New Recommendations for Hepatitis A Vaccination of Children

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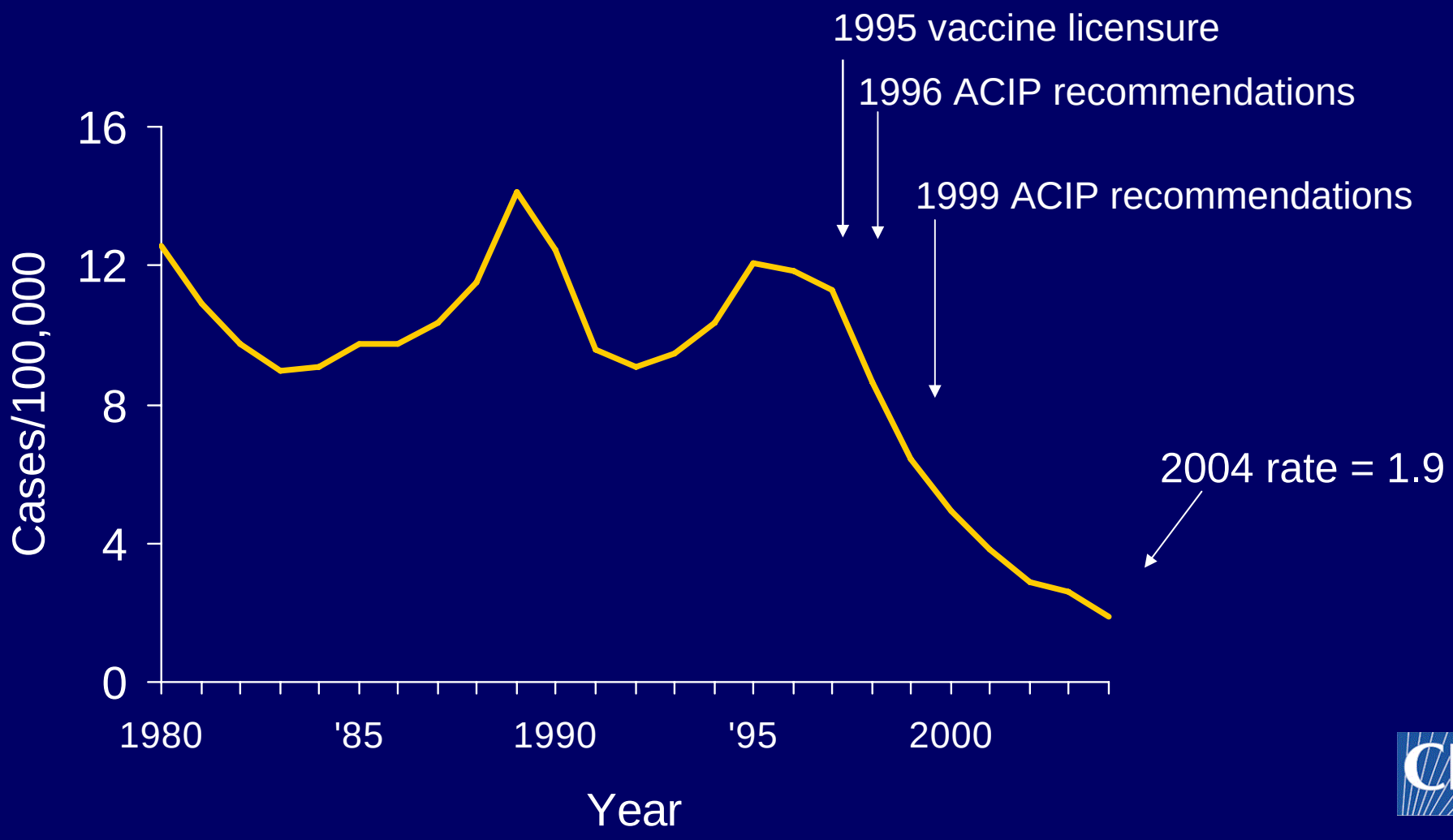
"The findings and conclusions in this presentation have not been formally disseminated by CDC and should not be construed to represent any agency determination or policy."

Hepatitis A Incidence, United States, 1980-2004



2005 Events in Childhood Hepatitis A Vaccination

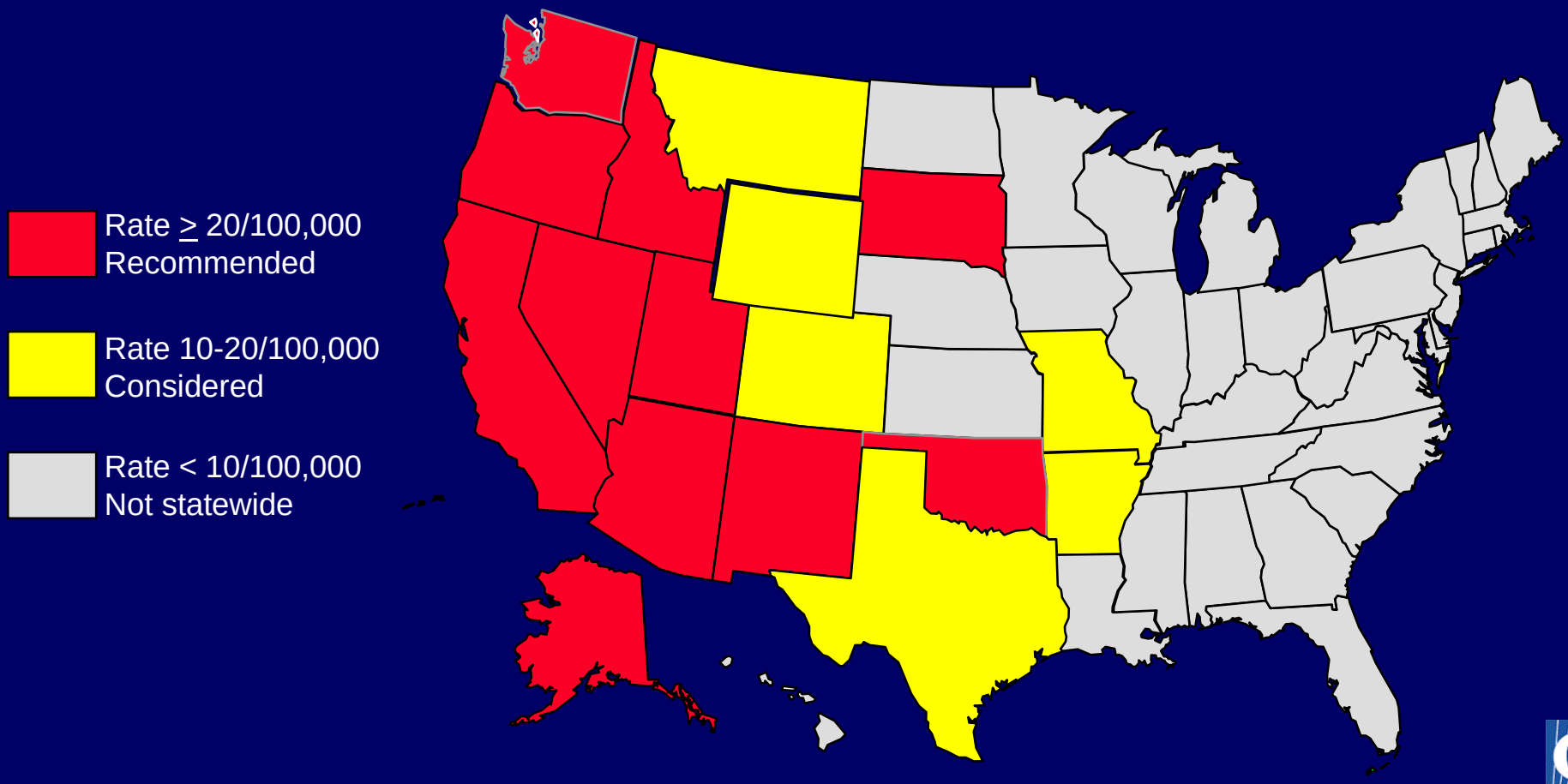
- FDA licensure of hepatitis A vaccines for children aged 12-23 months
- ACIP recommendation for routine nationwide childhood vaccination

