Heart Failure Disease Management

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NATIONALLY UNPRECEDENTED SIX CERTIFICATIONS FOR WALTER REED ARMY MEDICAL CENTER – *MARCH 2003*

- ***CHRONIC HEART FAILURE***
- **CHRONIC OBSTRUCTIVE PULMONARY DISEASE**
- **DIABETES**
- **PEDIATRIC ASTHMA**
- ***CARDIOVASCULAR RISK REDUCTION***
- **WOMEN'S HEALTH**

FIRST HEALTHCARE FACILITY, MILITARY OR CIVILIAN,TO RECEIVE SIX DSC CERTIFICATIONS

ONLYHEALTHCARE FACILITY TO BE CERTIFIED WITH TWO PREVENTIVE HEALTH PROGRAMS

WRHCS Performance Improvement Project

2002

Performance Measures:

- Reduce frequency of acute HF exacerbations and hospitalizations
- Increase immunizations against vaccine preventable influenza and pneumonia
- Deploy patient friendly educational strategies for active involvement and improve compliance with prescribed meds and dietary restrictions
- Expand use of therapeutic agents to improve clinical outcomes (ACEI)
- Document ejection fractions to enhance use of appropriate and effective diagnostics

Needs Assessment

- More than 50% of readmissions with heart failure are potentially preventable
- Most hospital readmissions are related to noncompliance with treatment recommendations and other behavioral factors
- Knowledge of LV function not routine
- Morbidity and mortality rates in CHF are high (nearly 40 % mortality within first year)
- Interdisciplinary care has been shown to facilitate effective outpatient treatment and improve QOL

Team Organization

- **Cardiologist:**
  Dr. Marina Vernalis
- **Nurse Practitioners:**
  Cathy Franklin, CRNP
  Stacy Walsh, CRNP

Knowledge Clarification

- Patient education and active patient involvement enhance self-efficacy and decrease CHF exacerbations
- Timely immunizations reduce morbidity and mortality
- ACEI use improve outcomes
- Disease management of CHF improves QOL

Understanding Variation

Causes:

- Patient education
- Medication and dietary compliance
- Guidelines in practice
- Co-morbidities

Process Improvement Goals

- Reduce the frequency of ER Visits and hospitalizations
- Enhance functional capacity by providing tailored exercise prescriptions (NYHA)
- Improve ejection fractions
- Enhance perceived Quality of life
- Maximize compliance with ACEI and all meds compared to National Standard
- Optimize number of patients immunized against influenza and pneumonia compared to National Standard

Process Improvement Goals

- Patient education at each visit regarding diet, weight monitoring, activity level, medications and symptom management
- Pharmacists, nutritionists and physical therapists to aid in patients' plan of care; Utilizing KC Cardiomyopathy questionnaire
- Ensure medications are at target dose as tolerated by patient (based on ACC guidelines and document compliance)
- EMR documentation of immunizations and document compliance

Strategy Overview

- Multidisciplinary disease management team
- Consensus algorithms for evaluation and treatment based on scientific literature
- Cardiac function evaluation
- Coordinated care plan at point of care
- Patient education
- Active patient involvement to enhance self efficacy
- Data collection (Health-e-forces, C-trax, KCCQ)

Strategy Implementation

- Data collection
  - Chart and specialized database audits to determine:
    - % Of patients immunized
    - % Of patients on ACEI
    - % Of pts given customized education on
      - Diet
      - Exercise
      - Symptoms
      - Weight
      - Medication (polypharmacy)
  - KC Cardiomyopathy questionnaire comparisons for effective multidisciplinary management

Sustaining Guidelines

- Ensure patients enrolled in CHF clinic are receiving weekly phone calls to monitor new or worsening CHF symptoms
- Continue patient education
- Recheck cardiac function after patient reaches target dose of medication

  (6 months)

