href="http://www.deis.cl/wp-content/uploads/2015/11/Cobertura-Programa-Nacional-de-Inmunizaciones-a%C3%B1o-2012.xls">http://www.deis.cl/wp-content/uploads/2015/11/Cobertura-Programa-Nacional-de-Inmunizaciones-a%C3%B1o-2012.xls</a>. Consultado en: Marzo de 2016.</li> </ol>

# Colombia

Policies	Vaccination Schedule	Vaccination Coverage	Source
	<p>1. Influenza Vaccine: Population 60 years and older, an annual dose.</p> <p>2. Yellow Fever Vaccine: In endemic areas defined by the Ministry of Social Protection can vaccinate adults aged 60 and 65 years of age, prior to having completed a medical assessment.</p>	<p>Influenza Vaccine:28% in 2013</p>	<p>1. Programa Ampliado de Inmunizaciones. Lineamientos para la vacunación durante 2015. Disponible en: <a href="https://www.minsalud.gov.co/salud/publica/Vacunacion/Paginas/pai.aspx">https://www.minsalud.gov.co/salud/publica/Vacunacion/Paginas/pai.aspx</a>. Consultado en Abril de 2016.</p> <p>2. Ministerio de la protección social. Manual técnico administrativo del programa ampliado de inmunizaciones PAI, 2008. Disponible en: <a href="https://www.minsalud.gov.co/salud/Documents/Manual+Tecnico+Adtivo+PAI_2008.rar">https://www.minsalud.gov.co/salud/Documents/Manual+Tecnico+Adtivo+PAI_2008.rar</a> Consultado Abril de 2016.</p> <p>3. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p>

# Costa Rica

Policies	Vaccination Schedule	Vaccination Coverage	Source
	<p>1. Tetanus and Diphtheria toxoid: If you have a history of beign vaccination with Td during childhood, revaccination every 10 years with an additional dose.</p> <p>If you do not have proof of vaccination history with Td follow the schedule 0-1-6 (Zero Moment: 1<sup>st</sup> dose, second dose a month of the first and third dose at 6 months after the 1<sup>st</sup> dose). 1 booster every 10 years.</p> <p>2. Trivalent seasonal Influenza vaccine. 1 dose annually for people aged 65 years and older.</p> <p>3. Vaccine 23-valent pneumococcal polysaccharide: 1 dose for adults aged 65 years of age.</p>	<p>Influenza Vaccine: 70% in 2013.</p>	<p>1. Norma Nacional de Vacunación Costa Rica 2013. Disponible en: <a href="https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/2302-norma-nacional-de-vacunacion-2013/file">https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/2302-norma-nacional-de-vacunacion-2013/file</a>. Consultado Marzo de 2016.</p> <p>2. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p>

# Ecuador

Policies	Vaccination Schedule	Vaccination Coverage	Source
	<p>1. Vaccine Trivalent seasonal Influenza, A yearly dose from age 65 years and older.</p> <p>2. Vaccine 23-valent pneumococcal polysaccharide, a dose from 65 years of age and a booster every 5 years.</p>	<p>Influenza Vaccine: 39% in 2014.</p>	<p>1. Ministerio de Salud Pública. Esquema de vacunación familiar Ecuador 2015. Disponible en: <a href="http://instituciones.msp.gob.ec/images/Documentos/Ministerio/Esquema_de_vacunacion_2015_2.pdf">http://instituciones.msp.gob.ec/images/Documentos/Ministerio/Esquema_de_vacunacion_2015_2.pdf</a>. Consultado en Marzo de 2016.</p> <p>2. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p>

