



# **Strategies for Increasing Immunization Rates in Adolescents**

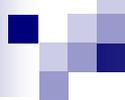
**Rachel C. Estuar**

Immunization Program Coordinator

Health Policy & Promotion Division

City of Pasadena Public Health Department

Chair, Pasadena Immunization Coalition



## Objectives for Today's Presentation:

1. Describe current immunization schedule and disease burden
2. Provide examples of bold initiatives to improve awareness and coverage levels
3. Describe how to start in your local community

# 2010 Adolescent Iz Schedule

## Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2010

For those who fall behind or start late, see the schedule below and the catch-up schedule

Vaccine ▼	Age ►	7–10 years	11–12 years	13–18 years
Tetanus, Diphtheria, Pertussis <sup>1</sup>			Tdap	Tdap
Human Papillomavirus <sup>2</sup>		see footnote 2	HPV (3 doses)	HPV series
Meningococcal <sup>3</sup>		MCV	MCV	MCV
Influenza <sup>4</sup>		Influenza (Yearly)		
Pneumococcal <sup>5</sup>		PPSV		
Hepatitis A <sup>6</sup>		HepA Series		
Hepatitis B <sup>7</sup>		Hep B Series		
Inactivated Poliovirus <sup>8</sup>		IPV Series		
Measles, Mumps, Rubella <sup>9</sup>		MMR Series		
Varicella <sup>10</sup>		Varicella Series		

Range of recommended ages for all children except certain high-risk groups  
 Range of recommended ages for catch-up immunization  
 Range of recommended ages for certain high-risk groups

# Vaccines for Adolescents\*

- Vaccines for routine administration to all Adolescents
  - Influenza (1 dose annually)
  - Human papillomavirus (3-dose primary series)
  - Meningococcal conjugate vaccine (1 primary dose)
  - Tetanus, diphtheria and acellular pertussis (1 booster dose)
  
- Catch-up vaccines for adolescents not fully immunized previously
  - Hepatitis B
  - Inactivated polio
  - Measles, mumps and rubella
  - Varicella
  
- Vaccines for certain high-risk adolescents
  - Hepatitis A
  - Pneumococcal polysaccharide

