



Comparison of Chronic Systolic Heart Failure Guideline Adherence for Two Ambulatory Clinics

Sarah Dehoney, PharmD

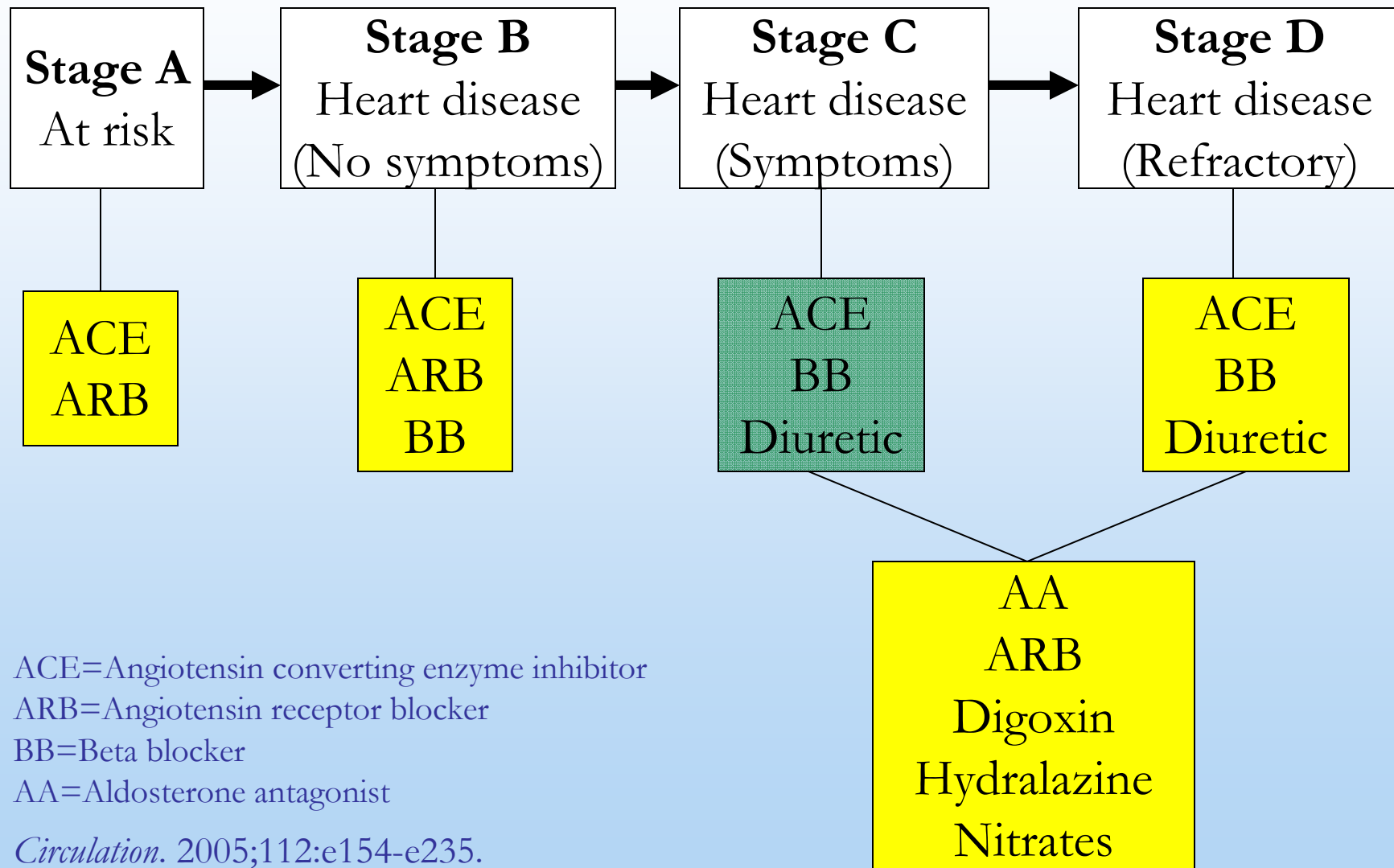
PGY 2 – Pharmacotherapy Resident

MUSC Medical Center and College of Pharmacy Residency Program

Background

- Heart failure is a chronic, progressive disorder
- Chronic systolic heart failure guidelines provide evidence-based recommendations for medical management of heart failure to reduce morbidity and mortality
 - Disease staging, medications, target doses
- Two local ambulatory clinics provide heart failure management

