

# An Overview of Vaccine Acceptance

Glen Nowak, Ph.D.

Senior Advisor to Director, National  
Center for Immunization and  
Respiratory Diseases

Centers for Disease Control and  
Prevention



# Four Areas

- The concept
- Issues and challenges
- CDC efforts and activities
- Efforts by others

# The Concept

A targeted population's belief, confidence and voluntary intentions with respect to. . .

- vaccines in general, or
- immunizations, or
- a recommended vaccination
- all of the above

. . . coupled with their trust, beliefs and confidence in those making the recommendation

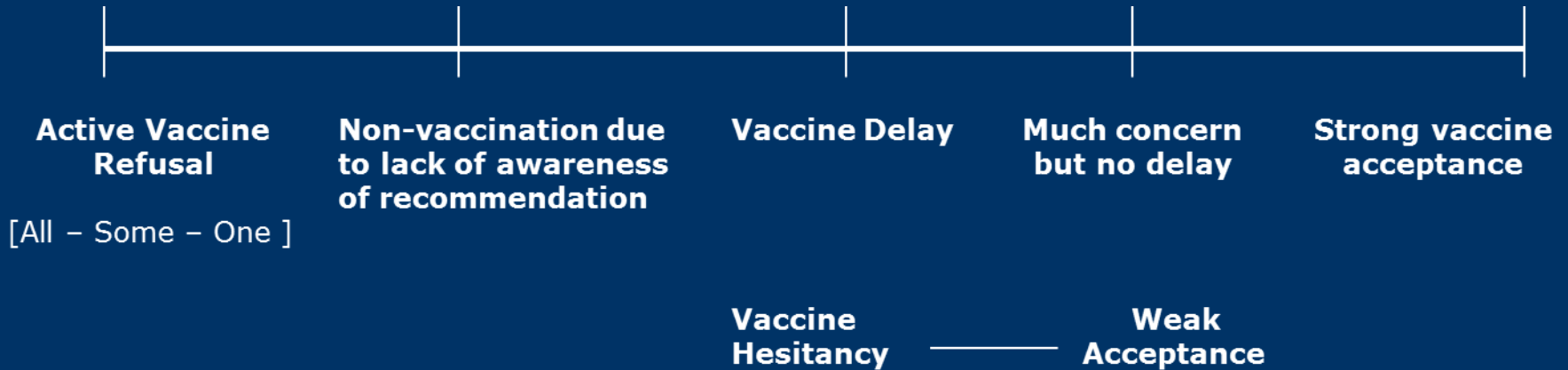
# An Important and Appealing Concept

- Recognizes that seeing high value and benefits in a health-related recommendation often drives behavior
- A necessary foundation for achieving and maintaining high immunization rates
  - Public, provider, and parent attitudes and perceptions an important component of vaccination success (e.g., public often doesn't accept expert recommendations without reflection)
  - When adoption or coverage is low or less than desired, vaccine acceptance may be contributing or primary factor

# Vaccine acceptance correlated or believed to be associated with. . .

- High “vaccine confidence”
- Low or little “vaccine hesitancy”
- Greater/faster adoption of new vaccines and/or new immunization recommendations
- Attitudes/beliefs toward vaccines and vaccination
- Dialogue (e.g., with parents, targeted populations)

# “Acceptance” provides a helpful framework



If only it were that simple 😊  
Four issues and challenges  
related to “Vaccine  
Acceptance” concept

# 1. Much underlying complexity

- “Acceptance” can and does vary
  - Vaccines as a product category
  - Immunization as a medical intervention
  - By vaccine
  - By immunization recommendation
- Health system factors (e.g., cost, access, availability)
  - Also foster or impede vaccine use and vaccination uptake
  - Impact “acceptance” and are impacted by “acceptance”



# Vaccine-related Factors



**Active Vaccine Refusal**

**Non-vaccination due to lack of awareness of recommendation**

**Vaccine Delay**

**Much concern but no delay**

**Strong Vaccine Acceptance (high confidence)**

[All – Some – One ]

**Vaccine Hesitancy**

**Weak Acceptance**

## 2. Identifying the best measure(s) or indicator(s) of 'vaccine acceptance'

(e.g., how do you know you have high acceptance or whether acceptance is a problem?)