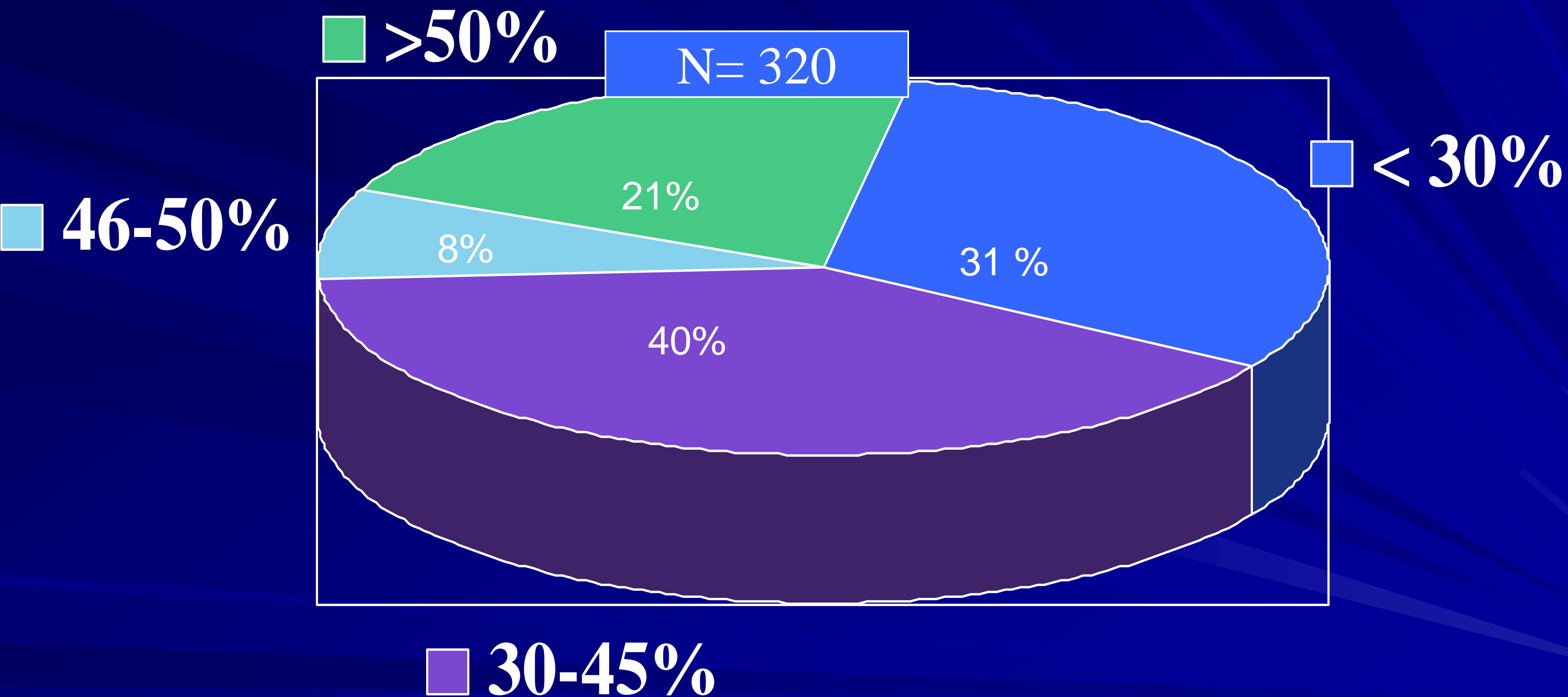
Keys to success

- ✓ Systematically review patient records enrolled
- ✓ Illustrate the number of ER visits and hospitalizations for CHF exacerbations
- ✓ Compare the number of ER visits and hospitalizations prior to and after enrollment into the CHF clinic
- ✓ Document medications and guidelines in practice
- ✓ Document education
- ✓ Document use of KCC survey
- ✓ Compare the NYHA classification before and after patient being enrolled in CHF clinic
- ✓ Plan appropriate intervention

