

2014 Infectious Disease Surveillance  
Data Evaluation

**COMPLETENESS  
AND  
TIMELINESS**

Division of Infectious Disease Epidemiology  
Revised July 16, 2015

## **Objectives of disease surveillance evaluation:**

- **Improve data quality**
- **Share data with partners and stakeholders**
- **Identify areas for improvement**
- **Comply with funding requirements (federal and state)**

# Background

- **WVEDSS experienced challenges in the past**
- **2015 – database stable and accessible**
- **2014 – establish baseline**

# Methods

## Data Source:

- **WVEDSS**

## Parameters:

- **Selected diseases**
- **MMWR 2014**

## Analysis Tool:

- **Microsoft Excel**

Infectious Disease	Completeness of disease data	Timeliness of disease report	Timeliness of public health action
<b>VACCINE-PREVENTABLE DISEASES</b>			
Invasive Hemophilus influenza disease	YES	YES	N/A
Measles	YES	YES	YES
Invasive pneumococcal infection	YES	YES	N/A
Pertussis	YES	YES	YES
Invasive meningococcal disease	YES	YES	YES
Mumps	YES	YES	YES
<b>VIRAL HEPATITIS</b>			
Hepatitis B, Acute	YES	YES	YES
Hepatitis C, Acute	YES	YES	N/A
<b>FOOD and WATERBORNE DISEASES</b>			
Botulism	YES	YES	YES
Hepatitis A	YES	YES	YES
STEC	YES	YES	YES
Campylobacteriosis	YES	YES	N/A
Giardiasis	YES	YES	N/A
Salmonellosis	YES	YES	N/A
Shigellosis	YES	YES	N/A
<b>ZOO NOTIC DISEASES</b>			
Lyme Disease	YES	N/A	N/A
LaCrosse Encephalitis	YES	N/A	N/A
Tularemia	YES	YES	YES

# Methods

Activity	Indicator	Target
Investigate and respond to reports of reportable infectious disease conditions according to the Reportable Disease Rule (WV 64 CSR-7) and disease protocol manual	Proportion of disease investigations that were lost to follow-up	TBD
	Proportion of disease cases reported to WVEDSS from January 1 to December 31 of the previous year with complete demographic data	100%
	Proportion of disease cases reported to WVEDSS from January 1 to December 31 of the previous year with complete risk factor data for viral hepatitis, food and waterborne diseases, and vaccine-preventable diseases	TBD
	Proportion of disease cases reported to WVEDSS from January 1 to December 31 of the previous year with complete vaccine information for vaccine preventable diseases including hepatitis B	100%
Submit reports in WVEDSS	Proportion of disease investigations submitted to CDC within 30 days of report	TBD
Educate community partners to recognize and report outbreaks and share the reportable disease rule	Number of outbreaks reported from January 1 to December 31 of the previous year	TBD
LHD reporting outbreaks to DIDE within 60 minutes	Proportion of outbreaks reported within 1 hour of notification from January 1 to December 31 of the previous year	90%
LHDs investigate outbreaks and prepare a written report at the outbreak completion	Proportion of outbreaks with an outbreak report from January 1 to December 31 of the previous year	90%
Educate staff and partners on the importance of lab testing and the timely collection of appropriate specimen	Proportion of the following outbreak types with clinical laboratory testing from January 1 to December 31 of the previous year: a. Respiratory b. Foodborne	a. 90% b. 100%
LHD recruit and maintain actively reporting influenza sentinel provider.	Percent of time an Influenza Sentinel Provider reports to the ILINet during the influenza surveillance period October (previous year) through May (current year).	50%

## Evaluate completeness of demographic information

- A COMPLETE case report (confirmed, probable, suspect) must include the following 12 pieces of demographic information:
  - Age
  - Date of birth
  - Gender
  - Ethnicity
  - Race
  - First name
  - Last name
  - Address
  - City
  - County
  - State
  - Zip code

## Evaluate timeliness

- Reporting to WVEDSS (*Time to Report*)
  - Measures timeliness of notification to WVEDSS regardless of case status
  - *Date of Laboratory Report* or *Date of Diagnosis to PHC Add Time* (*date entered in WVEDSS*)
  - Data used: All Investigations (includes Not a Case records)
  - Benchmark: by disease category per WV reportable disease rule
- Reporting to CDC (*Time to Close*)
  - Measures timeliness of completion of case report
  - *PHC Add Time to 1<sup>st</sup> Notification Sent Date* (*date report submitted to CDC*)
  - Data used: All Investigations except La Crosse and Lyme Disease
  - Benchmark: 30 days
- PHA (Public Health Action) Time
  - Measures timeliness of public health response to a case following notification
  - *PHC Add Time to Date of Public Health Action*
  - Data used: All Cases requiring Public Health Action
  - Benchmark: disease-specific per protocol

**A TIMELY investigation/report/action must have a date reported in the field with a timeframe that is equal to or less than the benchmark.**

# Methodology

Summarize data by jurisdiction (region and county)

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## WEST VIRGINIA

Bureau for Public Health  
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# Results by Region

Completeness of demographic data and timeliness of report of selected conditions  
January 01 to December 31, 2014

Region	Completeness		Time to Report		Time to Close		Public Health Action Time	
	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Central	221	83%	312	67%	298	76%	71	17%
Eastern	351	70%	518	80%	242	70%	29	24%
Northeastern	135	75%	187	71%	148	80%	17	47%
Northwestern	158	80%	219	74%	189	69%	26	38%
Southern	254	85%	394	62%	365	62%	67	18%
Western	191	92%	294	61%	286	41%	43	16%
<b>Statewide</b>	1310*	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

\* Represents 72% of cases reported in WVEDSS, excluding past/present hepatitis C.

