

COMMUNICABLE DISEASE SURVEILLANCE DATA: MAKING IT WORK FOR YOU



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Objectives



- Understand the role of the local health departments in the surveillance system
- Understand the value of surveillance at the local level
- Understand the basics of analysis and reporting

Public Health Surveillance

The ongoing, systematic collection, analysis, interpretation and dissemination of data about a health-related event for use in public health action to reduce morbidity and mortality and to improve health.

Surveillance Components

Data

- Collection
- Analysis
- Interpretation

Application

- Dissemination
- Action

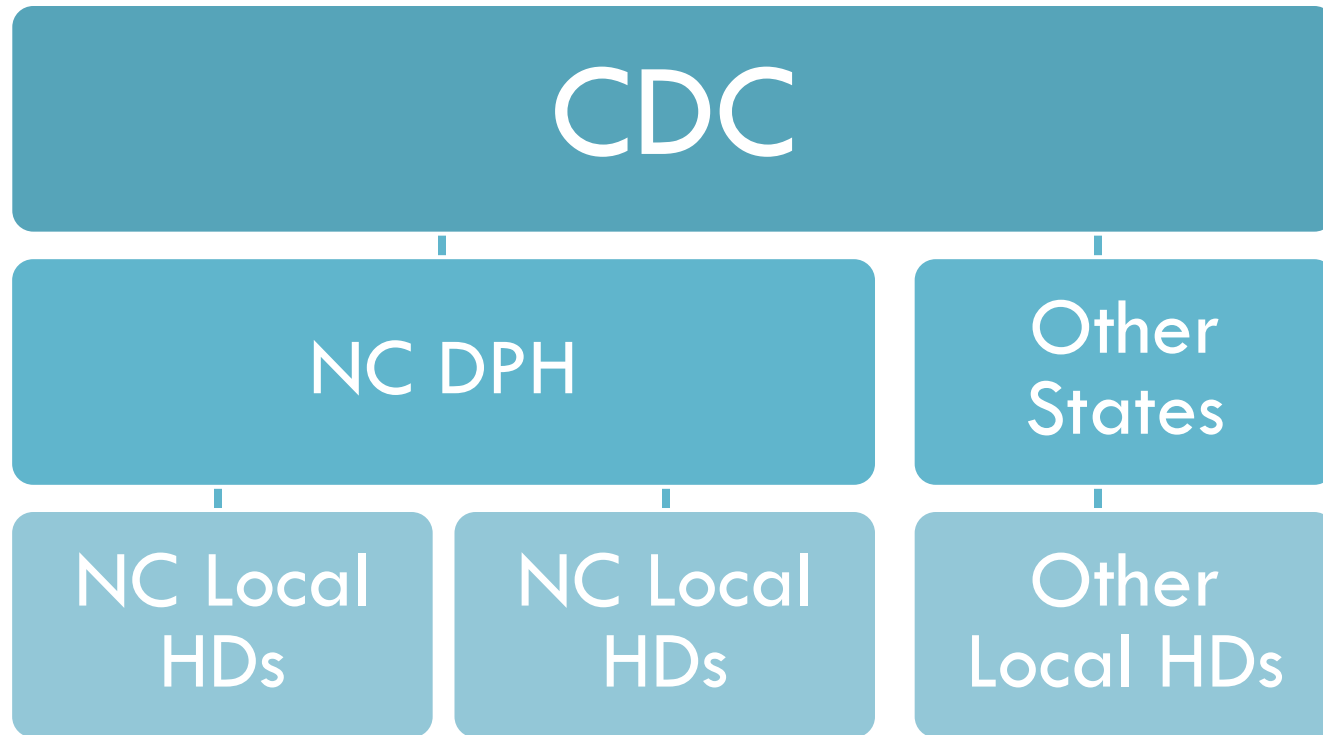
“Action is what distinguishes surveillance from the task of simply monitoring events.”

