

The Influenza Season 2003-04

Stephen L. Cochi, M.D., M.P.H.
Acting Director
National Immunization Program,
CDC



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

2003-2004 Influenza Season

- Influenza activity onset earlier than usual
- Children appeared disproportionately affected
 - reports of pediatric deaths
- Unprecedented demand for vaccine
 - additional vaccine purchased by CDC
- Drifted variant of influenza A (H3N2) vaccine strain predominated
 - vaccine effectiveness questioned



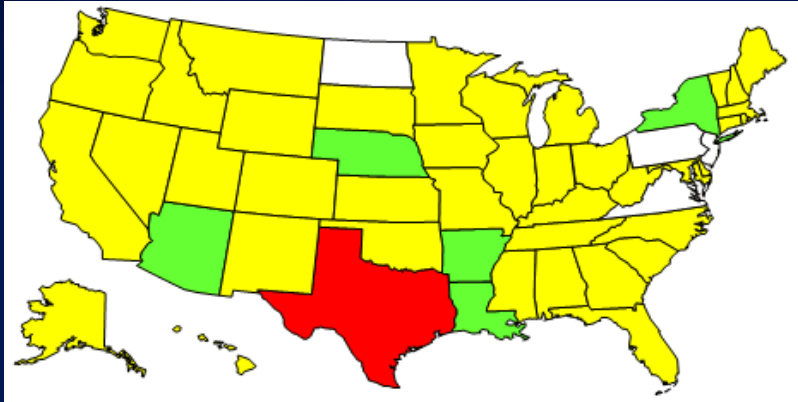
Outline of Presentation

- Influenza surveillance
- Pediatric deaths
- Influenza vaccine supply
- Influenza vaccine effectiveness
- Influenza vaccine and thimerosal
- Prospects for 2004-05

