

Revolutionizing **Healthcare** in **Indonesia: The Digital Transformation** Agus Rachmanto

Presented at the event:

Medinfo 2023, Sydney, Australia



3 Tasks from the Minister

Beginning of Digital Health Transformation Journey Indonesia

Develop Digital Collaboration to Overcome COVID-19 Pandemic

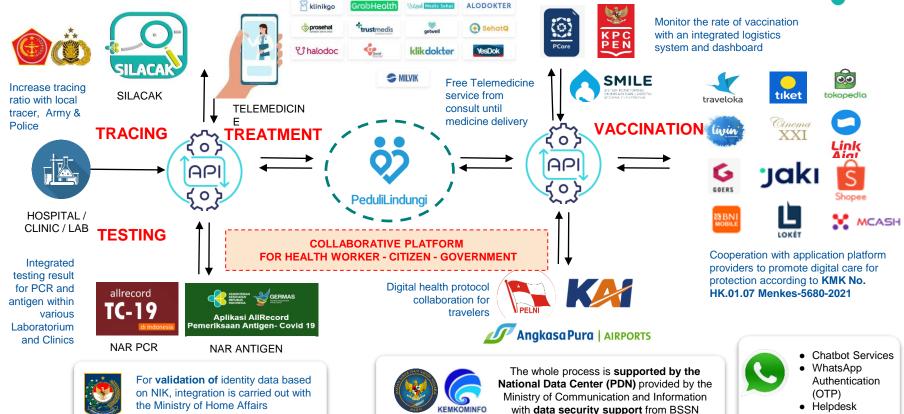
2 Setting up Team and Regulation to Support Health Transformation

Building a Roadmap for Digital Transformation in Health Sector



Development of Digital Ecosystem for Handling COVID-19





Accelerating the Digital Transformation of Health in Indonesia

Crisis is the right time to make changes



The pandemic awakens the importance of Health Sector Resilience

- The pandemic shows systemic problems that must be fixed
- It is necessary to increase the capacity and resilience of the health system

2

Health system
Indonesia is ready to
Transform

- Digital technology is widely available and the public is more open to change
- The pandemic encourages the acceleration of the implementation of the digital health transformation to be carried out immediately

3

Collaboration is needed Towards Healthy Indonesia

- Towards a Healthy Indonesia, the Ministry of Health cannot handle it alone, so cooperation with all health industry players is needed
- The Ministry of Health must build a platform to connect various data and systems in the health ecosystem in a single unit

