

Sustainable Development Goals (SDGs)

Immunization indicator selection



SAGE Oct. 2017

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SUSTAINABLE DEVELOPMENT GOALS



“SDG 2030 agenda is deliberately ambitious and transformational”

“at its heart is a promise to leave no one behind”

“it is a universal agenda, applying to all countries; even the richest”

- Covers period 2015-2030
- build on the success of the Millennium Development Goals (MDGs)
- adopted by world leaders in September 2015
- came into force 1 January 2016

Immunization in the SDGs

Currently two indicators for immunization in the SDGs and unlikely more in future

3.b.1 Proportion of the target population covered by all vaccines included in their national programme

- Primary stand alone immunization indicator in the SDGs
- Visible within SDG report
- Reflects the ability of a country to both access new vaccines and also deliver them with high and equitable coverage

3.8.1 Coverage of essential health services or “Universal health Coverage (UHC) - index”

- Immunization is 1 of 16 tracer indicators aggregated together
- UHC Index is visible within UN-SDG report, tracer indicators are not
- Measures the ability of a national programme to deliver services with high and equitable coverage (in keeping with the principle of UHC).

Indicator 3.8.1: Coverage of essential health services

- average coverage of essential services based on tracer interventions that include **(1) reproductive, maternal, newborn and child health, (2) infectious diseases, (3) non-communicable diseases** and **(4) service capacity and access**
- “UHC Index” of coverage with essential health services by aggregating 4 groups of 4 “tracer” indicators
- Immunization is 1 among 16 tracer indicators within the UHC index
- Immunization tracer is currently “full child immunization” and will be averaged with 3 other tracer indicators within the *Reproductive, maternal, newborn and child health group*
- All tracer indicators are scaled from 0-100 and currently measured at national level
- DTP3 is the current proxy indicator of Full Child Immunization but it could be replaced to be the same as 3.b.1 if recommended

SAGE WG Process and UN SDGs process

UN SDG indicator selection process

- 6th Meeting of the Inter-agency and Expert Group on the Sustainable Development Goal Indicators (IAEG-SDGs), Manama, Bahrain, 11-14 November. Country driven process (UN agencies are observers)
- Deadline extension for submitting immunization indicator choice : 20 Oct. 2017
- The meeting only considers a proposal for **how (=metadata) 3.b.1 would be measured**, but **not** a change to the current wording of the **definition** of indicator itself (*“Proportion of the target population covered by all vaccines included in their national programme”*) - the latter could be updated in 2020 (and again in 2025).
- Note: Given the advance consultation process **for 3.8.1**, a recommendation on changing current tracer metadata (DTP3) would only be submitted to **2018 meeting**.

SAGE Decade of Vaccines working group (DoV WG)

- Tasked to work on the selection of the immunization relevant indicators
- **Two dedicated teleconferences** including presentations of the options by Gavi and WHO, and email interactions . **TCs : 27 March and 8 May 2017**

Different scenarios considered by the SAGE DoV WG (1)



- 12 scenarios were presented based on
 - Single antigen vs. composite indicators
 - Single antigen indicators (DTP3, PCV3, MCV2) vs.
 - Composite indicators:
 - (1) Different vaccines and doses included
 - (2) Different methods used for depicting coverage
 - *Average national coverage vs. lowest coverage for any of the antigens in the composite indicators*



Scenarios explored in full analysis by the WG (2)

Scenario	Indicator	Data source and availability
7	Lowest coverage level among under 2 years of age vaccines* in the national program, <i>excludes birth dose</i>	WUENIC (all, annual); surviving infants (UNPD)
8	Average coverage with under 2 years of age vaccines* in national programme, <i>excludes birth dose</i>	WUENIC (all, where introduced, annual) ; surviving infants (UNPD)
9	Average coverage with universal infant vaccines: <i>DTP3, Hep B3, Hib3, PCV3, Rota, MCV1, POL3, Rubella, MCV2 (excluding birth dose and IPV)</i>	WUENIC (all, where introduced, annual) ; surviving infants (UNPD)
PCV3	Proxy for last vaccine in a multi-dose infant series	WUENIC (all, where introduced, annual) ; surviving infants (UNPD)
MCV2	Proxy for last vaccine in primary series; indicator of vaccination beyond infancy (proxy for life course)	WUENIC (all, where introduced, annual) ; surviving infants (UNPD)

Assumptions:

