CONNECT-HF

Partnering to improve cardiac care

Effect of a Hospital and Post-discharge Quality Improvement Intervention on Clinical Outcomes and Quality of Care for Patients With Heart Failure With Reduced Ejection Fraction

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Presenting on behalf of the

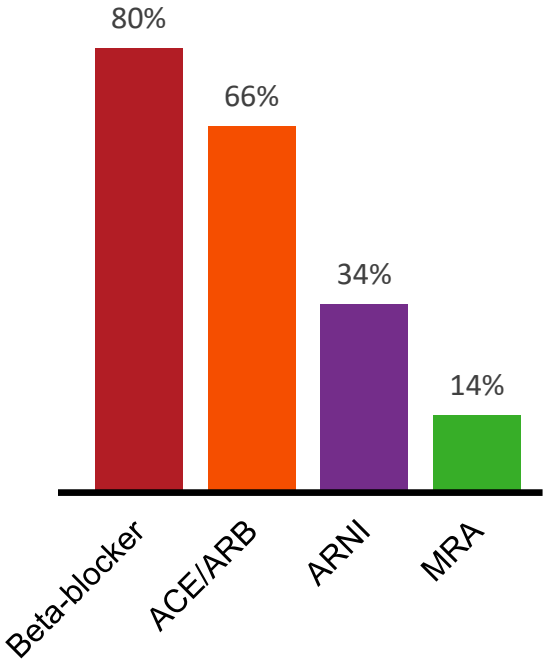
CONNECT-HF Investigators and Committees

Disclosures

- The presenter reports research funding through his institution from Novartis and h provided consulting services for Novartis
- CONNECT-HF was funded by Novartis through an investigator-initiated trial program

Background

- Heart failure with reduced ejection fraction (HFrEF) affects >3 million in US
- Suboptimal outcomes with high rates of rehospitalization and death
- Low use of guideline-directed medical therapy (GDMT) for HFrEF



CHAMP-HF GDMT Use for HFrEF Among Eligible Patients (%)

Greene SJ et al. *J Am Coll Cardiol*. 2019 May 21;73(19):2365-2383

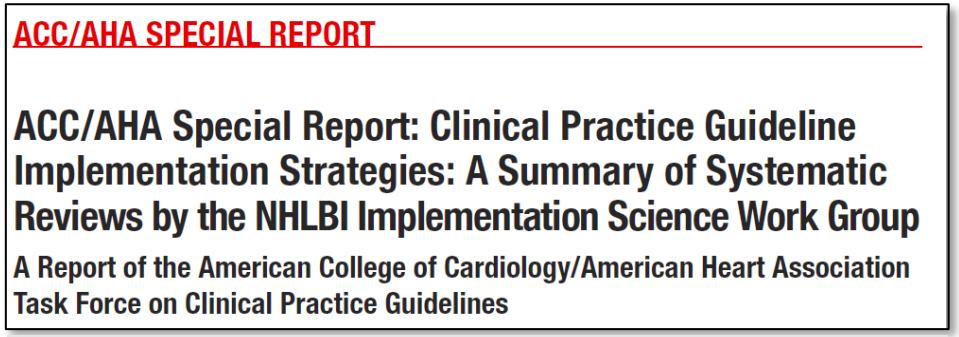
Background

- Limited data available to inform best practices for hospital and post-discharge quality improvement initiatives
- CONNECT-HF was designed as a pragmatic, prospective, cluster-randomized trial to assess the effect of a hospital and post-discharge quality improvement intervention compared with usual care

Rationale

The CONNECT-HF Intervention:

- Audit and feedback to hospitals on HF processes of care and outcomes
- Education and mentorship to hospitals by the CONNECT-HF Academy


ACC/AHA SPECIAL REPORT

ACC/AHA Special Report: Clinical Practice Guideline Implementation Strategies: A Summary of Systematic Reviews by the NHLBI Implementation Science Work Group

