Adult Immunization Board - Technical meeting:

Advancing vaccination strategies for the older adults: insights into epidemiology, immunity, and implementation

Session 1: Opening, Introduction and Objectives

Adult Immunization Board

A collaboration of

UNIVERSITÀ DEGLI STUDI FIRENZE
DSS DIPARTIMENTO DI SCIENZE DELLA SALUTE

University of Antwerp

Name: Stefania Maggi

Country: ITALY

Affiliation: European Interdisciplinary Council on Aging (EICA)

Function: President

Main expertise (1-2 lines): Geriatrician, with main interest in lifecourse approach to healthy Aging

Overview of the objectives of the meeting + Why focusing on older adults

Stefania Maggi (European Interdisciplinary Council on Ageing)

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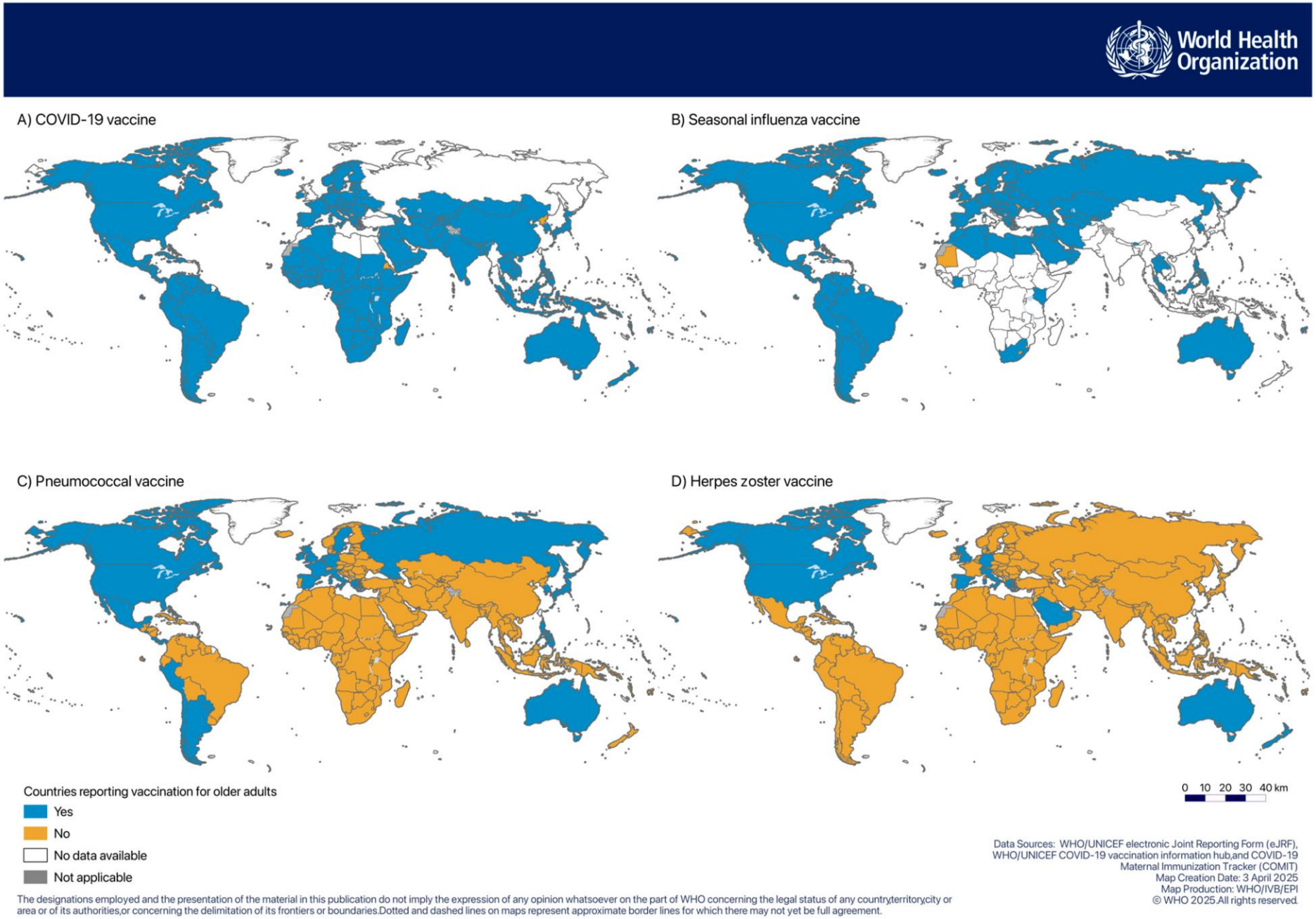
University of Antwerp