Surveillance Serves Public Health

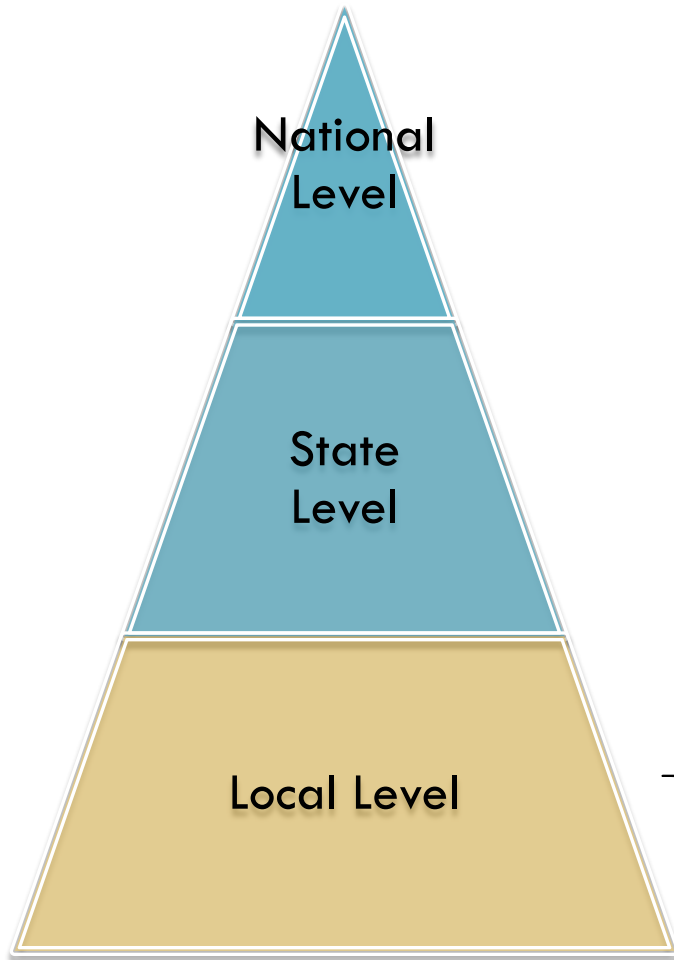
Function

- Supporting case detection and public health interventions
- Estimating the impact of a disease or injury
- Determining the distribution and spread of illness
- Generating hypotheses and stimulating research
- Evaluating prevention and control measures
- Facilitating planning

