TRAINING MANUAL FOR MEDICAL OFFICERS FOR HOSPITAL BASED DISEASE SURVEILLANCE

INTEGRATED DISEASE SURVEILLANCE PROJECT
NATIONAL CENTRE FOR DISEASE CONTROL

Contents

Preface..... 2

1. Disease Surveillance 7

2. Integrated Disease Surveillance Project 9

3. Hospital Based Disease Surveillance under IDSP 11

3.1 District Health System.....11

3.2 Why capturing hospital data is important for disease surveillance under IDSP 12

3.3 Both Inpatient and Outpatient Data need to be included in hospital surveillance 12

3.4 Hospital based Surveillance as classified under IDSP.....12

4. Establishing Surveillance at Hospital Level..... 14

4.1 Role of Key stakeholders..... 14

4.2 Role of the Hospital Superintendent 14

4.3 Role of the Nodal Officer/s 14

4.4 Role of the Doctors 14

4.5 Role of Laboratory staff 15

4.6 Role of the Paramedical staff (Pharmacists, Nurses) 15

4.7 Mapping All Sources of Data..... 15

5. Translating Data to Requisite Forms for Weekly Reporting..... 17

5.1 Suspecting Outbreak based on Tally Number..... 18

5.2 Laboratory confirmed reporting in IDSP is through L form 18

6. Communicable Diseases under IDSP 20

7. Probable Case Definitions as per IDSP..... 21

8. Sample Collection (Summary Table)..... 26

9. Frequency of Hospital reporting under IDSP..... 27

ANNEXURE I : P Form under IDSP..... 28

ANNEXURE II: Tally Sheet (Blank) 29

ANNEXURE III: L form as per IDSP 30

ANNEXURE IV: Master Table: Week Wise 31

Preface

Integrated Disease Surveillance Project (IDSP), a decentralized disease surveillance project in India was initiated by the Government of India in November 2004 with funding support from World Bank. It is intended to generate and detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner.

An important component in this regard is strengthening of hospital based disease surveillance in the country for the priority diseases as identified by the project. The surveillance of probable cases under IDSP is based on the clinicians assessment of the patient based on signs and symptoms. Timely sharing of this information can help prevent the spread of outbreaks in the community.

This document has been compiled and produced for the purpose of providing clear and concise information to medical staff on how their diagnosis translates into epidemiologically useful information which is collated using IDSP prescribed formats with due importance being accorded under the project to both inpatient as well as outpatient data.

It is hoped that this manual will help the medical faculty to understand their pivotal role in hospital based disease surveillance under IDSP. We gratefully acknowledge valuable technical inputs of the World Health Organization (WHO) and the World Bank (WB).

1
Disease Surveillance

Introduction

Communicable diseases constitute a significant disease burden and are major causes of morbidity, mortality and long-term severe mental and physical disabilities. Many of these diseases are epidemic prone. Epidemics are public health emergencies which can disrupt routine health services and are a major drain on resources.

The receptivity of an area to outbreaks is related to inadequate drinking water facilities, poor sanitary and adverse environmental conditions. Developmental activities such as large constructions, irrigation and industries can also increase the risks of epidemics unless adequate preventive and precautionary measures are inbuilt in the planning and implementation stages.

The course of an epidemic is dependent on how early the outbreak is identified and how effectively specific control measures are applied. Not all outbreaks can be predicted or prevented. However, precautionary measures can be taken within the existing health infrastructure to reduce risks of outbreaks and to minimize the scale of the outbreak if it occurs.

Doctors in medical facilities and hospitals can play a pivotal role in generating early warning signals of an impending outbreak by sharing this information quickly with the local health authorities. During outbreaks, information based on provisional diagnoses as reported by the clinicians is pivotal to direct the outbreak control efforts in the right direction. Outbreak verification based on the laboratory confirmed information is crucial but public health response to the outbreaks should not wait for laboratory reports.

Surveillance

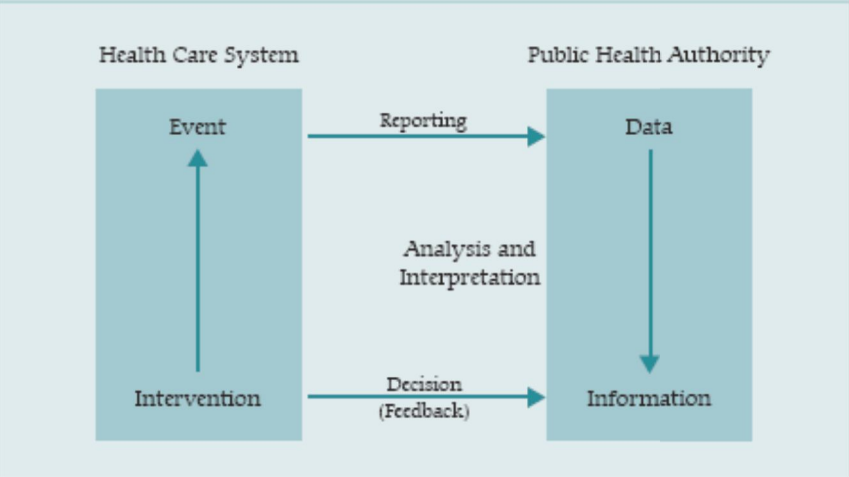
Surveillance in its simplest form is collection of information for action. Disease surveillance is the ongoing systematic collection and analysis of data, converting into and the provision of information which leads to action being taken to prevent and control a disease. Surveillance keeps a close watch on health events occurring in the community and detects outbreaks that may be occurring so that corrective action can be taken immediately.

