

## INDICATORS FOR MONITORING DISTRICT AND NATIONAL PERFORMANCE

Objectives of listing a set of commonly agreed core indicators:

- To recommend best practice, and at the same time, promote a streamlined monitoring system
- To focus on district and monitor RED implementation: having a set of district indicators defined by a country that are analyzed routinely to build the capacity of districts to take their own management decisions.
- To move beyond the classical monitoring of basic coverage indicators towards a comprehensive approach allowing to follow-up and point out problems in all aspects of the immunization systems.
- The monitoring of all components of the immunization systems will draw attention to low performing areas that need additional support. The regular collection of data through routine reporting should allow district and national level to take rapid corrective actions.

With renewed efforts to support district capacity building (RED strategy) and achieve national and regional goals for improving access and increasing coverage at district level, WHO recommends that the **following areas** should be monitored at district and national level. The description below is not prescriptive: the tables describe a number of options that could be chosen by a country to monitor district and national performances. Countries are encouraged to define a **minimal set of core indicators** that are useful at the *local* level to improve immunization services, are feasible to collect, and do not overburden the district or health facility. A streamlined system that collects only the minimum necessary data is encouraged.

It makes sense to have a **link between indicators** collected by a district to monitor the performance in the district (information collected from all health facilities (HF)) and the indicator collected by the national level to monitor the performance in the country (information collected from all districts):

For instance:

Selected district indicator for vaccine management:

HF with vaccine stock-out during the month /total HFs  
(the district collects the variable stock-out at the HF: YES/NO from all health facilities)

Selected national indicator for vaccine management:

Districts with no vaccine stock-out in any of the HF during the month /total number of districts  
(the national level collects the variable stock-out in the district: YES/NO from all districts)

For each selected indicator, a number of **determinants** should be clarified:

- Reporting periodicity: while a monthly periodicity can be recommended for many indicators, a number of them could only be measured during on site visits (supervision).
- Variable format (Yes/no; quantitative, %, ...)
- Numerator / denominator
- Targets (monthly, annual, ....)
- Meaning of low/high performance (interpretation)
- Format of collecting the information (regular monthly report, supervisory checklist, etc...)
- Which performance is measured (of which entity): a number of district indicators measure the performance of the health facilities in the district while others measure activities conducted by the district (same for national level). Indicators from the 2 situations are described separately in the lists below (heading of third column).

At the end of this document, an example of 'district monitoring chart' is presented to provide a practical idea on how the information can be collated at district level.

## 1. District level

<b>Area to be monitored</b>	<b>Proposed menu of possible indicators* for the district (select only a minimal number or devise different ones)</b>	<b>1. Possible* variables either - collected and reported by all health facilities (HF) providing immunization services - or collected on site in a selected number of facilities</b>	<b>Notes</b>
Outreach	- Number of immunizations given in outreach / total number of immunization given during the month	- Number of immunizations performed by outreach strategy by HF - Total number of immunizations performed by HU	Could be for one antigen only
	- Outreach sessions completed during the month in the whole district / outreach sessions planned	- Number of outreach session conducted during the month by HF - Number of outreach sessions planned by HF	
	- Number of villages reached in the district during the month / total number of villages planned to be visited in the district -	- Villages reached during immunization sessions at the HU during the month - Total number of villages for outreach strategies of the HU	Every village should be reached 4 times a year.
Link with community	- HF with monitoring meetings including community participants / total HF	- HF monitoring meetings that include a community-participants (yes - no)	Monitoring meeting with the community: may need to be adapted according to the frequency, local name, ...
	- number defaulter children traced and vaccinated in the HF / Number of defaulters children in the HF - number defaulter children traced the district / Number of defaulters children in the district	- defaulter traced during the month - defaulter vaccinated during the month	Defaulter needs to be defined including: which vaccine; defaulter=infant and/or mother? Define after what interval of time does someone become a defaulter.
Safety	- HFs with AD syringe stock-out during the month / total HF	- AD syringe stock-out during the month	Stock-out needs to be defined: can be zero level or level impeding immunization service, or an established reserve level. Alternative if AD syringe is not the country policy