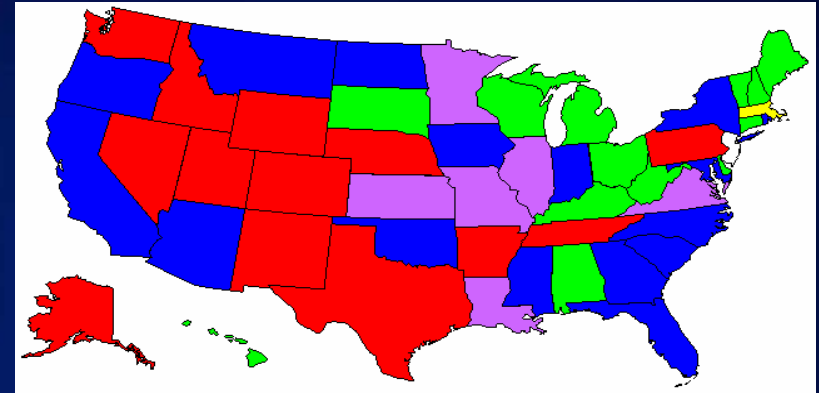


Reported Influenza Activity

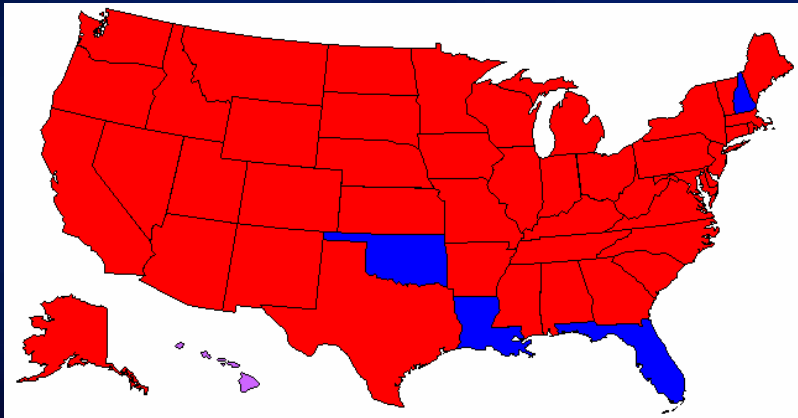
Week ending October 18, 2003



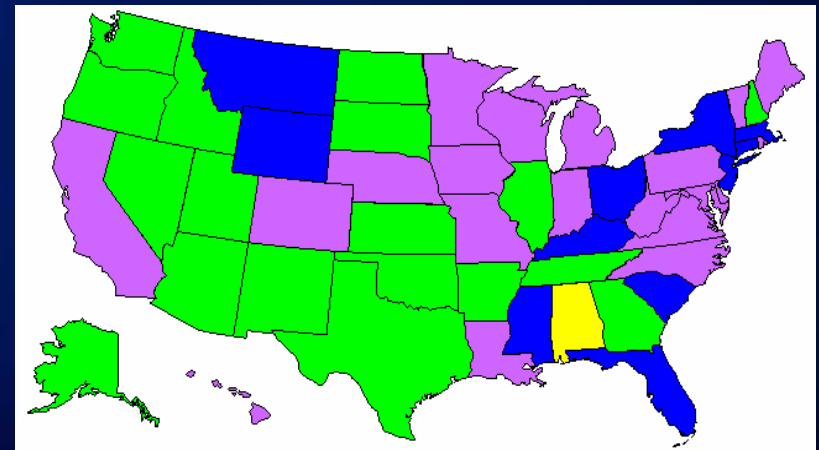
Week ending November 29, 2003



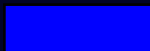
Week ending December 20, 2003



Week ending January 31, 2004



No Report



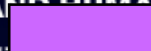
No Activity



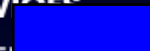
Sporadic



Local



