

Get With The Guidelines-Heart Failure

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Presenter and Program Disclosure Information

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AHA GWTG HF Program Presentation

FINANCIAL DISCLOSURE:

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UNLABELED/UNAPPROVED USES DISCLOSURE:

None



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Opportunities to Improve Care for Patients With HF

- Despite overwhelming clinical trial evidence, expert opinion, national guidelines, and a vast array of educational conferences, evidence-based, life-saving therapies continue to be underutilized
- New approaches to improving the use of proven, guideline-recommended, life-prolonging therapies are clearly needed

Why a Hospital-based System for HF Management?

- Patients
 - Patient capture point
 - Have patient's/family's attention: "teachable moment"
 - Predictor of care in community
- Hospital structure
 - Standardized processes/protocols/orders/teams
 - Accrediting bodies for standards of care
 - Centers for Medicare and Medicaid Services—peer review organizations
 - HEDIS (post-discharge)

What is GWTG-HF?

- The American Heart Association's in-hospital quality improvement program aimed at ensuring every heart failure patient receives the best care possible.

GWTG-HF Program

Objectives

- Improve medical care and education of patients hospitalized with heart failure
- Accelerate initiation of the HF evidence-based, guideline-recommended therapies by starting these life-saving therapies before hospital discharge in appropriate patients without contraindications
- Increase understanding of barriers to uptake of evidence-based therapies in this patient population

Methods: GWTG-HF

GWTG employs a collaborative model of care involving organizational stakeholders, AHA, physician/nurse champions, hospital teams

Web-based PMT providing decision support at the point of care, on-demand reporting, and patient education features

Hospital toolkit: Order sets, critical pathways, pocket cards, discharge checklists, patient educational materials

Ongoing real-time feedback of hospital data to support rapid cycle improvement

Learning sessions, Post meeting follow-up, teleconference and Internet based conferencing, Email community, and Hospital site visits

GWTG-HF Data Collection

- Relevant medical history
- Smoking within the last 12 months
- HF History
- Symptoms (closest to admission)
- Vital Signs
- Exam (closest to admission)
- Labs (closest to admission; peak to troponin)
- Admission medications (taken prior to admission)
- Parenteral therapies
- Procedures during this hospital stay
- Ejection Fraction
- Discharge Status
- If patient expired, primary cause of death
- Symptoms (closest to discharge)
- Vital Signs (closest to discharge)
- Exam (closest to discharge)
- Labs (closest to discharge)
- Discharge medications
- Smoking cessation counseling
- Discharge instructions
- Date of discharge
- Process of care improvement
- Highlighted items are optional

GWTG-HF Recognition Program Performance Measures

1. HF Discharge instructions provided to all eligible patients
2. Measurement of LV function in all eligible patients
3. ACE inhibitor and/or ARB at discharge provided to eligible patients with LVEF \leq 0.40, in absence of documented contraindications or intolerance
4. Beta blocker at discharge provided to eligible patients with LVEF \leq 0.40, in absence of documented contraindications or intolerance
5. Smoking cessation counseling provided to all eligible patients (current or recent smokers)

Emerging Performance Measures

- Anticoagulation in eligible patients with current or paroxysmal atrial fibrillation and no documented contraindications, intolerance, or other reason
- Aldosterone antagonists in eligible patients with LVSD and no contraindications, intolerance, or other reason
- Hydralazine/Nitrates in eligible Black patients with LVSD and no contraindications, intolerance, or other reason
- Evidence based beta blocker use (carvedilol, bisoprolol or metoprolol succinate) in eligible patients with LVSD
- ICD in eligible patients with LVEF ≤ 30 and no contraindication or other reason documented



Admission Information

Payment Source

- Medicare (Title 18)
- Medicaid (Title 19)
- Other
- No Insurance/Not Documented/UTD

Primary Cause of Admission:

- Heart failure Other Unknown

Characterization of HF at admission or when first recognized:

Acute pulmonary edema

If Other, specify:

Other Conditions Contributing to HF Exacerbation:
(check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Ischemia/ACS | <input type="checkbox"/> Noncompliance-dietary |
| <input checked="" type="checkbox"/> Uncontrolled HTN | <input type="checkbox"/> Noncompliance-medication |
| <input checked="" type="checkbox"/> Pneumonia/resp process | <input type="checkbox"/> Other (specify): |
| <input type="checkbox"/> Worsening renal failure | <input type="text"/> |
| <input type="checkbox"/> Arrhythmia | |

Demography

Date of Birth

12 / 23 / 1941
MM DD YYYY

Gender

- Male Female Unknown

Race/Ethnicity:

— select one —

Hispanic Origin

- select one —
- African American
- American Indian/Alaska Native
- Asian
- Caucasian
- Native Hawaiian/Pacific Islander
- Other (i.e. mixed race, Hispanic)
- UTD

Relevant

- Acute renal failure
- ICD
- Anemia
- Atrial arrhythmia
- ...

/CRT



GWTG-HF PMT Special Features: Guidelines

Symptoms

(closest to discharge)

Unchanged

Vital Signs

(closest to discharge)

Weight lbs kg Not well documented

Heart rate bpm



BP - Supine / mmHg (systolic/diastolic)

Exam

(closest to discharge)

Lower extrem

Labs

(closest to discharge)

BNP

SCr

Na

K

https://gol.medpad.com - GWTG-HF BP Guidelines: - Microsoft Int...

BP Guidelines:

Initiate lifestyle modification (weight control, physical activity, alcohol moderation, moderate sodium restriction, and emphasis on fruits, vegetables, and low-fat dairy products). Add blood pressure medication, individualized to other patient requirements and characteristics (ie, age, race, need for drugs with specific benefits).

