WEEKLY EPIDEMIOLOGICAL REPORT

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Indicator & Event based Surveillance Part II

This is the second article of series of two articles.

Table 2: Strengths and characteristics of the IBS & EBS (continued)

IBS	EBS
What is reported?	
Cases meeting pre-defined case definitions for a selected number of priority diseases and conditions	Events meeting pre-defined event definition – these can be either broad or tailored to detect events related to a specific threat/ ongoing outbreak. Not restricted to specific prioritized diseases or hazards and can be based on unstructured information and include other sectors (e.g., animal & environmental health)
Frequency of reporting	
Systematic & regular reporting (usually pre-defined frequency complemented by immediate reporting for selected alert levels).	Ad hoc reporting (when an event is detected). All events should be reported to the system in real-time immediately. Immediate reporting to supervisor for immediate triage and prompt notification as a signal.
Structure of reporting	
Clearly defined. Has reporting forms and dates with teams to analyze data at regular intervals.	-No predefined structure -Reporting forms are flexible for qualitative and quantitative data. -Can be at any time -Teams needed to confirm events and prepare the response.
When does reported info become a signal?	
When predefined, disease-specific alert thresholds are crossed.	When triaged info is assessed to be non-duplicative information about a potential public health event.
Precision	
Fewer discarded signals are expected.	More discarded signals are expected.
Response	
Can have delays in reporting and response.	Can have delays in confirmation and response.
Resource considerations	
Requires less staff for alert management as fewer false signals are generated. Usually well-established before an emergency; better resources with more trained staff readily available.	Requires more resources for alert management as many false signals are generated. Initial systems can be implemented rapidly.

It is to be noted that while these distinc-

tions are relevant in some settings, case and event definitions can share many similarities, and IBS & EBS can be integrated into common systems for early warning. Outlining a strategy for the implementation of the IBS and EBS systems effectively is also an important step. When deciding on a surveillance strategy for EWAR, the following questions need to be systematically considered:

-**WHO** should be reporting to the surveillance network. *(Please refer to Table 3)*

-**WHAT** priority diseases, conditions and events should be reported?

-**WHEN** and **WHERE** should the data be reported?

-**HOW** do data collection and reporting occur? What is the process for reporting?

Table 3: Potential sources of IBS & EBS data

IBS	EBS
Laboratories	
Routinely used	Often used – identification of a disease not previously detected in the region / new antimicrobial resistance profile/increase in demand for hepatitis serology
Hospitals	
Routinely used – notification systems	Often used – reporting diseases not resolving with usual treatment
OPDs / Pharmacies	
Routinely used	Often used – reporting a group/family with similar symptoms
Community based workers / Field HCWs	
Sometimes used – e.g. reporting weekly counts of suspected cases in their assigned region ***However, in SL – this is a frequently used system via the MOH notification system of communicable diseases.**	Often used – reporting clusters of severely sick children with an unknown disease
Other community based members	
Sometimes used	Often used – religious / village leaders reporting clusters of death in their community
Government agencies, NGOs, veterinary services, food agencies, etc.,	
Sometimes used	Sometimes used – regional animal health authorities reporting mass animal die off
General public & media	
Not applicable	Sometimes used – e.g., public hotlines to report acute public health events

identification of acute public health events may be best achieved through the use of a combination of complementary reporting sources under IBS & EBS strategies. Information arising from different sources will need to be inked for interpretation. The same event or case might be reported from different sources; therefore, de-duplication is crucial. E.g., an outbreak of Disease X might be reported as a single case in IBS data from health facilities but reported as a cluster of 15 ill people with similar symptoms in a town through community EBS. Thus, this data needs to be brought together and interpreted jointly to unleash an appropriate and timely public health response.

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Sources:

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- WHO (2022) Early Warning Alert and Response in Emergencies: an operational guide. Geneva: World Health Organization. License: CC BY-NC-SA 3.0 IGO.
- CDC (2021) *Event-Based Surveillance*, Global Health Protection Security- CDC; Accessed 8.2.2023. https://www.cdc.gov/globalhealth/healthprotection/gddopscenter/how.html#:~:text=Indicator%2Dbased%20Surveillance,Objectives&text=Event%2Dbased%20Surveillance%3A%20Official%20and,blogs%2C%20community%20members%2C%20etc.