By preventing outbreaks, the credibility of the health services is greatly improved. Hence it is important to have a good public health surveillance system, which is able to pick up any unusual events early enough and alert decision makers enabling them to act swiftly and effectively.

The six main steps in surveillance as also shown in the figure below are:

- Detection and reporting of health event
- Collection of data
- Investigation and confirmation
- Analysis and interpretation of data
- Response – a link to public health program primarily actions for prevention and control
- Feed back and dissemination of results.

Fig 1: Conceptual framework for surveillance and response of infectious diseases



2
Integrated Disease Surveillance Project (IDSP)

Integrated Disease Surveillance Project (IDSP), a decentralized disease surveillance project in India was initiated by the Government of India in November 2004 with funding support from World Bank. It is intended to generate and detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. In later years the routine surveillance data and trends over years will be used to predict outbreaks well in advance and initiate preventive /averting actions.

Under the project, Surveillance Units under the project have been set up at Central, State and District levels with the district being the hub of all activities. Linkages have been established with all State Head Quarters, District Head Quarters and all Government Medical Colleges on a Satellite Broadband Hybrid Network for enhanced speedy data transfer and video conferencing facilities.

Objective of IDSP

The main objective of IDSP is early detection of disease outbreaks. Whenever there is a rising trend of illnesses of similar nature in any area, it is investigated by the Medical Officers/Rapid Response Teams (RRT) to verify, confirm and take up appropriate control measures for the outbreak.

Information flow under IDSP

Under IDSP disease surveillance data are collected on a weekly (Monday–Sunday) basis and immediate (SOS) on imminent outbreaks. The weekly data gives the time trends and silent outbreaks. The IDSP has a web portal through which information can be directly uploaded at district and is accessible at www.idsp.nic.in.

Reporting formats under IDSP

The information is collected on three specified reporting formats, namely “S” (suspected cases), “P” (presumptive cases) and “L” (Laboratory confirmed cases), the data for which is generated by Health Workers, Clinician and Laboratory staff respectively.

Emphasis is being laid on reporting of surveillance data from major hospitals both in public and private sectors and also Infectious Disease hospitals. Paramedical staff and pharmacists can be crucial links in collating the P form data from hospitals.

Generating surveillance data for action

The compilation of disease outbreak alerts has been started in 2008. On an average 20-30 outbreaks are reported every week to Central Surveillance Unit, IDSP. Data analysis and action are being undertaken by respective districts.

IDSP Toll Free Number

A 24X7 call center with toll free telephone no. 1075 accessible from BSNL/MTNL telephone from all districts of the country is in operation since February 2008. This receives disease alerts from anywhere in the country and diverges the information to the respective District Surveillance Units and State Surveillance Units for verification and initiating appropriate actions wherever required.

Private practitioners are particularly encouraged to use this toll free number and report if they are seeing an unusual increase in the number or change in presentation of cases.

3
Hospital Based Disease Surveillance under IDSP

A greater emphasis is being laid on reporting of surveillance data from major hospitals both in public and private sectors and Infectious Disease hospitals under the Integrated Disease surveillance Project (IDSP).

3.1 District Health System

India's Public Health System has been developed over the years as a 3-tier system, namely primary, secondary and tertiary level of health care. District Health System is the fundamental basis for implementing various health policies and delivery of healthcare, management of health services for defined geographic areas. The District Health System includes district hospitals, Sub-district/Sub-divisional hospitals, Community Health Centers, Primary Health Centers and Sub-centers and private sector hospitals, nursing homes and large number of private clinics.

District hospitals

District hospitals are an essential component of the district health system and functions as a secondary level of health care. District hospital mainly works as a curative facility, but also supports the district health system for the preventive and promotive health care of the community.

The district hospital in India caters to the people living in urban (district headquarters town and adjoining areas) and as referral for the rural people in the district.

As per the information available, 626 districts in the country at present are having 615 district hospitals. Some of the medical college hospitals or a sub-divisional hospital may serve as a district hospital where a district hospital as such (particularly the newly created district) has not been established.

Medical colleges in the district

Medical colleges serve as referral institutes within the districts and attract population in and around the district for the advanced curative services they offer. There are over 250 Medical colleges in the country. Some of them are attached to the district hospitals but most have their own hospitals, catering to large number of patients and act as referral of secondary and tertiary level care. Through departments of Medicine, Pediatrics, Microbiology and Community Medicine, their role in disease surveillance of the district is

paramount. All the major colleges also have Postgraduate Degree or Diploma courses in their programmes. In many districts, doctors from medical college hospitals are active members of the Rapid Response Team.

Other big hospitals such as the Infectious disease (Isolation/ communicable diseases) hospitals, Corporation Hospitals, Railway Hospitals, ESI Hospitals, Military Hospitals and Missionary Hospitals also contribute to the health service delivery of the district. Some of the Infectious Diseases Hospitals are already involved in IDSP and generating important information on the diseases prevailing in the community.

Private Hospitals in the district

Health care services also depend on the private health providers in most states in India. Private hospitals, nursing homes and clinics meet a large chunk of the curative needs of the urban centers. In the event of an emerging outbreak, the private sector units may detect the warning signs earlier than the public sector. It becomes crucial to engage the private hospitals and IDSP is making all out efforts for their participation in the surveillance of outbreak prone diseases.

3.2 Why capturing hospital data is important for disease surveillance under IDSP

Public sector Hospitals cater to large populations especially lower and middle socio-economic groups and thus capture crucial data on many communicable diseases. Many of these diseases such as gastroenteritis, dengue and leptospirosis also have the potential of causing large outbreaks.

