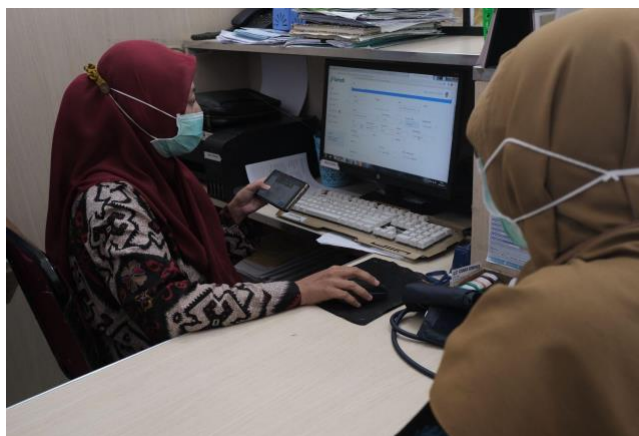


Accelerating Indonesia's digital transformation through interoperable health information systems

Background

Ibu Idjeriah Rossa has witnessed Indonesia's digital transformation first hand. As a Health and Pharmaceutical Service Officer in the Pontianak (West Kalimantan) Health Office, Ibu is responsible for compiling community health data to guide decisions for public health planning. She has seen how SATUSEHAT, Indonesia's health information system, empowers decision making with information that can be exchanged across many different sources. "Back in the days when we did not use Electronic Medical Records (EMR) and SATUSEHAT had not yet launched, we could not get real-time health data," Ibu said. "It took approximately one month for Puskesmas (community health centers) to send their data to us, and we had difficulties in data validation and the decision-making process."

With over 400 hundred existing health information systems that are siloed and cannot exchange data, health workers in Indonesia were required to repeatedly submit the same data across multiple systems, making data entry time-consuming and more prone to error. Connecting all of the information systems at each level of the country's health system reduces health workers' data entry burden while improving their ability to manage and access data for timely decision-making.



Health worker doing data entry into Electronic Medical Record (EMR) in a health facility in East Java (Photo credit: Dwi Prafitria/CHISU Indonesia)

Recognizing this potential, the Ministry of Health (MOH) launched SATUSEHAT, Indonesia's national health information exchange platform that aims to connect health facilities and create health data interoperability. SATUSEHAT enables data exchange across different health applications and program areas to ensure that policymakers, health workers, and individuals have the data they need to support quality health services. In 2022, the MOH mandated EMRs in Indonesia's health facilities to reduce data entry and improve the availability of quality data. EMRs have subsequently been central to SATUSEHAT's success because they must adhere strictly to standardized data protocols in Indonesia, facilitating efficient data exchange and accelerating the country's digital transformation.

Since SATUSEHAT launched in 2022, the Country Health Systems and Data Use (CHISU) program, USAID's flagship health information system and data use program, has supported MOH's Center for Data and Information Technology (PUSDATIN) to lead the rollout of SATUSEHAT, connecting EMRs to the platform across Indonesia. CHISU is building on lessons learned from past efforts to achieve interoperability in Jakarta, East Java, and South Sulawesi and to support PUSDATIN in scaling up SATUSEHAT coverage to accelerate connectivity across the country.

Steps Taken

The MOH set an ambitious goal of having 95% of hospitals and community health centers (puskesmas) in targeted provinces and districts routinely send data to SATUSEHAT in the three months that PUSDATIN, the Digital Transformation Office (DTO), and CHISU provided technical assistance to accelerate progress. A standardized process and set of tools bolstered roll out efforts and a rapid technical assistance team also supported SATUSEHAT integration in the provinces of North Sumatera, West Java, West Kalimantan, and East Kalimantan. PUSDATIN, DTO, and CHISU developed a phased approach to accelerate connecting each facility to SATUSEHAT (see figure).

