

# An Overview of the Life Course & Integration Approach To Immunization

Session Speakers: Stephanie Shendale, WHO HQ Aaron Wallace, GID CDC

2023 Life Course and Integration Webinar Series
Sponsored by the IA2030 Life Course and Integration Working Group

### SESSION FACILITATORS



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Life Course and Integration
Essential Programme on Immunization
WHO

# OVERVIEW OF THE WEBINAR SERIES

### LIVE ENGAGEMENTS

### Each live session will consist of the following:

- Short presentation(s) by a Subject Matter Expert (SME) or panel of speakers
- Q&A session on topic presented

### LIVE ENGAGEMENT TOPICS: 2023

DATE	TOPIC
Feb 22nd <b>Webinar 1</b>	Introduction To Webinar Series An Overview of the Integrated Life Course Approach To Vaccination
March 8th Webinar 2	Health worker vaccination programmes: opportunities beyond COVID
March/April Webinar 3	Catch-up vaccination: an ongoing safety net to reduce immunity gaps across the life course
May <b>Webinar 4</b>	School-based vaccination strategies: screening and beyond
June <b>Webinar 5</b>	Adult vaccination programmes
TBD <b>Webinar 6</b>	COVID-19 vaccine integration into existing immunization programmes
TBD <b>Webinar 7</b>	Integrated delivery case studies: efforts to integrate delivery of immunizations with other essential child and maternal health interventions
TBD <b>Webinar 8</b>	HPV vaccination strategies: moving the agenda forward
TBD	& more topics to be identified

### LIFE COURSE VACCINATION

# WHAT DO WE MEAN WHEN WE TALK ABOUT LIFE COURSE VACCINATION?





### LIFE COURSE VACCINATION

The life course approach to vaccination extends the benefits of vaccination across an individual's entire life.



### Life course vaccination recommends A2030



# specific vaccines at each stage of life

Pregnant Woman	Newborn	Infant	Second Year of Life	Child	Adolescent	Adult	Older Person
Pregnant woman	Newborn (<24 hours)	Infant (<1 year)	Second year of life	Child	Adolescent	Adult	Older Person
Tetanus toxoid containing vaccine (TTCV)  Seasonal influenza	BCG Hep B-BD	DTPCV Measles Rubella / HepB / PCV Rotavirus / Hib / Polio  Japanese Encephalitis Meningococcal Rabies Seasonal influenza Typhoid / Yellow Fever	DTPCV booster Measles PCV3 (if 2+1 schedule)  Cholera Seasonal influenza Hepatitis A Typhoid Meningococcal Varicella Mumps Rabies	Diphtheria booster Tetanus booster  Cholera Rabies Seasonal influenza Typhoid	Diphtheria booster HPV Tetanus booster  Cholera Dengue Rabies Seasonal influenza Typhoid	Cholera Dengue Rabies Seasonal influenza	Cholera Rabies Seasonal influenza

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	94				COVID	-19 vaccination	
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### IA2030 VISION

A world where everyone, everywhere, at every age...

... fully benefits from vaccines...

... for good health and well-being

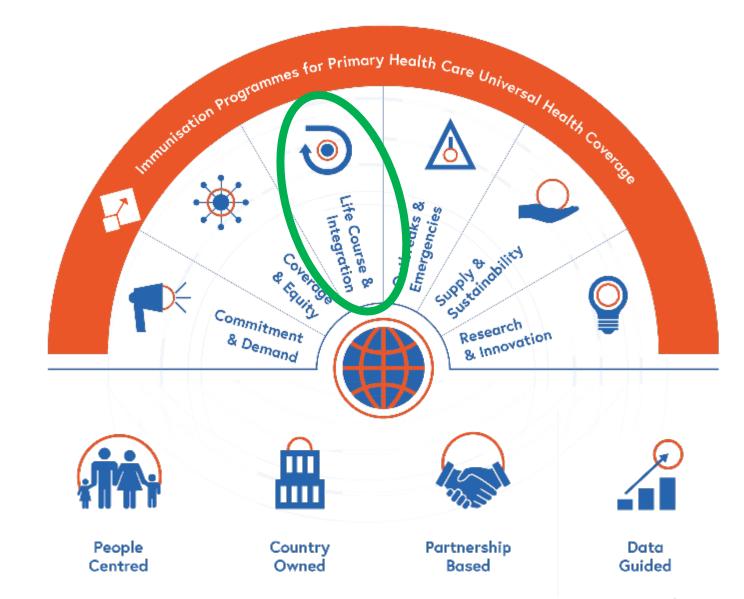
### **IA2030 PROPOSES A STRATEGIC FRAMEWORK**



**7 Strategic Priorities** 

informed by

4 Core Principles for action





### STRATEGIC PRIORITY 4: LIFE COURSE & INTEGRATION

**GOAL:** All people benefit from recommended immunizations throughout the life course, effectively integrated with other essential health services

### **OBJECTIVES:**

- ✓ Strengthen immunization policies and service delivery throughout the life course, including for appropriate **catch-up vaccinations** and booster doses.
- Establish integrated delivery points of contact between immunization and other public health interventions for different target age groups.

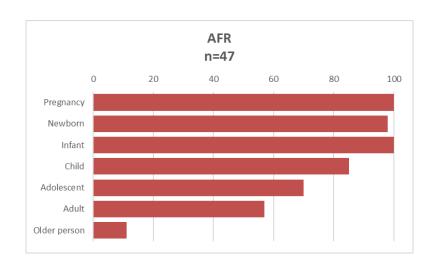
# WHAT IS THE GLOBAL EXTENT OF LIFE COURSE VACCINATION?

