

**Department of Health and Human Services
Advisory Committee Blood Safety and Availability
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Public Health Coordination

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Council of State and Territorial Epidemiologists

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Council of State and Territorial Epidemiologists (CSTE)

- ❖ Founded 1951 as offshoot of ASTHO**
- ❖ State Epidemiologist in every state and territory**
- ❖ 850 members**
- ❖ Charged with determining which diseases should be nationally notifiable**
- ❖ Promotes the effective use of epidemiologic data to guide public health practice and improve health**

History of Notifiable Diseases

- 1842** Registration of births and deaths in Massachusetts
- 1850** *Report of the Massachusetts Sanitary Commission*
(Shattuck)
- 1874** Sentinel surveillance in Massachusetts, 168 physicians,
14 diseases
- 1878** U.S. Marine Hospital Service charged with disease
surveillance
- 1893** Federal authority for weekly state and city reporting
- 1912** *The Notifiable Diseases* (10 diseases, 19 states, D.C. and
Hawaii)
- 1928** National reporting
- 1961** *MMWR*

Public Health Surveillance

Basic Elements

- ❖ Definition of population and time period
- ❖ Case definition
- ❖ Recognition
- ❖ Assurance of confidentiality
- ❖ Reporting
- ❖ Incentives
- ❖ Validation
- ❖ Analysis and interpretation
- ❖ Feedback loop

Attributes

- ❖ Sensitivity
- ❖ Timeliness
- ❖ Representativeness
- ❖ Predictive value
- ❖ Data quality (accuracy and completeness)
- ❖ Simplicity
- ❖ Flexibility
- ❖ Acceptability
- ❖ Stability

Application of Surveillance Information

- ❖ Recognition of trends and clusters in time and place**
- ❖ Link to intervention**
- ❖ Prevention and service planning**
- ❖ Link to services**
- ❖ Education and policy guidance**
- ❖ Evaluation**



Patient



**Medical care
provider or
laboratory**

Most reportable diseases (including those possibly acquired through food, such as laboratory-confirmed Salmonellosis) should be reported to the local board of health.



**Local board
of health**

The local board of health contacts the provider or patient to complete the *Case Report Form*



**Case Report
Form**

Sent to MDPH in
a timely manner

Some diseases (such as TB, STDs and AIDS) are reported directly to MDPH



**Massachusetts
Department of
Public Health**

Trends in Surveillance at the State Level

- ❖ Electronic data transmission**
- ❖ Electronic laboratory reporting**
- ❖ Syndromic surveillance**
- ❖ Administrative data sets**
- ❖ Pharmacy surveillance**
- ❖ Application of geographic information systems**
- ❖ Antibiotic resistance surveillance**
- ❖ Healthcare-related infection reporting**

Activities of State/Local “Epidemiology” (Acute Disease) Programs

- ❖ Surveillance**
- ❖ Outbreak investigation and response**
- ❖ Disease intervention**
- ❖ Clinical and immunization services**
- ❖ Public education**
- ❖ Provider education**
- ❖ Risk communication**
- ❖ Emergency preparedness**

Other Activities

- ❖ **Vital statistics**
- ❖ **Health promotion, disease prevention**
- ❖ **Maternal and child health**
- ❖ **Chronic disease surveillance**
- ❖ **Environmental health**
- ❖ **Occupational health**
- ❖ **Monitoring health status**
- ❖ **Assurance functions**