Programs are in place

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Status of immunization policies for older adults by WHO region:

Vilajeliu, A.; Vega, V.; Gibson, R.; Nogareda, F.; Wang, X.; Brooks, D.J.; Wiysonge, C.S.; Cakmak, O.N.; Mere, O.; Marti, M.; Lambach, P.; Shendale, S.; Contreras, M.; Njambe, E.; Sparrow, E.G.; Hombach, J.; Lindstrand, A. Global Status of Adult Immunization Post COVID-19 Pandemic. Vaccines ***2025****, 13, 401.*

Figure. Geographical distribution of countries that reported vaccination in 2024 (2023 data) for older adults against A) COVID-19, B) seasonal influenza, C) pneumococcal disease, and D) HZ.

Status of immunization policies for older adults by WHO region:

Table 6. Status of immunization policies for older adults by WHO Region and country income-group.

		Number of Member States (MS)	COVID-19 (%)	Seasonal Influenza (%)	Pneumococcal** (%)	HZ (%)
Number of reporting countries		194	184 (95%)	118 (61%)	194 (100%)	194 (100%)
WHO Region	Africa	47	46 (98%)	5 (11%)	0	0
	Americas	35	35 (100%)	32 (91%)	12 (34%)	2 (6%)
	Eastern Mediterranean	21	15 (71%)	15 (71%)	1 (5%)	2 (10%)
	Europe	53	50 (94%)	49 (92%)	16 (30%)	7 (13%)
	South East Asia	11	9 (82%)	4 (36%)	0	0
	Western Pacific	27	27 (100%)	9 (33%)	4 (15%)	2 (7%)
Country-income group	HIC	63	58 (94%)	55 (89%)	25 (40%)	13 (21%)
	UMIC	53	51 (96%)	40 (75%)	7 (13%)	0
	LMIC	50	46 (92%)	15 (30%)	1 (2%)	0
	LIC	25	24 (92%)	2 (8%)	0	0
	Not classified*	3	3	2	0	0
	All regions	194	182 (94 %)	114 (59%)	33 (17%)	13 (7%)

Notes: *Not included in the WB classification: Niue and Cook Islands. Not classified by WB due to unavailability of data: Venezuela. **Includes those countries reporting use of PCV13, PCV15, PCV20, and/or PPV23.

*Vilajeliu, A.; Vega, V.; Gibson, R.; Nogareda, F.; Wang, X.; Brooks, D.J.; Wiysonge, C.S.; Cakmak, O.N.; Mere, O.; Marti, M.; Lambach, P.; Shendale, S.; Contreras, M.; Njambe, E.; Sparrow, E.G.; Hombach, J.; Lindstrand, A. Global Status of Adult Immunization Post COVID-19 Pandemic. Vaccines **2025**, 13, 401.*

RSV: In 2024, no information about other recently licensed vaccines was reported in eJRF by countries. However, by the end of 2024, five European countries had introduced the RSV vaccine for older adults. (Communication from Pfizer and GSK, January 2025) / MS= member states

- Percentage of European member states that indicate to vaccinate older adults
  - 94% for COVID-19
  - 92% for Influenza
- More heterogeneous:
  - 30% against pneumococcal
  - 13% against herpes zoster
  - 9% against RSV (data jan 2025, *from Pfizer/GSK)*