BP Goal: <140/90 mmHg, <130/85 mmHg if heart failure or renal insufficiency, <130/80 mmHg if diabetes.

Done Internet

Beta Blocker:

Contraindication(s) to Beta Blocker at discharge: Yes No

—select one—

Dosage: mg

Administrative
(for JCAHO
only)

ICD-9 CM

MM

ICD-9 CM
 Use P

MM

Postal Code

Optional
Fields

Field 1
Field 6

Complete Form: Check to

Save Record

Check

Bookmarks
Signatures
Layers
Pages
Comments

American Heart Association
Learn and Live.

PATIENT INFORMATION

What I Need to Know about Heart Failure

WHAT IS HEART FAILURE?

Heart failure means that the heart muscle is weakened and does not pump blood normally. In heart failure, the heart is too weak to supply the right amount of blood to all parts of the body. When the heart muscle doesn't squeeze strongly enough, fluid can back up into the heart and lungs and into other places such as the legs or abdominal (belly) area. This buildup of fluid in the tissues is why heart failure is sometimes referred to as *congestive* heart failure. When you have heart failure, it means that your heart muscle is weaker than normal. It does not mean that your heart has stopped pumping or beating or has completely failed.

WHAT ARE THE SIGNS AND SYMPTOMS OF HEART FAILURE?

As a heart failure patient, you may experience some or all of the following:

- Shortness of breath
- Tiredness, loss of energy
- Loss of appetite, abdominal (belly) discomfort
- Abdominal bloating (stomach swelling)
- Swollen ankles or legs

8.5 x 11 in

name:

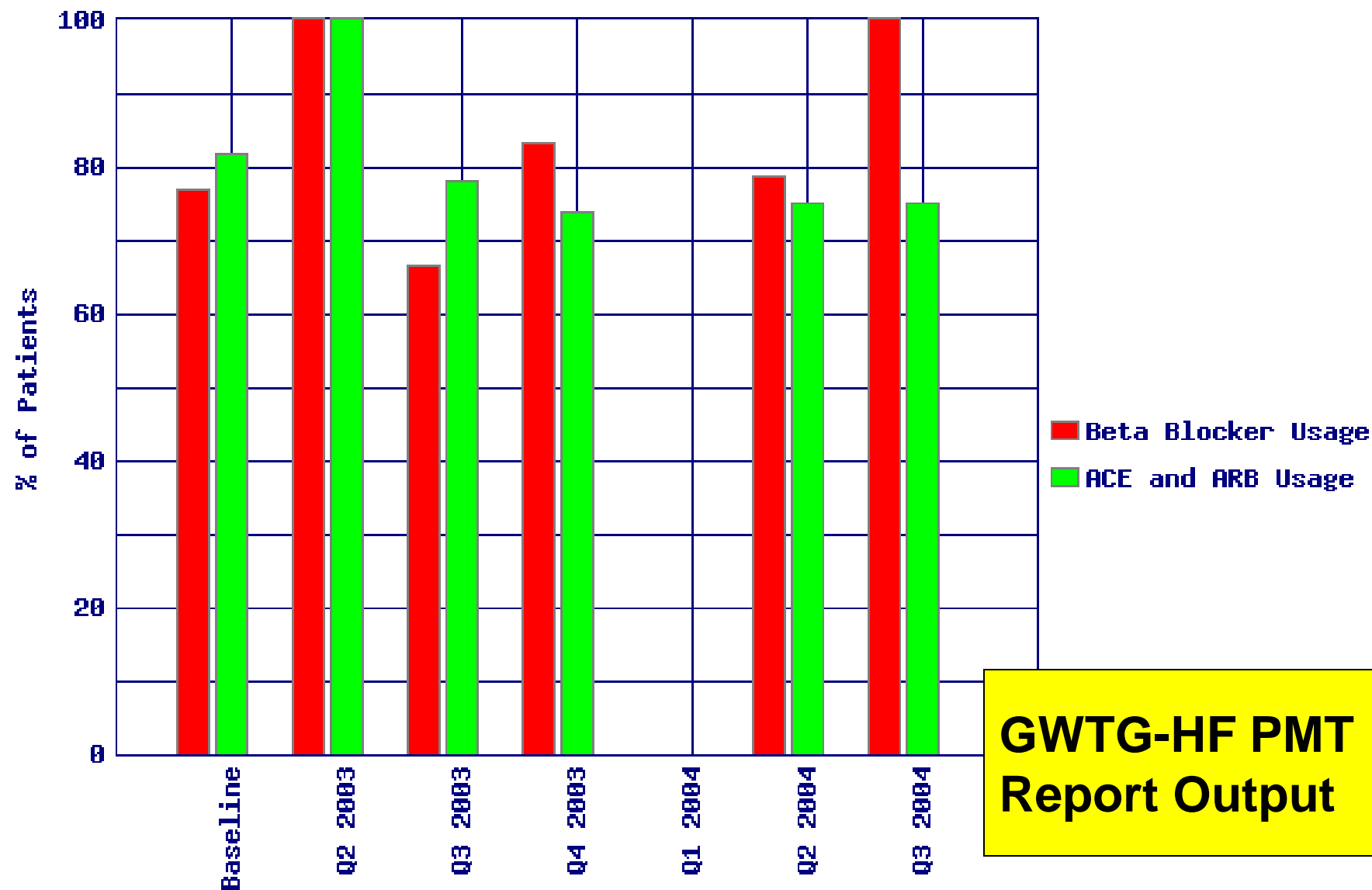
Done

**GWTG-HF PMT Special
Features: Patient Ed**

ACE and ARB Usage: % patients on ACE inhibitors or ARBs at discharge

Beta Blocker Usage: % patients on Beta blockers at discharge, or with a documented plan to initiate on an outpatient basis

