

Monitoring Pandemic Related Morbidity and Mortality - CDC Perspective

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Surveillance Objectives

- Detect and investigate initial human cases/clusters of H5N1/influenza virus subtypes with pandemic potential.
- Determine and track trends in the impact of disease in affected areas.
- Assess effectiveness of treatment guidelines, vaccines, antivirals, and public health interventions.
- Monitor changes in circulating influenza viruses.
- Ensure laboratory, epidemiologic, and clinical systems are in place.

How Are We Going to Achieve These Objectives?

- Seasonal surveillance will be the foundation of pandemic surveillance
- Seasonal surveillance alone will not be enough
- Where available, use existing electronic data sources in collaboration with states
- Use this opportunity to build/improve public health reporting systems

Assumptions

- Reporting will need to be more frequent than once per week
- Data will need to be reported on a state level and where possible on a more local level
- Certain data will be needed from all states but other data can be collected from a limited number of sites
- Data needs will change as the pandemic progresses

Detect and Investigate Initial Human Cases/Clusters

- Detection
 - Continue enhanced surveillance and expand as needed
 - Monitor returning travelers
 - Monitor health care workers, lab workers
 - Conduct active surveillance among persons exposed to infected birds

Detect and Investigate Initial Human Cases/Clusters

- Investigation
 - Identify exposures
 - Look for transmission
 - Describe clinical features
 - Tally of suspect, confirmed cases, # hospitalized, # deaths
- Needs
 - Case investigation protocols
 - System for data collection
 - Triggers for moving from case investigation mode to monitoring mode

Monitoring – Outpatient Illness

- Current system
 - Sentinel provider surveillance
- Additional data sources
 - BioSense DoD and VA outpatient clinics
 - BioSense real-time hospitalization data – ER visits
 - ER visits from existing BT systems
- We hope to combine data from all these sources to provide wider geographic coverage

Monitoring – Hospitalization

- Current systems
 - EIP/NVSN
 - Children only
 - Sites in 11 states
- Additional data sources
 - Expanded EIP
 - Inclusion of adults
 - Special studies
 - VSD
 - BioSense real-time hospitalization data
 - Hospital capacity
 - Exploring use of a HAvBED-like system that accepts bed census data from existing systems
 - Other?

Monitoring – Deaths

- Current
 - 122 Cities Mortality Reporting System
 - Pediatric mortality reporting
 - NCHS mortality reporting
- Additional
 - Exploring timely reporting of all deaths

Monitoring – Viruses

- Current
 - US WHO/NREVSS collaborating laboratories
- Additional
 - LRN
 - Test results from commercial laboratories through BioSense

Public Health Surveillance System Enhancement

- High priority systems
 - Electronic laboratory data exchange
 - Rapid 2-way exchange of patient level data
 - Electronic death reporting
 - Early use of mortality data submitted by funeral directors
- Benefits
 - Build public health reporting systems that would have multiple uses
 - Use existing electronic data
 - Allow sub-state level analysis

Conclusions

- We want to use existing electronic data as much as possible
- Some new data sources will supplement existing data
- We want systems that can be used in the interpandemic period and reduce reporting burden
- Hope to develop systems that have broader use than just influenza surveillance
- Looking for data sources that are sustainable
- Data obtained through these systems will be shared with states just as the data we currently use for influenza surveillance is