Regional



Widespread

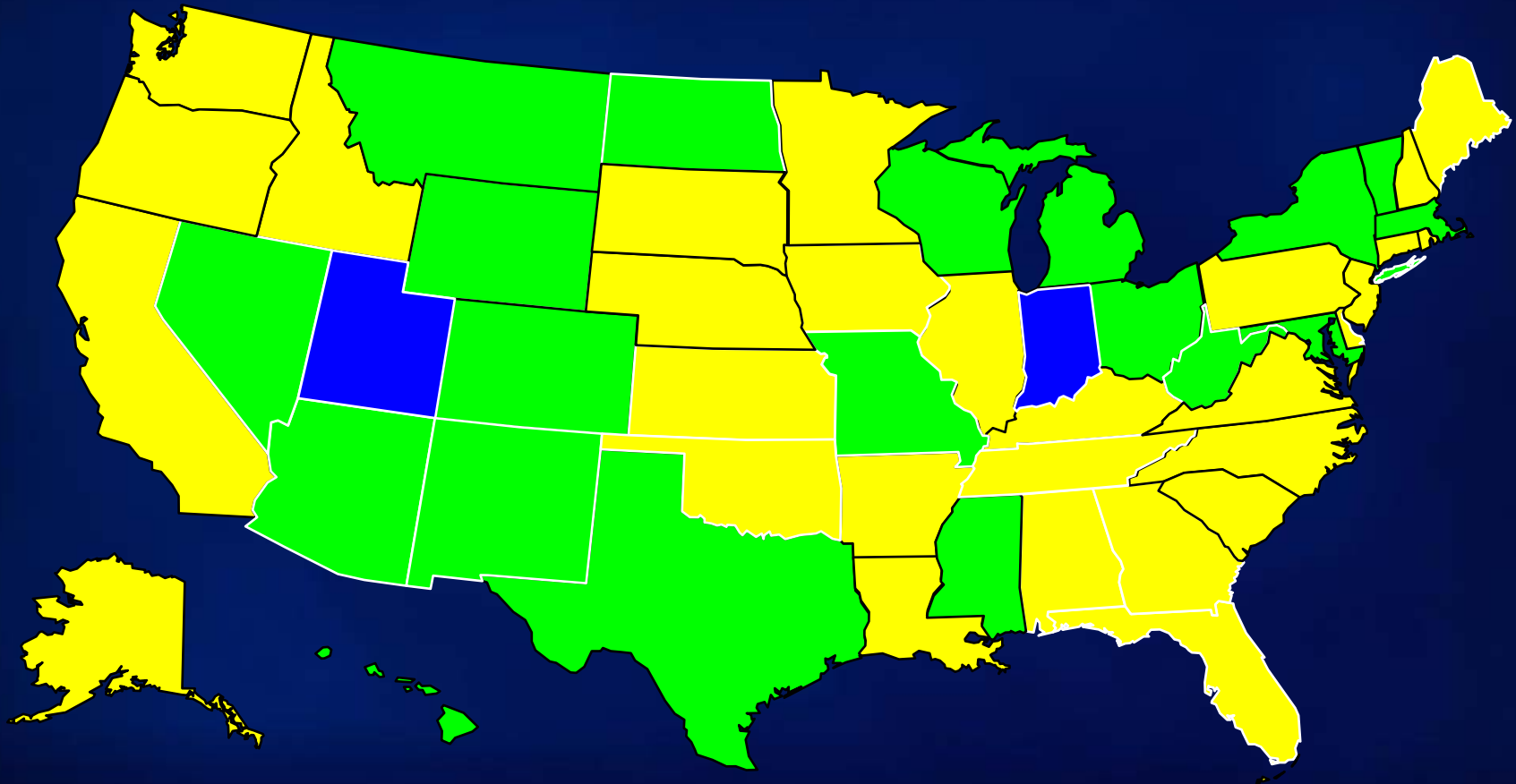


DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists

Week ending March 27, 2004 - Week 12



No Report

No Activity

Sporadic

Local Activity

Regional

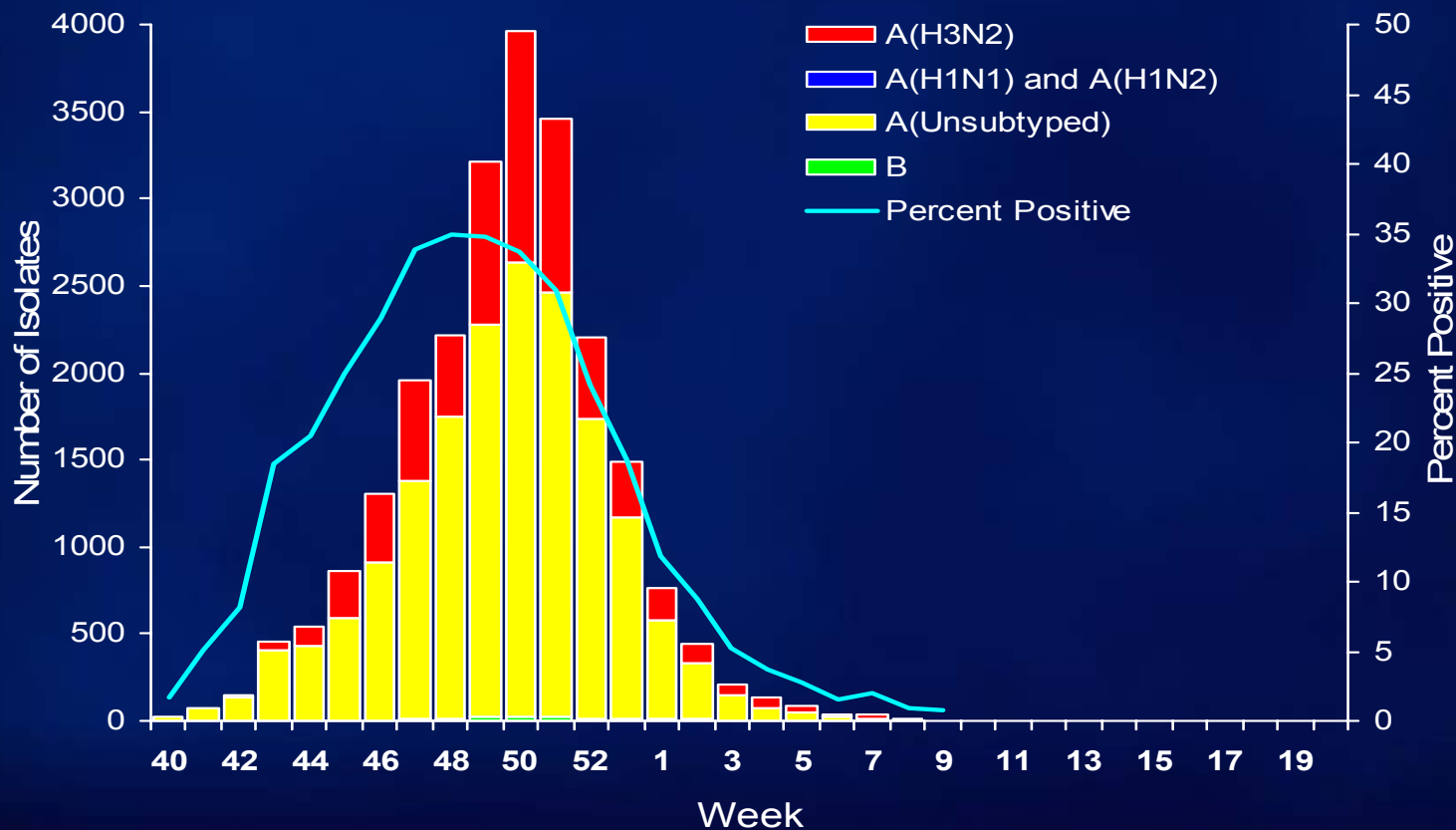
Widespread



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



WHO/National Respiratory and Enteric Virus Surveillance System Collaborating Laboratories National Summary, 2003-04

