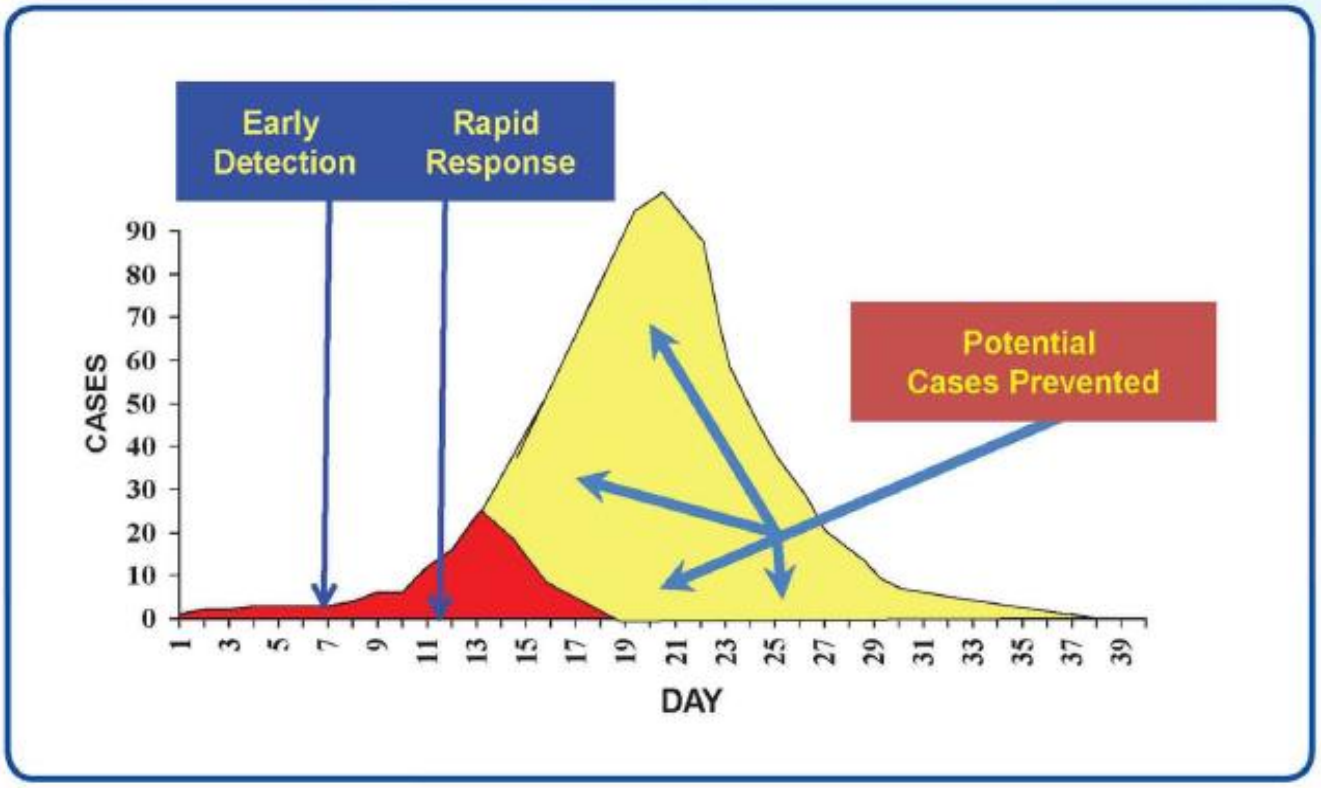
National Standard Operating Procedure (SOP) for Early Warning, Alert and Response System (EWARS), 2025



Government of Nepal
Ministry of Health and Population
Department of Health Services
Epidemiology and Disease Control Division
Teku, Kathmandu

(Revised Edition- 2025)

National Standard Operating Procedure (SOP)

for

Early Warning, Alert and Response System

(EWARS)

2025

Government of Nepal

Ministry of Health and Population

Department of Health Services

Epidemiology and Disease Control Division

Teku, Kathmandu.

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Message from Director General

It gives me great pleasure to present the updated *National Standard Operating Procedure for the Early Warning, Alert and Response System (EWARS) 2025*. This document represents a significant step forward in strengthening Nepal's public health surveillance and epidemic preparedness capacities.

The revised SoP embodies our national commitment to timely detection, verification, and coordinated response to epidemic-prone diseases and other public health events. It reflects valuable lessons learned from recent global and national health emergencies, including the COVID-19 pandemic, and aligns Nepal's surveillance architecture with the core capacities required under the International Health Regulations (IHR, 2005).

I commend the Epidemiology and Disease Control Division (EDCD) and all partners who contributed to the development of this SoP. Its successful implementation requires the active participation and ownership of all stakeholders—from federal to local levels, including sentinel hospitals, laboratories, and response teams.

I am confident that this revised EWARS framework will further enhance the country's ability to prevent, detect, and respond to public health threats in a timely and coordinated manner, thereby safeguarding the health and well-being of our people.

Dr Keshar Bahadur Dhakal

Director General

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Message from Director

The revision of the *Early Warning, Alert and Response System (EWARS) Standard Operating Procedure 2025* marks a major advancement in Nepal's disease surveillance system. This SoP transitions EWARS from a reporting-focused mechanism to an integrated system that emphasizes early warning, risk assessment, and rapid response.

The updated SoP consolidates national and international best practices, integrates and clarifies operational linkages between sentinel hospitals, laboratories, and Rapid Response Teams at all levels. It also ensures interoperability across surveillance systems, promoting evidence-based decision-making and real-time public health action.

I extend sincere appreciation to the Disease Surveillance and Research Section (DSRS), federal and provincial health authorities, sentinel hospitals, and technical partners for their contribution in developing this document. The continued collaboration and commitment of all stakeholders are crucial to ensure that EWARS remains responsive, data-driven, and sustainable.

Together, we shall continue to build a resilient public health surveillance system that protects the nation from epidemic and emerging health threats.

Dr Roshan Neupane
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Message from the Section Chief

The *EWARS Standard Operating Procedure 2025* provides a comprehensive and practical guide for the operation of Nepal's disease surveillance system. It outlines the mechanisms for early warning, alert verification, and coordinated response, ensuring alignment with national health priorities and international standards.

This revision incorporates standardized case definitions, clarifies institutional roles, and integrates digital innovations to enhance data quality, timeliness, and interoperability. It serves as both a policy and operational reference for sentinel hospitals, laboratories, and health authorities engaged in surveillance and response.

The Disease Surveillance and Research Section remain committed to ensuring that EWARS functions as a dynamic, reliable, and evidence-based surveillance platform. We will continue to work closely with provincial, district, and local partners to strengthen reporting systems, build technical capacity, ensure timely and accurate detection of public health events and prompt response.

I express my sincere gratitude to the respected Director General, the Director, the team of the section, experts, provincial authorities, academic institutions, sentinel sites and GIZ, WHO for contributing to and supporting the development of this SOP.

Hem Raj Pandey

Chief, Disease Surveillance and Research Section

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Preamble

Pursuant to Section 49 of the Public Health Service Act, 2075 (2018), in cases where listed infectious diseases or unforeseen public health events occur, information shall be communicated to the concerned authority within the prescribed time frame. This obligation is to ensure the collection, reporting, analysis, communication, and response relating to infectious diseases and public health events, as well as to conduct continuous disease surveillance in accordance with the International Health Regulations, 2005 (IHR 2005), under which certain diseases must be reported immediately at the international level. Accordingly, in exercise of the authority conferred by Section 64 of the Act, the Ministry of Health and Population, Department of Health Services hereby updated the EWARS Standard Operating Procedure 2025.

Chapter 1: Preliminary

1. Short Title and Commencement: i) This document shall be called the National Standard Operating Procedure (SOP) for Early Warning, Alert and Response System (EWARS), 2025.

ii) This SOP shall come into force immediately.

2. Some Definitions

a) Case-Based Surveillance: Case-Based Surveillance is the systematic collection, analysis, and reporting of detailed information for each individual case of a disease or health condition, based on the minimum indicators specified in Annex VII, including other essential disease-specific indicators in a designated electronic system.

b) Early Warning, Alert and Response System(EWARS): The Early Warning, Alert and Response System (EWARS) is a fully electronic sentinel surveillance system developed and managed by the Epidemiology and Disease Control Division (EDCD), Department of Health Services (DoHS), for the early detection of epidemic-prone diseases and to facilitate prompt alert generation and timely response through a coordinated network of sentinel and reporting hospitals and Rapid Response Teams (RRTs) at federal, provincial, and local levels across Nepal.

c) Generic Alert: An automated alert generated by EWARS indicating a potential public health event or an alarming disease outbreak, which shall be verified and assessed for risk before initiating further investigation or response.

d) Outbreak: The occurrence of more cases of a particular type of infectious disease or conditions than expected or that has crossed the predefined thresholds in a given area, among a specific group of people, over a particular period of time or declared by Federal, Provincial and Local governments.

e) Outbreak-prone disease: The diseases listed by the Government of Nepal and published in the Nepal Gazette.

f) Unexpected Public Health Event: A public health event that is unusual for the given time, person and place. Some examples are listed in Annex V.

g) Reporting Site: A designated health facility or an institution other than a hospital assigned to routinely submit reports on specified priority diseases and public health events and is responsible for reporting based on its capacity and role, but is not considered a sentinel site within the EWARS system.

h) Response: Response is the public health actions including event monitoring, risk communication, field investigation, case response/management and control measures initiated by hospital and /or Rapid Response Teams or/and Field Epidemiology Training Program (FETP) graduates following the detection of an alert.

i)Response Alert: A response alert is issued once a generic alert has been verified and an initial risk assessment completed, signaling a confirmed or probable public health event of emergency or outbreak, which respective RRTs shall respond.

j)Sentinel Site: A designated public or private hospital that regularly collects and reports data on specific epidemic-prone diseases/syndromes or health events, strategically selected to reflect a broader geographic and epidemiological area for timely outbreak detection and response.

k) Sentinel Surveillance: Sentinel Surveillance is a targeted public health surveillance strategy that engages designated sentinel sites to systematically collect, report, and analyze data on specified diseases, syndromes, publichealth events, or conditions.

l)Syndromic Surveillance: Syndromic Surveillance is the systematic collection, analysis, and interpretation of health-related data based on clinical symptoms or syndromes rather than laboratory-confirmed diagnoses.

m) Hospital Disease Surveillance Committee: It is a Disease Surveillance Committee established as per clause 7.

