## Heart Failure Network

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### **Conflicts of Interest**

- None
  - Employment: VA Health Care System

## Agenda

- Announcements
- Results of Network Survey
- Three Projects
  - Reminder for Beta-blockers in the Echo Report
  - Nurse based clinic to initiate and titrate betablockers/ACE inhibitors.
  - Tool for patients to evaluate their HF care

#### Announcements

- Upcoming Meeting: 9th Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke.
   Hyatt Regency Baltimore Maryland April 30-May 2<sup>nd</sup>.
- Rapid Response Projects
   Quality Improvement / Implementation
   Submit to us by Noon on Friday.

#### Current Membership

- 360+ providers
- 167 facilities
- 1-8 members at each facility

## **Table: Provider Categories**

PROVIDERS	PERCENT
Physician (Staff)	50
Nurse / Nurse Practitioner	26
Chief of Cardiology	7
Chief of Medicine	2
Researcher	2
Chief of Staff	1
Pharmacist	1
Physician Assistant	1
Psychologist	1
Others (cardiology tech, supervisor, case manager, clinical care coordinator, tele-care health coordinator, etc.)	9

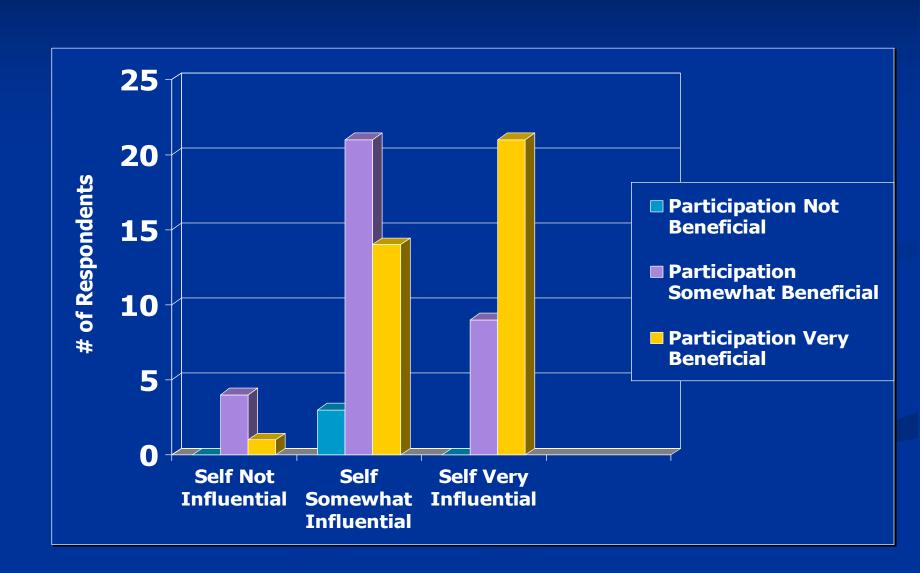
# Formative Evaluation of the HF Network

 115 members have completed a webbased survey (32% response rate)

