

Indicators that Describe the Strength of the Routine Immunization System

PRELIMINARY LEARNING

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Kate Holt/MCSP

BACKGROUND

Immunization is at the very core of health programs around the world yet its performance is commonly measured by just a single number, namely coverage with a third dose of a vaccine that protects against diphtheria, pertussis, and tetanus (DTP3). While DTP3 coverage is highly useful for describing the ability of the routine immunization system to reach children multiple times, it only tells part of the story. Similar to vaccination drop-out rate (also widely used), DTP3 is an outcome indicator that provides retrospective information on what has already happened. But additional indicators that describe the functioning of the immunization

system in real time can provide managers with essential information to guide their actions for improving vaccination coverage and help explain reasons for low coverage. Such process indicators have long been proposed but not highly valued by health personnel or promoted as useful tools for management. While the WHO/AFRO Reaching Every District (RED) guide¹ proposes several input, process, and output indicators for immuni-

¹ Available at: <http://www.afro.who.int/publications/reaching-every-district-red-guide-increasing-coverage-and-equity-all-communities>. MCSP contributed practical inputs to the updated 2017 WHO AFRO RED guide in close collaboration with the Ministries of Health and global partners. MCSP contributed tools, job aids, and training materials; and supported pretesting of the guide in Malawi and Kenya.

zation, MCSP is working to test and validate ten of these indicators to determine their feasibility and value to health personnel from the health facility up to the national level. This brief shares MCSP's emerging findings from an iterative learning process to understand how such indicators can benefit the immunization system.

OBJECTIVES

To advance global learning on the effective use of process indicators for strengthening routine immunization, the Maternal and Child Survival Program drew from its country-level technical assistance in three countries to explore two primary objectives:

SELECTED IMMUNIZATION PROCESS/SYSTEM INDICATORS²

1. Proportion of health facilities with an updated immunization microplan (last quarter).
2. Proportion of districts with an updated immunization microplan (last 6 months).
3. Proportion of planned immunization outreach sessions actually conducted (last month).
4. Proportion of planned immunization sessions at facilities ("fixed sessions") actually conducted (last month).
5. Proportion of scheduled immunization coordination meetings involving health facilities actually held by district health team (last 6 months).
6. Proportion of health facilities that received supportive supervision (last quarter).
7. Proportion of health facilities with no stock-out of vaccines or syringes (last month).
8. Proportion of health facilities with an updated immunization monitoring chart (last month).
9. Proportion of health facilities that met with community members to discuss immunization (last quarter).
10. Proportion of health facilities with at least one qualified and trained vaccine provider (last quarter).

² Definition and timeframe may differ slightly by country. Malawi does not collect the community meetings indicator (#9). Uganda does not collect the district microplan indicator (#2). (Source: WHO/AFRO RED Guide.)

Figure 1: Ntchisi and Dowa districts, Malawi

Health facility-based process indicator performance



Source: program monitoring data

Immunization coordination meetings



Source: program monitoring data

- Explore health facility and district staff's understanding and utilization of a selected set of process indicators.
- Identify mechanisms that promote the use of process indicators for decision making by district and health facility staff.

METHODS

MCSP used a mixed method approach and worked with country staff to select 10 process indicators for routine immunization among the indicators in the AFRO RED guide that countries commonly monitor. MCSP then selected Malawi, Nigeria, and Uganda as focal countries for this learning question as they already collect most of these indicators through government monitoring systems or MCSP's internal monitoring system. In this initial stage, staff

monitored the indicators in MCSP-supported districts/states over the period of a year and complemented the quantitative data with qualitative data collection. In the first of two rounds of qualitative data collection (round 1: April-September 2017; round 2: February-April 2018), MCSP conducted interviews with 70 primarily facility-based health staff. The interviews focused on data validation; exploring the usefulness, feasibility, acceptability, and accuracy of the process indicators; and understanding how the indicators were used for decision-making at the health facility and district levels. Between the two rounds of data collection, MCSP revised the data collection tools to address information gaps identified during the first round of data collection. An internal webinar in March 2018 promoted cross-learning across nine countries and interaction with partners in various working groups at the regional and global levels provided an opportunity to share and receive feedback as part of the iterative learning process. The learning was also shared with ministries of health and partners from 17 countries in the WHO East and Southern Africa Region during its revised RED guide orientation and adaptation workshop in May 2018.

