Proposed Time-Frame for Modifying Influenza Vaccination Recommendations*

- **2007-2008**: Consider expanding recommendations to include school-age children
- **2010-2011**: Consider expansion of recommendations to include household contacts and caregivers of school-aged children
- **2012-2013**: Consider expansion to universal vaccination

***Presented to ACIP meetings 2006-07**

CDC

Influenza Vaccine Recommendations for School-Age (5-18 Year Old) Children

Convened by

Influenza Division

Centers for Disease Control and Prevention

and

Council of State and Territorial Epidemiologists

September 10-11, 2007

Critical Factors: Expanding Annual Vaccination Recommendations to Include 5-18 Year Olds

- Vaccine supply
- Vaccine safety
- Cost-effectiveness
- Disease burden
- Vaccine effectiveness
- Feasibility of sustained implementation

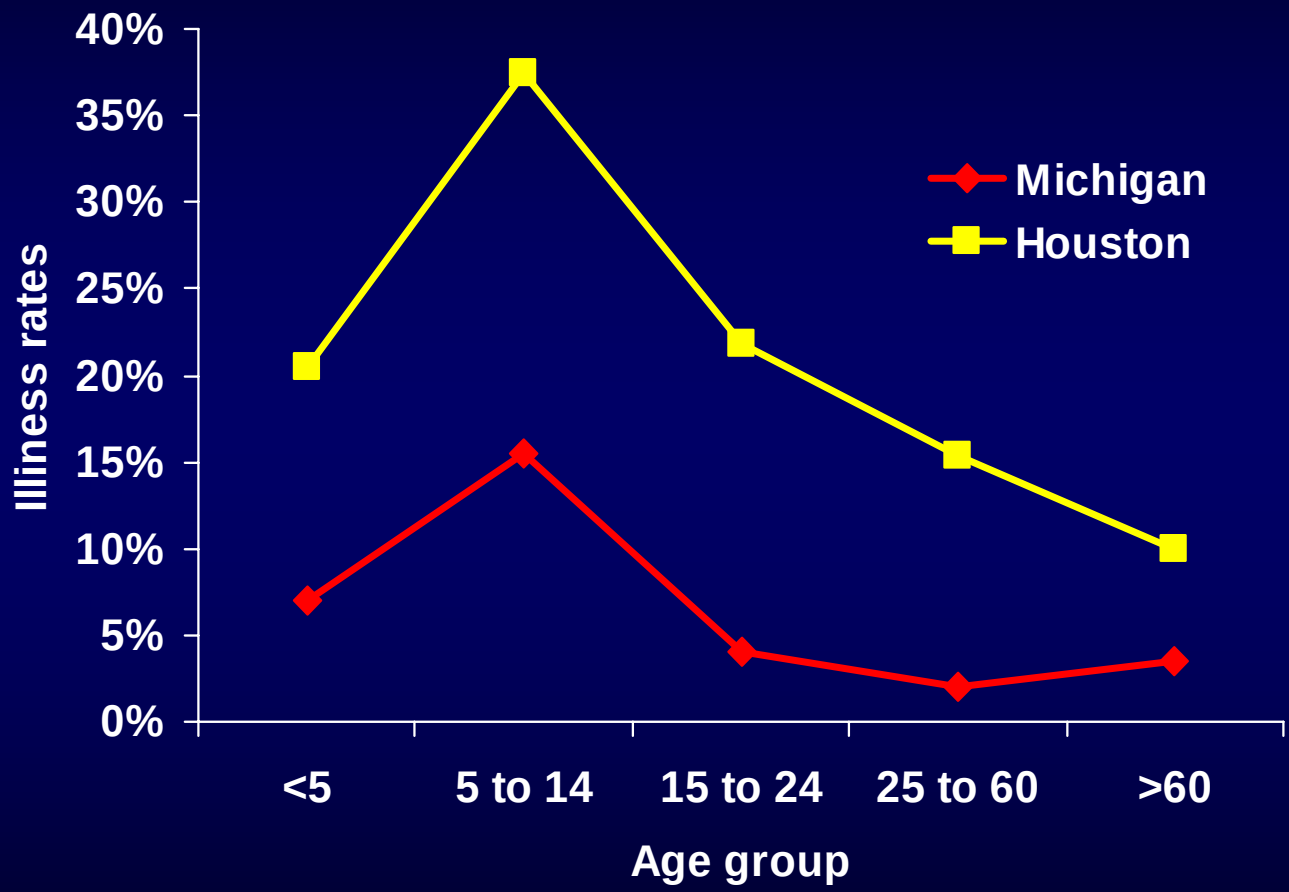
Conclusions (1): Vaccinating School Age Children Against Influenza*

