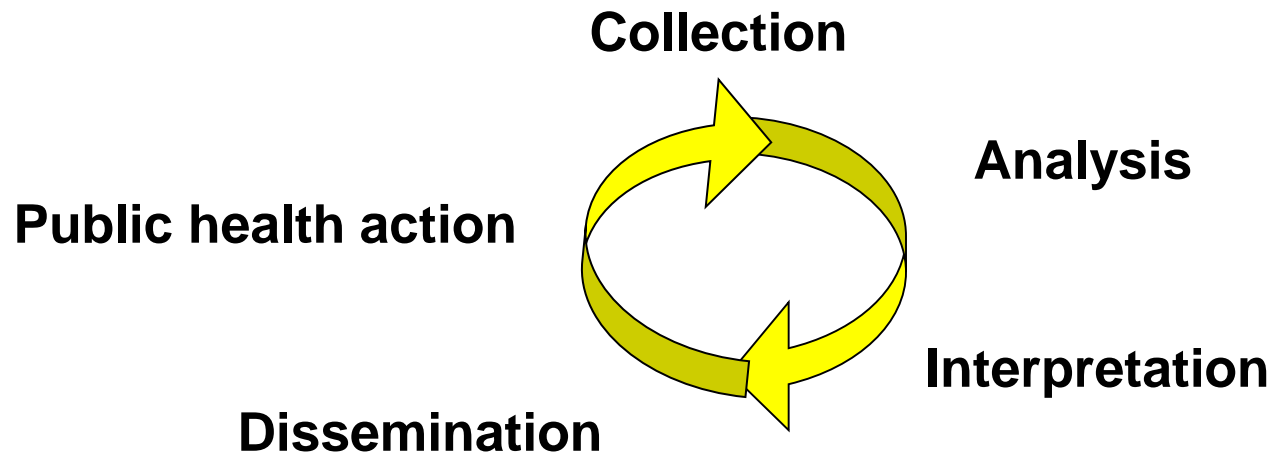


Surveillance for Foodborne Illness in India: A Capacity Review

National Centre for Disease Control
(Directorate General of Health Services, GOI)

What is surveillance?

- **The systematic, ongoing, collection, analysis interpretation, and dissemination of data for public health action**



Foodborne Illness Surveillance in India

Integrated Disease Surveillance Programme (IDSP)

- **decentralized State based surveillance system for epidemic prone diseases to detect the early warning signals**
 - **Weekly reporting**
 - **P Form**
 - **L Form**
 - **Early warning signals for Outbreaks**

Foodborne Illness Surveillance in India

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:-
	__/__/__	__/__/__	__/__/__