\*Source: CDC. *MMWR*. 2008;57(01):Q1-Q4.2



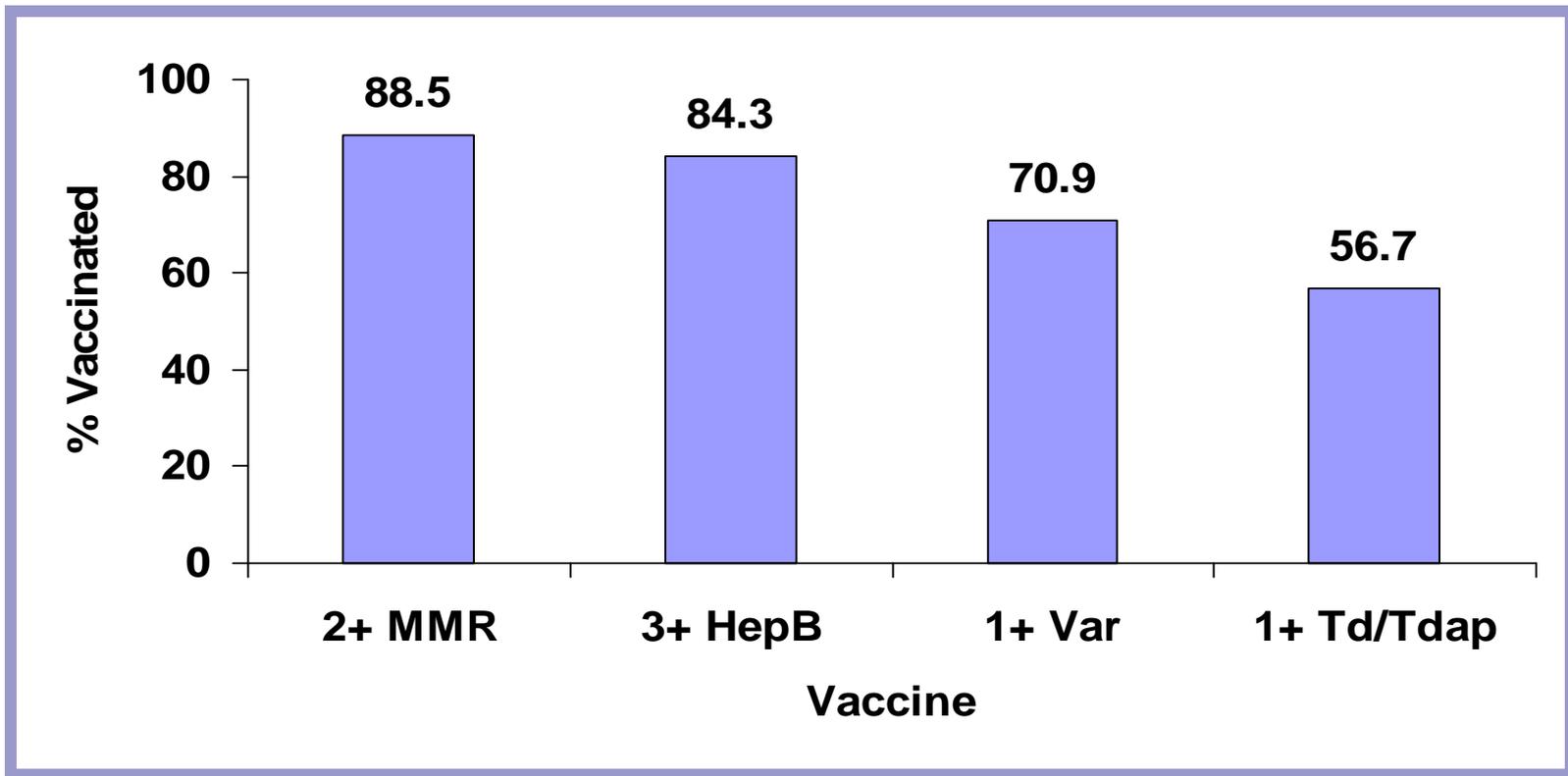
a set of national health objectives that serve as the basis for the development of State and community plans

- Healthy People 2010 objectives for adolescents age 13-15 years

90% coverage of:

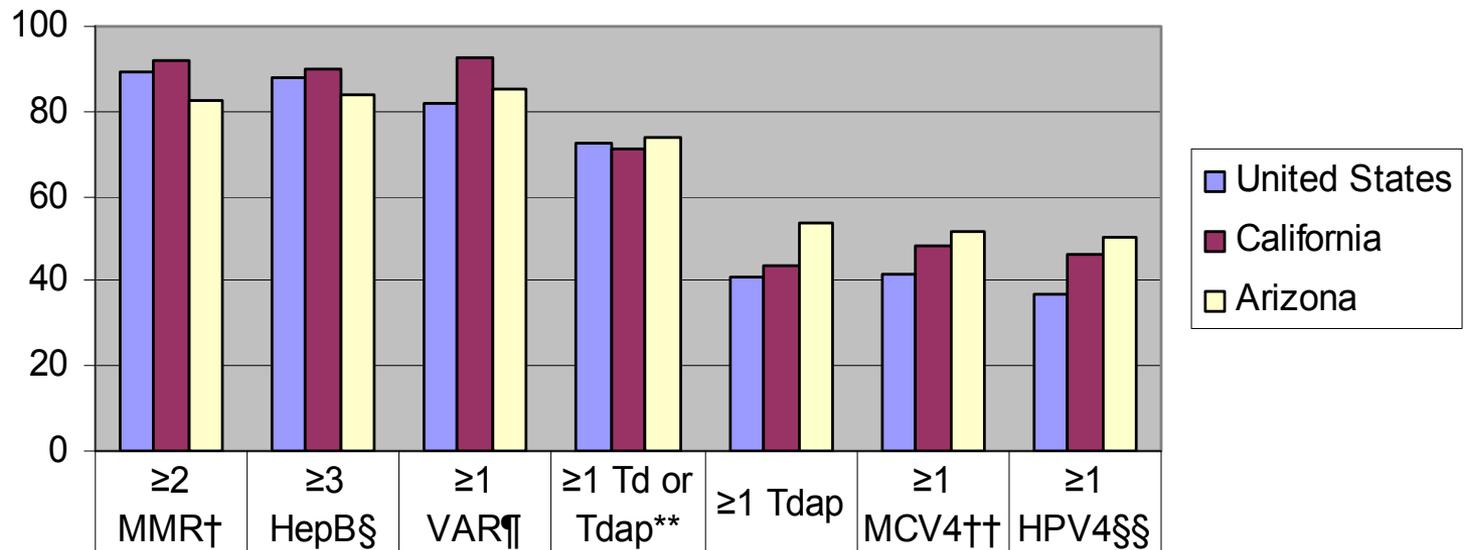
- 3+ doses of HepB
- 2+ doses of MMR
- 1+ dose of Td or Tdap
- 1+ dose of varicella (among those without prior history of disease)