- **Vaccine supply**: Adequate and improving, although local distribution issues remain problematic
- **Vaccine safety**: Established, but need for continued vigilance and long term studies
- **Cost-effectiveness**: Higher than many currently recommended vaccines but models do not fully account for potential indirect effects
- **Disease burden**
- **Vaccine effectiveness**
- **Feasibility of sustained implementation**

***Based on CDC/CSTE consultation, September 2007**

CDC

Average Influenza-Associated Illness Rates by Age Group*



Sources: Monto J Infect Dis

Glezen N Engl J Med

CDC

Summary of Influenza Burden in School Aged Children

- Few deaths and hospitalizations compared to younger children, elderly, or chronically ill
- 5-7 outpatient visits per 100 children annually, frequently receive antibiotics
- 10-30 illnesses per 100 children –frequently associated with school absenteeism

Slide source: K Edwards, CDC/CSTE Consultation, September 10, 2007

Conclusions (2): Vaccinating School Age Children Against Influenza*

- **Vaccine supply:** Adequate and improving, although local distribution issues remain problematic
- **Vaccine safety:** Established, but need for continued vigilance and long term studies
- **Cost-effectiveness:** Higher than many currently recommended vaccines but models do not fully account for potential indirect effects
- **Disease burden:** Highest rates of influenza but severe outcomes less common than in older or younger age groups
- **Vaccine effectiveness**
- **Feasibility of sustained implementation**

***Based on CDC/CSTE consultation, September 2007**

CDC

Conclusions (3): Vaccinating School Age Children Against Influenza*

- **Vaccine supply**: Adequate and improving, although local distribution issues remain problematic
- **Vaccine safety**: Established, but need for continued vigilance and long term studies
- **Cost-effectiveness**: Higher than many currently recommended vaccines but models do not fully account for potential indirect effects
- **Disease burden**: Highest rates of influenza but severe outcomes less common than in older or younger age groups
- **Vaccine Effectiveness**: Established effectiveness (50-90%) in reducing influenza illness
- **Feasibility of sustained implementation**

***Based on CDC/CSTE consultation, September 2007**

CDC

Potential Indirect Effects of Vaccinating School Age Children

- Growing literature on reductions in illness among contacts of school age vaccinees in community demonstration projects*
  - Coverage levels among children typically have not exceeded 50%
- Evidence for reductions in school or work absenteeism in some studies
- Reductions in severe outcomes among contacts not demonstrated but might not be achievable without larger samples

***King N Engl J Med 2006; Piedra Pediatrics 2005; Gehndon Epidemiol Infect 2006**

CDC

Conclusions (4): Vaccinating School Age Children Against Influenza*

- **Vaccine supply**: Adequate and improving, although local distribution issues remain problematic
- **Vaccine safety**: Established, but need for continued vigilance and long term studies
- **Cost-effectiveness:** Higher than many currently recommended vaccines but models do not fully account for potential indirect effects
- **Disease burden**: Highest rates of influenza but severe outcomes less common than in older or younger age groups
- **Vaccine Effectiveness**: Established effectiveness in reducing influenza illness, and increasing evidence for indirect effects
- **Feasibility of sustained implementation**

***Based on CDC/CSTE consultation, September 2007**

CDC

Selected Remarks from Consultants: Implementation Issues

- Low expectations for coverage in first few years of implementation
- Vaccinating all school age children increases number of annual recommended vaccinations by ~50%
- The medical home does not have capacity to deliver influenza vaccinations to all school age children
- Immunization programs and providers must maintain focus on children at higher risk for influenza complications
- Implementation strategies will vary according to local capacity, and will not be planned until recommendations made
- Assessment of impact will be a major challenge and will require planning and additional resources

Conclusions (Final): Vaccinating School Age Children Against Influenza*

- **Vaccine supply:** Adequate and improving, although local distribution issues remain problematic
- **Vaccine safety:** Established, but need for continued vigilance and long term studies
- **Cost-effectiveness:** Higher than many currently recommended vaccines but models do not fully account for potential indirect effects
- **Disease burden**: Highest rates of influenza but severe outcomes less common than in older or younger age groups
- **Vaccine Effectiveness**: Established effectiveness in reducing influenza illness, and increasing evidence for indirect effects
- **Feasibility of sustained implementation**: Uncertain, but comprehensive efforts to vaccinate this large cohort are not likely to be established until a recommendation is made

***Based on CDC/CSTE consultation, September 2007**

CDC

ACIP Influenza Vaccine Workgroup Recommendations

- Vaccinate all children ages 6 months through 18 years annually

- Recommendation will take effect in 2009-10 season