If the hospital is able to timely notify and report a sudden increase in the number of cases of an infectious disease presenting to the hospital or clustering of cases in an area, to the district surveillance authorities, necessary corrective action can be taken to prevent spread of the outbreak and control it effectively.

3.3 Both Inpatient and Outpatient Data need to be included in hospital surveillance

All health facilities including hospitals should maintain records of patients seen including all OPD cases. Address of the patients may be recorded. Severe presentations and mortality will be reflected in the inpatients and milder and earlier disease will be reflected in the outpatient surveillance data. Therefore collection of data from OPD is very important and each hospital/facility needs to work out the methodology of collecting this data.

3.4 Hospital based Surveillance as classified under IDSP

- Presumptive or probable surveillance: Diagnosis made on the typical history and clinical examination by a medical officer.
- Laboratory Confirmed: Clinical diagnosis with positive laboratory identification

Fig 2: Timely information generated by the hospitals, laboratories and clinicians can help alert the health authorities to prevent the spread of communicable diseases.

Table I

Case Definition	Criteria	Users
Presumptive (Probable) "P" forms	Typical history and clinical examination	Medical officers of primary and community health centers, Hospitals (private, Government), private practitioners. Pharmacists can help in compiling disease surveillance data from OPDs while nurses can help in data collection from inpatients. This information needs to be collated as P form.
Confirmed "L" forms	Clinical diagnosis by a medical officer and positive laboratory identification	Medical officer and Laboratory staff For compiling line lists in L form, Nurses can help in collection of detailed information from inpatient case sheets.

4
Establishing Surveillance at Hospital Level

4.1 Role of Key stakeholders

The key stakeholders for establishing surveillance at the hospital level are the Hospital Superintendent, Nodal person (Hospital surveillance nodal officer-as designated by the Hospital Superintendent), doctors, the paramedical staff and laboratory staff. The role of the clinicians is paramount as the entire probable surveillance is based on their assessment of signs and symptoms of the patients' presenting to the health facility and entering a provisional diagnosis in the register.

4.2 Role of the Hospital Superintendent

The Superintendent of the hospital is the ultimate responsible authority for establishing, maintenance and reporting arrangement of surveillance in the district/major hospital. He/she may identify one or more nodal person (each department i.e. general medicine, pediatrics, microbiology or lab services etc) for facilitating surveillance in respective units. The task of collating data into P form would be facilitated by paramedical staff as identified by the Hospital Superintendent.

The hospital superintendent with nodal officers should be able to map out all possible sources of data in the hospital that would ultimately be collated into the P form and lab data into L form.

4.3 Role of the Nodal Officer/s

The nodal person would be responsible for day to day oversight like:

- Ensuring that the doctors sitting in OPD are writing provisional diagnosis.
- He/she would also ensure that list of conditions to be reported is placed on the table under a glass or hung on the wall at site easily visible to doctors sitting in OPD for ready reference.
- Organize a briefing to all the doctors running OPD/casualty etc to emphasize the need for their cooperation in making surveillance possible in the larger interest of the community.
- Be able to identify impending disease outbreak/s in the community.
- Weekly data shared with the district authorities may be submitted for perusal of Hospital Superintendent.

4.4 Role of the Doctors

The clinicians are the key staff around which the probable reporting under IDSP is based. The doctors must make it a habit to write the provisional diagnosis in the OPD register (or in

OPD chit that is later collated at the Pharmacy before giving out drugs prescribed). This important information generated in routine OPD would serve to identify impending outbreaks; hence it is important that the writing of the doctor is clear and legible.

Coming across multiple (clustering) cases from the same locality (urban ward/village) on a given day or consecutive days, one should suspect and alert the DSO OVER PHONE. In such a case they may note down the address also which is not generally noted for OPD patients.

The doctors in the OPD should refer at least the suspected outbreak associated cases to the laboratory for taking appropriate samples of human cases.

4.5 Role of Laboratory staff

The laboratory staff shall fill up the L form from the laboratory investigation register being maintained routinely in the facility/hospital, (See Annexure). The line listing of all positive cases of diseases to be reported under IDSP requires: Name, age/sex and address details of the patient, to detect clustering of cases, hence it is important to note the registration number of the patient.

4.6 Role of the Paramedical staff (Pharmacists, Nurses)

The P form reporting under IDSP is to be done as per information generated by the clinicians. The pharmacists shall collect information from OPDs and nurses from the in-patient case sheets and enter into daily Tally Sheet. At the end of the week (every Monday), data would be collated into P form as per IDSP. Nurses can also facilitate in obtaining detailed information on laboratory confirmed cases.