Vaccines within programs are different

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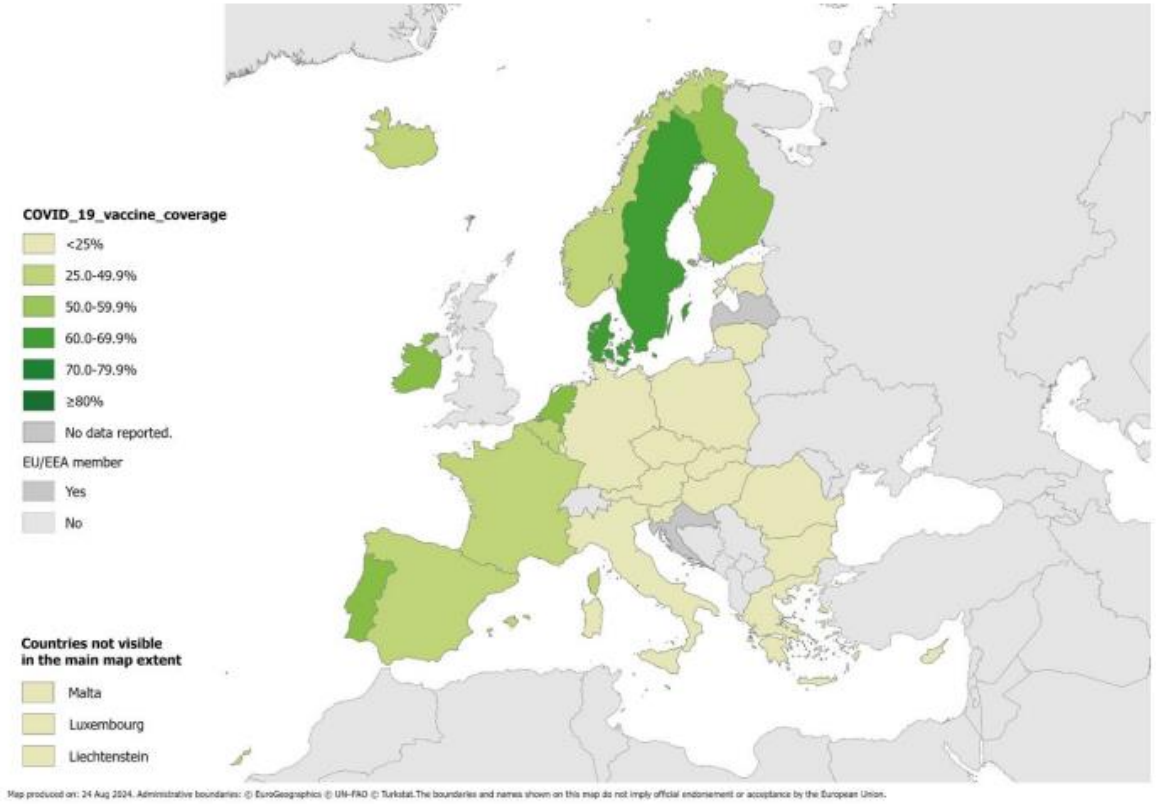
Status of coverage (COVID-19)



COVID-19 vaccine coverage among people aged 60 years and above, 28 EU/EEA countries 1 September 2023 to 31 July 2024

Table 1. COVID-19 vaccine coverage in target age groups, 28 EU/EEA countries, 1 September 2023 to 31 July 2024

Age group	Median coverage in the EU/EEA[a] (range)	Number of countries with ≥80% coverage	Number of countries with ≥50% coverage	Number of countries with ≥30% coverage
60+ years	14.0% (0.02–66.1%)	0/28	6/28	10/28
80+ years	21.5% (0.03–93.9%)	3/27	9/27	12/27

[a] Values are the median across all the reporting countries for one dose received. The reporting period may be different for some countries, as indicated in Table 2.