# Progress toward HP2010 objectives among adolescents aged 13-15 years, NIS-Teen, 2007, United States



\*Varicella coverage is among teens without a reported history of disease. 1+Td/Tdap is booster dose MMWR. 2007;56:885-888.

# Estimated vaccination coverage Adolescents aged 13--17 years --- NIS--Teen, 2008



United States	89.3	87.9	81.9	72.2	40.8	41.8	37.2
California	91.9	89.9	92.9	71.3	43.7	48	46.6
Arizona	82.4	83.9	85.4	74	53.8	51.5	50.5

- Vaccine doses routinely recommended during childhood (adolescent catch-up vaccines): MMR, HepB, VAR
- Vaccine doses routinely recommended for adolescents: Td or Tdap, MCV4, HPV4

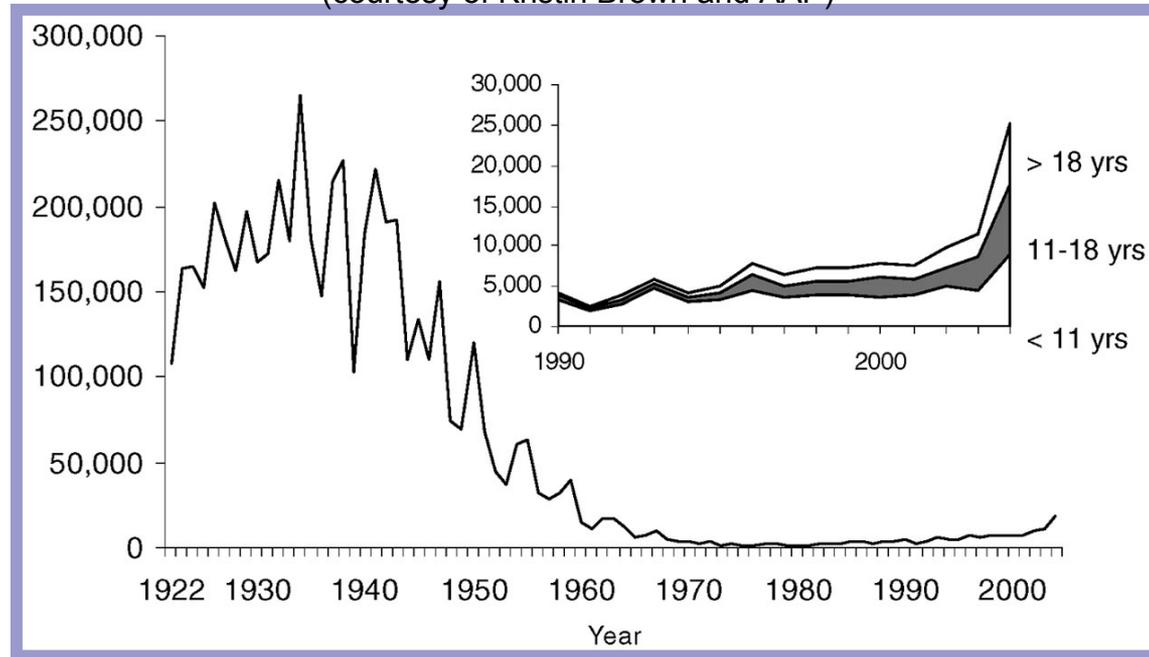
## Waning Immunity: One Reason Why ACIP Developed Separate Adolescent Immunizations