# Initial Results: Influence of Participation

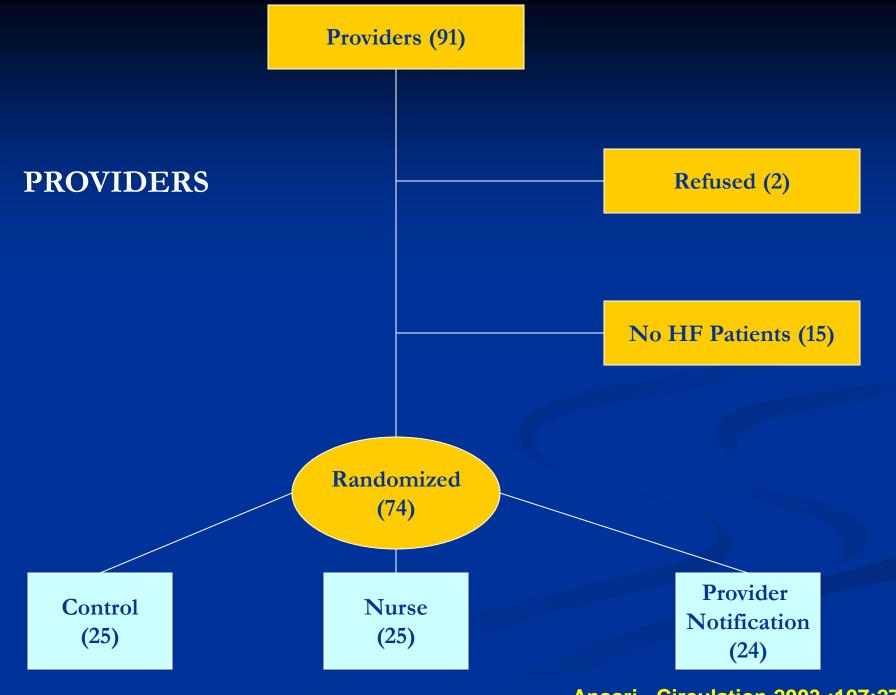
Overall, did participation in the sessions influence YOU in terms of the following-	YES
Help understand facilitators and barriers in setting up or running HF clinic/program	92%
Help solve implementation-related problem at your facility	66%
Validated your current practice in taking care of HF patients	91%
Provide names of contacts from HF Network for networking and potential problem solving	91%

## Initial Results: Benefit of Participation for Influential Members

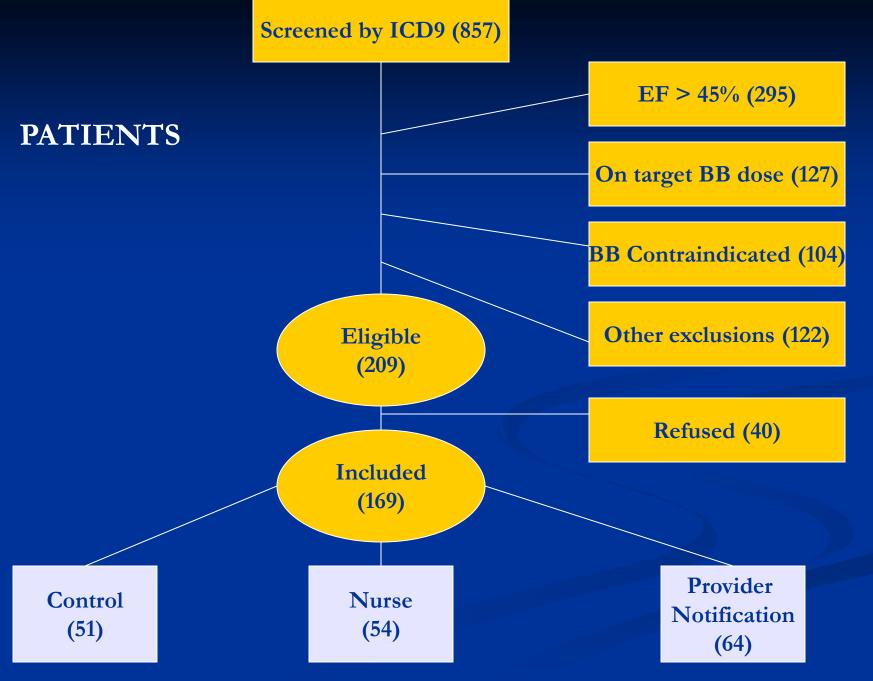


#### **Nurse Initiation Clinic**

- Hypothesis
  - Providers are aware of the value of betablockers but don't have the time to address all issues in a timely manner.



