



Increasing Access to Vaccines in the Uninsured Population



Desmarais, Ashley¹; Aguirre, Sophia²; Barraza, Gabriela³; Lee, Maurice³

Perez, Javier³; Bai, Patricia²; Arbon, Jake²; Bhullar, Puneet²; Berry, Nicolas²; Besch-Stokes, Jake²

1. University of Arizona College of Medicine, 2. Mayo Clinic Alix School of Medicine, Virginia G. Piper St. Vincent De Paul Medical Clinic

BACKGROUND

Diseases that are preventable by vaccines have substantial direct health care costs as well as indirect societal costs. Tdap alone has been demonstrated to result in direct and indirect cost savings of \$92.5 million over a year's time when targeting a population over 65 years old. There are also high risk populations that need additional vaccinations based on their medical history. Multiple studies have demonstrated a large gap in vaccination rates among insured and uninsured adults.

Understanding Cultural Competency and Racial Disparities in Health Care



OBJECTIVE

Evaluate if through rapid cycle quality improvement the health disparity between uninsured and insured adults can be erased for high risk and population based vaccines.

METHODS – PDSA CYCLES

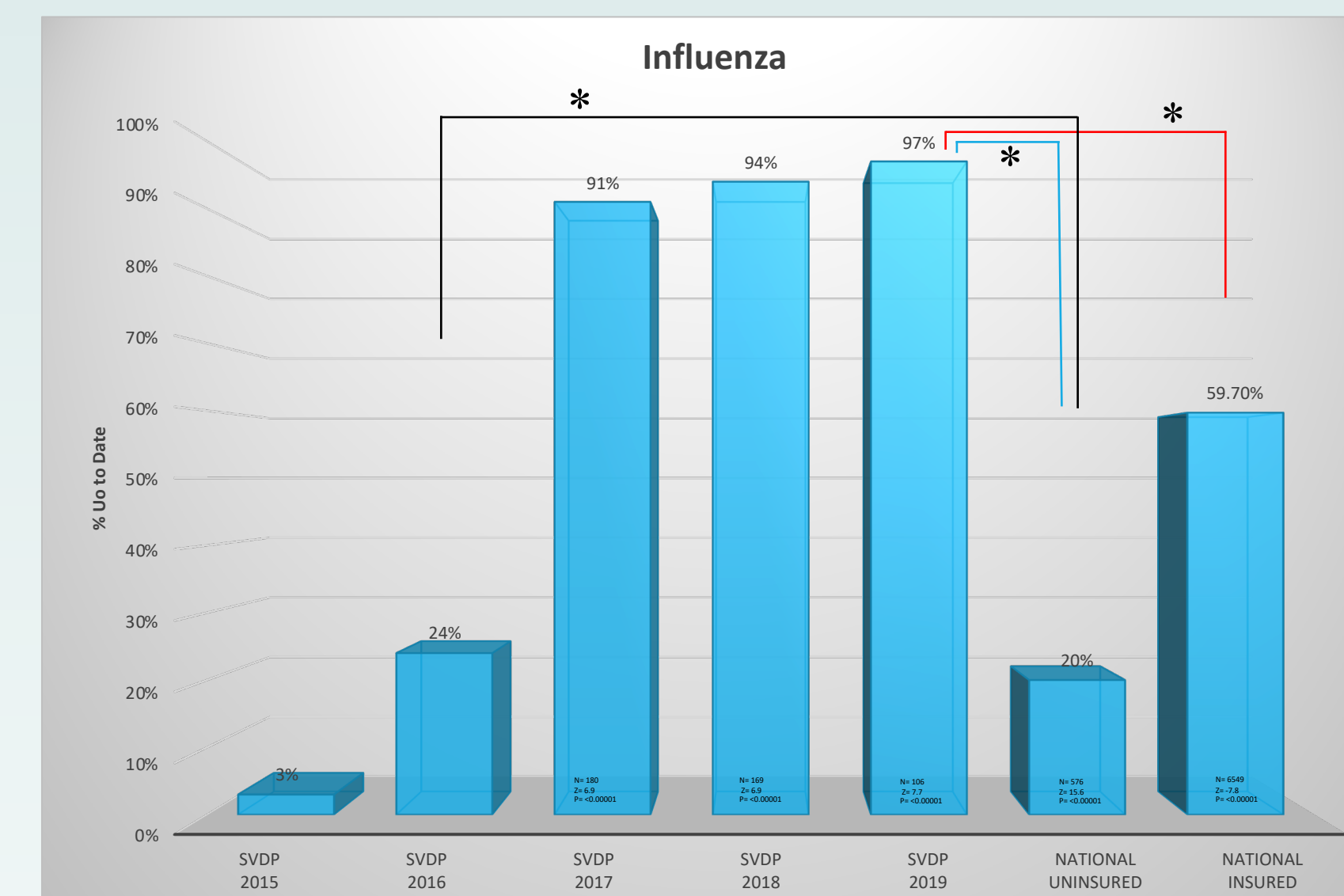
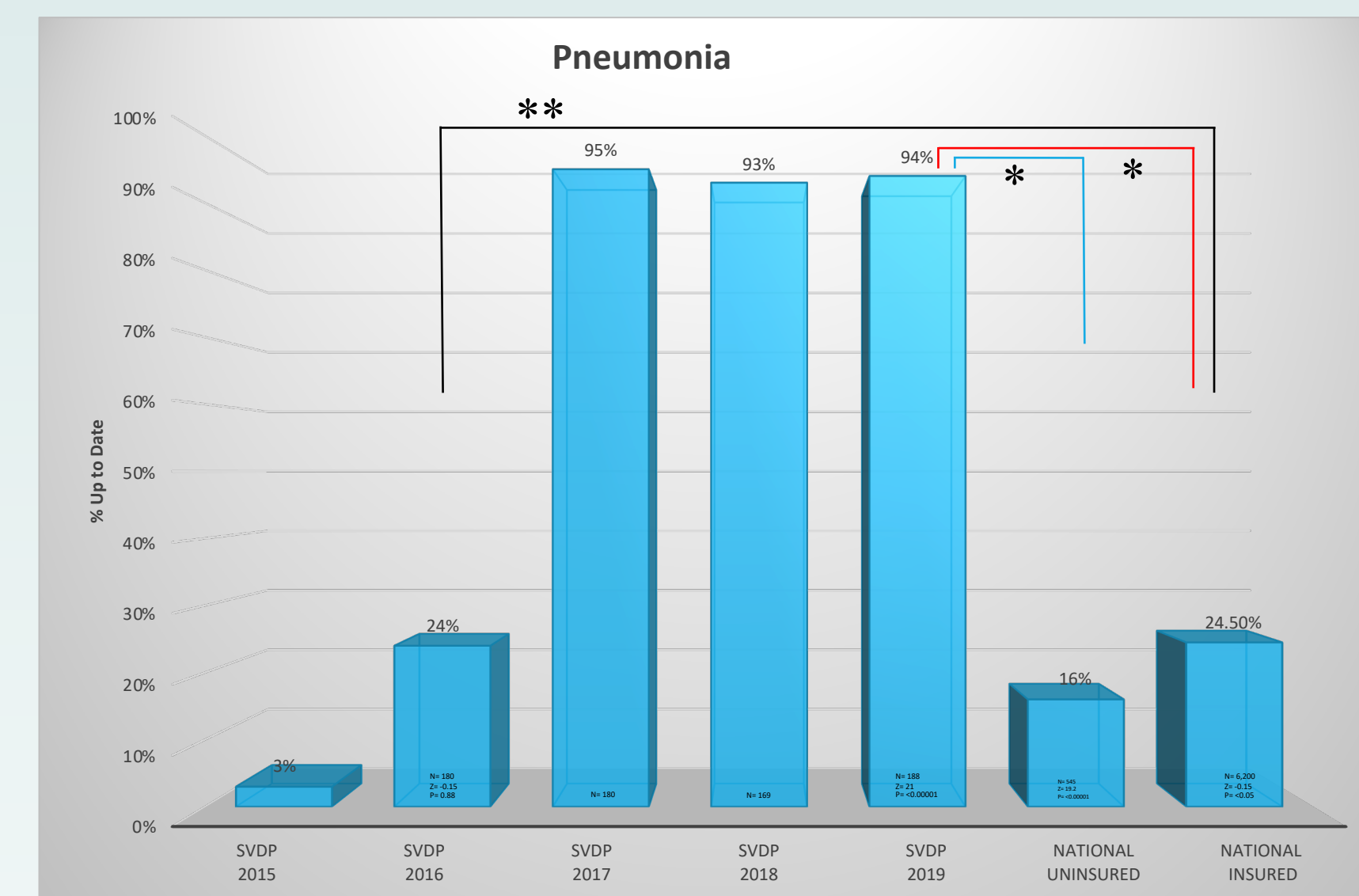
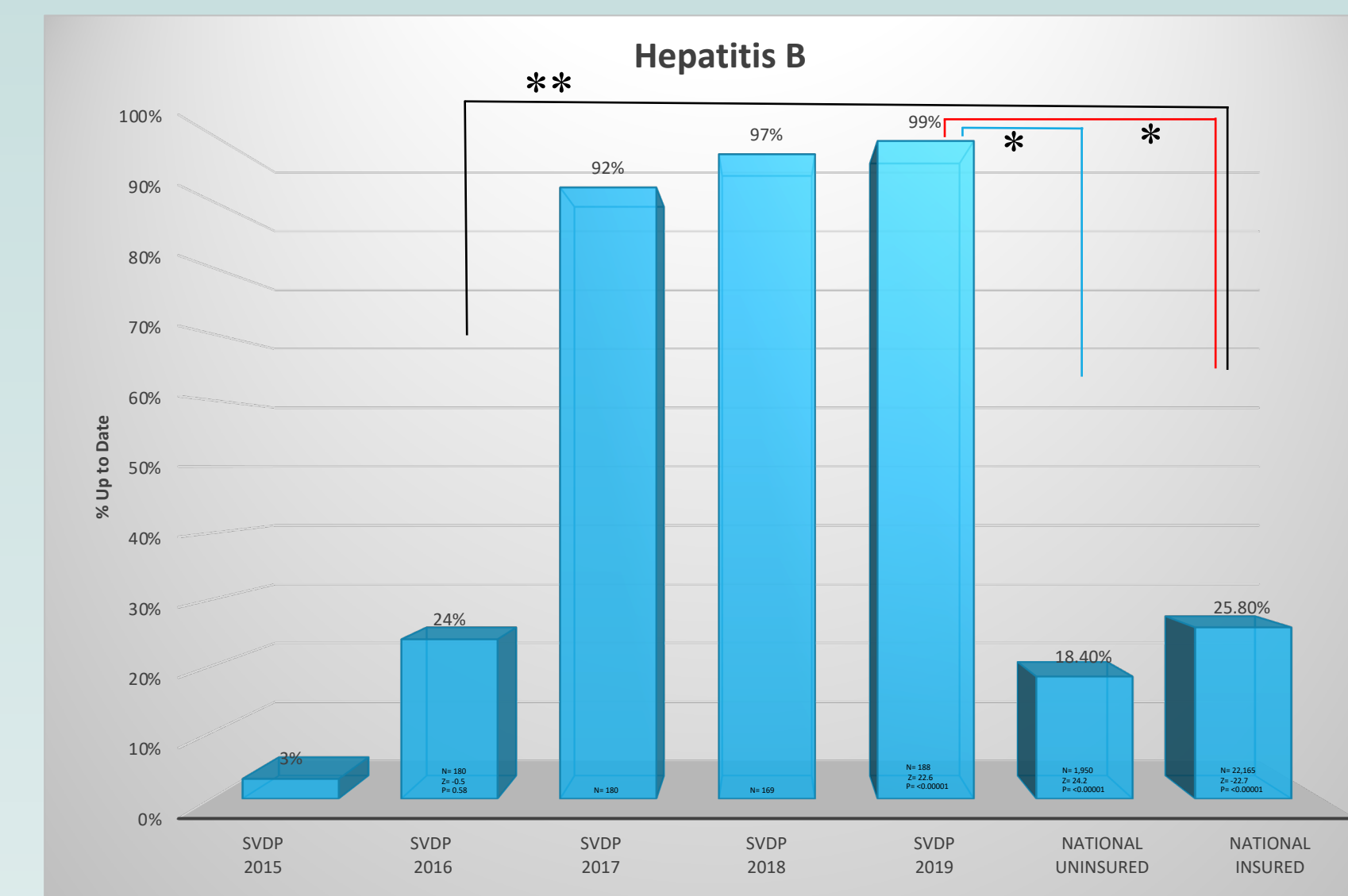