Time Period: Baseline + Q2 2003 - Q3 2004



GWTG-HF Cycle of Quality Improvement

Find and Support a Champion



Assess HF Treatment Rates

Measure current treatment rates and process-of-care indicators

Implement Refined Protocols

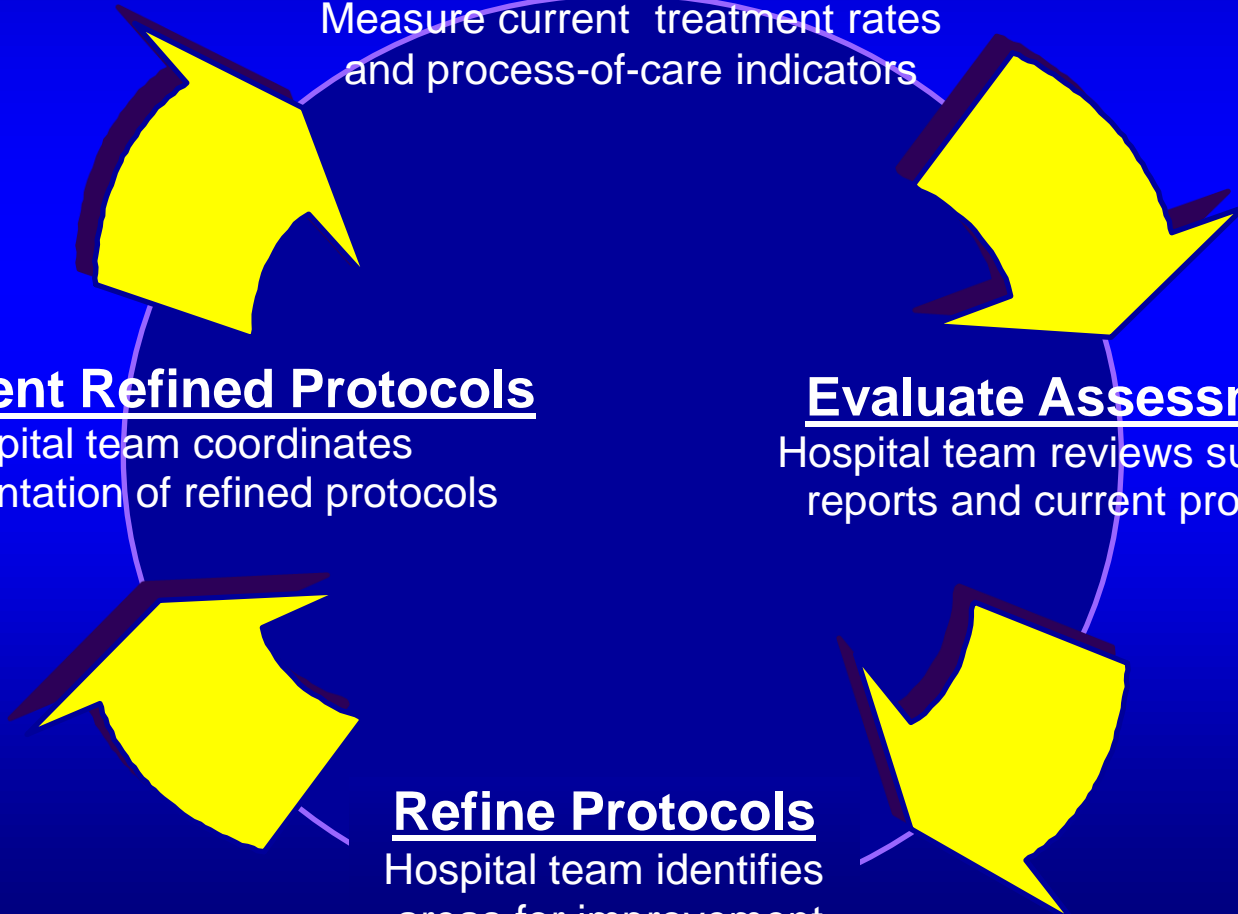
Hospital team coordinates implementation of refined protocols

Evaluate Assessment

Hospital team reviews summary reports and current protocols

Refine Protocols

Hospital team identifies areas for improvement



GWTG-HF Implementation Recognition

GWTG-HF Quality Improvement Award
Levels include:

- Initial GWTG-HF Performance Achievement Award
- Annual GWTG-HF Performance Achievement Award
- Sustaining GWTG-HF Performance Achievement Award

GWTG-HF Initial Results

- **Data analyzed from the first 97 hospitals participating in GWTG-HF and utilizing the web-based Patient Management Tool™ for data collection and decision support (Outcome, Cambridge, MA).**
- **Patient cohort: patients hospitalized with a primary or secondary heart failure diagnosis.**
- **The first 30 pre-GWTG implementation “baseline” patient records were compared to post 4 quarters of patients entered immediately after the start of GWTG implementation to determine if guideline-driven care improved over time for 5 performance measures (PM).**

