Assessment of Influenza & Pneumonia-Associated Death Surveillance – Maine 2003-2005

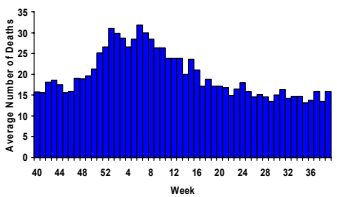
AR Sites [1], SR DeVader [12], BE Corkum [1]
[1]Maine Center for Disease Control and Prevention, [2]Federal Centers for Disease Control and Prevention/ Council of State and Territorial Epidemiologists

Background

- Approximately 36,000 deaths are associated with influenza in the US and 150 deaths in Maine annually.
- During seasonal epidemics, municipal vital records offices report pneumonia and influenza-associated deaths.

Pneumonia and Influenza Deaths

Maine, 1994-2003



Objective

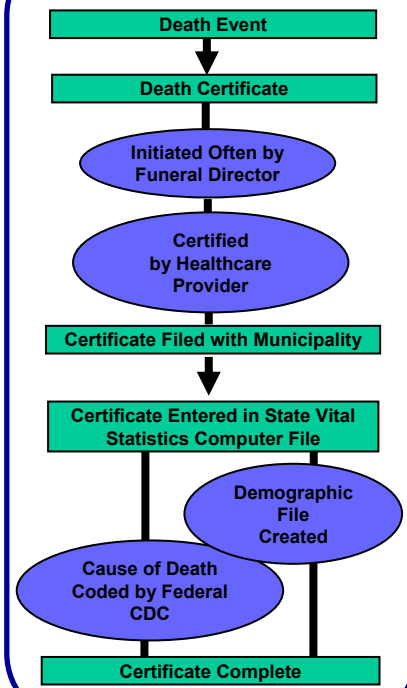
To describe the timeliness of State's vital records death surveillance system to inform pandemic influenza response planning

Deaths by Municipality Size

Maine, 2003-2005

	No. (%)
County Seat (n=16)	13,820 (38)
Population >10,000 (n=20)	19,493 (53)
Population >5,000 (n=64)	27,441 (75)
Total	36,669 (100)

State of Maine Vital Records Death Surveillance System



Methods

Data sources:
- State of Maine Vital Statistics Electronic Data File
- US Census Population Estimates, 2003-2005

Study period:
- January 1, 2003 to December 31, 2005

Measures of interest:
- Date of death
- Date certificate filed with municipality
- Date certificate entered into the State's vital statistics electronic file

Results

- During 2003 – 2005, the State Vital Record Death Surveillance System required
  - a median of 4 days to file the death certificate with the municipality and
  - a median of 49 days to enter the death certificate in the State's electronic system.
- The system's timeliness varied by municipality size and location.

Median Days from Death to State Electronic System

Maine, 2003-2005

	Filed at municipality*	Entered at State#	Total‡
All Municipalities	**No.**	**No.**	**No.**
2003	4	68	72
2004	4	39	43
2005	4	64	69
Total	4	49	53
County	**No.**	**No.**	**No.**
Androscoggin	3	46	49
Aroostook	4	48	52
Cumberland	4	46	50
Franklin	6	48	54
Hancock	6	45	51
Kennebec	3	56	59
Knox	8	50	58
Lincoln	6	48	54
Oxford	4	53	57
Penobscot	4	45	49
Piscataquis	5	49	54
Sagadahoc	5	53	58
Somerset	4	56	60
Waldo	6	47	53
Washington	5	49	54
York	3	48	51

* Median days from date of death to date death certificate was filed with municipality
# Median days from date certificate is filed with municipality to date certificate is entered in the State Vital Statistics Computer File
‡ Total equals filed at municipality plus entered at state

Median Days from Death to State Electronic System by Municipality Size and Location

Maine, 2003-2005

Limitations

- Time measures were not available for all parts of the surveillance system.
- The State updated its death surveillance system during the study period.
- Changes implemented to improve the handling of death certificates may have contributed to the variation in timeliness observed during the study period.

Recommendations

- To improve the timeliness of the system at the state level, Maine should consider employing an electronic death filing system.
- During a pandemic, accessing death-related health information at the earliest point in the surveillance system is preferred.
- Targeting specific municipalities according to their size and/or location may also improve timeliness while also capturing a large percentage of deaths.

References

- CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Influenza Practices (ACIP), 2007. MMWR 2007; 56 (RR-6);1-42.

Acknowledgments

Kathleen Gensheimer, Don Lemieux, Erika Lichter, Katie Meyer, Andrew Pelletier, Don Ward