

Building a Stronger VPD Surveillance Workforce: Outcomes of the 2026 Crash Course

Activity Report

a joint initiative of WHO Indonesia and
the Ministry of Health of the Republic of Indonesia

**Jakarta,
2-6 March 2026**

Course Overview

The four-day VPD Surveillance Crash Course, held in Jakarta on 2-6 March 2026, strengthened the competencies of 30 surveillance officers across the full spectrum of VPD surveillance functions through highly interactive sessions facilitated by WHO Indonesia and the Ministry of Health (MOH). The course began with foundational modules on operational definitions and team-building, establishing a common understanding of surveillance terminology and core principles.



The course continued with applied modules covering case finding (active, passive, and community-based), recording and reporting through hands-on form-filling, epidemiological investigation via group role-plays using real VPD case and outbreak scenarios, specimen management through demonstrations, and case classification based on national guidelines. Participants also practised outbreak detection and response, conducted Excel-based data analysis to identify priority districts, and joined sessions on IHR and Situation Reports.

A dedicated Root-Cause Analysis workshop allowed participants to apply a hypothesis-driven approach with the Five Whys method to identify challenges in case finding, epidemiological investigation and specimen management, data reporting and recording, and outbreak occurrence. Each group produced action-oriented improvement plans focused on strengthening coordination, advocacy, data systems, and resource allocation at subnational levels.

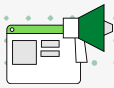
Learning gains were evident in the pre- and post-test results, with the average score increasing from 43 to 71 out of 80, indicating significant improvement in case detection, epidemiological investigation, specimen management, and data interpretation. These gains reflect the effectiveness of the course design, interactive methods, and practical group exercises.

The Crash Course successfully strengthened essential competencies for VPD surveillance, providing participants with practical tools, enhanced understanding, and applied skills to support improved surveillance performance at the national level.

Modules

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|-----------|--|-----------|--|
| 01 | Overview of VPD Surveillance & Root Cause Analysis | 06 | Specimen Management for VPD Surveillance |
| 02 | VPD Case Finding Strategies | 07 | Epidemiological Investigation |
| 03 | Recording and Reporting in VPD Surveillance | 08 | VPD Outbreak Detection and Response |
| 04 | VPD Case Classification | 09 | IHR and Situation Report |
| 05 | VPD Case Management | 10 | VPD Surveillance Data Analysis |

Modules



Overview of VPD Surveillance & Root Cause Analysis

The overview module explains how systematic data collection, analysis, and interpretation strengthen VPD surveillance by enabling early case detection, timely outbreak response, and informed immunisation program decisions. It highlights the surveillance cycle, core operational definitions, as well as the importance of identifying under-immunised populations in collaboration with the immunisation unit. The module then links these functions to root-cause analysis through a hypothesis-driven approach with the 5 Whys method, showing how asking high-quality questions and pinpointing true underlying problems help to avoid “boiling the ocean/trying to answer too many questions at once” and focus on targeted, impactful actions.



VPD Case Finding Strategies

The core strategies for VPD case finding focus on routine, active, and community-based surveillance to ensure the early detection of suspected cases. The module emphasises systematic register reviews, verification of clinical symptoms with health workers, and timely follow-up of community alerts, reinforcing that coordinated and proactive case-finding is essential for prompt investigation and response. A key message of this material is the workflow of how to find cases using different strategies, providing participants with a structured understanding of the decision-making steps involved in each surveillance approach. As part of the course activity, participants worked in groups to develop draft scripts or video concepts illustrating these strategies, strengthening their practical understanding of how they operate in real settings. These video concepts will be taken forward for the development of educational videos to support broader capacity-building efforts.



Recording and Reporting in VPD Surveillance

The module outlines the standardised flow for case notification, investigation, and weekly reporting, using forms such as MR-01, FP-1, DIF-1, and PERT-01. It emphasises accurate completion of investigations and adherence to routine reporting formats to ensure timely, high-quality surveillance data. Participants practised this process by completing MR-01, FP-1, and other forms using a case study, strengthening their skills in proper documentation and reporting.



Modules



VPD Case Classification

The module provides a structured overview of how suspected VPD cases are categorized based on clinical compatibility, laboratory confirmation, and epidemiological linkage. It outlines classification pathways for priority diseases such as AFP/polio, measles-rubella, pertussis, and diphtheria to ensure consistent and accurate reporting. Participants also completed a brief group activity to construct case-classification flowcharts, reinforcing correct decision-making steps.



Specimen Management for VPD Surveillance

The module provides a structured overview of proper specimen collection, labelling, storage, and transport for key VPDs, including AFP/polio, measles-rubella, diphtheria, and pertussis. It outlines the required specimen types (stool, serum, urine, throat/nasopharyngeal swabs), conditions for adequate collection, appropriate containers, temperature requirements (2-8°C or -20°C), and timelines for transport using the WHO-recommended triple-packaging system. The module also emphasises proper documentation, including FP-1, FP-S1, and cold-chain monitoring forms, and highlights common errors such as inadequate volume, leakage, improper labelling, and failure to maintain the cold chain. During the session, participants practised the complete process through demonstrations and hands-on packaging exercises to reinforce correct technique and compliance with biosafety standards.



VPD Case Management

The Case Management module outlines key clinical and public-health actions for managing VPD cases & close contacts, including timely investigation, appropriate isolation, supportive treatment, and specimen collection according to disease-specific guidelines. It highlights essential steps such as high-dose vitamin A and monitoring for measles-rubella, antibiotic treatment and Anti-Diphtheria Serum for diphtheria, macrolide therapy and isolation for pertussis, and urgent referral with antitoxin for neonatal tetanus.