# Suggested measures, outcomes include...

- Coverage rates
- Adherence/compliance to recommended immunization schedules
  - Low non-medical exemption rates
  - Few purposeful delays or deferrals
  - Few refusals
- Speed of adoption of new immunization recommendation
- High confidence/trust in a) vaccines, b) immunization recommendations, and c) both
- High recognition of immunization as “a personal and collective community responsibility”
- (Great/greater) Public/government support for immunization recommendations and/or vaccine development
- “Consumer demand”
- Some combination of the above

3. Determining when or whether  
“acceptance” is a problem, a  
potential problem,  
or not a problem

# Some recent U.S. data

- Record high infant and toddler immunization rates
  - Most vaccines at or over 90% coverage for kids 19-35 months
  - Less than 1% zero-dose children
- Kindergarten vaccination coverage
  - Median coverage levels for DTaP, polio, HepB vaccines at or above HP 2020 target of 95%; MMR was 94.8%, two doses of varicella was 93.2%
  - Some variability across states, including for vaccine exemptions (which ranged from 0.1% to 7.0%)
- Adolescent/teen coverage increased from 2006 to 2011
  - From 68.7% to 78% for one dose Tdap and from 62.7% to 70.5% for MenACWY
  - HPV vaccination coverage relatively low
  - Considerable variability by state
- “Plateau” in many adult vaccination rates

# Confidence in Vaccine Safety

Percent of parents of at least one child 6 years of age or younger who reported that they were confident or very confident in the safety of routine childhood vaccines

(Source: PN HealthStyles and ConsumerStyles Surveys)



# Which of the following best describes your plans for vaccinating your youngest child?

- My child has already received all of the recommended vaccines.....68.8%
- I intend to have my child receive all of the recommended vaccines as scheduled.....17.1%
- I intend to have my child receive all of the recommended vaccines but will space-out or delay them.....7.4%
- I intend to have my child receive some but not all of the recommended vaccines.....5.1%
- I intend to have my child receive none of the recommended vaccines.....1.7%

**2011 Consumer Styles survey, 453 parents w/ at least one child <=2 years old**

## 4. Determining how best to maintain, extend or build “acceptance”

- Education campaigns (e.g., public, parents)
  - Value and benefits of vaccines / immunization
  - Value and benefits of schedule
  - Value and benefits of specific vaccine(s)
- Scale and focus
  - Targeted efforts/interventions?
  - Broad efforts/interventions?
- Policies
  - Health systems factors to reduce/eliminate barriers
  - Ones that facilitate or foster immunization



# CDC/NCIRD taking a Multi-faceted Approach to “Acceptance”

- Working to foster, strengthen understanding of concept
  - Literature/research review
  - Developing and assessing survey measures
- Collaborations with NVPO
  - Vaccine confidence expert consultation (May 2011)
  - Planned longitudinal study of mothers
- Provider resources to foster effective vaccine communications
- Ongoing work to improve web presence
- Proactive media work around, before disease outbreaks (e.g., press conferences, ethnic media roundtables, working w/ states)
- New “Champions of Immunization” awards

# Direct to parent/public communications

- Often note getting vaccinated is social norm
- New English TV and radio public service announcements and print ads
  - “Immunization. Power to protect”
- New Spanish-language TV and radio public service announcements and print ads
  - “Con salud, todo es posible. Vaccine a sus hijos”  
(“With health, all is possible. Vaccinate your children”)

# English TV PSA: *Immunization. Power to Protect.*



Immunization.  
Power to protect.



U.S. Department of  
Health and Human Services  
Centers for Disease  
Control and Prevention

<http://www.cdc.gov/vaccines>  
1-800-CDC-INFO



<http://www.cdc.gov/vaccines/cdcmediaresources/>

# Spanish TV PSA



Con salud, todo es posible.  
Vacune a sus hijos.



U.S. Department of  
Health and Human Services  
Centers for Disease  
Control and Prevention

<http://www.cdc.gov/espanol/vacunas>  
1-800-232-4636

<http://www.cdc.gov/vaccines/cdcmediaresources/>

# Learning from Others

- Washington state efforts
- Research by others into vaccine refusal, delay, hesitancy
  - Dr. Saad Omer (Emory University)
  - Baruch Velan (Gertner Institute, Israel)
  - Gary Freed, Amanda Dempsey (University of Michigan)
  - Alison Kempe (CO School of Public Health)
- International efforts related to vaccine confidence and acceptance
  - Robb Butler, WHO
  - Global Vaccine Action Plan
  - Heidi Larson, London

# Looking Forward

- Continue efforts to understand role that “acceptance” plays, e.g.,
  - determinants of acceptance, different types of acceptance
  - relationship between acceptance and adoption of immunization recommendations, consumer demand
- Address challenges, e.g.,
  - Best measures and indicators
  - How best to track and assess over time
- Collaborations
  - Research and studies
  - Projects, efforts to build, extend acceptance

Thanks!