

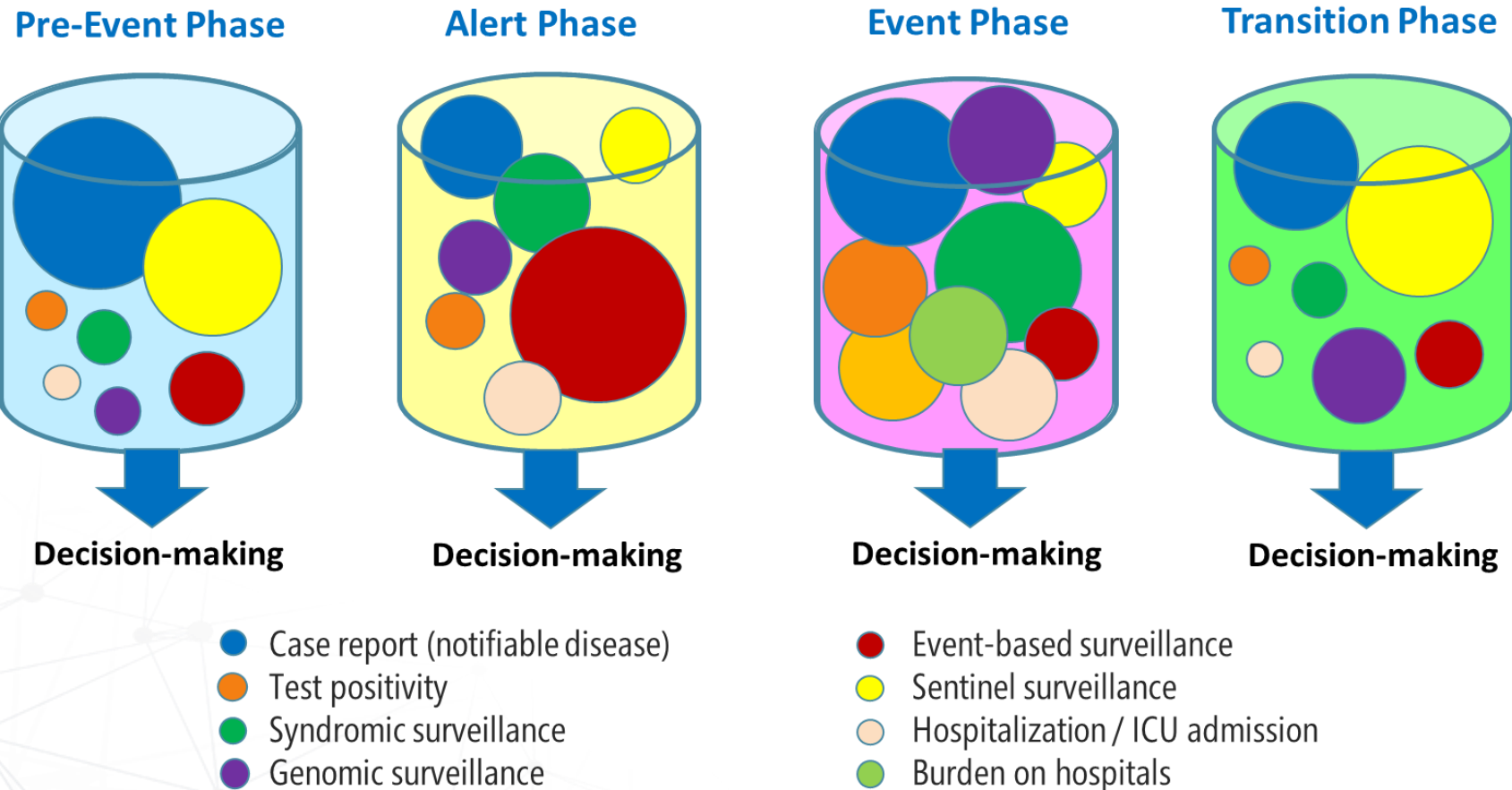
Advancing Multi-Source Collaborative Surveillance in WHO South-East Asia Region

Masaya Kato

Programme Area Manager, Health Emergency Information and Risk Assessment

WHO Health Emergencies Programme, WHO SEARO

Information Needs for Decision Making Evolves over Emergency Phases



**Synthesis of Relevant Multiple Information Items at each Phase
→ Effective Public Health Intelligence**

Source: <https://www.who.int/publications/i/item/9789290210030>

However, Multisource Collaborative Surveillance (MSCS) is not easy...

