Functional Requirements for Successful Configuration of DHIS2 Tracker for HIV Case Surveillance Based on 2017 WHO Guidelines

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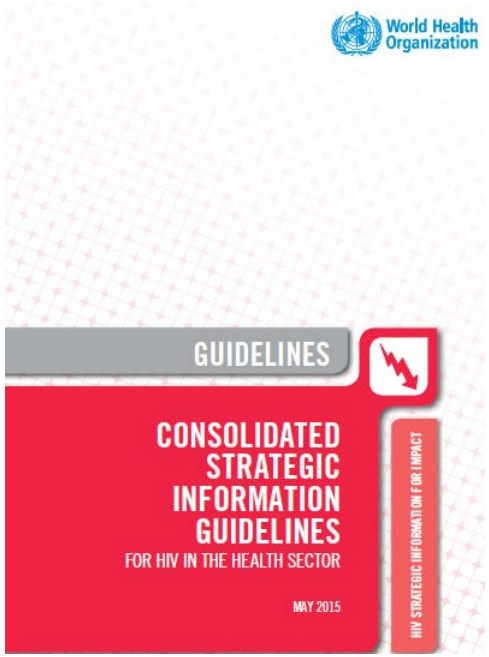
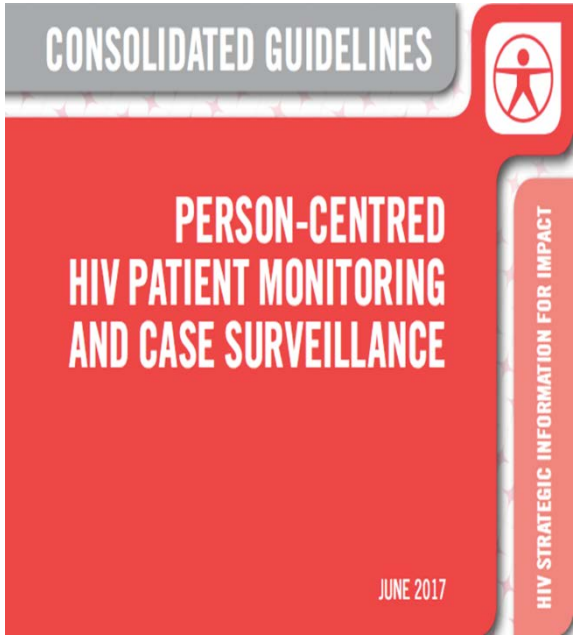
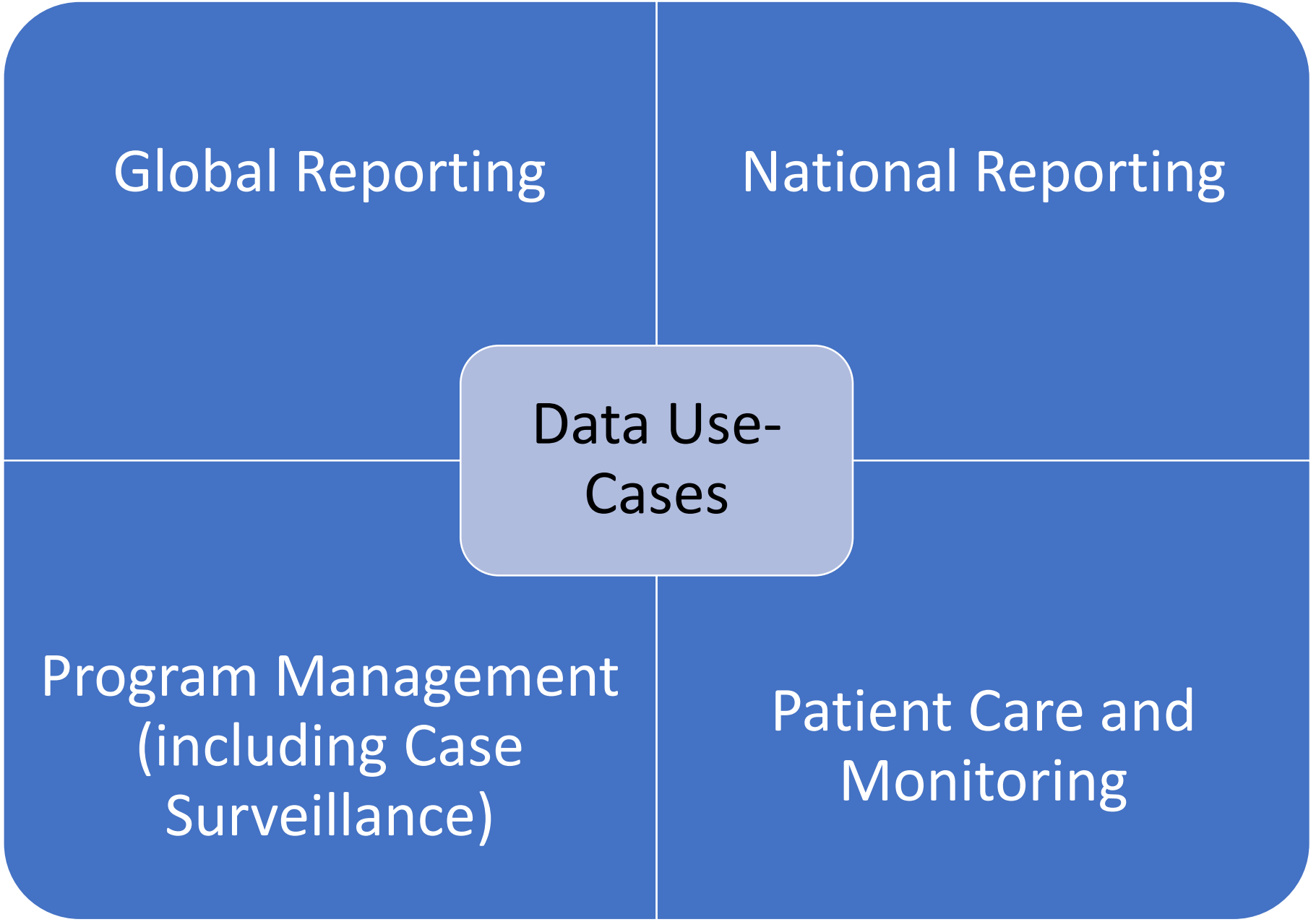
Acknowledgements: Antoine Mayer