Ansari, Circulation 2003;107:2799



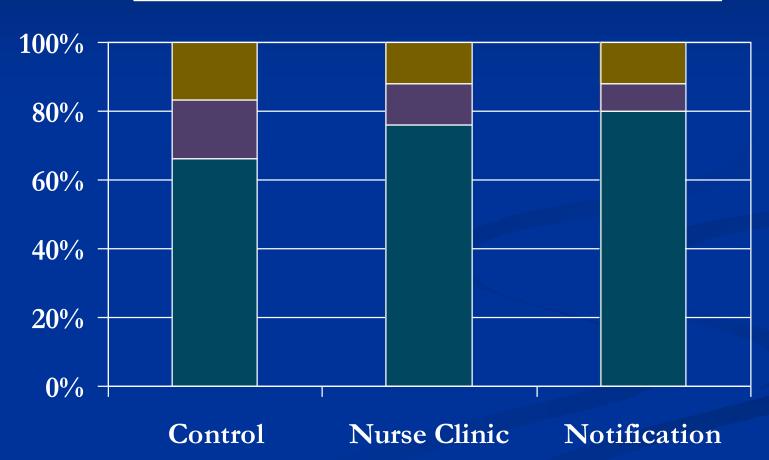
Ansari, Circulation 2003;107:2799

## **Patient Characteristics**

	Control (n=51)	Nurse Facilitator (n=54)	Provider/Patient Notification (n=64)	Р
Age, y	70±11	69±11	70±11	0.53
Male sex	50 (98)	51 (94)	62 (97)	>0.99
Baseline $eta$ -blocker use				
None	35 (69)	36 (67)	41 (64)	0.90
At less than target dose	16 (31)	18 (33)	23 (36)	