Table 1: Selected notifiable diseases reported by Medical Officers of Health 04th– 10th Feb 2023(6th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	222	1722	0	1	0	2	0	0	0	2	3	19	0	0	0	0	0	0	1	16	0	4	0	3	**18**	**81**
Gampaha	172	1548	0	0	1	3	0	0	0	0	5	30	0	0	0	2	0	0	0	23	3	18	6	8	**1**	**78**
Kalutara	84	571	1	2	0	0	0	0	0	2	7	51	0	0	0	1	0	1	5	32	0	14	0	0	**5**	**72**
Kandy	75	456	1	7	0	0	1	1	0	1	4	26	2	13	0	0	0	0	10	37	1	3	1	4	**46**	**100**
Matale	20	162	0	1	0	0	0	1	0	1	0	10	0	1	0	2	0	0	1	5	0	1	12	47	**28**	**100**
NuwaraEliya	5	24	2	7	0	0	0	0	0	4	1	11	0	9	0	0	0	0	1	15	0	0	0	0	**44**	**78**
Galle	49	276	0	3	0	1	0	0	0	3	18	70	3	10	0	0	0	0	10	40	0	1	0	0	**23**	**100**
Hambantota	29	127	0	0	0	0	0	0	4	4	2	30	7	17	0	7	0	0	5	24	0	2	2	56	**31**	**100**
Matara	49	232	2	5	0	0	0	0	0	3	9	52	0	7	0	1	0	0	11	28	1	4	4	18	**46**	**100**
Jaffna	46	541	2	6	0	1	0	2	0	3	0	4	21	200	0	0	0	1	1	13	0	0	0	0	**78**	**80**
Kilinochchi	3	24	0	2	0	0	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	0	0	0	**15**	**83**
Mannar	0	16	0	3	0	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	0	1	0	0	**25**	**53**
Vavuniya	0	7	0	3	0	0	0	0	0	0	1	5	0	3	0	0	0	0	2	2	0	1	0	0	**0**	**88**
Mullaitivu	0	5	0	6	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	0	0	0	**22**	**64**
Batticaloa	62	249	1	34	0	4	0	2	3	5	1	14	0	0	0	0	0	0	0	12	1	5	0	0	**33**	**100**
Ampara	7	31	0	1	0	1	0	0	0	0	0	9	0	0	0	1	0	0	5	13	0	4	0	1	**12**	**98**
Trincomalee	35	197	1	1	0	0	0	0	0	0	2	10	1	4	0	0	0	0	0	7	0	3	1	1	**23**	**99**
Kurunegala	50	452	1	5	0	3	0	0	0	0	1	38	0	3	0	2	0	0	8	64	1	20	7	67	**21**	**97**
Puttalam	118	1194	0	0	0	0	0	0	0	0	2	5	0	6	0	0	0	0	3	18	1	10	0	0	**14**	**91**
Anuradhapur	9	77	0	1	0	0	0	0	0	1	9	61	0	10	0	0	0	0	4	24	1	6	3	68	**20**	**99**
Polonnaruwa	16	109	0	1	0	2	0	0	0	0	1	23	0	2	1	3	0	0	6	11	0	7	5	56	**23**	**72**
Badulla	38	237	1	6	1	1	0	0	0	4	14	46	0	3	1	17	0	0	1	14	1	4	1	6	**46**	**100**
Monaragala	8	58	1	3	0	0	0	0	0	0	3	57	0	8	1	1	0	0	1	6	0	18	5	25	**16**	**95**
Ratnapura	60	266	0	6	1	2	0	0	0	5	19	121	0	8	1	2	0	0	1	6	2	22	1	25	**26**	**100**
Kegalle	45	306	0	0	0	0	0	0	0	0	3	27	1	4	0	1	0	0	6	37	0	6	0	1	**22**	**88**
Kalmune	89	711	2	13	0	0	0	0	0	0	0	8	0	0	0	0	0	0	1	2	2	3	0	0	**41**	**96**
SRILANKA	**129**	**9598**	**15**	**117**	**3**	**20**	**1**	**6**	**7**	**38**	**10**	**737**	**35**	**314**	**4**	**40**	**0**	**2**	**84**	**452**	**14**	**157**	**48**	**386**	**28**	**92**

Source: Weekly Returns of Communicable Diseases (esurvillance.epid.gov.lk). T=Timeliness refers to returns received on or before 10th Feb, 2023 Total number of reporting units 358 Number of reporting units data provided for the current week: 301 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

04th– 10th Feb 2023(6th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2023	Number of cases during same week in 2022	Total number of cases to date in 2023	Total number of cases to date in 2022	Difference between the number of cases to date in 2023 & 2022
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	01	00	00	00	00	00	00	00	01	02	10	09	11.11
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	00	00	00	00	00	00	01	04	01	18	05	260 %
Measles	01	00	00	00	00	00	00	00	00	01	01	01	04	- 75 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	01	01	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Enceph-alitis	00	00	00	00	00	00	00	00	00	00	00	00	01	0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Tuberculosis	58	11	15	04	04	00	00	06	07	105	55	897	953	- 5.8 %

Key to Table 1 & 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

RDHS Divisions: **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna, **KN**: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam, **AP**: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS =**Congenital Rubella Syndrome

NA = Not Available

Seek medical advice if you get a fever after exposure to muddy water or soil.

It could be Leptospirosis.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to **chepid@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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