WHO HIV Strategic Information Guidelines: Comprehensive Aggregate and Individual-Level Metadata






Global Reporting
National Reporting
Data Use-Cases
Program Management (including Case Surveillance)
Patient Care and Monitoring

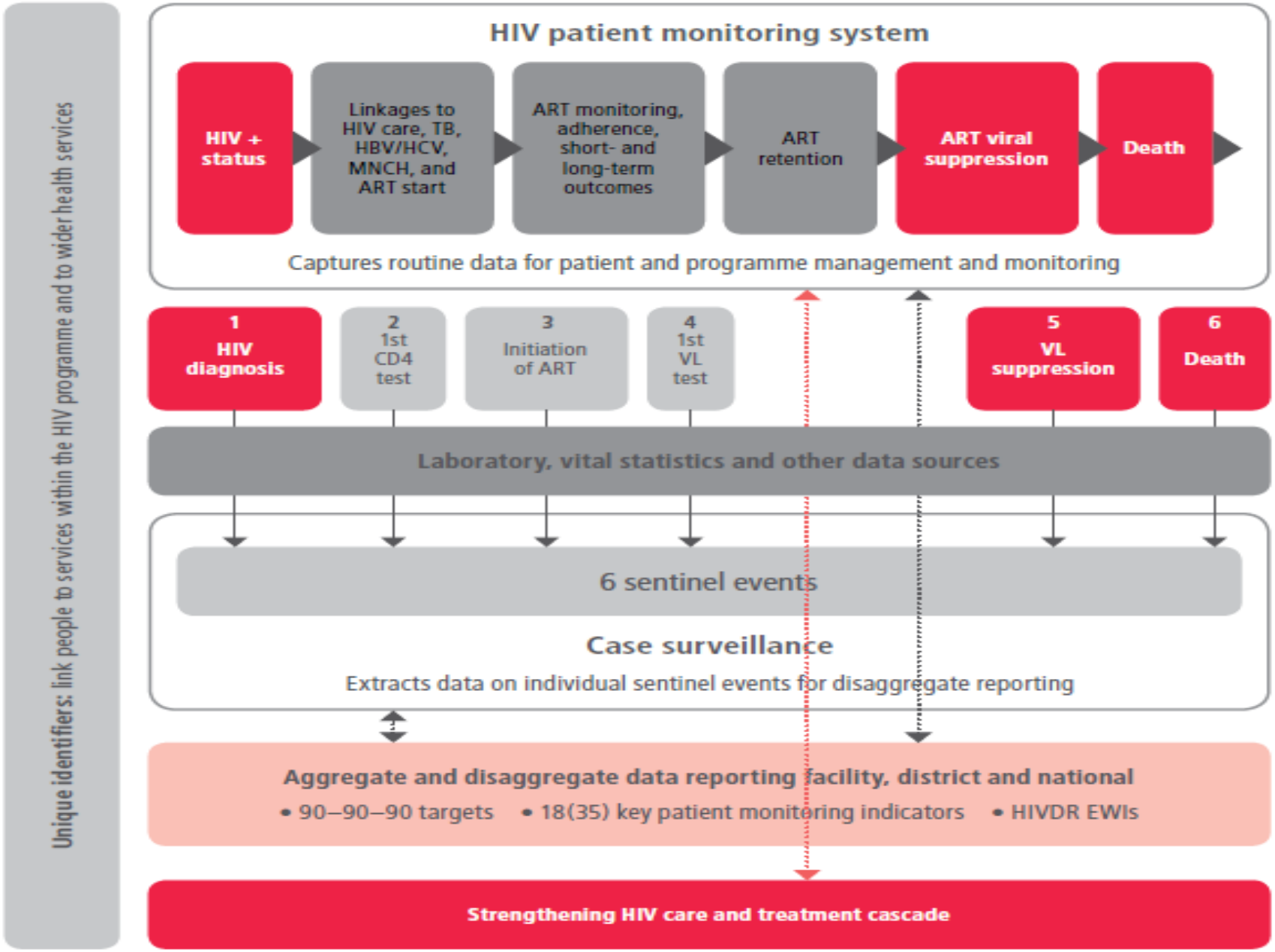
CONSOLIDATED GUIDELINES

PERSON-CENTRED HIV PATIENT MONITORING AND CASE SURVEILLANCE

JUNE 2017

HIV STRATEGIC INFORMATION FOR IMPACT

Fig. 1.1 Links between HIV patient monitoring and case surveillance in a comprehensive strategic information system for HIV



3. HIV CASE SURVEILLANCE

Summary of key recommendations in this chapter

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Additional recommendations relevant to this chapter

6. **Transition progressively from paper-based to electronic patient information systems.** Countries should use a tiered approach to when and how patient and case monitoring data from paper tools are entered electronically based on resource availability by site or setting, starting with high-volume sites, e.g. with more than 2000 patients. *WHO provides an example of a tiered approach.*
7. **Strengthen and establish different data security levels.** Countries should assess and establish different security levels for data elements, and invest in robust databases and policies to protect security and confidentiality based on risks and benefits in individual settings. *WHO provides the major headings to be included and provides reference to additional specialized guidance.*

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Common Misconception #1

- If we have a digital health information system/application (e.g. electronic medical record or individual level reporting system) which reflects the complete patient monitoring system and metadata, including PUID, then we have an HIV case surveillance system.