Surveillance System

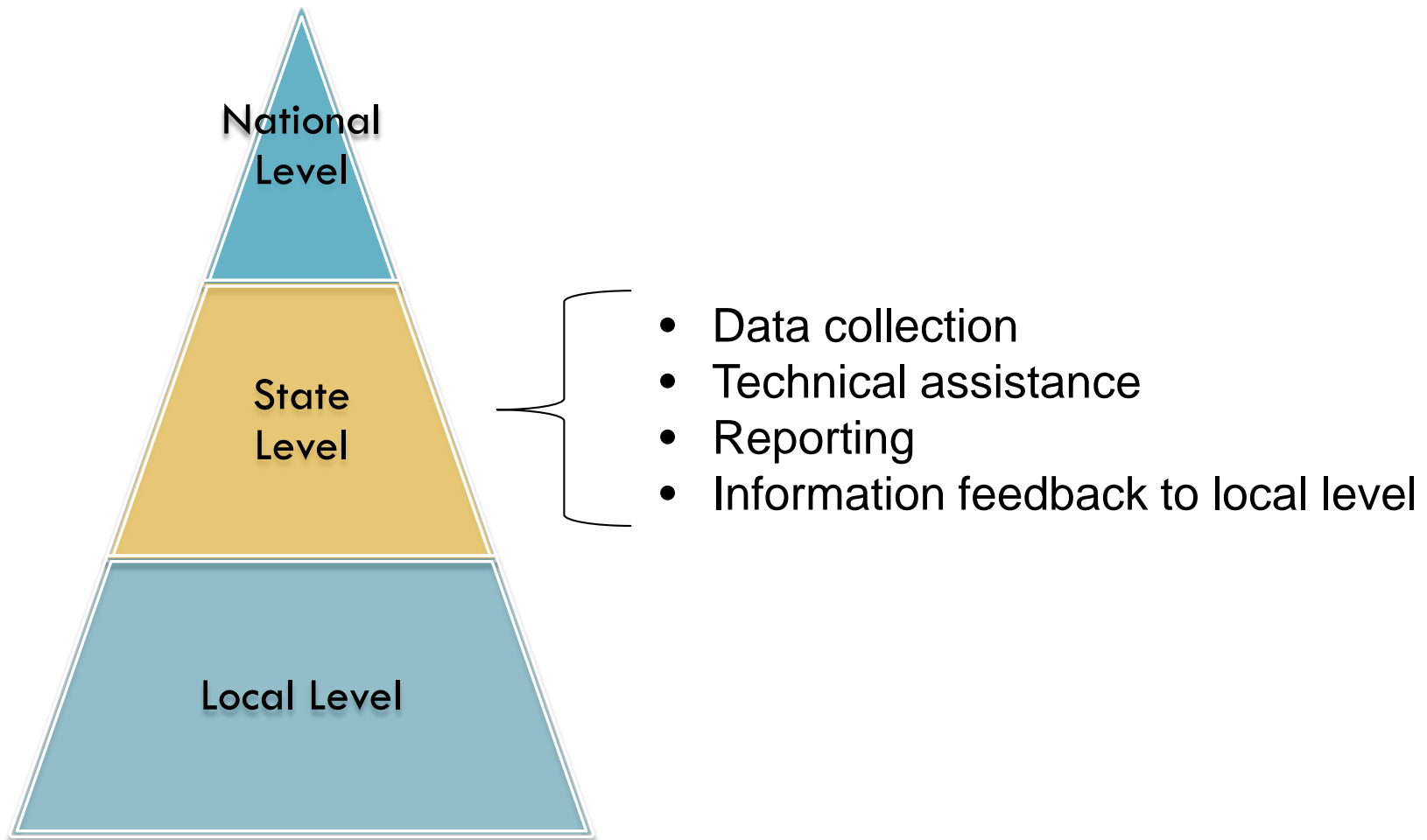


Surveillance Tasks

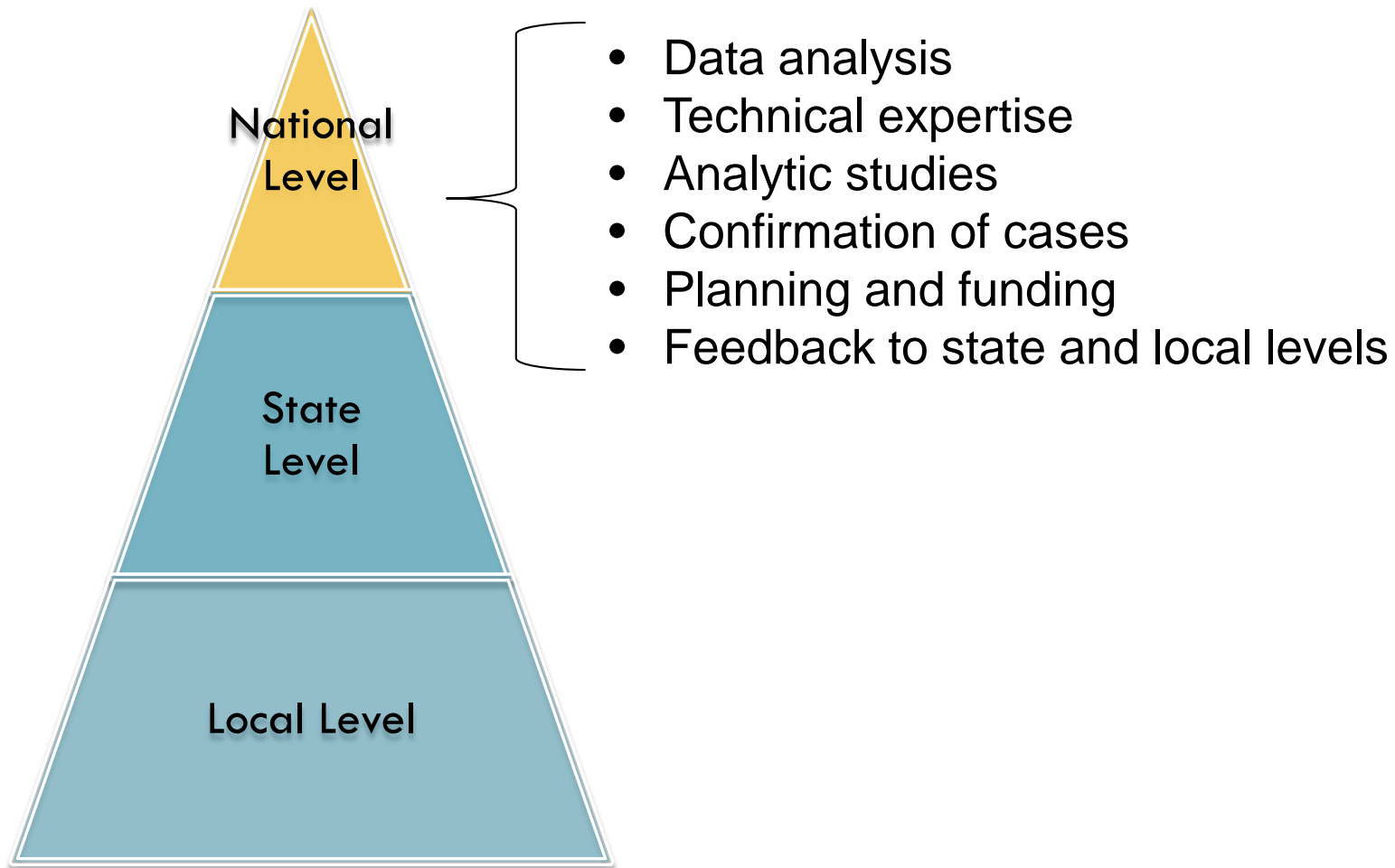


- Data collection
- Case reporting
- Outbreak detection and investigation
- Implementation of public health interventions
- Data analysis
- Reporting

Surveillance Tasks



Surveillance Tasks





Using Data to Communicate

Surveillance Components

Data

- Collection

- Analysis

- Interpretation

Application

- Dissemination

- Action

Descriptive Epidemiology



Person



Place



Time

Analysis



Pertussis Cases by Age Group, Jan. 1 – Dec. 31, 2013

Classification	Number of Records	Percent
< 1	100	16.05%
1 - 4	76	12.20%
5 - 9	117	18.78%
10 - 14	136	21.83%
15 - 19	49	7.87%