ACC/AHA Chronic Systolic Heart Failure Guidelines



ACE=Angiotensin converting enzyme inhibitor
ARB=Angiotensin receptor blocker
BB=Beta blocker
AA=Aldosterone antagonist

Circulation. 2005;112:e154-e235.

Research Goals

- To determine if chronic systolic heart failure guideline adherence would differ between the two clinic populations:
 - Community Family Medicine Resident's Clinic
 - Multidisciplinary Heart Failure Specialty Clinic

Study Objectives

- Primary
 - To compare the medications prescribed and the frequency of achievement of target doses as recommended by chronic systolic heart failure guidelines
- Secondary
 - To compare the number of emergency department (ED) visits and hospital admissions

Study Hypothesis

- Patients attending a heart failure specialty clinic will more often be prescribed medications at doses recommended by chronic systolic heart failure guidelines when compared to patients attending a community general practice clinic for heart failure management

- Inclusion
 - >18 years old
 - Treated for systolic heart failure at either study clinic

- Exclusion
 - Hospitalization for heart failure in preceding 2 months
 - Diastolic heart failure (LVEF \geq 50%)
 - Pregnancy
 - No clinic visit in last 12 months

- Retrospective chart review
- Data from most recent clinic visit during study period
 - Heart failure medications and doses
 - Blood pressure, heart rate, weight, ejection fraction (LVEF)
 - BUN, serum creatinine
- Data for entire study period
 - Number of ED visits and hospital admissions

Results

Characteristic	Specialty (N=111)	Community (N=19)
Mean Age (yrs)	50 (21-85)	68 (37-94)*
Mean weight (kg)	96 (41-205)	85 (44-166)
% Male	56%	58%
Race	74% African American 26% Caucasian <1% Asian	42% African American* 58% Caucasian