HIV case surveillance focuses on a priority subset of metadata, referred to as “sentinel events”, within the care cascade. A critical aspect of the Program Management data use-case which case surveillance data address is their relative simplicity which facilitates data management, analysis and use.

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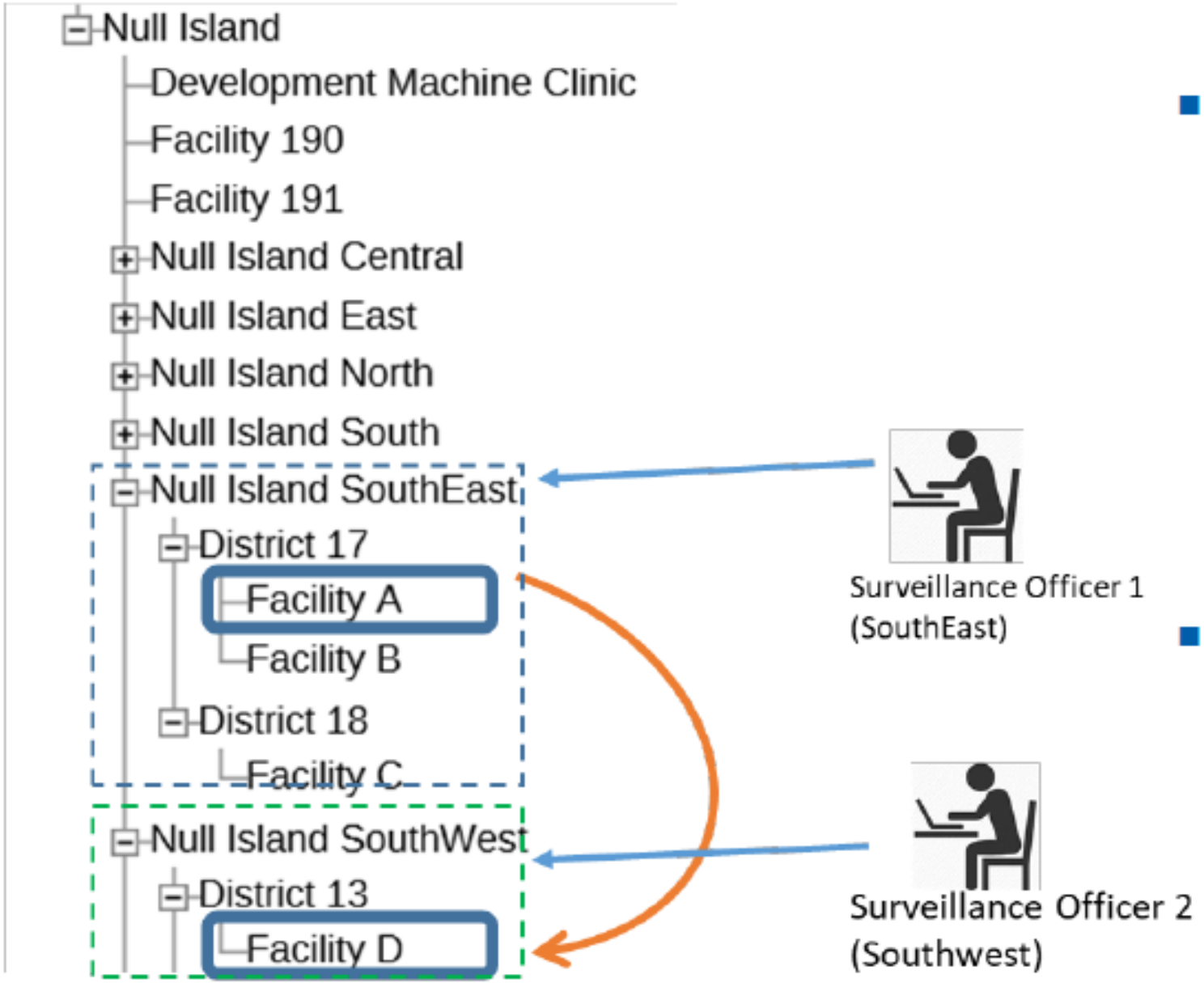
Common Misconception #2

- If we have a digital health information system which includes longitudinal data capture and PUID which is specific to the health facility-level (but not unique at higher administrative levels) then we have an HIV case surveillance system.