Public Health Issues Related to Blood Products

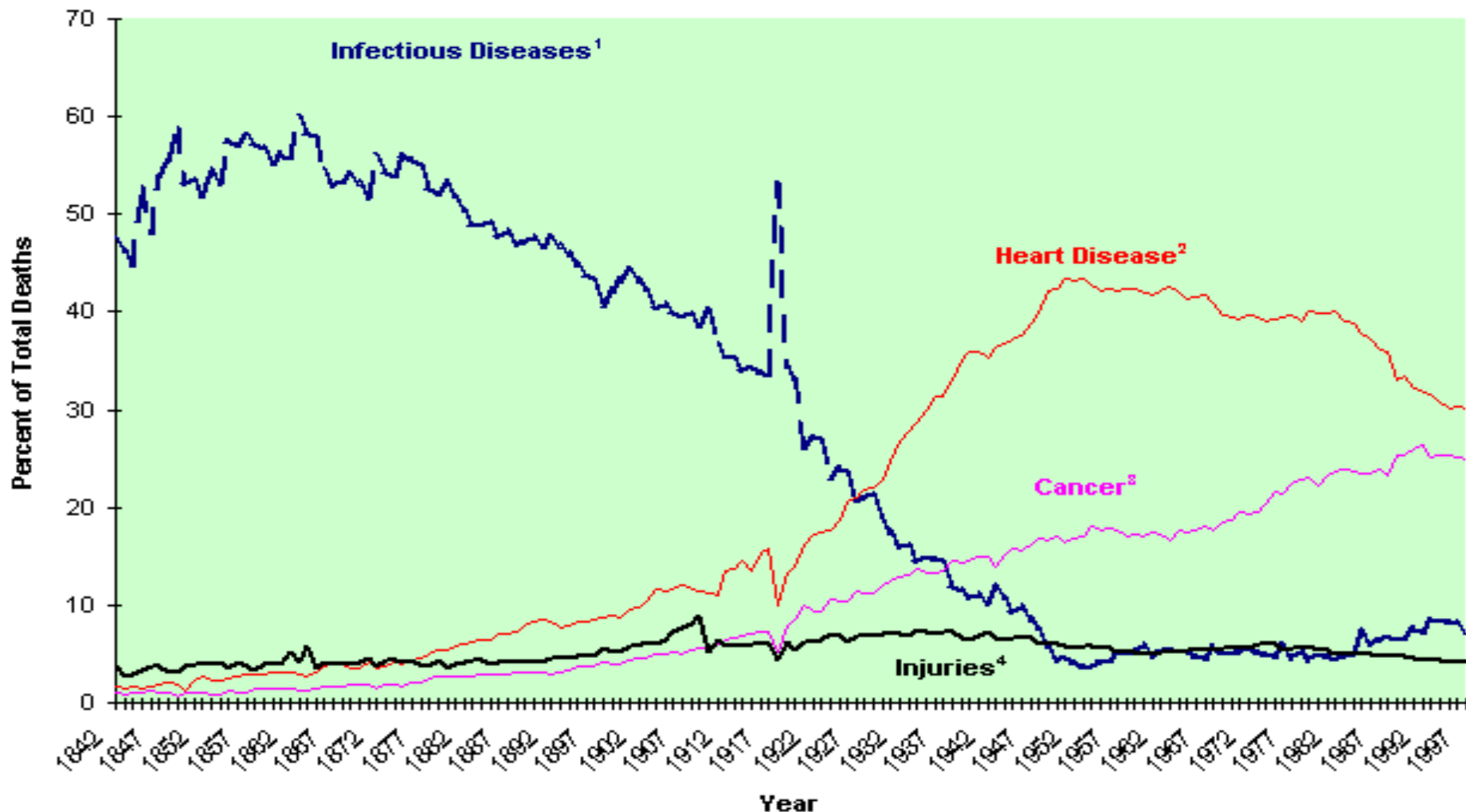
From the Standpoint of the State Epidemiologists

- ❖ **Reporting of reportable diseases**
 - ❖ Hepatitis C, B and A
 - ❖ STDs – HIV, syphilis
 - ❖ WNV
- ❖ **Reporting of clusters/outbreaks**
 - ❖ Bacterial infections – when, how, why
 - ❖ Vector-borne diseases – *Babesia*
 - ❖ Do to unknown agents, infectious or otherwise
- ❖ **Prion diseases**
- ❖ **Transfusion-related acute lung injury and other issues of public (legislator) concern**
- ❖ **Immune globulin, VZIG supplies**
- ❖ **Blood supply**
 - ❖ Routine conditions
 - ❖ Emergency preparedness

Approaches to Communication and Coordination

- ❖ Build on ongoing experience with WNV**
- ❖ Build on emergency preparedness activities**
- ❖ Develop consistent guidelines and procedures for reporting of conditions and situations, and follow-up and interventions**
- ❖ Develop ongoing and consistent communication in all jurisdictions**
- ❖ Enhance opportunities for public health staff to learn about blood donor recruitment, donor supply, screening, QA/QC, donor notification, product distribution, adverse event notification and follow-up, recipient notification and emerging issues**
- ❖ Enhance opportunities for managers and staff in blood banks and related operations to learn about the role of public health agencies in disease prevention, surveillance and intervention**
- ❖ Appropriate cross-participation in committee and task force in relevant areas**

Trends in Deaths from Selected Causes, Massachusetts: 1842-1997



1. The category of infectious disease includes Infectious and Parasitic Diseases, ICD-9 codes 001-139, and Pneumonia and Influenza, ICD-9 codes 480-487
2. Heart Disease, ICD-9 codes 390-398, 402, 404-429
3. Cancer, ICD-9 codes 140-208
4. Injuries, ICD-9 codes E800-E999

Estimates of the Impact of Pandemic Influenza on the United States When the Virus is Similar to the 1957 & 1968 Strains and 1918 “Swine” Influenza

	“Ordinary” Influenza	Pandemic Influenza	
		Similar to 1957 & 1968	Similar to 1918
Deaths	36,000	92,500	1,200,000
Hospitalizations	200,000	400,000	5-6 million
Numbers Infected	17-50 million	120-180 million	120-180 million
Missed Work Days	70 million	150 million	???
Missed School Days	38 million	85 million	???
Direct/Indirect Costs	\$3-15 billion	\$35 billion	???

Elements of State and Local Pandemic Planning

- ❖ Direction and Control**
- ❖ Agency-Specific Contingency Plans**
- ❖ Systems for Vaccine Distribution**
- ❖ Teams of Trained Volunteers**
- ❖ Increase Influenza Vaccine Coverage Now**
- ❖ Increase Pneumococcal Vaccine Coverage
Now**