

Automating the Inpatient Chronic Heart Failure Quality Measures



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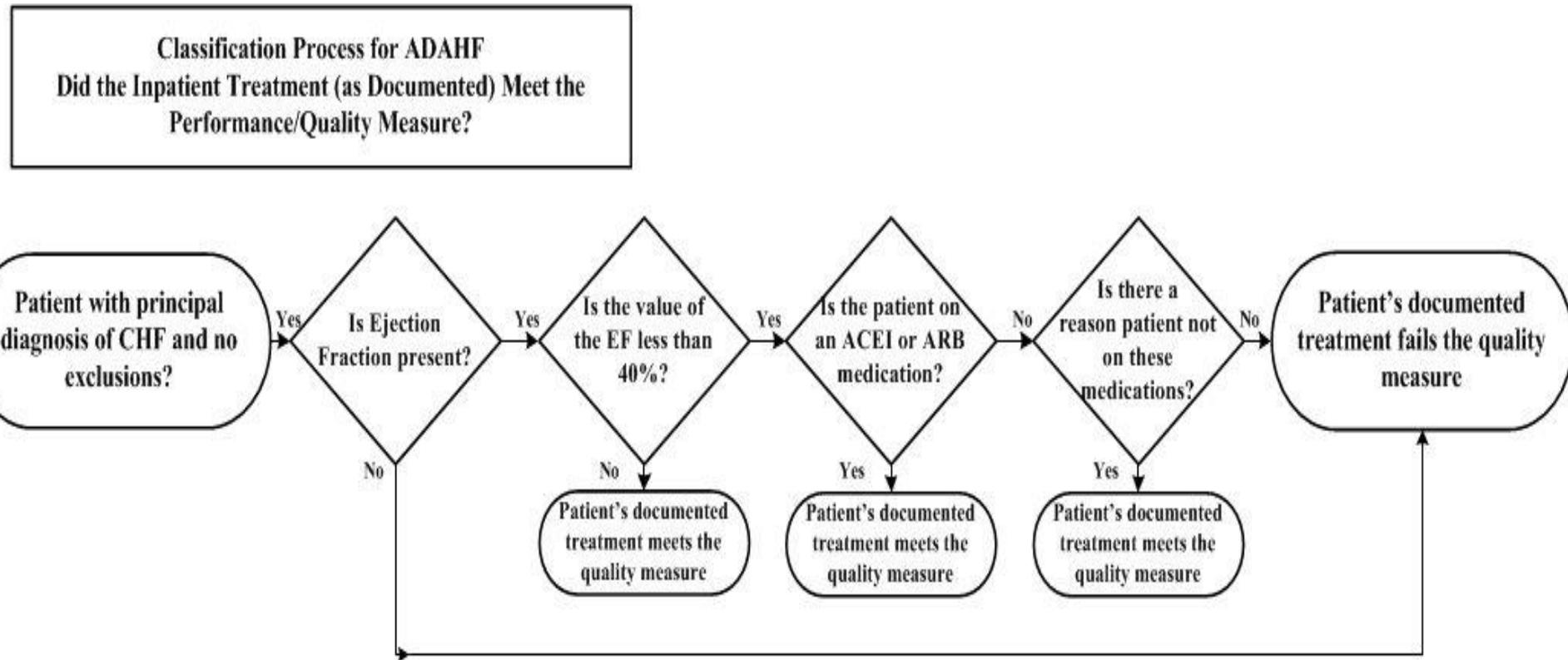
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Overview

- Promote transparency and increase eventual adoption of our informatics tools
- Describe research about automation inpatient chronic heart failure (CHF) quality measures
- Demonstrate major components and related natural language processing (NLP) and informatics tools
- Request participation in our stakeholder engagement

Automated Data Acquisition for Heart Failure (ADAHF)

Diagram of Overall Classification and Sub-classifications



Demonstrations on Privacy Officer Approved, De-identified Documents

- Annotation
- Adjudication of differences
- Natural Language Processing Tools
 - Congestive Heart Failure Information Extraction Framework (CHIEF) Ejection Fraction Module
- Resulting Table (early representation)



Stakeholder Engagement

Theoretic Framework and Model

- The Promoting Action on Research on Implementation in Health Services (PARIHS) framework¹⁻²
 - *Evidence*
 - *Context*
 - *Facilitation*
- Socio-Technical Model (STM)³

Eight Dimensions of which we are using four:

 - *hardware and software*
 - *clinical content*
 - *workflow and communication*
 - *internal organizational features*

¹Stetler, 2011 <http://www.implementationscience.com/content/6/1/99>

²Kitson , 2008 <http://www.implementationscience.com/content/3/1/1>

³ Sittig and Singh , A new sociotechnical model for studying health information technology in complex adaptive healthcare systems, *Qual Saf Health Care* 2010;19

Research Questions Related to Stakeholder Engagement

- What is the context of implementation at the national, VISN and local level in terms of
 - hardware and software
 - clinical content
 - workflow and communication
 - internal organizational features
- What facilitation is needed to overcome barriers identified at the national, VISN and local level?
- How can we use the output of the system not only for performance measurement but also for clinical decision support?
- What are clinical extensions of the tool?

Thank you! Questions or Comments?

- *If you would like to participate in our stake engagement process please contact me at Jennifer.garvin@va.gov*
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 - Andrew Redd PhD and Dan Bolton MS (Statisticians)
 - Megha Kalsy MS and Natalie Kelly MBA (Stakeholder Engagement)
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