	- HF with ratio [number of immunization (injectable) / AD syringe use] < 1	- AD syringe balance beginning - end & received of the month (AD syringe use during the month) - All immunization reports (except OPV)	
	- AEFI rate in the district (No. AEFI reported / target population of the district)	- Number of AEFI	Denominator could be number of doses given
	- HF with Syringes used / Safety box used ratio < 100 / total HF -	- syringe balance beginning - end & received of the month (syringe use during the month) - Number of safety boxes used - balance-end stock of safety boxes	complicated by the leftover stock of unfilled boxes from the previous month and the unfilled box currently in use at the end of this month that will continue to be used for the following month
	- health facilities with incinerators or safe waste disposal /total HF	- Health Facility with incinerators or safe waste disposal	Incinerator would need to be defined Waste disposal: depends on the country policy / probably not to be monitored on a monthly basis (available through inventory process)
	- health facilities reporting at least one needle stick injury /total HF	- Number of needle stick injuries	
Vaccine management	- HF with vaccine stock-out during the month /total HF -	- vaccine stock-out during the month	Stock-out needs to be defined: can be zero level or level impeding immunization service, or below reserve level; Any vaccine
	- HF with wastage rate higher than defined threshold /total HF	- vaccine used during the month - total number of immunization performed	Vaccine should be defined
	- Vaccine utilisation of the district (all HF reported immunizations / all vaccines distributed)	- District vaccine balance beginning - end & received of the month - number of immunization performed	Definition of which vaccine
	- HF with functioning cold chain equipment /total HF	- functioning cold chain equipment	

<b>Area to be monitored</b>	<b>Proposed indicator* for the district</b>	<b>2. Possible* variables collected at the district</b>	<b>Notes</b>
Supervision	<ul style="list-style-type: none"> <li>- Supervisory visits completed by district staff during the month/Supervisory visits planned by district staff for the month.</li> <li>- Number of health facilities visited during the month / total number of health facilities</li> </ul>	<ul style="list-style-type: none"> <li>- Number of supervisory visits planned during the month</li> <li>- Number of supervisory visits conducted during the month</li> <li>- Number of health facilities supervised</li> </ul>	<p>Does not include a measure of the quality of supervision</p> <p>Target would need to be adapted function of the target number of supervisory visits per health facility in a year</p>
Planning	<ul style="list-style-type: none"> <li>- Existence of a district microplan for the current year</li> <li>- Proportion of districts that have conducted monitoring meetings with HF staff</li> </ul>	<ul style="list-style-type: none"> <li>- Existence of a microplan for the current year</li> <li>- Number of DMT monitoring meetings</li> </ul>	<p>Could be annual (for existence) or quarterly (for an update)</p> <p>Microplan could be immunization specific or integrated</p> <p>At least a quarterly district management team with the HCW from vaccination units should be conducted to monitor or review the performance</p>
Monitoring and surveillance	<ul style="list-style-type: none"> <li>- Number of health facility monthly coverage reports received by district for that month/Number of health facility monthly coverage reports expected by district for that month.</li> <li>- Number of health facility monthly disease surveillance reports received by district /Number of health facility monthly disease surveillance reports expected by district.</li> <li>- Number of health facility monthly coverage reports received by district on time /Number of health facility monthly coverage reports expected by district.</li> <li>- Number of health facility monthly disease surveillance reports received by district for that month/Number of health facility monthly disease surveillance</li> </ul>	<ul style="list-style-type: none"> <li>- number of health facility reports received</li> <li>- number of health facility reports received on time</li> <li>- number of detected outbreaks</li> <li>- number of investigated outbreaks</li> </ul>	<p>Completeness and timeliness of HF reporting (monthly basis)</p> <p>- outbreak: which disease? - Definition of investigation</p>