PRELIMINARY LEARNING

A summary of qualitative findings on the use of the selected process/system indicators for routine immunization in Malawi, Nigeria and Uganda from the first round of data analysis can be found below. Learning around these indicators is ongoing and will continue through the end of the country programs.

Relevance and Usefulness: Respondents widely stated that the selected process indicators allowed health workers to understand system performance at a glance and encourage discussion of the root causes of poor performance. They felt that there were few enough indicators that they were easy to track, but that there was still sufficient diversity to tell the story holistically. They found the indicators to be useful for identifying stakeholders to support the system and providing accountability to funders and communities by providing a measure of performance beyond coverage. However, some respondents stated that many health workers do not analyze the data and are not encouraged to do so by their supervisors.

Feasibility: Most respondents stated that the indicators were easy to collect. However, several stated that time constraints and lack of health worker remuneration made data collection difficult in general and that it was difficult to track community meetings because there was no formal system for doing so. These factors may limit the feasibility of the indicator and understate the true extent of community interaction.

Acceptability: All respondents recommended using these indicators, particularly after going through the qualitative interview process, which itself helped them better understand how the indicators could be used.

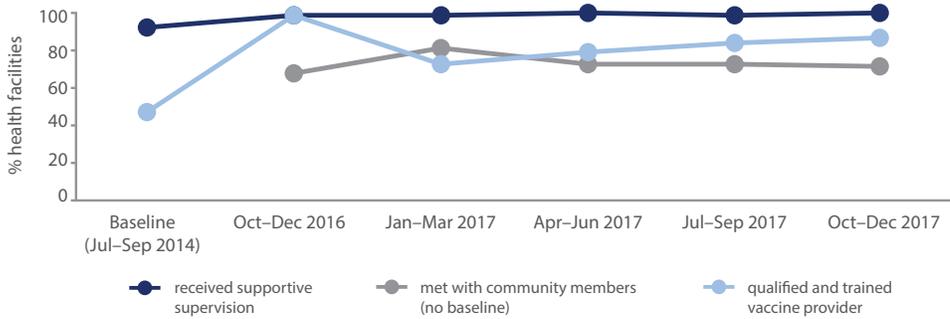
Accuracy and Reliability: Interviewers were able to verify most of the reported

“District and facility managers take these indicators as learning opportunities and morale boosters, especially when used with supportive supervision. It also encourages work as a team to achieve better results.”

– UGANDA RESPONDENT

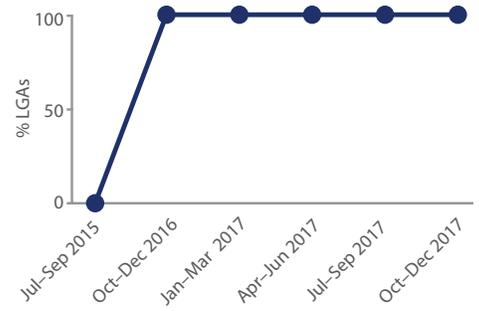
Figure 2: Bauchi and Sokoto states, Nigeria

Health facility-based process indicator performance



Source: National HMIS

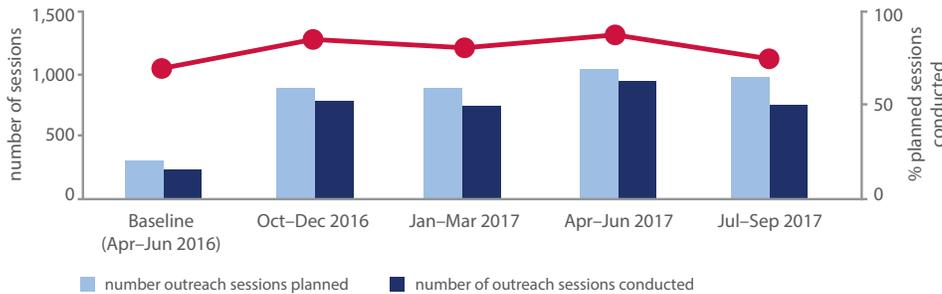
LGAs with up-to-date microplans (n=43)