Coverage remains below the targeted levels

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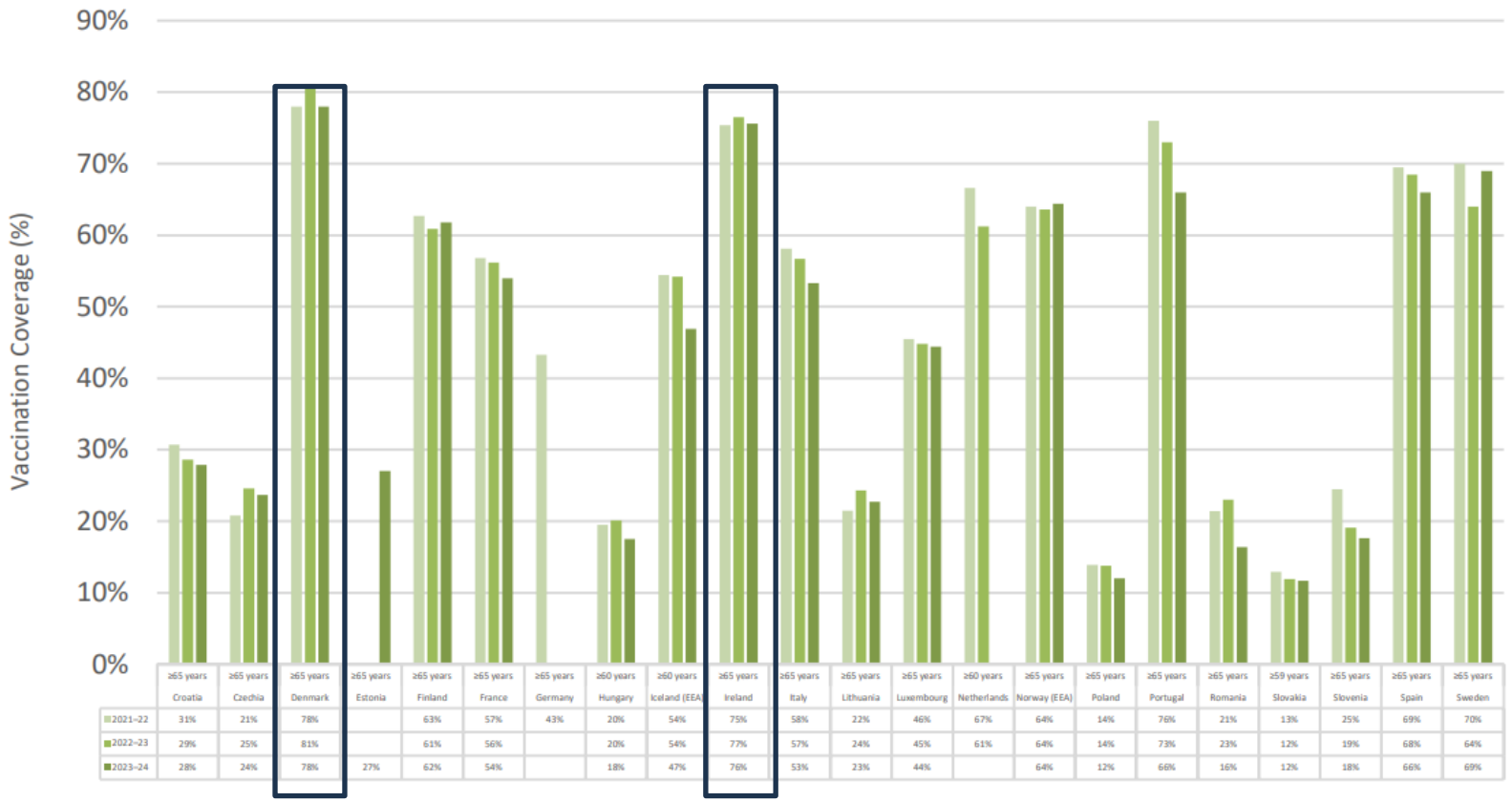
Status of coverage (Influenza)

Figure 2. Seasonal influenza vaccination coverage rates in older adults, EU/EEA countries, influenza seasons 2021–22, 2022–23 and 2023–24



	≥65 years Croatia	≥65 years Czechia	≥65 years Denmark	≥65 years Estonia	≥65 years Finland	≥65 years France	≥65 years Germany	≥60 years Hungary	≥60 years Iceland (EEA)	≥65 years Ireland	≥65 years Italy	≥65 years Lithuania	≥65 years Luxembourg	≥60 years Netherlands	≥65 years Norway (EEA)	≥65 years Poland	≥65 years Portugal	≥65 years Romania	≥59 years Slovakia	≥65 years Slovenia	≥65 years Spain	≥65 years Sweden
2021–22	31%	21%	78%		63%	57%	43%	20%	54%	75%	58%	22%	46%	67%	64%	14%	76%	21%	13%	25%	69%	70%
2022–23	29%	25%	81%		61%	56%		20%	54%	77%	57%	24%	45%	61%	64%	14%	73%	23%	12%	19%	68%	64%
2023–24	28%	24%	78%	27%	62%	54%		18%	47%	76%	53%	23%	44%		64%	12%	66%	16%	12%	18%	66%	69%

Source: 2024 ECDC Influenza Survey in EU/EEA countries.