	reports expected by district for that month. - Number of reported outbreaks investigated		
Human resources	- number of health facilities with at least one vaccinator /Total number of health facilities.  - proportion of staff trained.	- presence of vaccinator at the health facility - health facility conducting immunization services - year since health worker last attended a training that covered issues of immunization	Absence of vaccinator needs to be defined  would need to define "training", including the time frame (eg trained during the last three years)  Periodicity could be annual
	<b>Core indicators of performance</b>	<b>3. Possible* variables for core performance</b>	
Access to health services	- BCG or DTP 1 coverage of the month - Cumulative BCG or DTP1 coverage	- Number of BCG immunizations done in the district during the month - Number of DTP1 immunizations done in the district during the month - Monthly target population	
Utilisation of services	- district drop-out rate (DTP1-DTP3/DTP1) of the month - Cumulative district DOR (Cumulative since the beginning of the year)	- Number of DTP1 immunizations done in the district during the month - Number of DTP3 immunizations done in the district during the month -	DOR: could be for other antigens then DTP1 and 3 (eg BCG/measles)
Capability of the system to provide all vaccines in the schedule	- District DTP3 / measles coverage - District coverage of fully immunized child - Cumulative district coverage (Cumulative since the beginning of the year) with any of antigens above	- Number of DTP3 / measles immunizations done in the district during the month - Number of children fully immunized in the district during the month - Monthly target population	DTP3 is core for GAVI/VF Measles is core for MDGs

\* the list consists of a number of options. The collected information will depend on the chosen option, which means that not all listed data /indicators are necessarily collected

## 2. National level

<b>Area to be monitored</b>	<b>Proposed indicator * for the national level</b>	<b>1. Possible* variables collected and reported by all districts</b>	<b>Notes</b>
Outreach	- Proportion of districts meeting outreach services targets		Target according to the district indicator selected
Link with community	- Proportion of districts meeting targets for community links		Target according to the district indicator selected
Supervision	- Proportion of districts reporting visiting all HFs at least once in the year	- District reporting visiting all HFs at least once in the year	Frequency of reporting could be annual
	- Proportion of districts reporting visiting targeted number of HF supervisory visits in the month	- Number of supervisory visits conducted - Number of monthly planned supervisory visit	monthly
Safety	- Proportion of districts with AD syringe stock-out in any HF during the month	- AD syringe stock-out in any HF of the district during the month	Stock-out needs to be defined: can be zero level or level impeding immunization service. Alternative if AD syringe is not the country policy
	- Proportion of districts with AD syringe stock-out during the month (at district store level)	- AD syringe district stock beginning - end & received of the month	Stock-out needs to be defined: can be zero level or level impeding immunization service. Alternative if AD syringe is not the country policy
	- Proportion of districts supplied with adequate (equal or more) number of AD syringes for all routine (injectable) immunizations during the year	- Total number of immunizations (injectable) performed in the district - AD syringe supplied by National level - Balance beginning and end of year.	Alternative if AD syringe is not the country policy.
	- AEFI rate at national level	- Number of AEFI reported	AEFI need to be defined (severe, ...) Denominator could be number of doses given or target population
	- Proportion of districts with	- District with incinerators/safe waste	According to the waste