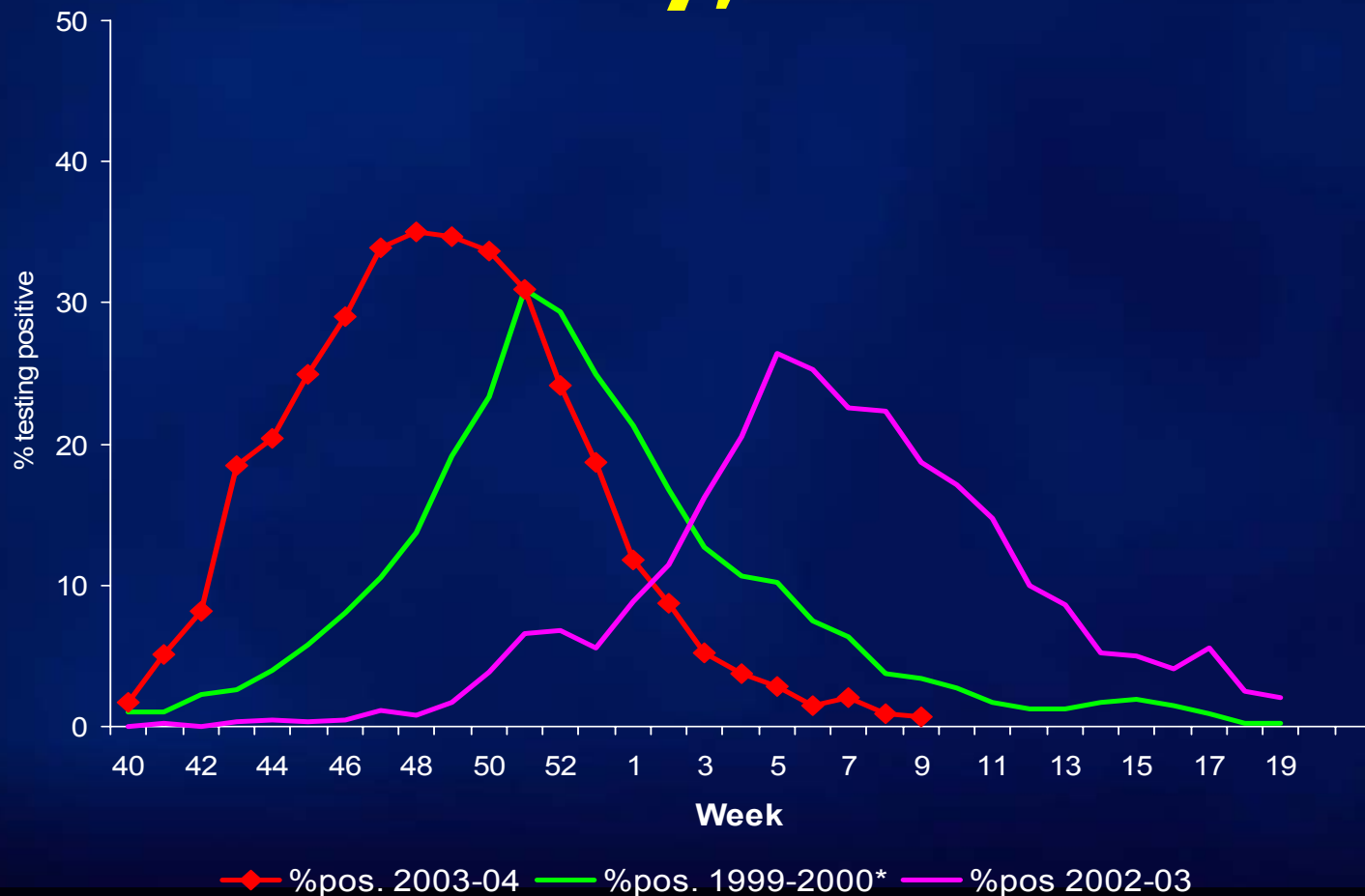


DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

Percentage of Specimens Testing Positive for Influenza - National Summary, 2003-04