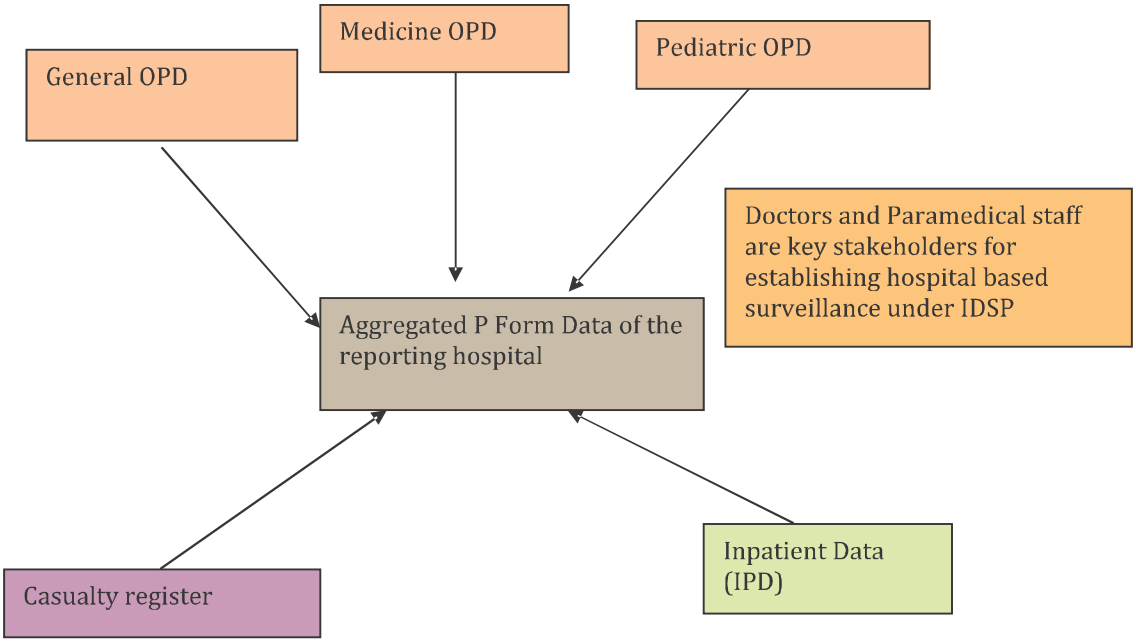
It is important that the data that is generated be uniform, regular and timely.
[See Annexure I for P form].

It is important that the clinician writes the diagnosis legibly so that surveillance data can be collected and collated into the final P form by the pharmacist and other paramedical workers.

4.7 Mapping All Sources of Data

The hospital superintendent with nodal officers should be able to map out all possible sources of data in the hospital that would ultimately be collated into the P form and L form. In a district/block hospital, data capture from emergency/casualty register and the OPD (outpatient register) would be vital. The two specialty branches which are crucial for generating early warning signals are medicine and pediatrics. The in-patient details (usually maintained by the hospital nurse in most hospitals) also need to be entered into the collated form at the end of the week.

Fig 2: Mapping the sources of data to be collated in the P form under IDSP



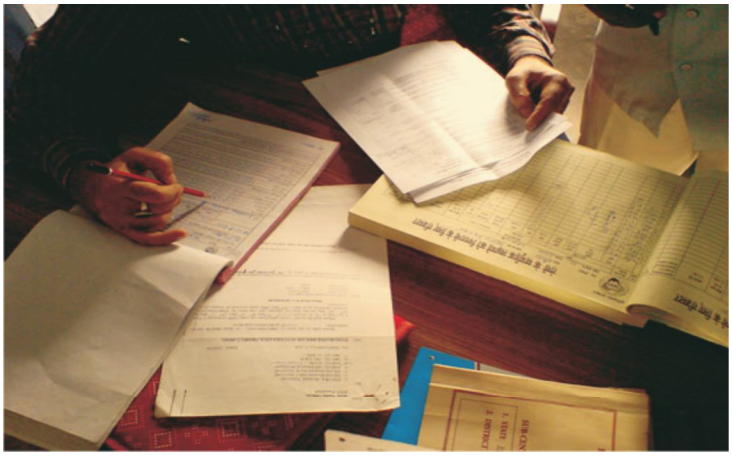
5
Translating Data to Requisite Forms for Weekly Reporting

The designated person (pharmacist/nurse/other) responsible for collating IDSP surveillance information needs to understand the basis of compiling this information and ensure that proper and complete information is collected, collated and shared with the District Surveillance Officer.

The pharmacist needs to be familiar with the common epidemic prone diseases in the State and those that are to be included in the IDSP form. The medical staff can facilitate this process.

With this basic knowledge, the paramedical staff is expected to read the provisional diagnosis written by the doctor and be able to collate that as per IDSP, P format.

Figure 3: A pharmacist noting down details of cases from OPD register.



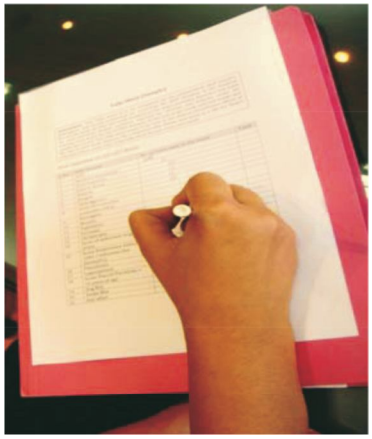


Fig 4: A paramedical staff filling the daily tally sheet.

5.1 Suspecting Outbreak based on Tally Number

Outbreak is a term used in epidemiology to describe an occurrence of a disease or illnesses of similar nature occurring in greater number than normal expectation in a particular time and place. It may be small and localized or affect thousands of people. One case of a rare condition like plague, polio or two linked cases of an uncommon infectious disease may be sufficient to constitute an outbreak.

Recognizing an Early Warning Signal

If the pharmacist or nurse encounters in his/her daily tally process [see Sample Tally Sheet on page 19] an unusual increase in the number of cases in any particular category, he/she should call up the District Surveillance Officer (DSO) immediately and notify on telephone. The written report/mail can follow subsequently.

5.2 Laboratory confirmed reporting in IDSP is through L form

The L form reporting in the hospital is to be done by the laboratory technical staff based on the number of samples tested and those found positive.

Role of paramedical staff in L form reporting:

- The line lists [Annexure III] of positive cases are required to be entered. This includes patient's details: Name, Age, Sex and Address.
- The staff nurse can facilitate obtaining these details of in-patients from the patient data records.