Modules



Epidemiological Investigation

The Epidemiological Investigation module outlines the systematic steps for verifying suspected VPD cases, collecting field data, identifying contacts, and determining appropriate response actions. It emphasises confirming operational definitions, documenting findings using standard investigation tools, and assessing risk factors that may drive transmission. In a group role-play exercise, participants worked through VPD case and outbreak scenarios, practising how to conduct field investigations, interpret evidence, and determine follow-up actions.



VPD Outbreak Detection and Response

The module covers how VPD outbreaks are identified, verified, and managed through early signal detection, confirmation of suspected clusters, and rapid implementation of control measures. Participants practiced these steps through a scenario-based group exercise to strengthen their readiness for real outbreak situations.



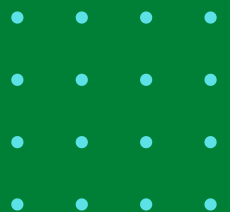
IHR and Situation Report

The module introduces how VPD events are escalated through the PHEOC and reported using the weekly Situation Report to support timely decision-making. It also highlights the IHR notification process, illustrated through a recent example of laboratory-confirmed measles cases in bordering countries with travel history to Indonesia. Participants then reviewed sample SitReps in group discussions to identify priority information needed for clear and actionable reporting.



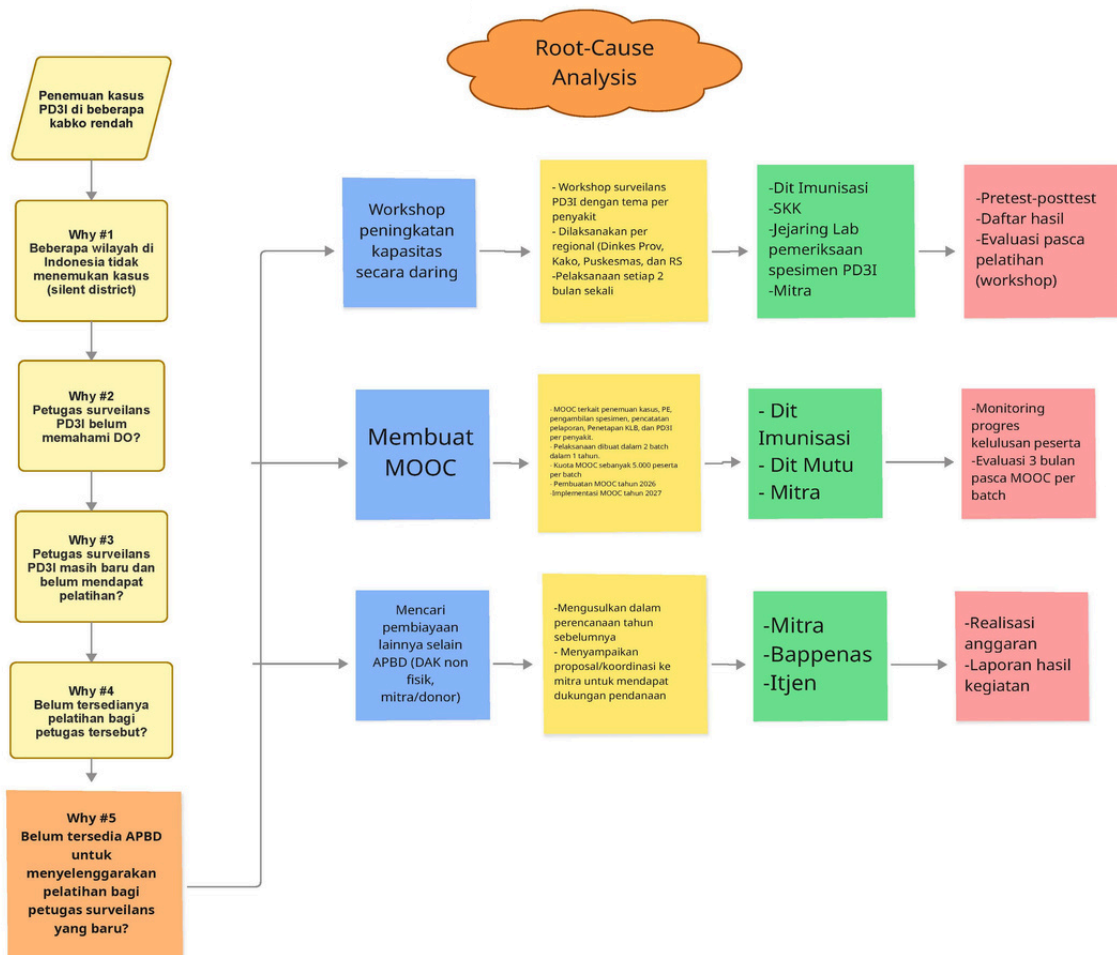
VPD Surveillance Data Analysis

The module guides participants in using Microsoft Excel to analyze provided surveillance data, identify priority districts based on performance indicators, and interpret gaps in case detection and reporting. Working in groups, participants practiced sorting and evaluating district-level indicators, selecting priority areas for follow-up, and developing practical action plans to strengthen surveillance performance.



Root Cause Analysis

Case Finding



Identified Root Cause:

No APBD (local budget) available to conduct training for newly assigned surveillance officers.