Results: Patient Characteristics

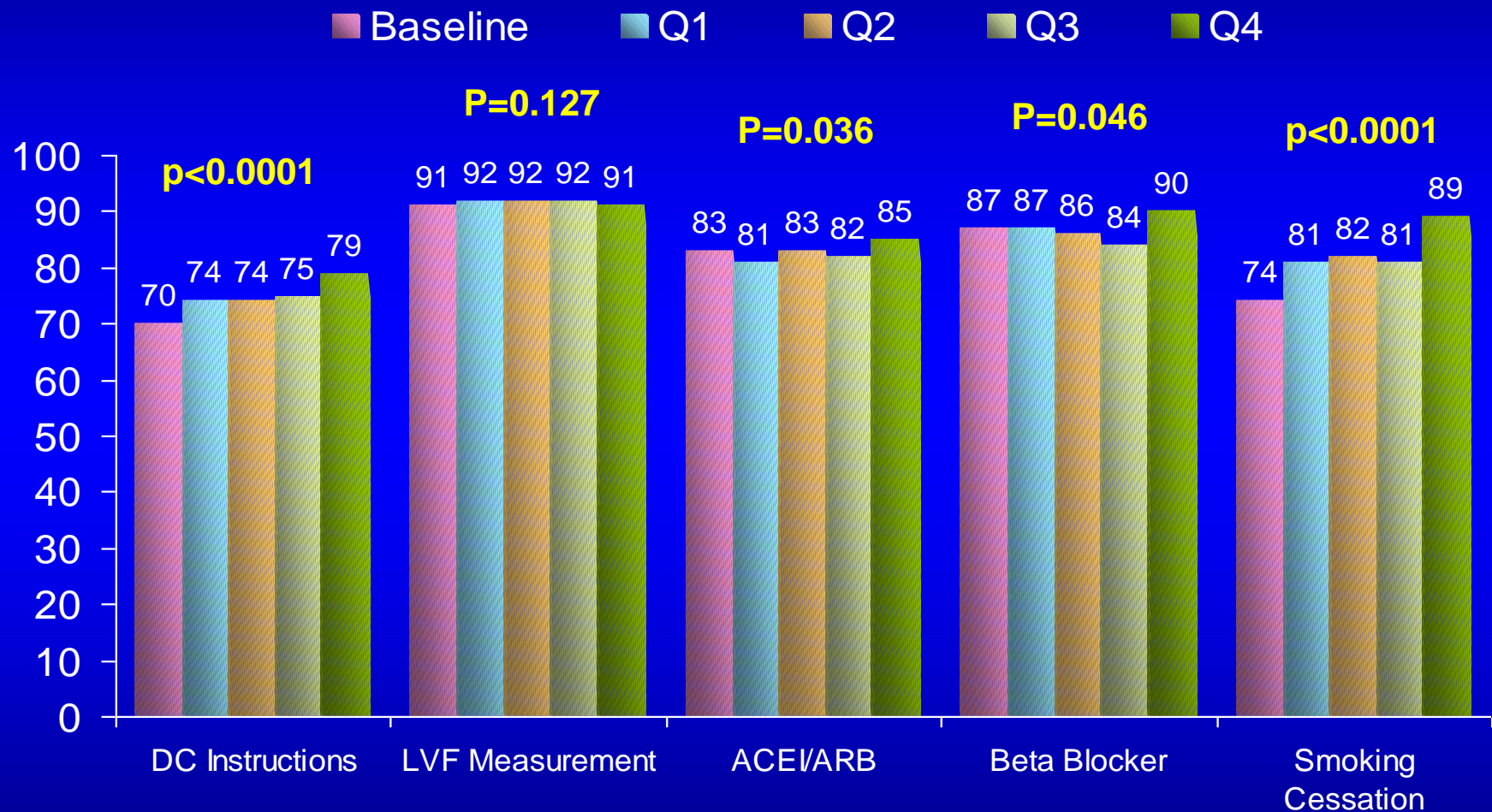
18,516 hospitalized HF patients from January 2005 to March 2006

Characteristic	Level	Total Cohort (N=18,516)
Age	Mean (STD)	72.9 \pm 14.2 years
Gender	Male	50.0%
Race/ Ethnicity	Caucasian African American	71.6% 16.3%
CAD-Ischemic	Yes	49.8%
Diabetes	Yes	43.7%
Atrial Fibrillation History	Yes	31.1%
Hypertension History	Yes	72.6%

Results: Patient Characteristics

Characteristic	Level	Total Cohort (N=18,516)
Systolic Blood Pressure	Mean (STD)	140.5 ± 31.2 mmHg
Heart Rate	Mean (STD)	85.6 ± 21.0 bpm
LVEF	Mean (STD) LVEF < 40%	38.7 ± 17.1% 49.8%
Sodium	Mean (STD)	137.1 ± 9.5 mEq/L
Potassium	Mean (STD)	4.1 ± 0.7 mEq/L
Blood urea nitrogen (BUN)	Mean (STD)	31.6 ± 20.3 mg/dL
Creatinine	Mean (STD)	1.8 ± 1.9 mg/dL
BNP (n=11,844)	Median (IQR)	873 (451-1701) pg/mL

