

Mortality Surveillance: Real-Time Monitoring for Improved Data Quality and Public Health

Paul D. Sutton, Ph.D.

Mortality Surveillance Team Lead

National Conference on Health Statistics

August 6-8, 2012

Mortality Surveillance

The ongoing systematic monitoring and analysis of mortality data and the dissemination of information that leads to actions being taken to address data quality and public health concerns.

Is Surveillance Business as Normal?

- ❑ Despite having much in common, surveillance is not the same as vital statistics.
 - Speed is sometimes more important than complete accuracy
 - Unique events can be just as important as statistical significance
 - Surveillance partners are not the same as data users

Mortality Surveillance: Methods

- ❑ Analysis of death records as they are received and processed
- ❑ Automated identification of deaths of potential surveillance interest
- ❑ Routine analysis for temporal and spatial clusters
- ❑ Data mining to identify and understand emerging trends and patterns of potential surveillance interest

Mortality Surveillance: Objectives/Goals

- ❑ Identify potential data problems as soon as possible and communicate that information to NCHS and/or state staff in a position to correct the problem
- ❑ Identify potential public health concerns and communicate that to appropriate public health partners

Characteristics of Surveillance

- ❑ Near real-time analysis
- ❑ Intended to initiate an action or investigation
- ❑ Based on partnerships and communication
- ❑ Topic Focused

Potential Surveillance Topics

- ❑ Infectious disease
- ❑ Emerging drug threats
- ❑ Clustering of suicides
- ❑ Deaths related to faulty products

Potential Partners

- ❑ Food and Drug Administration (FDA)
- ❑ Substance Abuse & Mental Health Services Administration (SAMHSA)
- ❑ Office of National Drug Control Policy
- ❑ National Center for Immunization and Respiratory Diseases
- ❑ National Center for Injury Prevention and Control
- ❑ National Highway Transportation Safety Administration (NHTSA)
- ❑ Consumer Product Safety Commission

RARE CAUSES OF DEATH

What has been happening?

- ❑ NCHS codes cause-of-death and flags rare causes
- ❑ NCHS notifies states and requests state follow-up on rare causes
 - Attempt to confirm the COD with the original certifier
 - Send copy of the certificate

- ❑ The annual file is closed and is rechecked for rare causes.

The Objective of our New Protocol for Confirming Rare Causes of Death

- ❑ Increase confidence that rare causes of high public health interest and visibility are correct. Currently we are focusing on rare vaccine-preventable diseases

Vaccine-Preventable Diseases

[underlying and multiple cause-of-death unless otherwise specified]

ICD	Description	Age limitations
A08.0	Rotaviral enteritis (Rotavirus)	<5 years
A36	Diphtheria	any
A37	Whooping cough (Pertussis)	<5 years
A80	Acute poliomyelitis (Polio)	any
B01	Varicella	<50 years
	Varicella [underlying cause only]	50 years and older
B05	Measles	any
B06	Rubella	any
B26	Mumps	any
P35.0	Congenital rubella syndrome	any

Partners

- ❑ Centers for Disease Control and Prevention (CDC)
 - National Center for Health Statistics (NCHS)
 - National Center for Immunization and Respiratory Diseases (NCIRD)
- ❑ States
 - State vital records offices
 - State epidemiologist and immunization programs

The New Protocol for Confirming Rare Causes-of-Death

- The initial steps do not change significantly.
 - NCHS codes the COD
 - NCHS notifies state and request standard follow-up
 - Attempt to confirm the COD with the original certifier
 - Send copy of the certificate

But, no more waiting!

NCIRDs Investigation and Verification

- ❑ NCIRD working with the state epidemiologist and/or immunization program investigates.

- ❑ If NCIRD verifies the COD
 - NCHS marks the cause as confirmed.

- ❑ If NCIRD cannot verify the COD
 - NCHS notifies the state vital records office and attempts to coordinate an update/correction.
 - Pending the receipt of an update/correction NCHS changes the COD to R99 (Other ill-defined and unspecified causes of mortality)

Implementation

- ❑ NCHS is currently in the process of implementing the new protocol for 2012 data
- ❑ NCHS is closely monitoring the 2012 mortality data for deaths attributed to a vaccine-preventable rare causes

Is It Working?

□ Successes

- Confirmed the cause of death
- Identified a potential coding problem
- Encouraged more thorough review at the state level
- Helped to encourage better communication

Mortality Surveillance: Real-Time Monitoring for Improved Data Quality and Public Health

For more information please contact

Paul D. Sutton

3311 Toledo Road, Hyattsville, MD 20782

Telephone: (301) 458-4433

E-mail: PSutton@cdc.gov

The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

National Center for Health Statistics

Division of Vital Statistics