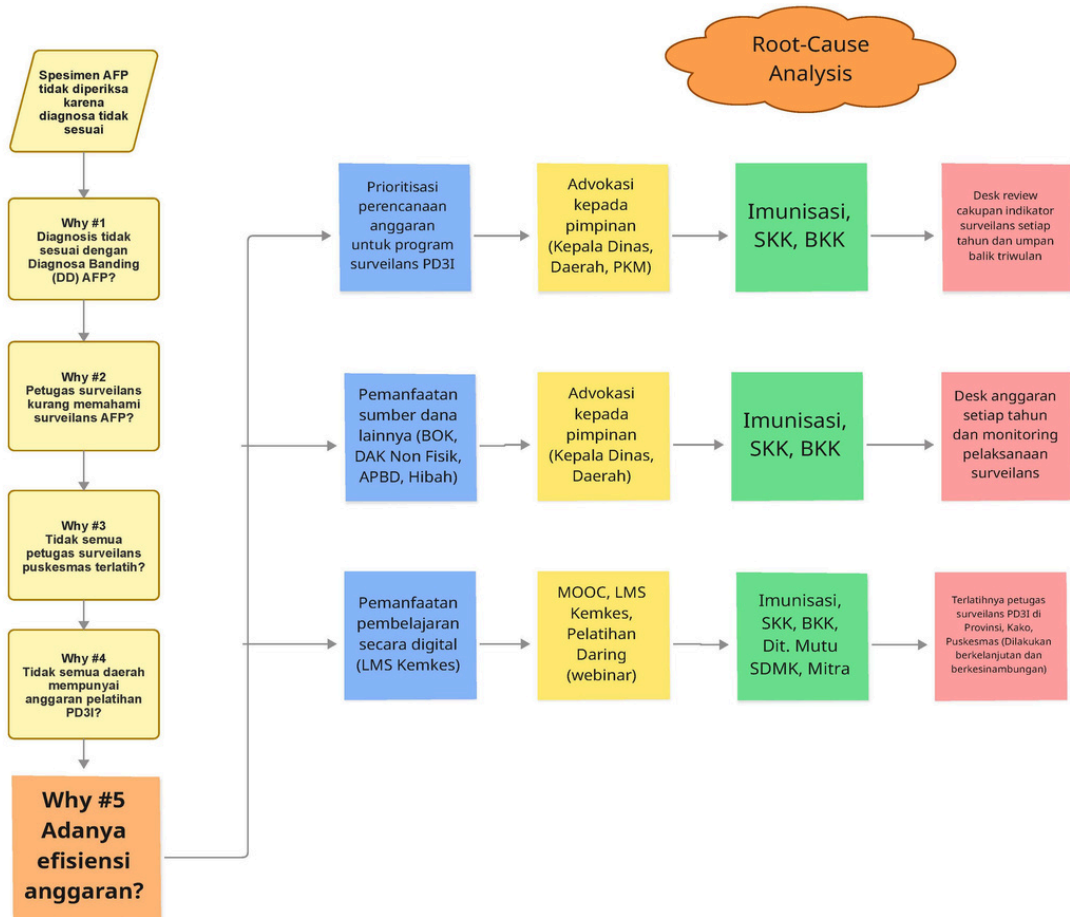
Action Plan:

Conduct regular regional online capacity-building workshops and develop MOOCs on case finding, PE, specimen collection, and reporting, with national-scale implementation and dedicated annual training batches.



Root Cause Analysis

Specimen Collection and Epidemiological Investigation



Identified Root Cause:

Budget efficiency measures limit funding for training and activities.

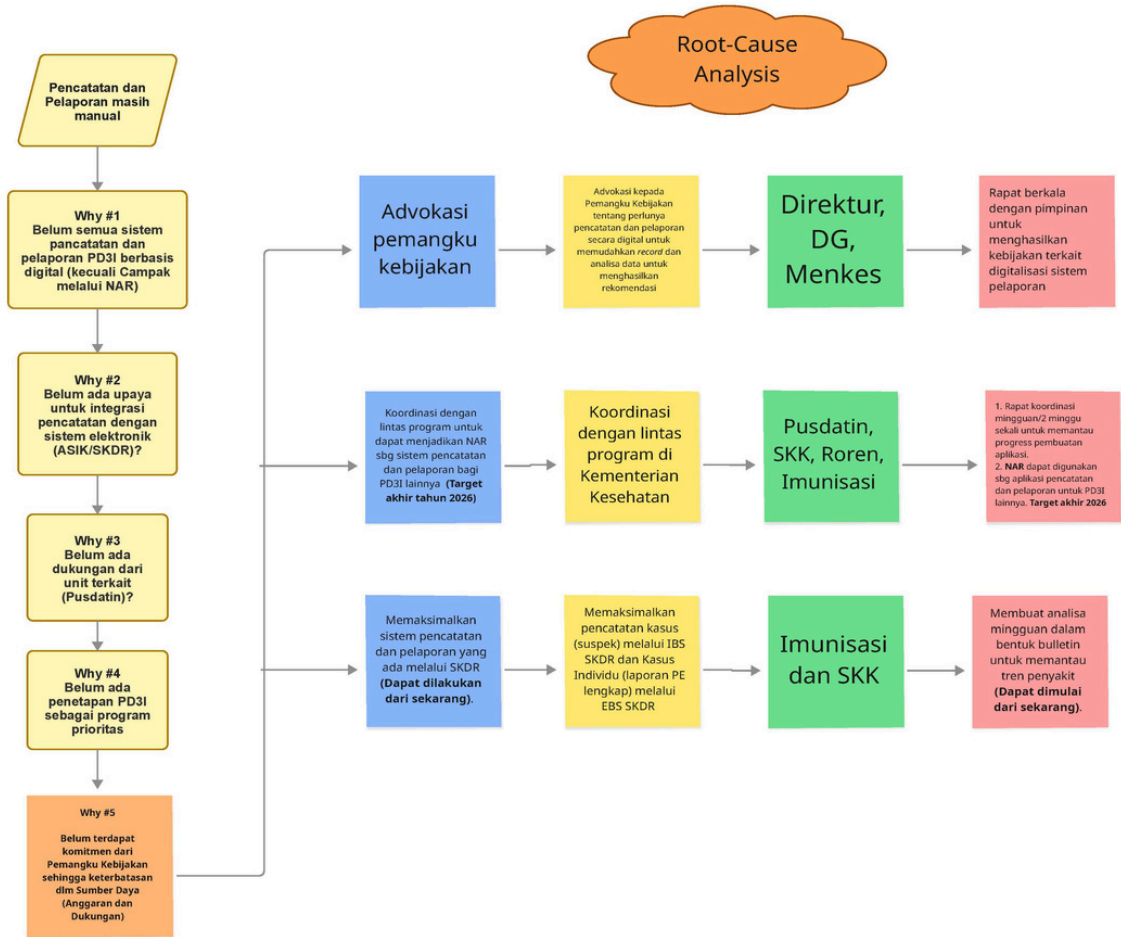
Action Plan:

1. Improve planning prioritisation for VPD surveillance.
2. Use alternative funding streams (BOK, DAK Non-Fisik, APBD, donor support)
3. Expand use of digital learning platforms (LMS, MOOCs), and
4. Conduct ongoing monitoring to ensure sustained competency and program implementation.



Root Cause Analysis

Recording and Reporting



Identified Root Cause:

There is lack of commitment from policymakers, resulting in limited resources (budget and support).

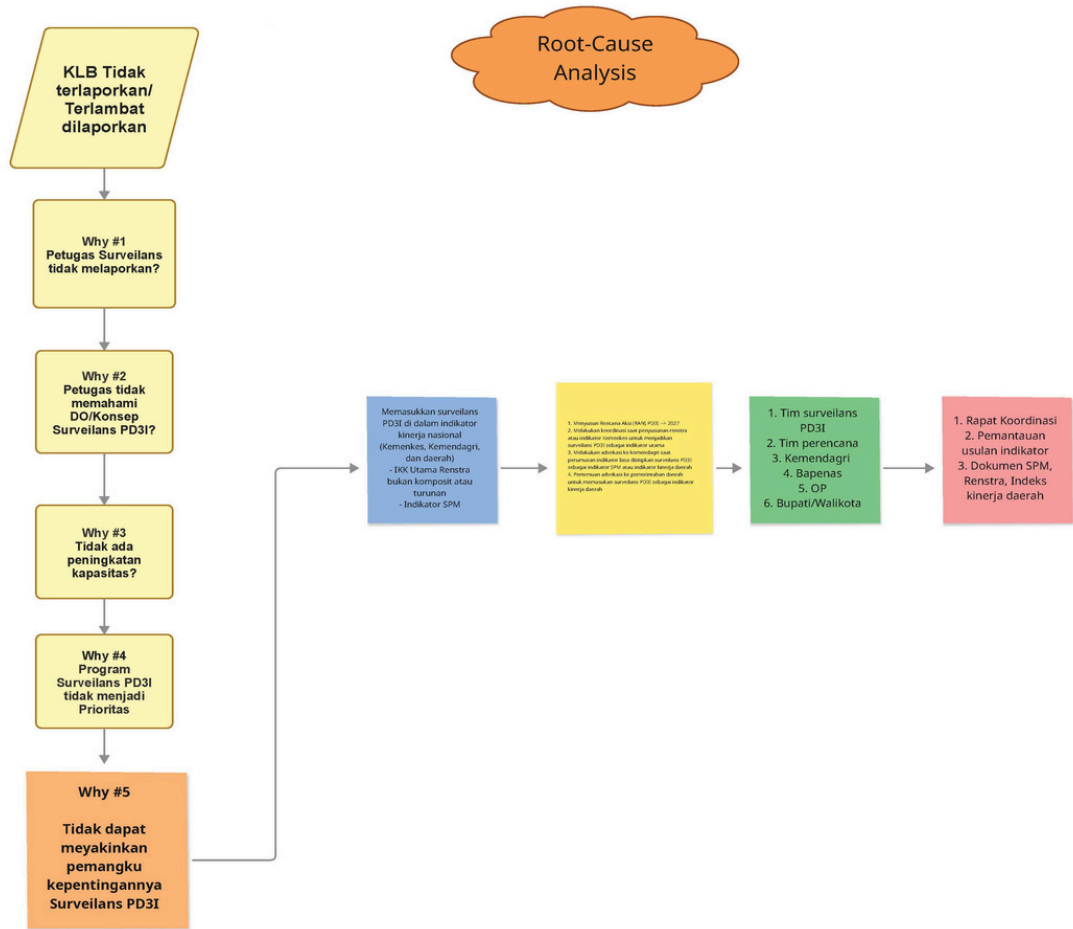
Action Plan:

Strengthen cross-program coordination in the Ministry of Health through regular meetings, advancing digital reporting using NAR by 2026, and ensuring consistent monitoring of indicator development to secure policy support and resources.