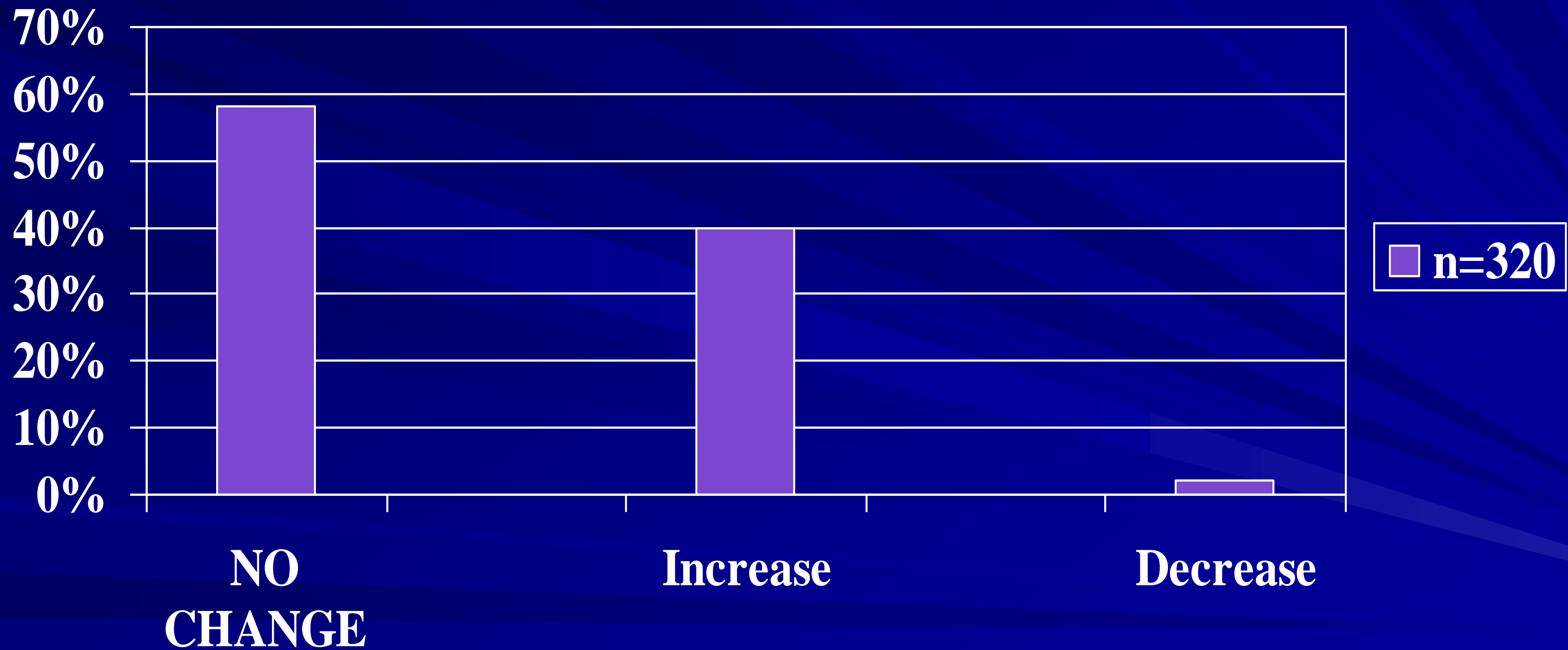
Maintaining Success

- Continue to review patient charts for number of hospitalizations/ER visits to track changes
- Continue close monitoring of patients enrolled in the CHF clinic to help minimize number of ER visits and hospitalizations for CHF
- Continue patient education about the importance of medication, dietary, and exercise compliance
- Continue to document immunization records
- Continue to monitor for improvements in NYHA classification
- Continue to review KC Cardiomyopathy questionnaires

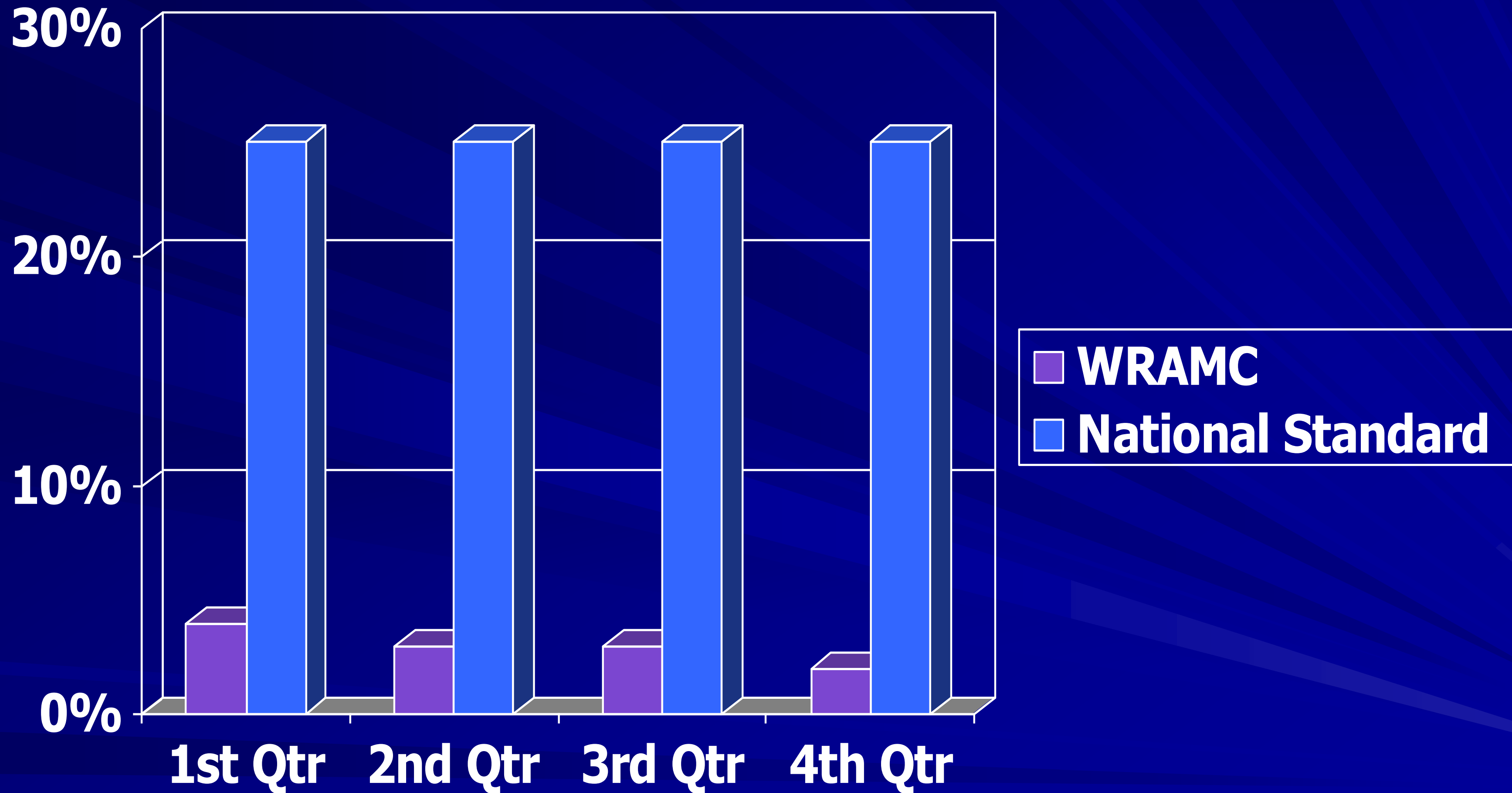
Ejection Fractions in Patients Enrolled in the HF clinic