20 - 24	7	1.12%
25 - 29	9	1.44%
30 - 39	34	5.46%
40 - 49	31	4.98%
50 - 59	33	5.30%
>= 60	30	4.82%
Unknown	1	0.16%
Total	623	100.00%

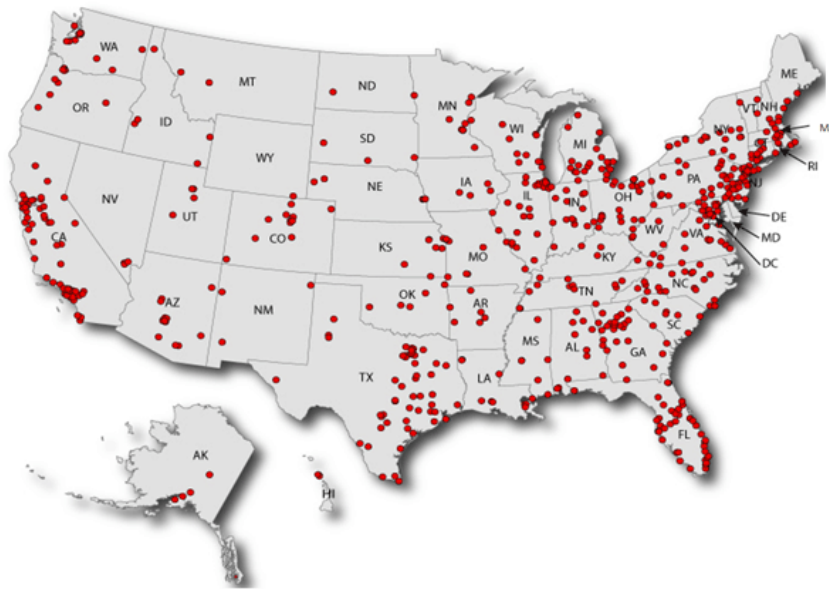
Person

~75% of cases

Analysis



Place



ILI Outbreaks Reported – County X, Jan. 1 – Dec. 31, 2013

Facility Type	Number Ill	Percent
LTCF	14	74%
School	3	16%
Correctional Institute	2	11%
Total	19	100.00%

Analysis



Time

Disease	Year	Total	Month											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hepatitis A (14)	2010	45	6	5	7	6	2	3	5	4	3	0	3	1
	2011	29	2	2	2	3	1	3	1	6	3	2	1	3
	2012	37	2	2	2	3	2	1	4	3	5	6	2	5
	2013	43	8	5	5	2	4	1	5	5	5	1	2	0
	2014 (YTD)	7	0	3	3	1	0	0	0	0	0	0	0	0
Totals		161	18	17	19	15	9	8	15	18	16	9	8	9