Chapter 2: Introduction

3. Background

Public health surveillance is the ongoing, systematic collection, analysis, and interpretation of health-related data, forms the foundational pillar of effective disease prevention and control. Within this expansive domain, infectious disease surveillance is critical due to its rapid transmission potential and epidemic nature. It serves three essential functions: **Outbreak Intelligence and Response**, facilitating rapid detection and response to signals that might indicate outbreaks and clusters of epidemic-prone diseases; **Planning and Monitoring**, supporting evidence-based public health decision-making; and **Program Evaluation**, assessing interventions for disease elimination, eradication, and control. A robust surveillance system is characterized by attributes such as timeliness, representativeness, sensitivity, and specificity, whose relative importance varies based on the specific health problem and the intended application of the data.

The early warning function of surveillance is fundamental to national, regional, and global health security. Recent public health emergencies such as the COVID-19 pandemic, outbreaks of Severe Acute Respiratory Syndrome (SARS), and Avian Influenza have highlighted the critical need for effective surveillance and rapid response systems. Surveillance is recognized as a core capacity under the International Health Regulations (IHR 2005), and the Joint External Evaluation (JEE 2022) further emphasizes the importance of timely detection, risk assessment, and coordinated response through robust, multisectoral, and integrated systems.

In alignment with these global standards, Nepal has strengthened its national surveillance framework for infectious diseases through a Hospital-based Sentinel

Surveillance system, popularly known as the Early Warning and Reporting System and Community-Based Surveillance; an event-based system via Surveillance, Outbreak, Response, Management and Analysis System (SORMAS) from Municipalities in four provinces with gradual expansion to all provinces. These systems are an amalgamation of Indicator-Based Surveillance (IBS) and Event-Based Surveillance (EBS), enabling both structured reporting of priority diseases and rapid detection of unusual health events for informing public health actions, and supporting Nepal's commitment to national and global health security.

4. Rationale

In response to the persistent threat of infectious disease outbreaks, Nepal strategically established its hospital-based sentinel surveillance system, the Early Warning and Reporting System in 1997. Initially designed to monitor six priority diseases, EWARS has undergone significant expansion from 8 sentinel sites in 1997 to 134 by November 2024, demonstrating a sustained commitment to public health surveillance. Its primary objectives are to strengthen the flow of disease information and facilitate prompt outbreak response through timely reporting for early detection of selected vector-borne, water-borne, and food-borne diseases. Since 2019, when the last Early Warning and Reporting System guide was issued, Nepal's public health landscape and surveillance needs have evolved significantly. With the Government of Nepal officially enlisting 52 infectious diseases of priority in the Gazette in July 2024, there is a need to align Early Warning and Reporting System with current priorities and practices. In addition to this, given the evolving public health context, there is a clear need to shift from a passive reporting system to a more proactive mechanism that emphasizes early alerts and rapid response. This revised SOP redefines EWARS from the Early Warning and Reporting System to the Early Warning, Alert and Response System so as to reflect its expanded scope in alert generation and timely public health response

In addition, the evolving global and national public health landscape, particularly illuminated by recent health emergencies such as the COVID-19 pandemic and the recent amendments to the IHR (2005), necessitates a comprehensive revision of Nepal's

EWARS guide. The pandemic revealed fundamental gaps in the existing framework, highlighting the need for a more robust, pre-emptive, and integrated national surveillance system. This revised SOP, therefore, aims to consolidate critical lessons learned, integrate best practices, and fundamentally strengthen EWARS to meet the complex and evolving public health challenges of the 21st century and effectively monitor the expanded list of priority diseases.

5. Purpose

This SOP serves as an operational document for health professionals and sentinel hospitals involved in EWARS in Nepal. It aims to:

i) Provide a standardized framework for the effective implementation and operation of the EWARS in Nepal.

ii) Enhance timely detection, generating early alerts, reporting, and response to epidemic-prone and notifiable diseases.

iii) Update procedures, roles, and responsibilities to align with current national priorities and international best practices.

iv) Integrate modern digital platforms (e.g., LIS, HMIS, SORMAS, EMR) to improve data flow, interoperability and real-time reporting.

6. Intended Users

The SOP is designed primarily for all the hospitals and stakeholders responsible for implementing EWARS. It is expected to be useful for the following:

i) Medical Record Section or the reporting focal points for EWARS.
ii) Surveillance Committee Members of the sentinel hospitals.
iii) Personnel involved in EWARS activities at the reporting sites.
iv) Physicians, Nurses, Laboratory Personnel and other Paramedics of the sentinel hospitals
v) Rapid Response Committee and Team Members at all levels
vi) Federal, Provincial and local health authorities

vii) The technical specialists responsible for the design and development of digital solutions support the EWARS system. FETP Graduates.

viii) Other persons with the mandate or interest in working in surveillance, health emergency and response

ix) Academia and researchers

Chapter 3: Structural Arrangement for EWARS

7. Hospital Disease Surveillance Committee (HDSC)

i) Each EWARS sentinel hospital shall establish a Hospital Disease Surveillance Committee to oversee the implementation and performance of disease surveillance activities at the facility level.

ii) The committee comprising the following officials shall be established:

S.N.	Position	Role
1	Hospital Chief or designated Representative	Chairperson
2	Emergency In-Charge or Designated Representative	Member
3	Nursing Chief or Designated Nursing Representative	Member
4	Designated Representative from OPD/Medicine/Pediatric Department	Member
5	Laboratory In-Charge or Designated Representative	Member
6	District/Local RRT Chair or Designated Representative	Member
7	EWARS Focal Person	Member Secretary

i. The committee may invite other relevant hospital staffs like IT staff, Registration In-charge, Store In-charge, Infectious disease experts, and Representatives from the development partner organization, as needed.

ii. The roles and responsibilities of the Hospital Disease Surveillance Committee shall be as follows;

a. Provide overall guidance for EWARS implementation within the hospital.

b. Facilitate and ensure coordination among hospital departments (OPD, emergency, laboratory, inpatient wards, etc.) for effective data recording, collection, and reporting.

c. Ensure timely and accurate reporting of event/suspected/confirmed cases through the EWARS platform.

d. Verify and validate reported data to minimize errors as per the minimum data variables (Annex VII) and missing reports.

e. If any of the cases in OPD, IPD, Emergency and Lab records found not reported, then HDSC shall ensure the cases be reported immediately.

f. Analyze trends in reportable syndromes, hospital morbidity and mortality to detect unusual patterns and report them timely.

g. Inform and collaborate with local, district and provincial RRT for the verification, risk assessment and response of the alerts/outbreaks as and when required.

h. Conduct training and orientation of hospital staff on EWARS case definitions, reporting procedures, and response protocols.

i. Supervise and provide feedback to the EWARS focal person and other reporting staff

j. Share feedback received from EDCD/provincial authorities with hospital staff.

k. Conduct meeting every month or as required.

8. Arrangements pertaining to Sentinel sites

i) Sentinel sites will report the selected priority disease, syndromes and events regularly as defined in this SOP.

ii) The designated hospitals shall report the events, diseases and syndromes in the designated EWARS platform.

iii) The hospitals selected for EWARS will not report in the SORMAS platform.

iv) The sentinel hospitals may be expanded as per the system's requirement.

9. Criteria for selection of sentinel sites

EDCD may select the sentinel sites for expansion based on the criteria as follows;

i) The sentinel hospital shall have functional Outpatient, Inpatient, Lab and Emergency Department.

ii) The facility should demonstrate a relatively consistent and comparatively high patient volume across outpatient (OPD), inpatient (IPD), and emergency departments over the past three years.

iii) The facility's geographical establishment is vital to ensure the coverage of the designated area.

iv) The hospital must be duly registered in designated Federal, Provincial or Local Authority.

v) The hospital shall be enlisted or registered in the Nepal Health Facility Registry (NHFR) & Health Management Information System (HMIS).

vi) The site has been recommended by the respective Provincial and Local Health authorities to be included as a sentinel site.

vii) Hospitals with a functional Electronic Medical Record (EMR) system will be prioritized for selection.