County-level data for each region are shown on the following slides.

# Central Region

Central

Jurisdiction	Completeness		Time to Report		Time to Close		Public Health Action Time	
	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Braxton,WV	7	43%	9	89%	7	14%	2	0%
Kanawha,WV	149	87%	216	66%	211	81%	48	19%
Lewis,WV	5	0%	7	57%	6	17%		
Putnam,WV	39	85%	50	68%	49	80%	16	6%
Upshur,WV	17	82%	24	83%	19	63%	4	50%
Webster,WV	4	75%	6	17%	6	33%	1	0%
<b>Statewide</b>	1310	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Eastern Region

Eastern

	Completeness		Time to Report		Time to Close		Public Health Action Time	
Jurisdiction	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Berkeley,WV	133	66%	194	77%	107	72%	12	0%
Grant,WV	8	100%	11	73%	10	100%	3	100%
Hampshire,WV	46	67%	59	78%	21	95%	1	0%
Hardy,WV	19	89%	22	64%	18	89%	3	0%
Jefferson,WV	64	70%	125	87%	33	30%	7	29%
Mineral,WV	22	86%	31	84%	16	75%	1	0%
Morgan,WV	26	46%	36	89%	5	80%		
Pendleton,WV	8	75%	9	100%	7	86%		
Pocahontas,WV	6	100%	6	50%	4	100%	1	100%
Randolph,WV	15	67%	20	80%	17	59%	1	100%
Tucker,WV	4	75%	5	60%	4	0%		
<b>Statewide</b>	<b>1310</b>	<b>80%</b>	<b>1924</b>	<b>70%</b>	<b>1528</b>	<b>64%</b>	<b>253</b>	<b>22%</b>
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Northeastern Region

Northeastern

Jurisdiction	Completeness		Time to Report		Time to Close		Public Health Action Time	
	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Barbour,WV	4	100%	5	100%	4	50%	1	0%
Doddridge,WV	6	50%	10	80%	9	56%	3	100%
Harrison,WV	34	88%	48	63%	36	83%	1	0%
Marion,WV	16	63%	20	55%	16	63%	2	50%
Monongalia,WV	46	74%	65	72%	51	84%	6	33%
Preston,WV	24	75%	30	80%	23	96%	4	50%
Taylor,WV	5	40%	9	89%	9	67%		
<b>Statewide</b>	1310	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Northwestern Region

## Northwestern

Jurisdiction	Completeness		Time to Report		Time to Close		Public Health Action Time	
	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Brooke,WV	9	78%	11	64%	10	70%	2	0%
Calhoun,WV	3	67%	4	100%	3	67%		
Clay,WV	6	50%	8	63%	7	86%		
Gilmer,WV	4	50%	5	80%	5	20%		
Hancock,WV	20	55%	27	78%	23	87%		
Marshall,WV	15	73%	20	65%	17	0%	2	100%
Ohio,WV	19	79%	26	92%	23	83%	1	0%
Pleasants,WV	5	100%	6	50%	5	80%	1	0%
Ritchie,WV	2	0%	6	67%	4	100%	1	0%
Roane,WV	8	100%	12	58%	11	55%	1	0%
Tyler,WV	7	100%	12	75%	10	80%	3	67%
Wetzel,WV	12	92%	13	77%	13	46%	2	0%
Wirt,WV	3	67%	6	67%	5	80%		
Wood,WV	45	93%	63	73%	53	83%	13	46%
<b>Statewide</b>	1310	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Southern Region

Southern

	Completeness		Time to Report		Time to Close		Public Health Action Time	
Jurisdiction	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Fayette,WV	23	91%	34	62%	31	16%	8	38%
Greenbrier,WV	17	88%	31	61%	27	37%	4	25%
McDowell,WV	19	68%	27	48%	23	22%	7	0%
Mercer,WV	69	88%	97	84%	90	81%	10	30%
Monroe,WV	10	90%	16	81%	13	69%	2	100%
Nicholas,WV	10	30%	16	38%	15	27%	2	0%
Raleigh,WV	84	94%	131	45%	127	78%	27	11%
Summers,WV	9	56%	16	81%	15	47%	4	0%
Wyoming,WV	13	85%	26	69%	24	54%	3	0%
<b>Statewide</b>	1310	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Western Region

Western

Jurisdiction	Completeness		Time to Report		Time to Close		Public Health Action Time	
	# of Cases	Percent Complete	# of Cases	Percent Timely	# of Cases	Percent Timely	# of Cases	Percent Timely
Boone,WV	20	85%	31	61%	31	42%	4	0%
Cabell,WV	45	89%	78	58%	74	15%	11	9%
Jackson,WV	14	93%	16	69%	16	31%	2	50%
Lincoln,WV	18	89%	29	41%	28	36%	5	40%
Logan,WV	39	100%	58	74%	56	71%	5	20%
Mason,WV	13	77%	23	61%	24	50%	2	50%
Mingo,WV	21	95%	28	54%	27	22%	9	0%
Wayne,WV	21	100%	31	68%	30	63%	5	20%
<b>Statewide</b>	1310	80%	1924	70%	1528	64%	253	22%
Based on:	All Cases		All Investigations including Not a Case		All Investigations except Lyme, La Crosse		All Cases requiring Public Health Action	

# Limitations

- **Data are current as of July 16, 2015**
- **Conditions are often underreported and disease counts in this presentation may not represent the true burden of disease in West Virginia**
- **Findings in this report reflect the efforts of healthcare providers, laboratories, and local and state public health offices**
- **Counties under each region were realigned in the fall of 2014 (from 8 to 6 regions)**