Interpretation



Analysis



Pertussis Cases by Age Group, Jan. 1 – Dec. 31, 2013

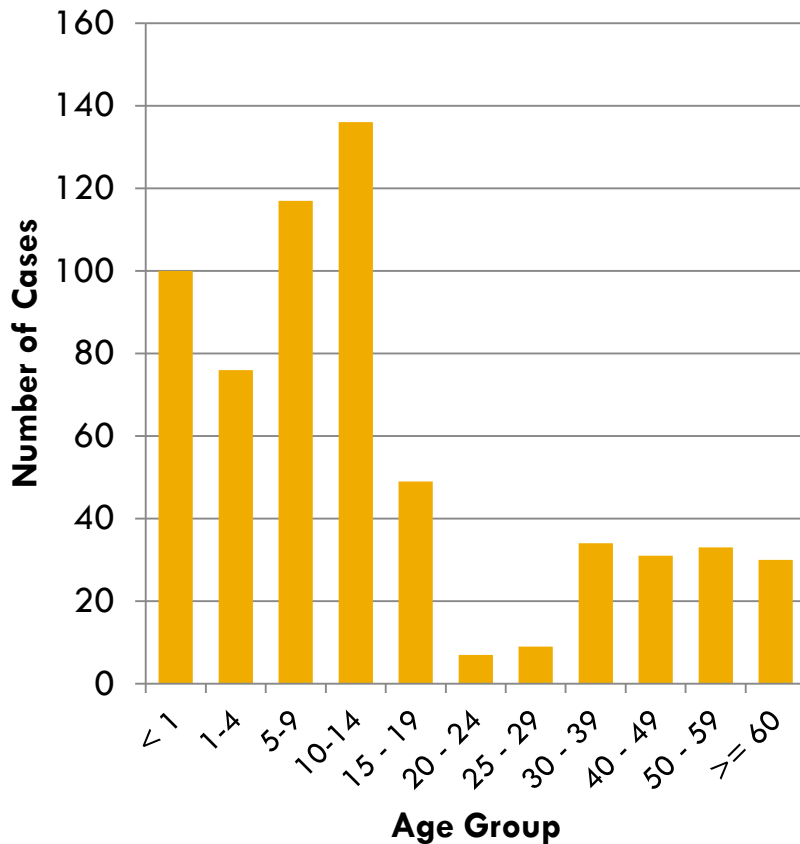
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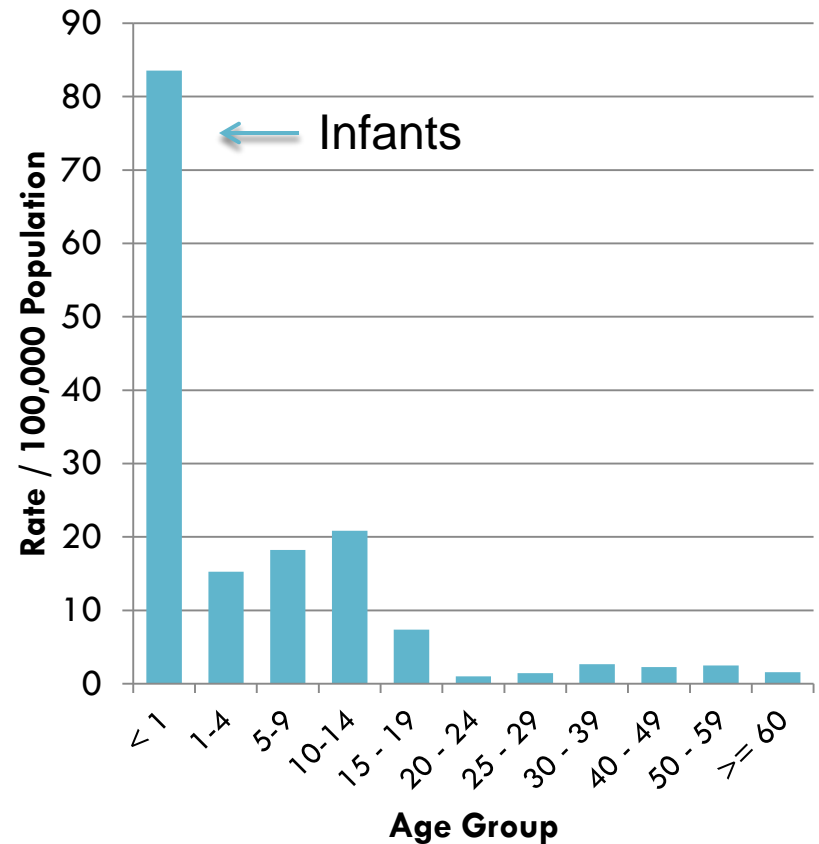
~75% of cases

Pertussis Example

Number of Cases of Pertussis by Age Group – NC, 2013



Rate of Pertussis by Age Group – NC, 2013





Reporting

- Communicate information on diseases and prevention efforts
- Communicate the value of local public health