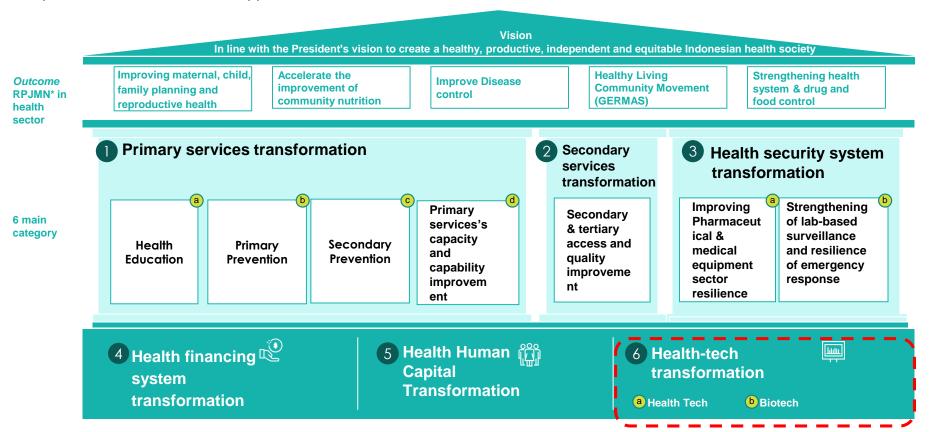


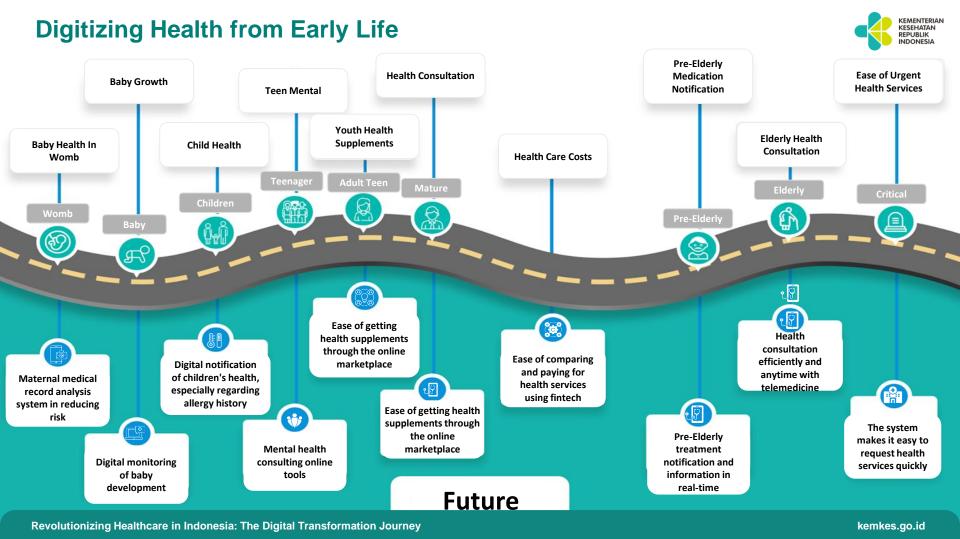
Digital Transformation Acceleration becomes one **agenda of national priority and importance** after the COVID-19 Pandemic.

Ministry of Health is committed to Health System Transformation



6 pillars of transformation to support Indonesia's health





Digital Transformation Office (DTO)

Dedicated Team to Accelerate Health Digital Transformation



Service-Based National Health Data Integration

Consolidation and Standardization of Electronic Medical Record Data in the SATUSEHAT platform

2 Reporting Process Efficiency to Support Data Analysis and Decision

App transformation to support the efficiency of the Health data reporting process that supports the needs of program and policy analysis

- Health Digital Ecosystem Collaboration
 - Building partnerships with health industry players to create a health care ecosystem that continues to grow
- Increasing the Digital Capacity of Health HR

Increase the capacity of human resources in the health sector in the development and utilization of Digital Information Technology products

Blueprint of Digital Health Transformation Strategy 2024

Transform healthcare delivery in Indonesia





A. Integration and Development of Health Data System



Implementation of single identity health recordt

Integration of electronic system services between health institutions, govern-

ment, and health

industry



of Health Big

Data Analysis System Development of Al based big data

ecosystem at

central and local

governments

Digitalization and integration of health care information system (puskesmas, clinic. hospital, lab, and

B. Integration and Development of Healthcare Application System



5. Integration of **Business Process** and HR Improvement

Business Process Integration and HR Improvement on health informatics dispensary)



Availability of Helpdesk and customer management system for health applications



7. Expansion of telemedicine technology

Expansion of telemedicine from health facilities to the public



C. Health Technology Ecosystem

Development

Integration of biotechnology R&D and healthcare

9.Integration of

health

biotechnology

research

Regulation and implementation of regulatory sandbox prioritizing health providers technology 4.0

OUTCOME

Improved health policy based on accurate, update and complete data

OUTCOME

Efficient health services at puskesmas. clinic, hospital, lab, and dispensary

OUTCOME

Collaboration and digital health ecosystem involving the government, industry and the public

Download on http://dto.kemkes.go.id/

Indonesia's Health Transformation Roadmap



Integrate all health data, digitizing the healthcare services, and encourage the health ecosystem

Priority Activities 2021 2022 2023 2024 Development of a Implementation Expanded Integration and Health data of an Al-based single-health coverage of **Development** architecture identity-based big health analysis single-health design **Health Data** identity data system system **Expanding the** Integration and **Integrated** health **Implementation** scope of the Health system facilities of integrated **Development** integrated health interoperability information system health facilities **Application** facilities architecture design development information system System information system AI, Blockchain & Health information **Expansion of** Health technology **Health Tech** IOT-based system telemedicine innovation Regulatory **Ecosystem** infrastructure and supporting licensing Sandbox **Development** security infrastructure expansion **Implementation** assessment