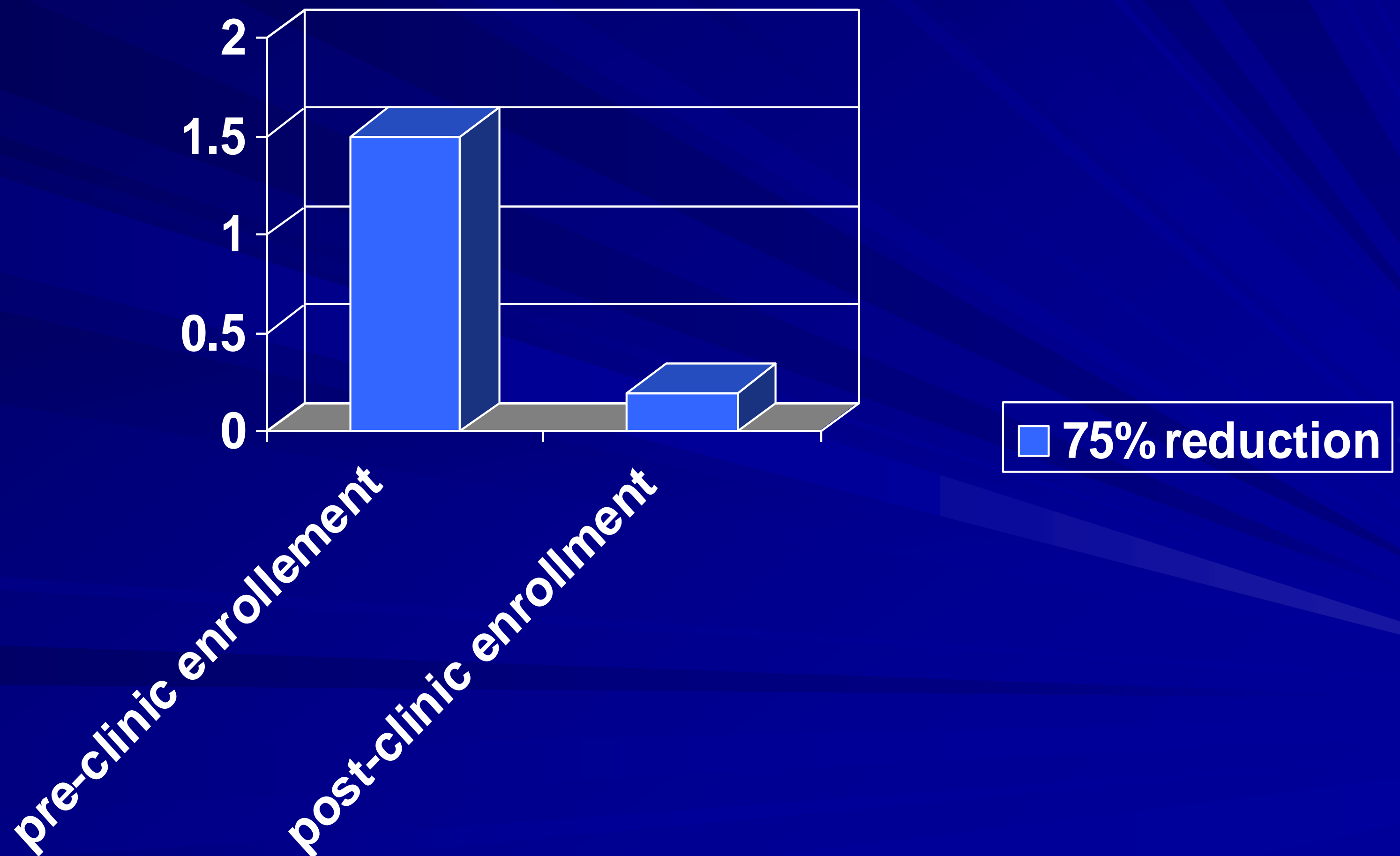
Significant Improvements in EF Patients Enrolled in HF Clinic