# Honduras

Policies	Vaccination Schedule	Vaccination Coverage	Source
	<ol style="list-style-type: none"> <li>1. Seasonal Trivalent Influenza Vaccine, an annual dose in patients over 60 years of age.</li> <li>2. Vaccine 23-valent pneumococcal polysaccharide, a dose in patients over 60 years old.</li> </ol>	<p>Influenza Vaccine: 78.9% in 2014.</p>	<ol style="list-style-type: none"> <li>1. Programa Ampliado de Inmunizaciones. Actualización sobre esquema nacional de vacunación, Honduras 2011. Disponible en: <a href="https://www.google.com.mx/url?sa=t&amp;rct=i&amp;g=&amp;esrc=s&amp;source=web&amp;cd=2&amp;cad=rja&amp;uact=8&amp;ved=0ahUKEwjp17zT4uvLAhXjm4MKHYhDA24QFggiMAE&amp;url=http%3A%2F%2Fwww.bvs.hn%2FHonduras%2FPAI%2FPAIEsquemaNacVac2011.pdf&amp;usg=AFQjCNGkFMSvU8W310_2SgpKD_s-SkwLBA&amp;sig2=imSEwSKrY9dgRkJLh44flg">https://www.google.com.mx/url?sa=t&amp;rct=i&amp;g=&amp;esrc=s&amp;source=web&amp;cd=2&amp;cad=rja&amp;uact=8&amp;ved=0ahUKEwjp17zT4uvLAhXjm4MKHYhDA24QFggiMAE&amp;url=http%3A%2F%2Fwww.bvs.hn%2FHonduras%2FPAI%2FPAIEsquemaNacVac2011.pdf&amp;usg=AFQjCNGkFMSvU8W310_2SgpKD_s-SkwLBA&amp;sig2=imSEwSKrY9dgRkJLh44flg</a></li> <li>2. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</li> </ol>

Policies	Vaccination Schedule	Vaccination Coverage	Source
<p>National health week for grownups</p>	<p>1. Tetanus and Diphtheria toxoid: In women and men with full and documented schedules (3 doses of Td), receive a Td booster every 10 years. In those without documented dose of Td receive 3 doses (the first at the time of first contact, second month after the first dose and the third at 12 months after the first dose), then a booster every 10 years.</p> <p>2. Anti – Influenza: (An annual dose) The entire population from 50 years of age and above.</p> <p>3. Pneumococcal 23- serotypes (A dose): Population 2 to 64 years of age with risk factors. The entire population of 65 years old.</p>	<p>Influenza Vaccine: 90.6% in 2014.</p>	<p>1. Centro Nacional para la Salud de la Infancia y la adolescencia. Programa de vacunación universal y semanas nacionales de salud. Lineamientos generales 2015. Disponible en: <a href="http://www.censia.salud.gob.mx/contenidos/descargas/vacunas/Lineamientos_PVUySNS2015.PDF">http://www.censia.salud.gob.mx/contenidos/descargas/vacunas/Lineamientos_PVUySNS2015.PDF</a>. Consultado en Marzo de 2016.</p> <p>2. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p>

Policies <sup>4</sup>	Vaccination Schedule	Vaccination Coverage	Source
<p>Establishment of an Expert Committee on Comprehensive Health Care of the Elderly approved with Ministerial Resolution No. 741-2005 / MINSa.</p> <p>Preparation of Medical History Form, corresponding to Stage Elderly Life.</p> <p>Inclusion in the Regional Institutional Operation Plan a regional and macro technical skills to strengthen health teams in Comprehensive Health Care for the Elderly Events.</p> <p>Conformation Club of Elderly in health facilities with the aim of promoting care, self-care, use of leisure among others; with the aim of promoting healthy lifestyles.</p> <p>Printing of normative technical documents and distribution to health facilities nationwide.</p> <p>Permanent Technical coordination with the Regional Managers of EVAM across the country, where progress is reported and information is shared pertaining more to adults.</p>	<p>1. Anti-Influenza: (Annual dose) The entire population from 65 years of age.<sup>1</sup></p> <p>2. Tetanus and Diphtheria toxoid, Men at risk of any age (field workers, armed forces, Red Cross, civil defense)<sup>2</sup></p>	<p>Influenza Vaccine: 89% n 2014.<sup>3</sup></p>	<p>1. Ministerio de salud. Vacunación contra influenza. Disponible en: <a href="http://www.minsa.gob.pe/portada/Especial/es/2015/influenza2015/index.asp?op=3">http://www.minsa.gob.pe/portada/Especial/es/2015/influenza2015/index.asp?op=3</a>. Consultado en Marzo de 2016.</p> <p>2. Ministerio de salud. Estrategia nacional de inmunizaciones 2014. Disponible en: <a href="ftp://ftp.minsa.gob.pe/oei/Sistema_His3.05_2014/Manuales_HIS/Manuales_Actualizados_2014/OESN_Inmunizaciones_2014.pdf">ftp://ftp.minsa.gob.pe/oei/Sistema_His3.05_2014/Manuales_HIS/Manuales_Actualizados_2014/OESN_Inmunizaciones_2014.pdf</a>. Consultado en Marzo de 2016.</p> <p>3. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p> <p>4. Ministerio de salud. Estrategias para el adulto mayor: Yo cuido mi salud. Disponible en (Marzo de 2016): <a href="http://www.minsa.gob.pe/portada/Especial/es/2008/adulto_mayor/default.htm">http://www.minsa.gob.pe/portada/Especial/es/2008/adulto_mayor/default.htm</a>.</p>