Vaccine Introduction

- Used the year of introduction (WHO database) as an indicator of whether in national programme
- Each country is given a 2-year ramp up period for introductions before they are included in the analyses (Scenarios 7 & 8)
- *YFV and JE are only included if it has been introduced to the entire country

Coverage

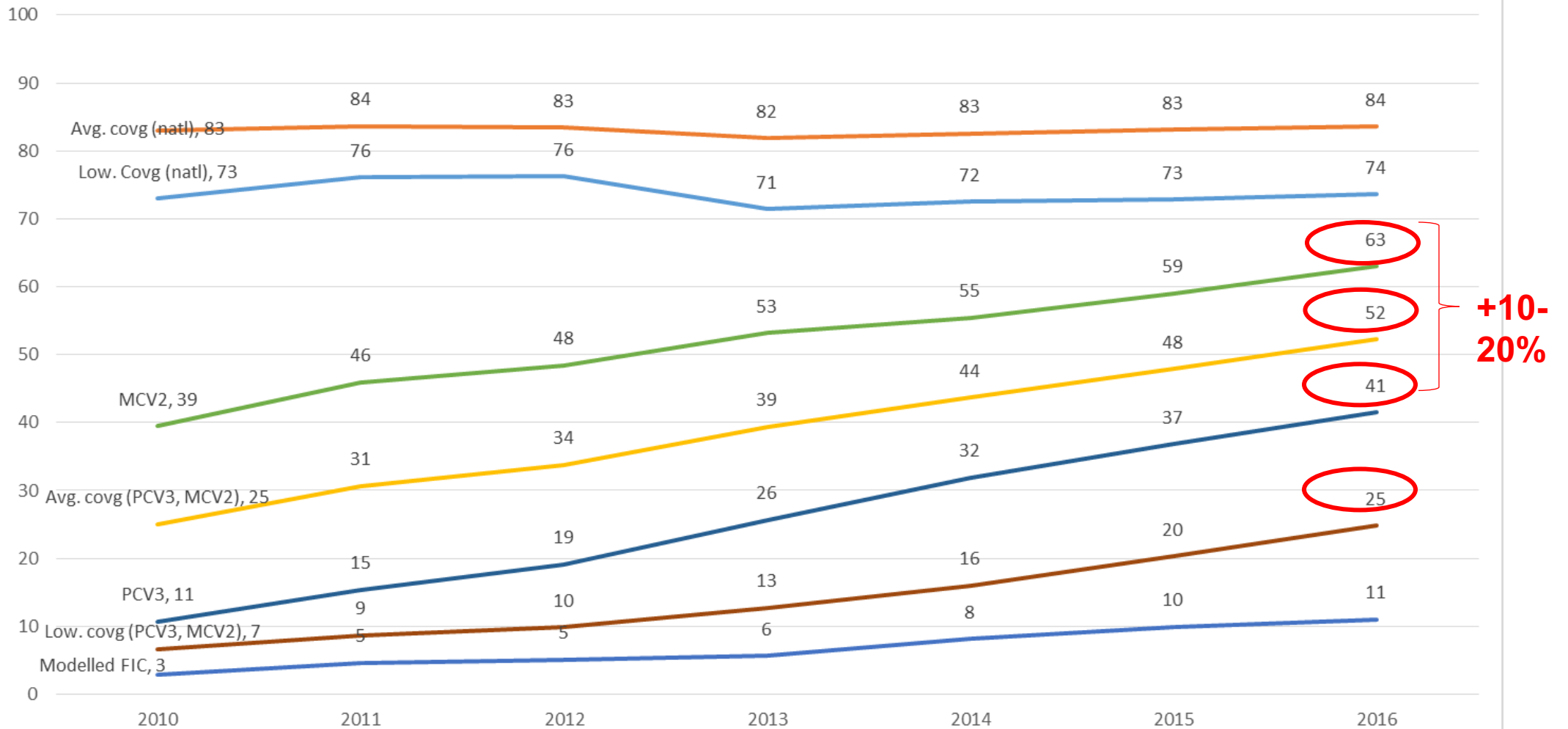
- JE - JRF coverage data has been used as no WUENIC data

Interim proxy measure: PCV3 + MCV2

- Fully immunized child should be the goal by 2030
- **PCV3+MCV2 as an interim proxy measure**
- ...keeps new vaccines on the agenda
- Translates in at least **10% increase in ambition** for immunisation outcomes globally
- Increase chances to fast track new political, financial and programmatic support for immunisation