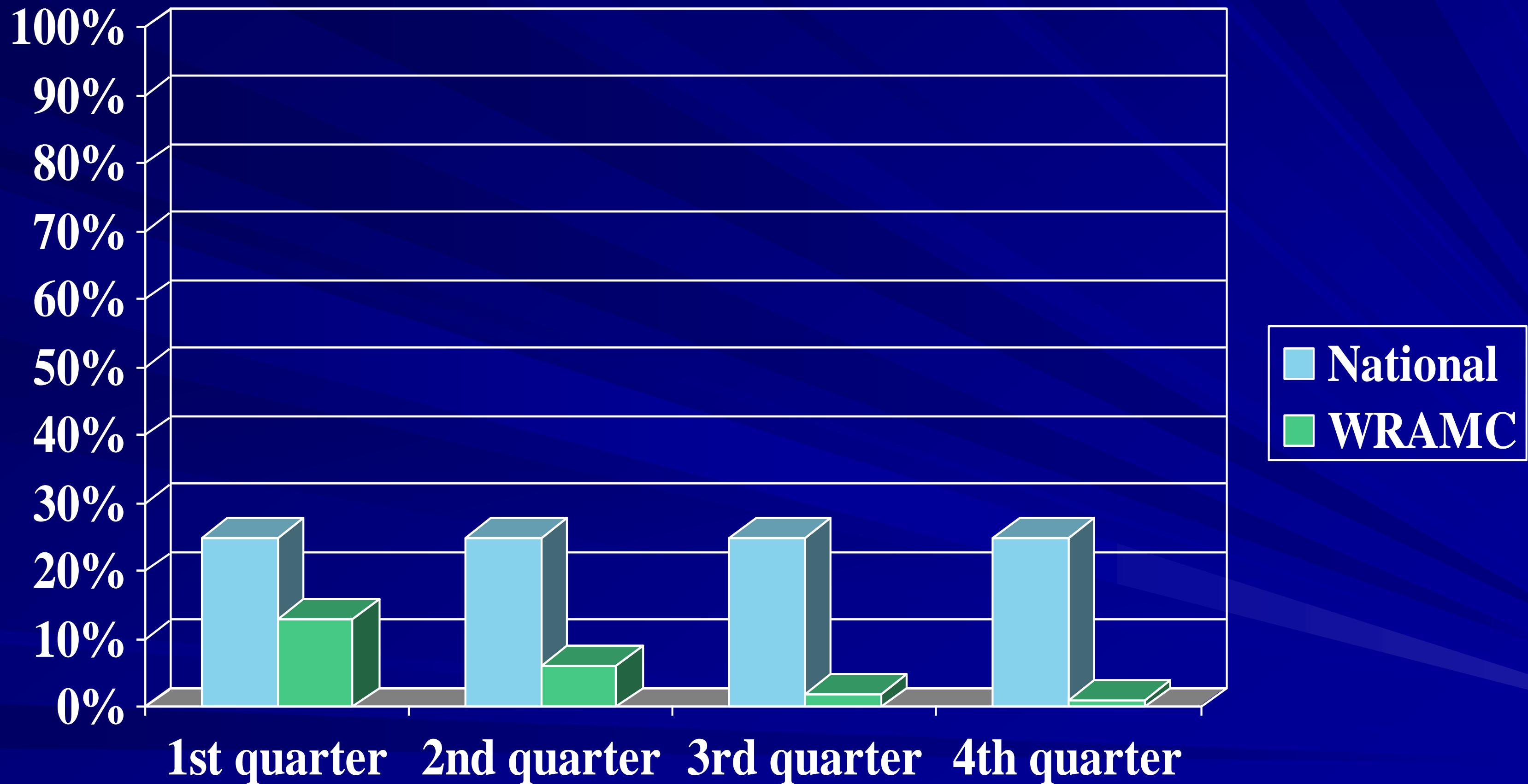
WRAMC readmission rate for CHF within 6 months of enrollment