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

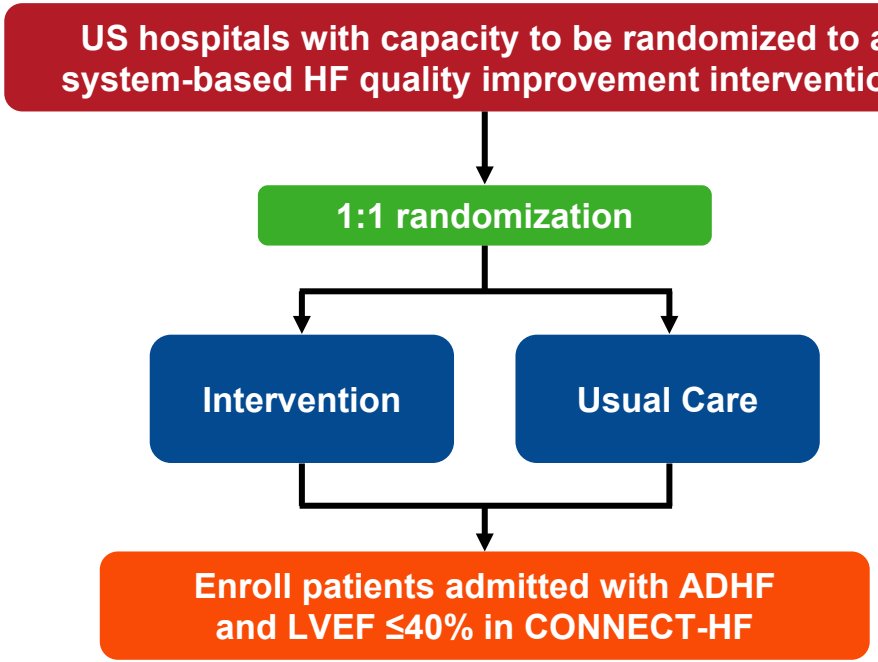
"The strategies of audit and feedback and educational outreach visits were generally effective in improving both process of care and clinical outcomes... multifaceted interventions appeared to be more effective. "

DeVore AD, et al. *Am Heart J.* 2020 Feb;220:41-50

Primary Hypothesis

The intervention would improve clinical outcomes as measured by rates of HF rehospitalization or death and quality-of-care delivery over 12 months of follow-up compared to usual care

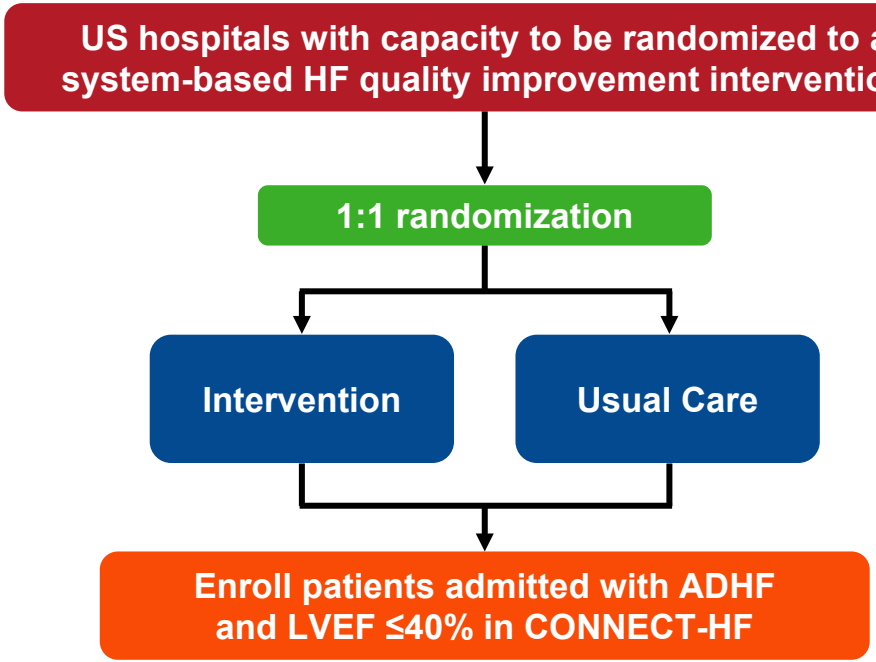
Study Design



Co-primary Endpoints:

- Composite of HF rehospitalization or death
- Change in an opportunity-based composite score for HF quality

Study Design



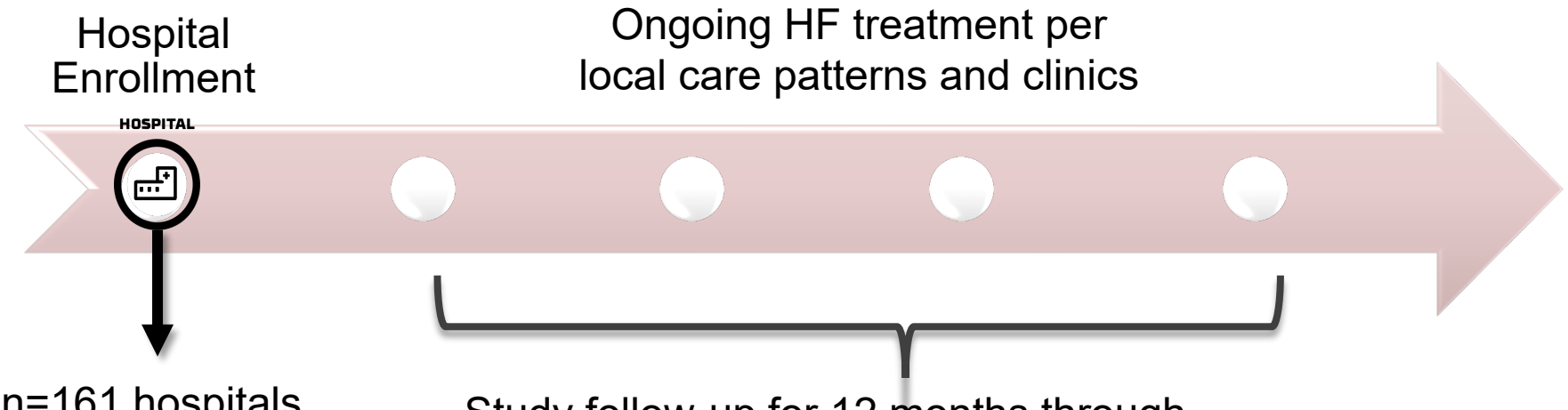
Powered for the composite of HF rehospitalization or death to detect a 15% difference between intervention and usual care (n=160 sites, 6240 patients yielded 85% power)

Key Eligibility Criteria

Hospitals

- Treat ≥50 patients with acute HF annually
- The capacity to perform a system-based QI intervention