◆ %pos. 2003-04 — %pos. 1999-2000* — %pos 2002-03

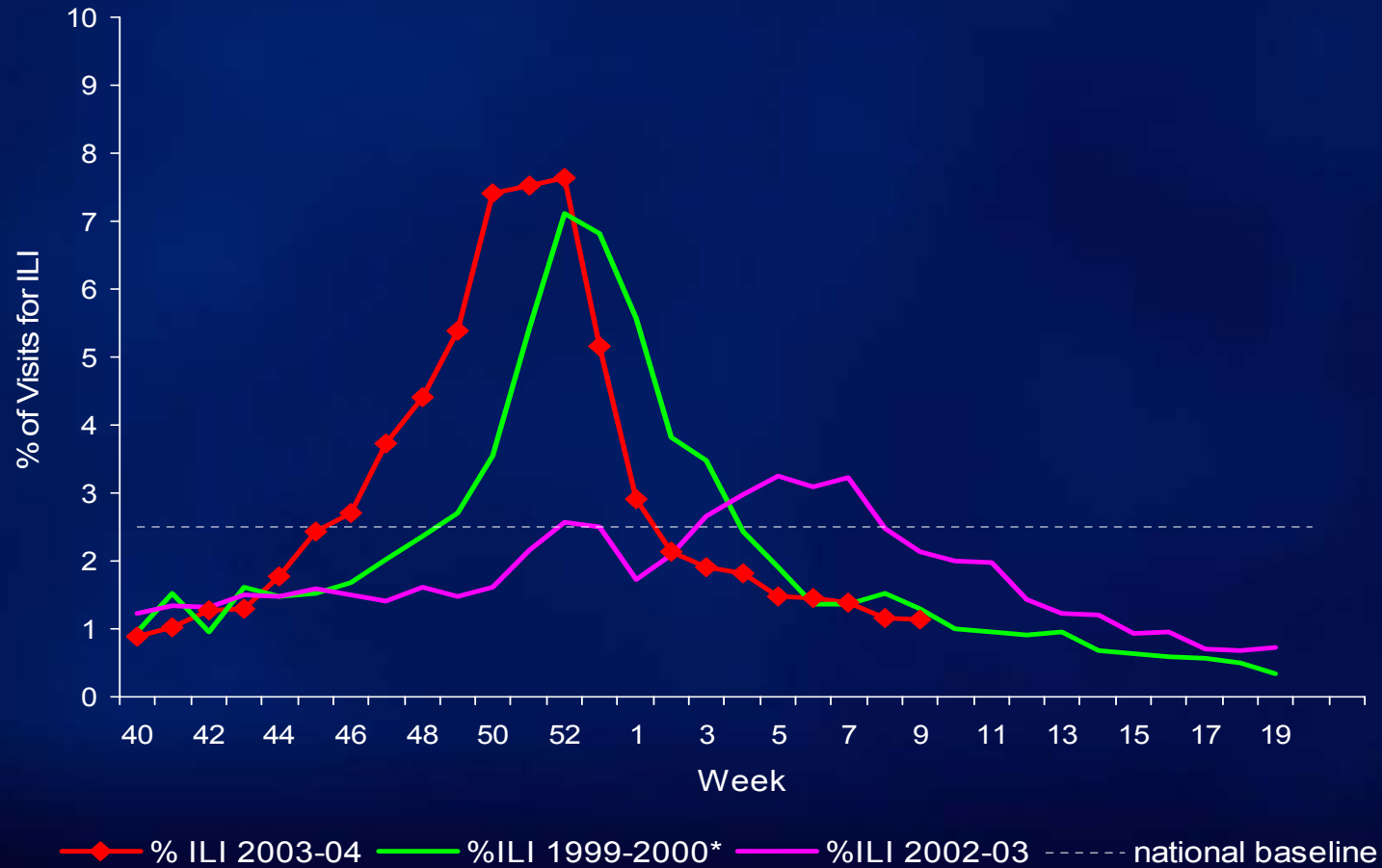


DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

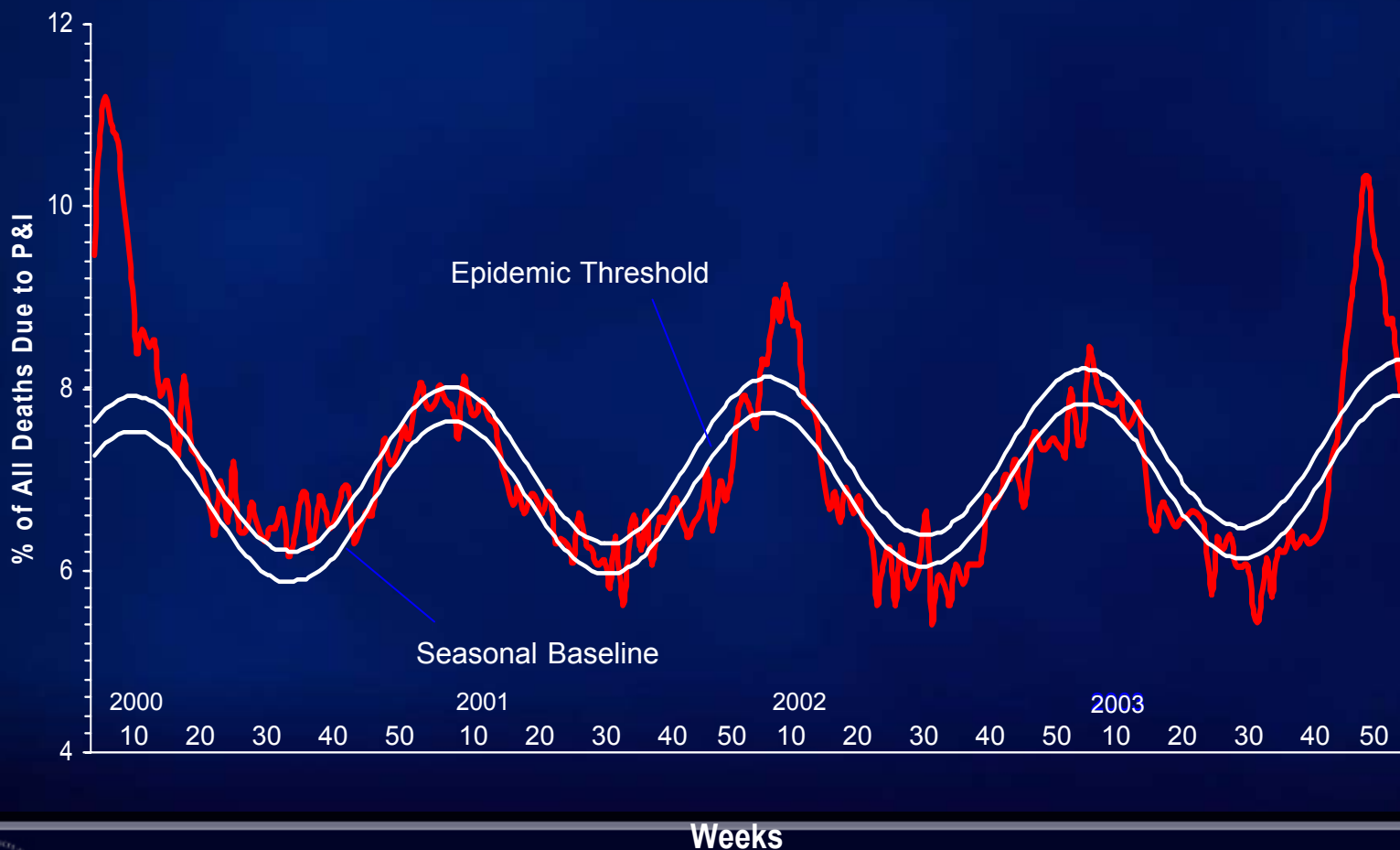
Percentage of Visits for Influenza-like Illness Reported by Sentinel Providers National Summary, 2003-04



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 03/6/04



Weeks
DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

Deaths in Children, 2003-04

- 143 deaths reported through 4/5/04, all influenza-confirmed
- Median age 3.1 years; 58 <2 years and 79 <5 years
- 110 (76.9%) had NO high-risk medical conditions
- 101 had vaccination status reported
 - 22 had received some vaccine at some time
 - Only 4 had been completely vaccinated
- No prior years' surveillance data to compare
- Between 1990-99, modeling estimated that an average of 92 deaths from influenza occurred in children <5 years