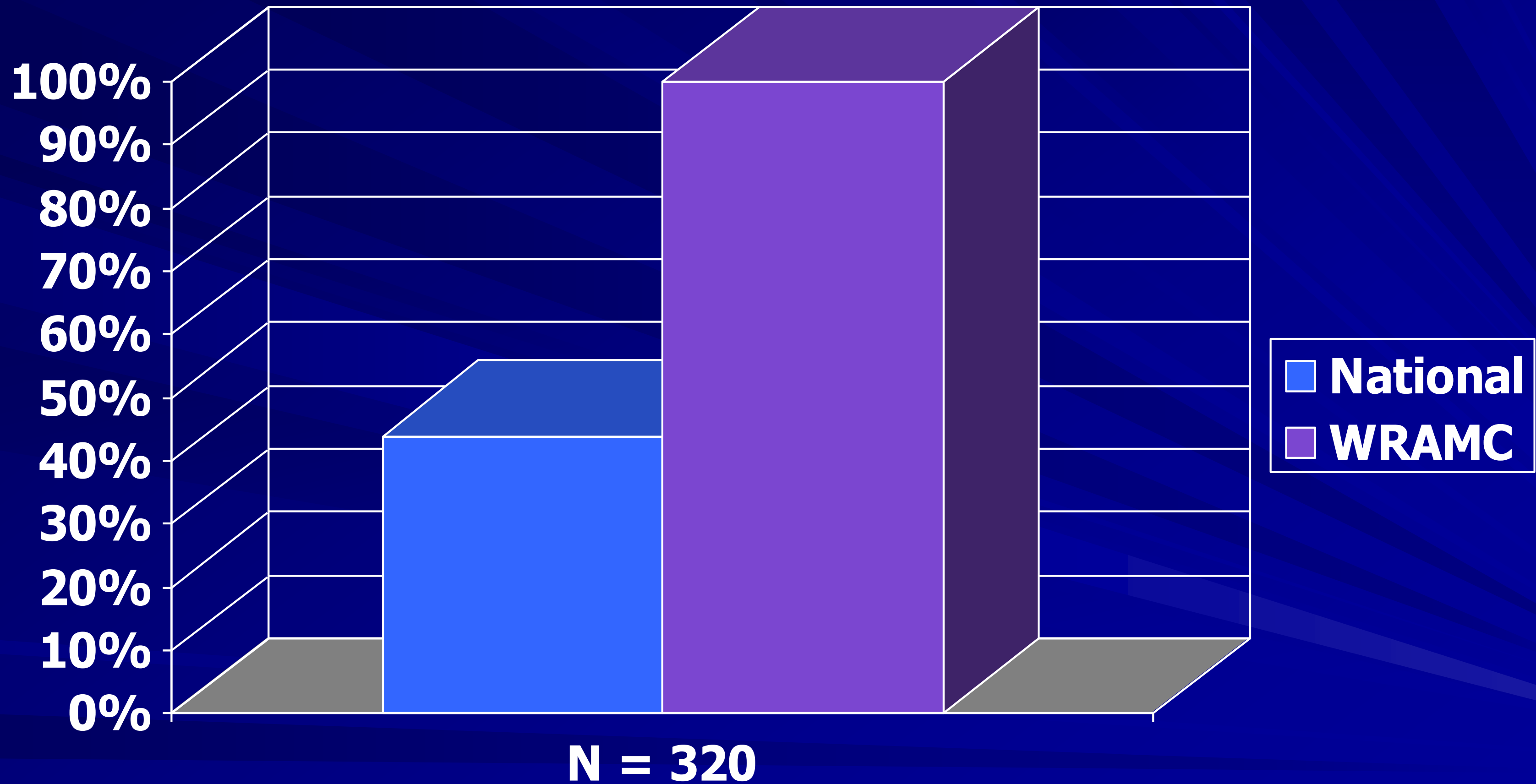
Reduction of average annual admissions per HF patient



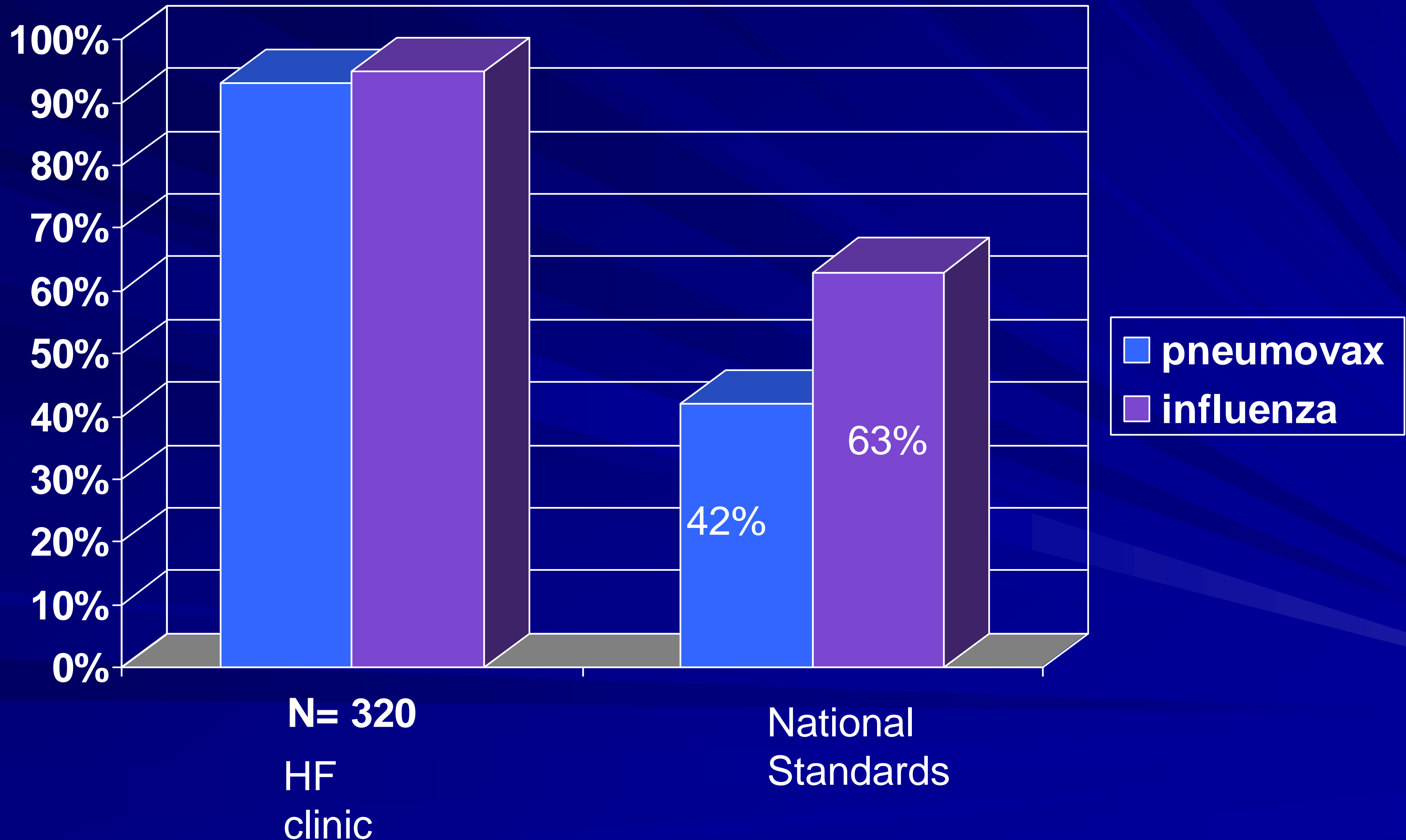
Reduction in ER Visits post enrollment in CHF clinic (%) within 30 days