Incremental ACIP Recommendations for Hepatitis A Vaccination of Children

- 1996 - Children living in “high rate” communities
- 1999- Children living in states/communities with consistently elevated rates during “baseline period”
- All children nationwide
  - Facilitated by availability of vaccine for children < 2 years
  - Allow consideration of elimination of transmission

CDC

1999 ACIP Recommendations for Statewide Routine Hepatitis A Vaccination of Children*

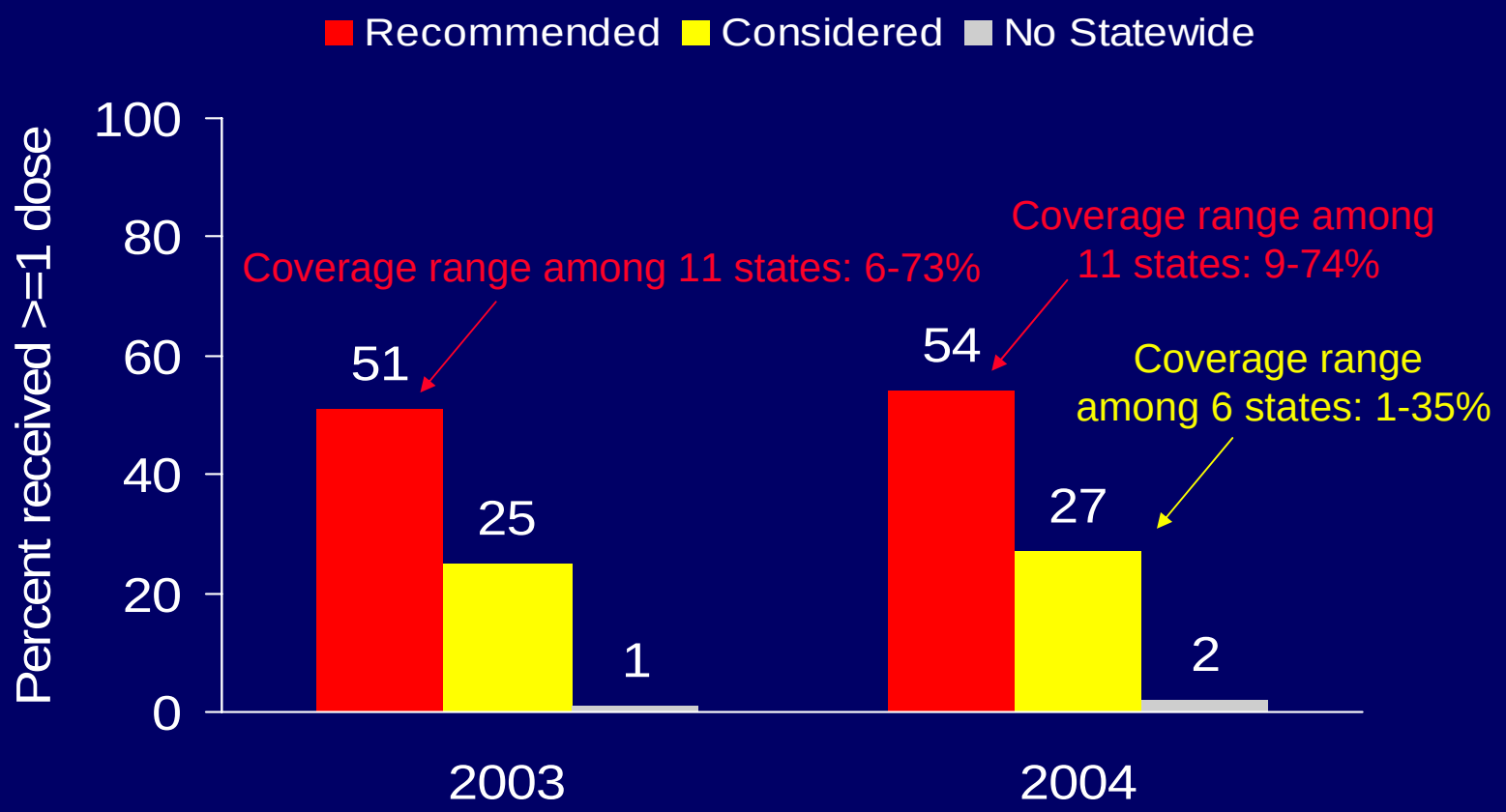


* Based on average incidence rate during baseline period (1987- 97)