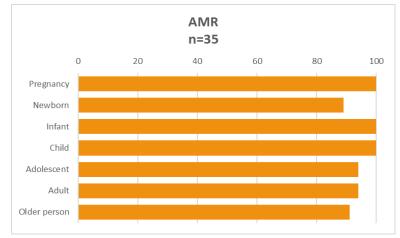


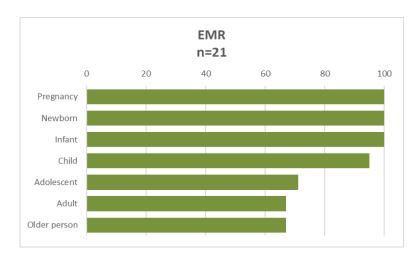
### Status of life course vaccination by WHO region - 2021

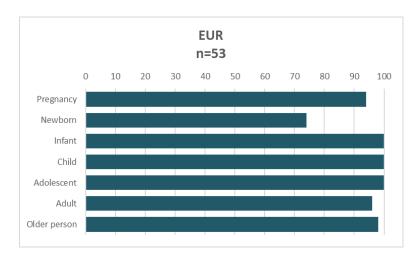


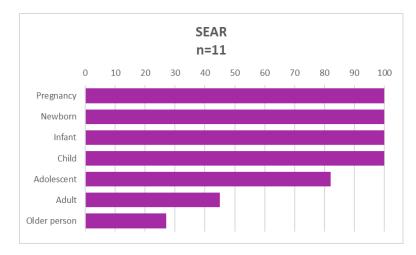
Percentage of WHO Member States in 2021 with universal vaccination recommendations for each life course stage

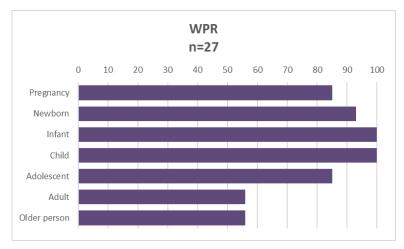












# WHAT DO YOU NEED TO CONSIDER FOR A LIFE COURSE APPROACH TO VACCINATION?



# Key considerations when transitioning to a life course approach to vaccination

Identifying & reaching target populations

Policy and investment/ financing

Recording and tracking data

Developing health worker capacity

Ensuring equitable access

Integrating with other services

Catching-up on missed vaccinations

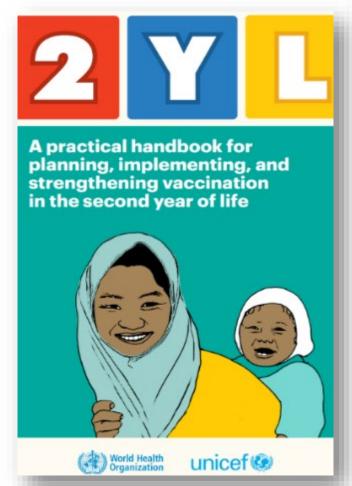
Building community acceptance and demand

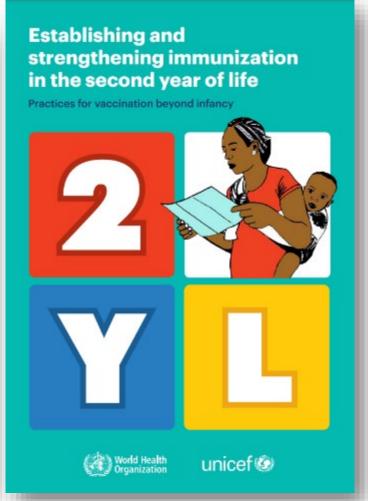
# EXAMPLES OF LIFE COURSE APPROACHES TO VACCINATION

# SECOND YEAR OF LIFE (2YL): GUIDANCE TO ADDRESS IMPLEMENTATION BARRIERS

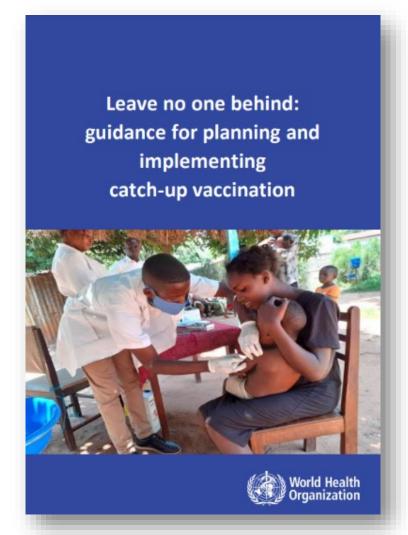
These resources can serve as a template for how to more broadly approach life course implementation

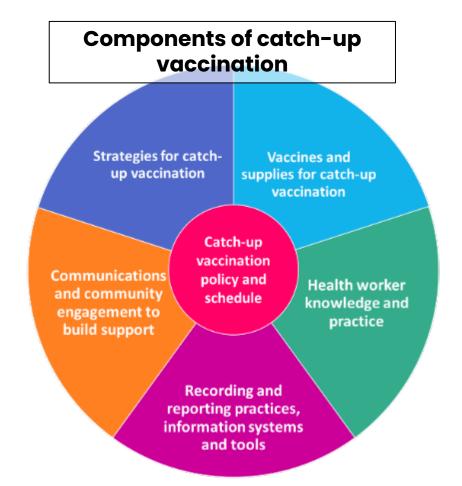
- Modification of data tools/systems
- Expanding catch up
- Reducing missed opportunities for vaccination