Ability to de-duplicate client-level records at all relevant administrative levels (facility to national) is the single most essential characteristic of case surveillance functionality, enabled by a robust national health PUID standard.

Patient transfer from SouthEast to SouthWest
Centralized data capture



Use case

- If patient John **was tested positive** in Facility A and move in district 13 and is tested positive in Facility D

- If patient John was on **treatment** in Facility A and move to South West to be enrolled in Facility D

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Common Misconception #3

- If my system employs patient unique identification (PUID) and captures longitudinal clinical data - for example, starting at treatment initiation - then this represents HIV case surveillance functionality.

Case surveillance functionality is DEFINED by the inclusion of case reporting of new HIV diagnoses. Any system that does NOT include case reporting of new HIV diagnosis does not reflect case surveillance functionality.

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Common Misconception #4

- If my digital health information system with HIV case surveillance functionality includes a PUID which represents a national standard then my HIV case surveillance solution is sufficiently “interoperable” with regards to broader health information exchange needs and requirements.

HIV case surveillance solutions, like all digital solutions, are ideally based on the most generic and universal data standards, e.g. HL7 FHIR, ICD, etc., in order to enable robust health information exchange within a health information system architecture.

Configuration of DHIS2 Tracker capture for HIV Case surveillance

Patient Registration

HIV Case based surveillance

Register Diagnosed HIV Patients

Enroll patient in the Program

Date of HIV Diagnosis
Date of report entered
First Name, Last Name
Place of Birth
Date of Birth
Reporting Clinic
National Identifier
Facility Identifier

Program Stages

Step 1
Initial case report

Step 2
Follow Up case report

Follow Up case report

Follow Up case report

Step 3
Death

Data Collected

- Patient Demographic
- Marital Status
- Risk Factors
- Patient Testing information
- Recency Testing Information
- Clinical Information at diagnosis

- Reporting Facility
- CD4 Count and Test date
- Viral results and Test date
- WHO Stage
- Pregnant and Infant PCR
- Lost to follow up
- Treatment Stop
- Transfer

- Death
- Date of Death
- Cause of Death

“Added Value” of HIV Case Surveillance

- De-duplication provides enhanced data quality over aggregate data
- Key clinical outcomes can be more effectively assessed, e.g. cohort analyses
- Added epidemiologic utility due to case reporting
- In LIC settings, may represent an elegant solution to support the program management data use-case in a robust manner but without the data management burden posed by complete patient monitoring metadata