Influenza Vaccine Supply



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

Influenza Vaccine Doses Produced for the U.S. Market, 1999-2003*

Year	Doses Produced (millions)	Doses Distributed (millions)
1999	77.2	76.8
2000	77.9	70.4
2001	87.7	77.7
2002	95.0	83.0
2003**	86.9	83.1

*Data provided by vaccine manufacturers

**Estimated; includes both inactivated and live vaccines



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



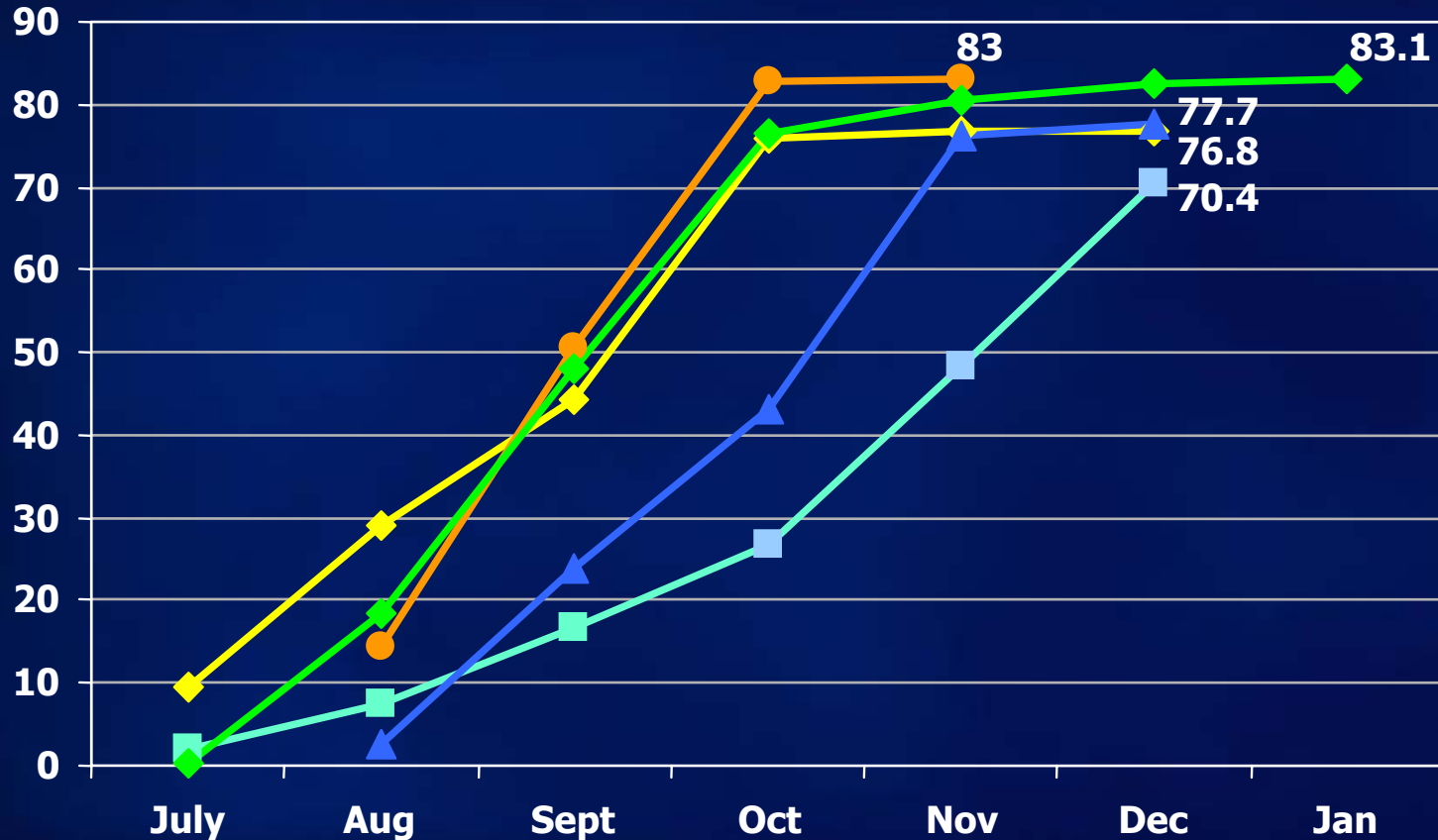
SAFER · HEALTHIER · PEOPLE

Cumulative Monthly Influenza Vaccine Distribution

For 1999, 2000, 2001, 2002, 2003/04¹

Doses (Millions)

◆ 1999 ■ 2000 ▲ 2001 ● 2002 ◆ 2003/04



1. Data presented in this figure were supplied by the influenza vaccine manufacturers to the Centers for Disease Control and Prevention (CDC).