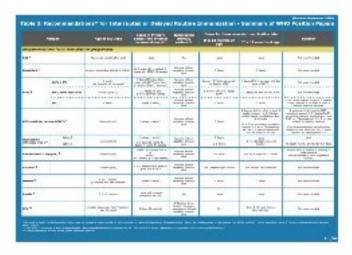




# Catch-up vaccination requires a whole system life course approach

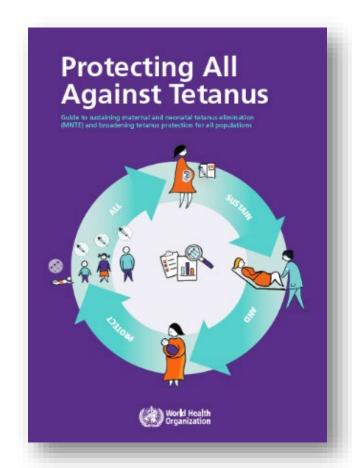






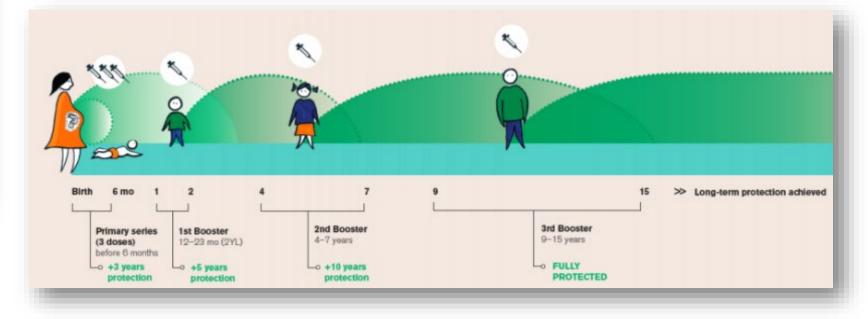
WHO Recommendations for Interrupted or Delayed Routine Immunization

### Life-course vaccination for tetanus protection

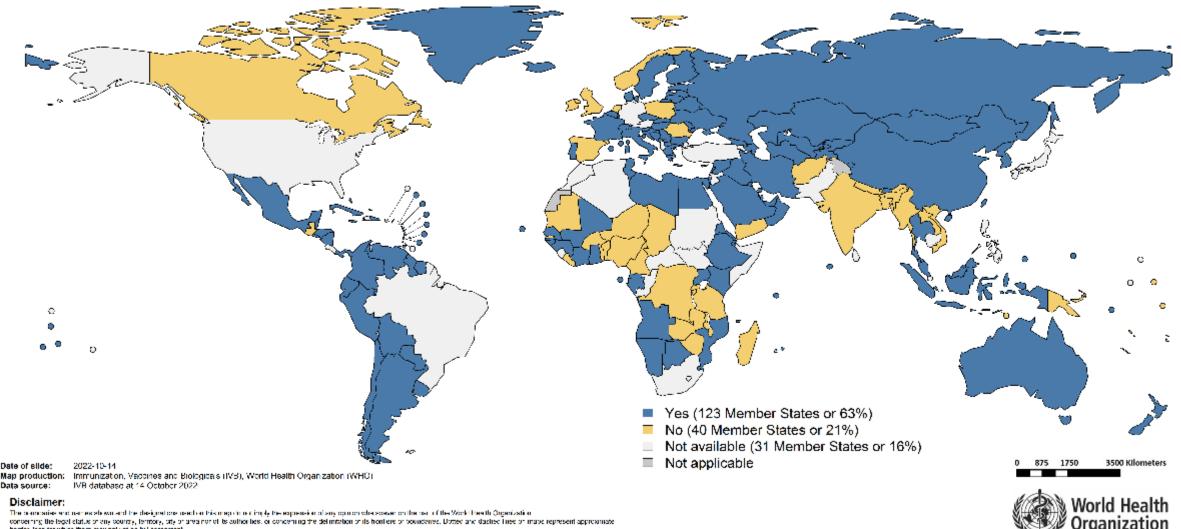


https://www.who.int/publicatio ns/i/item/protecting-allagainst-tetanus

- 6 doses of Tetanus-containing vaccine (TTCV) for long-term (likely lifetime) protection
- 3 primary doses (infants) + 3 boosters (2YL, 4-7yrs, 9-15yrs)
- Aligned with boosters for diphtheria and pertussis (give as combo vaccines)
- Protect All (girls and boys)
- Sustain Maternal & Neonatal Tetanus Elimination



### WHO Member States Reporting Vaccination Checks at Pre-primary or Primary School in 2021



border. Thes for which there may not yet be full agreement. World Health Organization, WHO, 2022, All rights reserved

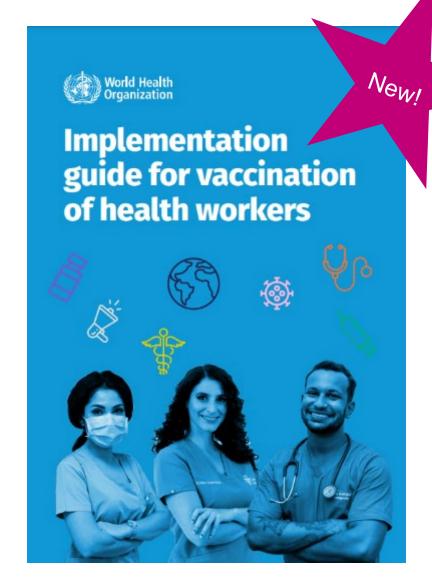
### **Considerations for Health Worker Vaccination**