10. Arrangements pertaining to Reporting Sites

i) Reporting sites mentioned in Annex II will report in the EWARS as specified.

ii) Reporting sites may be added based on emerging public health needs comprehended by EDCD, DOHS.

iii) The province and local level may also recommend an institution for inclusion as the reporting site.

iv) All the provincial public health laboratories will be enrolled as reporting sites.

v) A separate reporting template will be designed for PPHL& NPHL to secure the data needed as per Annex VIII.

vi) Reporting sites shall report defined infectious diseases and the public health events as prescribed.

Chapter 4: Operating Procedures for EWARS

11. Priority Diseases/Syndromes/Events to be reported in EWARS

i) Though 52 notifiable infectious diseases have been identified for national surveillance, only 18 selected priority diseases, 8 syndromes, and public health events, as listed in Annexes III, IV and V, shall be reported through the EWARS system.

ii) The list of reportable conditions may be reviewed and updated periodically by DoHS based on public health importance and evolving disease trends.

12. Components of EWARS

i) **Early Warning**

a. The early warning component shall focus on the detection of public health threats.

b. Hospitals shall identify and document all the reportable public health events, diseases and syndromes to support timely verification and response

c. Sentinel sites shall report priority diseases and syndromes immediately using standardized case definitions via the EWARS platform.

ii) **Alert**

a. Signals of diseases of public health priority and events are captured in EWARS.

b. The EWARS platform shall directly compute a generic alert when a signal meets the desired thresholds and criteria.

c. Each generic alert shall undergo Initial Risk Assessment (IRA) using a standard form (Annex IX) after which it may be discarded if not relevant, monitored if it requires observation or confirmed as requiring response.

d. Once confirmed as requiring response, the alert shall be escalated as a response alert to relevant response agencies via EWARS/SORMAS for further action.

e. The entire process, from alert generation to decision, shall be completed within one working day through the EWARS digital platform.

iii) **Response**

a. Once a response alert is received by relevant response agencies, they shall mobilize the RRTs based on the nature, scale, and requirements of the event.
b. The response may include public health interventions such as outbreak investigation, contact tracing, sample collection, risk communication, community engagement, and implementation of control measures, all of which shall be conducted in accordance with the national RRT and program-based guidelines.
c. The response shall be completed within seven days of alert confirmation.
d. All outbreak response activities shall be documented in the SORMAS/EWARS platform by the responsible RRT members.
e. Epidemic and Outbreak Management Section (EOMS) at EDCD and Provincial Health Directorate shall take the lead in coordinating the response.

13. Mechanism of Information Flow and Response in EWARS

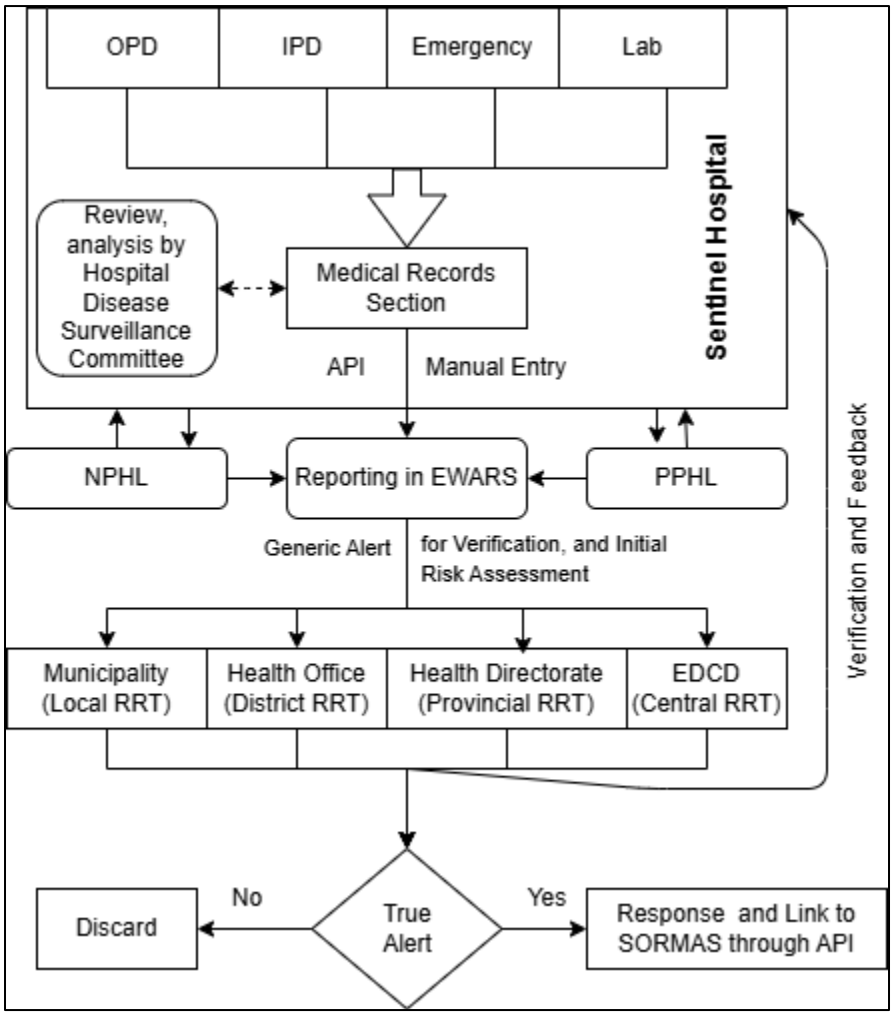


Figure 1 Mechanism of Information flow and response in EWARS

14. Data Recording:

i) Sentinel hospital shall ensure proper recording of targeted diseases, syndromes and events in the existing HMIS Recording Registers/Separate EWARS registers.

ii) Needful amendments in the HMIS Recording Registers shall be made to accommodate the need for disease surveillance.

iii) Until the desired amendments are made in HMIS Recording Registers, hospitals are required to make necessary arrangements to record the events or disease/syndromes that are not captured otherwise in a separate register.

iv) Sentinel sites and reporting sites shall ensure that the minimum variables or data as mentioned in Annex VII and VIII, including the current place of residence of the patient and his or her contact number, are not missed in keeping the record to facilitate time, place and person analysis.

v) Hospitals can collect and record their data in their EMR system and push it to EWARS with the prior information to EDCD.

vi) The hospital must keep a case line list of the suspected or probable outbreak situation, safely and properly, as they shall be required for verification and validation of cases after the outbreak situation ends.

15. Data Collection and Compilation

i) EWARS data shall be collected from five key hospital departments: OPD, IPD, Laboratory, Emergency and Patient Registration Department.

ii) Each department must assign a focal person and an alternate to collect data as per the needs of EWARS, ensure completeness and accuracy and submit it to the medical record section.

iii) The Medical Records Section shall make necessary arrangements to collect data from each department mentioned above daily.

iv) Medical records sections shall collect, compile and validate data before entering it into the digital platform.

v) All relevant hospital staff must be aware of the events, disease or syndromes requiring immediate reporting under EWARS.

vi) Treating medical officers or health workers shall classify reportable cases as specified as suspected, probable, or confirmed based on standard case definitions.

vii) Medical recorders may seek technical support from medical officers, health workers and laboratory personnel when needed while validating the information.

viii) The Hospital Disease Surveillance Committee (HDSC) shall oversee overall data collection activities, provide support in resolving classification or reporting issues, and ensure departmental coordination and compliance with EWARSSOP.

16. Data Reporting

i) To ensure timely detection and response to public health threats, reporting under EWARS shall be done immediately within 24 hours of clinical and/or laboratory confirmation of the diseases/syndromes/events listed in Annex III, IV and V.

ii) The reporting modality shall be case-based and event-based.

iii) If a patient is diagnosed with one or more reportable diseases or conditions, each shall be recorded as a separate entry, regardless of duplication

iv) In case of internet disruption delay, immediate notification shall be initiated by contacting Hello Health 1115 or the concerned sections to enable rapid communication of urgent public health events. Contact information for key response agencies is provided in Annex VI.

v) Timeliness of report submission shall be classified as follows:

a. Timely: Reports submitted within 24 hours of clinical or laboratory confirmation of the case/event.

b. Not Timely: Reports submitted beyond 24 hours

vi) The sentinel sites shall submit zero reports in EWARS if no reportable diseases, syndromes or events are observed in the Epidemiological week.

vii) The report shall be considered complete if all the minimum data for the disease as per the EWARS platform is filled. The Hospital Disease Surveillance Committee shall review and verify reports to ensure data quality, monitor trends, and coordinate response activities within the facility monthly.

viii) Verified immediate reports must be entered without delay into the reporting platform.

ix) In case of perceived threat of rapid spread and nobleness of the disease, the sentinel hospital shall communicate to Epidemiology and Disease Control Division

(EDCD) and the respective Province Health Directorate (PHD), Ministry of Health (MOH), Ministry of Social Development (MOSD) and District Health Office.

x) During the time of a suspected or probable outbreak situation, an aggregated reporting platform will also be provided to the respective sentinel hospital, in which the hospital must report daily and update the cases line lists that contain a small subset of variables, within 24 hours.