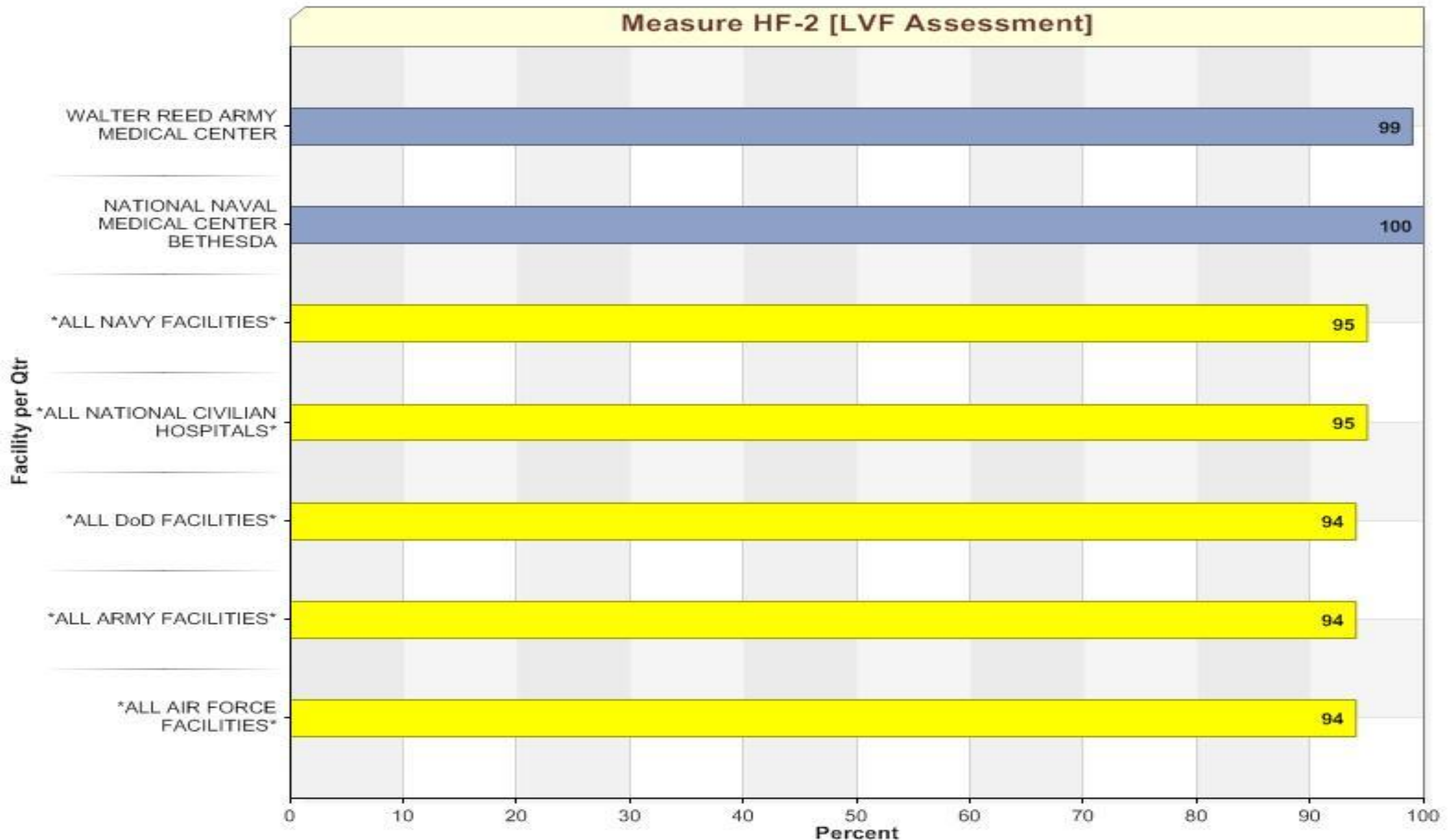
Significant improvement in Patients Receiving Target ACEI/ARB