Hepatitis A Vaccination of Children Implementation to Date

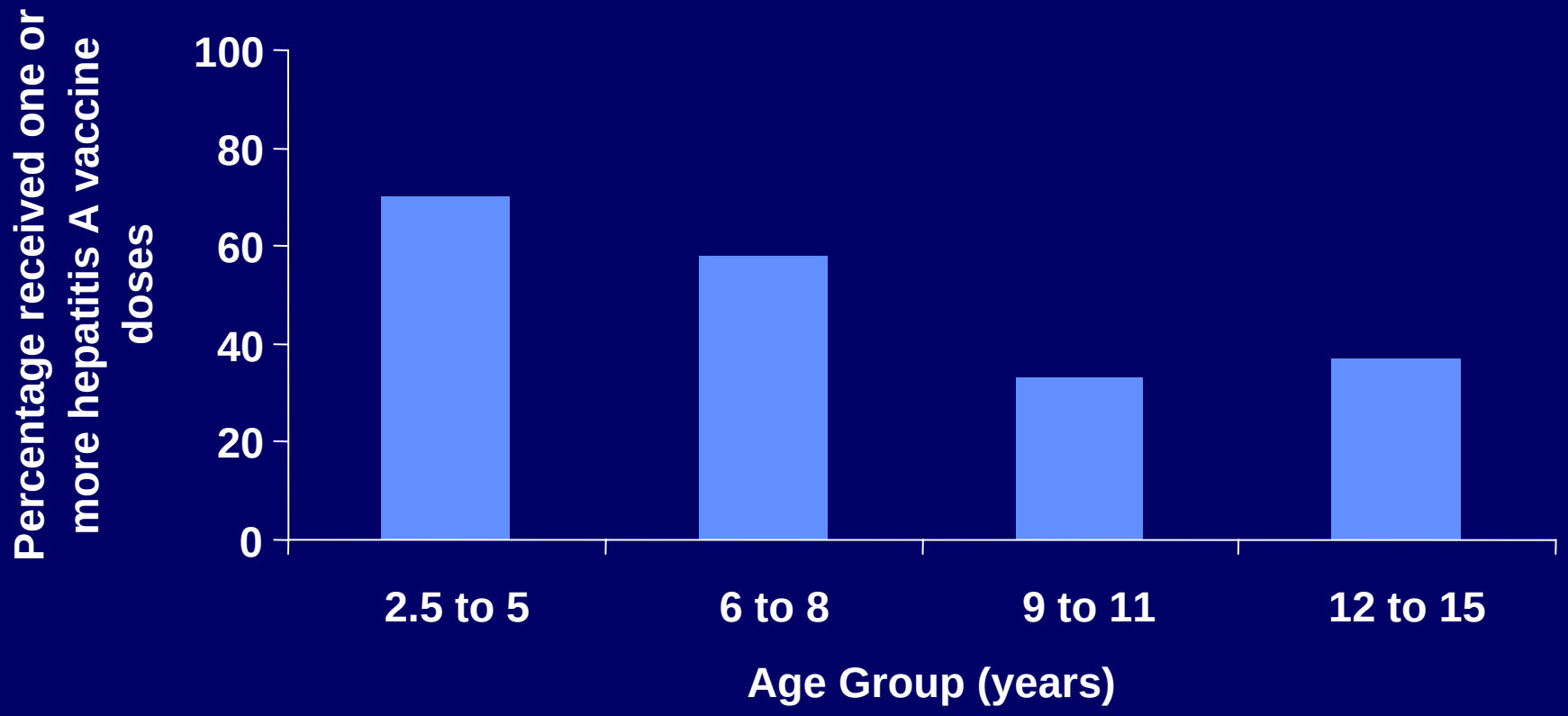
- Permissive language in 1999 statement
  - Determine recommended age groups considering community disease patterns
  - Proposed possible strategies included vaccinating
    - ≥ single age cohorts
    - In selected settings (eg daycare)
    - Wide range of ages when present for medical care
- Considerable variation in approach across states

Hepatitis A Vaccine Coverage (≥1 dose) among 24-35 Month Old Children, National Immunization Survey, United States, 2003-2004



Source: MMWR and CDC unpublished.

Hepatitis A vaccine coverage (one or more doses) among Arizona and Oregon children, 2004-5 (n=488)