- A "catch-up" second dose for all adolescents and adults who may have missed a second dose as a child (2006, ACIP)
- Pertussis remains endemic- steady increase in the number of reported cases.  
Among pediatric patients: infants <6 months of age who are inadequately protected and adolescents 11 through 18 years old due to vaccine-induced immunity has waned (*March 2006, PEDIATRICS*)

# Unique Case of Pertussis Prevalence

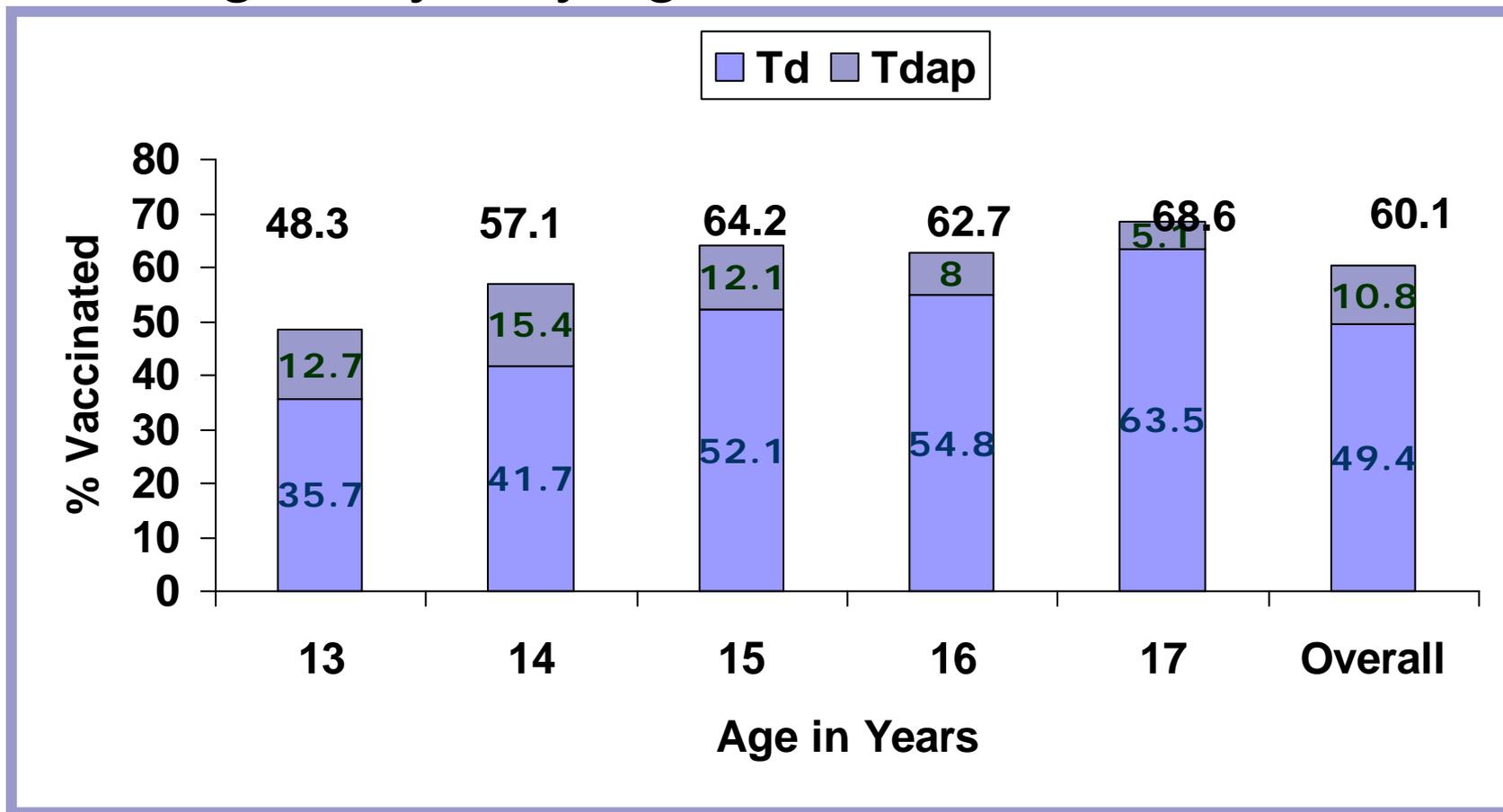
Reported cases of pertussis: United States, 1922–2004

(courtesy of Kristin Brown and AAP)



Studies suggest age-specific burden of cases of pertussis a growing problem in the future unless booster immunization is undertaken.