Study Design



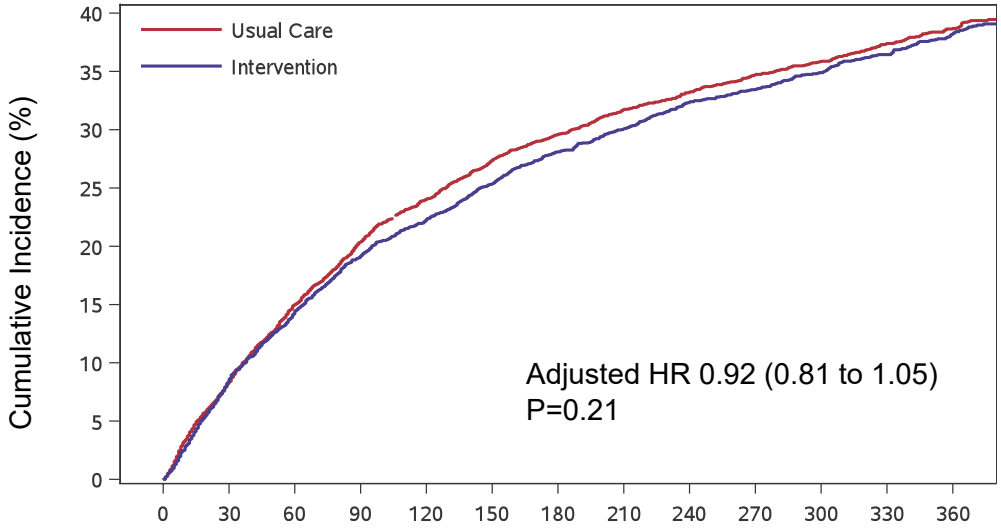
Site Characteristics

	Intervention (N=82)	Usual Care (N=79)
Hospital size (no of beds)	431 ± 271	454 ± 261
Region		
Northeast	17%	15%
West	12%	13%
South	52%	41%
Midwest	18%	32%
Teaching hospital	20%	24%
Interventional cardiology services	97%	97%

Patient Characteristics

	Intervention (N=2675)	Usual Care (N=2972)
Age, years, mean±SD	62 ± 14	63 ± 13
Female	33%	34%
Race White Black Asian	 56% 36% 3%	 56% 41% 1%
LVEF, %, mean±SD	26 ± 8	25 ± 8
Recent HF Admissions: 1 ≥2	 24% 24%	 26% 24%

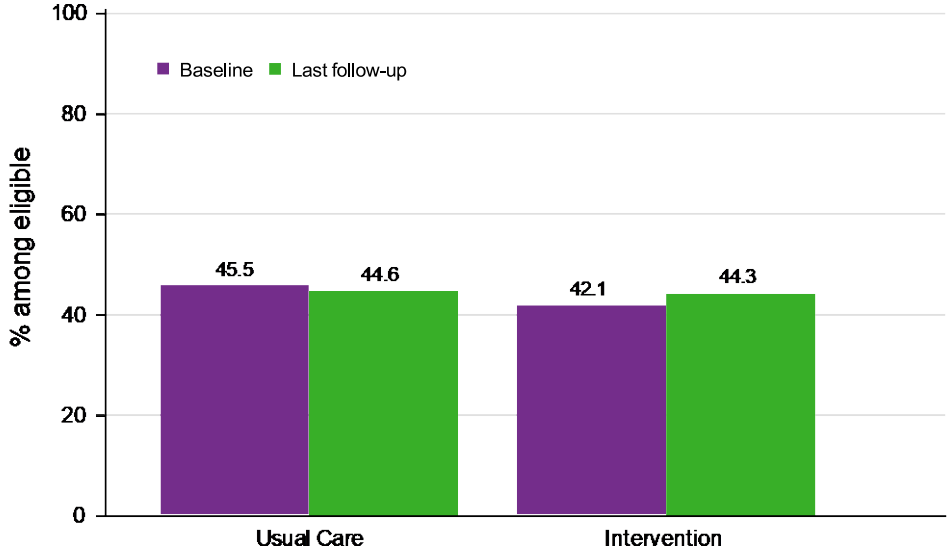
Primary Outcome: HF Rehospitalization or Death