Root Cause Analysis

VPD Outbreak



Identified Root Cause:

Unable to convince decision-makers about the importance of VPD surveillance.

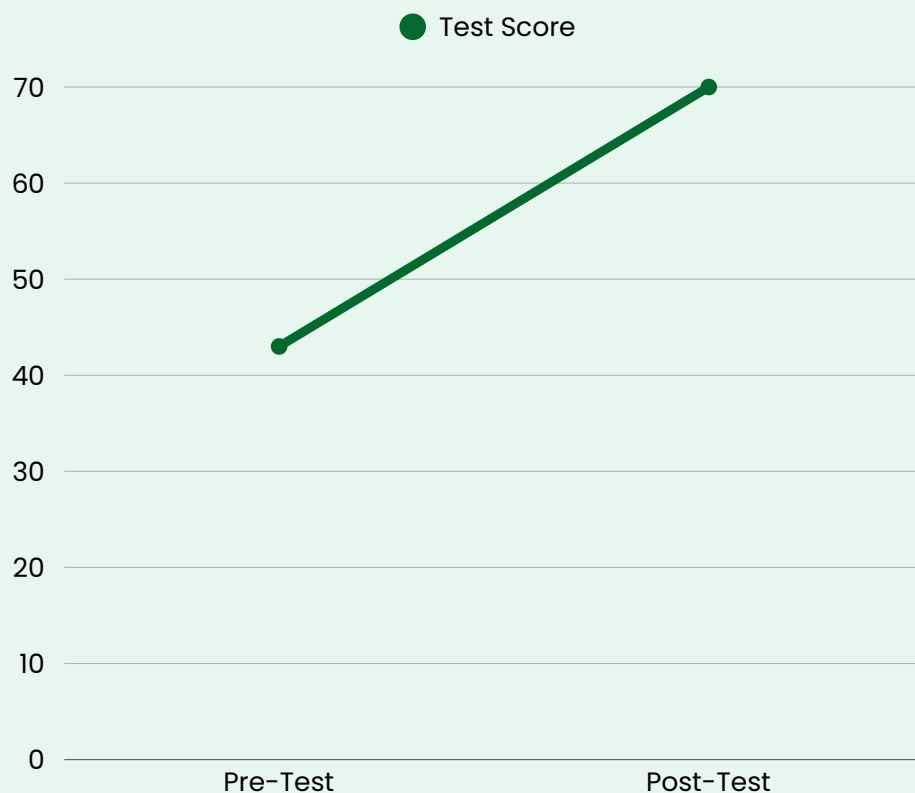
Action Plan:

Advocate for integrating VPD surveillance into national and regional performance indicators by coordinating during Renstra development, engaging Kemendagri and local government leaders, and conducting advocacy meetings so VPD surveillance becomes part of SPM and district performance metrics.



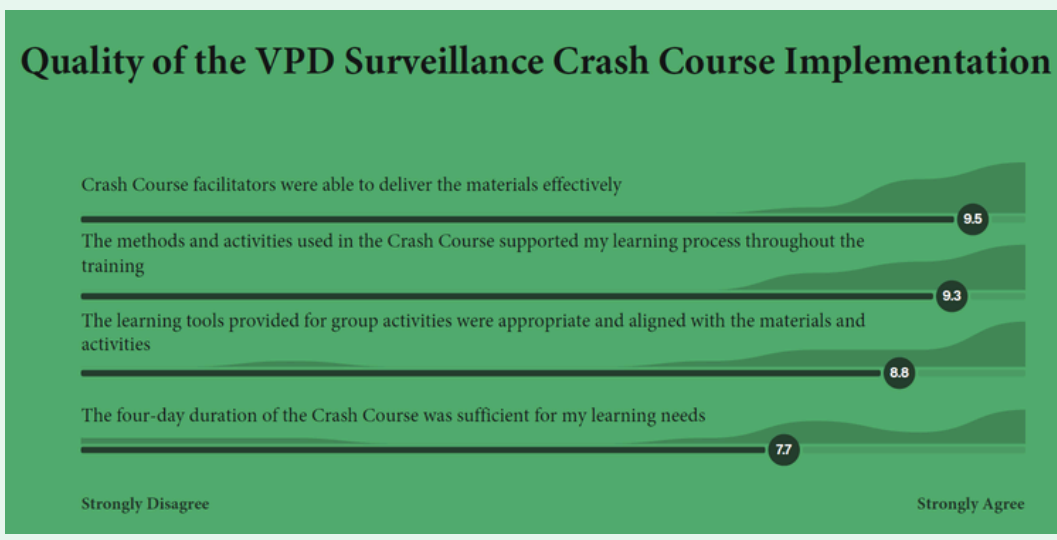
Pre- and Post-test Crash Course

The pre- and post-test results from the VPD Surveillance Crash Course demonstrate a significant improvement in participants' technical knowledge and capacity. Across **30 participants**, the assessment—comprising 16 questions covering case finding, epidemiological investigation, specimen management, and data analysis—showed marked progress, with the average score **increasing from 43 out of 80 at pre-test to 71 out of 80 at post-test**. This **28-point gain** reflects substantial learning achievement and highlights the effectiveness of the course design, facilitation, and practical group activities in strengthening surveillance officers' competencies and enhancing overall program readiness.