# Estimated vaccination coverage of 1+ Td or Tdap since age 10 yrs by age, NIS-Teen



MMWR. 2007;56:885-888.

# Strategies to Introduce Change are Available

## The Vaccines for Teens Campaign

The **NBA** and the **WNBA** are collaborating with the Society for Adolescent Health and Medicine (SAHM) and Sanofi Pasteur on a national campaign designed to help educate parents and their teens about the importance of getting vaccinated.



Photo of Bob Lanier and Jonas Jerebko with students as part of the Vaccines for Teens awareness event on March 29 at the Arts & Technology Academy of Pontiac in Michigan.

## Preteen Vaccine Week Campaign

## Vaccinate Before You Graduate Campaign (May-June)



### The Mission of SPIIn:

to integrate Pasadena's youth in the public health discourse by improving their awareness of immunization and the diseases they prevent and encouraging cross sector collaboration to develop local, solution-oriented initiatives.

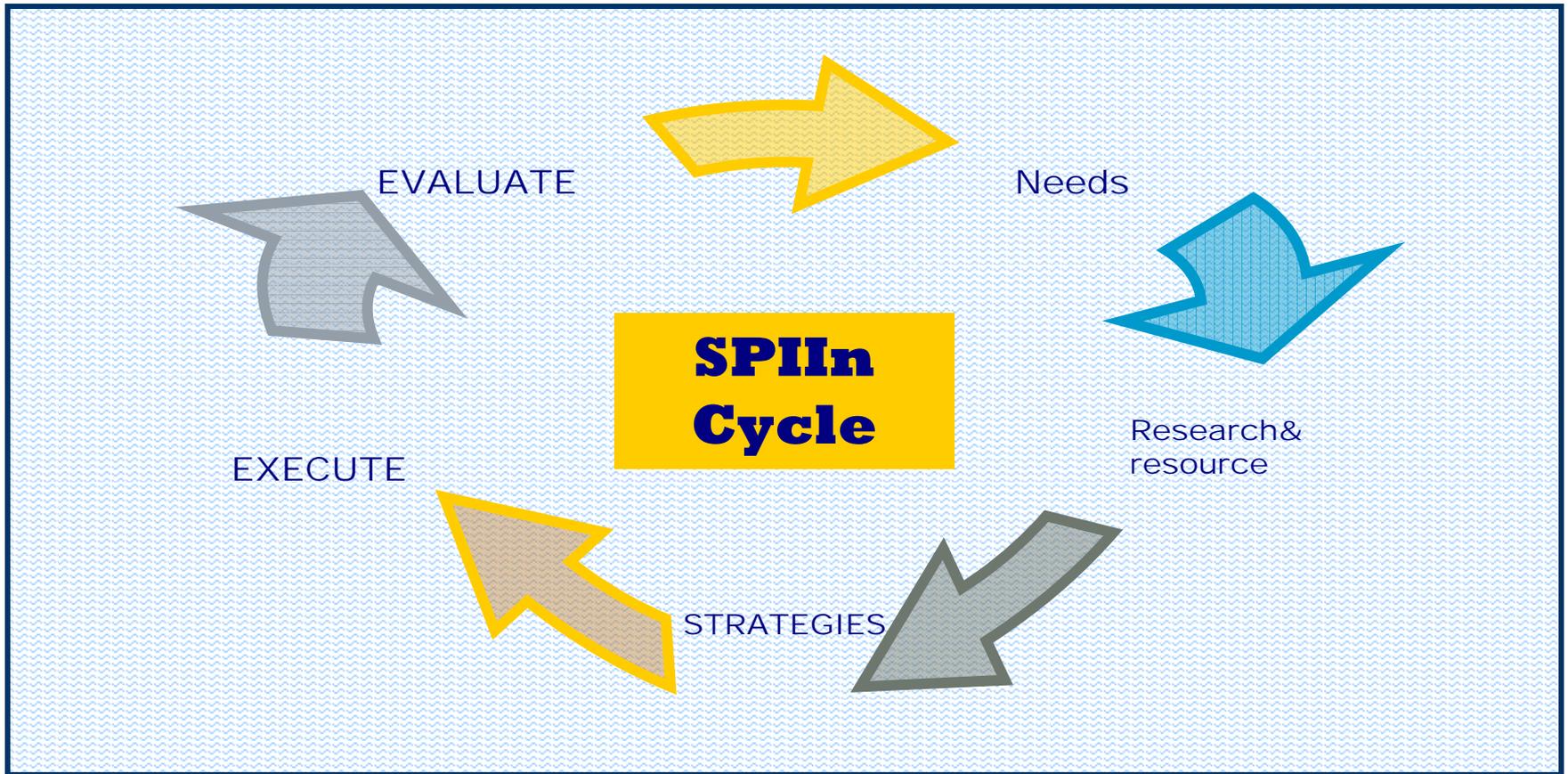
Adolescents typically receive little to no preventative care leaving inadequate time or opportunity for physicians to incorporate education into patient visits. Such gaps must be addressed if adolescent immunization rates are going to increase (Middleman, A., 2007. Journal of Adolescent Health).

