Opportunities for and barriers to sacubitril/valsartan initiation in a chronic heart failure population

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PRISMA HEALTH

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BACKGROUND

- Sacubitril/valsartan is an angiotensin receptor/neprilysin inhibitor (ARNI) with a Class I recommendation in patients with heart failure with reduced ejection fraction (HFrEF) per the 2017 ACC/AHA/HFSA Focused Update of the 2013 Heart Failure Guidelines
- The Change the Management of Patients with Heart Failure (CHAMP-HF) Registry show that 86.1% of patients in this registry are not prescribed sacubitril/valsartan despite its indication and lack of contraindications
- ARNI therapy is underutilized in patients with HFrEF and further assessment of prescribing patterns is warranted to identify and address causes of suboptimal adherence to guideline-directed therapy
- The purpose of this project was to assess opportunities for and barriers to initiation of sacubitril/valsartan use in an outpatient advanced heart failure clinic in patients with HFrEF

OBJECTIVE

- Primary Endpoint: The proportion of eligible patients currently prescribed sacubitril/valsartan and the proportion of patients who are optimal candidates for guideline-directed initiation of sacubitril/valsartan
- Secondary Endpoints: Reasons for not initiating sacubitril/valsartan when indicated and opportunities to titrate dosing

METHODS

- Retrospective, single-center, cross-sectional analysis evaluating adult patients within an outpatient heart failure clinic
- Visit encounter between May 1, 2019 and June 28, 2019

Total Encounters → Advanced HF Encounters; Left Ventricular Assist Device (LVAD) Encounters

- Criteria for ARNI use:
  - HFrEF
  - Not currently on ARNI
  - NYHA Class II to IV
  - eGFR $\geq$ 30 mL/min/1.73m^2
  - K $\leq$ 5.0
  - SBP $\geq$ 100 (non-LVADs) or MAP $\geq$ 80 (LVADs)
  - No history of ACEI, ARB, or ARNI-associated angioedema

RESULTS

ARNI THERAPY REMAINS UNDERUTILIZED DESPITE A LACK OF CONTRAINDICATIONS TO INITIATION OR DOSAGE TITRATION

Table 1: Baseline Characteristics of Full Cohort	n=432
Age at Visit, years	62.1 ± 13.8
Male	272 (63.0)
African-American	247 (57.2)
Ischemic Cardiomyopathy	175 (40.5)
LVAD Present	116 (26.9)
HFrEF	374 (86.6)
Ejection Fraction, % (non-LVAD)	35.7 ± 15.5
Insurance	
Uninsured	37 (8.6)
Private/Commercial	74 (17.1)
Medicare	131 (30.3)
Medicaid	52 (12.0)
Dual Coverage	132 (30.6)
VA	6 (1.4)
HF Admissions in Last 6 Months, per patient	0.4 ± 0.7
New York Heart Association Class	
I	24 (5.6)
II	185 (42.8)
III	200 (46.3)
IV	23 (5.3)
Systolic Blood Pressure, mmHg (non-LVAD)	128 ± 23.1
Mean Arterial Pressure, mmHg (LVAD)	95.6 ± 15.0
Potassium, mmol/L	4.1 ± 0.4
Renal Function, mL/min/1.73m²	
Estimated Glomerular Filtration Rate (eGFR)	
eGFR	62.7 ± 30.0
eGFR > 30 mL/min	365 (84.5)
Renin Angiotensin Aldosterone System Inhibitor	221 (51.2)
Beta Blocker	308 (71.3)
Aldosterone Antagonist	126 (29.2)
Loop Diuretic	377 (87.3)
Thiazide Diuretic	17 (3.9)
Digoxin	84 (19.4)
Nitrates	33 (7.6)
Hydralazine	26 (6.0)

*Categorical data are presented as n (%) and continuous data as mean ± std dev

Figure 1: Candidates for ARNI therapy

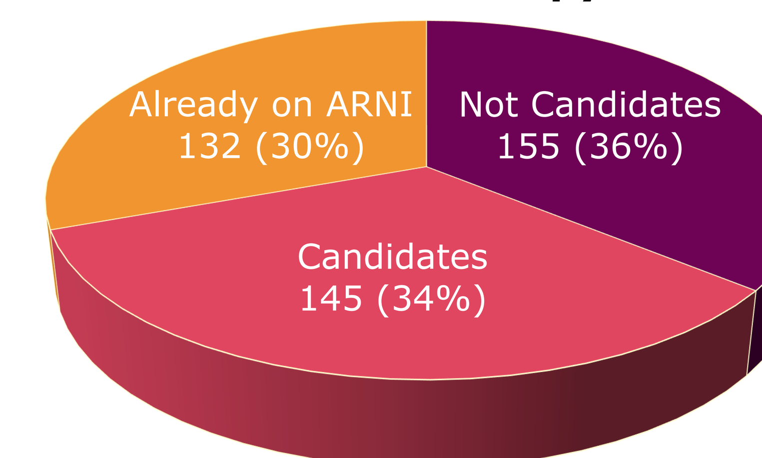

Figure 2: Sacubitril/valsartan dose at time of visit

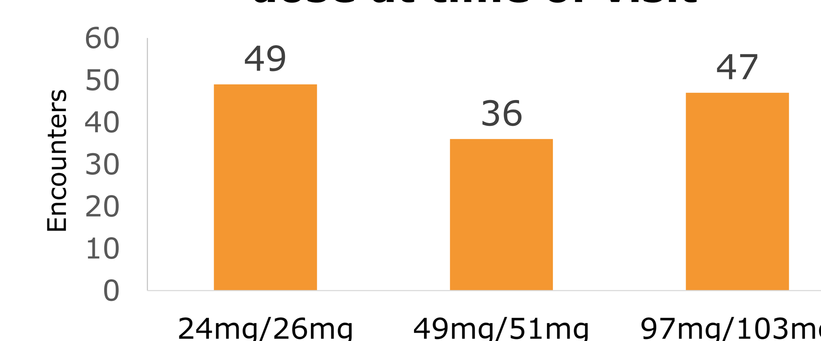

Table 2: ARNI qualifiers for use	
Reasons not candidate	
HF with Preserved Ejection Fraction	58 (13.4)
Already on ARNI	132 (30.6)
Angioedema	16 (3.7)
NYHA Class I	24 (5.6)
eGFR < 30	67 (15.5)
K > 5.0	18 (4.2)
SBP < 100 (non-VADs, n=315)	23 (7.3)
MAP < 80 (VADs, n=112)	15 (13.4)
Reasons ARNI not added per note	
Chronic kidney disease	53 (12.3)
Hypotension	40 (9.3)
Allergy	15 (3.5)
Hyperkalemia	1 (0.2)
Other (refusal, hospice)	7 (1.6)
Reason not noted	117 (27.1)

DISCUSSION

- Overall, ARNI use was low, but a total of 145 encounters (115 unique patients) were potential candidates for initiation of ARNI
- The most common exclusions from ARNI candidacy were poor renal function (15.5%), HFpEF (13.4%), and lower MAP (13.4%) or SBP (7.3%)
- Of patients already on an ARNI, 37.1% were on the lowest dose of sacubitril/valsartan, indicating an opportunity for dose titration
- There are significant opportunities to expand RAAS inhibition with sacubitril/valsartan in this population with over one-third of the patients identified as potential candidates for ARNI initiation

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Disclosures:
A. Mardis, Novartis (Speakers Bureau);
All Others, Nothing to Disclose