17. Data Analysis and Alert Generation

i) Sentinel site shall act as the first point of data analysis, with primary verification by departmental focal persons and the medical record section and validation by the hospital disease surveillance committee.

ii) Municipality, District, Province, and Federal level shall also review, validate and analyses surveillance data and alerts generated via EWARS sentinel sites within their respective jurisdictions to detect unusual trends, outbreaks and emerging public health risks.

iii) EWARS generates generic alerts after analyzing the reported diseases/syndromes against defined thresholds that are shared automatically with the Hospital, Municipal Health Section/Division/Departments, Provincial Health Directorate, Public Health/Health Office and the Disease Surveillance and Research Section (DSRS).

iv) Respective Municipal Health Section/Division/Departments shall verify and conduct the initial risk assessment using the standard form in Annex IX within EWARS, which may also be available digitally.

v) The Provincial Health Directorate, District (Public/Health Office), and the Disease Surveillance and Research Section (DSRS) shall ensure that the respective municipality has conducted the IRA and shall carry it out if not already performed.

vi) The hospital disease surveillance committee shall support and facilitate risk assessment.

vii) Based on the IRA, the alert may be:

a) Discarded (not relevant),

b) Monitored (requires further observation), or

c) Escalated as a response alert for further investigation and response.

viii) Response alerts will be transferred to the relevant response agencies through EWARS or SORMAS.

18. Response

i) The response mechanism under the EWARS framework shall be activated when a generic alert, upon verification and completion of the Initial Risk Assessment, is confirmed as requiring response.

ii) Generic alerts categorized as requiring further observation, once confirmed, also follow the same mechanism.

iii) The initial response shall be led by Rapid Response Teams (RRTs) at the local, district and provincial levels, or FETP Graduates, depending on the nature and location of the event within the seven days following the response alert generation.

iv) If the outbreak escalates or cannot be managed effectively at the sub-national level, the central-level RRT may be mobilized to provide support or assume full responsibility for the response.

v) The RRTs shall manage the situation in accordance with the national RRT Guideline, ensuring standardized procedures are followed during outbreak investigation and response

vi) Provincial and federal oversight agencies shall monitor response activities through the EWARS or SORMAS platform.

19. Feedback Mechanism

i) Provincial entity shall be responsible for the continuous monitoring and oversight of sentinel site performance within their respective provinces. Their responsibilities include:

a. Monitoring the timeliness, completeness, and accuracy of reports submitted by sentinel sites.

b. Providing regular feedback to sentinel sites to support improved performance.

c. Recognizing and encouraging sites that demonstrate consistent and timely reporting.
d. Following up with underperforming or non-reporting sites to identify and address challenges.

ii) If issues persist despite provincial follow-up, technical support shall be provided by the central level (EDCD) to assist in resolving reporting gaps or operational difficulties.

iii) To strengthen accountability, the Epidemiology and Disease Control Division (EDCD) shall conduct routine follow-up calls to all sentinel sites that have failed to submit reports.

iv) These calls shall be coordinated through a Hello Health 1115 and aim to:

a. Identify reasons for reporting delays,
b. Provide on-the-spot technical guidance

v) Annual review meetings shall be conducted at both provincial and federal levels to evaluate the overall performance of the EWARS system, share lessons learned, best practices, and challenges encountered, identify areas for improvement and develop plans for system strengthening, and recognize and award best-performing sentinel sites for their contributions to disease surveillance and public health.

vi) The weekly consolidated Surveillance bulletin shall be developed, which includes the data from EWARS, SORMAS, CBS and other surveillance systems.

vii) The bulletin should feature key highlights, disease burden, distribution of cases by time, place, and person, as well as an overview of the surveillance system's performance through the presentation of reporting timeliness, response time, outcome of the response and key public health messages and recommendations.

viii) The bulletin shall be shared electronically with key stakeholders, including:

a. The Ministry of Health and Population (MoHP),
b. Department of Health Services (DoHS),
c. Provincial Health Directorates,
d. All sentinel sites, and

e. Relevant partners and stakeholders.

ix) To ensure transparency and public access, the bulletin shall also be published on the official EDCD website.

20. Data Sharing

i) Weekly consolidated Surveillance bulletin shall be shared with authorized stakeholders, including the Ministry of Health and Population (MoHP), Department of Health Services (DoHS), Epidemiology and Disease Control Division (EDCD), Provincial Health Directorates, sentinel hospitals, and relevant partner organizations for surveillance, risk analysis, decision-making, and response purposes.

ii) Viewer access to the EWARS database will be given to relevant stakeholders and other entities as deemed necessary by EDCD

iii) Any public release or use of EWARS data for publication, research or external communication shall require prior approval from EDCD, the province or respective sentinel/reporting site and shall be solely used for the approved purpose.

21. Data Protection

i) EWARS data containing personally identifiable information (PII) must be handled with strict confidentiality and used solely for public health surveillance and response.

ii) Sentinel hospitals and reporting sites must ensure anonymisation or aggregation of individual-level data, where applicable, before sharing beyond the reporting platform.

iii) Access to the EWARS platform shall be role-based, with user credentials assigned based on responsibility and authorization (e.g., data entry, validation, analysis, administration).

iv) Hospitals and authorities shall ensure secure storage, handling, and transmission of EWARS data in both electronic and physical forms.

v) Unauthorized access, disclosure, or misuse of EWARS data is strictly prohibited and shall be subject to disciplinary or legal action as per national regulations.

Chapter5: Monitoring and Evaluation

22. Monitoring and Evaluation for Functional EWARS

i) To make the system effective and functional, its regular monitoring and evaluation shall be carried out as follows:
ii) Monitoring and evaluation shall be conducted by the federal, provincial, and local levels using the indicators prescribed in Annex X
iii) Annual reviews of EWARS shall be conducted at sentinel sites, provincial, and federal levels, with action plans developed and implemented to address necessary improvements.

Chapter 6: Roles and Responsibilities

23. Roles of Sentinel sites

i) Conduct daily and weekly review and validation of OPD, IPD, emergency, laboratory registers, patient master registrations and compile the data for reportable diseases.
ii) Ensure complete and timely reporting of all priority diseases/syndromes.
iii) Report any specified events within 24 hours as prescribed.
iv) Review weekly data on reported cases and deaths to detect unusual trends or outbreaks.
v) Immediate notification to the Provincial Health Directorate and respective district/municipal RRTs of any suspected outbreak
vi) Support municipality and other stakeholders in Initial Risk Assessment as and when required.
vii) Act promptly on feedback received from EDCD, provincial health directorate and Public Health/Health Office.
viii) Regularly review the EWARS weekly bulletin and stay updated on surveillance trends
ix) Maintain consistent communication with the provincial and District Level Public Health/Health Office focal person.
x) Participate in annual EWARS review meetings at provincial and federal levels

xi) Conduct training and orientation to build the capacity of the hospital staff on EWARS protocols and processes.

xii) Conduct data audit and review to improve the data quality, timeliness, and completeness of surveillance reporting.

xiii) Sentinel hospitals receiving grants from the federal government shall allocate the required resources for capacity building, review and operation of the EWARS in the hospital.

xiv) Allocate additional resources required for the operation and management of the EWARS at the hospital.

xv) Host hospital disease surveillance committee meeting at least monthly or as required.

xvi) May share the EWARS report and data with FETP graduates, RRTs and other relevant stakeholders.

xvii) Hospitals shall maintain strict confidentiality and anonymity of client information when sharing surveillance data.

xviii) Collaborate to link the EWARS digital platform with EMR and other existing surveillance systems, with subsequent update of the same to EDCD.

24. Roles of the reporting sites

i) Submit timely reports on specified priority disease/syndrome and public health events

ii) Maintain proper documentation of all specimens and test results for verification purposes

iii) Communicate unusual events or suspected outbreaks to relevant authorities

iv) Assist in the verification of alerts and IRA when required

v) Communicate the test results timely to the respective sentinel hospitals.

vi) Facilitate timely testing during the outbreak situation and subsequent reporting in EWARS immediately.

25. Roles of Municipal Health Sections/Departments/Divisions

i) Oversee and coordinate EWARS activities within the municipality, ensuring all sentinel sites function effectively.
ii) Review and verify generic alerts received from EWARS sentinel sites within the municipality.
iii) Conduct an IRA to determine whether the alert should be discarded, monitored or responded.
iv) Communicate the alert requiring response with relevant response agencies.
v) Analyze surveillance data to detect unusual trends, emerging public health threats and potential outbreaks
vi) Provide feedback to sentinel sites and reporting sites to improve reporting quality and timeliness.
vii) Assist with the response activities as needed.

26. Roles of Public Health/Health Offices

i) Oversee and coordinate EWARS activities within the district, ensuring all sentinel sites function effectively.
ii) Compile surveillance data from health facilities, analyze it regularly to identify unusual trends, and generate district-level alerts.
iii) Verify generic alerts received through the system and conduct/facilitate Initial Risk Assessment (IRA) to determine the need for response.
iv) Mobilize and coordinate Rapid Response Teams (RRTs) at the district level, and support hospitals and municipalities in outbreak investigation and control.
v) Provide guidance, training, and resources to health facilities for effective surveillance and response.
vi) Ensure timely reporting of verified alerts, data analyses, and response actions to the Provincial Health Directorate and EDCD, and share feedback with health facilities.

vii) Support the dissemination of accurate information to the public and local stakeholders to prevent panic and encourage community participation.

viii) Monitor data quality, timeliness of reporting, and functionality of EWARS sites, and provide supportive supervision to strengthen the system.

ix) Designate a focal point to support EWARS activities.