	incinerators/safe waste disposal	disposal	disposal policy Incinerator need to be defined (functioning?, at district level only?)
Planning	<ul style="list-style-type: none"> <li>- Proportion of districts with microplan for current calendar year</li> <li>- Proportion of districts with updated annual microplan</li> </ul>	<ul style="list-style-type: none"> <li>- Existence of a district microplan for the current year</li> <li>- Last update of the microplan</li> </ul>	<p>Could be annual (for existence) or quarterly (for an update)</p> <p>Microplan could be immunization specific or integrated</p>
Vaccine management	<ul style="list-style-type: none"> <li>- Proportion of districts reporting a vaccine stock-out in any HF during the month</li> </ul>	<ul style="list-style-type: none"> <li>- vaccine stock-out in any HF of the district during the month</li> </ul>	<p>Stock-out needs to be defined: can be zero level or level impeding immunization service</p>
	<ul style="list-style-type: none"> <li>- country wastage rate (integrating the information from all centres and stores)</li> <li>- Total proportion of vials of vaccine discarded (in the country) / vials handled</li> </ul>	<ul style="list-style-type: none"> <li>- vaccine used during the month (total of doses opened for immunization) in the district</li> <li>- total number of immunizations performed</li> <li>- number of vials of vaccine discarded because they were frozen or expired at district store level</li> </ul>	<p>Definition of which vaccine (for wastage)</p> <p>Could be restricted to unopened vial wastage only</p>
	<ul style="list-style-type: none"> <li>- Proportion of districts with sufficient cold chain equipment</li> </ul>	<ul style="list-style-type: none"> <li>- Updated district cold chain inventory</li> </ul>	<p>Sufficient cold chain equipment: according to district inventories. Cold chain equipment and 'sufficient' need to be defined, including whether this includes district store only or HFs too.</p>
<b>Area to be monitored</b>	<b>Proposed indicator * for the national level</b>	<b>2. Possible* variables collected by the national level</b>	<b>Notes</b>
Supervision	<ul style="list-style-type: none"> <li>- Proportion of districts supervised at least once by the national level in the year</li> </ul>	<ul style="list-style-type: none"> <li>- Supervisory visit to the district</li> </ul>	Yearly indicator
Planning	<ul style="list-style-type: none"> <li>- National workplan update</li> <li>- Number of monitoring &amp; evaluation meetings with DMT</li> <li>- Number of ICC meetings</li> </ul>		<p>ICC meetings: with minutes and action points noted? - Could include a qualitative component</p>
Monitoring and surveillance	<ul style="list-style-type: none"> <li>- Number of district monthly coverage reports received by national level for that month/Number of district monthly coverage reports expected by national</li> </ul>	<ul style="list-style-type: none"> <li>- number of district reports received</li> <li>- number of district reports received on time</li> </ul>	<p>Completeness and timeliness of district reporting (monthly basis)</p>



	<ul style="list-style-type: none"> <li>level for that month.</li> <li>- Number of district monthly disease surveillance reports received by national level / Number of district monthly disease surveillance reports expected by national level.</li> <li>- Number of district monthly coverage reports received by national level <i>on time</i> /Number of district monthly coverage reports expected by national level.</li> <li>- Number of district monthly disease surveillance reports received by national level <i>on time</i> for that month/Number of district monthly disease surveillance reports expected by national level for that month.</li> </ul>		On time needs to be defined.
	<ul style="list-style-type: none"> <li>- Number of written feedback sent to all districts</li> </ul>		Feedback needs to be defined: bulletin, meeting reports, any paper, contents...
Vaccine management	<ul style="list-style-type: none"> <li>- number of days with any vaccine stock-out at the national store</li> </ul>	<ul style="list-style-type: none"> <li>- vaccine stock-out during the month</li> </ul>	Stock-out needs to be defined: can be zero level or level impeding immunization service or an established reserve level.
	<ul style="list-style-type: none"> <li>- Vaccine utilisation at national level (immunizations administered throughout the country / vaccine supplied by the national level)</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Vaccine stock beginning - end &amp; received of the month</li> <li>- total number of immunization performed (from district reports)</li> </ul>	Definition of which vaccine (for wastage and utilisation)
	<ul style="list-style-type: none"> <li>- Existence of up-to-date cold chain equipment inventory</li> <li>- Proportion of discarded expired or frozen vaccine at national level/ total quantity of vaccine handled (national store)</li> </ul>	<ul style="list-style-type: none"> <li>- date since last inventory update of cold chain</li> <li>- number of vials of vaccine discarded at national level because they were frozen or expired</li> </ul>	Sufficient cold chain equipment: according to district inventories. Sufficient equipment needs to be defined
Vaccine quality	<ul style="list-style-type: none"> <li>- Proportion of all vaccine used for immunization procured of assured quality, i.e. pre-qualified</li> </ul>		Yearly basis