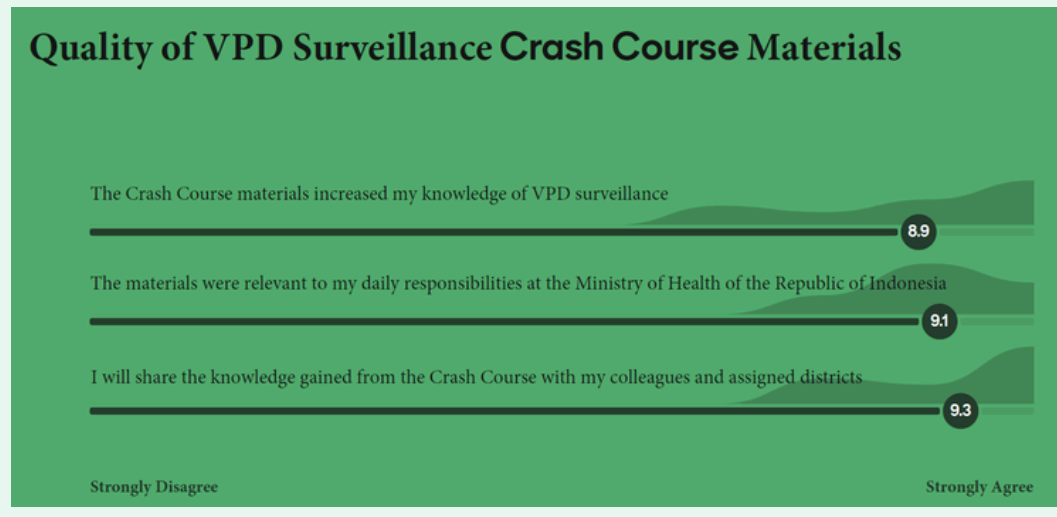


Post-Crash Course Survey

Overall feedback from participants shows **strong satisfaction** with both the delivery and content of the VPD Surveillance Crash Course. Facilitation quality received exceptionally high scores, with participants noting that trainers delivered the material effectively (**9.5**) and that the learning methods and group activities significantly supported their understanding (**9.3**). Learning tools used during group work were considered appropriate (**8.8**). Although the four-day duration was generally sufficient (**7.7**), participants indicated that additional time could further enhance the learning experience.

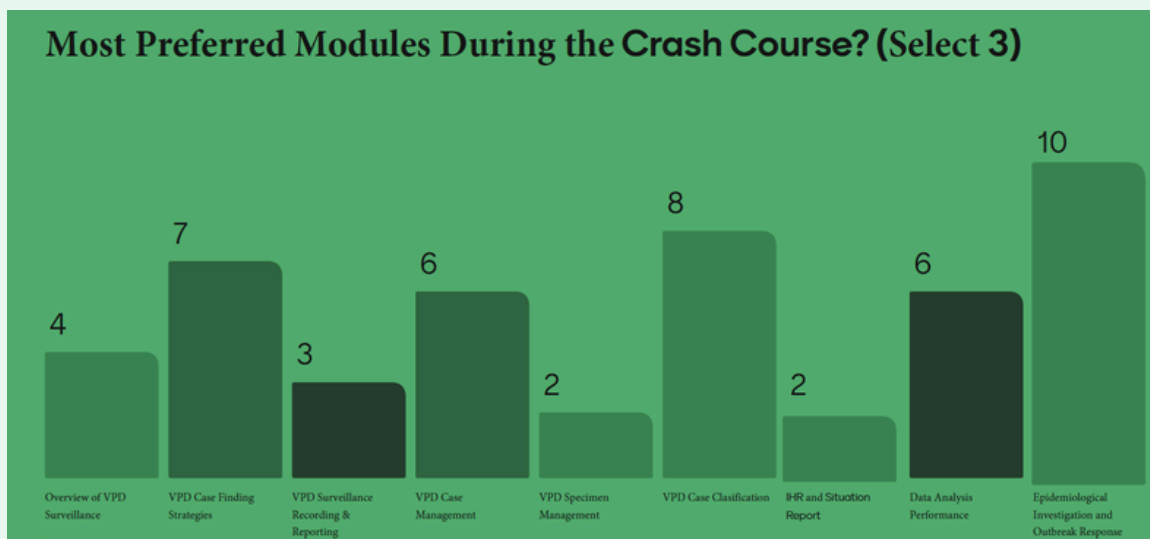


Participants also rated the content quality very highly. The materials increased their knowledge of VPD surveillance (**8.9**) and were highly relevant to their day-to-day responsibilities (**9.1**). Importantly, participants expressed strong willingness to share the knowledge gained with colleagues and their assigned districts (**9.3**), demonstrating the training’s positive impact on wider system strengthening.



Post-Crash Course Survey

In terms of most preferred modules, the highest-ranked topic was Epidemiological Investigation and Outbreak Response (**10 votes**), followed by Case Classification (**8 votes**), Case Finding (**7 votes**), Case Management (**6 votes**), and Performance Data Analysis (**6 votes**). These preferences highlight the demand for practical, field-oriented, and analytical skills among surveillance officers.



Overall, the survey results reflect a **highly valued and impactful training**, with participants emphasising both the quality of facilitation and the relevance of materials, alongside clear priorities for strengthening future courses through more hands-on practice, deeper analytical content, and extended learning time.