Coverage remains below the targeted levels

Meeting definitions

Adult immunization	Adult immunization refers to the administration of vaccines (active immunization) or antibodies (passive immunization) to **individuals who are 18 years of age or older** in order to protect them against various infectious diseases, before or after exposure. *Source: AIB secretariat*
Older adults	The United Nations defines "older adults" as persons 60 years of age or older, although this age limit may vary from country to country. **For the purposes of this meeting, we have defined "older adults" as those aged 50 and over to ensure the broadest possible inclusion**. *Source: AIB secretariat*
Vaccines for older adults	This meeting will focus on the following 6 VPI/vaccines: **1. Influenza** **2. COVID-19** **3. Tdap** **4. Pneumo** **5. Shingles** **6. RSV** An overview of the different vaccines is given on next slide *(Source: AIB adult vaccines tracker)*

AIB adult vaccines tracker – vaccines for older adults

Pathogen	Pathogen type	Manufacturer	Brand name (non-commercial nam	Platform	(Most common) route of ad	Antigen / active substance	Adjuvant
Diphtheria, Tetanus (Td)	Bacteria	AJ Vaccines	diTeBooster	Subunit (toxoid)	Intramuscular	Tetanus toxoid, Diphtheria toxoid	Alum-based
Diphtheria, Tetanus (Td)	Bacteria	Astro Pharma	Td-pur / DIFTETALL	Subunit (toxoid)	Intramuscular	Tetanus toxoid, Diphtheria toxoid	Alum-based
Diphtheria, Tetanus (Td)	Bacteria	Sanofi	Tenivac / dT-reduct "Merieux"	Subunit (toxoid)	Intramuscular	Tetanus toxoid, Diphtheria toxoid	Alum-based
Diphtheria, Tetanus, Pertussis (Tdap)	Bacteria	GSK	Boostrix	Subunit (toxoid)	Intramuscular	Diphtheria toxoid, Pertussis toxoid, a	Alum-based
Diphtheria, Tetanus, Pertussis (Tdap)	Bacteria	AJ Vaccines	diTekiBooster	Subunit (toxoid)	Intramuscular	Diphtheria toxoid, Pertussis toxoid, a	Alum-based
Diphtheria, Tetanus, Pertussis (Tdap)	Bacteria	Sanofi	Triaxis/Covaxis/Adacel	Subunit (toxoid)	Intramuscular	Diphtheria toxoid, Pertussis toxoid, a	Alum-based
Diphtheria, Tetanus, Pertussis, Polio (Tdap-IPV)	Bacteria / Virus	Sanofi	Adacel-Polio / Repevax	Inactivated / subunit (toxoid)	Intramuscular	Diphtheria toxoid, Pertussis toxoid, a	Alum-based
Diphtheria, Tetanus, Pertussis, Polio (Tdap-IPV)	Bacteria / Virus	GSK	Boostrix Polio	Inactivated / subunit (toxoid)	Intramuscular	Diphtheria toxoid, Pertussis toxoid, a	Alum-based
Diphtheria, Tetanus, Polio (Td-IPV)	Bacteria / Virus	Sanofi	Revaxis	Inactivated / subunit (toxoid)	Intramuscular	Diphtheria toxoid and Tetanus toxoi	Alum-based
Respiratory syncytial virus (RSV)	virus	GSK	Arexvy	Subunit (recombinant protein)	Intramuscular	F protein: RSVpreF (RSV A)	AS01E
Respiratory syncytial virus (RSV)	virus	Moderna	mRESVIA (mRNA-1345)	Nucleic acid (mRNA)	Intramuscular	Single-stranded 5' capped mRNA en	None
Respiratory syncytial virus (RSV)	virus	Pfizer	Abrysvo	Subunit (recombinant protein)	Intramuscular	F protein: RSVpreF (RSV A) and RSVp	None
Seasonal Influenza	Virus	Fluart Innovative Vaccines	3Fluart	Inactivated (egg-based)	Intramuscular	TIVs contain two A lineages (H1N1 a	Alum-based
Seasonal Influenza	Virus	CSL Seqirus	Fluad / Chiromas	Inactivated (egg-based)	Intramuscular	TIVs contain two A lineages (H1N1 a	MF59
Seasonal Influenza	Virus	CSL Seqirus	Fluad Tetra/Quad /Quadrivalent	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	MF59