Updated 02/27/2004



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



SAFER · HEALTHIER · PEOPLE

Vaccine Shortages, 2003-04 (I)

- Influenza vaccine is recommended for 185 million persons annually (a potential shortage each year)
- Beginning in late November, 2003, health care providers reported spot shortages of inactivated vaccine
- CDC surveyed providers in early to mid-December:
 - Information received from pediatricians, family physicians, AMA chapters, public health immunization programs, local public health agencies, Indian Health Service, health plans



Vaccine Shortages, 2003-04 (II)

- Majority of physicians reported having small amounts of vaccine on hand (<50 doses)
- Majority ordered more vaccine, and reported difficulties with ordering more vaccine (few or no doses available)



Vaccine Shortages, 2003-04 (III)

- By 12/10/03, 21/45 state and 299/419 local public health agencies reported having no vaccine, and 32/47 state respondents reported redistribution activities underway
- In response to CDC announcement of potential additional doses, state and local immunization programs requested
 - 602,000 doses of 0.5mL vaccine
 - 240,000 doses of 0.25mL vaccine



CDC Influenza Vaccine Contracts, 2003

Doses ordered under contract:

- April, 2003:
 - 4.1 million doses
 - all distributed
- December 8:
 - 100,000 doses 0.5mL
 - 150,000 doses 0.25mL (received 213,000)
 - all distributed
- December 12:
 - 363,200 doses 0.5mL; 256,900 distributed
 - 2,090,320 doses FluMist, 62,320 distributed



Other Late Season Vaccine Distribution, 2004

- January 12:
 - 250,000 doses of FluMist donated to CDC;
49,000 ordered by public health
departments
- January 14:
 - Department of Veterans Affairs donated
50,550 doses of 0.5mL vaccine to CDC
 - 47,500 doses distributed



Influenza Vaccine Effectiveness, 2003-04

- CDC study of influenza-like illness (ILI) in Colorado among health care workers did not demonstrate vaccine effectiveness (VE; MMWR 1/16/04)
- CDC case-cohort study suggests 16% - 63% effectiveness against lab confirmed influenza (CCI)
- French case-cohort study suggests 61% effectiveness against ILI
- Results of CDC case-control study of VE against CCI pending; results to be published in MMWR, June, 2004



Influenza Vaccine and Thimerosal - I

- **There has been legislative, media, and public interest and concern related to influenza vaccine and thimerosal.**
 - Concern about pregnant women and 6-23 month-old children.
 - Questions about lack of official preference for thimerosal preservative-free influenza vaccine
- **The ACIP has repeatedly evaluated this issue and has not offered a preference:**
 - Influenza vaccination is the best way to prevent the many deaths from influenza, now recommended for children 6-23 months
 - Available scientific evidence has not shown thimerosal-containing vaccines to be harmful



Influenza Vaccine and Thimerosal - II

- Producing thimerosal preservative-free vaccine may significantly reduce total vaccine production and/or delay availability
- CDC supports production of thimerosal preservative free vaccines for children, and has done so since 1999.
- CDC understands that many in the public may prefer thimerosal preservative-free influenza vaccines for their young children. CDC is working with vaccine companies to meet the demand for this vaccine.



Future Plans - I

- **Make pediatric influenza-related deaths reportable**
- **Develop infrastructure for annual influenza vaccine effectiveness studies**



Future Plans - II

- Implement pediatric influenza vaccine stockpile
 - \$40 million allocated for each of 2004, 2005, which in 2004 will allow for purchase of between 4 million and 4.5 million doses.
 - Challenges include
 - prioritization/targeting of vaccine
 - Providing reserve vaccine without affecting usual vaccine production
 - Unable to keep stockpile vaccine beyond usual expiration date
- Increase regular CDC contract purchase allocation significantly, up from 4.1 million doses in 2003
- Develop vaccine distribution tracking
- Continue aggressive promotion of vaccination
- Work with partners to enhance vaccine production