Next Steps



Strengthen National and Subnational Strategies for VPD Surveillance

These steps should aim to:

- Integrate VPD surveillance into national and local strategic plans (Renstra, SPM, district performance indicators).
- Ensure alignment between national VPD guidance and district-level implementation, especially for case finding, epidemiological investigation, specimen management, and outbreak response.
- Use district-level data analysis from the course to prioritise surveillance strengthening in low-performing or silent districts.
- Establish regular review mechanisms to monitor indicator performance and implementation of post-training actions.



Institutionalise Root-Cause Analysis Solutions into System and Program Improvements

This will involve:

- Embedding the Five Whys findings—such as leadership advocacy, improved documentation, digitalisation, and resource prioritisation—into program workplans and provincial/district operational plans.
- Strengthening coordination between surveillance teams, planning units, laboratories, and leadership to ensure sustained support for VPD surveillance improvements.
- Addressing systemic challenges identified in RCA, including limited APBD, insufficient understanding of operational definitions, and inadequate specimen logistics.
- Establishing clear accountability mechanisms and measurable follow-up indicators for each action plan.



Build Continuous Workforce Capacity Through Training, Technical Assistance, and Supportive Supervision

Key actions include:

- Rolling out regular refresher sessions, e-learning modules, and MOOCs on VPD case finding, PE, specimen management, outbreak detection, and data analysis.
- Institutionalising supportive supervision using structured checklists, mentoring visits, and peer-learning mechanisms.

Next Steps

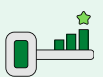
- Expanding advanced learning areas that participants requested—data analysis (Excel/GIS), communication and IEC, IHR/SitRep reporting, and supervision skills.
- Enabling trained officers to cascade knowledge to colleagues and health facilities in their districts.



Accelerate Digital Transformation and Reporting Improvements for VPD Surveillance

This should focus on:

- Advancing integration of VPD reporting into national digital platforms such as SKDR, NAR, ASIK, and other Ministry of Health systems.
- Improving completeness and timeliness of IBS/EBS SKDR reporting and ensuring full use of individual case reporting formats (MR-01, FP-1, DIF-1, PERT-01).
- Developing digital dashboards and routine bulletins to support early detection, prioritisation, and targeted response actions.
- Strengthening collaboration between PHEOC, Pusdatin, immunisation programmes, and surveillance units to harmonise data sources and eliminate reporting silos.



Strengthen Outbreak Preparedness and Response Capacity

Recommended actions include:

- Standardising the use of outbreak detection algorithms, thresholds, and PE protocols for priority VPDs.
- Enhancing laboratory coordination for timely specimen collection, cold-chain maintenance, and prompt result reporting.
- Conducting regular outbreak simulations, case-scenario exercises, and district-level readiness assessments.
- Improving Situation Reporting (SitRep) quality through clearer templates, faster escalation pathways, and stronger coordination with PHEOC and IHR focal points.

Annex 1

Video concepts illustrating
VPD Surveillance strategies

01 Routine Surveillance at Hospital Video Script Concept

Setting: Hospital

Actors:

Hospital surveillance staff across inpatient wards, outpatient clinics, and emergency department

Scenario:

Surveillance staff announce the upcoming surveillance round → on the day, they check ward registers covering the last six months → relevant suspected VPD cases are identified, reviewed with clinicians, and documented → similar register reviews take place in outpatient and emergency units → identified cases are communicated to the district/related units.

Duration: 1-2 minutes.

02 Active Surveillance at Hospital Video Concept

Setting: Type A Hospital

Actors:

Health office surveillance officers, hospital surveillance focal person, hospital management, ward surveillance staff, and Medical Doctor.

Scenario:

The district health office coordinates with the hospital surveillance focal person to conduct active surveillance → communication takes place via a WhatsApp group → the officer arrives, meets with hospital management, and is accompanied to the wards → registers are checked for unreported suspected VPD cases → findings are validated with ward staff, marked in the logbook, and reported to hospital management for SARS form submission.

Duration: 2-3 minutes.



Video concepts illustrating VPD Surveillance strategies

03 Active Surveillance at Puskesmas Video Concept

Setting: Puskesmas

Actors:

District surveillance officer, Puskesmas surveillance officer, nurses/midwives, clinic focal persons

Scenario:

All facilities are informed about reporting procedures. Surveillance is carried out in two conditions: event-based (when cases appear) and weekly reporting. The Puskesmas surveillance officer is responsible for identifying, verifying, and reporting children who are symptomatic. Frontline staff (nurses, midwives, and clinic focal persons) are responsible for reporting findings to the Puskesmas surveillance officer. The Puskesmas surveillance officer compiles weekly reports and submits them to the district health office. The district surveillance officer reviews and acts on the compiled reports.

Duration: 3-5 minutes.

04 Community-Based Surveillance (CBS) Video Concept

Setting: Posyandu or Village

Actors:

- Child (suspected measles/rash case)
- Parent
- Community members
- Health worker

Scenario:

A child in the village develops fever and rash → community members notice and discuss the symptoms → a concerned resident reports it to the health worker → the Puskesmas team verifies the situation and takes appropriate action based on the suspected VPD case → the video ends with a narrator explaining CBS and delivering a key message such as “Let’s Care, Let’s Report!”

Duration: 2-3 minutes.

