



# **Improving Pneumococcal Vaccine Guideline Adherence During Transition to a New Electronic Medical Record**

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# Objectives

- Describe the role of the CNS in improving adherence to pneumococcal vaccine guidelines across a health system
- Identify gaps in pneumococcal vaccine assessment and administration
- Identify criteria for administration of pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23)

# Background



# Significance



- Pneumonia is the 1<sup>st</sup> leading cause of infectious death in the United States. 1:20
- And now the 5<sup>th</sup> leading cause of death overall in the United States
- 50,000 deaths per year; adults >75 and children <5
- 1 million hospitalized each year

# Significance



- Vaccination can greatly reduce the incidence of pneumonia
- Healthy People 2020's target vaccination rate is 90% in high risk adults and age >65
- Remains at <60%
- The Center for Disease Control's (CDC) Advisory Committee on Immunization Practices (ACIP) guidelines have been in effective since 2014

# Guideline Recommendations

- CDC ACIP guideline recommends 2 vaccines for adults age 65 or greater and immunocompromised adults age 19 – 64
- 1<sup>st</sup> - pneumococcal conjugate vaccine (PCV13)
- 2<sup>nd</sup> - pneumococcal polysaccharide vaccine (PPSV23) 1 year later

VACCINE	PPSV23 “Pneumovax”	PCV13 “Prevnar”
DESCRIPTION	Pneumococcal polysaccharide vaccine 23-valent.	Pneumococcal conjugate vaccine 13-valent.

- Why 2 vaccines? B-cell verses T-cell immune response

## Previous practice

- Practice in 2017
- Guidelines implemented in the medical group offices only
- In-patient protocol
  - On admission all adult patients age 19> received a pneumococcal vaccine assessment
  - Electronic medical record (EMR) automatically sent notification to pharmacy to place the vaccine order
  - Medication administration record (MAR) task for administration
  - Orders lost with med reconciliation or transfer
  - May have been missed at discharged or patient refused prior to discharge
- Patients at risk

## Effect of new EMR

- Develop healthier populations
- Merging protocols
- Impact to multiple departments
- New processes and workflow
- Improved quality of care and patient safety



## Evaluation: Identifying Gaps

- Lack of knowledge in guideline changes
- Workflow changes for nurses in assessment and documentation
- Protocol changes for ordering of vaccine types
- Practice changes in administration techniques

# Coordinating a System Practice Change

- Identify key contacts in each department at each entity within the system
  - Pharmacy
  - Information Technology
  - Nursing
- Communicate to entity administrative leaders
  - Impact
  - Timeline

# Coordinating a System Practice Change

- Consult information technology
  - Understanding the system logic
- Address system committees and councils
  - Pharmacy and Therapeutics Committee
  - Nursing Practice and Quality Council
- Collaborate with nursing clinical educators at each entity
- Partner with external experts for resources
  - Nursing in-services and education