27. Roles of Provincial Health Directorates

i) Oversee the functioning and compliance of sentinel sites within the province.

ii) Provide regular, constructive feedback to sentinel sites to improve data quality and reporting performance.

iii) Verify generic alerts received through the system and conduct/facilitate Initial Risk Assessment (IRA) to determine the need for response.

iv) Designate provincial focal point and necessary human and material resources to support EWARS activities.

v) Organize periodic orientations, review meetings, and capacity-building programs for sentinel sites.

vi) Conduct onsite coaching and data verification program to ensure operational accuracy and system integrity.

vii) Maintain a provincial alert log

viii) Ensure timely verification of alerts; provide support to the RRT/FETP in outbreak detection, investigation and response.

ix) Collaborate with EDCD and provincial authorities to ensure effective implementation of the strengthening of EWARS in the province.

x) Where necessary, propose the expansion of sentinel surveillance coverage to the EDCD based on epidemiological needs.

xi) Coordinate and facilitate the activation of provincial and district Rapid Response Teams (RRTs) together with FETP graduates during outbreaks.

xii) Monitor the timeliness and effectiveness of outbreak responses and facilitate necessary interventions.

xiii) Allocate additional resources to complement the federal funding for the operation and management of EWARS across the province.

xiv) Ensure timely distribution of operational and management funds to all designated sentinel hospitals and reporting sites.

xv) Communicate with districts to see if similar signals are being detected across districts.

28. Roles of Epidemiology and Disease Control Division

i) Compile and analyze EWARS and surveillance data received from all sentinel sites nationwide on a weekly basis.

ii) Interpret early warning signals and verify alerts for timely outbreak detection and response.

iii) Prepare and disseminate the EWARS Weekly Bulletin as feedback to all sentinel and reporting sites and stakeholders.

iv) Provide case-specific and system-level feedback to PHDs and sentinel sites as needed.

v) Support provinces and districts in verification of signals, initial risk assessment of events, alert generation and response, laboratory sample collection and testing, and timely feedback of results

vi) Facilitate financial and logistics resource mobilization to ensure the smooth operation of EWARS activities.

vii) Conduct data quality assurance through routine validation workshops of reported data.

viii) Organize national-level training and provide technical support to provinces and districts.

ix) Develop and periodically update EWARS-related guidelines, SOPs, training modules and disease case definitions in alignment with international standards.

x) Promote integration of EWARS with other surveillance systems like SORMAS, Community-Based Disease Surveillance and EMR.

xi) Conduct periodic supervision and onsite coaching at the sentinel and reporting sites.

xii) Allocate resources to Provincial Health Directorate (PHDs) for EWARS review, orientation, and operation through sentinel hospital networks.

xiii) Conduct or support operational research to assess the effectiveness and efficiency of EWARS surveillance and response mechanisms.

xiv) Develop and update the digital EWARS platform for reporting as per the SOPs.

xv) Collaborate with national and international partners for technical exchange, capacity building and coordinated outbreak response.

29. Role of Hello Health 1115 in EWARS

i) Function as a primary hub for receiving event-based reporting.

ii) Verify the generic alert of EWARS, maintain alert logs and communicate it with EDCD.

iii) Ensure easy and accessible channels for real-time reporting and support.

iv) Triage calls and forward validated alerts to relevant sections like Disease Surveillance and Research Section (DSRS) and Epidemiology and Outbreak Management Section (EOMS)

v) Communicate confirmed alerts to provincial health authorities to initiate appropriate action.

vi) Supports contact tracing and follow-up during outbreak situations.

vii) Verify the status of the IRA by the respective municipalities.

viii) Verify community-generated rumors or signals through field engagement or coordination with RRTs.

ix) Follow up with sentinel sites to ensure timely and complete reporting as per the EWARS SOP.

x) Maintain detailed records of received calls and alerts to support surveillance analysis and decision-making.

Chapter 7: Miscellaneous

30. Capacity Building and Training

i) Foundational Training for New EWARS sites and Reporting sites shall be given.

ii) Refresher training to the EWARS sites shall be given after initial training and hands-on training for data analysis.

iii) An alternative person to the medical recorder shall also be involved in the training.

iv) Both onsite and online coaching shall be provided as and when required.

v) EWARS Review Program shall be done annually by province, and the best reporting site shall be rewarded

vi) A separate user manual shall be developed to aid data entry, API linkage and analysis in the EWARS digital platform.

31. Revision of the Standard Operating Procedure (SOP)

i) EDCD may review and revise the procedure as needed.

32. Update of contact details

i) Sentinel sites should provide updated contact details (Name, Post, Email address and contact number) of the Hospital Disease Surveillance Committee members yearly in December, to EDCD.

ii) Reporting sites, PHD and Health Offices should provide updated contact details (Name, Post, Email address and contact number) of the EWARS focal person yearly in December, to EDCD.

iii) Sentinel Hospitals should provide updated contact details (Name of the company & developer, Email address and contact number) of the EMR and its focal person yearly in December, to EDCD.

33. API

i) API of EWARS will be provided to all sentinel hospitals and other entities based on their request. These entities should request EDCD for API, and EDCD will provide that after verification of their EMR variables.

Annex I: List of sentinel sites

S. No.	Prov	District	Code as per NHFR	Name of Sentinel Hospital
1	Koshi	Bhojpur	1060400051	District Hospital Bhojpur
2		Dhankuta	1070400051	District Hospital Dhankuta
3		Ilam	1100300051	District Hospital Ilam
4		Jhapa	1110700052	Amda Hospital Damak
5		Jhapa	1111400121	Mechi Hospital Jhapa
6		Khotang	1050500041	District Hospital Khotang
7		Morang	1121400191	Koshi Hospital Biratnagar
8		Morang	1121400422	Nobel Medical College Morang
9		Okhaldhunga	1040200012	Okhaldhunga Community Hospital
10		Okhaldhunga	1040200041	Rumjatar Hospital
11		Panchthar	1090400051	District Hospital Panchathar
12		Sankhuwasabha	1020600071	Sankhuwasabha Hospital
13		Solukhumbu	1030700071	District Hospital Solukhumbu
14		Sunsari	1130100011	BP Koirala Institute of Health Sciences
15		Sunsari	1130900041	Inaruwa Hospital
16		Taplejung	1010600061	District Hospital Taplejung
17		Terhathum	1080400051	District Hospital Terhathum
18		Udayapur	1140300031	District Hospital Udayapur
19	Madhesh	Bara	2070800051	Provincial Hospital Kalaiya
20		Dhanusha	2031500532	Janaki Medical College
21		Dhanusha	2031500191	Madhesh Institute of Health Sciences
22		Mahottari	2041500061	District Hospital Jaleshwor
23		Parsa	2080700241	Narayani Hospital
24		Parsa	2080700512	National Medical Hospital
25		Parsa	2080900031	Pokhariya Hospital
26		Rautahat	2061700051	Provincial Hospital Gaur
27		Saptari	2011300121	Gajendra Narayan Singh Hospital
28		Siraha	2021700051	Provincial HospialSiraha
29		Siraha	2021700051	Provincial Hospital Siraha
30		Sarlahi	2052000031	Malangawa District Hospital
31	Bagamati	Bhaktapur	3070200031	Bhaktapur Hospital
32		Chitawan	3130400221	Bharatpur Hospital
33		Chitawan	3130400992	Chitwan Medical College
34		Chitawan	3130401002	College Of Medical Science
35		Dhading	3040600221	Dhading Hospital
36		Dolakha	3010500011	Jiri District Hospital
37		Dolakha	3010900261	Pashupati Chaulagain Memorial Hospital
38		Kathmandu	3060800451	Civil Services Hospital Kathmandu
39		Kathmandu	3060800461	Bir Hospital Kathmandu
40		Kathmandu	3061000201	Nepal APF Hosptial