Results: Performance Measures

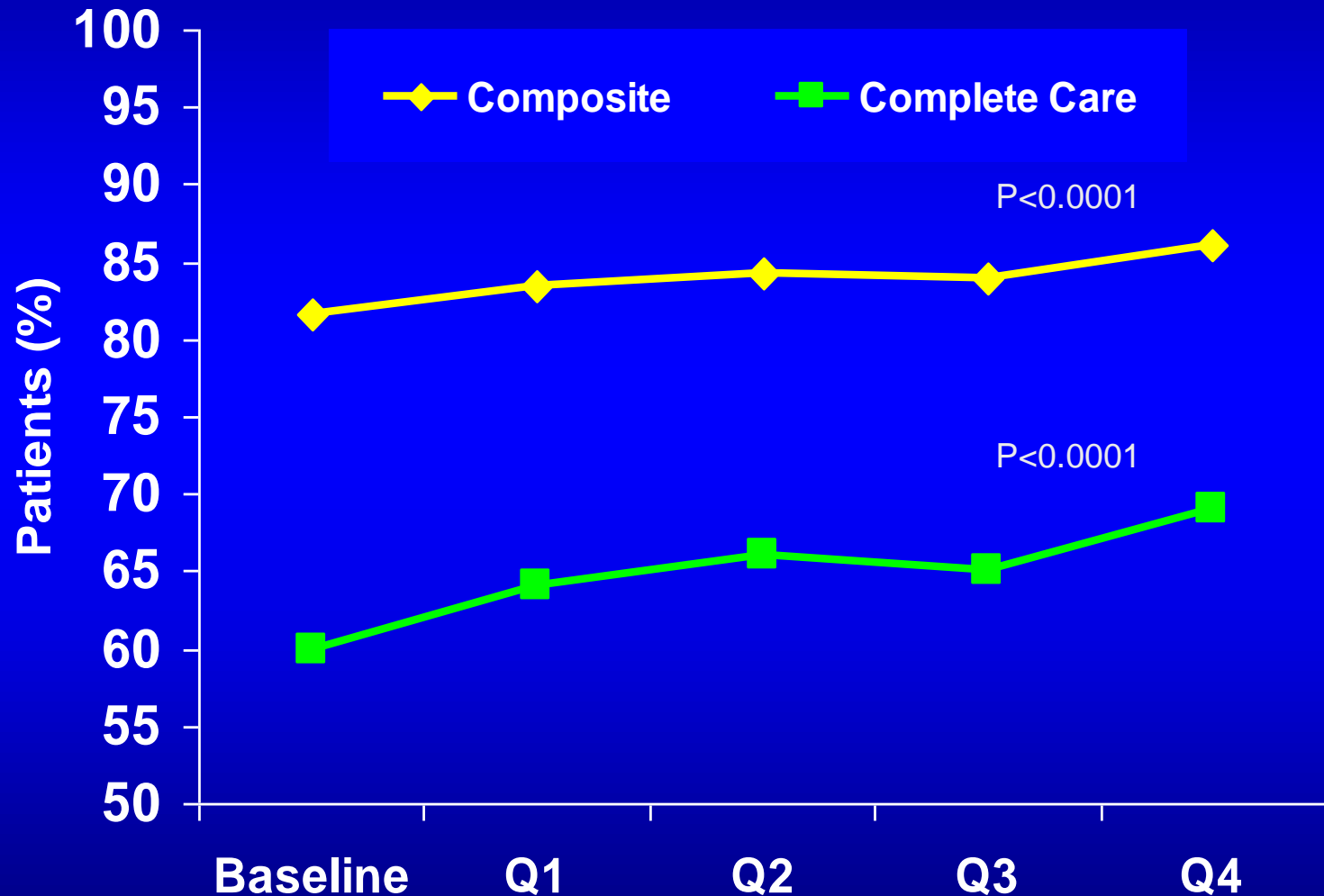


Data from 97 GWTG-HF hospitals and 18,516 HF patients were collected from 1/05-3/06
Fonarow GC, et al. *J Card Fail.* 2006;12:S130.

