



# Denver's In-School Immunization Project

*an invaluable learning  
experience*

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**Denver Health**





# Objectives

- Discuss details and timeline for implementing a school-based vaccination program
- Discuss plans for evaluating the feasibility and acceptability of billing 3rd party payers for vaccines delivered in schools



# Vaccine Program's Objectives

- To implement a school-based vaccination program in selected middle and elementary schools of Denver Public Schools
- To develop a process for billing 3<sup>rd</sup> party payers
- To evaluate the acceptability of these programs
- To evaluate the feasibility of conducting these programs
- To evaluate the costs of conducting these programs
- To determine vaccine uptake and barriers to participation





CDC Funding – 2 Year Cycle: August 2008-August 2010  
2 Separate Projects

**year one**

Pilot program Tdap only clinic  
1 Denver area middle school

**year two**

8 middle schools  
Adolescent and flu vaccines  
Implementation and evaluation

H1N1?

8 middle schools  
Comparison and evaluation  
No implementation

20 elementary schools  
Flu vaccine only  
Implementation and evaluation

H1N1?





# Year 1 Pilot Program

- Test all processes and systems anticipated to be used for year 2 projects
  - Consenting process
  - Working with school staff
  - Training medical staff
  - Implementation of an immunization clinic at a school
  - Data entry into state immunization registry
  - Billing the insurance companies
  - Evaluating the clinical services provided
- Conducted a single Tdap clinic at one Denver area middle school





# Pilot Program Process

- Initial planning – started in 11/08
- Developing relationships with school administration and project partners, 11/08 – 2/09
- Collaborative process for development of all forms and tracking tools, 11/08 – 2/09
  - Translation/reverse translation of program materials
  - Standing orders
  - Procedures and protocols
- Approval granted by school district to proceed with pilot early 3/09
- Consent distribution and return during 3/09
  - 2 mailings/2 weeks apart
- Participant registration/insurance verification, 3/09
- Clinic preparation and planning, 3/09

## **Tdap Clinic April 2009!**



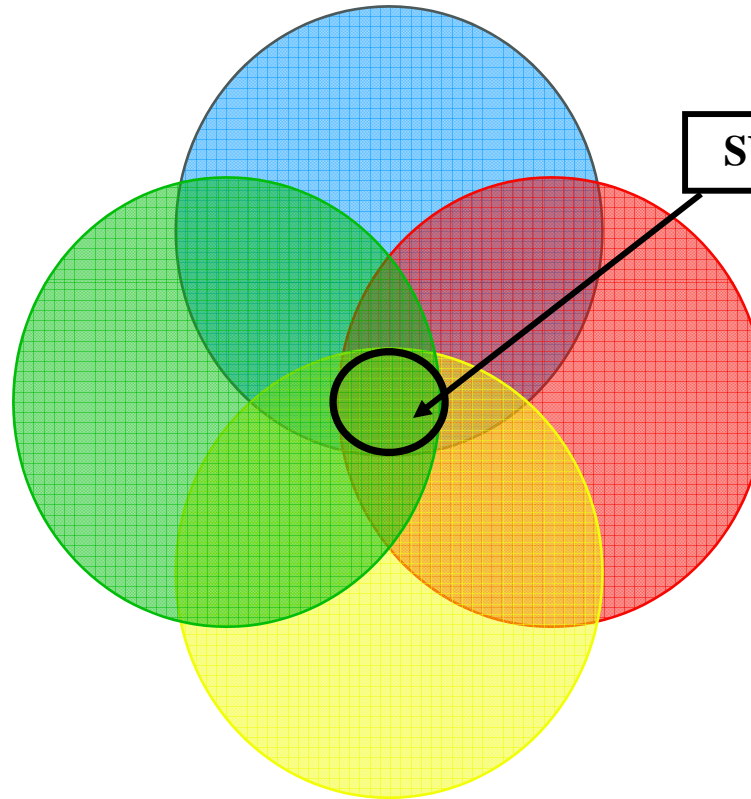
# Community Collaboration is Critical!

## Denver Public Schools

\* Health Services \* DoTS

## Denver Health

- \* Community Health
- \* School-Based Health
- \* Denver Public Health
- \* Billing and Contracts
- \* Data Warehouse



**SUCCESSFUL PROJECT!**

## Kaiser Permanente

- KP Health Plan
- Community Health Initiative

## University of Colorado Denver

\* Colorado Outcomes Research



# Consent Distribution and Return

- 451 consents mailed out by school staff
  - Spanish side 1, English side 2
  - Information collected included permission to provide the vaccine, insurance information, and provision of any available immunization records
  - 2 mailings 2 weeks apart
  - 20 duplicate mailings
- 38% of mailed consents were returned for participation (N = 164)
  - 15% return rate from first mailing
  - 23% return rate from second mailing
- 16% of consents returned were completed in Spanish (N = 37)
  - 97% of consents completed correctly
- 84% of consents returned were completed in English (N = 124)
  - 98% of consents completely correctly
- Among just the immunization records returned, 8% were able to be listed as up-to-date by school district