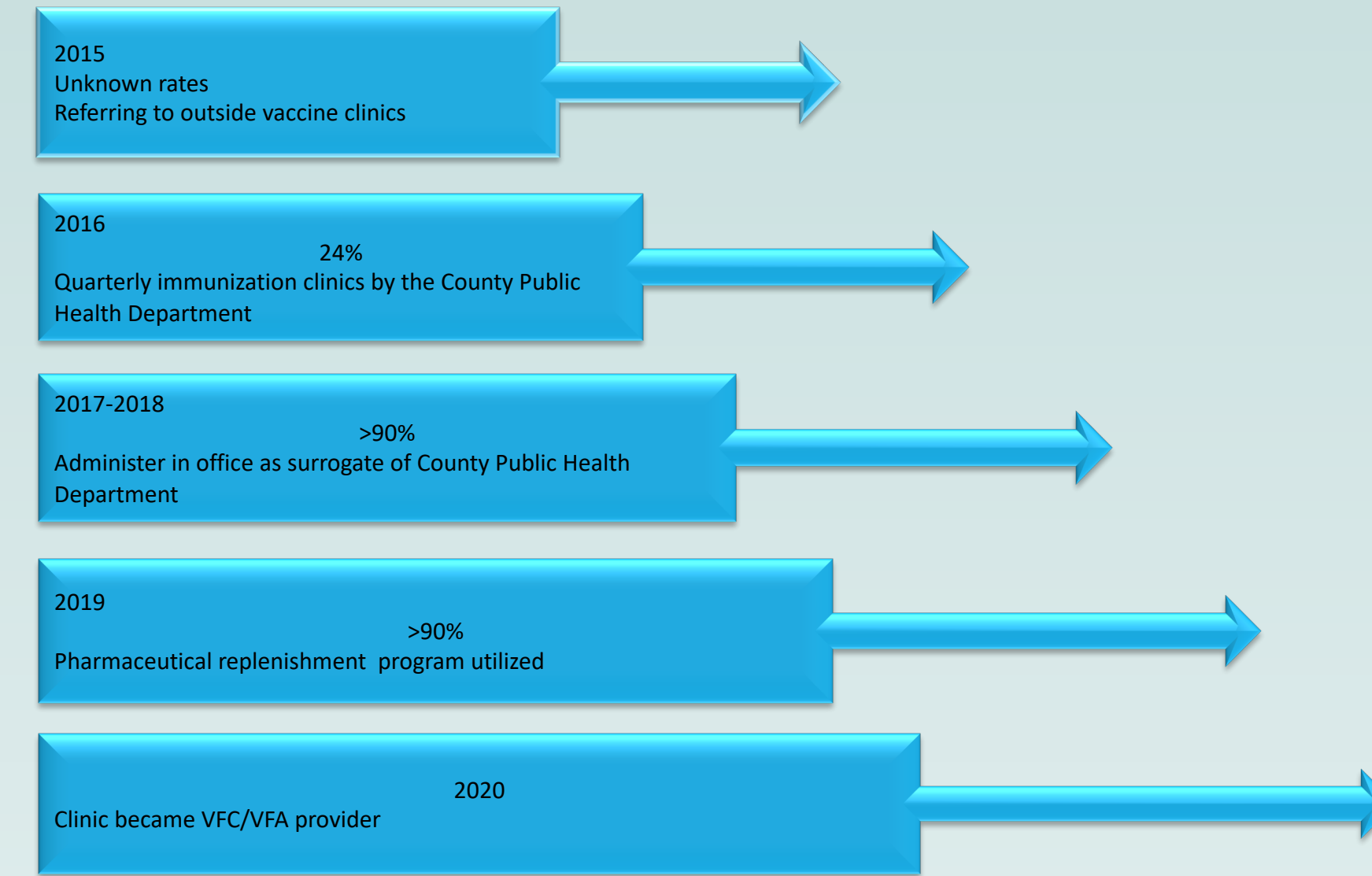
- Review of HIE databases prior to visit
- Transition from referring out to administering
- Easy to use tracking reports created
- Educate and empower staff
- Standing orders
- Create an opt-out culture
- Integrate vaccines into normal clinic flow
- Establish a PAP process
- Literature review – best practices
- Identify prior immunization history
- Identify vaccine providers
- Identify supply of vaccines



