The impact of the health burden in an archetype analysis of older adult immunization decision-making and implementation

Focus on Europe

Adult Immunization Board
Lois Privor-Dumm
Little data available to explain why countries make very different decisions when reviewing similar data and achieve different results with different implementation approaches.

We reviewed the literature and conducted key informant interviews to help describe the adult vaccine landscape and factors influencing uptake on vaccines for older adults (>50 Yrs).

Research funded by GlaxoSmithKline & Merck

- Influenza (Flu Vaccine)
- Pneumococcal Pneumonia (Polysaccharide & PCV)
- Herpes Zoster/ Shingles (HZ Vaccine)
34 study countries

Countries selected to represent a diversity of adult immunization programs and approaches and represent a variety of geographic regions

- Australia
- China
- Hong Kong
- India
- Japan
- Malaysia
- New Zealand
- Philippines
- South Korea
- Taiwan

- Canada
- USA
- Mexico

- Argentina
- Brazil
- Colombia
- Peru

- Belgium
- Denmark
- France
- Germany
- Greece

- Ireland
- Italy
- Netherlands
- Norway
- Russia

- Saudi Arabia
- UAE
- Spain
- Sweden
- Switzerland
- Turkey

= case study country
Methods - Overview

1. Identify indicators
2. Develop abstraction tools & key informant interview guides (5 domains)
3. Conduct desk review, key informant interviews (n=120)
4. Conduct thematic analyses on qualitative data
5. Plot and analyze data to develop archetypes and assess approach to decision making and implementation*
6. Obtain feedback on archetypes from 1-2 informants per country
Methods - 5 domains of data collection

<table>
<thead>
<tr>
<th>Country Characteristics</th>
<th>AV Policies &amp; Decision Making</th>
<th>Health &amp; Immunization Systems</th>
<th>AV Uptake</th>
<th>Stakeholders &amp; Champions</th>
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<tbody>
<tr>
<td>Life expectancies</td>
<td>NITAG structure</td>
<td>Insurance systems</td>
<td>Delivery platforms (places)</td>
<td>Key experts &amp; advocates across medical, healthy aging communities</td>
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<td>Percent of older adults</td>
<td>AV recommendations</td>
<td>Registries</td>
<td>Providers</td>
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<td>Disease burden</td>
<td>Immunization laws</td>
<td>Financing mechanisms</td>
<td>Coverage</td>
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</table>
Data sources

- Global databases
- Country Ministry of Health sites
  - Press releases
  - NITAG documents
- Country policy & laws
  - Vaccine recommendations
  - Laws and legal gazettes
- Peer-reviewed literature
- Grey literature (dissertations, reports, working papers, etc.)
- IVAC’s organizational knowledge
- Key informant interviews (AUS, ARG, CAN, GER, JAP, UK)
  - MOH, vaccine program, NITAG, researchers, economists, medical and/or advocacy organizations, public health experts

jhsph.edu/ivac
Facilitators of Adult Vaccine (AV) National Recommendations

- Disease burden data
- Economic data
- Surveillance
- Adult experts on NITAGs
- Vaccine policies or strategies for older adults
- Healthy aging policies or strategies
- Lack of stringent requirements for adoption
- Health security driven
Facilitators for **Implementing** Adult immunization Programs

- Publicly financed vaccines
- Registries
- Use of coverage data & targets
- Advocacy
- Influence of champions
- Access
- Equity focus
- Centralized vaccine delivery
- Centralized health system
## Implementation Scores

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### Hi to Hi pneumonia vaccine coverage

- **UK**: 2
- **Spain**: 2
- **Ireland**: 1
- **Germany**: 2
- **Belgium**: 2
- **Norway**: 1
- **Italy**: 1
- **Turkey**: 1
- **Denmark**: 1
- **France**: 1
- **Greece**: 2
- **Sweden**: 2
- **Switzerland**: 1
- **Netherlands**: 1

### Robustness of Policies & Decision-Making

- **Health Security**: 2
- **Cost-effectiveness**: 1
- **NITAG-presence**: 2
- **PCV Adopted**: 1
- **HZ adopted**: 0
- **NatIMMUNIZATION Strategy**: 1
- **NatHealthy Aging Strategy**: 0

### Scores

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<tr>
<th>Hi to Hi pneumonia vaccine coverage</th>
<th>Financing</th>
<th>Vaccine Registries</th>
<th>Availability of Coverage Data</th>
<th>Advocacy</th>
<th>Leadership influence</th>
<th>Access - Providers</th>
<th>Equity focus</th>
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### Hi to Hi pneumonia vaccine coverage

- **Hi to Hi pneumonia vaccine coverage**
- **Financing**
- **Vaccine Registries**
- **Availability of Coverage Data**
- **Advocacy**
- **Leadership influence**
- **Access - Providers**
- **Equity focus**
- **Health Security**
- **Cost-effectiveness**
- **NITAG-presence**
- **PCV Adopted**
- **HZ adopted**
- **NatIMMUNIZATION Strategy**
- **NatHealthy Aging Strategy**

### Scores

- **Scoring**: 2
- **1.5**: 0
- **1**: 0
- **0.5**: 0
- **0**: 0
Country Typologies (Archetypes)

Adult immunization program archetypes in 34 countries

Decision-Making Score

Implementation Score

Archetype Legend
★ Disease prevention-focused
+ Health security-focused
● Evolving adult focus
◆ Child-focused & cost-sensitive

Are older adults getting vaccinated?

Seasonal influenza

Source: OECD iLibrary
COVID-19 vaccination coverage variability emerges with booster doses

Source: ECDC
Although an important consideration for vaccine decision-making, deaths & DALYs generally don’t explain differences in vaccination uptake.
## Factors influencing vaccination in older adults

<table>
<thead>
<tr>
<th>Domain</th>
<th>Illustrative examples</th>
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<tr>
<td>Policy</td>
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<td>Demand</td>
<td>• Health provider didn’t recommended vaccine</td>
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<td>• Older adults are not aware of their risk and/or that they need a vaccine</td>
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<td>• Older adults are not aware of existing public vaccine services</td>
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<td>Health &amp; Immunization System</td>
<td>• Older adults are not routinely interacting with the preventive arms of the health system</td>
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<td>• Vaccine is too expensive (high co-pay or must be fully paid out of pocket)</td>
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<td>• Logistical challenges that make accessing vaccine difficult (e.g., limited mobility, living in nursing home, older adult must arrange for vaccination themselves, etc.)</td>
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</table>

Impact of health burden in older adults & implications of archetypes

- Countries make **decisions** differently
  - In non-emergency periods, some countries require more data, including disease burden, but also economic impact
  - Other countries are influenced by politics and competing priorities and require an advocacy approach
- **Uptake** is influenced by public knowledge and perceptions, acceptance of mandates, AND access
- Financing makes a difference – where vaccines are publicly funded, uptake is higher
  - A broader approach to measuring value of adult vaccination may help where vaccines are not funded
- COVID-19 provided some important tools including digitalization of health records
- Expanding expertise on NITAGs to include a broader variety of disciplines is needed in some countries to ensure more of a life course approach
- Public knowledge and awareness of the health impact of COVID could be further leveraged for other vaccines to build public engagement in health

Even considering differences between countries, some standardization of approaches across Europe could be valuable