Tally Sheet (Sample)

Instructions: This Tally sheet is to be completed daily by the paramedical staff (nurses, pharmacist, and record technician) for recording the IDSP diseases in the hospital. Record the week (by date and week number) in the space provided. Record a tick mark for each infectious disease condition reported by clinician and indicate under the relevant rows as per the list of IDSP diseases. At the end of the week, add tick marks and update the record. This tally sheet needs to be sent to the district surveillance officer at the end of each week. Remove the completed tally sheets and store in a file for future reference. Place a new copy of the tally sheet for use every week.

Week: September 6-12 (37th week)

S. NO.	IDSP DISEASE	NO. OF CASES SEEN IN THE WEEK							TOTAL
		Mon	Tues	Wed	Thur	Fri	Sat	Sun	
1	Acute Diarrheal Disease(including acute gastroenteritis)	III	II	II	I	II	I	I	12
2	Bacillary Dysentery	I	—	—	—	—	—	—	1
3	Viral hepatitis	—	I	II	II	I	—	—	6
4	Enteric Fever	—	—	I	—	—	—	I	2
5	Malaria	II	I	II	I	—	—	I	7
6	Dengue/ DHF/DSS	II	—	—	—	—	I	—	3
7	Chikungunya	—	—	—	—	—	—	—	0
8	Acute Encephalitis syndrome (AES)	—	—	—	—	—	—	—	0
9	Meningitis	I	—	—	—	—	—	—	1
10	Measles	—	—	—	II	—	—	—	2
11	Diphtheria	—	—	—	—	—	—	—	0
12	Pertussis	—	—	—	—	—	—	—	0
13	Chicken pox	—	—	—	—	—	I	—	1
14	Fever of unknown origin (PUO)	—	I	—	I	—	—	—	2
15	Acute Respiratory Infection (ARI) / influenza like illness(ILI)	II	III	I	IIII	I	II	—	14
16	Pneumonia	I	—	—	I	II	—	I	5
17	Leptospirosis	—	—	I	—	—	—	—	1
18	Acute Flaccid Paralysis < 15 years of age	—	—	—	—	—	—	—	0
19	Dog Bite	—	—	—	—	—	I	—	1
20	Snake Bite	—	—	—	—	—	—	—	
21	Any other	—	—	—	—	—	—	—	0

6
Communicable Diseases Under IDSP

For the purpose of surveillance under IDSP, the paramedical staff needs to be familiar with the diseases that are to be reported under the P form. The list is given below:

1. Acute Diarrhoeal Disease (including acute gastroenteritis)
2. Bacillary Dysentery
3. Viral Hepatitis
4. Enteric Fever
5. Malaria
6. Dengue/Dengue Hemorrhagic Fever(DHF)/ Dengue shock syndrome(DSS)
7. Chikungunya
8. Acute Encephalitis Syndrome(AES)
9. Meningitis
10. Measles
11. Diphtheria
12. Pertussis
13. Chicken Pox
14. Fever of unknown origin(PUO)
15. Acute Respiratory Infection (ARI)/Influenza Like illness(ILI)
16. Pneumonia
17. Leptospirosis
18. Acute Flaccid Paralysis < 15 years of age
19. Dog Bite
20. Snake Bite
21. Any other State specific disease (check with your State/district surveillance officer for any additional list of diseases)
22. Unusual syndrome (not being captured by any of the above)

7
Probable Case Definitions as per IDSP

The following case definitions are as defined by the programme[1]:

1. **Acute Diarrhoeal Disease (including acute gastroenteritis)**

   Acute watery diarrhea (passage of 3 or more loose or watery stools in the past 24 hours) with or without dehydration.

   Cholera

   In an area where the disease is not known to be present: Severe dehydration or death from acute watery diarrhoea in a patient aged 5 years or more
   In an area where Cholera is endemic: Acute watery diarrhoea, with or without vomiting in a patient aged 5 years or more.
   In an area where there is a cholera epidemic: Acute watery diarrhoea, with or without vomiting, in any patient.

2. **Dysentery**

   Acute diarrhoea with visible blood in the stool

3. **Viral Hepatitis**

   Acute illness typically including acute jaundice, dark urine, anorexia, malaise, extreme fatigue, and right upper quadrant tenderness. Biological signs include increased urine urobilinogen and >2.5 times the upper limit of serum alanine aminotransferase.

4. **Enteric Fever**

- Any patient with fever for more than one week and with any two of the following:
- Toxic look
- Coated tongue
- Relative bradycardia
- Splenomegaly
- Exposure to confirmed case
- Clinical presentation with complications e.g. GI bleeding, perforation,etc.

[1] http://idsp.nic.in/idsp/IDSP/Case_Def_P_Form.pdf

5. Malaria

A patient with fever in the endemic* area during the transmission season, or who has recently visited an endemic area, without any other obvious cause of fever like:

- Cough and other signs of respiratory infection
- Running nose and other sign of cold
- Diarrhoea
- Pelvic inflammation indicated by sever low backache, with or without vaginal discharge and urinary symptoms
- Skin rash suggestive of eruptive illness
- Burning micturition
- Skin infections e.g. boils, abscess, infected wounds
- Painful swelling of joints
- Ear discharge

However none of these symptoms exclude malaria with certainty. Only an experienced health functionary can exclude other "obvious causes of fever''

6. Dengue/Dengue Hemorrhagic Fever(DHF)/ Dengue Shock Syndrome(DSS)

An acute febrile illness of 2-7 days duration with two or more of the following:

- Headache,
- Retro-orbital pain,
- Myalgia,
- Arthralgia,
- Rash
- Hemorrhagic manifestations
- Leucopoenia

And with one or more of the following:

- Supportive serology (reciprocal haemagglutination-inhibition antibody titer, comparable IgG EIA titer or positive IgM antibody test in late acute or convalescent-phase serum specimen)
- Epidemiologically linked with a confirmed case of dengue fever
- (Occurrence at same location and time as other confirmed cases of dengue fever).