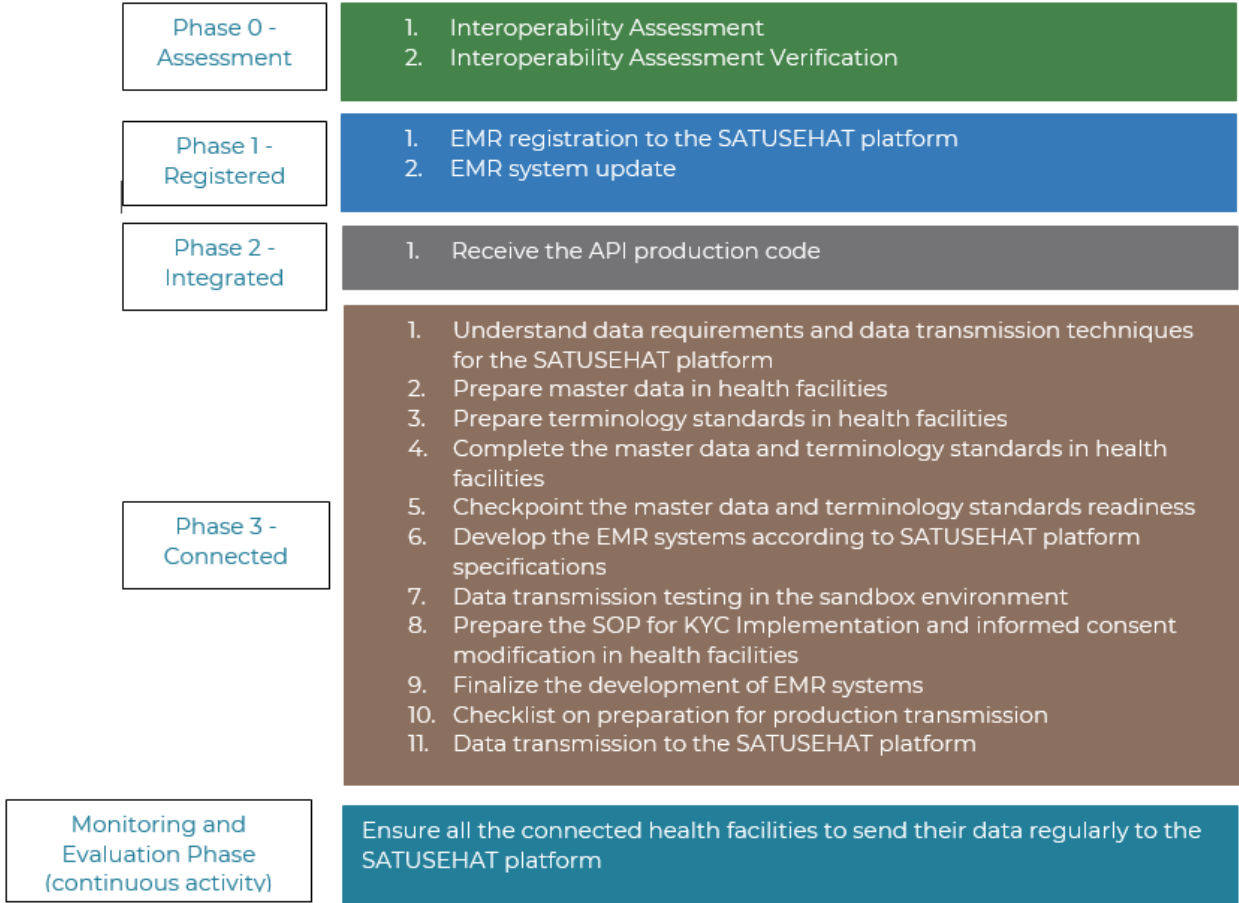


Initial meeting on SATUSEHAT Implementation with PHO West Kalimantan, DHO Pontianak, and DHO Sintang in June 2024 (Photo credit: CHISU Indonesia)

To accompany the acceleration plan, PUSDATIN, DTO, and CHISU also developed an e-booklet that covers the steps needed to connect to SATUSEHAT, along with monitoring and evaluation implementation guidelines that provide extensive instructions to effectively track progress. The guidelines incorporate lessons learned on the overall SATUSEHAT implementation throughout Indonesia, serving as an essential reference for future efforts to expand connectivity.

PUSDATIN, DTO, and CHISU organized kick-off meetings in the first two provinces, North Sumatera and West Kalimantan, to present the status of health facility connectivity to SATUSEHAT and set a goal of having 100 percent of facilities connected and regularly sending data from EMRs to SATUSEHAT. In Sumatera, this included 83 health facilities (75 puskesmas and 8 hospitals) in Medan City and Deli Serdang District, while in West Kalimantan it included 49 health facilities (43 puskesmas and 6 hospitals) in Pontianak City and Sintang District.

SATUSEHAT Roll Out Acceleration Phases

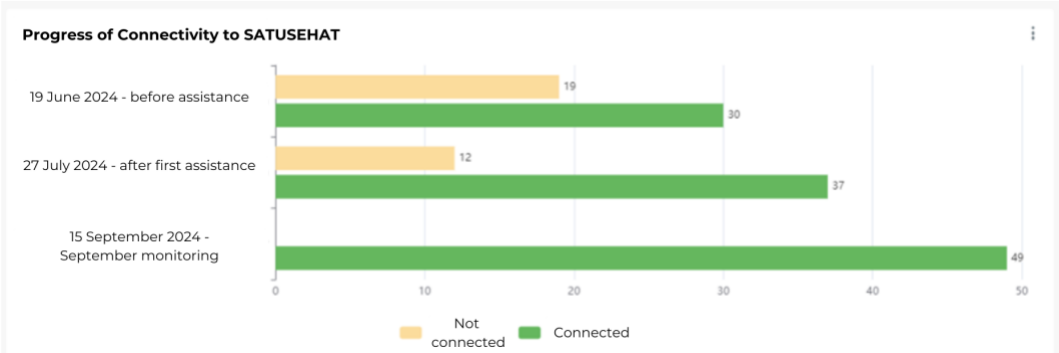


“When we had our first meeting with PUSDATIN and CHISU, they showed us the data of which health facilities were still not connected to SATUSEHAT,” Ibu said. “It was like a wake-up call for us and it motivated us to accelerate the SATUSEHAT implementation in our area (Pontianak, West Kalimantan).”

