



# Issues in Implementing Hepatitis B Vaccination in Adolescents

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# **Despite The Obvious Benefits of Vaccination...**

**Availability of a vaccine may not  
automatically translate into vaccine  
acceptance and . . .**

**And acceptance does not  
necessarily translate into uptake**

# Steps of Implementation

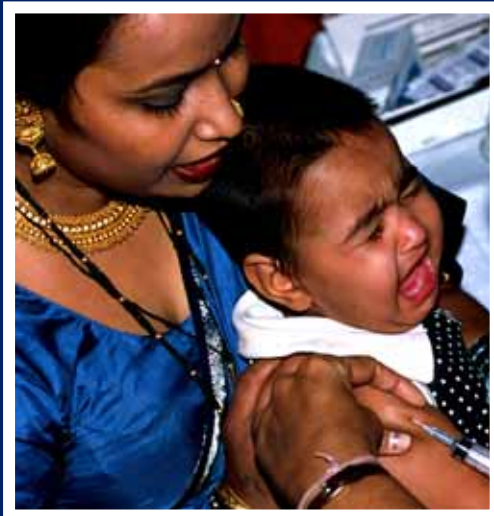
Approval  
Official Recommendations  
Professional Organizations



Providers Adopt  
Recommendations;  
Parents/Patients Accept  
Recommendations



Strategies to Facilitate Implementation



# Approval/Acceptance/Uptake Not Linear





**Cartoon appeared following a flu supply problem in U.S.**

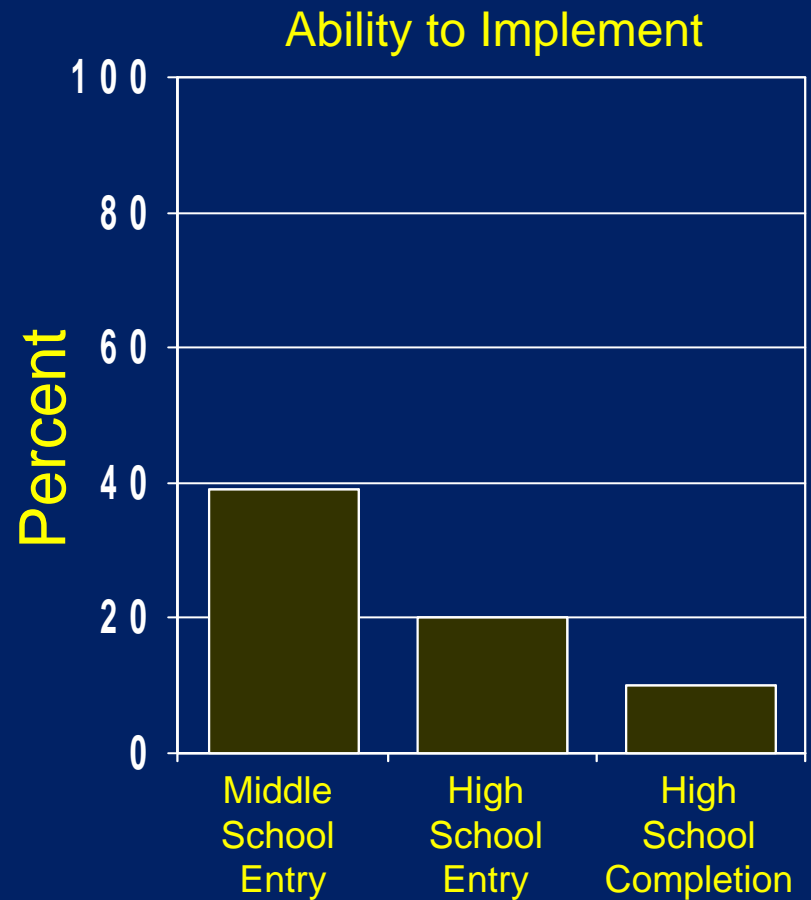
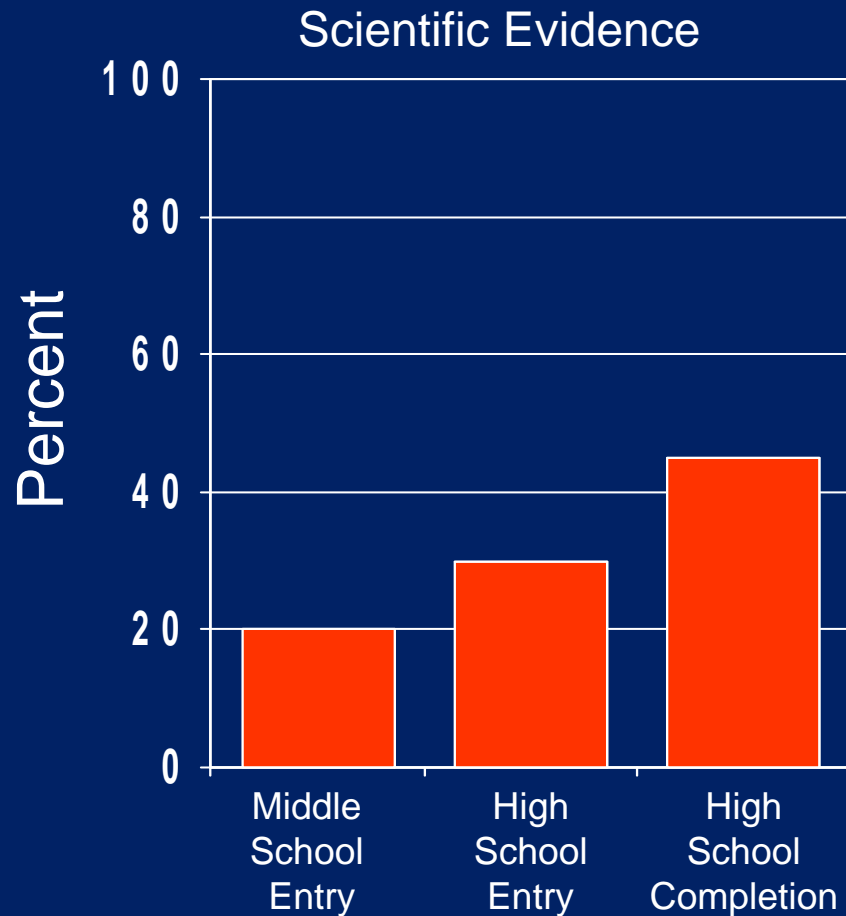
# Importance of Cost

