



e-Posyandu: Digitizing Integrated Health Post Monitoring System in Indonesia

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BACKGROUND

Indonesia is committed to improving national health governance and health information systems, ensuring fair distribution of quality health services and revitalizing community-based integrated health posts (posyandu) as stated in the National Medium-Term Development Plan (RPJMN) 2020-2024. To do this, the government requires real-time information to implement appropriate interventions. Posyandu, a mandated agency of the government to provide health services to mothers and children in the community, has a manual monitoring system, but it does not have the capacity to provide real time-information to initiate real-time actions.

UNICEF, at the request of the Indonesian Government, supported posyandu to develop a digitized Posyandu Monitoring System or e-Posyandu, which is able to provide real-time information on public health, focusing on maternal health programmes and health promotion; and to assess their level of stratification; in other words how many services are available and how widely they have been delivered in an area.

APPROACH

The Posyandu Monitoring System uses RapidPro and ONA technology, a real-time digital data collection system using short messaging services and online chatrooms. It uses geo-tagging functions to accurately locate posyandu in villages. It also engages community-based health centre (puskesmas) officers and village midwives to regularly update the system through their own mobile devices

GOAL

- Strengthening posyandu information system
- Monitoring posyandu performance and development

PROBLEM

- Manual monitoring is time consuming and has the possibility of human error

Reporting System

To improve the existing reporting form, the Posyandu Monitoring System uses the ONA Form. This form is available for puskesmas staff and village midwives to report on posyandu stratification and key indicators on a monthly basis. Forms can be accessed digitally by sending a request through unpaid text message or WhatsApp chat. As downloading the form and reporting the situation depends on internet connection, which is sometimes unreliable, offline access is possible. Offline data will be automatically recorded and synchronized once the connection returns to stability.

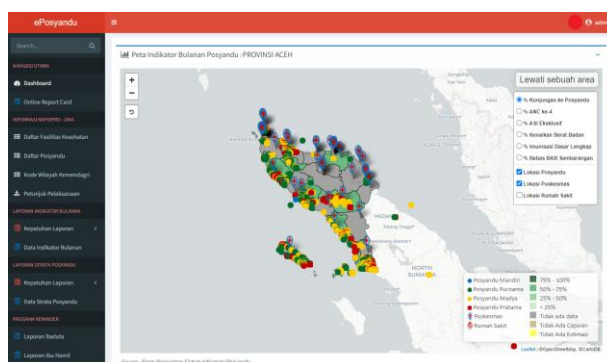


Figure 1. Screen capture of interactive map in the dashboard showing the posyandu stratification status assessed by key indicators

Data Visualization

Using RapidPro technology, the Posyandu Monitoring System can capture a wide range of indicators and variables and show the data in sophisticated visualization. The M-Health progress report card is one of the deliverables on the issue mapping function to support managerial-level stakeholders in understanding the situation analysis. As it delivers timely reports, it also makes it possible to track development progress, allowing an appropriate intervention to be made for the relevant district.

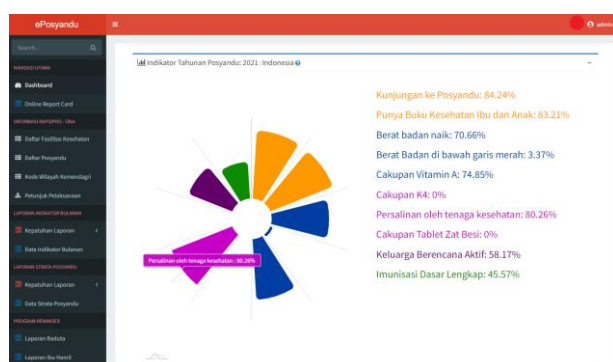


Figure 2. Visualization of the dashboard capturing annual key indicators in the form of interactive graphs

KEY RESULTS ACHIEVED

- Being at the forefront of maternal and child health service centres, posyandu have an important role in collecting health indicators. The Posyandu Monitoring System helps capture important indicators such as number of visits, counselling practices, and specific aspects of maternal health, nutrition and immunization of both mothers and children.
- Generally, the Posyandu Monitoring System works on digitalizing and improving the existing manual monitoring system. The stratification of posyandu, thus, can be done in a timely manner, minimizing human error and overtime reporting, while also delivering the results in mapped visualizations.
- This system captures the actual data on several indicators that are calculated to determine each posyandu stratification, as follows: *Mandiri* (more than 80%); *Purnama* (from 70% to 80%); *Madya* (from 60% to 70%); and *Pratama* (below 60%). These indicators cover facility, community health worker, infrastructure, funding, governance, programme implementation, and performance.
- The Posyandu Monitoring System also shows the reporting rate, showing coverage and reporting compliance. In this regard, the local government has a crucial role and gives immense support to encourage puskesmas officers and village midwives to report to the posyandu on the conditions in their area.