Example of challenges

Sub-optimal
Coordination

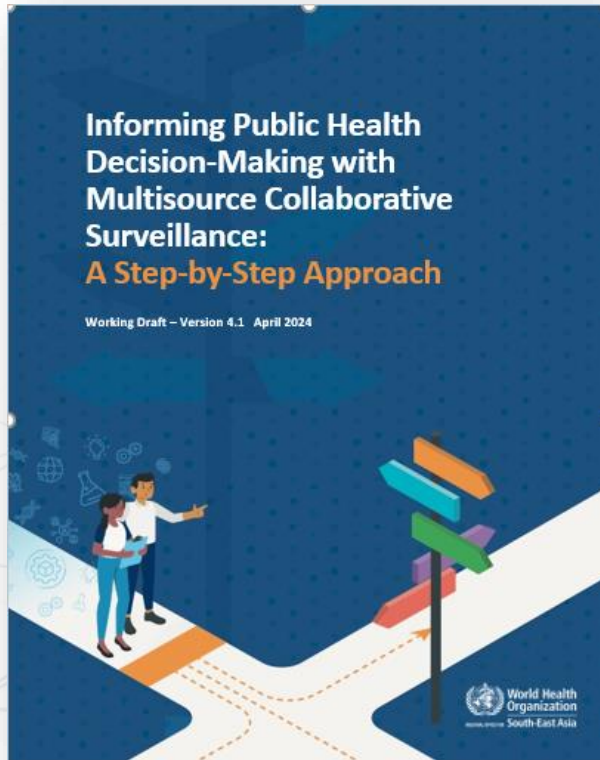
Lack of data
sharing
procedures

Workforce
challenges

Data
ownership

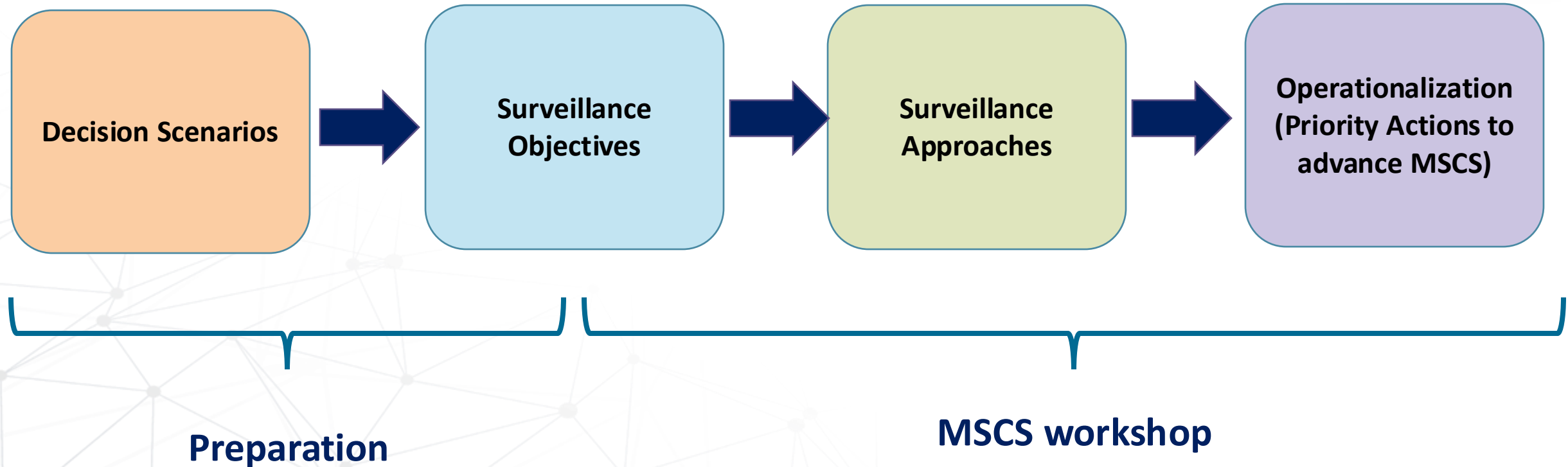
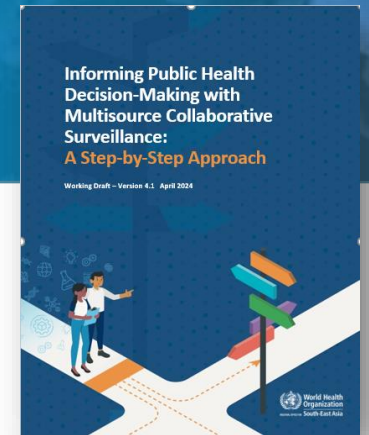
Lack of
interoperable
Information
system

Six Steps to Strengthen MSCS in Countries



Phases	Steps
Preparation	<ol style="list-style-type: none">1. Select a disease or disease groups2. Map surveillance systems and stakeholders, and identify decision scenarios
Stakeholder engagement	<ol style="list-style-type: none">3. A stakeholder workshop – Review and clarify surveillance objectives for decision-making4. A stakeholder workshop – Identify priority actions to strengthen MSCS
Action and review	<ol style="list-style-type: none">5. Implement prioritized actions to strengthen MSCS6. Review the implementation to monitor the progress and draw lessons

Core Process of MSCS strengthening



Thinking backward from decision scenario to surveillance objectives to surveillance

Translate Decision Questions into Surveillance Objectives (Indonesia Example)

Decision Questions

When do we have to start our intervention ?

How can we see that cases started to picking up?

When outbreak happened, how we can decrease the number of death? (0 death is the national goal right now)

What intervention is the most effective to decrease number of cases?