Policies	Recommended Vaccination Schedule	Vaccination Coverage	Sources
	<p>1. Anti-Influenza: (An annual dose) The entire population from 60 years of age<sup>1</sup>.</p> <p>2. Tetanus Toxoid and Diphtheria: The entire population from 60 years of age<sup>1</sup> (1 booster every 10 years)</p> <p>3. Anti-Varicella: 2 doses<sup>1</sup></p> <p>4. Anti-Zooster: 1 dose<sup>1</sup></p> <p>5. Pneumococcal 13-valent : 1 doses<sup>1</sup></p> <p>6. Pneumococcal 23-valent: 1 dose<sup>1</sup></p>	<p>Influenza Vaccine: 66.9% in 2012.<sup>2</sup></p>	<p>1. U.S. Department of Health &amp; Human Services. Recommended Immunizations for Adults: By Age, 2016. Disponible en: <a href="http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-schedule-easy-read.pdf">http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-schedule-easy-read.pdf</a>. Consultado en Abril de 2016.</p> <p><a href="http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf">http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf</a></p> <p>2. PAHO. Country reports on PAHO/WHO. Disponible en: <a href="http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es">http://www.paho.org/hq/index.php?option=com_docman&amp;task=doc_view&amp;Itemid=270&amp;gid=27151&amp;lang=es</a>. Consultado en Marzo de 2016</p>

# Venezuela

Policies	Vaccination Schedule	Vaccination Coverage	Problems / Sources Limitations
	<p>1. Anti-Influenza: (An annual dose) The entire population of 60 years and older.</p> <p>2. Pneumococcal 23-serotypes (two doses): Population 60 years of age and older.</p>	<p>Influenza Vaccine: 9.6%</p>	<p>1. Portal del Ministerio del Poder Popular para la Salud. Esquema Nacional de Vacunación de la Familia, Adolescentes, Adultos y Adultos Mayores. Disponible en: <a href="http://www.mpps.gob.ve/index.php?option=com_phocadownload&amp;view=category&amp;download=594:esquemanacionaldevacunaciondelafamiliaadolescentesyadultosyadultosmayores&amp;id=26:esquemanacionaldevacunacion&amp;Itemid=915">http://www.mpps.gob.ve/index.php?option=com_phocadownload&amp;view=category&amp;download=594:esquemanacionaldevacunaciondelafamiliaadolescentesyadultosyadultosmayores&amp;id=26:esquemanacionaldevacunacion&amp;Itemid=915</a>. Consultado Abril de 2016.</p>

**COBERTURA DE VACUNACIÓN EN ADULTOS MAYORES DE 60 O MÁS AÑOS SEGÚN CARACTERÍSTICAS SOCIODEMOGRÁFICAS Y TIPO DE VACUNA. ENCOVAM 2008**