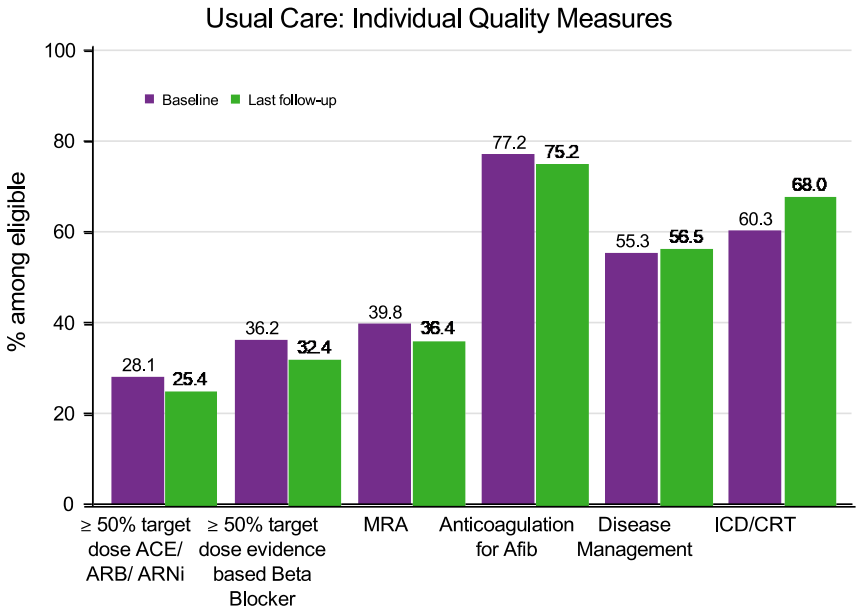
No. at risk													
Usual Care	2967	2716	2507	2338	2212	2085	1960	1803	1645	1543	1441	1322	1122
Intervention	2670	2441	2267	2129	2032	1923	1797	1676	1553	1455	1333	1219	1012

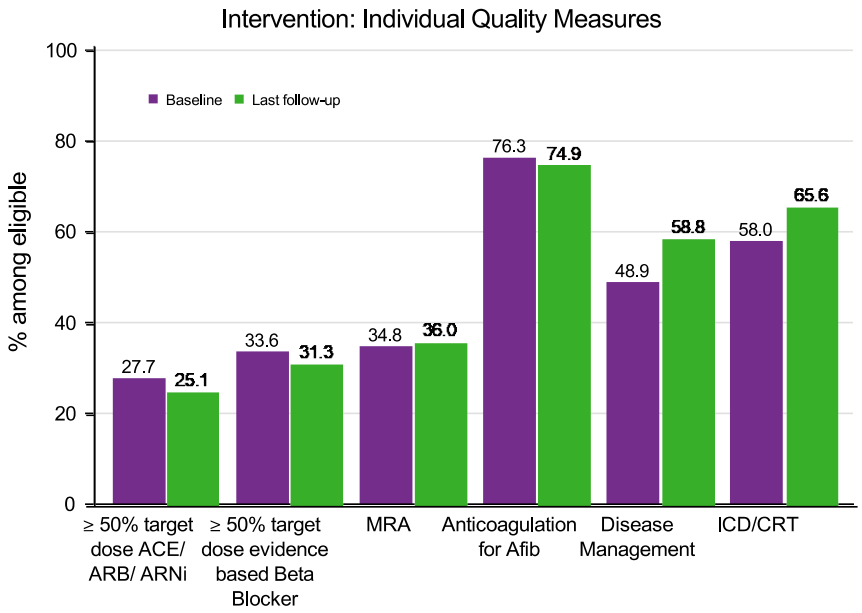
Primary Outcome: Composite Quality Score

Change in Composite Quality Score: +2.3% vs -1.0%, between-group difference of +3.3% (95% CI -0.8 to 7.3)
Adjusted Odds Ratio of Higher Score: 1.06 (0.93 to 1.21), P=0.35



Individual Quality Measures





Conclusion

In this cluster-randomized trial of hospitals treating patients after a hospitalization for HFrEF, a hospital and post-discharge quality improvement intervention that focused on clinician education and audit and feedback of HF quality of care did not meaningfully improve HF outcomes or care above current quality improvement efforts.

Clinical Implications

Major gaps in guideline-directed care remain

- Low rates of ACEI/ARB/ARNI, evidence-based beta-blocker, and MRA

New approaches are needed to improve care above current quality improvement efforts for patients with HFrEF

- HF rehospitalization or death: 39% over 12 months of follow-up
- Fragmented nature of HF care in the US apparent during the study

Thank you

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