# Potential Barriers to Immunizing Adolescents

- Inadequate or no health insurance
- Fewer adolescents seek preventive health services
- Pediatricians provide much smaller share of preventive care older adolescents
- Lack of training among pediatricians in
  - gynecological care
  - Mental health
- Inadequate reimbursement for amount of time required in seeing a teenager & a disincentive for vaccination
- Behavioral issues among this population
- Parental misconception and lack of knowledge about new vaccines

*D.W. Kaplan, Journal of Adolescent Health 46 (2010)*

# How Pasadena started SPIIn





## 1. Identify NEEDS relevant to your community's adolescent population

- Public health workforce is shrinking while community needs and disparities are prevalent
  - o gang violence
  - o uninsured youth
  - o under and over-immunization of foster care children
- Public health a foreign term and view the field in narrow terms (e.g., restaurant inspection)
- Scarce opportunities for adolescents to have meaningful dialogue about healthcare in clinical and community settings
- Low immunization awareness among youth and their parents/caregivers
- Aversion to shots

## 2. Continuous updates to your research & resources

- Anchor the project on a proven concept such Positive Youth Development Theory which highlights processes and dynamics in human development are foundational for growing up healthy or other successful youth initiatives from another discipline
- Work with local community based organizations who ascribe to the 40 Development Assets which supports the notion that the more assets young people have, the less likely they are to engage in a wide range of high-risk behaviors and the more likely they are to thrive.
- Replenish resources as needs arrive.

## 3. Make a road map: SPIIN's Strategy

### 1. SPIIn used the youth development theory to create opportunities for students to:

- develop connections with peers and adults
- contribute to their community
- have input in decision-making
- access engaging and challenging activities

### 2. SPIIn is experiential in nature

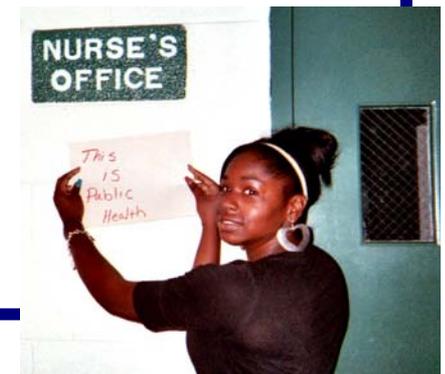
SPIIn allows teens to be leaders and to provide the direction of the immunization work group and community intervention projects

### 3. SPIIn incorporates a public and private school partnership

Students from diverse backgrounds have dialogue to learn and work together in a positive manner and with a supportive setting