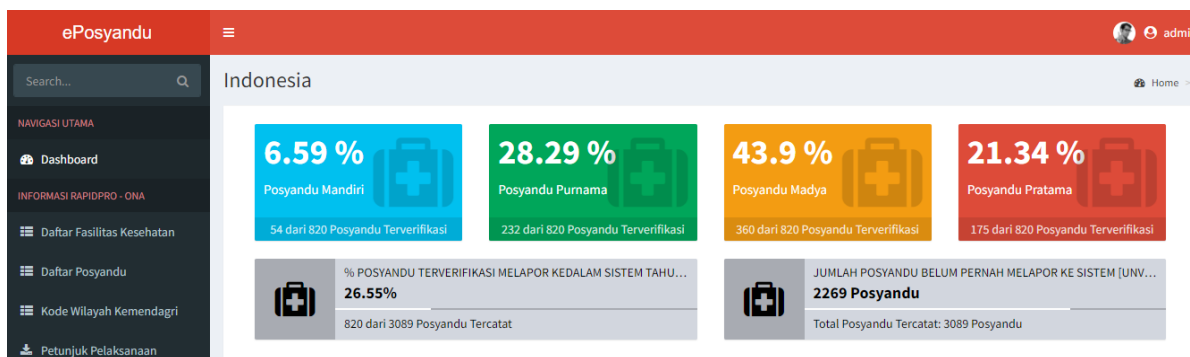


Figure 3. The illustration of dashboard featuring the overall stratification status and reporting rate

LESSONS LEARNED

- *Rapid posyandu mapping is feasible.* Integrated with the village identification code of the Ministry of Home Affairs, which has nationwide coverage, the geo-tagging feature in the Posyandu Monitoring System provides accuracy as well as reliability of mapping.
- *Close monitoring improves posyandu performance.* Capturing the real-time situation, more than 850 posyandu have been mapped and classified based on their activity status and their capacity.
- *High reporting coverage with district support.* Supported by puskesmas staff and village midwives and district health officers, the Posyandu Monitoring System works well with the close collaboration of any stakeholders in the field.
- *Visualization of data and facilities helps identify problems.* Within this system, obtaining monthly updates is feasible and information is trackable. It also allows the health manager to obtain statistical information easily.
- *Improved coverage linked to data utilization.* The technology helps to decrease human error factors and overtime consumption that would likely happen in a manual reporting and monitoring system.

REPLICABILITY & UPSCALING

Since 2019, in collaboration with Aceh Health Department and Ministry of Health, the Posyandu Monitoring System has been implemented in several districts in Aceh Province: Singkil, Sabang, Aceh Jaya and Simeuleu. This initiative has been replicated in Banda Aceh, Langsa, and other districts with government funding.

For scaling up beyond the initial intervention districts, e-learning videos are available to educate health practitioners on how to use the features of the Posyandu Monitoring System. These videos include tutorials for community health workers on

using RapidPro, as well as step-by-step explanations for village midwives on using the ONA form to stratify posyandu development and conduct monthly reports on key indicators. The wide use of smartphones among the stakeholders makes it easier to implement the Posyandu Monitoring System.

To optimize the benefits of the Posyandu Monitoring System, the implementing partner can also be hired to conduct cascade training to public health workers, as necessary.

FURTHER READING AND INFORMATION

- Website: <http://eposyandu.com>
- Mobile application: https://play.google.com/store/apps/details?id=com.ikea.aceh.unicef.sip&hl=en_US
- Video tutorial: <https://youtu.be/f3IQbe1UnEM> and <https://youtu.be/RDgZiQVLoMI>
- Compendium of Good Practices: <https://www.unicef.org/indonesia/reports/compendium-of-good-practices>

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