S. No.	Prov	District	Code as per NHFR	Name of Sentinel Hospital
41		Kathmandu	3060800121	Birendra Army Hospital Kathmandu
42		Kathmandu	3060500092	Grande International Hospital Pvt
43		Kathmandu	3060804272	Hams Hospital Kathmandu
44		Kathmandu	3060800471	Kanti Children Hospital Kathmandu
45		Kathmandu	3060808422	Manmohan Memorial Medical College & Teaching Hospital Soyambhu
46		Kathmandu	3060808412	Kathmandu Medical College Kathmandu
47		Kathmandu	3060800652	Kathmandu Model Hospital
48		Kathmandu	3060804372	Menlha Nursing Home (Ciwec Hospital Pvt)
49		Kathmandu	3060809861	Nepal Police Hospital Maharajgunj
50		Kathmandu	3060804442	Norvic International Hospital
51		Kathmandu	3060804452	Om Hospital & Research Center
52		Kathmandu	3060300192	Nepal Medical College Teaching Hospital
53		Kathmandu	3060800491	Sukraraj Tropical Hospital Kathmandu
54		Kathmandu	3060800151	Teaching Hospital (Tribhuvan University) Kathmandu
55		Kathmandu	3060804542	Vayodha Hospital
56		Kavrepalanchok	3090500142	Dhulikhel Hospital
57		Kavrepalanchok	3090800021	Methinkot Hospital
58		Lalitpur	3080100082	Kist Medical College
59		Lalitpur	3080200011	Patan Academy of Health Science
60		Lalitpur	3080201312	Sumeru Hospital
61		Lalitpur	3080201252	Nepal Mediciti Hospital
62		Makwanpur	3120600161	Heatuda Hospital
63		Nuwakot	3050400331	Trisuli Hospital Nuwakot
64		Ramechhap	3100400021	Ramechhap Hospital
65		Rasuwa	3030100041	District Hospital Rasuwa
66		Sindhuli	3110500061	Sindhuli Provincial Hospital
67		Sindhupalchok	3020700101	Chautara Hospital
68	Gandaki	Baglung	4110100221	Dhaulagiri Hospital
69		Gorkha	4010900071	Gorkha Hospital
70		Kaski	4050400622	Fewacity Hospital & Research Centre
71		Kaski	4050400762	Gandaki Medical College Pokhara
72		Kaski	4050400772	Manipal Teaching Hospital
73		Kaski	4050400361	Pokhara Academy of Health Sciences (PAHS)
74		Lamjung	4060500081	Lamjung District Hospital
75		Manang	4020300031	District Hospital Manang
76		Mustang	4030200071	District Hospital Mustang
77		Myagdi	4040600051	Beni Hospital Myagdi
78		Nawalpur	4080600311	Madhyabindu District Hospital
79		Parbat	4100300051	District Hospital Parbat
80		Syangja	4090100061	District Hospital Syangja
81		Syangja	4090900191	Garahau Primary Hospital Walling Syangja
82		Tanahu	4070200081	Damauli District Hospital

S. No.	Prov	District	Code as per NHFR	Name of Sentinel Hospital
83	Lumbini	Arghakhanchi	5050400281	Arghakhanchi Hospital
84		Banke	5110600482	Nepalgunj Medical College Nepalgunj
85		Banke	5110600241	Bheri Hospital
86		Bardiya	5120700081	Bardiya Hospital
87		Dang	5100200421	Rapti Academy of Health Science Ghorahi
88		Dang	5100300131	Rapti Provincial Hospital
89		East Rukum	6080400051	Rukum District Hospital
90		Gulmi		Gulmi Hospital
91		Kapilbastu	5090700051	Kapilbastu Hospital
92		Nawalparasi	5070300021	Prithivi Chandra Hospital
93		Palpa	5060100041	Rampur Hospital
94		Palpa	5060500202	Lumbini Medical College
95		Palpa	5060500081	Palpa Hospital
96		Palpa	5060500162	United Mission Hospital
97		Pyuthan	5030400031	Pyuthan District Hospital
98		Rolpa	5020700031	Rolpa Hospital
99		Rupandehi	5081100282	Universal College of Medical Sciences (UCMS)
100		Rupandehi	5080200162	Amda Hospital Butwal Municipality
101		Rupandehi	5081100031	Bhim Hospital Rupandehi
102		Rupandehi	5080800112	Crimson Hospital
103		Rupandehi	5080100062	Devdaha Medical College and Research Institute Pvt. Ltd.
104		Rupandehi	5080200151	Lumbini Zonal (Provincial) Hospital
105	Karnali	Dailekh	6060700031	Dullu Hospital, Dailekh
106		Dailekh	6060800041	Dailekh District Hospital
107		Dolpa	6010600031	Dolpa District Hospital
108		Humla	6030300031	Simikot District Hospital
109		Jajarkot	6070600031	Jajarkot Hospital
110		Jumla	6040400011	Karnali Academy of Health Science Teaching Hospital
111		Kalikot	6050600031	District Hospital Kalikot
112		Mugu	6020200061	District Hospital Mugu
113		Rukum West	6080600082	Chaurjahari Hospital
114		Rukumkot	6080400051	Rukum District Hospital
115		Salyan	6090700031	District Hospital Salyan
116		Surkhet	6100400021	Mehelkuna Hospital Surkhet
117		Surkhet	6100600121	Provincial Hospital Surkhet
118	Sudurpaschim	Achham	7070400012	Bayalpata Provincial Hospital
119		Achham	7070600031	District Hospital Achham
120		Bajhang	7020600041	District Hospital Bajhang
121		Bajura	7010600031	District Hospital Bajura
122		Baitadi	7040500041	District Hospital Baitadi
123		Dadeldhura	7050200101	Dadeldhura Hospital
124		Dadeldhura	7050500021	Jogbuda Hospital

S. No.	Prov	District	Code as per NHFR	Name of Sentinel Hospital
125		Darchula	7030300031	District Hospital Darchula
126		Darchula	7030700021	Gokuleshwor Hospital
127		Doti	7060500061	District Hospital Doti
128		Kailali	7080300071	Malakheti Hospital
129		Kailali	7081300362	Maya Metro Hospital
130		Kailali	7081300212	Nawa Jeewan Hospital
131		Kailali	7081300242	Nisarga Hospital
132		Kailali	7081300151	Seti Provincial Hospital
133		Kailali	7081000021	Tikapur Hospital
134		Kanchanpur	7090400101	Mahakali Provincial Hospital

Annex II: List of reporting sites

S. no.	Province	District	Name of Reporting Health Facility
1	Bagamati	Kathmandu	National Public Health Laboratory, Teku
2	Koshi	Morang	Provincial Public Health Laboratory, Koshi
3	Madhesh	Dhanusha	Provincial Public Health Laboratory, Madhesh
4	Bagamati	Kavre	Provincial Public Health Laboratory, Bagamati
5	Gandaki	Kaski	Provincial Public Health Laboratory Gandaki
6	Lumbini	Rupandehi	Provincial Public Health Laboratory, Lumbini
7	Karnali	Surkhet	Provincial Public Health Laboratory, Karnali
8	Sudurpashchim	Dhangadhi	Provincial Public Health Laboratory, Sudurpaschim