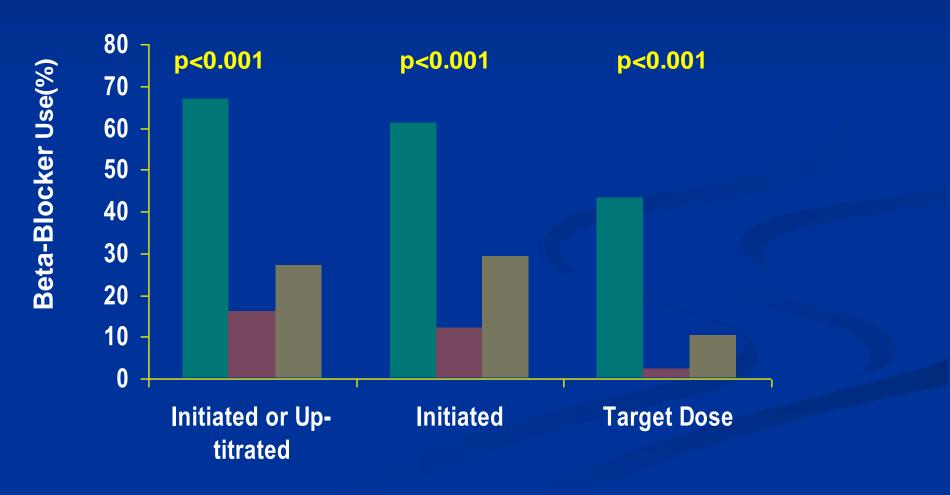
## Type of Providers



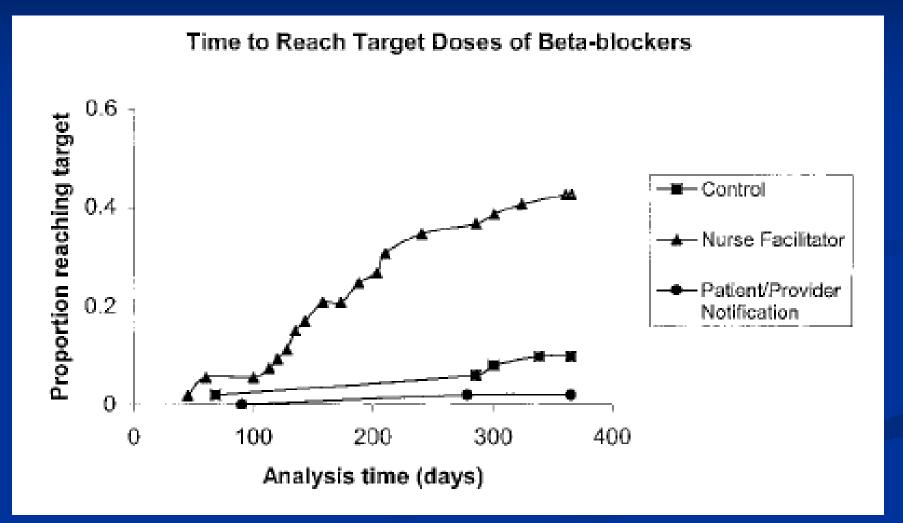


## VA: Nurse Clinic for Beta-Blocker Initiation/Titration

■ Nurse Clinic ■ Notification ■ Control



## Time to Target Dose



## Study Summary

- Nurse Initiation is effective
  - Is the cost of the clinic worth it?
  - Could it be cost savings?
- Simple notification not effective
  - Are there better ways to deliver reminders?

# Cost-Effectiveness of the Nurse-Based Clinic

- Beta-blocker use increased 61 vs. 12 %
- However, use rates have increased since then.
- Question: how effective does a nurse based clinic have to be to be costeffective?

## Model Assumptions

- Age 70 (mean age of trial participants)
- Beta-blockers
  - Cost \$1.40 per day
  - Decrease mortality by 34%
  - Decrease hospitalization by 35%
- The clinic personnel costs were \$7,800 per 50 patients referred

#### Results Cost-Effectiveness

Nurse Clinic Usual Care Life-years 4.78 4.35

Cost \$76,500 \$71,000

Incremental Cost-Effectiveness

\$12,900/ Life-Years

\$16,500/ Quality Adjusted Life-Years

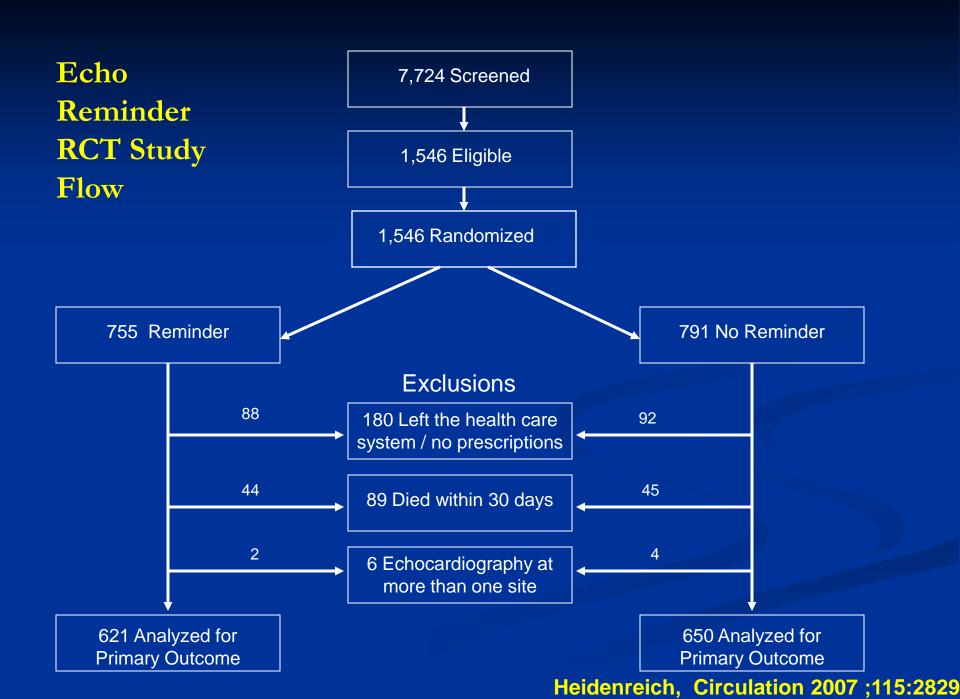


Absolute Increase (%) in Beta-Blocker Use

## Echo Reminder Study

Could a clinical reminder attached to the echocardiography report (that provides ejection fraction data) be effective?