# WHO provides recommendations for vaccinations that should be provided to health workers

The information below is providecumented proof of immunity the national vaccination scheduler.	ded to assist countries to develop national policies for the vaccination of health workers (HWs). For recommended vaccines, all HWs should have or immunization. This should be required as a condition of employment and enrollment into training. It is expected that HWs are fully vaccinated po- ite in use in their country.
Antigen	Vaccination of Health Workers Recommended
BC01	BCS vaccination is recommended for unwaconsted TST- or ISRA-negative persons at risk of occupational exposure in law and high TB incidence areas (e.g. health workers, laboratory workers, medical students, prison workers, other individuals with occupational exposure).
Hepatitis R <sup>2</sup>	Transmission is suggested for groups at risk of anguining infection who have not been vaccinated previously (for example HVs who may be exposed to blood and blood products at work).
Polic <sup>2</sup>	All IIIVs should have completed a full course of primary vectoration against polic.
Diphtherie*	HWs into may have occupational exposure to C. alphithmes about the vectorated.
Meanies <sup>5</sup>	All HWs should have immunity or be vaccinated equinat measure.
Rubeltof	If rubble vaccine has been introduced into the national programme, all HWs should have immently or be vaccinated ejected rubble.
MeningacoccaP	One baoster dose 3-5 years after the grimany dose may be given to persons considered to be at continued risk of exposure, including HWs.
Driverza <sup>2</sup>	Hills are an important group for influence vaccination. Annual immunication with a single risse is recommended.
Varice8s*	Countries should consider vaccination of potentially susceptible Hills (i.e. unvaccinated and with no history of varicella) with 2 doses of varicella vaccine.
Pertussis <sup>30</sup>	HMs should be prioritized as a group to receive derbusos vaccine.
Antigen	No current recommendation for vaccination of Health Workers
Tetanus <sup>13</sup>	There is currently no recommendation regarding HWs.
Macesophilus (effuencee type bill	The main burder of disease his in infants under 5 years of age. Work in a health care setting is not indicated as a factor for increased risk. There is correctly no necommendation regarding HMs.
Presmocaccat <sup>13</sup>	The main ourder of disease lies in infarts under 5 years of age. Immunocompetent acults are not at increased risk for sensus pneumococcal disease. HWS are not indicated as a group of increased risk of pneumococcal disease.
Rotavirus <sup>14</sup>	Children are the target group for notivinis vectivation as they have the greatest turnlen of cleases. Adults including IRVs are not at increased risk of severe disease.
HbAra	HWs are not at increased risk of HPV. The primary target group for vaccination is girls aged 9-14.
Japanese Encephalitis <sup>36</sup>	HMs are generally not at special risk of contracting IE. Workers at high-risk in endemic areas, such as those involved in vector control, should be veccinated.
Yallow Ferent <sup>()</sup>	Individuals in endersic countries and travelers to these countries should receive a single dose of yellow fever vaccine. Work in a health care setting is not indicated as a better for increased risk. There is currently no recommendation regarding I-Wis.
Tick-horne Encephalitis/6	HWs are generally not at special risk of contracting IE. Workers at high-risk in endemic areas, such as those involved in vector control, should be vectorabed.
Typhoid!5	Typholis vaccines should be employed as part of comprehensive control strategies in areas where the disease is enternic. Work in a health care setting is not indicate as a factor for increased risk. There is committy no recommendation regarding MNs.
Cholera <sup>30</sup>	Chair or varcines may be employed as part of comprehensive control strategies in areas where the disease is endemic as well as to prevent and respond to chairm- outbreaks*. There is currently no recommendation regarding HWs.
Hepatitis A <sup>11</sup>	Repatitis A is transmitted through contaminated food and water or direct contact with an infectious person. Hit are not indicated as a group at increased risk of hepatitis A infection.
Rabios <sup>23</sup>	PrEP may be considered for medical professionals who regularly provide care to persons with nables.
Mureps <sup>23</sup>	Bodine mumps vacanation is recommended in countries with a well-established, effective disclosed -accreation programme and the capacity to mention high level vaccination coverage with measter and rubells vaccination. Hi
Dangue (CYD-TDV)24	HMs are not at increased risk of dengue.

https://www.who.int/publications/m/item/table-4-who-recommendations-for-routine-immunization

https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/integration/health-worker-vaccination



 $\underline{https://www.who.int/publications/i/item/9789240052154}$ 

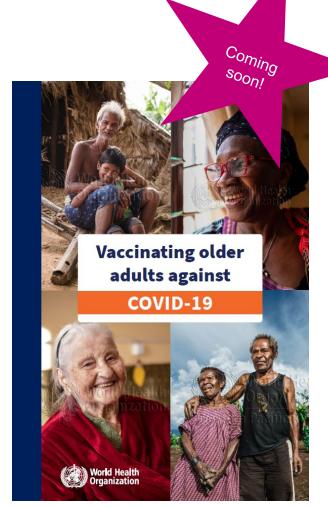
(EN, FR, SP, PT)

### Vaccinating Older Adults

COVID-19 vaccines have reached many older adults, in some programmes not previously targeting this age group

#### **Principles for vaccinating older adults**

8	Leadership- and people-centred approach	Involves older people in programme management and working groups.
(o)	Inclusiveness	Involves all segments of society, regardless of age, gender, ethnicity, location or other social category.
800	Multistakeholder partnerships	Multistakeholder partnerships are mobilized to share knowledge, expertise, technology and resources and to participate in the delivery of services.
(o)	Leaves no one behind	Applies to all adults, whoever and wherever they are, targeting their specific challenges and needs.
C <del>-</del>	Intergenerational solidarity	Enables social cohesion and interactive exchange among generations (including older adults themselves) to support health and well-being for all adults.