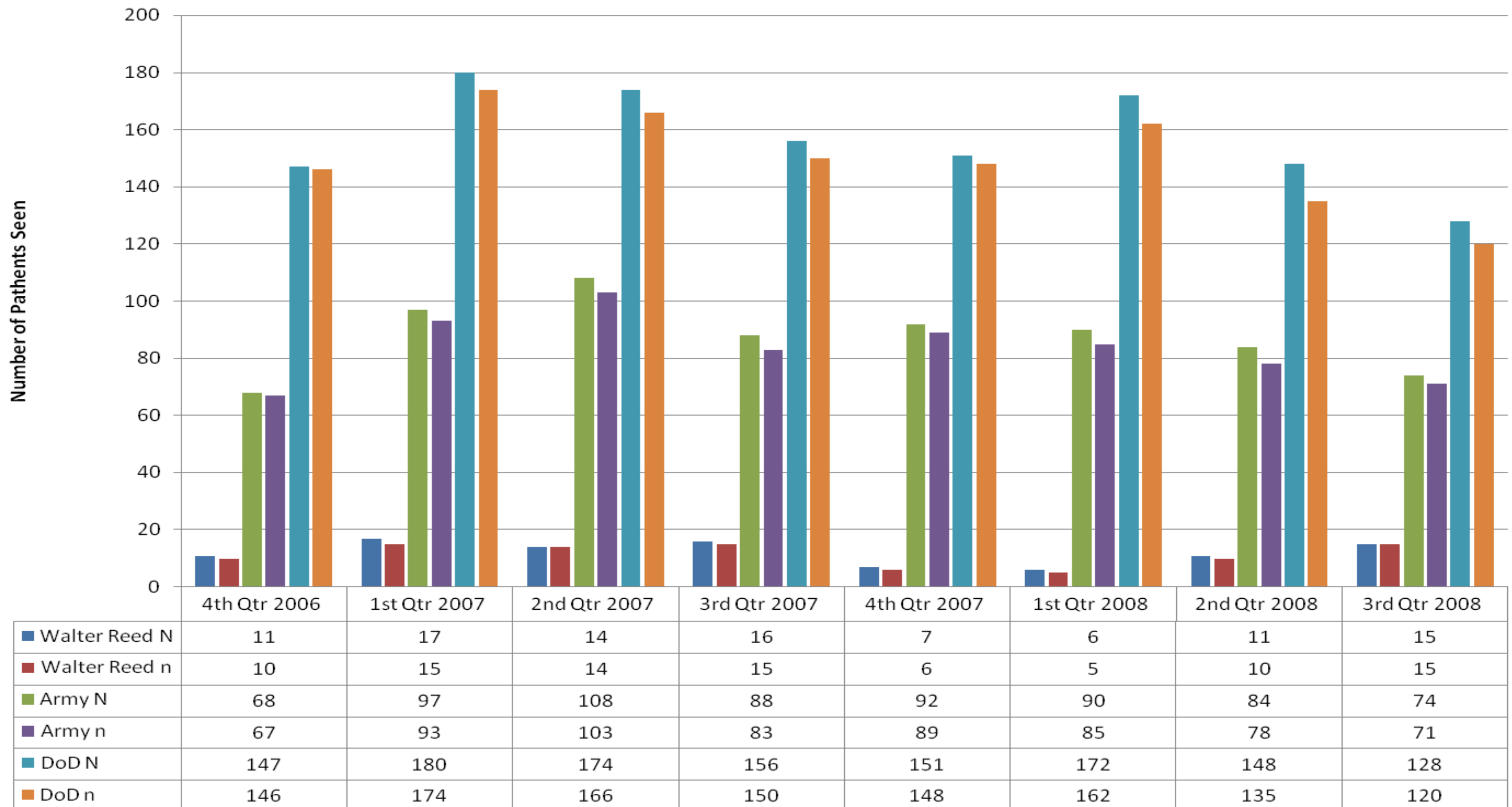
HF Clinic Surpassed Immunization Guidelines



JCAHO HF-2
LV Assessment



THE JOINT COMMISSION (TJC) HEART FAILURE (AMI) HF-3 ACEI OR ARB FOR LVSD



	4th Qtr 2006	1st Qtr 2007	2nd Qtr 2007	3rd Qtr 2007	4th Qtr 2007	1st Qtr 2008	2nd Qtr 2008	3rd Qtr 2008
Walter Reed N	11	17	14	16	7	6	11	15
Walter Reed n	10	15	14	15	6	5	10	15
Army N	68	97	108	88	92	90	84	74
Army n	67	93	103	83	89	85	78	71
DoD N	147	180	174	156	151	172	148	128
DoD n	146	174	166	150	148	162	135	120