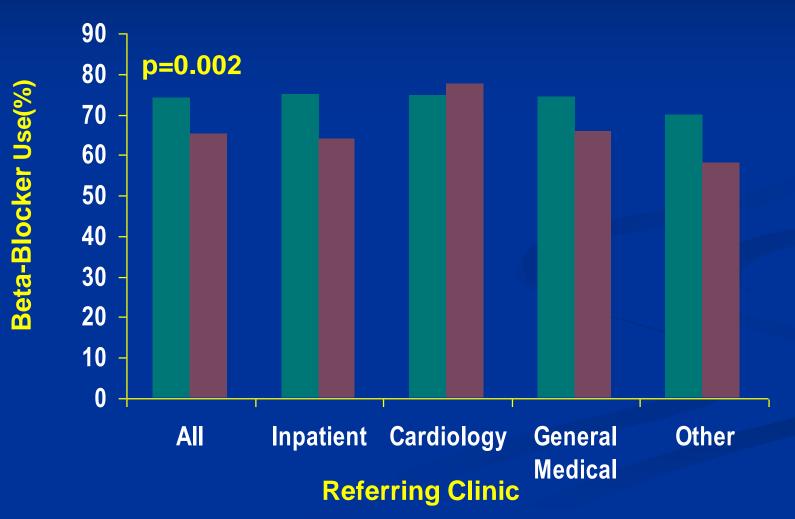
### Patient Characteristics

#### Baseline Characteristics of the Study Population

Characteristic	Reminder	No Reminder	Р
No.	621	650	
Age, y	69±11	69±12	0.84
Male	615/621 (99)	634/650 (98)	0.05
Race*			0.165
White	278/369 (75)	321/407 (79)	
Black	31/369 (8.4)	41/407 (10)	
Hispanic	40/369 (11)	33/407 (8.1)	
Asian	18/369 (4.9)	12/407 (3.0)	
Native American	2/369 (0.5)	0/407 (0)	
Heart failure	394/621 (63)	386/650 (59)	0.14
Ischemic heart disease	437/621 (70)	458/650 (70)	0.97

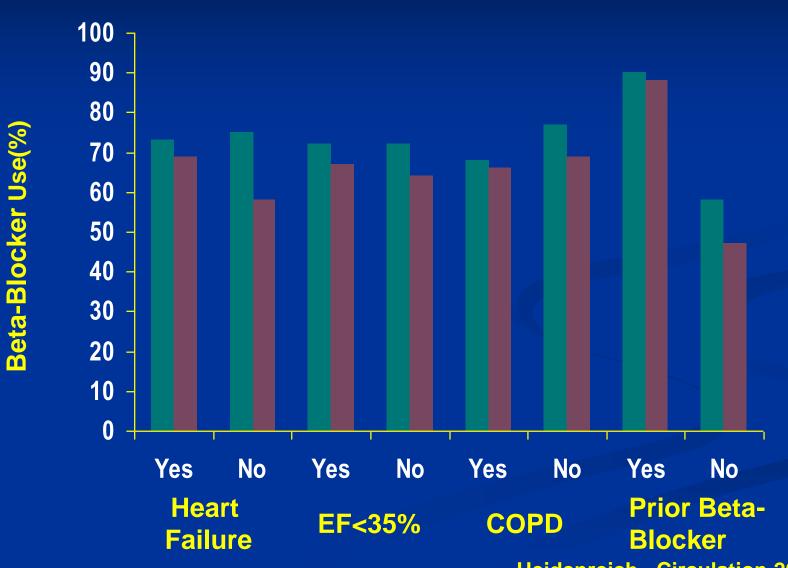
# VA: Reminder in the Echo Report for Beta-blockers

**Reminder** ■ **No Reminder** 



## Reminder Effect: Subgroups





Heidenreich, Circulation 2007;115:2829

## Reminder Effect over Time



Heidenreich, Circulation 2007;115:2829

## **Primary Care Survey**

- 50 Primary Care Providers
  - 45 Physicians
  - 5 Nurse Practitioners
- Up to 2 emails
- 82% response rate