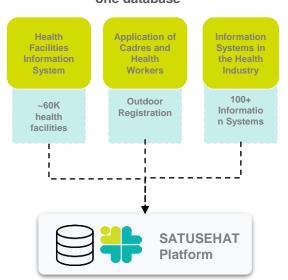
Digital transformation policies in the health sector





Standardization & Integration Data

Health data from various sources is **standardized and integrated** into the SATUSEHAT platform into **one database**



2 Simplification Application



a. Public: SATUSEHAT Mobile

One-stop health application for the community (3 Million monthly active users)

b. Health Facilities:

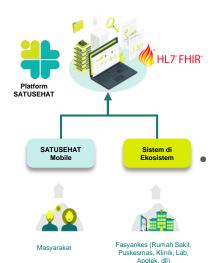
SIMPUS/SIMRS/other Integrated information system with SATUSEHAT for Health Facilities (~11.000 thousand Health Facilities have successfully integrated phase 1 trials)



c. Health Officers: (ASIK)

Input application by cadres (outside the building) in primary care (>90% of puskesmas have used it for Stunting, NCD Screening, BIAN, and Routine Immunization programs)

3 Protocol Data Exchange



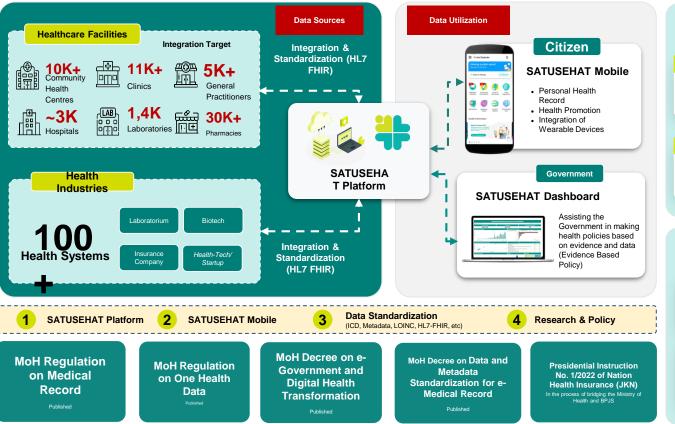
Health data
exchange is easy
using standards
set by the
Government
Standard HL7
FHIR based on
API (Application
Programming
Interface).

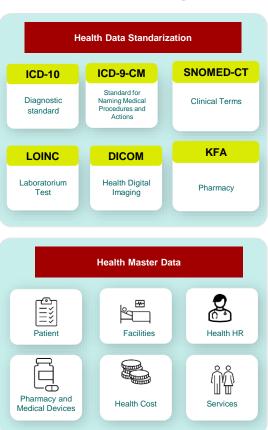
Ecosystems can have their own application systems, but must follow the technical protocol from the Ministry of Health

SATUSEHAT: Health Data Interoperability Platform

Linking and empowering all health data providers and users







SATUSEHAT Data Standardization and Management

Master Data Management to build reliable data ecosystem for further use





Patient Data (Master Patient Index)

- Product data specially designed as a standard for patient data to be validated by National Civil Registry for data related to demographics
- Can be used as the main standard for patient data by all Health Service Facilities in Indonesia via SATUSEHAT



Health Facilities Data

- Master data specially designed as a standard for Health Service Facility data which consists of 35 types of healthcare facilities.
- This data is compiled based on various sources such as Healthcare Workers Information System, Online Hospital, SIMADA, and others



Health Human Resources Data

 Specially designed data product as a standard data index for health workers combined from various data sources for health personnel (Name, STR, SIP, etc.)