Características	Influenza		Neumococo		Tétanos	
	(%)	(IC al 95%)	(%)	(IC al 95%)	(%)	(IC al 95%)
Total	56.53	55.56-57.51	44.28	43.30-45.26	61.77	60.81-62.71
<b>Sexo</b>						
Hombres	53.86	52.42-55.30	42.05	40.62-43.49	60.24	58.83-61.66
Mujeres	58.94	57.61-60.28	46.28	44.93-47.64	63.13	61.83-64.43
<b>Grupo de edad</b>						
60 – 64	51.69	49.88-53.50	38.58	36.80-40.36	58.44	56.66-60.21
65 – 69	58.14	56.12-60.16	46.53	44.47-48.59	64.04	62.06-66.02
70 – 74	60.68	58.51-62.84	48.35	46.13-50.57	64.35	62.21-66.48
75 y más	53.74	49.15-58.33	41.36	37.01-45.71	56.12	51.65-60.59
<b>Derechohabiciencia</b>						
IMSS	64.18	62.69-65.67	55.75	54.20-57.30	71.63	70.25-73.02
ISSSTE	59.02	55.51-62.52	41.87	38.31-45.42	58.05	54.52-61.59
Seguro Popular de Salud	65.53	63.37-67.68	46.66	44.38-48.94	64.04	61.87-66.21
Seguro privado	50.10	40.79-59.40	27.58	19.62-35.54	50.52	41.20-59.83
Otro tipo de institución	55.36	39.59-71.12	46.41	30.20-62.62	67.17	52.28-82.05
Ninguna	41.55	39.76-43.35	28.90	27.24-30.56	48.63	46.82-50.44
<b>Programas sociales</b>						
Beneficiario de al menos un programa	62.32	60.94-63.70	48.56	47.11-50.00	67.16	65.82-68.50
Sin programa alguno	51.76	50.40-53.11	40.75	39.41-42.08	57.31	55.98-58.64

# Factors Associated with Vaccination(Bogotá)

Characteristics	Influenza OR (95% CI)	<i>p</i> -value	Pneumococci OR (95% CI)	<i>p</i> -value	Tetanus OR (95% CI)	<i>p</i> -value
Age (years)						
60-64	1.00		1.00		1.00	
65-69	1.77 (1.22-2.56)	0.002	1.88 (1.34-2.64)	<0.001	1.68 (1.17-2.39)	0.004
70-74	2.04 (1.35-3.07)	<0.001	2.10 (1.43-3.08)	<0.001	1.63 (1.12-2.36)	0.009
75+	1.74 (1.15-2.62)	0.007	1.33 (0.95-1.86)	0.096	1.48 (1.03-2.12)	0.032
Sex						
Men	1.00		1.00		1.00	
Women	1.14 (0.86-1.53)	0.354	1.06 (0.82-1.36)	0.653	0.85 (0.66-1.09)	0.217
Socio-economic strata						
Lower class (1-2)	1.00		1.00		1.00	
Middle class (3-4)	0.89 (0.67-1.18)	0.426	1.10 (0.85-1.42)	0.463	0.87 (0.67-1.11)	0.269
Upper class (5-6)	0.16 (0.08-0.30)	<0.001	0.20 (0.10-0.38)	<0.001	0.50 (0.24-1.03)	0.060
Health insurance						
Not insured	1.00		1.00		1.00	
Contributive	3.47 (1.65-7.32)	<0.001	4.84 (2.18-10.74)	<0.001	4.55 (2.11-9.83)	<0.001
Subsidized	3.00 (1.39-6.45)	0.005	3.58 (1.60-8.01)	0.002	3.70 (1.69-8.07)	0.001
Transitory	3.76 (0.93-15.25)	0.063	5.11 (1.22-21.37)	0.025	3.32 (0.77-14.25)	0.105
Functional Status. Lawton test (IADLs)						
Continuous score (0-8)	1.13 (1.03-1.23)	0.010	1.08 (1.00-1.17)	0.048	1.11 (1.02-1.20)	0.012
Comorbidity. Number of diseases (0-7)	1.23 (1.08-1.39)	0.002	1.16 (1.04-1.30)	0.007	1.02 (0.91-1.14)	0.691

OR= odds ratios

CI= confidence intervals.

IADLs= instrumental activities of daily living.

Comorbidity includes: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease or cancer.