## Primary Care Survey: Reminders



## Implementation: Reminders

- Negligible cost, small benefit
- Can be done without additional resources or infrastructure

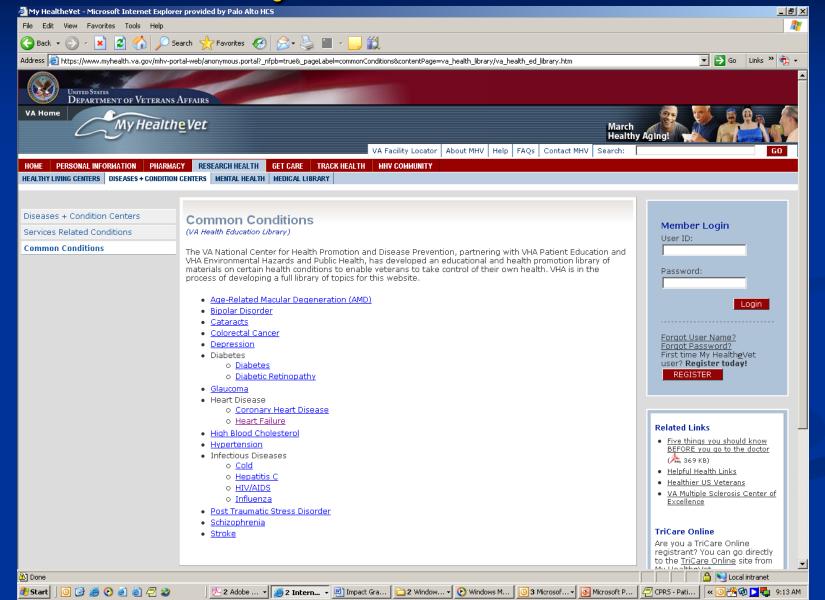
#### Patient Evaluation of Their Care

- LVEF Documentation
- ACEi or ARB if EF<40%</p>
- Patient Education
- Smoking Cessation

#### Not Yet a US Medicare or VA Measure

- Certain Beta-blocker if EF < 40%</p>
- ICD if EF <30%

## MyHealtheVet



# Patient Self-Check of the Quality of Their Heart Failure Care

- Have you been told you have heart failure?
  - No/Not Sure>> information page
  - Yes

# Patient Self-Check of the Quality of Their Heart Failure Care

- Have you been given education regarding diet?
  - No>> information on education
- Have you been told to weigh yourself regularly?
  - No>> information on benefits of weight monitoring
- Do you smoke?
- Has your provider counseled you to stop smoking?
  - No>> Information on benefits of not smoking

## **Ejection Fraction**

- Do you know if your Heart's Ejection Fraction is less than 40%
  - Not sure / Don't know what this is
    - >> information page, question to ask provider
  - My Ejection Fraction is at least 40%
    - >> information page
  - My Ejection Fraction is less than 40%

#### **Medications**

- At least two types of medications are known to prolong survival in patients with heart failure and low ejection fraction (who can tolerate them):
  - ACE inhibitors or Angiotensin Receptor Blockers (ARBs) (Click here for a list of generic and trade names).
  - Certain beta-blockers (Click here for a list of generic and trade names).

#### Beta-Blockers

- Have you ever been tried on one of these beta-blockers (click here for list)?
  - No/Not sure >> (information on why some people may not be candidates).

#### **ICDs**

- Has a provider ever discussed implanting a defibrillator?
  - No/ not sure >> information on why a defibrillator might not be recommended.
  - Yes/ I didn't want it
  - Yes/ I have one or will have one soon.

# Randomized Trial of a Nurse Initiation Clinic

- VA Facility
- Randomization at the Provider Level
  - Nurse initiation and titration group:
  - Notification group: providers received an electronic message that their patient was a candidate for beta-blockers
  - Control group: usual care-grand rounds given to all regarding the importance of beta-blocker use