Results: Performance Measures

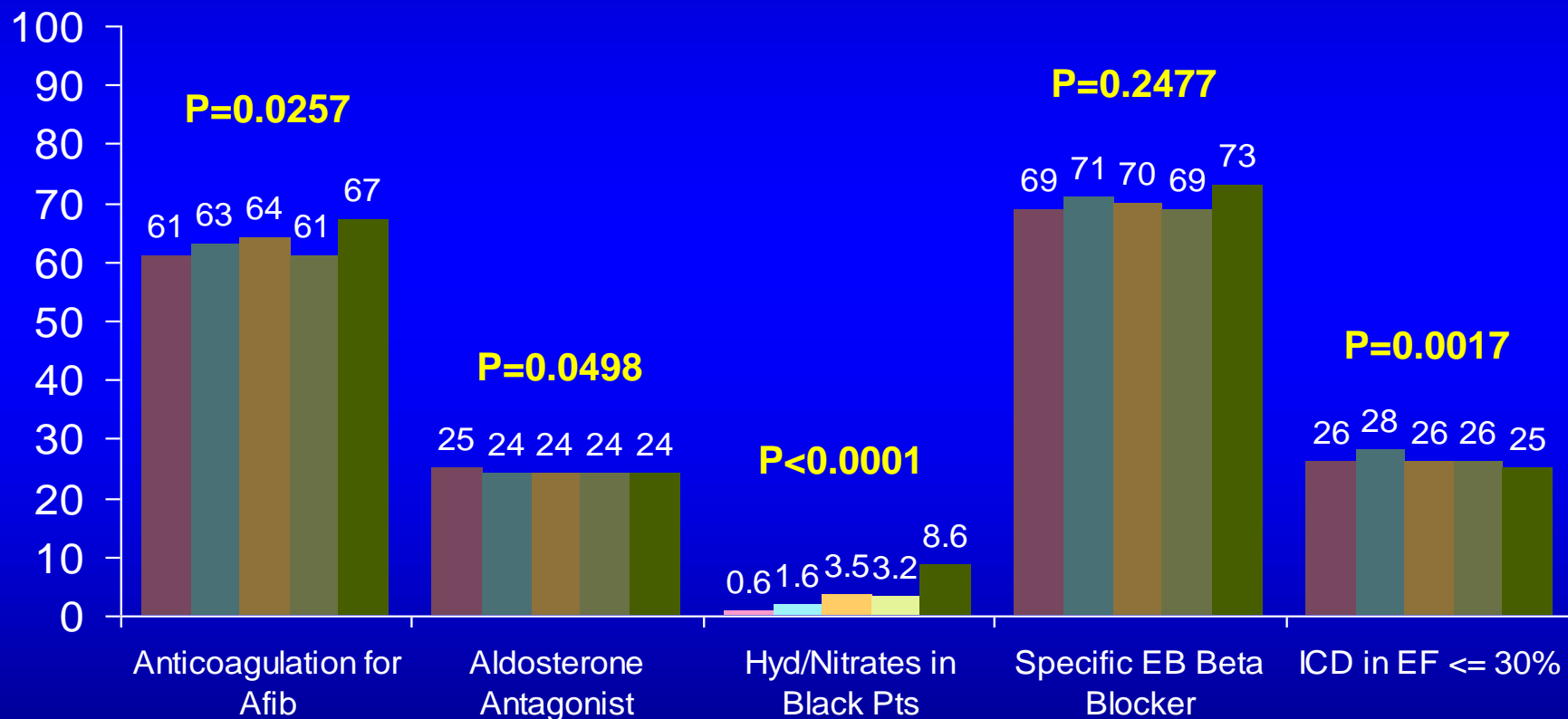
Performance Measure	Baseline	Q1	Q2	Q3	Q4	P value, time trend
N	2670	6477	4869	3172	1328	
Discharge Instructions	69.6% (1371/ 1970)	73.7% (3459/ 4696)	74.4% (2613 /3512)	75.4% (1773/ 2352)	78.7% (799/ 1015)	<0.0001
LV Function Measurement	90.6% (2129/ 2350)	91.7% (5319 /5803)	92.3% (4042/ 4381)	92.3% (2644/ 2864)	91.3% (1119/ 1226)	0.127
ACEI/ARB Use	83.3% (811/ 974)	80.8% (1884 /2333)	83.3% (1428/ 1715)	81.6% (913/ 1129)	84.5% (415/ 491)	0.036
Beta Blocker Use	86.5% (733/ 847)	87.3% (1800/ 2061)	85.5% (1299/ 1519)	84.1% (849/ 1009)	89.5% (417/ 466)	0.046
Smoking Cessation	74.3% (277/373)	80.7% (710/880)	82.4% (588/714)	80.9% (355/439)	88.5% (162/183)	<0.0001