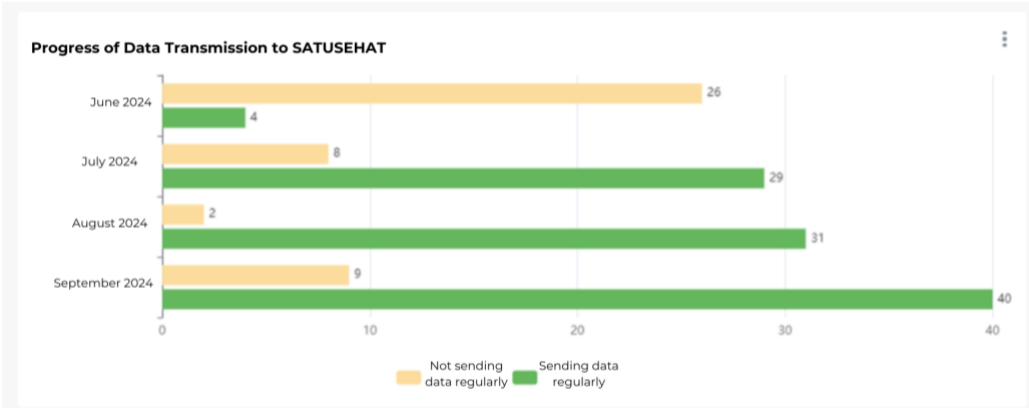
Virtual support sessions for District Health Offices (DHO) and vendors provided a connection to SATUSEHAT implementation experts and allowed DHO, Provincial Health Offices (PHO), and PUSDATIN staff to monitor and evaluate progress towards reliable data transmission to SATUSEHAT. Pusdatin, DTO and CHISU followed up with a final visit in September 2024 to support the DHO in evaluating their health facilities’ progress in connecting to SATUSEHAT.

Results + Next Steps

The collaboration between CHISU, Pusdatin and DTO led to significant acceleration in a short period of time. In North Sumatera, before PUSDATIN and CHISU's assistance, just 58 percent of its 83 health facilities were connected to SATUSEHAT. After the acceleration plan, all 83 health facilities were connected and all but one facility were sending data to SATUSEHAT. Results were similar in Pontianak, with the acceleration plan increasing the number of connected facilities from 61 percent to 100 percent of all 49 selected health facilities.



The increase in connectivity also resulted in an increase in EMR data sent to SATUSEHAT. Before the acceleration plan was in place, only 13 percent of 47 health facilities regularly sent data, leaving gaps that contributed to a lack of confidence in the quality of data. After the acceleration plan was executed, the number of health facilities regularly sending their data to SATUSEHAT increased to 82 percent.



Indonesia's interoperable information system has not only provided better data for decision-making, but has also created more efficiency in the health facilities. Nabila Tamara Sarry, Medical Record Officer in Pontianak Utara General Hospital (RSUD), explained that patient data used to be recorded in a spreadsheet so when a doctor

needed a patient's health information, she had to help find the data. However, it was also her job to register other patients and sometimes the doctor had to wait while she finished checking in a patient. Since the hospital has implemented the EMR and connected to SATUSEHAT, Nabila said that doctors now directly access the information without having to ask her. Health workers at RSUD are spending less time retrieving patients' health data and more time providing patient care.

“When PUSDATIN and CHISU showed us that RSUD had not been registered to SATUSEHAT and they did not even have EMR, we provided assistance throughout,” Ibu explained. “We intensively communicated and carried out regular monitoring with the hospital and their EMR vendor to keep track of their progress on connectivity to SATUSEHAT.” This deep engagement demonstrates the Pontianak Health Office's contribution and commitment that will help sustain progress over time.



Ibu Rossa, DHO Pontianak, during the technical assistance session with health facilities (Pontianak, August 2024)

This progress has been a catalyst for further expansion and it has also led to an invitation from the Pontianak Health Office to invite private clinics and medical practices to participate in the SATUSEHAT acceleration effort. SATUSEHAT is not limited to government-run facilities, and to have comprehensive health data, private health facilities must also be included.

“We really thanked PUSDATIN and CHISU for the assistance,” Ibu said. “We are now optimistic that all health facilities, including clinics and private hospitals in Pontianak, will soon be connected to and regularly sending their EMR data to SATUSEHAT. We can now have accurate health information from the city in real-time which will surely help us better in decision-making and policy-making.”

CHISU will replicate this process in the other two provinces selected by the PUSDATIN for this acceleration program, West Java and East Kalimantan. It will also further refine and package the SATUSEHAT e-booklet and SATUSEHAT M&E Implementation Guideline for use by others throughout Indonesia.



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