Seasonal Influenza	Virus	CSL Seqirus	Flucelvax Tetra/Quadrivalent/Quad	Inactivated (cell-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	CSL Seqirus	Afluria Quadrivalent/Quad/Tetra	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	CSL Seqirus	Agrippal/Begripal/Fluazur/Sandovac/	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Sanofi	Efluelda	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	GSK	Fluarix Tetra / Quadrivalent	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	GSK	Flulaval Quadrivalent	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Abbott Biologicals B.V / Mylan	Influvac/Fluvaccinol/Grippe-Impfstoff	Inactivated (egg-based)	Intramuscular	TIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Abbott Biologicals B.V / Mylan	Influvac Tetra	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Sanofi	Vaxigrip	Inactivated (egg-based)	Intramuscular	TIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Sanofi	Vaxigrip Tetra	Inactivated (egg-based)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Seasonal Influenza	Virus	Sanofi	Supemtek Tetra	Subunit (recombinant protein)	Intramuscular	QIVs contain two A lineages (H1N1 a	None
Severe acute respiratory syndrome coronavirus 2 (SARS-Co	Virus	Novavax	Nuvaxovid	Subunit (recombinant protein)	Intramuscular	Monovalent and Bivalent original an	Matrix-M
Severe acute respiratory syndrome coronavirus 2 (SARS-Co	Virus	Pfizer / BioNTech	Comirnaty	Nucleic acid (mRNA)	Intramuscular	Monovalent and Bivalent original an	None
Severe acute respiratory syndrome coronavirus 2 (SARS-Co	Virus	Moderna	Spikevax	Nucleic acid (mRNA)	Intramuscular	Monovalent and Bivalent original an	None
Severe acute respiratory syndrome coronavirus 2 (SARS-Co	Virus	Arcturus Therapeutics Europe B.V	Kostaive	Nucleic acid (self-amplyfing mRNA)	Intramuscular	Zapomeran, sa-mRNA,encapsulated	None
Severe acute respiratory syndrome coronavirus 2 (SARS-Co	Virus	Hipra Human Health	Bimervax	Subunit (recombinant protein)	Intramuscular	Monovalent and bivalent, alfa, beta,	SQBA
Streptococcus pneumoniae	Bacteria	Pfizer	Prevenar 20	Subunit (conjugate)	Intramuscular	Pneumococcal capsular polysacchar	Alum-based
Streptococcus pneumoniae	Bacteria	Pfizer	Prevenar 13	Subunit (conjugate)	Intramuscular	Pneumococcal capsular polysacchar	Alum-based
Streptococcus pneumoniae	Bacteria	MSD	Vaxneuvance	Subunit (conjugate)	Intramuscular	Pneumococcal capsular polysacchar	Alum-based
Streptococcus pneumoniae	Bacteria	MSD	Pneumovax 23	Subunit (polysaccharide)	Intramuscular	Polysaccharide antigen from 1, 2, 3,	None
Streptococcus pneumoniae	Bacteria	MSD	Capvaxive (PCV21)	Subunit (conjugate)	Intramuscular	Polysaccharide antigen from 3, 6A, 7	None
Varicella-zoster virus (VZV) - Herpes Zoster	Virus	GSK	Shingrix	Subunit (recombinant protein)	Intramuscular	Varicella Zoster Virus glycoprotein E	AS01B

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Platforms

- **Subunit** (Toxoid, Recombinant protein, Conjugate, Polysaccaride) Tdap, RSV, Influenza
- **Inactivated** Influenza
- **Nucleid acid** (mRNA) COVID-19, RSV

(Most common) Route of administration

- All intramuscular

Adjuvant

- **AS01** RSV, Shingrix
- **Alum-based** Tdap, Influenza, pneumo
- **M59** Influenza
- **Matrix-M** COVID-19
- **SQBA** COVID-19

Combination vaccines:

Tdap**, no other combination vaccines on the market yet**

Why focus on vaccination of older adults?

