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VIRTUAL



**Abstract Title:** Technology and workflow recommendations to improve use of guideline directed medical therapy for heart failure with reduced ejection fraction

## ABSTRACT PREVIEW: TECHNOLOGY AND WORKFLOW RECOMMENDATIONS TO IMPROVE USE OF GUIDELINE DIRECTED MEDICAL THERAPY FOR HEART FAILURE WITH REDUCED EJECTION FRACTION

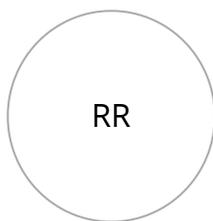
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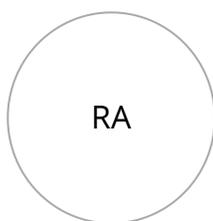
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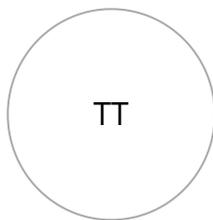
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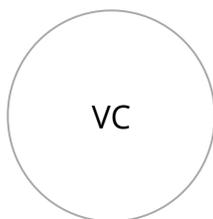
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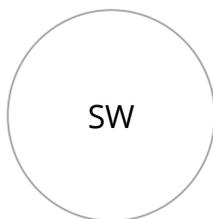
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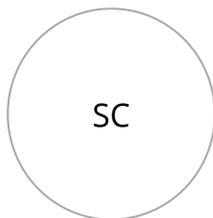
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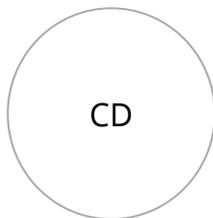
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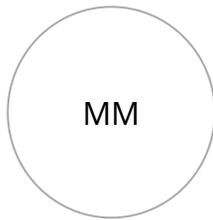
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#### Problem Statement or Scientific Question

Recently, the cardiology team of a large hospital system in northeastern Indiana integrated pharmacists in the ambulatory setting to drive better adoption of guideline directed medical therapy (GDMT) for patients with heart failure with reduced ejection fraction (HFrEF). A retrospective chart review at this site showed improvement in GDMT prescription in the heart failure clinic where the pharmacists were integrated; however, the general cardiology clinic did not improve. The current project aimed to utilize in-situ observation techniques to understand existing processes and to explore workflow optimization opportunities to enhance the adoption of GDMT prescription for patients with HFrEF. This quality improvement project engaged clinicians (cardiologists, nurse practitioners, and pharmacists) who are involved in the care of patients with HFrEF to answer the following questions: 1. What are the current office visit workflows among clinicians, particularly as they pertain to medication prescription? 2. Which areas of the workflow present potential for optimization to improve GDMT adoption? 3. What are some tools and techniques that can better support clinicians in their work to identify and resolve gaps in GDMT?

#### Background/Project Intent

Reduced ejection fraction (EF<40%) presents among about half of patients with heart failure. The American College of Cardiology (ACC) Task Force on Expert Consensus Decision Pathways suggests that utilization of evidence-based guidelines can improve outcomes in these complex heart failure patients. Specifically, they assert that the initiation or addition of GDMT is especially critical with this population. Clinical trials support the assertion that high-morbidity and high-mortality HFrEF patient cohorts benefit from GDMT management. However, despite strong positive scientific evidence for GDMT, significant gaps in prescribing GDMT persist, resulting in poor clinical and economic outcomes. In a previous intervention aimed at improving GDMT among outpatient HF patients (the IMPROVE HF study), only 24.3% of HF patients were receiving all eligible HF treatments at baseline, but this increased to 43.9% after 24 months of a targeted intervention. The IMPROVE HF intervention included chart audits and performance measures related to the use of GDMT, reminder systems to support clinical decision-making, and site-based educational outreach. The work presented is part of an ongoing quality improvement initiative at the project site to reduce care gaps and optimize the adoption of GDMT for patients with HFrEF.

#### Methodology

A team of health informaticians and user experience researchers from a research center embedded within the project site conducted observation techniques from Human Computer Interaction research. Contextual Inquiry was used to observe in-situ work of 9 clinicians in three cardiology clinic locations that included 5

physicians, 3 nurse practitioners and one pharmacist. Following observation of 2 to 7 patient visits, each clinician was asked a few clarifying questions and requested to complete a patient visit based on a mock HFrEF case inserted into their appointment schedule in advance. While clinicians were informed of the objective to optimize clinical workflow, the specific focus on GDMT was not revealed to reduce any impact on typical workflow during observations. Findings from the Contextual Inquiry were used to generate a shared interpretation of the generalized workflow primarily capturing interactions between roles and sequential steps in the process, identify areas of potential breakdown, and offer recommendations for improvement in technology support and existing processes.

## Results

Analysis of the study findings identified the following potential workflow issues: • Excessive number of information sources requiring conscious effort to review • Under-utilization of discrete data fields in favor of descriptive notes • Lack of documentation of collaborative decisions made verbally • Lack of EHR-based notification for the referring providers • Lack of standardized workflow to identify, address and document gaps in GDMT • Redundant tasks susceptible to inconsistency and avoidable effort • Complexity of distributed care resulting in care gaps and delays Recommended solutions offered include: • GDMT Snapshot with key decision-making information in the patient's EHR • Documentation of GDMT exceptions as discrete data in the Problem List of the EHR • Template or smart blocks to standardize the documentation of provider-provider consultation with resulting decisions • Option to "follow" and easily view updates from referral visits • Optimization of HF visit workflow by developing standard guidelines for communication between providers and documentation related to GDMT

## Value Proposition

The direct observation approach utilized in the project identified several opportunities for workflow optimization that can be implemented in cardiology practice to improve GDMT adoption. Furthermore, this effort laid a groundwork for outcome validation through small scale pilot initiatives.

## Conclusions

Although the presence of a pharmacist in care coordination can greatly improve GDMT, the study highlights additional opportunities for process improvement that can take advantage of the pharmacist integration and optimize patient care in a large employed cardiology practice. Recommendations for work process standardization, effective and actionable documentation techniques and enhancements to EHR workspace will be implemented and clinical and economic outcomes tracked.

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## Quality Program and Education Category

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National Cardiovascular Data Registry (NCDR)

ACC Quality Campaigns

Accreditation Services

Heart Failure Accreditation

## ACC Disclosure Agreement

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