Cano GC Reyes-Ortiz C, Borda MG, Arciniegas A El auto reporte de vacunación en los adultos mayores: Estudio SABE Bogotá, Colombia Médica 2016 - Vol. 47 N°1

# Factors Affecting Vaccines in the General Population

11 Countries, 2007/08\*

General  
Population

Awareness of the Seriousness of Influenza	55%
Recommendation from Family Doctor or Nurse	53%
Prevent transmission to other Family Members or Friends	39%
By Age	36%
Poor Health	26%
To avoid interruption of their professional activities	21%
Because your work demanded or indicated	10%

1. Educate about the seriousness of the disease
2. Proactive attitude of health workers to identify people at risk

# Reasons – Vaccinated vs. Unvaccinated Population

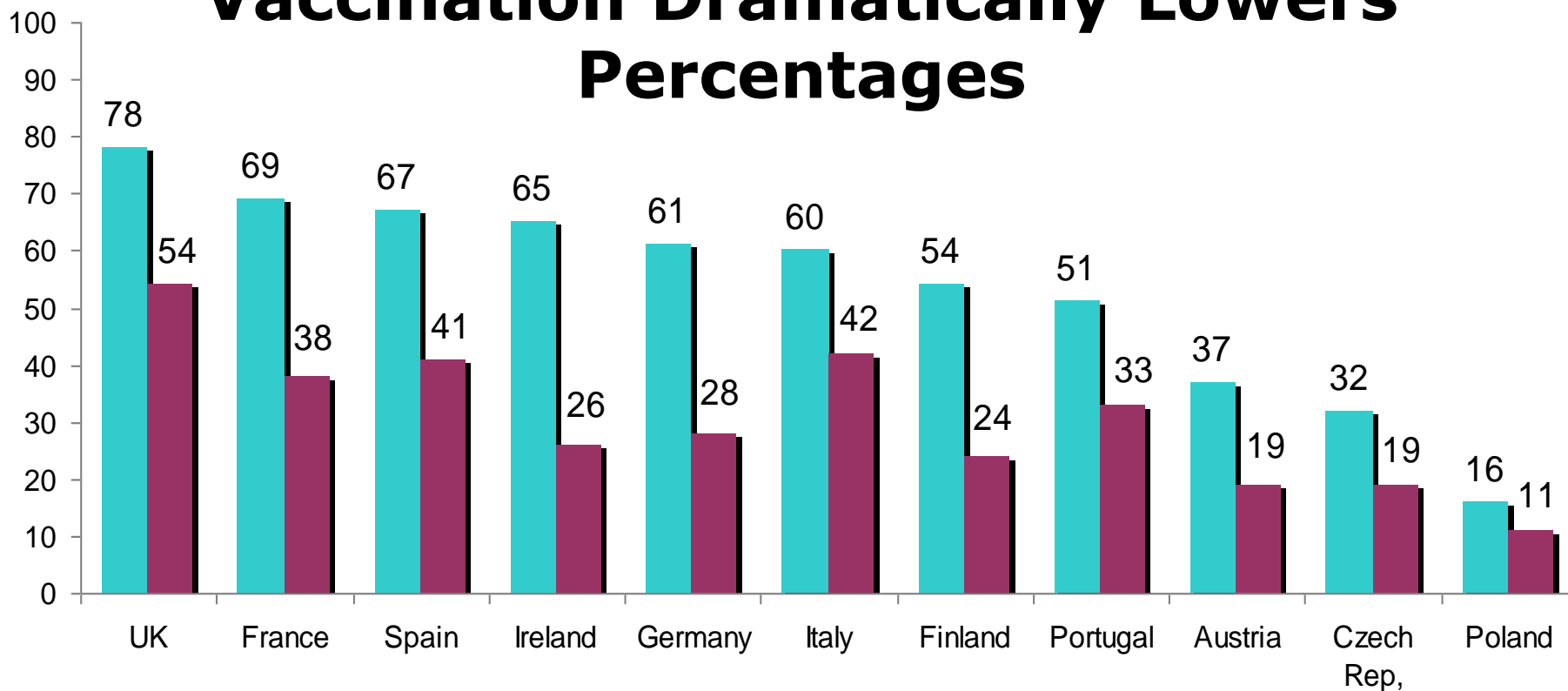
11 Countries, 2007/08\*

General  
Population

I've never considered	34%
I have not been informed by my family doctor	31%
It is not really a serious illness	22%
I'm too young to be vaccinated	19%
I do not think I can give the disease	39%
I do not think the vaccine is effective enough	17%
If I thought so, but I could go to get vaccinated	17%
My pharmacist never recommended it	14%
I do not like injections or needles	13%
I worry about the possible side effects of vaccines	13%

1. Education missing about the vaccine and disease
2. Missing proactive recall systems
3. Lack of adequate advice from health workers

# Lack of Funding correlated with Vaccination Dramatically Lowers Percentages



Blank PR1, Schwenkglens M, Szucs TD. Vaccination coverage rates in eleven European countries during two consecutive influenza seasons. *Infect.* 2009 Jun;58(6):446-58. doi: 10.1016/j.jinf.2009.04.001. Epub 2009 Apr 17.