Results: Composite and Defect Free Measures Over Time



GWTG-HF Results: Emerging Performance Measures

■ Baseline ■ Q1 ■ Q2 ■ Q3 ■ Q4

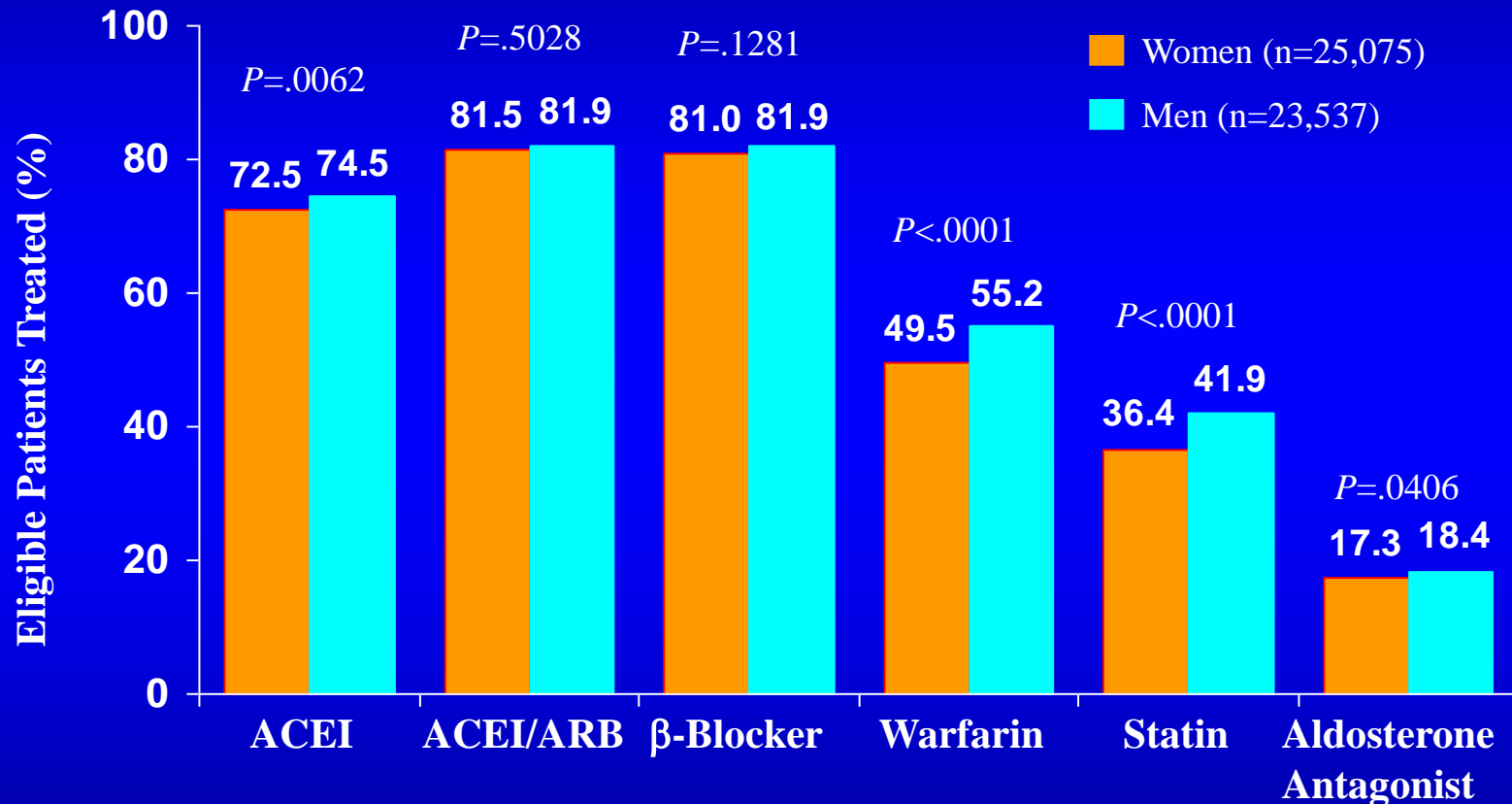


Data from 97 GWTG-HF hospitals and 18,516 HF patients were collected from 1/05-3/06

GWTG Findings

- **The AHA GWTG-HF Program is associated with significant improvements in the quality of care for patients hospitalized with heart failure as indexed by specific performance measures and composites.**
- **After initial increases from baseline, successive improvements over time in certain performance measures were observed.**
- **Hospitals participating in GWTG-HF significantly improved evidence-based care of HF patients over time as reflected by the composite and defect free care performance measures.**

Gender-Related Disparity in Use of Evidence-Based HF Therapy at Discharge

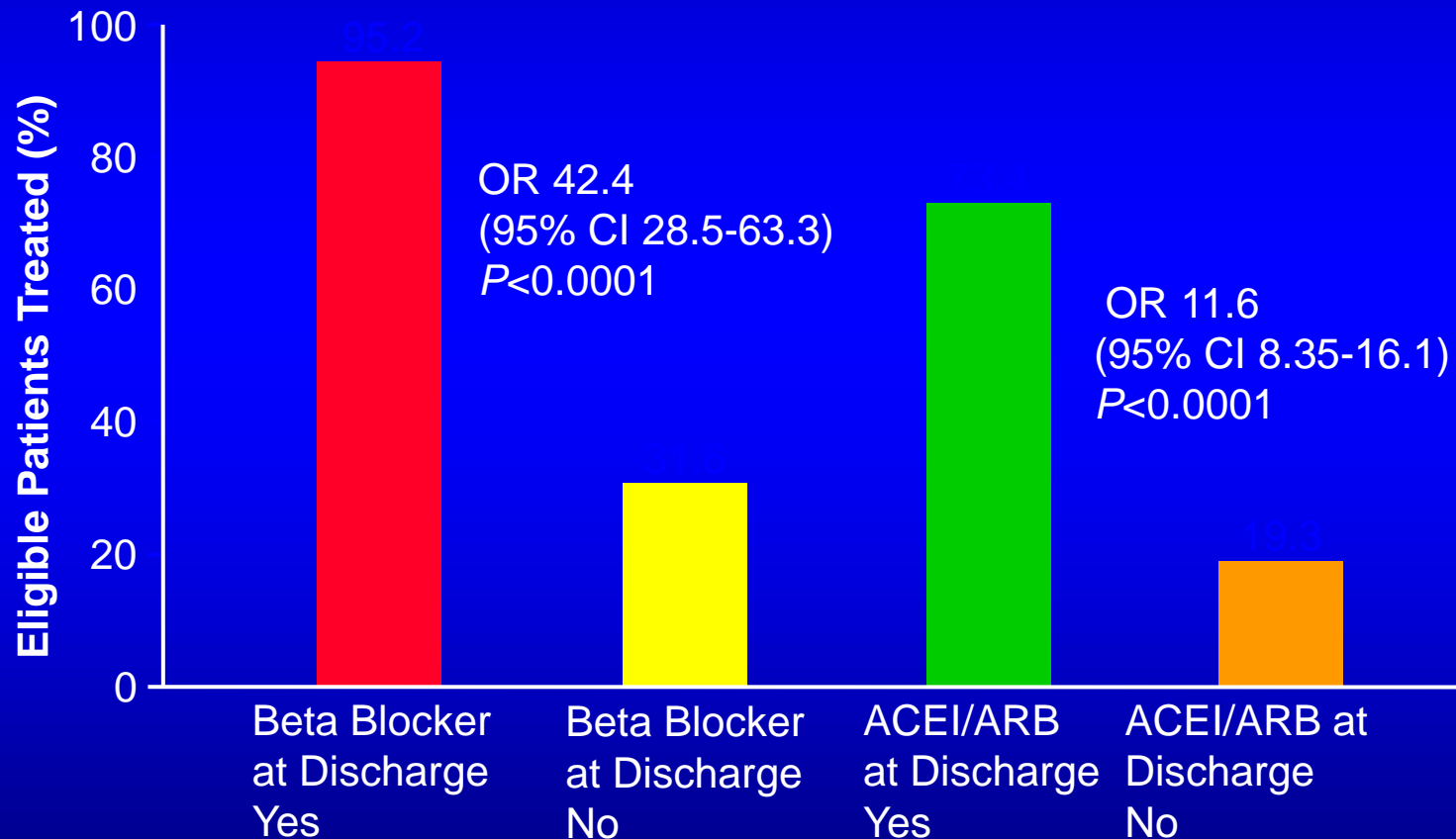


ACEI/ARB, β -blocker, and aldosterone antagonist use in eligible patients with LVSD; statin in CAD, PVD, CVD, and/or diabetes; and warfarin use in patients with atrial fibrillation.