Annex–III: Case Definition of EWARS Reportable Diseases

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
1.	**COVID-19 (RA01.0)**	**A.** Any person with an acute onset of fever, cough and sore throat. **B.** A person with severe acute respiratory illness:	A suspected case with a contact to a confirmed case or linked to a COVID-19 cluster or household contacts.	A suspected case with laboratory confirmation via PCR orSARS-CoV-2 Antigen-RDT	One Confirmed case
2.	**Measles (1F03)**	Any person with an acute onset of fever and maculopapular rash (non-vesicular) OR Any person whom a health care worker suspects measles.	A suspected case with epidemiological link to a lab-confirmed case.	A suspected case with laboratory confirmation by a proficient laboratory through detection of IgM in sera (or oral fluid) for measles in the laboratory by ELISA or virus isolation or through PCR in a WHO-accredited laboratory.	One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
3.	**Dengue (1D20; 1D21 ; 1D22 ; 1D2Z)**	Any person with a fever for 2-7 days with two or more of the following signs/symptoms: • Nausea or vomiting • Exanthema • Headache or retro-orbital pain • Myalgia or arthralgia • Petechiae or positive tourniquet test (+) • Leukopenia • Thrombocytopenia with or without any warning sign or sign of severity	A suspected case with IgM detected in a single serum sample (collected during the acute or convalescent phase) or an Epidemiological link to a confirmed case	A suspected case with one of the following results ✓ Detection of NS1 antigen by ELISA or RDT ✓ Seroconversion IgG in paired serum samples (acute and convalescent) collected 10-14 days apart or four-fold increase in antibody titer, excluding other ortho flaviviruses ✓ DENV detected by NAAT DENV isolated by virus culture	One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
4.	**Japanese Encephalitis (1C85)**	Any person with an acute onset of fever AND at least one of the following: -A change in mental status (including symptoms such as confusion, disorientation, coma or inability to talk); or -New onset of seizures, excluding simple febrile seizures*. *A ***simple febrile seizure*** is defined as a seizure among children who are between 6 months and 6 years of age, in whom the only findings are fever and a single generalized convulsion lasting less than 15 minutes, and who recover consciousness within 60 minutes of the seizure.	A suspected case with an epidemiological link to a laboratory-confirmed case or to an outbreak	A suspected case with laboratory confirmation through capture ELISA in a serum or CSF sample	One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
5.	**Cholera (IAOO)**	**In the absence of Cholera outbreak:** A person aged two years or older with acute watery diarrhea and dehydration OR who died from acute watery diarrhea with no other known cause of death. **In the presence of a cholera outbreak:** Any person with acute watery diarrhea OR who died from acute watery diarrhea.	A suspected case with a positive rapid diagnostic test	A suspected case with laboratory confirmation via culture (including Sero agglutination) or PCR	One Probable **OR** One Confirmed Case
6.	**Tetanus (1C10.1, 1C10.2, 1C10.Y &1C10.Z)**	Any person with an acute onset of hypertonia and/or painful muscular contractions (usually of the jaw and neck) and generalized muscle spasms with a history of wound or injury or trauma within 21 days of onset of symptoms.	A suspected case with a history of wound or injury or trauma within 21 days of the onset of symptoms.	A probable case with isolation of C. tetani from the pus and or dead tissues from the wound site.	One Suspected OR One Probable OR One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
7.	**Neonatal Tetanus (1C10.0)**	Any neonatal death between 3-28 days of age in which the cause of death is unknown. OR Any neonate who could suckle and cry normally during the first two days of life but lost the ability and developed lockjaw, stiffness, rigidity, muscle spasms or convulsion.	NA	Any neonate with normal ability to suck and cry during first two days, AND Who between 3-28 days of age cannot suck or cry normally, AND Who has convulsions or spasms triggered by minimal stimuli such as light, noise, or touch OR who has signs of stiffness and rigidity, which include any of the following: trismus, clenched fists or feet, continuously pursed lips, curved back (opisthotonos).	One Suspected **OR** One Confirmed Case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
8.	**Influenza, (1E30& 1E31)**	**For Seasonal Influenza:** Acute respiratory illness with measured fever (≥38°C) and cough. **For Zoonotic Influenza:** Acute respiratory illness with fever, cough and a history of exposure to sick or dead poultry, live animal markets, or individuals with suspected or confirmed zoonotic influenza infection.	A suspected case with a positive rapid diagnostic test	A suspected case with laboratory confirmation via RT-PCR or viral culture.	One Probable **OR** One confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
9.	**Scrub Typhus (1C30.3)**	Any person with • Acute undifferentiated febrile illness (AUFI) of five or more days with or without eschar, OR Fever of less than 5 days with presence of eschar	A suspected case plus • IgM positive by RDTs • Showing titers of 1: ≥ 80 in OX2, OX19 and OXK antigens by Weil Felix test	A suspected case with one or more of the following: • An optimal density > 0.5 for IgM by ELISA for scrub typhus • Detection of nucleic acid of the organisms in the blood, eschar or tissue sample by PCR • A ≥ 4-fold increase in IFA or IPA titer (IgG) in paired sera* • ≥ 1:400 IFA in acute serum (IgG and/or IgM) **Paired sera: acute and convalescent sera. Acute sera taken during the first week of illness and convalescent sera taken 2-4 weeks later*	One Probable **OR** One confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
10.	**Leishmaniasis (Kala-azar) (1F 54)**	Any person living in or having travelled to kala-azar endemic areas, presenting with • Fever lasting more than two weeks AND • Splenomegaly AND/OR • Weight loss after ruling out malaria in endemic areas.	A suspected VL case that has not been confirmed by any laboratory test (i.e. tests not done or negative) but assessed by a clinician to be confirmed VL case based on clinical grounds.	A suspected case with laboratory confirmation by any of the following: • Serological (RDT, DAT, ELISA, IFAT) • Parasitological confirmation by demonstration of *Leishmania* amastigotes in tissue smear or culture Detection of *Leishmania* DNA by PCR or other molecular methods.	One Probable **OR** One Confirmed Case
11.	**Leptospirosis (1B 91)**	Any person with acute fever, headache, myalgia and conjunctival redness accompanied by any (jaundice, renal dysfunction, bleeding or aseptic meningitis) with exposure to contaminated water or animals / animal products (mostly rodents)	A suspected case with supportive serological test (e.g., IgM positive)	A suspected case with laboratory confirmation via PCR, culture, or MAT (blood)	One Probable **OR** One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
12.	**Diptheria (1C17)**	Any person presenting with upper respiratory tract infection (laryngitis, pharyngitis, or tonsillitis) AND An adherent pseudo-membrane on: • Tonsils OR • Pharynx OR • Larynx AND/OR • Nose	A suspected case with an adherent pseudo-membrane or epidemiologically linked case to a laboratory-confirmed case	A suspected case with laboratory confirmation of Corynebacterium spp., isolated by culture and positive for toxin production from an oropharyngeal/nasopharyngeal swab (confirmed by the phenotypic Elek test).	One Suspected **OR** One probable **OR** One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
13.	**Malaria (1F45; 1F41Z;1F43;1F40.Z; 1F40; 1F40.O; 1F40.Y; 1F43;1F41.O;1F41.Y;AF42Y)**	Any person with an illness suspected by a health worker to be due to malaria, generally based on the presence of fever with or without other symptoms. Symptoms may include: • Fever • Chills and rigors • Headache • Muscle aches • Nausea, vomiting, or diarrhea • Sweating after fever subsides • Malaise and fatigue Usually has a history of travel to areas at risk of malaria, either within the country or abroad.	Not applicable	Presence of malaria parasite or antigen in the peripheral blood, detected by quality-assured microscopy, or WHO-PQ RDT (antigen-based)	One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
14.	**Pertussis (1C12.0)**	A person of any age with a cough lasting ≥ 2 weeks, or of any duration in an infant or any person in an outbreak setting, without a more likely diagnosis and with at least one of the following symptoms, based on observation or parental report: • paroxysms (fits) of coughing • inspiratory whooping • post-tussive vomiting, or vomiting without other apparent cause • apnea (only in < 1 year of age) OR If a clinician suspects pertussis, even without these signs.	Not applicable	An acute cough illness of any duration with * Isolation of B. pertussis from culture from a clinical specimen; OR * Polymerase chain reaction (PCR) positive for B. pertussis OR * from serology (Serology can be performed much later in the course of disease than culture and PCR)	One Suspected **OR** One Confirmed case
15.	**Hepatitis A (1E50.0)**	Any person with acute jaundice, fever, anorexia and hepatomegaly or ALT >2.5x upper limits of normal	A suspected case with history of travel/residence in endemic area or outbreak setting	A suspected case with Positive anti-HAV IgM or HAV RNA by PCR	One Confirmed case

S. N	Disease (ICD 11 Code)	Case Definition			Immediate reporting condition
		Suspected	**Probable**	**Confirmed**	
16.	**Mpox (monkeypox) (1D6Z)**	Any person presenting with characteristic rash (deep seated and well circumscribed lesions often with central umbilication and lesion progression through specific sequential stages- macule, papule, vesicles, pustules and scabs) anywhere in the body.	A suspected case who has contact to a confirmed case of mpox and/or had multiple and /or casual sexual partners within the 21 days before symptom onset.	A suspected case with laboratory confirmation via real-time PCR	One Suspected, **OR** One probable **OR** One Confirmed case
17	**Hepatitis E (1E50.4)**	Any person with acute jaundice, fever, anorexia and hepatomegaly or ALT >2.5x upper limits of normal	A suspected case with history of travel/residence in endemic area or outbreak setting	A suspected case with Positive anti-HEV IgM or HEV RNA by PCR	One Confirmed case
18	**Rabies (1C82)**	Any person presenting with paresthesia, localized pain or dysphagia with history of rabid animal bite	A suspected case with aerophobia or hydrophobia or paralytic form	A suspected case that is laboratory confirmed via biopsy (cornea, skin biopsy) or PCR (CSF, saliva)	One suspected, probable or confirmed Case

Any death case of the patient meeting the above case definitions should be reported immediately (within 24 hours).

Annex IV: Case Definition of EWARS Reportable Syndromes

S. N.	Syndromes	Definition of Syndrome	Target Diseases	Immediate reporting condition
1	**Fever with Rash**	A patient of any age with acute fever and maculopapular (non-vesicular) rash.	Measles, Mumps, Rubella, Dengue, Malaria, Kala-azar, Chikungunya, Zika Virus, Scrub Typhus, Mpox, Smallpox, Rift Valley Fever, Q fever, Toxoplasmosis, Brucellosis, etc.	One Case
2	**Acute Encephalitis Syndrome- AES**	A person of any age who, at any time of the year, develops Fever of acute onset AND at least one of the following: A change in mental status (including symptoms such as confusion, disorientation, coma or inability to talk); or New onset of seizures, excluding simple febrile seizures.	JE, Nipah virus, Rabies, Tetanus, Cysticercosis/Taeniasis, Scrub Typhus, Malaria (Cerebral Malaria), Toxoplasmosis	One Case
3	**Acute Hemorrhagic Fever- AHF**	Any person who develops a fever without any specific cause and has bleeding from different parts of the body, such as gums, nose or mouth or has bruises on the body without any injury.	Dengue, Yellow fever, Lassa Fever, Ebola, Crimean-Congo Hemorrhagic Fever, Marburg Viral Disease, Rift Valley Fever	One Case
4	**Acute Flaccid Paralysis- AFP**	Any child under 15 years of age with acute flaccid paralysis or any person with paralytic illness at any age in whom the clinician suspects poliomyelitis.	Poliomyelitis	One Case

S. N.	Syndromes	Definition of Syndrome	Target Diseases	Immediate reporting condition
5	**Severe Acute Respiratory Infection - SARI**	A patient with acute respiratory infection with a history of fever or measured fever, and cough, with onset within the last 10 days, requires hospitalization. Some conditions of SARI are *(Acute exacerbations of COPD with Fever, Asthma with Fever, Pneumonia, LRTI, ARI, ARDS, URTI, Tonsilitis, etc.)*	Influenza (Zoonotic and Seasonal), SARS, COVID-19, MERS, H. influenzae, Diphtheria, Pertussis, Anthrax, Plague, Pneumococcal Pneumonia, Nipah Virus, Legionellosis, Tuberculosis	One Case
6	**Influenza-Like Illness- ILI**	A patient with respiratory infections presents with a fever of ≥38 °C and cough with onset within 10 days. (Some Conditions of ILI are ARI, URTI, Tonsillitis, Pharyngitis, etc.)		5 or more cases from the same cluster
7	**Febrile Illness with Jaundice**	If a person presents with fever and jaundice with a history of less than 10 days.	Yellow Fever, Hepatitis A, Hepatitis E, Leptospirosis, Enteric Fever, Malaria	5 or more cases from the same cluster
8	**Acute Gastroenteritis-AGE**	Any person with three or more loose or watery stools within 24 hours, with or without vomiting	Cholera, Enteric (Typhoid/Paratyphoid) Fever, Salmonellosis, Rotavirus, and other diarrheal diseases	5 or more cases from the same cluster

Any death case of the patient having above syndromes should be reported immediately (within 24 hours). For Influenza-Like Illness (ILI), Fever with Jaundice, and Acute Gastroenteritis (AGE), any occurrence of five or more cases within the same cluster shall be reported immediately as an event. In instances where fewer than five cases are identified, these should be documented, compiled, and reported through the routine weekly reporting system.