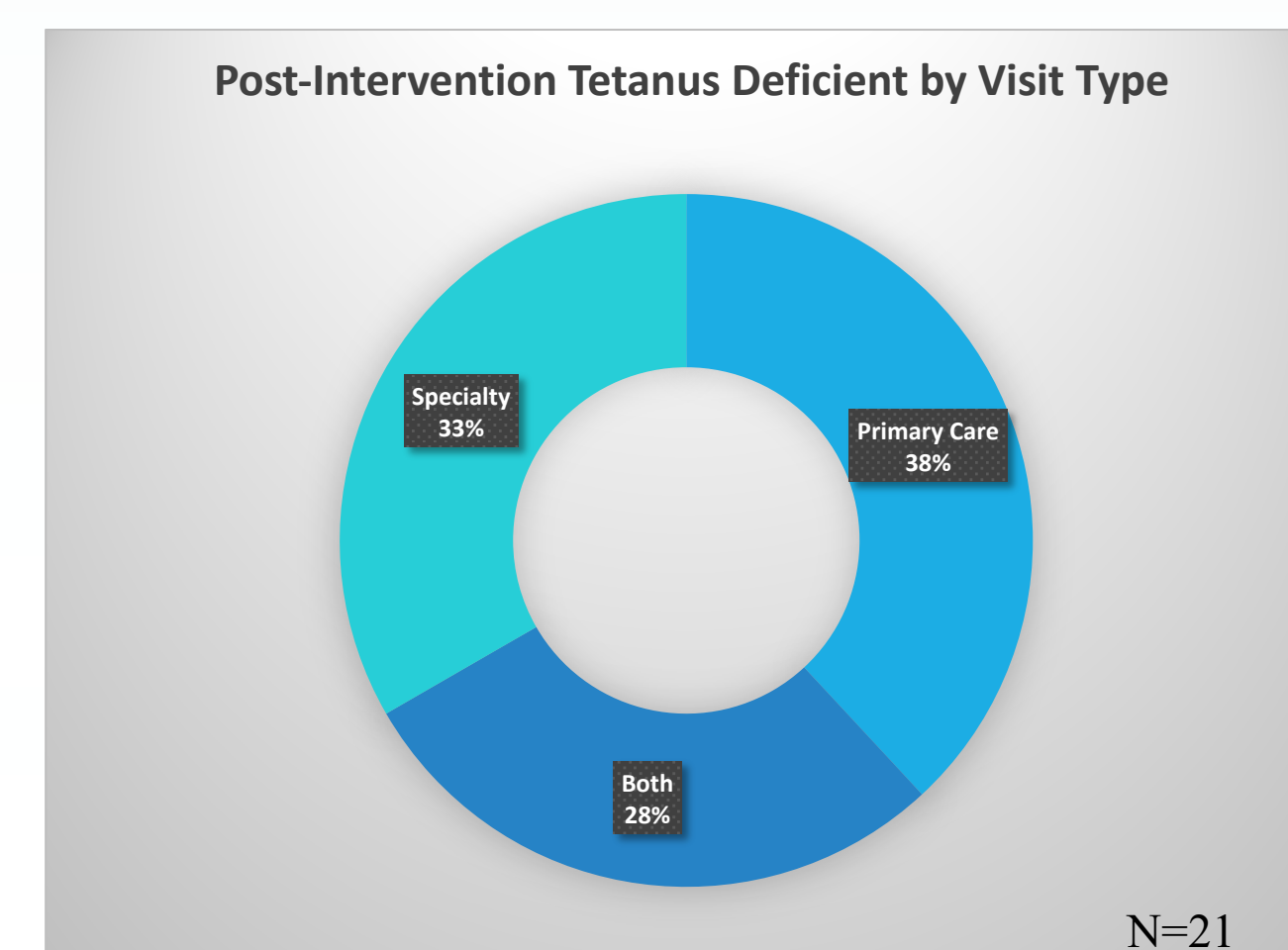
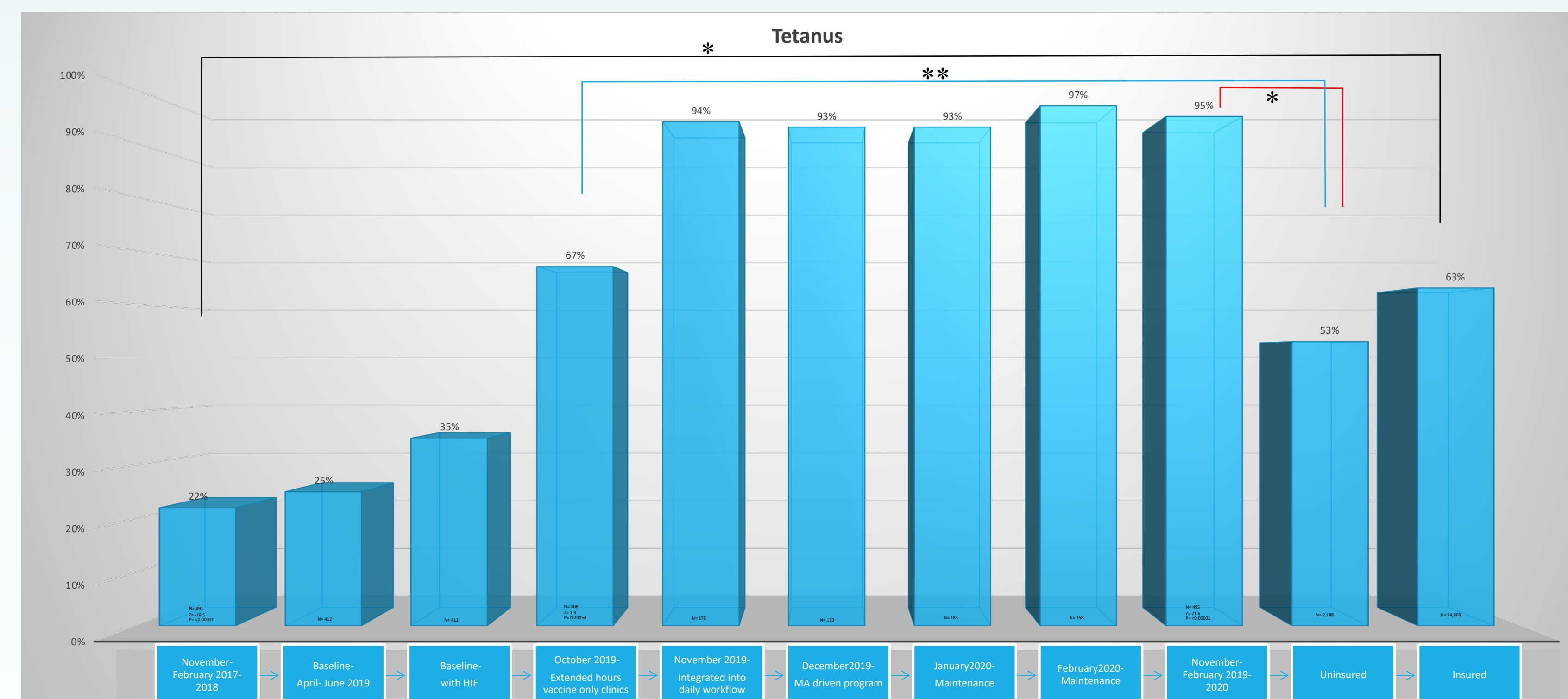
- BARRIERS IDENTIFIED**
- Lack of communication with outside vaccine clinics
 - Poor documentation of prior vaccinations
 - Rates drop with intermittent clinics
 - Lack of actionable report
 - Lack of provider initiative
 - Lack of vaccine supply
 - Refer to outside clinics
 - County Public Health administered vaccines quarterly
 - Clinic gives vaccines as a County surrogate
 - Pharmaceutical replenishment
 - HIE databases identified
 - Vaccine only extended hours clinic
 - Integrated into daily workflow