Financing	<ul style="list-style-type: none"> <li>- Percentage of recurrent program-specific immunization spending financed using Government funds</li> <li>- Percentage of total routine vaccine spending financed using Government funds</li> </ul>		(including loans and excluding external public financing)
Advocacy and communication	<ul style="list-style-type: none"> <li>- Proportion of immunization budget dedicated to advocacy activities</li> </ul>		
Human resources	<ul style="list-style-type: none"> <li>- proportion of districts with trained district manager in EPI</li> </ul>	<ul style="list-style-type: none"> <li>- Year since district officer last attended a training that covered immunization issues.</li> </ul>	<p>Training needs to be defined in terms of time frame</p> <p>Yearly indicator</p>
	<b>Core indicators of performance</b>	<b>3. Possible* variables for core performance</b>	
Access to health services	<ul style="list-style-type: none"> <li>- Proportion of districts reaching defined threshold coverage levels (eg &gt;90% DTP1)</li> <li>- National coverage</li> </ul>	<ul style="list-style-type: none"> <li>- Number of BCG immunizations done in the district during the month</li> <li>- Number of DTP1 immunizations done in the district during the month</li> <li>- Monthly target population</li> </ul>	
Utilisation of services	<ul style="list-style-type: none"> <li>- Proportion of districts reaching defined threshold coverage levels (eg &lt;10% DOR)</li> <li>- National DOR</li> </ul>	<ul style="list-style-type: none"> <li>- Number of DTP1 immunizations done in the district during the month</li> <li>- Number of DTP3 immunizations done in the district during the month</li> <li>- Monthly target population</li> </ul>	DOR: could be for other antigens then DTP1 and 3 (eg BCG/measles)
Capability of the system to provide all vaccines in the schedule	<ul style="list-style-type: none"> <li>- District DTP3 coverage</li> <li>- District coverage of fully immunized child coverage</li> <li>- National coverage</li> </ul>	<ul style="list-style-type: none"> <li>- Number of DTP3 immunizations done in the district during the month</li> <li>- Number of children fully immunized in the district during the month</li> <li>- Monthly target population</li> </ul>	
Sustained performance	<ul style="list-style-type: none"> <li>- % of districts reaching defined coverage level (e.g., DTP3 &gt;80%) each year for the past three complete years</li> </ul>	<ul style="list-style-type: none"> <li>- Yearly district coverage for the last 3 years</li> </ul>	

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Monitoring Chart District level - Example, Country X

District of .....Tombouctou les bains

Month of .....March

<b>Area</b>	<b>OUTREACH</b>	<b>COMMUNITY</b>	<b>SAFETY</b>	<b>VACCINE MANAGEMENT</b>	<b>MONITORING</b>	<b>PERFORMANCE</b>
<b>Health facility name</b>	Number of outreach session conducted / Number of outreach session planned	HF monitoring meeting with community participant	AD syringe stock-out	Vaccine Stock-out	HF report received on time	DTP3 coverage (reported DTP3/monthly target)
<b>HF 1</b>	3/4	Yes	No	No	Yes	81/111
<b>HF 2</b>	1/1	No	No	No	Yes	56/60
<b>HF 3</b>	0/1	NR (no meeting)	No	Yes (measles)	No	15/42
<b>HF 4</b>	2/2	No	No	No	Yes	62/55
<b>Etc</b>						
<b>District indicator</b>	Total number conducted / total number planned	% HF meetings with community participation	% HF without AD syringe stock-out	% HF without vaccine stock-out	Timeliness	Total number of doses reported/total monthly targets
	6/8 (75%)	33%	100%	75%	75%	80% (214/268) *

\* to be reported on the monthly coverage district monitoring chart