- **To support immune response**
  - Weaker immune system – higher risk of complications
  - Chronic diseases (e.g. diabetes, heart disease, or COPD) which make infections more severe/ harder to recover from. Moreover, infections can lead to exacerbation of chronic diseases

- **To maintain quality of life / independence** (improving long-term health)

- **To increase public health impact -** Older adults often live in close contact with family and caregivers (nursing homes /regularly organized home care → reduce transmission in the broader community).

- **To reduce society/health system costs:** hospital admissions, ER visits, and long-term care costs

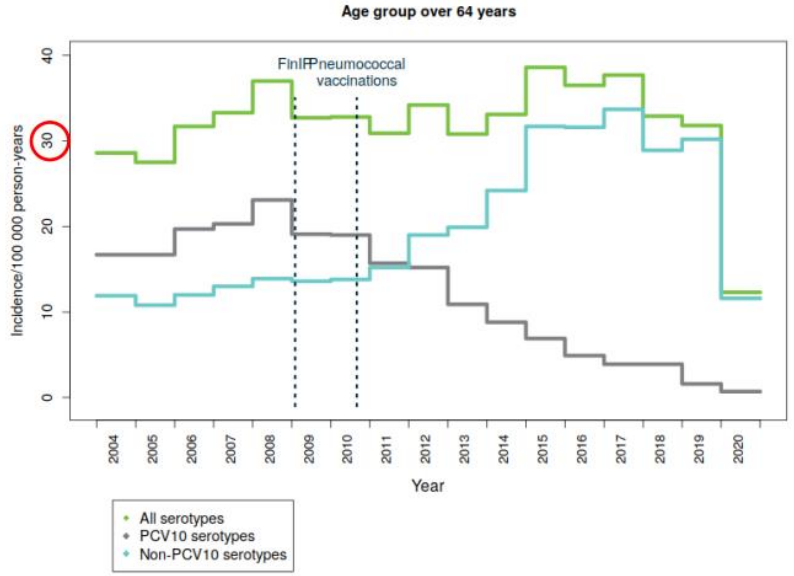
Wide variations in policies in terms of age criteria, type of vaccines, implementation framework and reimbursement procedures → worth discussion to gather perspectives from various contexts/ vaccines/ disciplines

Next to vaccination of older adults also important to vaccinate children and HCP

- **Potential impact of childhood vaccinations on older adults** (Pneumococcal, Influenza)

- The **role of vaccines targeting HCP**
  - to reducing the likelihood of transmission to (older) patients
  - safeguarding the health workforce
  - health workers play a key role in recommending vaccines

IPD incidence in adults ≥65 years by serotype group, NIDR Finland 2004-2020



THL National Institute for Health and Welfare, Finland

I-MOVE

UNIVERSITY OF TAMPERE School of Health Sciences

PCV10 serotype IPD: significant reductions in all adult age groups → however considerable remaining burden of pneumococcal bacteremia and pneumonia in older adults *(Finland / country meeting presentation J Pekka Nuorti (Tampere University)*

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Objectives of the meeting

Session 2: Setting the scene: health prevention and vaccination strategies of older adults in Europe

- Clarify the definition of **older adults** in the context of vaccination by considering factors such as chronological age, comorbidities, and biological markers like immunosenescence and frailty
- **Review and discuss vaccines and vaccination programs** targeting older adults across Europe

Session 2: Setting the scene:
health prevention and vaccination strategies of older adults in Europe

| Chairs: Pierre Van Damme and Paolo Bonanni

10.00 Enhancing health in an ageing population: WHO EURO's data-driven approach to prevention strategies (including vaccination) for older adults
▸ **Yongjie Yon / Niyazi Cakmak** | online |

10.25 Clarifying the older adults population for vaccination strategies: exploring age, comorbidities, immunosenescence, frailty as factors
▸ **Claudio Franceschi**

10.50 Discussion

11.10 Coffee Break

| Chairs: Thomas Weinke and Antoni Torres

11.40 Overview on current vaccines, recommendations and national vaccination plans in the older adults in Europe
▸ **Jane Barrat**

12.00 Healthcare providers perspectives from three different EU countries on their country's respective vaccination recommendations and strategic plans for older adults (barriers/opportunities for the future)
▸ **Felipe Froes** ▸ **Marcin Czech** ▸ **Jens Lundgren**

12.20 Discussion

12.40 Lunch

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Objectives of the meeting

Session 3: From clinical trials to real-world data: challenges and opportunities in the conduction of trials

- Address the **unique challenges and opportunities in conducting vaccination studies**, and especially clinical trials, with older adults.