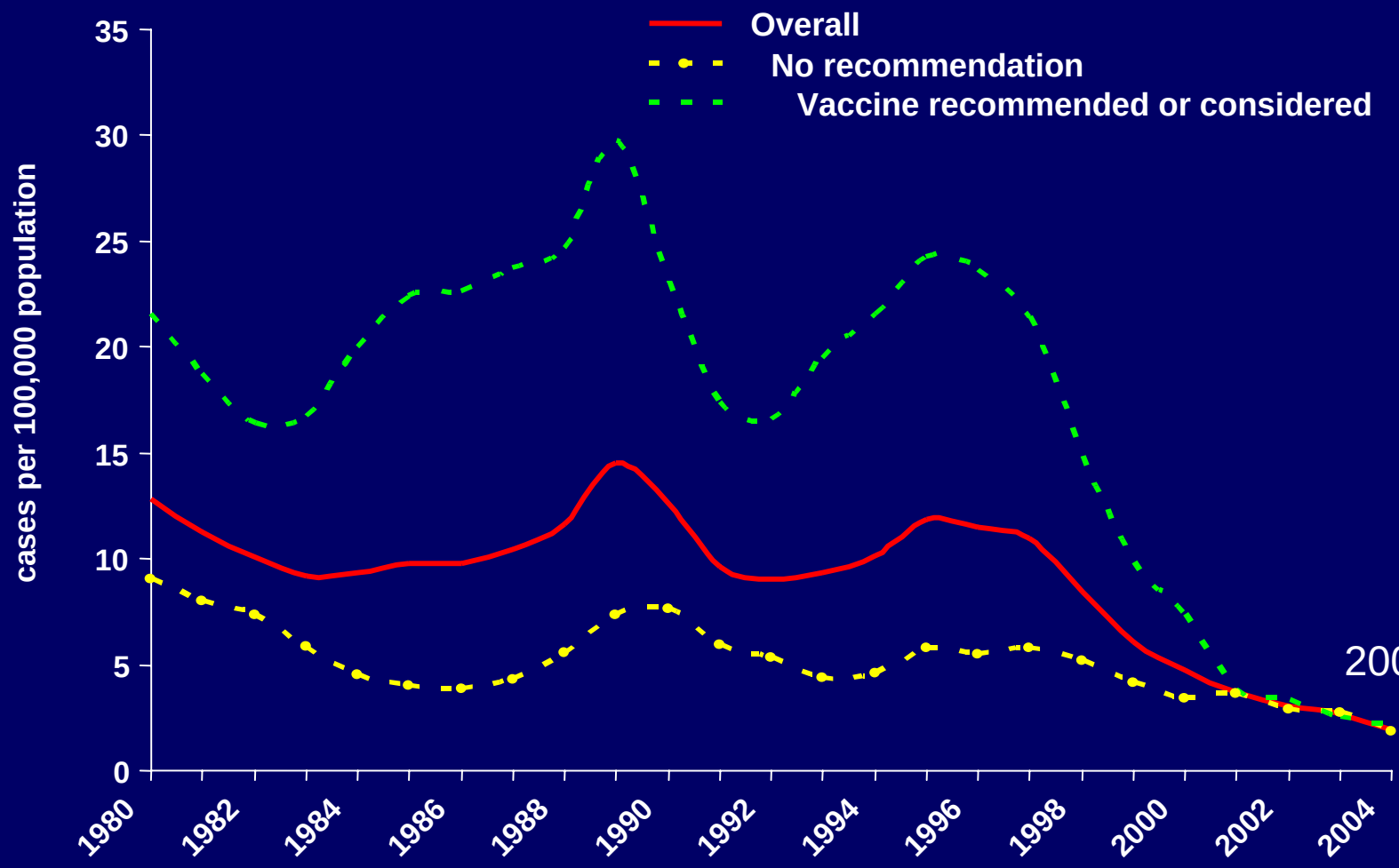


Source: CDC and RTI International, preliminary data.
Telephone survey with provider verification of immunization record

Summary of Implementation

- Coverage at ~50%, 5 years after recommendations were made
  - Wide range among states
- Few available trend data, but coverage appears to be rising slowly, if at all, in recent years
- Primarily voluntary strategies
  - Few states with mandates
    - Little change in past several years
    - No plans in states that haven't implemented to date

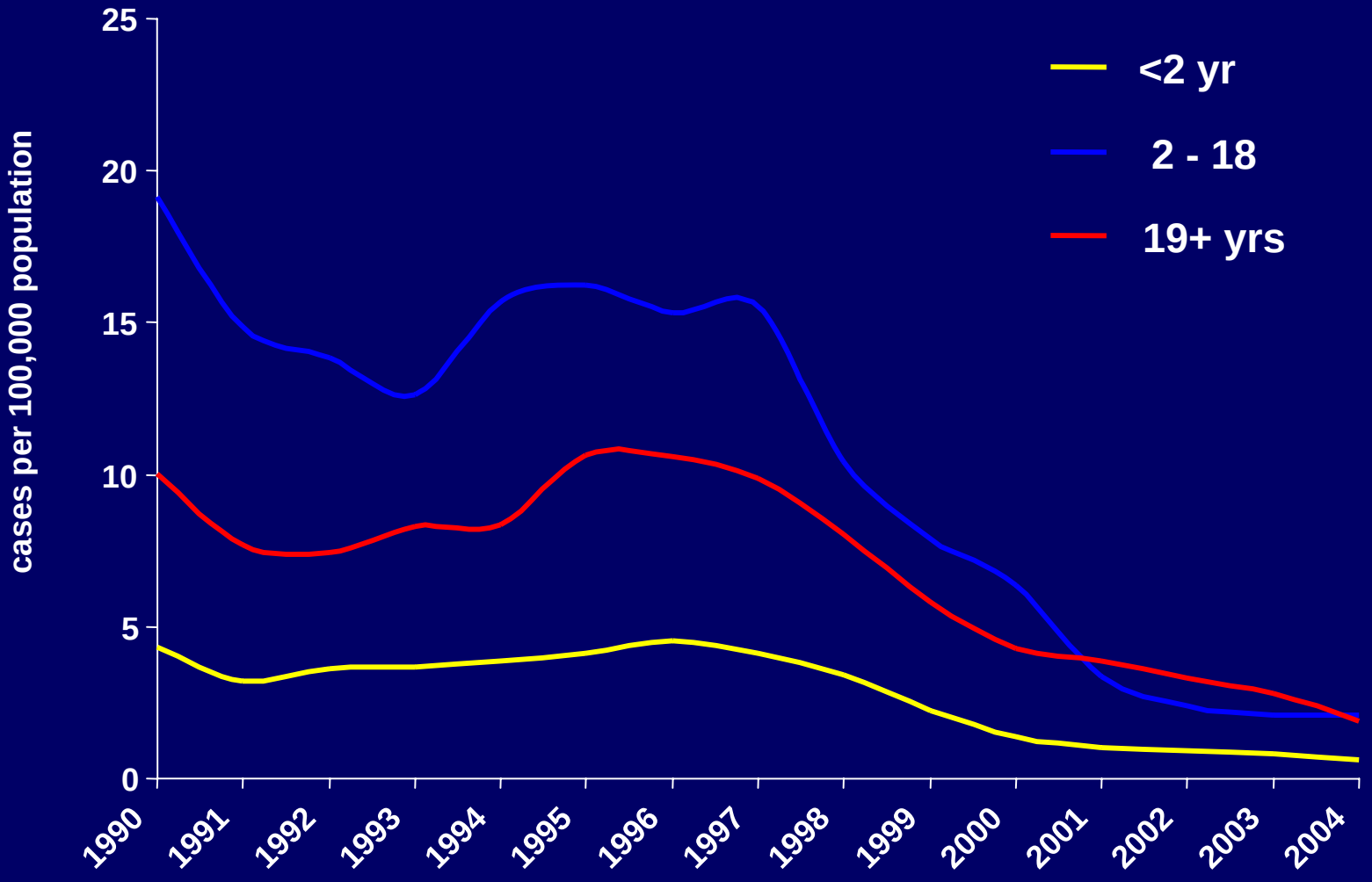
Hepatitis A Incidence, 1980-2004: Vaccinating and Non-Vaccinating States