### 4. SPIIn promotes careers in public health and includes the many facets of public health

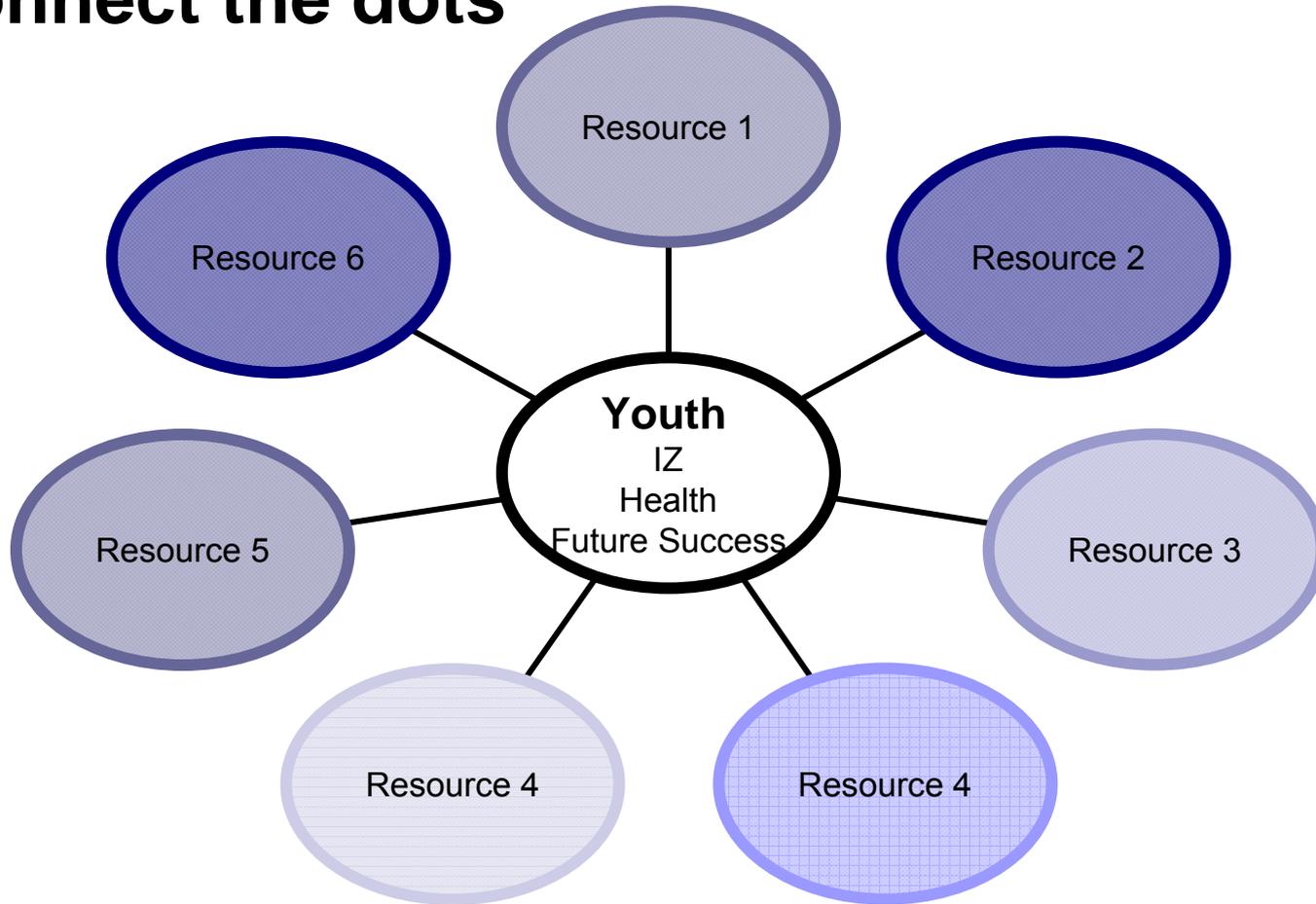
The special SPIIN curriculum helps broaden understanding of the public health workforce and its role in the community on a daily basis and in the event of emergencies or pandemics.  
(e.g, public policy, marketing, law, art & graphic design)



#### 4. Start implementing: Invest your time and resources on the youth's potential to succeed

- Attempt to overcome institutionalized barriers
- Create opportunities for youth input in civic life
- Channel creativity towards developing activities and innovative ideas that can have immediate impact
- Promote the positives: Invite them to see the youths' projects and to listen to them
- Find the funding to increase local utilization of federally- and state-funded resources and programs targeting youth
- Incentivize