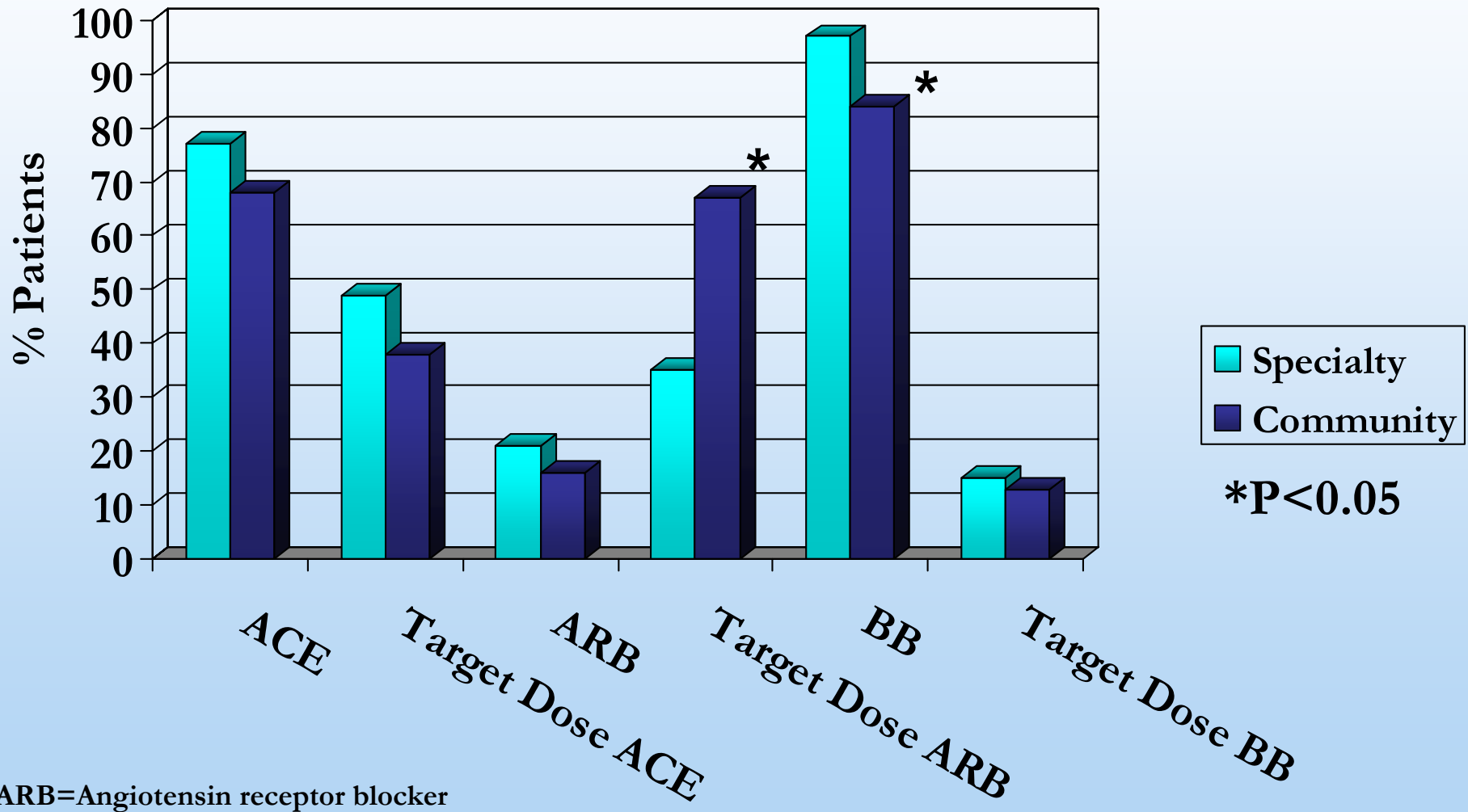
***P<0.05**

Results

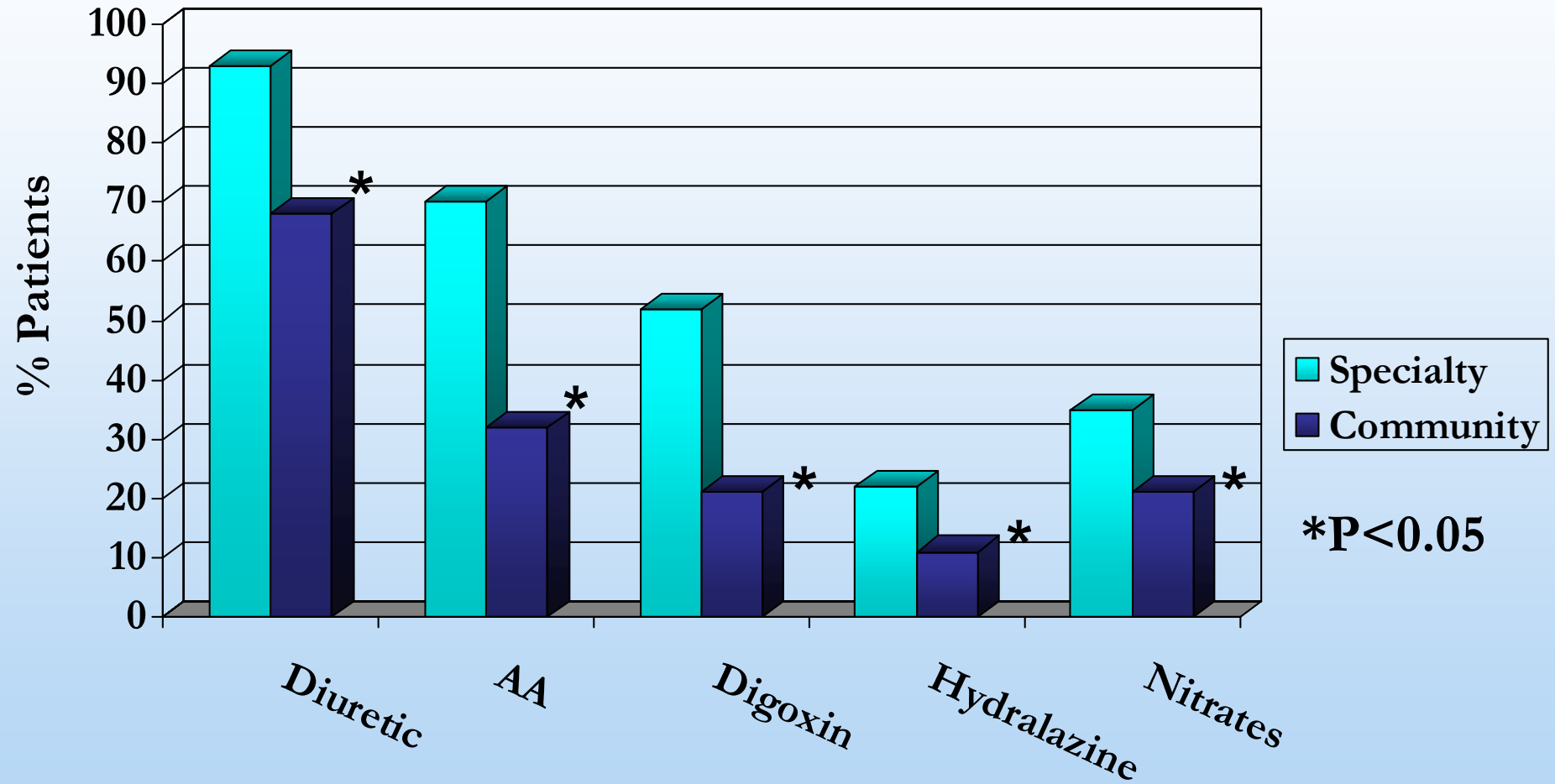
Characteristic	Specialty (N=111)	Community (N=19)
Mean systolic BP (mmHg)	114 (78-185)	132 (92-200)*
Mean heart rate (bpm)	78 (50-123)	76 (49-97)
BUN (mg/dL)	24 (6-95)	20 (7-47)
Serum creatinine (mg/dL)	1.5 (0.7-7.4)	1.3 (0.5-4.3)
LVEF (%)	27 (13-48)	31 (15-40)