### INTEGRATION

# WHAT DO WE MEAN WHEN WE TALK ABOUT INTEGRATION?



Technical Brief No.1, May 2008

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### INTEGRATED HEALTH SERVICES - WHAT AND WHY?

#### Main Message:

This Technical Brief is intended as a practical sid for people involved in discussions about "integrated health services", lintegration is not a new topic - in the past it has been the subject of a rather polarized debata. It is once again topical, largely because of the rise of single-disease funding and in recognition of the fact that the health Millennium Development Goals (MDGs) will not be met without improving health systems.

Integrated health services means different things to different people, and it is important to be clear about how the term is being used. The brief proposes one working definition, the focus of which is providing the "right care" in the 'right place', integrated service delivery is "the organization and management of health services so that people get the care they need, when they need it, in ways that are user-friently, achieve the desired results and provide value for money."

Many benefits are claimed for integrated health services. The evidence base is limited but there are five main messages from the literature:

- An "siways good" versus "siways bad" stance on integration is not helpful. On the ground, integration is
  about practical questions on how to deliver services to those that need them.
- Integration is best seen as a continuum rather than as two extremes of integrated/not integrated. It involves discussions about the organization of various basis which need to be performed in order to provide a population with good quality health services. Integrated care can look different at different service levels. In reality, there are many possible permutations.
- Supporting integrated services does not mean that everything has to be integrated into one package.
   The aim is to provide services which are not disjointed for the user and which the user can easily navigate. For specialist care, the issue is how their activities are linked to other services.
- Managing change in the way services are delivered may require a mix of political, technical and administrative action. It may require action at several levels, including austained consmitment from the top. It is useful to look for good 'entry points' for enhancing integration and to consider what incentives there are for health workers and their managins to change their behaviour.
- Integration is not a cure for inadequate resources. It may provide some savings, but integrating new activities into an existing system cannot be continued indefinitely without the system as a whole being better resourced.



### Range of definitions exist

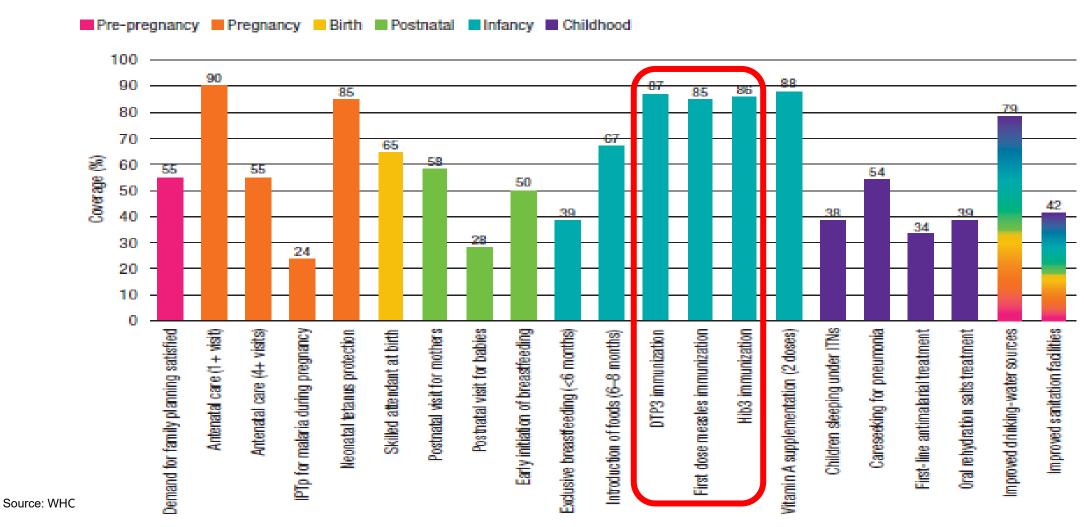
- WHO working definition (2008): The management and delivery of health services so that clients receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health system
- Integration is best seen as a spectrum (from vertical programmes to ideal of PHC)

### What is the rationale for integrating immunization?

- Immunization follows a schedule with multiple contact points, which overlap with other interventions for the same target populations; e.g. Vitamin A supplementation, deworming
- Relatively high childhood immunization coverage rates considered a "strong platform" to reach people (particularly those <2 years) with additional interventions</li>
- Immunization can also provide a contact point for the caregiver to receive services or referrals e.g. family planning or HIV testing.
- Integration of immunization into other services can facilitate delivery throughout the life course e.g. antenatal care for maternal immunization, school health for adolescents.
- Integration of immunization with other services throughout the life course supports comprehensive approaches for disease control e.g. HPV vaccination, screening and treatment.
- Reflects a growing need for multi-sectoral approaches, e.g. cholera vaccination and WASH interventions, school-based delivery of immunization.