RESULTS

HIGH RISK POPULATION - DIABETES



GENERAL POPULATION - TETANUS



	Baseline N= 2,326	Deficient N=21
Gender:		
Male	38%	23%
*Female	62%	76%
Visit Type:		
Primary Care Only	43%	38%
Specialty Only	34%	33%
*DM screening		18%
Both	23%	28%
Ethnicity/Race:		
*White	11%	23%
Black	6%	9%
*Jamaica visa		4%
Hispanic	81%	61%
Non-Hispanic	2%	4%
Language Spoken:		
Spanish	69%	62%
English	31%	38%

*P-value < 0.05, **P-value > 0.05

CONCLUSION

Uninsured patient's vaccination rates can equal those of insured. In this study the vaccination rates for the uninsured were statistically significantly higher than the national average for both population based vaccines: Tetanus 95% vs 63.4% (z-score: 71.6, p-value <0.00001) and high risk individuals: Diabetes: Flu 97% vs 59.7% (z score: 7.7 p-value <0.00001), Hepatitis B 99% vs 25.8% (z score: 22.6, p-value <0.00001), Pneumococcal 94% vs 24.5% (z score: 21, p-value <0.00001).



DISCUSSION

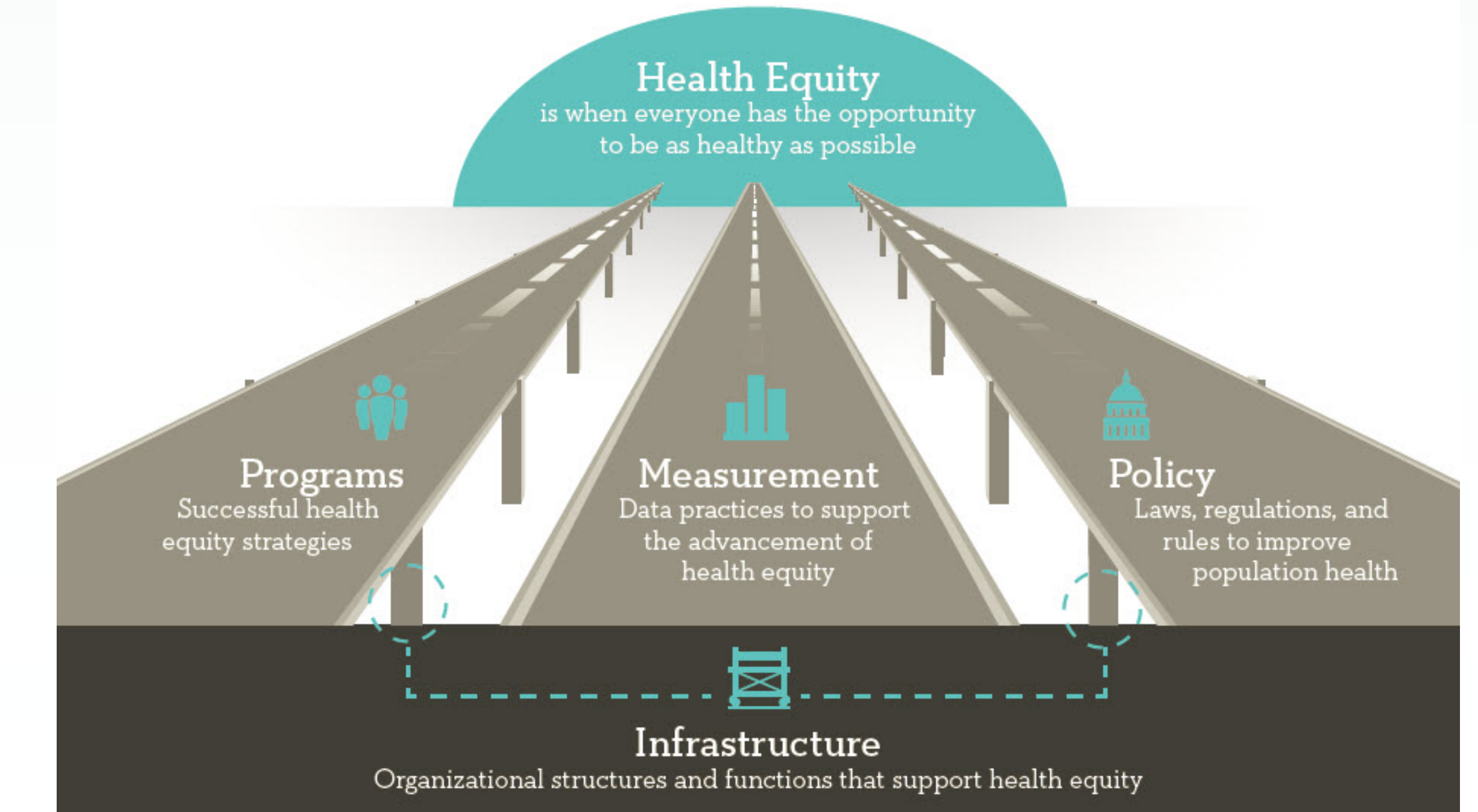
There are a number of patient, physician and healthcare oriented barriers to people receiving vaccines. This study demonstrated that with a standardized process, well trained staff and an opt-out culture from check-in to check-out vaccination rates can increase for both uninsured and insured populations to over 90%.

By use of a rapid cycle continuous quality improvement model the clinic successfully overcame all barriers and identified the largest gains were made by having:

- Easily accessible patient registry/report
- Reviewing state databases for previous immunization status
- Standing orders to avoid needing provider initiation
- Opt-out vaccines
- Identifying a constant supply for vaccines
- Intermittent vaccine clinics are effective
- Integrating vaccines into the day to day operations is more effective

The monetary cost of quality is low. A 2018 study quantified a per patient price of \$1.78 for an office to implement and maintain a practice wide immunization program. The World Health Organization estimates the economic and social impact of vaccinations in the US to be worth \$600 billion from 2011-2020. The return on investment is 930.2%. No patient identified barriers were significant during this study which suggests if clinics are willing to modify their processes there is no reason the results of this study cannot be duplicated in the uninsured and insured communities.

PAVING THE ROAD TO HEALTH EQUITY



Vaccines acquired through replenishment program