# Tdap Pilot Clinic

- The Denver area middle school had 937 students
  - 80% minority
  - 67% of students participated in the school's free or reduced lunch program
- 46% of the total student population (N=431) were eligible for Tdap vaccination per school records
- 38% of students consented to receive the vaccine (N=164)
- 35% of students were brought up-to-date on their Tdap vaccination status (N = 151)
- Differences between number consented and receipt of vaccine included:
  - Students absent on day of clinic
  - Students with contraindication
  - Students vaccinated between completing the consent but prior to the school clinic, i.e. another health facility





# Tdap Pilot Clinic

- Entire clinic took 4 hours including set up and tear-down
- Students escorted to clinic location (auditorium) by grade level
- Consent verification and vaccination time, 2 minutes per student
- 8 nurses on hand as vaccinators
- 2 clerical staff used for data entry
- Average time student out of class, 30 minutes

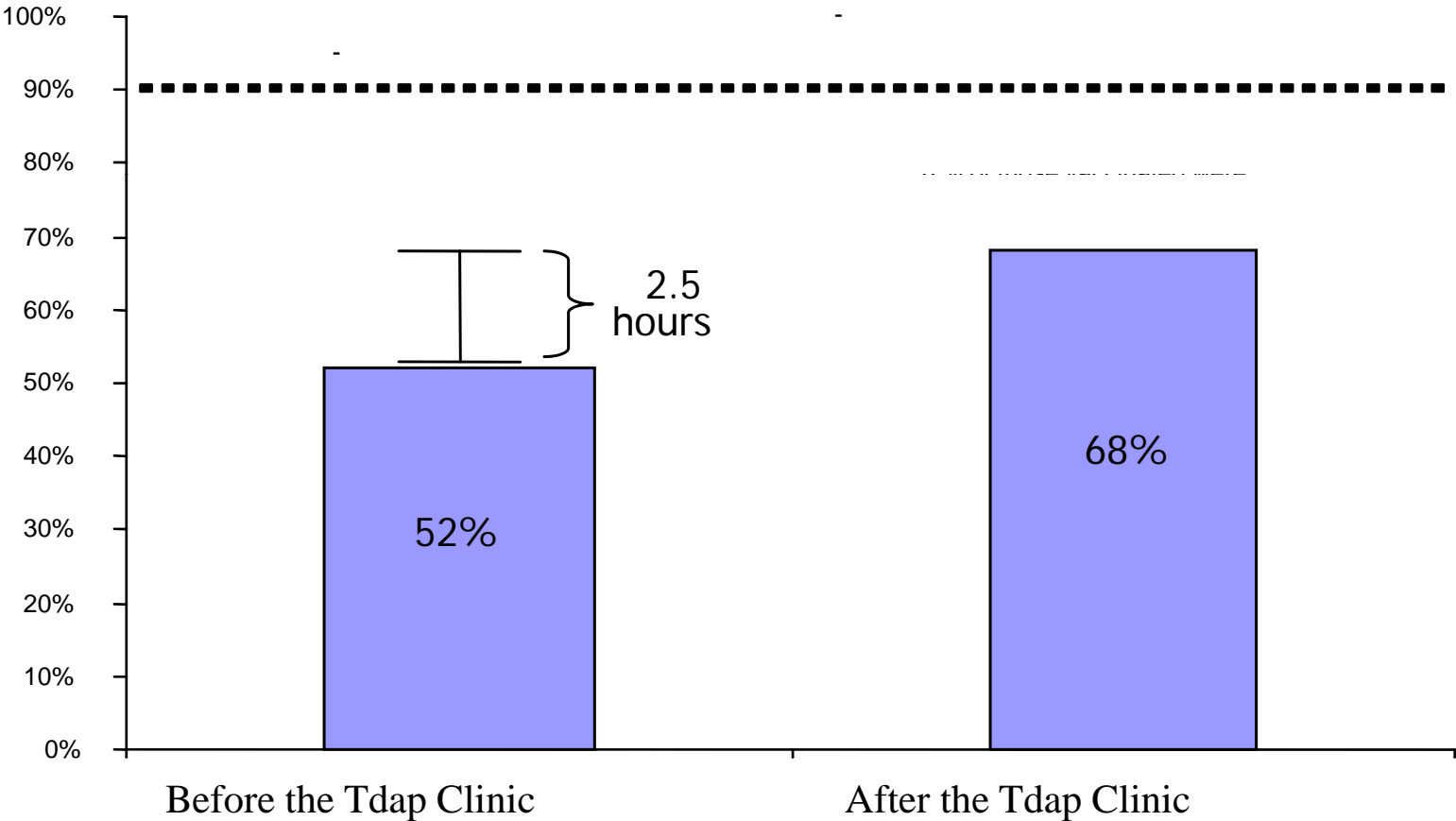
During the 2.5 hours of actual vaccination time,  
31% increase in the Tdap vaccination rate!