Dengue Hemorrhagic Fever (DHF): A probable or confirmed case of dengue with the following signs:

- ➢ Hemorrhagic tendencies evidenced by one or more of the following:
- Positive tourniquet test
- Petechiae, ecchymoses or purpura
- Bleeding mucosa, gastrointestinal tract, injection sites or other
- Haematemesis or melena
- ➢ And thrombocytopenia (100,000 platelets or less per mm3)
- ➢ And evidence of plasma leakage due to increased vascular permeability, manifested by one or more of the following:
- 20% rise in average haematocrit for age and sex
- 20% drop in haematocrit following volume replacement treatment compared to baseline
- Signs of plasma leakage (pleural effusion, ascites and hypoproteinaemia

Dengue Shock Syndrome (DSS)

All the above criteria, plus evidence of circulatory failure manifested by rapid and weak pulse and narrow pulse pressure (< 20 mm Hg) or hypotension for age, cold, clammy skin and altered mental status.

7. Chikungunya

Acute onset of fever and sever arthralgia/arthritis, with or without rash and residing, or having left an epidemic area 15 days prior to onset of symptoms **(Source: NVBDCP Guidelines)**

8. Acute Encephalitis Syndrome(AES)

Clinically, a case of AES is defined as a person of any age, at any time of year with the acute onset of fever and a change in mental status (including symptoms such as confusion, disorientation, coma or inability to talk) AND/OR new onset of seizures (excluding simple febrile seizures). Other early clinical findings may include an increase in irritability, somnolence or abnormal behavior greater than that seen with usual febrile illness.

Probable JE (Japanese Encephalitis): A suspected case that occurs in close geographic and temporal relationship to a laboratory-confirmed case of JE, in the context of an outbreak.

9. Meningitis

Meningococcal Disease

An illness with sudden onset of fever (>38.5°C rectal or >38.0°C axillary) and one or more of the following:

- Neck stiffness
- Altered consciousness
- Other meningeal sign or petechial or purpural rash
- Turbid CSF (with or without positive Gram stain) or
- Ongoing epidemic and epidemiological link to a confirmed case

In patients <1 year, suspect meningitis when fever accompanied by bulging fontanelle.

Viral Meningitis

A case with fever > 38.5°C and one or more of the following:

- Neck stiffness, severe unexplained headache, neck pain
  And 2 or more of the following
- Photophobia, nausea, vomiting, abdominal pain, pharyngitis with exudates

For children <2 years of age, a case is defined as a child with fever >38.5°C and irritability or bulging fontanelle.

10. Measles

Any person with:

- Fever and
- Maculopapular rash lasting for more than 3 days and
- Cough or coryza (i.e. running nose) or conjunctivitis (i.e. red eyes).

11. Diphtheria

An illness of the upper respiratory tract characterized by the following:

- Laryngitis or pharyngitis or tonsillitis,
- And adherent membranes of tonsils, pharynx and/or nose.

12. Pertussis

A person with a cough lasting at least 2 weeks with at least one of the following:

- Paroxysms (i.e. fits) of coughing
- Inspiratory whooping
- Post-tussive vomiting (i.e. vomiting immediately after coughing) without other apparent cause.

13. Chicken Pox

A febrile illness with acute onset of diffuse (generalized) maculopapulovesicular rash without other apparent cause.

14. Fever of unknown origin(PUO)

- Fever of more than 101°F (38.3°C), either continuous or intermittent, for at least two weeks, or
- Fever above 101°F with no known cause even after extensive diagnostic testing

15. Acute Respiratory Infection (ARI)/Influenza Like illness(ILI)

A person with sudden onset of fever of >38°C and cough or sore throat in the absence of other diagnosis.

16. Pneumonia

Any case clinically diagnosed as pneumonia with symptoms of fever and cough and/or difficult breathing + chest X-ray confirmation.
or
In a child -
Pneumonia: Cough or difficult breathing and

- Breathing rate >50/minute for infant aged 2 months to <1year

- Breathing rate>40/minute for child aged 1 to 5 years and no chest indrawing, stridor or danger signs

Severe Pneumonia: Cough or difficult breathing + any **general danger sign** or Chest indrawing or stridor in a calm child.

(**General danger signs**: For children aged 2 months to 5 years, the four general danger signs are unable to drink/breast feed, vomits everything, convulsions, and lethargic/unconscious)

17. Leptospirosis

Acute febrile illness with headache, myalgia and prostration associated with any of the following:

- Conjunctival suffusion
- Meningeal irritation
- Anuria or oliguria and/or proteinuria
- Jaundice
- hemorrhages (from the intestines, lung)
- cardiac arrhythmia or failure
- skin rash

and a history of exposure to infected animals or an environment contaminated with animal urine.

Other common symptoms include nausea, vomiting, abdominal pain, diarrhoea and arthralgia.

18. Acute Flaccid Paralysis < 15 years of age

A case of AFP is defined as any child aged <15 years who has acute onset of flaccid paralysis for which no obvious cause (such as serve trauma or electrolyte imbalance) is found and which is epidemiologically linked with a case of polio.