# 5. Review your goals and make sure to connect the dots



# Identifying & Developing Local Immunization Champions



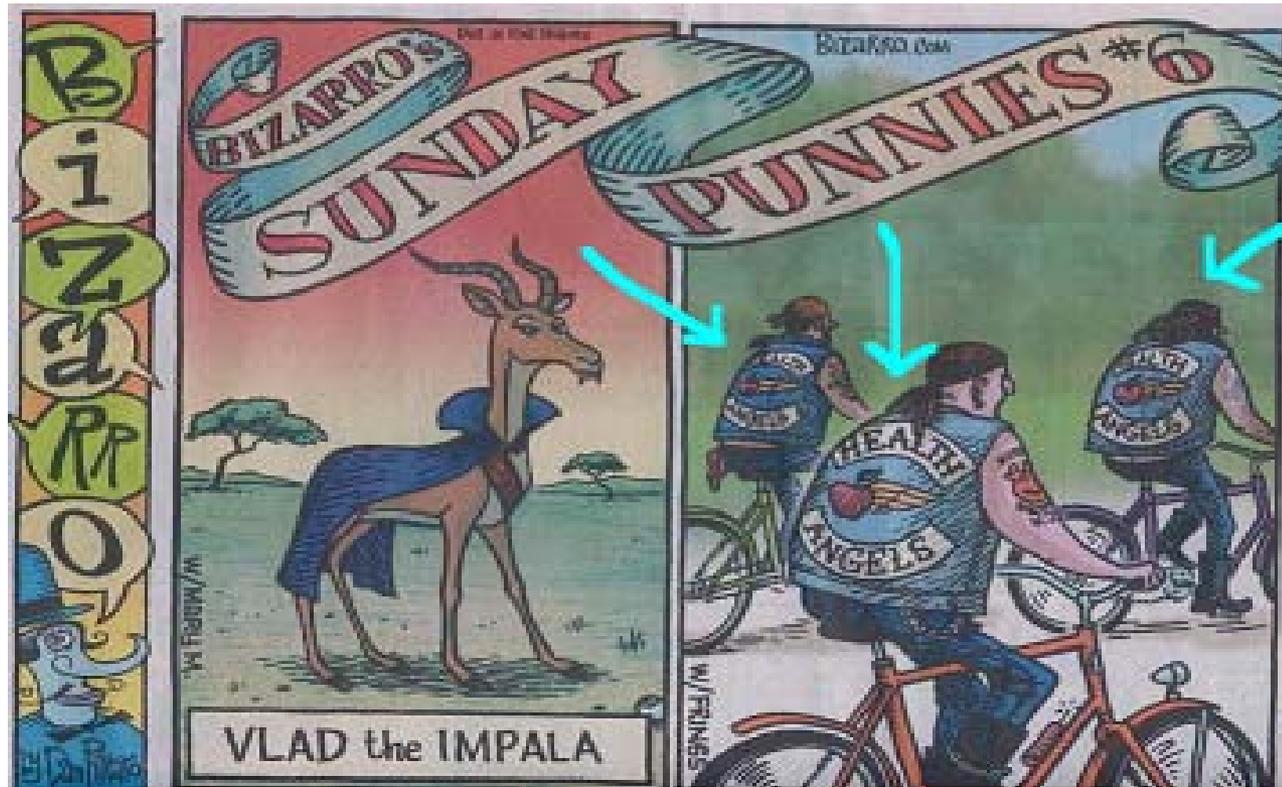


# Preparing the leaders of our future...



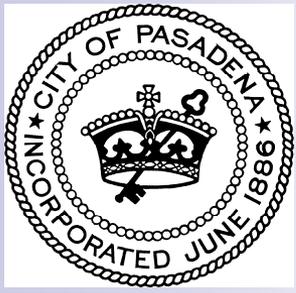
*You're Invited!*  
SPIIn Graduation 2009  
Huntington Hospital  
Braun Auditorium  
100 W. California Blvd.  
Pasadena, CA 91105  
August 14, 2009  
6:00 to 8:00 P.M.

Other options you may want to consider:



# Another option...drive it home





## Contact Information

**Rachel Estuar**  
**Immunization Program Coordinator**  
**City of Pasadena Public Health Department**

**(626) 744-6134**  
**[restuar@cityofpasadena.net](mailto:restuar@cityofpasadena.net)**