Data on Medical Devices and Medicines (KFA Dictionary)

 Data product designed as Master data for Pharmacy, Drugs, and Medical Devices collected from various data sources as reference standards for drug data (active substance content, size, volume, etc.) and medical devices



Financing Data

 The data product is designed as a Financing Master data that can be used by all Health Facilities and can be used as a standard for the preparation of cost formats for services, actions, and others.



Service Data

 Data products that are designed as Service Master data that can be used by all Health Facilities and can be used as service coding standards.

Transforming PeduliLindungi into SATUSEHAT Mobile

Realizing individual-based and personalized health data





Application of individual health services related to COVID-19 and **proven** in handling COVID-19

> 105 Mio

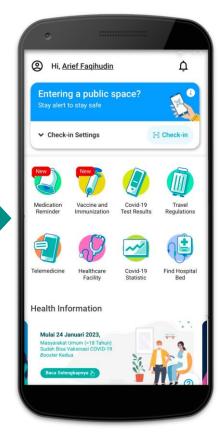
Total of users

8 Mio

Average daily users during the peak of COVID-19

- Digital Tracing
- 2 COVID-19 Testing
- 3 Self-Isolated Telemedicine
- 4 Integrated Vaccination System







Developed as a Personal Health Service application for the community for broader functions.

- 1 Medical Record
- 2 Health Promotion
- 3 Medication Profile
- 4 Health Diary
- 5 Hospital Bed Availability
- 6 Early Warning System
- 7 Tracing & Testing
- 8 Integrated Telemedicine
- 9 Personalized Health Education



>11.0000 Health Facilities Are Ready To Be Integrated with SATUSEHAT



Health Technology Transformation Achievements: Data Integration and Interoperability to SATUSEHAT

~11,000 **SATUSEHAT Integrated Health Facilities**

Integration and Interoperability

Module Training Has Been Done and Successfully Tested for Connection to the SATUSEHAT Platform.

> **Expansion to** outside lava Bali

~200 Health **Facility Groups with** independent systems

~50 EMR system provider vendors

Registration Production Phase



SATUSEHAT Mobile



Average daily usage ~180,000 user account

Average weekly usage ~800,000 user account

Average monthly usage ~2,900,000 user account

New Features:

- Non-COVID vaccines (Polio, Meningitis, Yellow Fever)
- Self Test Antigen
- Cancer Drugs Wiki
- Emergency Contact
- -Health News with

~1,000,000 user visits

Regulation Support for EMR Implementation





In supporting the digital transformation of health, regulatory support is needed to ensure the transformation can run well. The Ministry of Health has made changes and updates to regulations from the previous Ministry Regulation No.

269/MENKES/PER/III/2008 became the latest regulation, namely Ministry

Regulation No. 24 of 2022 Electronic Medical Records



PERATURAN MENTERI KESEHATAN REPUBLIK INDONESIA NOMOR 24 TAHUN 2022 TENTANG REKAM MEDIS

DENGAN RAHMAT TUHAN YANG MAHA ESA

MENTERI KESEHATAN REPUBLIK INDONESIA.

- Menimbang : a. bahwa perkembangan teknologi digital dalam masyarakat mengakibatkan transformasi digitalisasi pelayanan kesehatan sehingga rekam medis perlu diselenggarakan secara elektronik dengan prinsip keamanan dan
 - kerahasiaan data dan informasi; b. bahwa Peraturan Menteri Kesehatan Nomor 269/MENKES/PER/III/2008 tentang Rekam Medis sudah tidak sesuai dengan perkembangan ilmu pengetahuan dan teknologi, kebutuhan pelayanan kesehatan, dan kebutuhan hukum masyarakat sehingga
 - c, bahwa berdasarkan pertimbangan sebagaimana dinaksud dalam burul a dan burul b, serta untuk melaksanakan ketentuan Pasal 47 ayat (3) Undang-Undang Nomor 29 Tahun 2004 tentang Paskik Kedokteran dan Pasal 72 Undang-Undang Nomor 36 Tahun 2014 tentang Textik Kedokteran dan Pasal 72 Undang-Undang Nomor 36 Tahun 2014 tentang Tenaga Kesehatan, perlu menetapkan Peraturan Menteri Kesehatan tentang Rekam Mekan Me

Mengingat : 1.