■ ≥ 65 years

■ < 65 years at-risk

# Expected Benefits

- **Preserve the vitality as they age through:**
  - Decreased mortality from preventable infectious diseases (Influenza, pneumonia)
  - Fewer complications and hospitalizations (Influenza, pneumococcus)
  - Less use of antibiotics
  - Lower rate of antibiotic-resistant infections (pneumococcal conjugate vaccine reduces nasopharyngeal carriage of resistant strains)
  - Preservation of functional capacity
  - Cost effectiveness (prevention of dependency, life expectancy of good quality)
  - Better quality of life (herpes zoster)



# Key Assumptions

- Infectious diseases remain a major cause of morbidity and mortality in adults over 60 years, and many are preventable by vaccination.
- **A program on vaccines for life is necessary.**
- Vaccination is associated with reducing the burden of EPV at any age of life, due to **herd immunity**.
- Healthy ageing and free of disability is closely linked to the health of children and the state of health in young adults.
- The **vaccination** gap in middle age of life (and more health workers) have a major impact on subsequent health, especially in unvaccinated older adult populations.

# Public Policy Objectives

- Raise awareness about the benefits of a life course approach:
  - Improving surveillance systems to characterize vaccine-preventable diseases
  - Promote awareness about the value of public health, social and economic development of vaccination in this age group
  - Promote vaccination of health workers and their awareness of the relevance of the topic
  - Educate professionals

# Public Policy Objectives

- Promote vaccination with a life course perspective to promote healthy ageing
  - Provide access to vaccines
  - Include the item in regulations
  - Educate people about the benefits
  - Identify social and economic barriers for vaccination



## Public Policy Objectives

- Sort vaccination schedules with a life course perspective to simplify and avoid contradictions
  - Review and propose an immunization record for life
  - Integrate older adults and middle aged people to vaccination programs

# In Conclusion

- **To promote vaccination of middle-aged adults and older adults requires:**

**INFORM, INFORM AND REPORT  
EDUCATE, EDUCATE AND EDUCATE**

- Health personnel to become the main health promoter of health and vaccinations
- Inform the general population about diseases and the benefits that vaccines provide
- Inform decision makers about the benefits of a healthy population and the cost-benefit of vaccinations in addition to savings in suffering and finally increase life expectancy with a healthy long life

# In Conclusion

- **But it is also necessary:**
- Strengthen vaccination programs to have reliable statistics to allow experts to progressively achieve and maintain vaccination coverage
- Incorporate Professional Geriatric Committees
- Strengthen vaccination campaigns so that older adults are also prioritized in the actions established in these campaigns.
- Develop mechanisms to improve ongoing vaccination coverage by always having volunteers and workers attending retirement homes or private homes to vaccinate older adults and **STAFF**

# In Conclusion

- **And especially:**
- Securing budgetary resources to sustain these programs permanently so they are not exposed to the vagaries of annual expenditure budgets.
- “Vaccination is a national security issue and as such should be addressed”



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POR UN  
ENVEJECIMIENTO  
SANO Y ACTIVO



ACADEMIA NACIONAL  
DE MEDICINA DE MÉXICO



LOUIS  
PASTEUR

## "VACUNACIÓN EN EL ADULTO MAYOR: PERSPECTIVA DE CURSO DE VIDA"

24 AL 26 DE NOVIEMBRE DE 2014  
CIUDAD DE MÉXICO



150 Años

ACADEMIA NACIONAL DE MEDICINA / MÉXICO

COLECCIÓN DE ANIVERSARIO

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DOCUMENTO DE POSTURA

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