TECHNICAL BRIEF

HIV PATIENT MONITORING AND CASE SURVEILLANCE

ADAPTING AND IMPLEMENTING NEW RECOMMENDATIONS ON HIV CASE SURVEILLANCE

2017

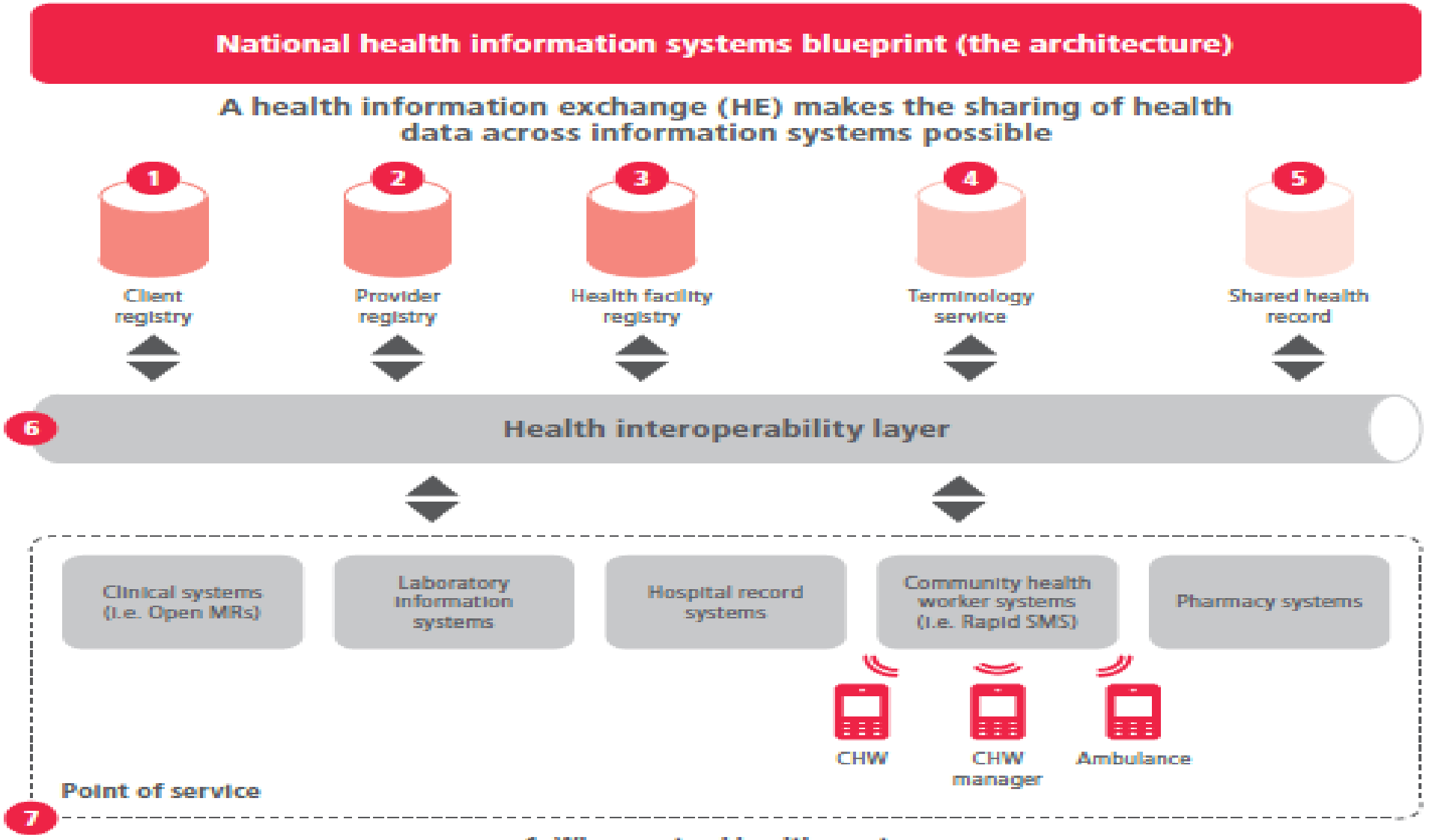
World Health Organization

The tools and recommendations for HIV case surveillance in the 2017 WHO *Consolidated guidelines on person-centred HIV patient monitoring and case surveillance* should be adopted and

ASSESS THE HIV SURVEILLANCE SYSTEM USING A SITUATION ANALYSIS TOOL (ANNEX 3.5.2)