Source: National HMIS

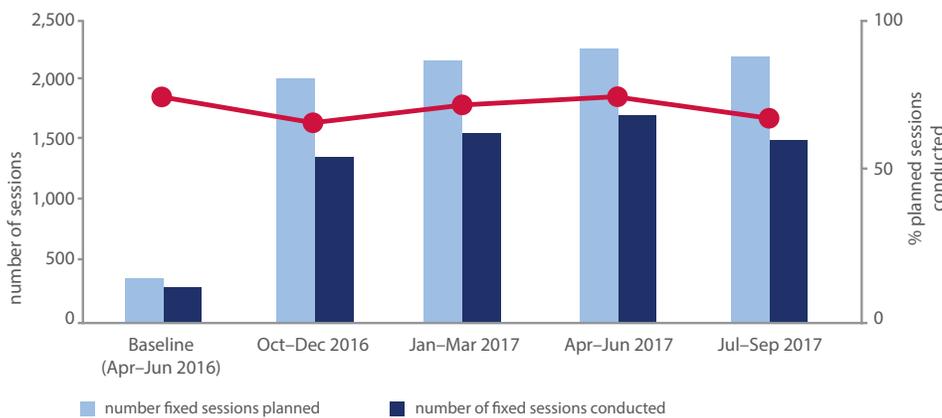
Figure 3: Mitooma, Ntungamo, Bulambuli and Kibuku districts, Uganda

Outreach sessions planned and conducted



Source: program monitoring data

Fixed sessions planned and conducted



Source: program monitoring data

data. However, some facility-level respondents were not able to show the interviewer their updated microplans, stating the plan was with the district. Interpretations of the indicators varied widely.

Figures 1-3 present sample data on the 10 selected process indicators across the three countries. Because of limited space, the full set of ten indicators for each country are not shown here but will be included in final report on this work.

As seen in Figure 1, in Dowa and Ntchisi districts, Malawi, the process indicator performance, with one exception, shows a sustained increase since 2015, pointing to an underlying strong system and correlating with improvements in coverage (from 2017 coverage surveys conducted in Dowa and Ntchisi).

Decision-makers must consider the context in which they analyze process indicator data. As shown in Figure 2, in Bauchi and Sokoto, Nigeria, process indicator values are high as a result of recent, intense efforts by the government and partners involved in a Memorandum of Understanding to strengthen the routine immunization system. However, additional information indicating very low baseline immunization rates, low awareness among caregivers of immunization and its benefits, poor data quality, and an overall weak health system highlight that much more is required to have an effect on coverage. Thus, while measurable improvements in these indicators may show that the immuni-

zation system is on a pathway to improved performance, they may not give the entire picture in all contexts and they do not necessarily translate to rapid increases in coverage. However, they can strengthen ongoing management by providing a snapshot of program strengths and deficiencies, thereby prompting the introduction of appropriate solutions. These results also prompt deeper exploration and suggest that additional process indicators (such as measures of discrepancies between health facility and health information monitoring system data, session size or expenditure tracking) are needed in certain contexts as well as consistent, longer-term attention. Additionally, these findings underscore the importance of looking beyond proportions to numerators and denominators. For example, in MCSP-supported districts in Uganda (see Figure 3), the proportion of

planned immunization sessions conducted remained almost the same between 2016 and 2017, but there was a four-fold increase in the number of sessions conducted.

CONCLUSION

The set of process indicators in this learning activity provides useful information for decision-makers and managers at the district and facility level with the long-term goal of achieving and sustaining high coverage. However, the interpretation of these indicators varied among health workers. Immunization programs need to promote a culture of information use to ensure that service providers and facility in-charges understand the value and benefit of input, process and output indicators and regularly collect, analyze and triangulate across them at the point of data generation.

As indicated by respondents, supervisors

play a key role in changing the norms around real-time data use and action. Furthermore, countries may need additional, context-specific indicators that foster greater understanding of the factors behind reported coverage and prompt appropriate actions that are targeted to sub-national needs. These core process indicators are not intended to predict vaccination coverage levels. Rather, **they flag the strengths and gaps in the immunization system to inform decision-making to address deficiencies, suggest additional investigations on other factors affecting coverage and quality, and protect the achievements that have been attained towards resilience.** MCSP will continue its iterative learning through the life of the program in order to generate conclusions on the role and value of process indicators as tools for strengthening immunization program management.