### High Childhood Immunization Coverage Spurred Calls for Integrated Delivery Efforts





# TYPES OF INTEGRATION: DIFFERENT OBJECTIVES

#### To strengthen health systems

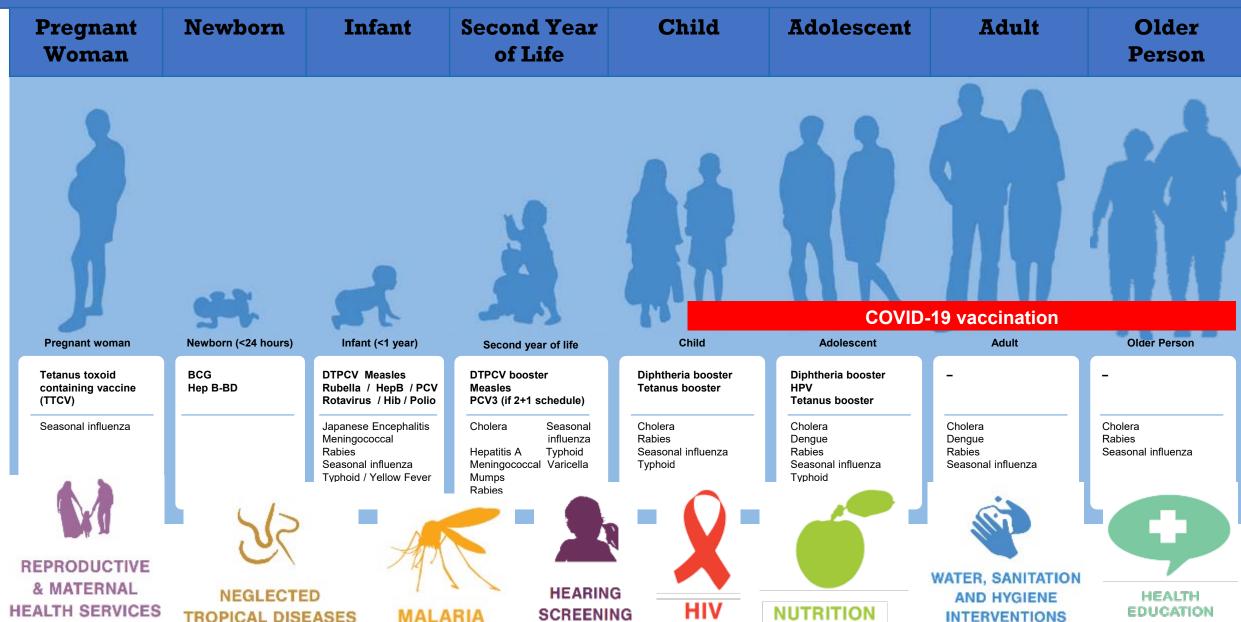
- e.g., Integration of supply chains, monitoring and evaluation systems
- To comprehensively address specific diseases
  - e.g., Comprehensive health packages where vaccination alone is not enough

#### To better serve particular target populations

- Service delivery integration
  - Focus is on integrating the way that interventions are delivered, E.g., Child Health Days or family planning services during immunization sessions
- Integration along the life course
  - Focus is on addressing the clients' health needs over time, e.g. IMCI, vitamin A with routine immunizations, disease specific interventions along life-course, e.g. comprehensive cancer control strategies

# EXAMPLES OF INTEGRATION

### In establishing age-based platforms, developing policies for integrated delivery are critical & support the broader concept of *life course approach for health*





### Health Campaign Integration

# New guidance: CONSIDERATIONS FOR PLANNING INTEGRATED CAMPAIGNS: IMMUNIZATION AND BEYOND

- Proposes a high-level coordination and decision-making process for identifying campaigns that can and should be integrated
  - Framework for determining facilitators and barriers for pairing interventions
  - Consider technical and operational compatibility and feasibility e.g. target population,
     delivery mechanisms, operational strategies, timing, logistics, safety, acceptability, funding alignment, etc.
- Outlines the key considerations for planning and implementing a successful integrated campaign
  - Alignment with existing campaign planning resources
  - Highlights case studies for best practices and lessons learned



### Example: Laos PDR reduced campaign cost

(USD0.23 to 0.03 per treated person)

Table 1

Comparison between the incremental costs of adding deworming to the integrated national campaign for immunisation and vitamin A supplementation and the financial costs of implementing a national deworming campaign in Lao People's Democratic Republic, targetting 1 140 381 individuals

Item	Integrated national campaign	National deworming campaign				
	Immunisation (OPV, TT, viatmin A)	Cost (SUS)	Deworming (added)	Cost (SUS)	Deworming	Cost (\$US)
Supplies	TT, \$0.25 × 671 349 WCBA	167 837	MBZ, \$0.02 × 485 495 pre-SAC	9 710	MBZ, \$0.02 × 485 495 pre-SAC	9 710
	OPV, \$0.16 × 205 658 pre-SAC	32 905	MBZ, \$0.02 × 654 886 WCBA	13 098	MBZ, \$0.02 × 654 886 WCBA	13 098
	Vitamin A, \$0.03 × 544 471 pre-SAC	16 334				
Drug storage and transport	(\$100/province × 17 provinces) + (\$50/district × 99 districts) + (\$20/health centre × 700 health centres	20 650		No additional costs		17 500
Surveillance and monitoring	\$5 000 (AEFI response)	5 000		No additional costs	1	8 750
	\$5 000 (printing)	5 000		No additional costs	1	8 750
Others						
Personnel	\$56 000 (central authority) + \$56 000 (province authority) + \$40 000 (district authority)	146 920		5 080		66 500
Supervision visits	\$15 000 (central authority) + (\$1 500/province × 17 provinces) + (\$500/district × 99 districts)	90 000		No additional costs	)	35 000
Provincial meeting	\$2 500/province × 17 provinces	42 500		No additional costs	1	29 750
Administration	\$10 000 (central authority)	10 000		No additional costs	1	8 750
Social mobilisation	\$30 000 (central authority) + (\$300/province × 17 provinces) + (\$150/district × 99 districts)	49 950		No additional costs		21 000
Training(1 day)	\$500/district × 99 districts	46 461		3 039		43 750
Total		633 557		30 927		262 558
Cost/treated individual				0.03		0.23
Cost/treated individual, excluding drug cost				0.007		