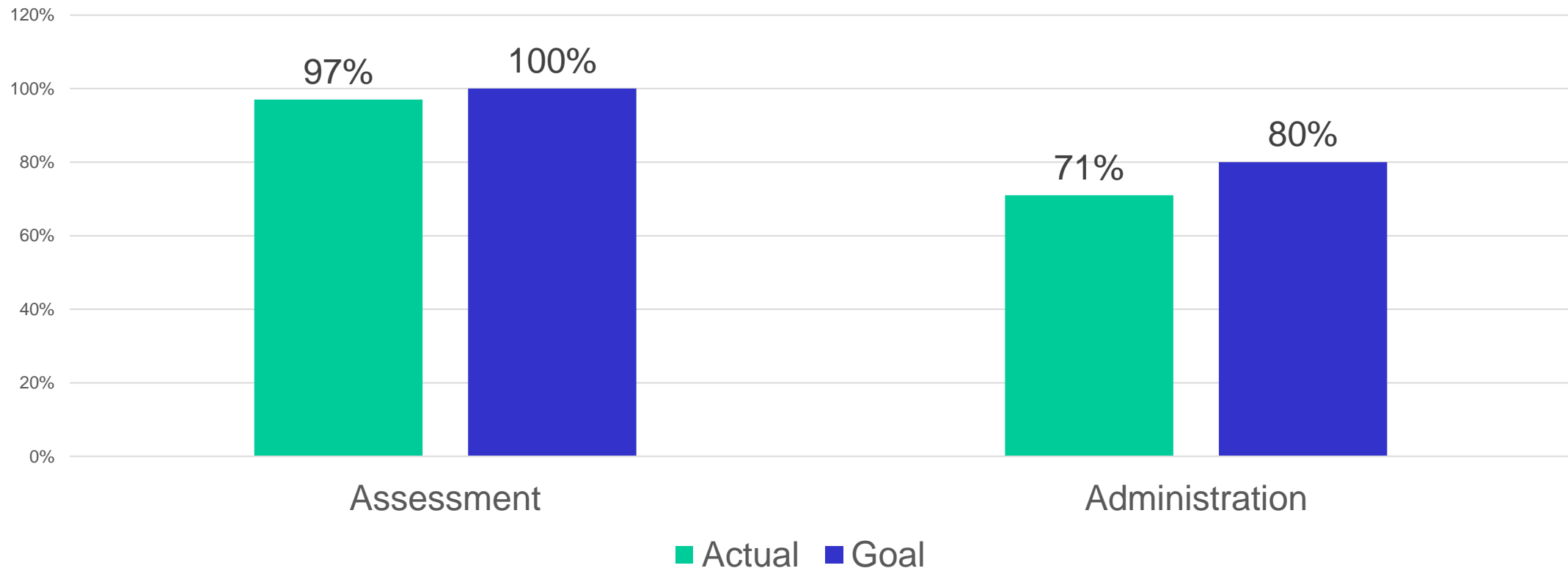
## Preparing for Go-Live

- EMR functionality reviewed for effectiveness
  - What does it look like and how does it work
- Vaccine accessibility in pyxis on nursing units
  - Vaccines labeled with new administration techniques
- Nursing education
  - Tip sheets – visual aids

**Goal: To increase adherence to pneumococcal vaccine guidelines for the in-patient population resulting in improved administration rates for high risk adults and adults > age 65**



### Pneumococcal Vaccine Assessment and Administration 2017 Rate and Goals



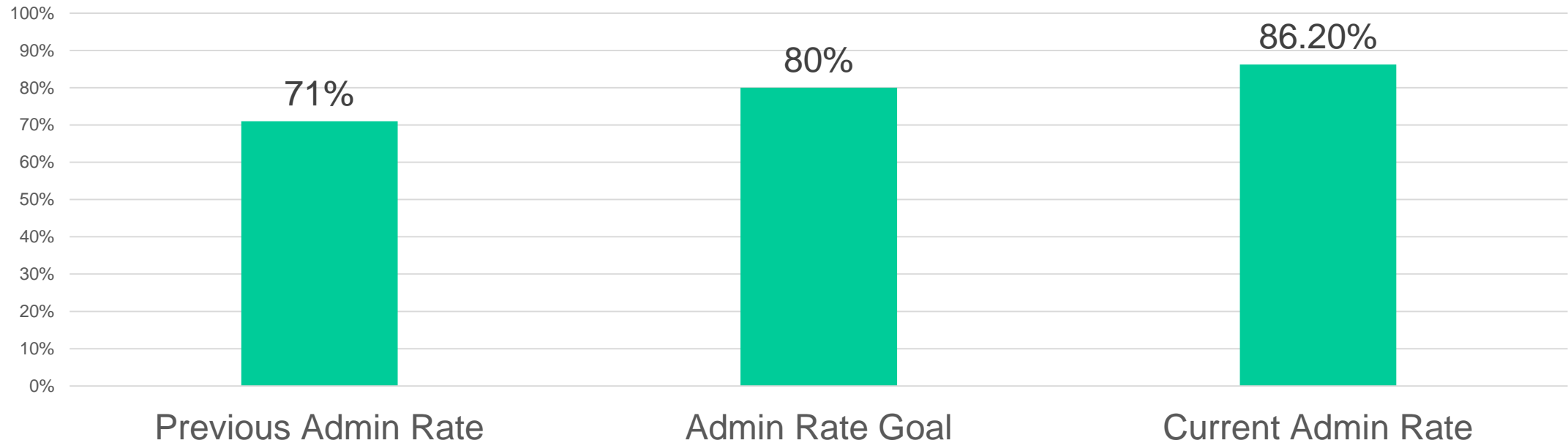
## New Practice and Workflow

- Immunization reconciliation
- Entering historical immunizations and vaccines
- If indicated pneumococcal screening and assessment is completed
- Best practice advisory alert recommends vaccine type
- Nurse orders vaccine and administers asap

# Outcomes



## Pneumococcal Vaccine Administration Rate for In-Patients



# Outcomes



- Improved adherence to pneumococcal vaccine guidelines
- Best practices for vaccine administration standardized across the system
- Healthier patient population and community with merged out patient and in-patient protocols