Influenza Surveillance in New York State 1998 - 2001

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NYSDOH Influenza Surveillance
Four Surveillance Systems

1. Collaborating Laboratories Surveillance System
2. NYSDOH Infection Control Program
3. CDC Sentinel Physician Surveillance
4. State Epidemiologists’ Surveillance System
NYSDOH Influenza Surveillance

Collaborating Laboratories Surveillance System

World Health Organization Laboratories

National Respiratory and Enteric Virus Surveillance System

• Weekly reports to the CDC and NYSDOH
• Number of respiratory specimens tested
• Number positive for influenza
• By type and subtype
NYSDOH Influenza Surveillance
Collaborating Laboratories Surveillance System

Geographic Distribution of
WHO / NREVSS Laboratories
NYSDOH Influenza Surveillance
Infection Control Program

Outbreak reports

• Telephone consultation
• Laboratory support
• On-site assistance

Outbreak surveillance

• Interfacility outbreaks / geographic trends
• Potential risks / preventive actions
### NYSDOH Infection Control Program

**Influenza Outbreaks vs. All Nosocomial Outbreaks**

**Influenza Seasons 1998-99, 1999-00, 2000-01**

<table>
<thead>
<tr>
<th>Report Period</th>
<th>Influenza Outbreaks</th>
<th>Total Outbreaks</th>
<th>Percentage of Outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 3, 1998 – May 22, 1999</td>
<td>178</td>
<td>648</td>
<td>27%</td>
</tr>
<tr>
<td>October 2, 1999 – May 20, 2000</td>
<td>206</td>
<td>527</td>
<td>39%</td>
</tr>
<tr>
<td>September 30, 2000 – May 19, 2001</td>
<td>31</td>
<td>386</td>
<td>8%</td>
</tr>
</tbody>
</table>
NYSDOH Influenza Surveillance
Sentinel Physician Influenza Surveillance

Influenza-like Illness

Cough OR sore throat AND fever ≥ 100 ° F
in the absence of a known cause

Reporting

1998:   7 sentinels   > 200 patient visits weekly
1999:   25 sentinels  > 1500    "
2000:   57 sentinels  > 4500    "

Specimen submission
Initiated 2001
NYSDOH 2000 - 2001 Influenza Surveillance

Upstate Sentinel Surveillance Sites and Census 2000 Population by County

Sentinel sites upstate  =  38
Sentinel sites in NYC  =  19

Census 2000: Total persons per county

- 5379 - 152,976
- 152,976 - 339,932
- 339,932 - 733,523
- 733,523 - 1,535,466
- 1,535,466 - 2,465,326
NYSDOH Influenza Surveillance

State and Territorial Epidemiologists’ Influenza Surveillance System

- CDC national tracking
- Weekly estimates of influenza activity
- Categorical estimates of influenza activity
  - none
  - sporadic
  - regional
  - widespread
NYSDOH Influenza Surveillance 1998 - 1999

Percent of Respiratory Specimens Positive for Influenza
Increased Virus Isolation - 14 Weeks

Reported Outbreaks of Nosocomial Influenza
Increased Outbreaks Reported - 10 Weeks
NYSDOH Influenza Surveillance 1998 - 1999
Percent of Respiratory Specimens Positive for Influenza
Reported Outbreaks of Nosocomial Influenza
NYSDOH Influenza Surveillance 1998 - 1999
Percent Positive Specimens, Nosocomial Outbreaks and Percent of Patient Visits for Influenza-like Illness
# NYS NREVSS Laboratories

## All Reported Respiratory Viruses

### Influenza Seasons 1998-99, 1999-00, 2000-01

<table>
<thead>
<tr>
<th>Weeks 20 - 40</th>
<th>Percent of Tests Positive For</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RSV</td>
</tr>
<tr>
<td>1998 - 1999</td>
<td>13%</td>
</tr>
<tr>
<td>1999 - 2000</td>
<td>15%</td>
</tr>
<tr>
<td>2000 - 2001</td>
<td>18%</td>
</tr>
</tbody>
</table>
NYSDOH Influenza Surveillance
Prevention, Surveillance, Outbreak Control

Annual Prevention and Control Guidelines

- ACIP recommendations
- Vaccine supply, indications, prioritization
- Website addresses for biweekly updates

Biannual Influenza Alerts

- At season onset
- As season intensifies
- Reiterates pertinent recommendations
NYSDOH Influenza Surveillance
Prevention, Surveillance, Outbreak Control

**Outbreak Reporting**
- Identify viral agent
- Direct control measures
- Recommend appropriate prophylaxis

**Feedback and Information**
- Health Information Network
- Health Providers Network
- NYSDOH Public Website
Influenza Activity For Week Ending February 9, 2002
NYSDOH/BCDC. Based on lab confirmed outbreak(s) in a health care facility, school or institution.

Outbreak Status
(Number of Counties)
- No Outbreak Reported - 28
- Outbreak Previously Reported - 7
- Outbreak Reported This Week - 27
Influenza Activity For Week Ending February 23, 2002
NYSDOH/BCDC. Based on lab confirmed outbreak(s)
in a health care facility, school or institution.
NYSDOH Influenza Surveillance
1998-99, 1999-00, 2000-01 Summary

Onset of Increased Influenza Activity

- \geq 10\% of respiratory specimens positive
- \geq 5 nosocomial outbreaks per week
- \geq 3\% of patient visits for ILI

Peak Influenza Activity

- \geq 15\% of respiratory specimens positive
- Doubling of nosocomial outbreaks
- 3\% - 10\% of patient visits for ILI
NYSDOH Influenza Surveillance
1998-99, 1999-00, 2000-01 Summary

Duration of Increased Influenza Activity

- Lab Surveillance: 10 - 14 weeks
- Nosocomial Outbreaks: 8 - 10 weeks
- Sentinel Physicians: Less distinct

Complementary Surveillance Systems in use in NYS

Categorical Assessment of Influenza Activity provided to the CDC
New York State Department of Health
Bureau of Communicable Disease Control

Influenza Surveillance

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