Annex V: Public Health Events to be reported via EWARS

1. Unexpected death(s) of an individual from an unknown cause.
2. Clusters of cases reported in the hospital within 24 hrs. due to food poisoning or contaminated water sources in the community.
3. Influx of cases due to exposure to specific environmental hazards, including chemical, radiological or nuclear events
4. Mass casualties reported in the hospital due to natural or man-made disasters
5. Transmission of the diseases to hospital Staff as a hospital-acquired infection.
6. Unexpectedly high number of hospitalizations and/or death cases over a period of time.
7. An illness with novel or rare symptoms.
8. Multiple patients with a disease that does not resolve with usual treatment.
9. Others events of public health emergencies.

Annex VI: Contact Information of Key Public Health Emergency Response Agencies

S.N	Agencies	Contact Number
1	Ministry of Health and Population	015362590
2	Department of Health Services	014248735
3	Epidemiology and Disease Control Division	014255796/ 015362268
4	Hello Health Call center	1115
5	Koshi Health Directorate	023-522508
6	Madhesh Health Directorate	041-590724
7	Bagmati Health Directorate	057524510
8	Gandaki Health Directorate	061570390
9	Lumbini Health Directorate	082590435
10	Karnali Health Directorate	083520171
11	Sudurpaschim Health Directorate	094-440120
12	HEOC	015369735
13	NPHL	015352421
14	PPHL Koshi	021511049
15	PPHL Madhesh	041-590974
16	PPHL Bagmati	11-491441
17	PPHL Gandaki	061-575751
18	PPHL Lumbini	9851239988
19	PPHL Karnali	083-520770
20	PPHL Sudurpaschim	091-590684
21	FWD	015362273

Annex VII: List of Variable or Minimum Data Need for Sentinel Sites

S.no.	Categories	Minimum Data
1	Identifiers	Registration Number
		Registration Type
		Patient/Client's Full Name
		Age of the Patient in completed years
2	Current Address of the Patient	District
		Municipality
		Village/Tole
		Ward Number
		Contact Number of the client or his/her near relatives
3	Disease or Syndrome	Name of Disease or Syndrome
		Details of Disease or Syndrome
		Classification of the disease
		Date of the diagnosis
4	Laboratory Diagnosis	Name of the laboratory Method
		Result of the diagnostic test
		Place of laboratory test (shall specify if it is undertaken within the sentinel site or other)
5	Outcome	Outcome of the disease or condition
6	Referral Information	Place of Referral Location
		Date of Referral
18	Others	Date of contact with the hospital

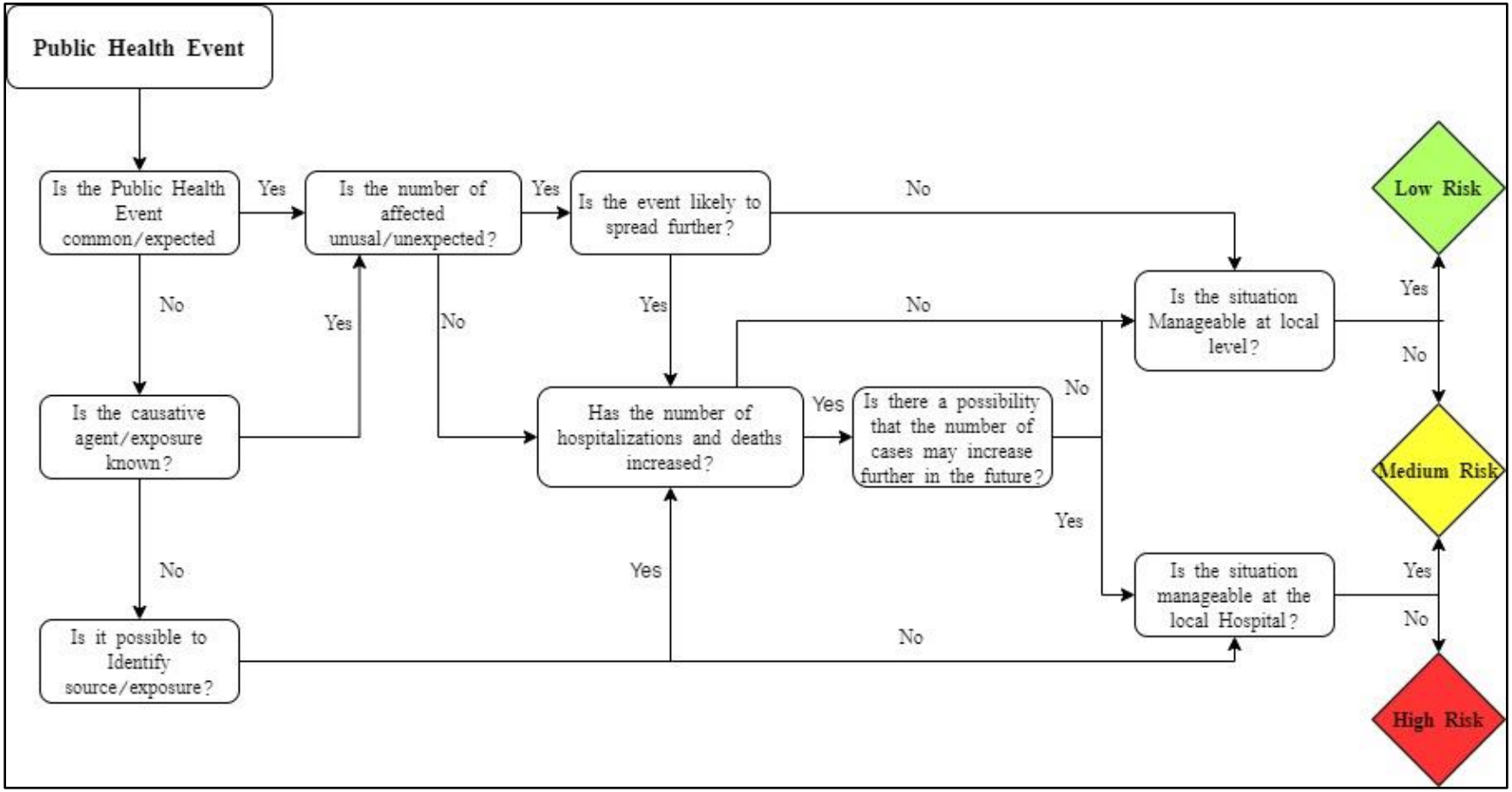
EDCD may add further information depending upon the diseases /syndromes/events

Annex VIII: List of Variable or Minimum Data Need for Reporting (Laboratory) Sites

S.N.	Categories	Minimum Data
1	Identifiers	Registration Number
		Patient/Client's Full Name
		Age of the Patient in completed years
2	Address of the Patient (Current)	District
		Municipality
		Village/Tole
		Ward Number
		Contact Number of the client or his near relatives
3	Specimen Information	Type of Specimen
		Date of Specimen Collection/ Received
		Specimen Collecting Institution (Reporting Lab or Referring Hospital)
4	Test Information	Type of Test Requested
		Type of Test Performed
		Test Result
		Date of Result
		Final Diagnosis

EDCD may add further information depending upon the diseases /syndromes/events

Annex IX: Initial Risk Assessment Framework



Annex X: Monitoring Indicators

Indicators	Definition of Indicators	Source	Monitoring Period
Timeliness in reporting	No. of cases reported immediately within the specified time frame/Total no. of cases reported within the epi-week* 100.	EWARS	Epi- Week
Completeness in reporting	Total no of cases reported with all the required fields within the specified time frame / Total no of cases reported within the time frame *100	EWARS	Epi- Week
Functionality of Surveillance sites	No. of sites that reported at least one case within the specified time frame/Total no of enrolled sites*100	EWARS	Epi-Week, Yearly
IRA Rate	Total number IRAs performed /Total Number of Generic Alert*100	EWARS/SORMAS	Epi-Week/Yearly
Timely response rate	Total response alert with response completed within seven days/ total response alerts * 100	RRT reports/SORMAS	Yearly

List of Contributors

S.N.	Name	Designation	Organization
1	Dr. Keshar Bahadur Dhakal	Director General	Department of Health Services
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