*P<0.05

Results

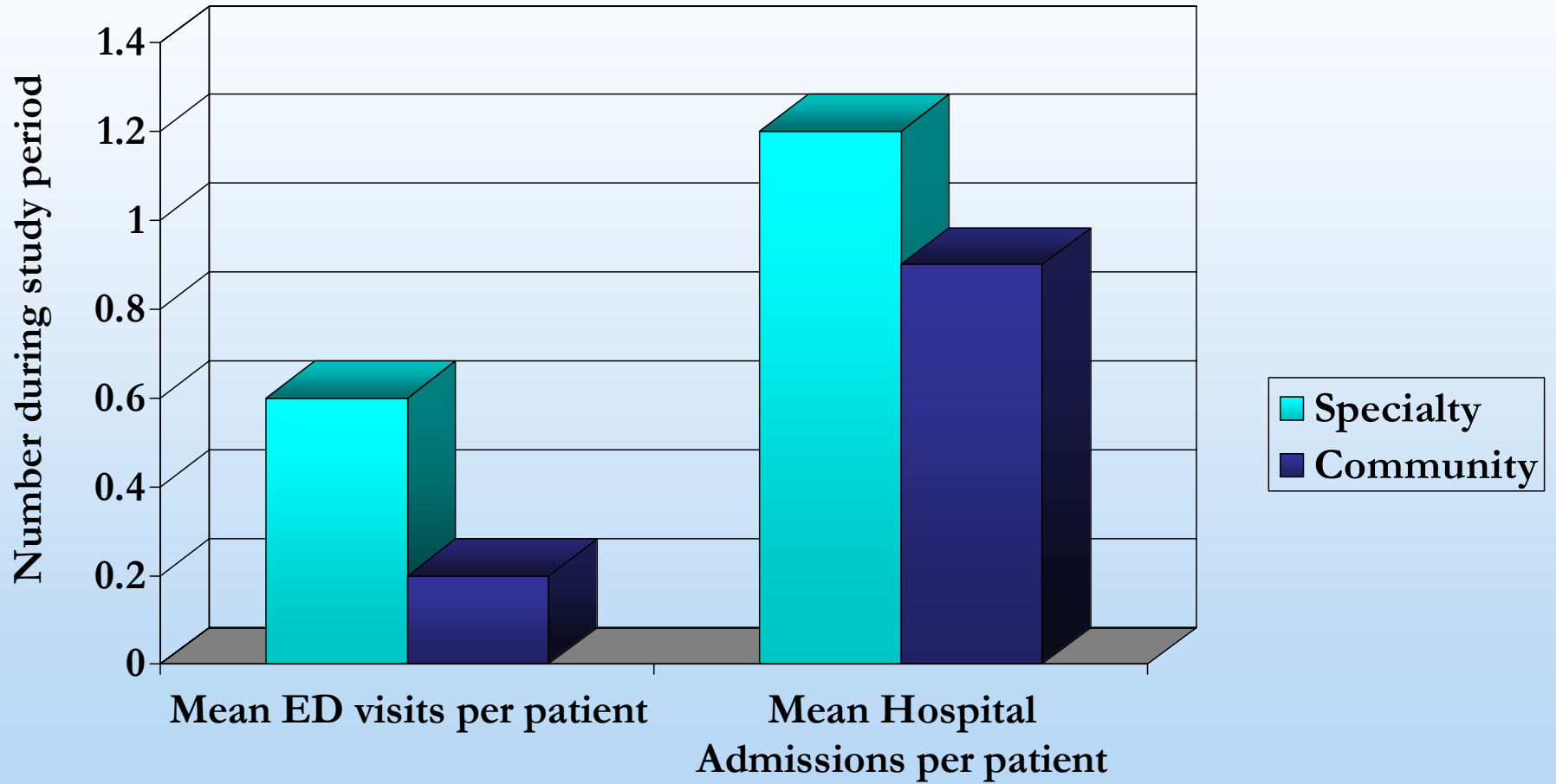


ARB=Angiotensin receptor blocker



AA=Aldosterone antagonist

Results



- Retrospective study design
- Small patient populations
 - Community clinic patients located by hospital discharge reports
 - Different demographic profiles
- Accuracy of ED visit and hospital admission data
- Patient comorbidities not assessed

Conclusions

- Heart failure specialty clinic patients had significantly lower systolic blood pressure
- Significantly more patients attending a heart failure specialty clinic were prescribed BB, diuretics, AA, digoxin, hydralazine, and nitrates compared to community general practice clinic patients
- Significantly more community practice clinic patients achieved target ARB doses
- Few patients in either clinic population achieved target BB doses
- No significant difference in the number of ED visits or hospital admissions between clinic populations

Acknowledgements

- Jean Nappi, PharmD, FCCP, BCPS
- Lori Dickerson, PharmD, FCCP, BCPS
- Cary Mountjoy, PharmD
- Patrick Mauldin, PhD
- Wendy Bullington, PharmD, BCPS