# Change in Tdap Immunization Status

Healthy People 2010 target: 90% of 11-15 year olds immunized with tetanus-containing vaccine



# Medical Coverage of Participants

- 36% privately insured
  - 13 different 3<sup>rd</sup> party payers identified
  - Billed for vaccine and administration fee
- 39% uninsured
  - VFC eligible
  - No billing conducted
- 25% Medicaid
  - VFC eligible
  - Billed for administration fee



# Billing for Vaccine and Administration Fee

- Private insurers were billed for both the vaccine (\$36.25) and administration fee (\$7)
- Public insurers were billed for the administration fee only
- Parents were NOT billed for their portion of the co-payment or deductible
  - As agreed upon by Denver Public Schools and Denver Health
- Billed third party payers \$3,431
- To date have collected \$1,357





# Pilot Program Lessons Learned

- Engaging partners early in the process is critical
- Flexibility and creativity a must
- Working with multiple system hierarchies requires patience
- Careful planning and heightened foresight allowed us to hit the ground running
- Detailed training needed for all staff
- Important for partners to see benefit to self/organization
- More detailed information on insurance coverage from parents was needed
- Time from billing to reimbursement varies greatly among the various insurance providers





# Community and Parental Benefit

- No need to take time off work to go for doctor appointments
- Assurance their child is up-to-date on immunizations
- Less likely to miss work because they contracted a vaccine-preventable illness from child
- Immunizations entered into the state immunization registry
- The process developed allows Denver Health to identify and help enroll families in available and appropriate health programs





# Benefits to Denver Health, Kaiser Permanente and Other Insurance Carriers

- Decrease in demand for provision of only vaccination services
- Increase in numbers of kids up-to-date on required and recommended immunizations
- Immunizations entered into state immunization registry
- Increase in HEDIS rates!







# School Benefit

- Accurate and up-to-date student immunization records
- Nurses spends less time ‘tracking’ immunization records; able to concentrate on other needs
- Helps students’ attendance in school and being ready to learn
- Fewer sick children!
- Fewer sick teachers!





## Year 2, Project 1

### Examination of the Feasibility of Obtaining 3<sup>rd</sup> Party Reimbursements for Influenza Vaccinations in Elementary Schools

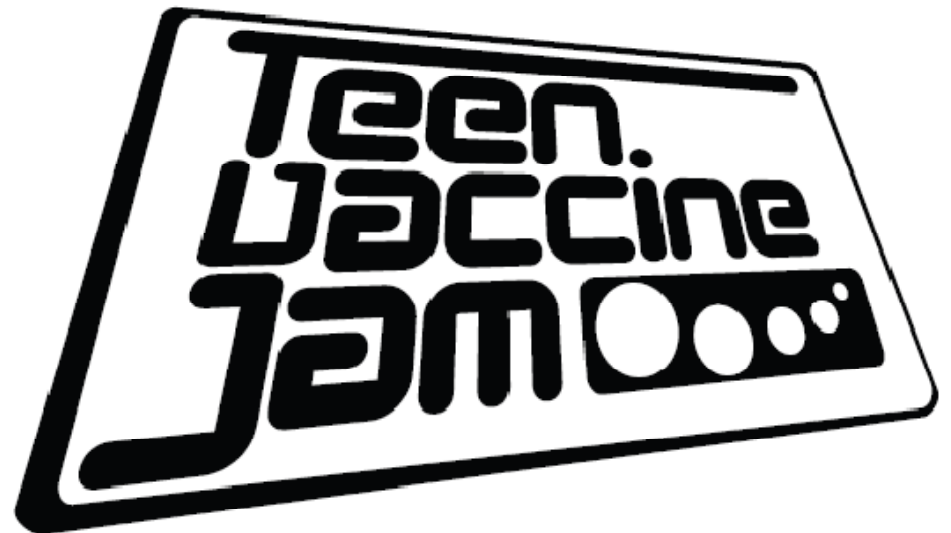
- 20 elementary school
- 10,000 students
- 2 clinics per school
- Seasonal influenza (H1N1 if available)



## Year 2, Project 2

### Examination of the Feasibility of Obtaining 3<sup>rd</sup> Party Reimbursements for Adolescent Vaccinations in Middle Schools

- 8 intervention middle schools
- 3,300 students
- 3 clinics per school
- All adolescent vaccines, catch-up vaccines and seasonal influenza (H1N1 if available)
- 8 comparison middle schools



# Year 2 Details

- School district being incentivized for participation in project, allocation as appropriate
- Each school supported in every aspect of the project
  - Forms and tracking tools have been created by Denver Health and Colorado Outcomes Research teams
  - One-on-one intensive staff trainings
- Each school developing their own consent distribution process
- School website will have a host link to Denver Health's Immunization Clinic website
  - Expanded access to forms and program information
- Parents will not be billed for co-payment, deductible, vaccine or administration cost as agreed upon by Denver Public Schools and Denver Health
- Partnering with Denver Health's Preparedness team to disseminate H1N1 (if/when available)



# Additional Questions and Off-Line Discussion

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