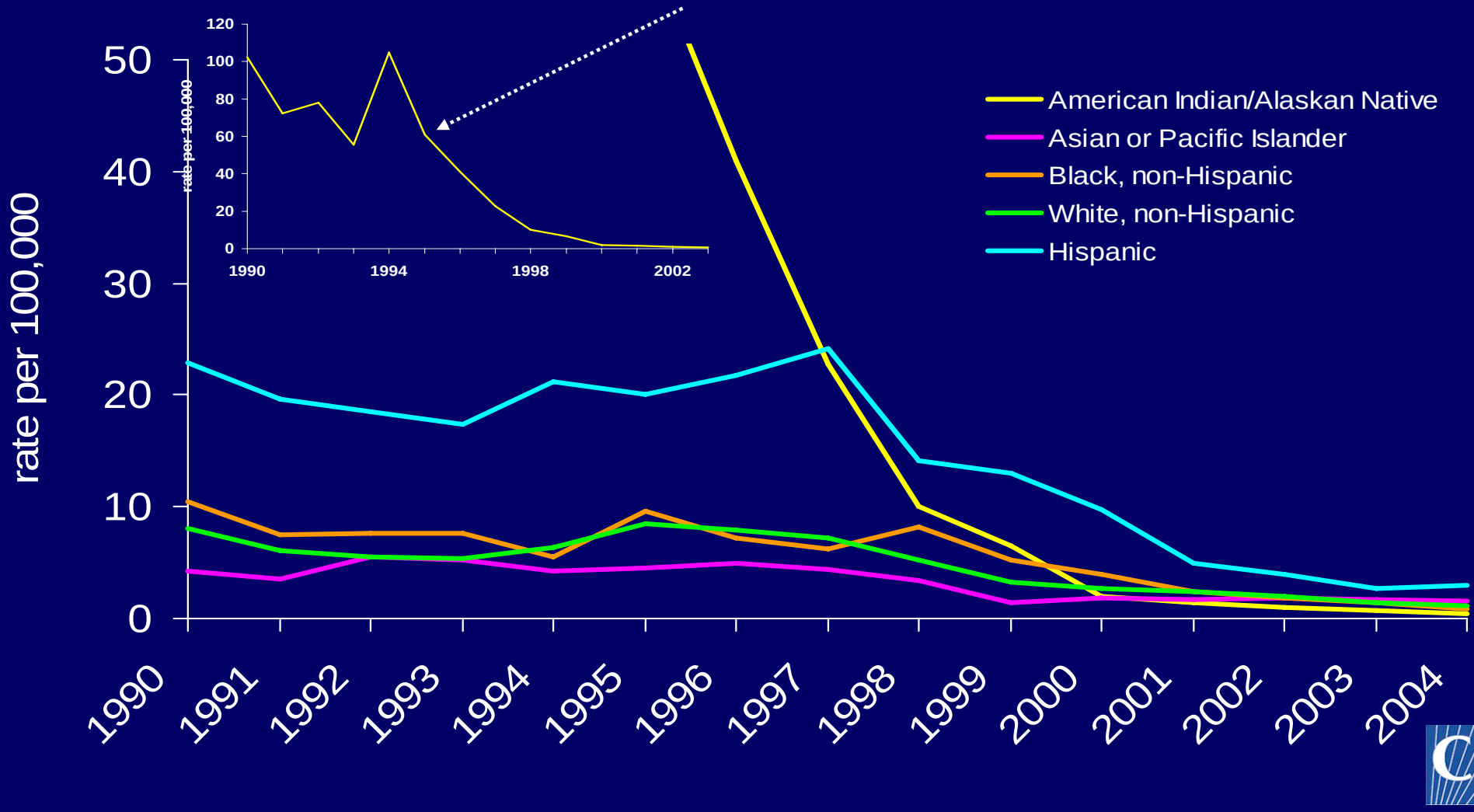
2004 rate = 1.9

Source: NNDSS

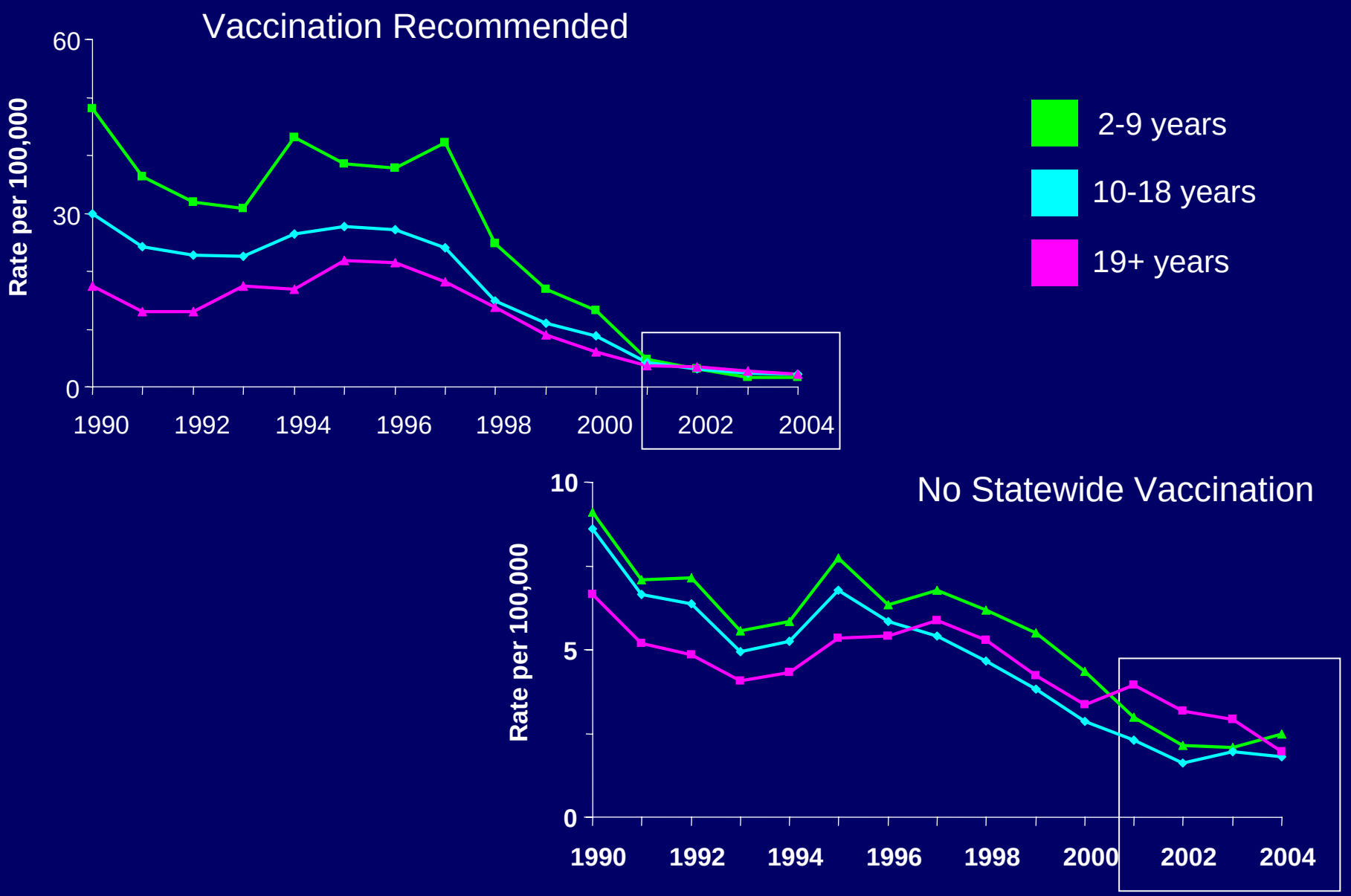
Hepatitis A Incidence by Age, 1990-2004



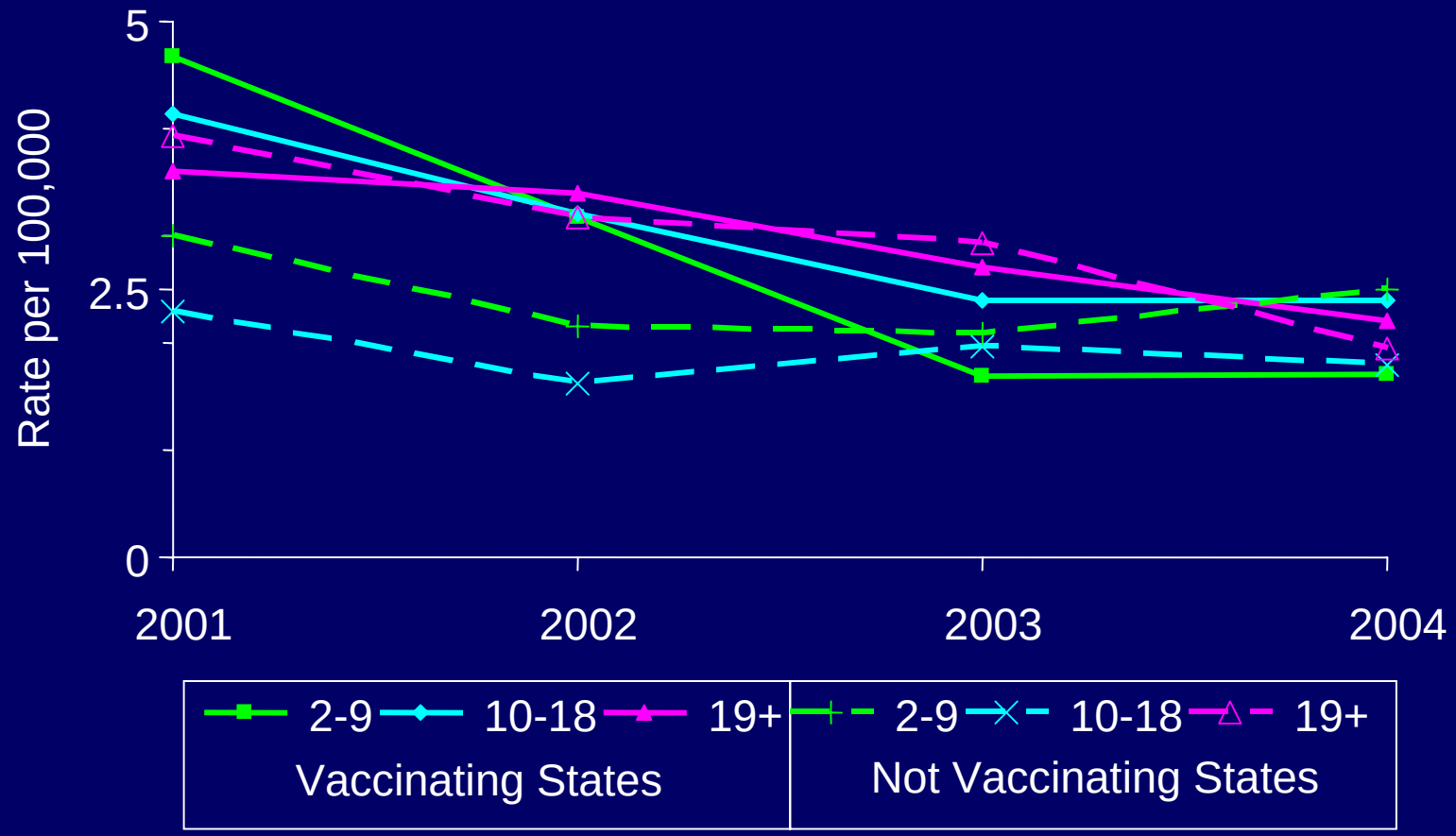
Hepatitis A Incidence by Race/ethnicity 1990-2004



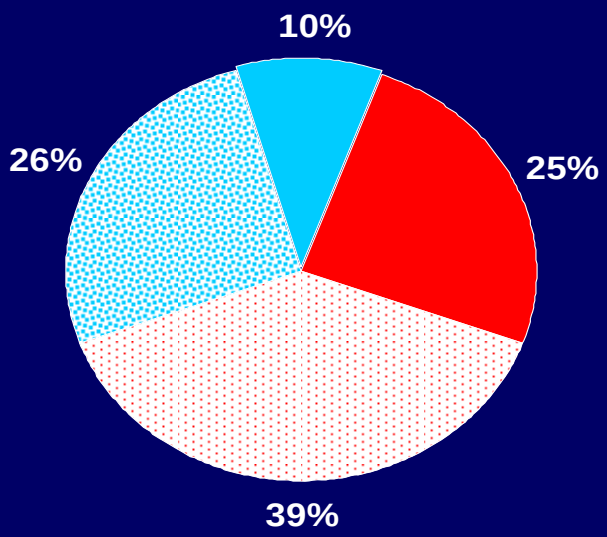
Hepatitis A Incidence Rates, by Age Group and Region, 1990-2004