### Opportunities for Integration of COVID-19 Vaccination with Other Health Interventions

Example from CHAI: Integrating early non-communicable disease screening and

counseling with COVID-19 vaccination in Cambodia

- A total of 3,592 adults aged over 40 years receiving COVID-19 vaccination were screened
- Of these, 25% opted in for diabetes screening and 26% for blood pressure screening
- Of these, 37% had an abnormal result for blood pressure and 31% for diabetes. They were referred to nearby health facilities for



confirmatory diagnosis and treatment



### INTEGRATION HAS BOTH BENEFITS AND RISKS

Potential Benefits	Potential Risks
<ul> <li>Increase coverage of a new intervention to level of existing intervention (i.e. immunization);</li> <li>Improve system efficiency, reduce redundancy/costs; reduce repeated engagements with beneficiaries</li> <li>Improve user satisfaction, convenience; able to meet clients' multiple health needs;</li> </ul>	<ul> <li>Negatively <u>impact overall coverage</u> rates or equity;</li> <li>Reduce the <u>quality of care</u>, due to reduced health worker time available;</li> <li><u>Staff may not accept</u> taking on additional responsibilities or workload due to issues with pay, conditions, skills, knowledge or training;</li> </ul>
Increase demand through cross-promotion; may reduce missed opportunities of vaccination.	<ul> <li>Clients may not accept integrated services, especially if stigmatised services are mixed with non-stigmatised (although this can also be a mechanism to reduce stigma).</li> </ul>



### KEY CONSIDERATIONS WHEN INTEGRATING IMMUNIZATION WITH OTHER INTERVENTIONS

#### RELATED TO THE INTERVENTION

- Has a similar target group as for routine vaccination
- Requires similar timing or frequency as routine vaccination
- Has similar logistical requirements
- Has as high a level of acceptability among patients, communities and health workers as immunization
- Entails a similar skill level among health workers

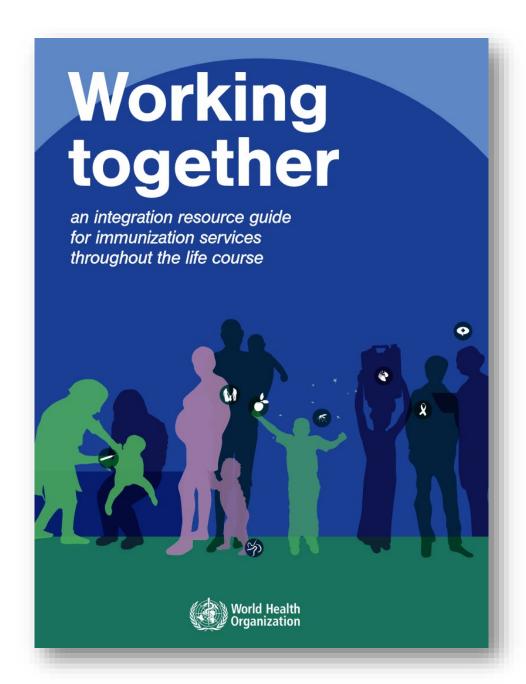


### KEY CONSIDERATIONS WHEN INTEGRATING IMMUNIZATION WITH OTHER INTERVENTIONS

#### RELATED TO HEALTH SYSTEM CONTEXT

- High-level political will exists to promote integration
- Coordination among the different programme managers is present
- National policies support each intervention
- Financial support and commodity logistics are secure for each intervention
- Primary health-care structures exist for delivering each intervention
- Responsibility for monitoring each intervention is clearly defined
- Health workers are "multi-purpose"
- Integration does not create an unrealistic burden for service delivery





- Integration checklist = guidance around considerations when linking interventions
- Strategies to integrate services together
- Opportunities for integration
- Ways to avoid common pitfalls of integration

Available at: <a href="https://apps.who.int/iris/handle/10665/276546">https://apps.who.int/iris/handle/10665/276546</a> (EN,FR)

### Thank You!

## Q & A

### **Annex Slides**

# GLOBAL INDICATOR FOR EXTENT OF LIFE COURSE VACCINATION

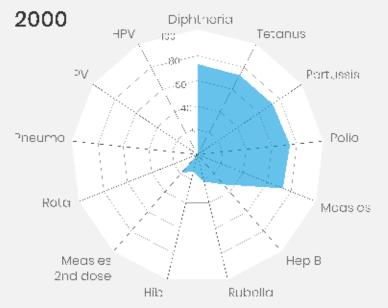
### **Breadth of protection:**

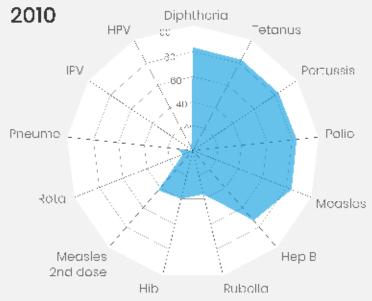
Cross-sectional programme performance indicator, defined as the average global coverage achieved for a set of globally recommended antigens\* across multiple age ranges.