Surveillance Objectives

Early detection of outbreaks

Risk analysis and alert

Monitoring case/death trend

Informing interventions

Indonesia Multisource Collaborative Surveillance : Dengue

Dr Endah Kusumowardani, M.Epid
Directorate of Surveillance and Health
Quarantine

Presented during EIOS GTM, Senegal 2024



Multisource Collaborative Surveillance on Dengue aims to have a better outbreak detection and response

How we can better mitigate

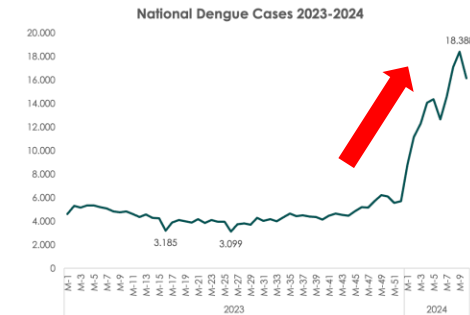
Limited coordination and capacity in utilizing available data for action

Defining priority action

Feasible priority action i.e short, medium and longer term, feasibility, at 3 administrative level (national, province and district level)

Dengue outbreak

Indonesia is experiencing higher peak of dengue incidence in early 2024



Multisource collaborative surveillance

Adopting regional manual : Defining the objectives, mapping the system, inviting various stakeholders and experts, identify data sources and accessibility,, lessons learned, and inject scenarios

What's next...

The most challenging. Some initiative have been started i.e dengue modelling (EWARS), dashboard integrating climate data in DHIS2, possible recreating for other priority diseases i.e zoonosis, VPDs.

Mapping of Surveillance System for Dengue in Indonesia

Name of Surveillance System	Key Variables	Approach	Confirmed or syndrome based	Coverage	Purpose	Remarks
Early Warning Alert and Response System (EWARS) - IBS : Dengue	Number of suspected dengue case	Report from the Puskesmas, weekly aggregated data report	Syndrome based	Nationwide	Early warning and response	MoH
Early Warning Alert and Response System (EWARS) - EBS : Dengue	Cluster of dengue cases, cluster of death	Report from puskesmas, hospital, PoE; daily/near-real time	Event-based surveillance, can be both	Nationwide	Early notification	MoH
Dengue surveillance	Confirmed cases, dengue haemorrhagic cases	Report from district health office, monthly (every 15 th)	Confirmed, clinical haemorrhagic	Nationwide	Monthly report	MoH
Dengue sentinel surveillance	Dengue serotype	Usually during outbreak	Confirmed	Sentinel	Monthly	MoH, PHL networks
Media Monitoring	Signal of acute dengue information/ news/ media post	Media monitoring : EIOS, google alert, google trend	Event based	Nationwide, by PHEOC team	Daily	MoH and some provinces
Hospital Data	Signal of hospitalized cases,	Report from hospital, eMR	Indicator based	Nationwide	Yearly	MoH (Health Services Directorate, by request)
Seasonality and climate data	Rainfall, temperature, relative humidity	Recorded from the satellite and local monitoring site	Indicator	Nationwide	Daily	BMKG (by request), also can accessed from DHIS2 database on climate
Diagnosis (claim)	Diagnoses case	eMR, ICD-X code (billing code)	Indicator	Nationwide	By request	MoH (Health Services Directorate, by request), BPJS (insurance)
Vector surveillance	Distribution of vectors	Not sure				
Waste-water surveillance	Polio virus surveillance	Sentinel sites in 14 sites	confirmed	Sentinel	Monthly, biweekly	Not yet for dengue
Disaster surveillance (landslide, flooding, forest fire)	Disasters incidence, incl. humanitarian crisis	Data reported from the network of disaster agency at district and province	Rumor and confirmed disaster	Nationwide	Updated daily	BNPB, BPBD, KLHK (Sipongi)

We can see the enthusiasm of the participants..



Pre-workshop : Field visit to PHO Central Java to better understanding the context; identify decision scenarios



Group discussion with various stakeholders (health and non-health) with inject scenario based on the surveillance objectives



Defining priority action at national, province and district level, including its periodicity

"The more information we have from as many sources as possible, the better we can prevent, prepare for and respond to the challenge, and build resilience against it", Dr Triya Dinihari, Head of Surveillance, MoH

Agreed Priority Actions...

Objective	PoA-Short term	PoA-Midterm	PoA – long term
To early detect outbreak	<ul style="list-style-type: none"> To develop integrated data analysis team at national and province level to support data-driven policy making To develop a circular letter to promote MSCS 	Continue supporting the community-based surveillance expansion plan by MoH	Health information system integration
To facilitate risk analysis		To strengthen sentinel dengue serotyping surveillance To strengthen vector surveillance	
To monitor trend		Data sharing (EWARS, Arbo, Vector, Climate), and elaborating development of dashboard	

Web story : Indonesia takes decisive, pioneering action to strengthen multisource collaborative surveillance for dengue, [Link](#)