Hepatitis A Incidence Rates, by Age Group and Region, 2001-2004

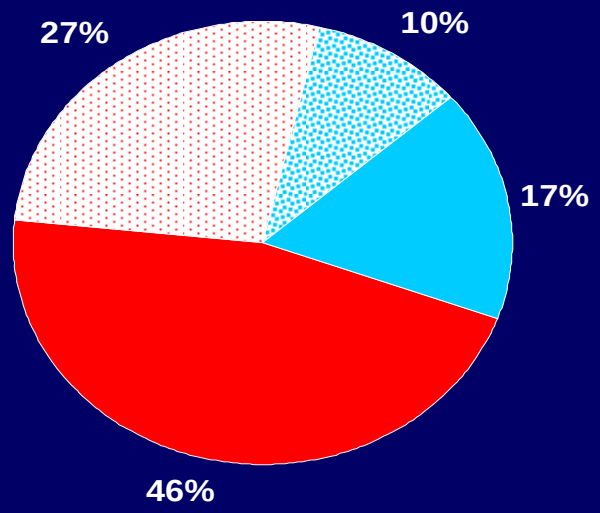


Distribution of Reported Hepatitis A Cases by Age Group and State Vaccination Recommendations



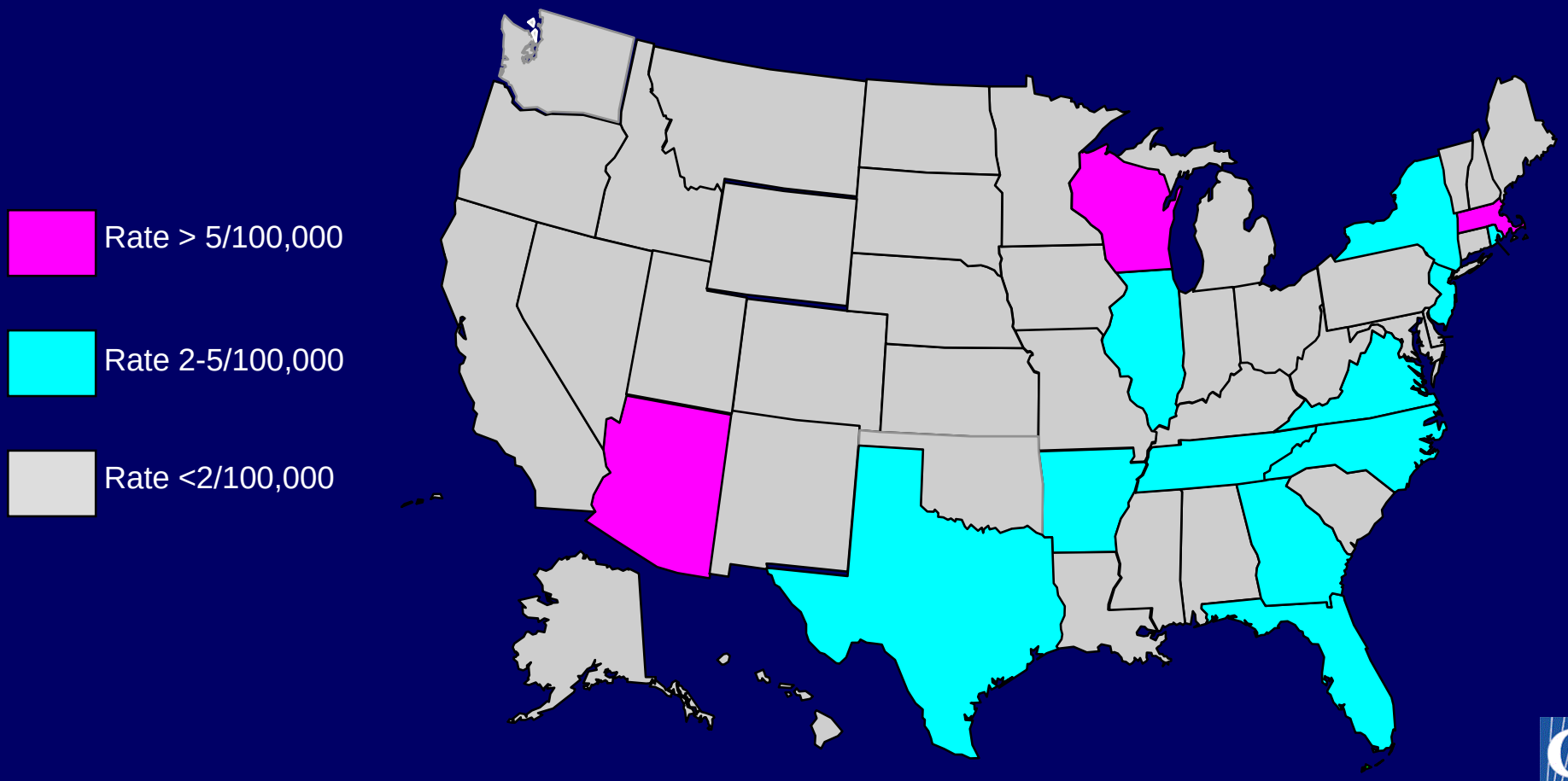
1990-1997 average
N = ~27500

Adults (non-vaccinating)
Adults (vaccinating)
Children (vaccinating)
Children (non-vaccinating)