Annex 2

Detailed Agenda

Time	Agenda	Method	Materials
Day 1			
08.00-08.30	<ol style="list-style-type: none"> 1. Course Outline & Introduction 2. Group Dynamics: Marshmallow Challenges 3. Pre-Test 	<ul style="list-style-type: none"> • Participant and facilitator introduction • Slide presentation • Activity 1: Marshmallow Challenges 	Marshmallow Challenge equipment <ul style="list-style-type: none"> • 4 packs of spaghetti stick (bamboo sticks) • 4 rolls of tape / double-sided tape • 4 pieces of string • 4 black paper clips
08.30-10.00	Module 1: VPD Surveillance Overview <ol style="list-style-type: none"> 1. Operational Definition of VPD 2. Definition and Objectives of VPD Surveillance 	<ul style="list-style-type: none"> • Slide presentation • Activity 2: Root Cause Analysis using a hypothesis-driven approach with the 5 Whys tools. 	Root Cause Analysis equipment (per group): <ul style="list-style-type: none"> • Flipchart paper / A3 paper • Black marker / colored markers • Sticky notes
10.00-10.15	Break		
10.15-11.45	Module 2: VPD Case Finding Strategies <ol style="list-style-type: none"> 1. Routine Surveillance 2. Active Surveillance 3. Community-based Surveillance 	<ul style="list-style-type: none"> • Slide presentation • Activity 3: Group Discussion to develop video concepts illustrating VPD Surveillance strategies 	Group discussion equipment (per group): <ul style="list-style-type: none"> • Flipchart paper / A3 paper • Black marker / colored markers • Sticky notes
11.45-12.30	Break		
12.30-14.00	Module 3: Recording and Reporting in VPD Surveillance	<ul style="list-style-type: none"> • Slide presentation • Activity 4: Case Study to fill out the reporting forms for each VPD case reporting form • Activity 5: Puzzle for VPD Surveillance reporting flow 	Case Study materials <ul style="list-style-type: none"> • 4 copies (printouts) of the case • 4 copies of the forms: FP1, MR-01, DIF-1, PERT-01, TN-01 • 4 copies (printouts) of the VPD surveillance reporting forms

Detailed Agenda

Time	Agenda	Method	Materials
Day 2			
08.00-08.30	Reflection previous day		
08.30-10.00	Module 4: VPD Case Classification	<ul style="list-style-type: none"> Slide presentation Activity 6: Group Work for Case Classification Scheme 	4 copies (printouts) of the case classification scheme for each VPD disease
10.00-10.15	Break		
10.15-11.45	Module 5: VPD Case Management	<ul style="list-style-type: none"> Slide presentation 	
11.45-12.30	Break		
12.30-14.00	Module 6: Specimen Management for VPD Surveillance <ul style="list-style-type: none"> Stool specimen Nasopharyngeal swab specimen Serum specimen Urine specimen Specimen shipping 	<ul style="list-style-type: none"> Slide presentation Activity 7: Specimen collection demonstration 	Specimen equipment <ul style="list-style-type: none"> 2 stool containers 2 small transparent ziplock bags 1 larger transparent ziplock bag 2 self-adhesive label sheets Marker pen Specimen carrier with five (5) ice packs 1 nasopharyngeal swab (dacron/nylon) 1 sterile sputum container 0.9% saline Sterile feeding tubeg Sterile disposable syringe 3 mL/5 mL disposable syringe Ice packs Cool box Shipping label

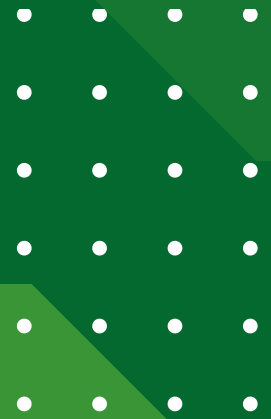
Detailed Agenda

Time	Agenda	Method	Materials
Day 3			
08.00-08.30	Reflection previous day		
08.30-10.00	Module 7: Epidemiological Investigation	<ul style="list-style-type: none"> • Slide presentation • Activity 8: Role play by case study in the steps of the epidemiological investigation 	Role play equipment (per group): <ul style="list-style-type: none"> • 4 Case study • Flipchart paper / A3 paper • Black marker / colored markers • Sticky notes
10.00-10.15	Break		
10.15-11.45	Module 8: VPD Outbreak Detection and Response	<ul style="list-style-type: none"> • Slide presentation • Activity 9: Group discussion to develop VPD-specific outbreak definitions 	Group discussion equipment (per group): <ul style="list-style-type: none"> • Flipchart paper / A3 paper • Black marker / colored markers • Sticky notes
11.45-12.30	Break		
12.30-14.00	Module 9: IHR and Situation Report	<ul style="list-style-type: none"> • Slide presentation 	

Detailed Agenda

Time	Agenda	Method	Materials
Day 4			
08.00-08.30	Reflection previous day		
08.30-10.00	<p>Module 10: VPD Surveillance Data Analysis</p> <ul style="list-style-type: none"> Identify priority districts based on performance indicators Interpret gaps in case detection and reporting 	<p>Activity 10: Group discussion to practiced sorting and evaluating district-level indicators, selecting priority areas for follow-up, and developing practical action plans to strengthen surveillance performance</p>	<p>Data analysis equipment (per group):</p> <ul style="list-style-type: none"> Laptop Ms. Excel table exercise
10.00-10.15	Break		
10.15-11.45	<p>Action Plan</p>	<ul style="list-style-type: none"> Activity 11: Group discussion using Miro to develop solutions and action plans based on identified root causes 	<p>Group discussion equipment (per group):</p> <ul style="list-style-type: none"> Miro
11.45-12.30	Break		
12.30-14.00	Post-Test Feedback evaluation survey		

Thank you



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