- Pasal 17 ayat (3) Undang-Undang Dasar Negara Republik Indonesia Tahun 1945;
- Indonesia Tahun 1945;

 2. Undang-Undang Nomor 29 Tahun 2004 tentang Praktik
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 2004 Nomor 116, Tambahan Lembaran Negara Republik
 Indonesia Nomor 4431):
- Onderseal violenty Monore 11 Tahun 2008 tentang Informasi
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 Undang-Undang Monore 13 Tahun 2008 Nomor 58, Tambahan Lembaran Negara Republik Indonesia Tahun 2008 Nomor 58, Tambahan Lembaran Negara Republik Indonesia Nomor 4843 sebagaimana telah diubah dengan Undang-Undang Nomor 19 Tahun 2016 tentang Perubahan atas Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik (Lembaran Negara Republik Indonesia Tahun 2016)

MoH Regulation No. 24 of 2022 Electronic Medical Records

Regulations to Support the Transformation of Health Technology



Support Implementation of SATUSEHAT and Electronic Medical Record (EMR)

Law No. 27/2022 of Personal Data Protection

Law No. 36/2009 of Health Law No. 23/2014 of Regional Administrations (Pemda) Government Regulation No. 46/2014 of Health Information System Presidential Regulation No. 95/2018 of e-Government (SPBE) Presidential Regulation No. 39/2019 of One Data Indonesia













1 SATUSEHAT Platform

2 SATUSEHAT Mobile

3

Data Standardization (ICD, Metadata, LOINC, HL7-FHIR, etc)

4 R

Research & Policy

MoH
Regulation on
Medical Record

Published

MoH Regulation on One Health Data

Published

MoH Decree on e-Government and Digital Health Transformation

Published

MoH Decree on
Data and
Metadata
Standardization
for e-Medical
Record

Published

Presidential Instruction No. 1/2022 of Nation Health Insurance (JKN)

In the process of bridging the Ministry of Health and BPJS

Health Technology Transformation Targets 2023

SATUSEHAT Platform Implementation and Roll out outside Java-Bali











Lab



Clinics and Community Health Centers

Hospitals

Pharmacies

Target integration of the SATUSEHAT platform in 2023, focusing on all regions of Indonesia with a target of 30,000 Health Facilities (Cumulatively)





Access SATUSEHAT integration and technical information via:

https://SATUSEHAT.kemkes.go.id/



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Implementation of MoH Regulation 24 of 2022

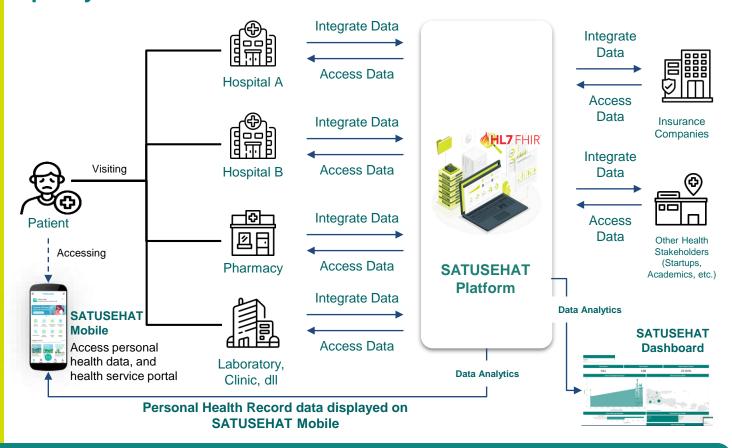
EMR must be held by all health facilities and integrated into SATUSEHAT

no later than December 31, 2023

Data integration can increase the efficiency and quality of health services

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

- Healthcare facilities only need to input data once and share various integrated data in SATUSEHAT
- Patients get health services that are more comprehensive and interconnected with the results of integrated data in SATUSEHAT







Collaboration is very important in order to accelerate Health
Transformation in Indonesia. Let's together we can build a stronger and healthier Indonesia.

#SATUSEHATSemuaSehat











@DTOkemkes