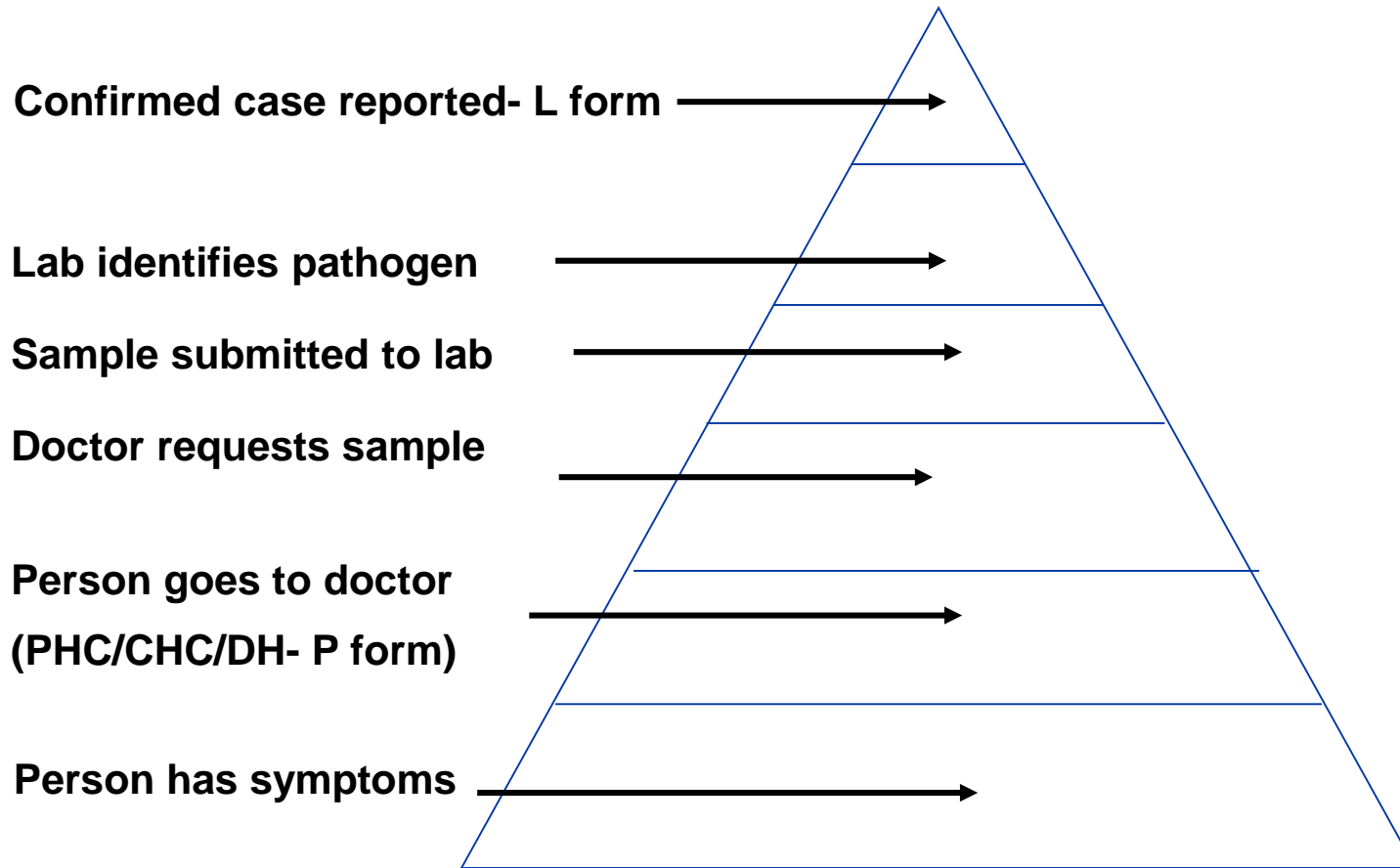
S.no	Diseases/Syndromes	No. of cases
1	Acute Diarrhoeal Disease (including acute gastroenteritis)	
2	Bacillary Dysentery	
3	Viral Hepatitis	
4	Enteric Fever	
5	Malaria	
6	Dengue / DHF / DSS	
7	Chikungunya	
8	Acute Encephalitis Syndrome	
9	Meningitis	
10	Measles	
11	Diphtheria	

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		

Pyramid of surveillance



IDSP Syndromic Surveillance

- **P Form data**
- **Outbreak detection:**
 - **Time from illness onset to signal- low**
 - **Number of cases needed for signal- high**
 - **Sensitivity for low-level widespread events- low**