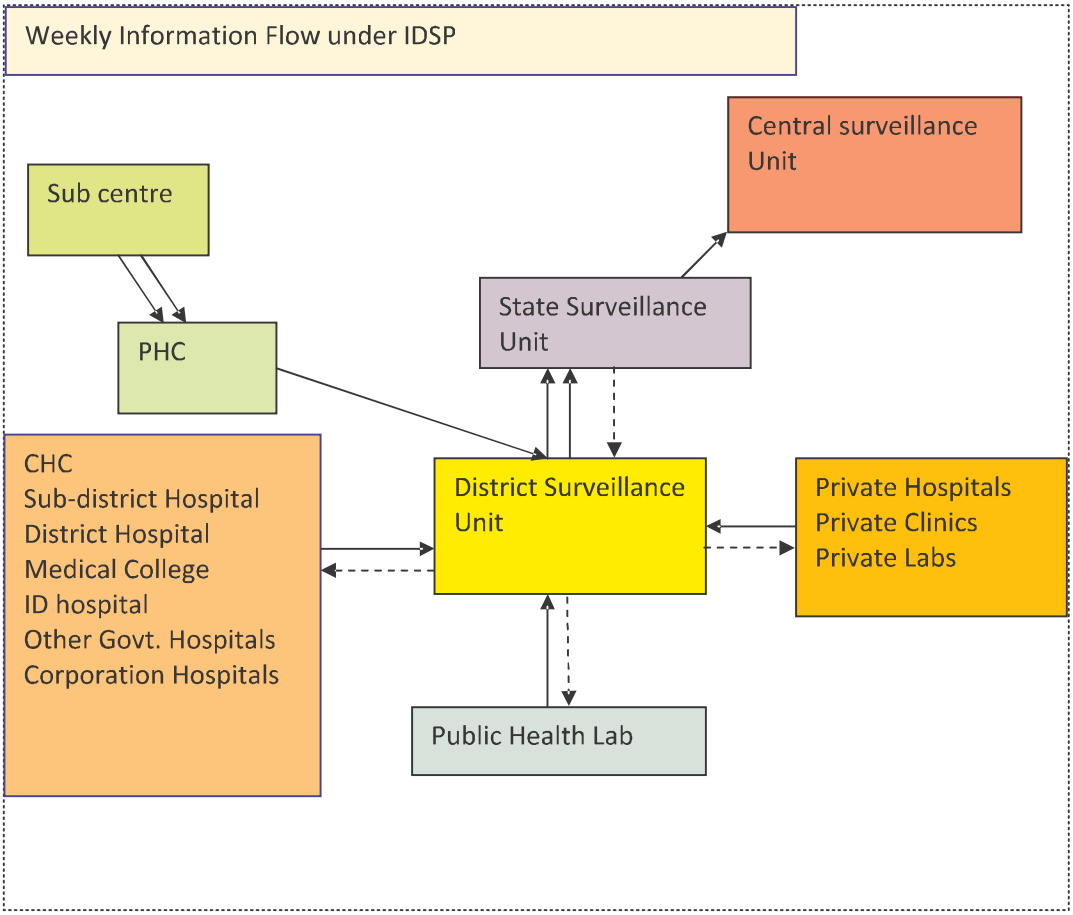
8
Sample Collection (Summary Table)

Probable diagnosis	Trigger event	Sample collection / storage / transport
Acute watery diarrhea	A single case of cholera or epidemiologically linked case of diarrhea / a case of severe dehydration or death due to diarrhea in a patient >5 yrs old Clustering of cases particularly village or ward where >10 houses having at least 1 case of loose stools irrespective of age.	Collect freshly passed stool in a clean, wide mouthed container. Ideally collect within 48 hours of onset of diarrhea. For viral specimens a larger volume is taken Transport stool specimen quickly to the laboratory, in case of delay store at 4-8°C for 48 hrs and transport in Cary Blair medium. In case of delay beyond 2 days store in freezer at -20°C.
Typhoid	More than 30 cases of prolonged fever a week from the entire PHC or 5 or more cases per week from 1 sub centre. OR More than 2 cases from a single village/urban ward with 1000 population.	Blood sample is collected for culture & serology For *blood culture* collect the required volume of venous blood aseptically (5-10 ml for adults, 1-2 ml for children) and transfer carefully to blood culture bottle containing BHI broth. Transfer immediately to lab, taking care to avoid spillage. In case of delay store in an incubator at 37°C for up to 24 hrs. For *serology* collect a paired blood/serum sample, one early in the disease & one in convalescence to detect antibodies.
Jaundice	Clustering of cases from a particular village/urban ward where more than 2 cases of jaundice in different households or More than 10 cases per PHC per week.	Collect blood sample for etiologic diagnosis of the causative agent of jaundice Preferably a paired serum sample for detection of antibodies to HAV, HBV, HCV, HEV.
Measles	A single case of probable measles from a tribal or remote area, or two or more cases with fever with rash.	Blood is collected for detection of specific IgM antibodies.
Dengue DF/DHF	Even a single case of suspected DHF from a community. Rising number of fever cases for previous 3 weeks.	A paired serum sample is collected again to demonstrate IgM or IgG antibodies to the virus. Blood is collected by venepuncture in a clean, sterile tube. Allow the blood to stand for 1-2 hrs for clotting & clot retraction and then centrifuge at low speed. Aliquot clear serum in a separate sterile tube. Store at 4-8°C for short term and in case of further delay store at -20°C.
Meningitis	2 cases with fever with altered consciousness/seizures.	CSF is to be collected by a trained physician or a medical officer. Collect about 1-2 ml CSF in each of the 3 collection vials for cell counts, biochemical & microbiological investigations. Do Gram staining, culture and antigen detection from the microbiological specimen. CSF for bacteriology should never be frozen, transport and store at room temperature - if an incubator is available store in it. CSF for virus detection can be stored at 4-8°C.