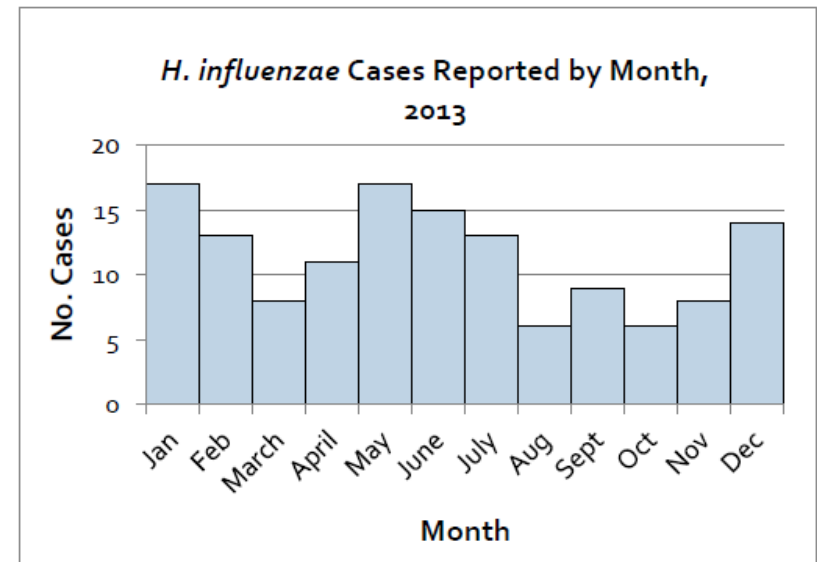
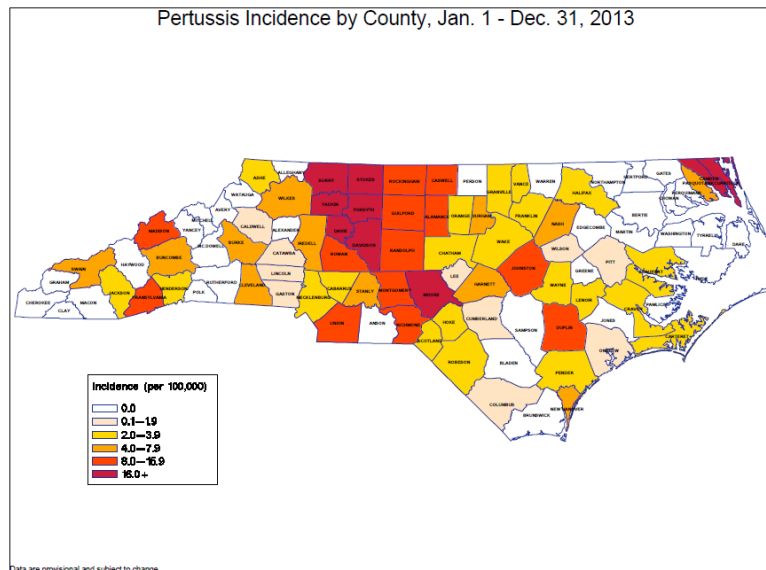
CDB Online Reports

□ Pertussis Monthly Report

□ <http://epi.publichealth.nc.gov/cd/diseases/pertussis.html>

□ VPD Report

□ <http://epi.publichealth.nc.gov/cd/figures/AnnualVPDReport2013.pdf>



Summary



- Establish baselines for you community
- Systematically analyze and interpret surveillance data using person, place and time
- Use reports to engage partners, show trends, plan programs and show the value of public health
- Take action

Training Resources

- NC Institute for Public Health
 - Training Website <http://nciph.sph.unc.edu/tws/index.php>
 - FOCUS on Field Epidemiology
<http://cphp.sph.unc.edu/focus/issuelist.htm>
- Principles of Epidemiology in Public Health Practice, Third Edition, An Introduction to Applied Epidemiology and Biostatistics
 - http://www.cdc.gov/osels/scientific_edu/SS1978/index.html
- GCF
 - <http://www.gcflearnfree.org/excel2013>

References

- A Blueprint of the Future for Local Health Departments in North Carolina (NC ALHD Public Health Task Force)
 - ▣ <http://nciph.sph.unc.edu/incubator/NCALHDBlueprintFinal.pdf>
- The World Bank Public Health Surveillance Toolkit
 - ▣ <http://siteresources.worldbank.org/INTPH/Resources/376086-1133371165476/PHSurveillanceToolkit.pdf>