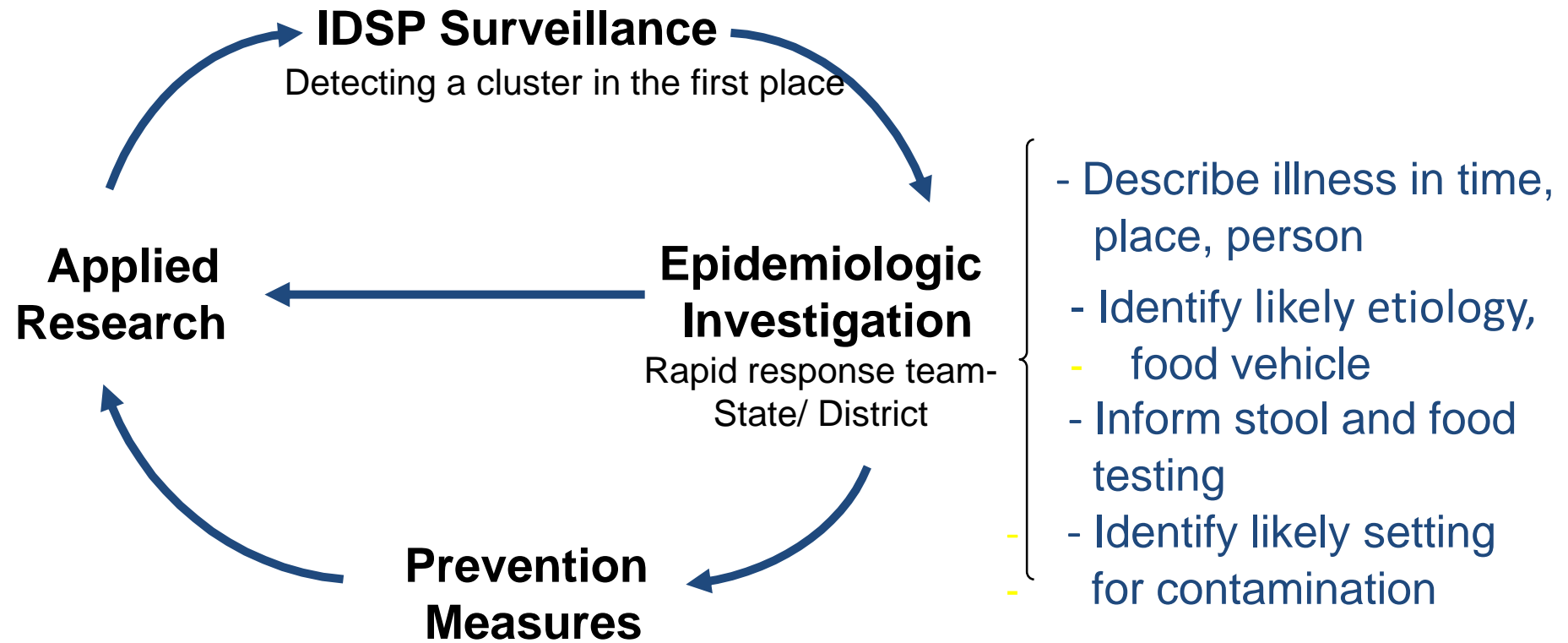
IDSP Lab-confirmation

- **L Form data**
- **IDSP district public health labs: 250 approved for strengthening, 135 strengthened**
- **IDSP state referral labs: 108 in 23 states**

IDSP Lab-confirmation

- **Confirmation of etiology**
- **Yield of IDSP lab confirmed cases low:**
 - **Diagnostic capacity**
 - **Stool sample request**
 - **Stool sample collection**
 - **Antibiotic course**

Cycle of Foodborne Disease Control & Prevention: Stages of an Outbreak Investigation



Outbreak Investigation

- **Coordinated epidemiology lab response required**
- **In IDSP reporting week 1-12, 2018:**
 - **51 events of Foodborne outbreaks detected**
 - **In 11/51 (21%)* events, stool samples collected**
 - **Water samples collected in most**
- **Training potential!**

*Indicative figure

Lab based Subtype Surveillance

- **Shift in food production and supply chain from local to large distribution network**
- **Potential for industrial contamination**
- **Geographically widespread cases**
- **Need to develop pathogen specific lab surveillance**

Linkages with FSSAI

- **NCDC/ IDSP**
 - **Generate evidence for public health action and policies**
 - **Training**
- **FSSAI**
 - **Develop food related policies**
 - **Enforcement**
 - **Risk assessment and management of production facilities**

Shellfish Poisoning Outbreak Cuddalore district, Tamilnadu, 2015

- **January 2015, 20 cases, median age 16.5 years, AR= 100%**
- **April 2015, 199 cases, median age 23 years, AR= 95%, OR= 302**
- **Public Health Actions were:**
 - **Food safety officials prohibited sale of shellfish during red tide/ algal bloom**
 - **Some harvesting sites declared unsafe**

Next Steps

- **Need to increase stool sampling and lab capacity**
- **Strengthen coordinated epi-lab response**
- **Data sharing and linkage possibility between NCDC/
IDSP and FSSAI are:**
 - **Develop guidelines/ SOP's for foodborne illness
investigation district level above**
 - **Coordinate response during foodborne outbreak
investigation**

Thankyou