9
Frequency of Hospital reporting under IDSP

- Routine Reporting from the hospital to DSU needs to be done once in a week.
- Under IDSP data is collected on a weekly (Monday-Sunday) basis.
- In case there are an unusual number of cases or any unusual presentation being seen of a particular disease, the nodal officer should call up District Surveillance Officer to inform regarding this health alert.
- The District Surveillance Officer shall investigate for any possible outbreak and share information.

Fig 6: Weekly Information flow to the district under IDSP



ANNEXURE I : P Form under IDSP

FORM P
(Weekly Reporting Format –IDSP)

Name of Reporting Institution:			I.D. No.:
State:	District:		Block/Town/City:
Officer-in-Charge	Name:		Signature:
IDSP Reporting Week:-	Start Date:-	End Date:-	Date of Reporting:-
	___/___/_____	___/___/_____	___/___/_____

S.no	Diseases/Syndromes	No. of cases
1	Acute Diarrhoeal Disease (including acute gastroenteritis)	
2	Bacillary Dysentery	
3	Viral Hepatitis	
4	Enteric Fever	
5	Malaria	
6	Dengue / DHF / DSS	
7	Chikungunya	
8	Acute Encephalitis Syndrome	
9	Meningitis	
10	Measles	
11	Diphtheria	
12	Pertussis	
13	Chicken Pox	
14	Fever of Unknown Origin (PUO)	
15	Acute Respiratory Infection (ARI) / Influenza Like Illness (ILI)	
16	Pneumonia	
17	Leptospirosis	
18	Acute Flaccid Paralysis < 15 Years of Age	
19	Dog bite	
20	Snake bite	
21	Any other State Specific Disease (Specify)	
22	Unusual Syndromes NOT Captured Above (Specify clinical diagnosis)	
	Total New OPD attendance (Not to be filled up when data collected for indoor cases)	
	Action taken in brief if unusual increase noticed in cases/deaths for any of the above diseases	

ANNEXURE II: Tally Sheet (Blank)

Instructions: This Tally sheet is to be completed daily by the paramedical staff (nurses, pharmacist, and record technician) for recording the IDSP diseases in the hospital. Record the week (by date and week number) in the space provided. Record a tick mark for each infectious disease condition reported by clinician and indicates under the relevant rows as per the list of IDSP diseases. At the end of the week, add tick marks and update the record. Remove the completed tally sheets & store in a file for future reference. Place a new copy of the tally sheet for use every week.

S. NO.	IDSP DISEASE	NO. OF CASES SEEN IN THE WEEK							TOTAL
		Mon	Tues	Wed	Thur	Fri	Sat	Sun	
1	Acute Diarrheal Disease(including acute gastroenteritis)								
2	Bacillary Dysentery								
3	Viral hepatitis								
4	Enteric Fever								
5	Malaria								
6	Dengue/ DHF/DSS								
7	Chikungunya								
8	Acute Encephalitis syndrome (AES)								
9	Meningitis								
10	Measles								
11	Diphtheria								
12	Pertussis								
13	Chicken pox								
14	Fever of unknown origin (PUO)								
15	Acute Respiratory Infection (ARI) / influenza like illness(ILI)								
16	Pneumonia								
17	Leptospirosis								
18	Acute Flaccid Paralysis < 15 years of age								
19	Dog Bite								
20	Snake Bite								
21	Other								

ANNEXURE III: L form as per IDSP

FORM L
(Weekly Reporting Format – IDSP)

Name of the Laboratory:		**Institution:**	
State:	**District:**	**Block/Town/City:**	
Officer-in-Charge:	**Name:**	**Signature:**	
IDSP Reporting Week:-	**Start Date:-**	**End Date:-**	**Date of Reporting:-**
	___/___/_____	___/___/_____	___/___/_____

Diseases	No. Samples Tested	No. found Positive	
Dengue / DHF / DSS			
Chikungunya			
JE			
Meningococcal Meningitis			
Typhoid Fever			
Diphtheria			
Cholera			
Shigella Dysentery			
Viral Hepatitis A			
Viral Hepatitis E			
Leptospirosis			
Malaria		PV:	PF:
Other (Specify)			
Other (Specify)			

Line List of Positive Cases (Except Malaria cases):

Name	Age (Yrs)	Sex (M/F)	Address: Village/Town	Name of Test Done	Diagnosis (Lab confirmed)

ANNEXURE IV: Master table: Weekly surveillance by IDSP conditions

Wk.	ADD	Dys	Hep	Ent	Mal	Den	Chi	AES	Dip	Per	Ch. pox	PUO	ARI	Pneum	Lept	AFP	Dog bite	Sn Bite
1																		
2																		
3																		
4																		
6																		
7																		
8																		
9																		
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11																		
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21																		
22																		
23																		
24																		
25																		
26																		

Wk.	ADD	Dys	Hep	Ent	Mal	Den	Chi	AES	Dip	Per	Ch. pox	PUO	ARI	Pneum	Lept	AFP	Dog bite	Sn bite
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
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ADD- Acute Diarrheal Disease ; Dys- Dysentery ; Hep- Hepatitis; Ent-Enteric fever; Mal- Malaria; Den- Dengue; Chi-Chikungunya; AES: Acute encephalitis syndrome; Dip: Diphtheria. Per: Pertussis, Ch pox: chickenpox; PUO-pyrexia of unknown origin; ARI: Acute Respiratory illness; Pneum: pneumonia; Lep: Leptospirosis; AFP: Acute flaccid paralysis; Sn bite: Snake bite