Fonarow GC, et al. *J Am Coll Cardiol*. 2005;45:339A (Updated July 2005). The OPTIMIZE-HF Registry [database]. Final Data Report. Duke Clinical Research Institute. July 2005.

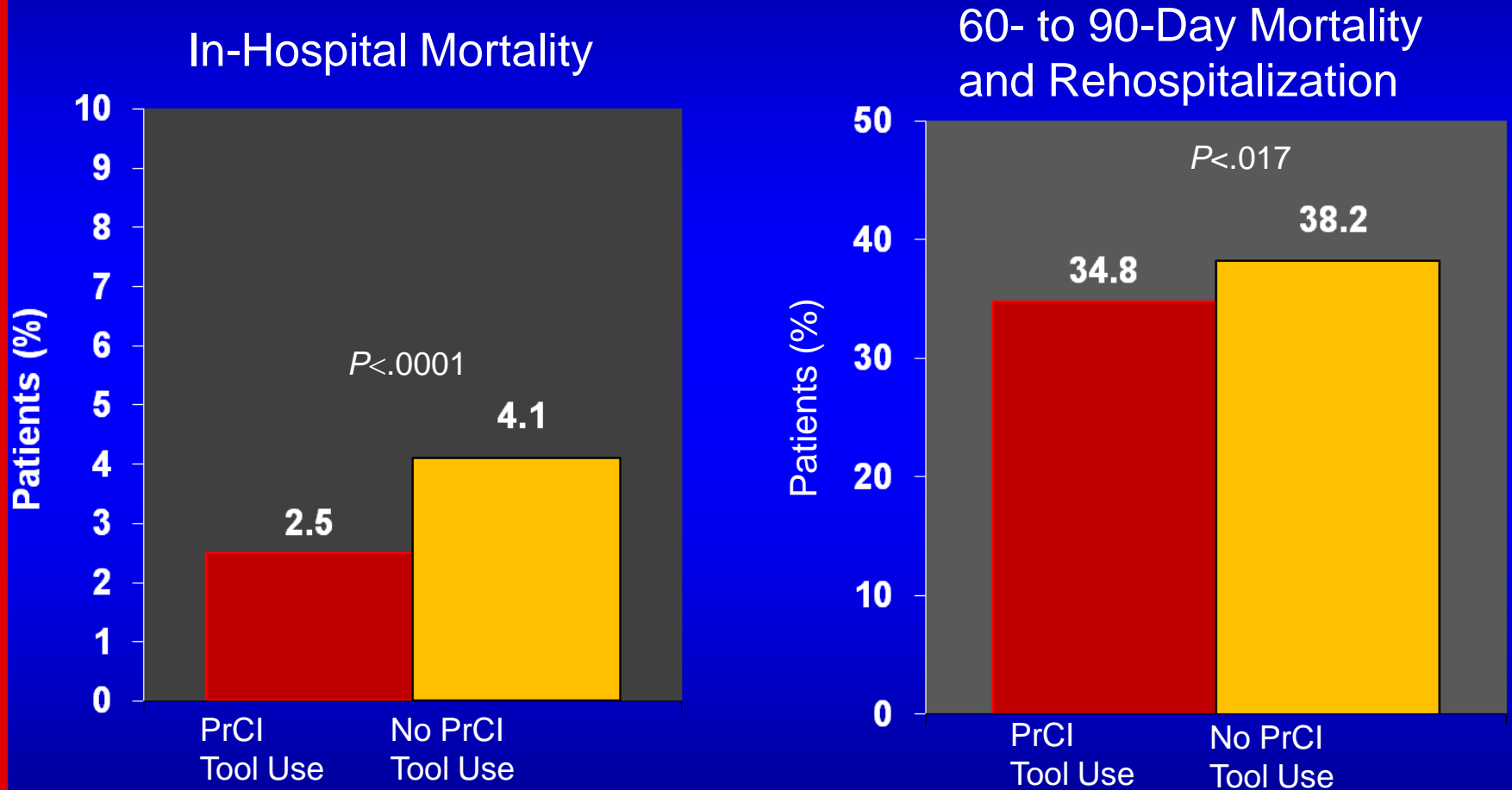
Impact of Evidence-Based HF Therapy Use at Hospital Discharge on F/U Use: OPTIMIZE-HF

60 to 90 Day Post-Discharge Follow-up



34,057 HF patients hospitalized at 236 US hospitals participating in OPTIMIZE-HF, f/u on 2500 with LVD.
Fonarow GC. Paper presented at: Heart Failure Society of America Annual Meeting; September 12-15, 2004; Toronto Canada.

In-Hospital and Follow-Up Outcomes by Process of Care Improvement Tool Use



PrCI tool use (admission order set or discharge checklist) was reported during hospitalization in 45.3% of patients (n=22,017/48,612).

Fonarow GC, et al. *Arch Intern Med.* 2007;167:1493–1502.

Conclusions

- Large number of heart failure patients are having events that could be prevented with improved care
- Hospital-based HF quality improvement is feasible on a national scale
- GWTG-HF can help hospital teams to ensure use of evidence-based therapies in their eligible HF patients prior to hospital discharge
- Recent studies provide additional scientific evidence in support of the American Heart Association's efforts through GWTG to improve the quality of cardiovascular care in the nation's hospitals.