Scenario comparison

Scenario Comparison - Global



Different scenarios considered by the SAGE DoV WG (2)



Composite indicators were discussed and discarded by the WG because of the:



- difficulty to measure and interpret the data
- challenge of comparability across countries and over time

**Rationale for the decision-making in the DoV WG presented
in the next 3 slides :**



Discussion elements for the 3 most-discussed scenarios

**All vaccines in national
programme**

PCV3

MCV2

All vaccines in national programme (lowest or average coverage)

PROS

- Ambitious: **yes**, but might be falsely ambitious as removing a vaccine from national programme will improve the indicator ('con')
- Strong **country ownership**

CONS

- **Complex** indicator to monitor
- **Not comparable across countries** and regions as different schedules in different countries
- **Difficult to interpret over time** as indicator does not reflect number of antigens in the schedule
- => **Same problems as for other composite indicators**

Pneumococcal conjugate vaccine 3rd dose (PCV3)

PROS

- **Ambitious:** It is a new vaccine, considered life-saving and targets an ubiquitous disease
- Progress on PCV3 coverage possible in most countries, including high- and middle-income countries

CONS

- Not all countries have prioritized the vaccine in their schedules (e.g. China) based on local epidemiology; does not recognize **national ownership** to prioritize
- PCV 3+0 scheme is used in 52 countries (including 43 Gavi countries). PCV3 will de facto measure the **same as DTP3** in those countries, which has been agreed as not being ambitious enough
- At country-level coverage will be '**blank**' for countries that prioritize other vaccines at expense of PCV. (as of Dec. 2016 135 countries have introduced PCV in their national programme)
- PCV is the main vaccine measured in the GVAP new/underutilized vaccine introduction indicator. It is the only GVAP indicator (G4.3) where the target has actually already been met.

Measles containing vaccine second dose (MCV2)

PROS

- **Ambitious:** Global elimination goal in place, which will **require high and sustained coverage** even after elimination. Global coverage still low around 64% in particular in low- and middle- income countries , 5 regions still to achieve measles elimination
- **Global elimination commitment:** All countries are committed to measles elimination and so to MCV2
- 2nd dose not yet introduced in 30 countries: **huge potential** to strengthen immunization programme, including 2nd year of life platform
- **Simple:** indicator, comparable across countries, regions and on time series.
- **Impact is objectively measurable** as measles incidence monitored in all countries
- MCV2 is the **last in the schedule of primary doses**, so arguably closest proxy for “*All vaccines included in Nat. Programme*”
- **Cheap** vaccine with stable supply

CONS

- Appears at first sight **less forward looking** as considered as an ‘old’ vaccine (used since 1963)
- Measles **mortality has declined** by 80% since 2000
- Not so ambitious for high-income countries: 86% of children not yet reached with MCV2 are in LICs or LMICs
- MCV2 not yet introduced in all countries (‘blanks’)

DoV WG Conclusions - 1

There was no perfect indicator and there are pros and cons for each of them

DoV WG converged on MCV2 as single **indicator for 3.b.1 and 3.8.1** as the option that ticked most effectively the different boxes:

- ✓ **Ambitious**, since current coverage is low with significant scope for improvement and represents a vaccine dose provided beyond infancy (first step towards a life course approach)
- ✓ **Highly relevant**: high MCV2 is essential for achieving the GVAP goal for measles elimination
- ✓ **Simple**: Directly measured through administrative data or surveys and not modelled; data are currently being reported and all Member States are familiar with the measurement
- ✓ **Comparable**: All countries expected to provide the dose and achieve high coverage because of measles elimination goal; does not interfere with principle of country ownership and right to prioritize vaccines for national use
- ✓ **Measurable impact**: with global measles surveillance in place

There was no perfect indicator and there are pros and cons for each of them

There is precedence of more than one indicator under SDG Goal 3.c

SAGE may consider recommending more than one stand alone **indicators for 3.b.1** as the option that ticked most effectively the different boxes:

- ✓ **Ambitious; Highly relevant; Comparable**
- ✓ **Effort to preserve the principle of country ownership; every country will have at least two indicators they can report on that show strength of the system.**

DPT3 Containing Vaccine	Overall immunization system
PCV3	Infant immunization & New Vaccine
MCV2	2nd Year & End of Primary Immunization
HPV2	Adolescent & Life cycle & New Vaccine

Thank you for your attention