- ◆ Countries have very different ways of funding
- ◆ In the U.S., the pediatrician may have to pay for the vaccines upfront
  - Total costs of vaccines keeps increasing
  - Dropped vial or freezer failure could be costly
- ◆ Those relying on government programs may get overwhelmed
- ◆ Cost influences cost-effectiveness analyses and the likelihood of government funding

# Relationship of Recommendations and Science: MCV4 as an Example

- ◆ Initially, ACIP recommendation to vaccinate at middle school entry (11-12 yr)
  - Based on correspondence with preventive care visit at that age
  - And consolidation with other vaccines for 11-12 year olds
  - Despite mismatch with epidemiology of meningococcal disease

# Pediatricians: Awareness of Scientific Evidence vs Ability to Implement



From Clark et al. *J Adolesc Health* 2006



# Professional Organization Recommendations

- ◆ In the U.S., key for adoption
  - American Academy of Pediatrics
  - American Academy of Family Physicians
  - Society of Adolescent Medicine
- ◆ What are the equivalent in Europe?

# Role of Recommendations: Necessary But Not Sufficient

- ◆ Providers report relying on ACIP/professional organization recommendations yet:
  - Three months after ACIP recommendation for universal infant hepatitis B immunization, 32% of pediatricians and 23% of family physicians in North Carolina agreed with the recommendations
  - Eight months later after AAP and AAFP recommendations, a greater number agreed with the recommendations but only 53% of pediatricians and 23% of family physicians had adopted it into practice

# Type of Provider

- ◆ In U.S., pediatricians more likely to immunize than family physicians
- ◆ Equivalent issue in Europe???

# Infrastructure for Accomplishing Adolescent Vaccination

- ◆ School entry or education/notification laws
- ◆ School based vaccination programs
- ◆ During health care visits:
  - Use already existing visits for health care (e.g., sports physicals)
  - Get the 1<sup>st</sup> shot in whenever you can
  - Use vaccines as an additional reason for preventive visits during early adolescents

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# School Entry Laws

- ◆ Successful U.S. strategy, not used in Europe
  - Differences of 72.8% versus 18.6% of 9<sup>th</sup> graders in Missouri schools with a law (Wilson, et al, 2005)
- ◆ Laws vary in terms of the ability to opt out
- ◆ Requires public funding for the vaccination

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# School Based Vaccination

- ◆ Scheduling easier
- ◆ Reduces time and transportation demands
- ◆ May decrease cultural barriers



# Success of School Based Immunization

- ◆ School based has been effective for HBV in some places in U.S.
- ◆ Commonly used in many countries in Europe:
  - Belgium, Croatia, and Netherlands have used school-based for HBV
  - Germany, France, and Italy no strong vaccine school health facilities and rates of adolescent immunization have been low

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# Issues of Vaccination in Health Care Settings

- ◆ Role of reminder and recall systems
- ◆ Presence of tracking systems
- ◆ More barriers with older teens

# Timeline: HBV Vaccine in the U.S.