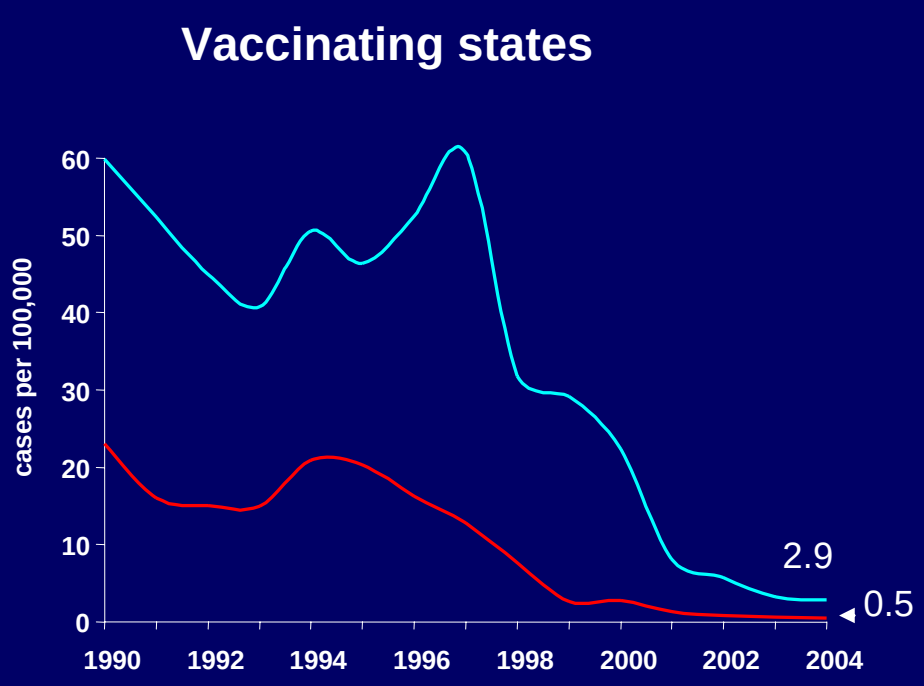


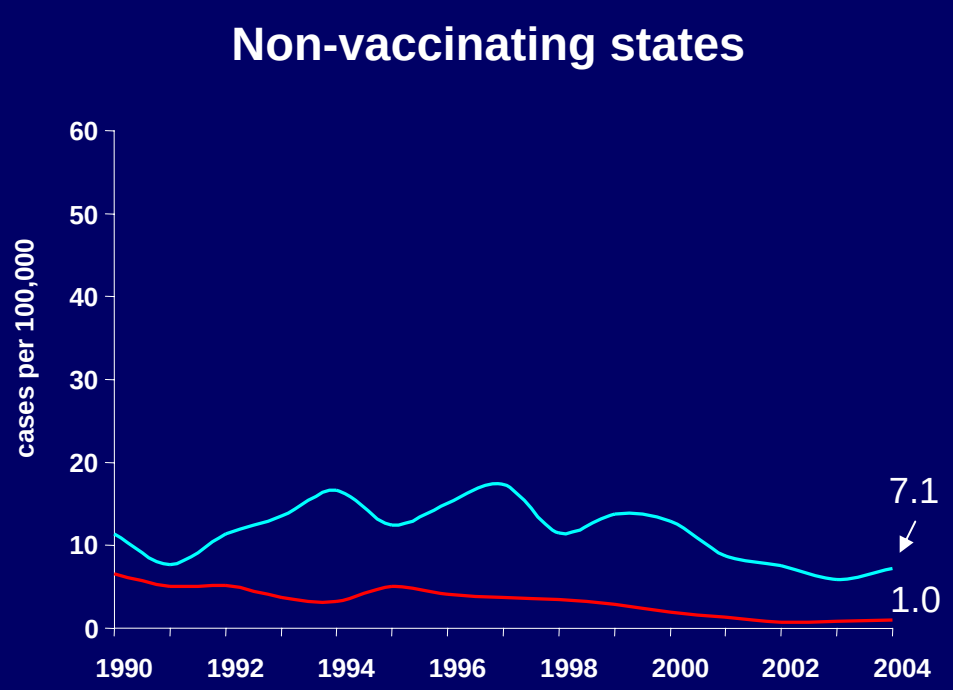
2004
N = ~6000

Hepatitis A Rates among Children, 2004



Hepatitis A among Children 0-18 Years, by Ethnicity and Vaccination Recommendations





Hispanic

Non-Hispanic

2004 Epidemiology Summary

- Overall rate falling
  - Largely due to declines among adults
  - Plateau among children
- Despite progress, 5,000-7,000 reported cases per year
  - Estimated 20,000-30,000 cases occur
- Overall rates similar across regions
  - Highest rate among Hispanic children in states where vaccination of children not recommended
- Majority of cases from states without routine vaccination recommendations

Economic Comparisons
Hepatitis A and Selected Recently-Recommended Vaccines

	Hepatitis A, 12 month olds (Rein)	Pertussis, adolescents (Lee)	Meningo-coccal (Shepard)
Cases prevented	180,000	31,000	270
QALYs saved	2,300	1,600	1,800
Direct cost of vaccination, $	134 M	44 M	273 M
Net societal cost	45 M	33 M	159 M
$ per QALY saved	25,000	20,000	138,000

CDC

Predicting the Future

- Theoretical models of incidence dynamics following introduction of new vaccine predict initial nadir followed by rebound to new “steady state” (Anderson and May)

- Model of expected incidence without immunization in states not currently routinely vaccinating children predicts 5,000-11,000 cases per year over next decade

Nationwide Vaccination of Children

- Moves childhood hepatitis A vaccination into “mainstream”
  - Improves sustainability
  - Increases probability of achieving high coverage
  - Consistent with incremental strategy
    - Vaccine now licensed for one year olds --- ability to incorporate into routine schedule
- Likely to result in lower rates over time
  - Further narrow demographic disparities
  - Consideration of elimination of transmission over longer term
- Economics reasonable

Routine Vaccination of Young Children
Single Age Cohort

All children should receive hepatitis A vaccine at 1 year of age (i.e., 12-23 months). Vaccination should be completed according to the licensed schedules and integrated into the routine childhood vaccination schedule. Children who are not vaccinated by 2 years of age can be vaccinated at subsequent visits.

Older Children and Adolescents
Areas with Existing Programs

States, counties, and communites with existing hepatitis A vaccination programs for children aged 2-18 years are encouraged to maintain these programs. In these areas, new efforts focused on routine vaccination of 1 year old children should enhance, not replace, ongoing programs directed at a broader population of children.

Older Children and Adolescents
Areas Without Existing Programs

In areas without existing hepatitis A vaccination programs, catch-up vaccination of unvaccinated children 2-18 years can be considered. Such programs might especiallly be warranted in the context of rising incidence or ongoing outbreaks among children or adolescents.

Next Steps

- New recommendations reflected in current VFC language

http://www.cdc.gov/nip/vfc/acip_resolutions/1005-1hepa.pdf

- Publish ACIP statement
- Implementation guidance

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