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Session 3: From clinical trials to real-world data: challenges and opportunities in the conduction of trials

Chairs: Alojz Ihan and Odile Launay

13.30 Overview of the difficulties and opportunities of vaccine trials (e.g. pragmatic trials) targeting frail and older adults.
T.Biering-Sorensen

13.50 Use of Real-World Data to complement experimental studies
Domnich Alexander

14.10 Discussion

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Objectives of the meeting

Session 4: Understanding specific characteristics of different vaccines for older adults

- Explore the **mechanisms and factors affecting the efficacy, effectiveness, safety and durability (including boosters) of vaccine responses in older adults** and discuss strategies (like adjuvants and higher doses) to enhance immune responses. **Discuss specific characteristics of different vaccines for older adults.**

Session 4: Understanding specific characteristics of different vaccines for older adults

14.30 | **4.1** Immunological mechanisms of vaccine-induced immune response in the older adults ▸ **Birgit Weinberger**

14.45 | **4.2** Effects of comorbidities and use of immune markers to predict vaccination responses in older adults ▸ **Debbie van Baarle**

15.00 Discussion

15.15 Coffee Break

| Chairs: Per Ljungman and Jacek Wysocki

| **4.3** Specific characteristics of different vaccines for older adults (Part 1)

15.45 **Herpes Zoster:** Specific topic: duration in older adults
▸ **Javier Díez-Domingo** | **online** |

16.00 **Pneumococcal disease:** Specific topic: future vaccines
▸ **Antoni Torres**

16.15 **Tdap:** Specific topic: boosters in older adults and differences between countries
▸ **Tino F Schwarz**

16.30 **RSV:** Specific topic: Need for revaccination? When and how to organize it?
▸ **Élisabeth Botelho-Nevers**

16.45 Discussion

17.15 Closure of day 1

| Chairs: Heini Salo and Helena Maltezou

| **4.3** Specific characteristics of different vaccines for older adults (Part 2)

09.00 **Influenza:** Specific topic: High-dose and adjuvanted vaccines
▸ **Colin Russel**

09.15 **COVID-19/SARS-CoV-2:**
Specific topic: Different platforms (e.g. mRNA)
▸ **Odile Launay**

09.30 Discussion

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Objectives of the meeting

Session 5: Implementing vaccination in the older adults on multiple levels

- Discuss **implementation of vaccination** in older adults at the **policymakers, organizational and population levels**. Identify strategies, including best practices and successes, to increase vaccination coverage in both community and other care settings, and address communication and logistical challenges to ensure program sustainability and equity.

Session 5: Implementing vaccination in the older adults on multiple levels

09.45 **The policymakers level**: Vaccine impact assessment and economic value of vaccination in aging adults ▸ **Simon Brassel**

10.10 **The organizational level**: What are challenges in reaching older adults and opportunities (e.g. co-administration) ▸ **Sofia Duque**

10.35 Discussion

10.45 Coffee Break

11.15 **The population level**: Communicating the importance of vaccination for healthy aging ▸ **Litjen Tan**

11.40 Discussion

Session 6: Breakout Groups and meeting closing

| Chairs: Birgit Weinberger and Stefania Maggi

12.00 Breakout Groups (potential topics are decided during the course of the meeting)

13.00 Plenary feedback

13.30 Lunch

| Chairs: Pierre Van Damme and Paolo Bonanni

14.30 Meeting summary by AIB rapporteur ▸ **Katherine Newell**

15.00 Closing remarks and Closing of the Meeting

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Let the discussions begin!

Introduction of meeting participants

Prof. Pierre Van Damme

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University of Antwerp

Tour de table: Introduction of the (virtual or physical) participants

- Please note that we have participants / speakers online – **hybrid meeting**

- **Physical Participants**
  - Please use the mic to ask questions and/or give comments.
    It will help the online participants to follow the questions and discussion in the meeting room

- **Online participants**
  - Please switch on your video while introducing yourself and every time you speak
  - Keep yourself on mute when not speaking

  - **Video recordings of the presentations are for internal use only.**
    No recordings will be put online.