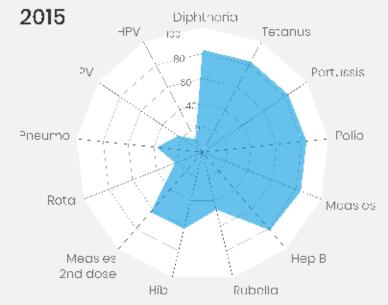
Sourced from annual WHO/UNICEF estimates of national immunization coverage - so limited range of vaccines

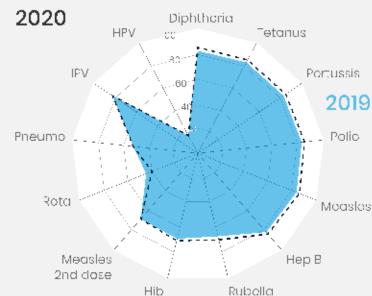
\*This list includes polio, measles1, measles2, rubella, diphtheria, tetanus, pertussis (DTP), hepatitis B (Hep-B), *Haemophilus influenzae* type B (Hib), Pneumococcal vaccine (PCV), Rotavirus vaccine, Inactivated Polio vaccine (IPV), and Human Papilloma Virus vaccine (HPV).

### THE INCREASE IN **BREADTH OF PROTECTION IS DRIVEN MORE BY** INTRODUCTION **OF VACCINES** THAN EXPANDING **COVERAGE FOR VACCINES IN USE**



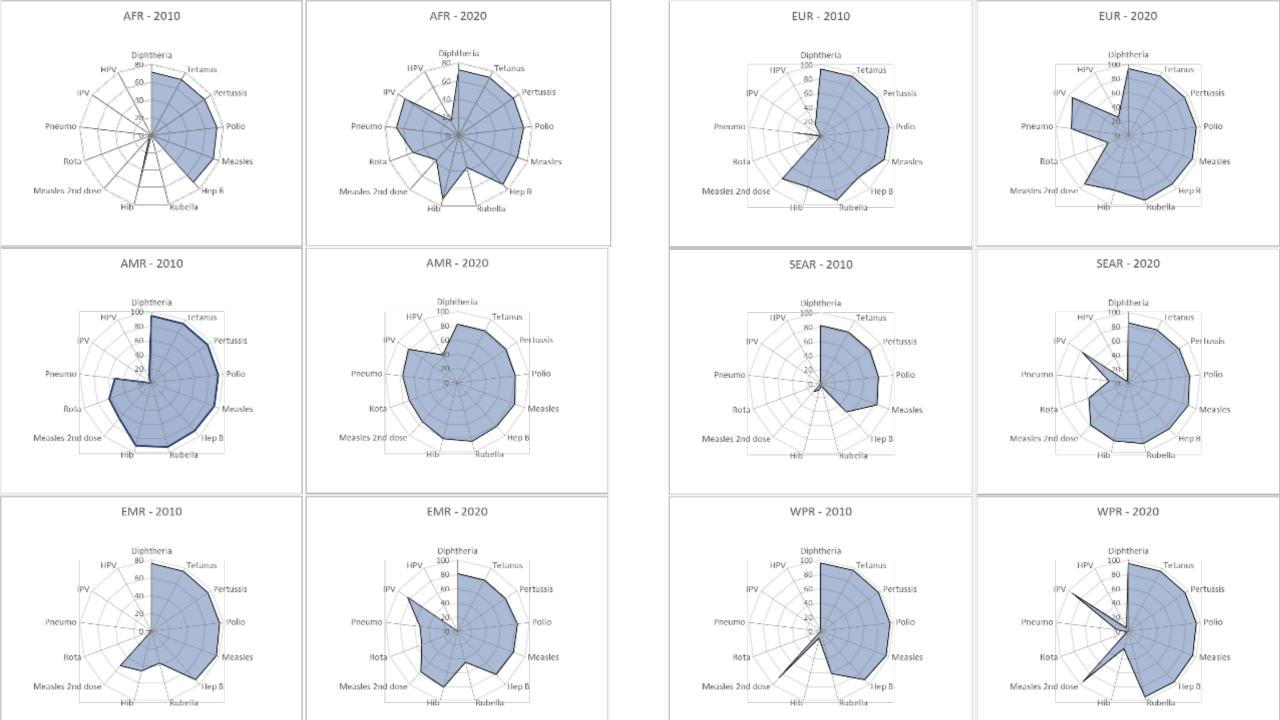












# CASE STUDY: ESTABLISHING A SECOND YEAR OF LIFE (2YL) VACCINATION PLATFORM IN GHANA

Measles 2nd dose & MenA vaccination introduced at 18 months of age, first new vaccination visit beyond 12 months of age in Ghana.

Endorsed by NITAG.

Vaccination visit is **integrated** with existing growth monitoring & nutrition check visit

New catch-up vaccination policy & guidance to providers to screen and catch-up on 1st year vaccinations during 2YL & beyond

Paper-based and electronic registers, tally sheets and home-based records **revised** to include health information through adolescence and collection of vaccines provided in the 2<sup>nd</sup> year of life

Mobilization to increase awareness for healthcare providers and caregivers on rationale for this new platform and that vaccinations no longer end at 1 year of age

New outlets engaged: daycare owners trained to provide vaccination messages

rovide vaccination message to parents of older children



### GLOBAL HEALTH FRAMEWORKS, GUIDELINES & INTEGRATED DELIVERY WITH IMMUNIZATIONS

- GIVS, Objective 3
- Integrated delivery of MCH interventions
- GVAP, Objective 4
- Platform for other interventions and vice-versa
- Emphasis with pneumonia, diarrhea, cervical cancer vaccines
- GAPPD
- Deliver packages of interventions in a continuum of care
- WHO Guidelines for ARV Use for HIV
- HIV screening and testing during immunization visits