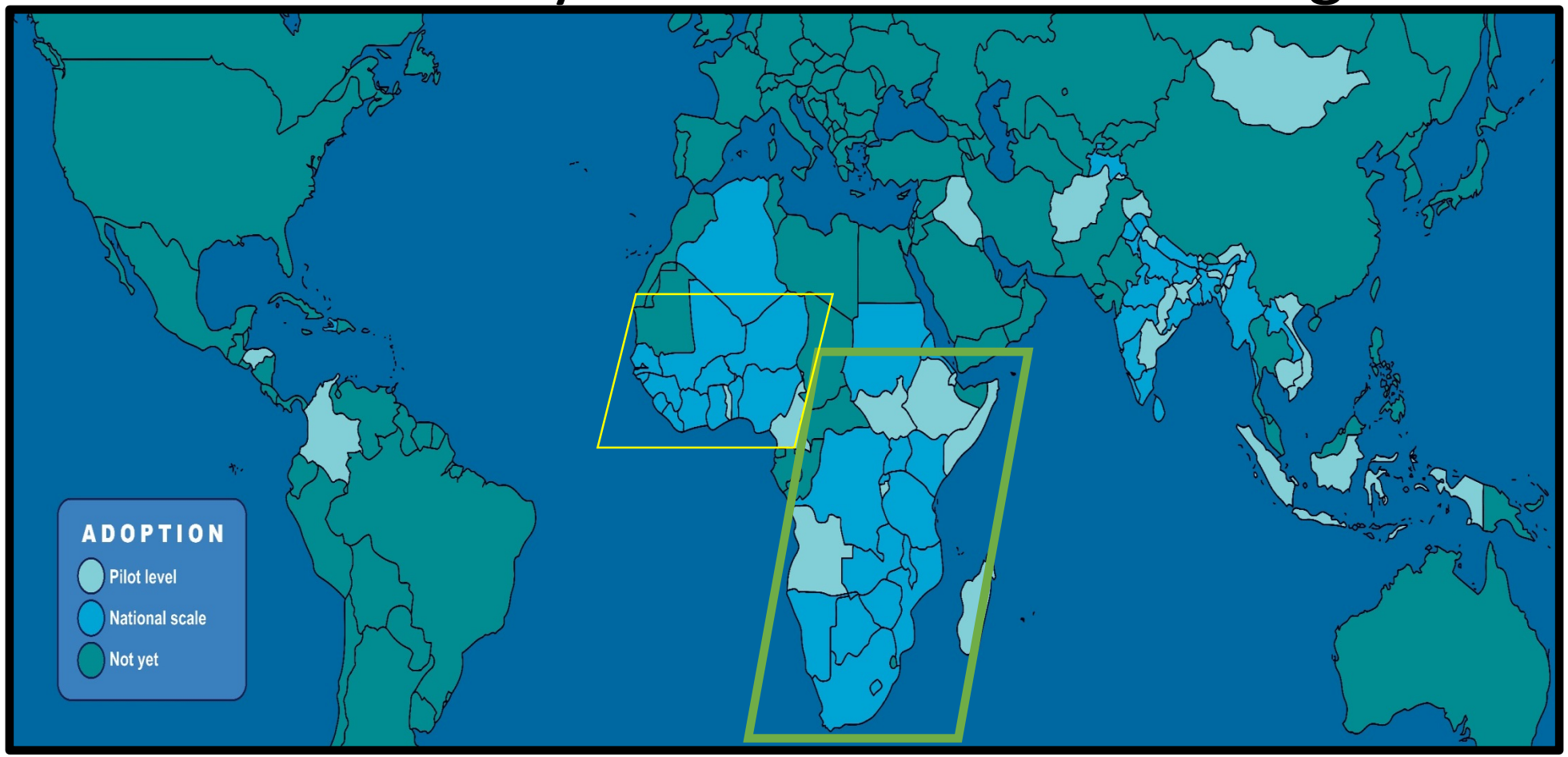
- Review and identify the gaps in policies for
- i.e
- notification and relating to data use,

Fig. 4.7 Internal and external attributes of system architecture



Source: http://ehia.org/architecture/

Adoption of HIV-specific Individual-level Information Systems in WHO AFRO Region



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