

Impact of Cardiac Diagnostics in Risk Adjustment

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Background

The Center of Medicare & Medicaid Services utilizes Hierarchical Condition Categories (HCCs) to reflect a patient's burden of disease and allocate payments.

Accurate risk adjustment factors (RAF) are critical for estimating expenditures and allocating care.

Cardiac diagnostics like echocardiograms provide significant diagnostic information but their RAF impact has not been quantified.

Methods

The study constituted 5,182 Medicare Advantage patients across 7 states.

Each patient underwent an outpatient clinically-indicated echocardiogram in 2021.

Diagnostic Findings

The following diagnoses with severity were collected from reports:

1. Heart Failure (preserved or reduced EF)
2. Pulmonary Hypertension and/or RV Failure
3. LV Hypertrophy
4. Aortic Disease
5. Coronary Artery Disease

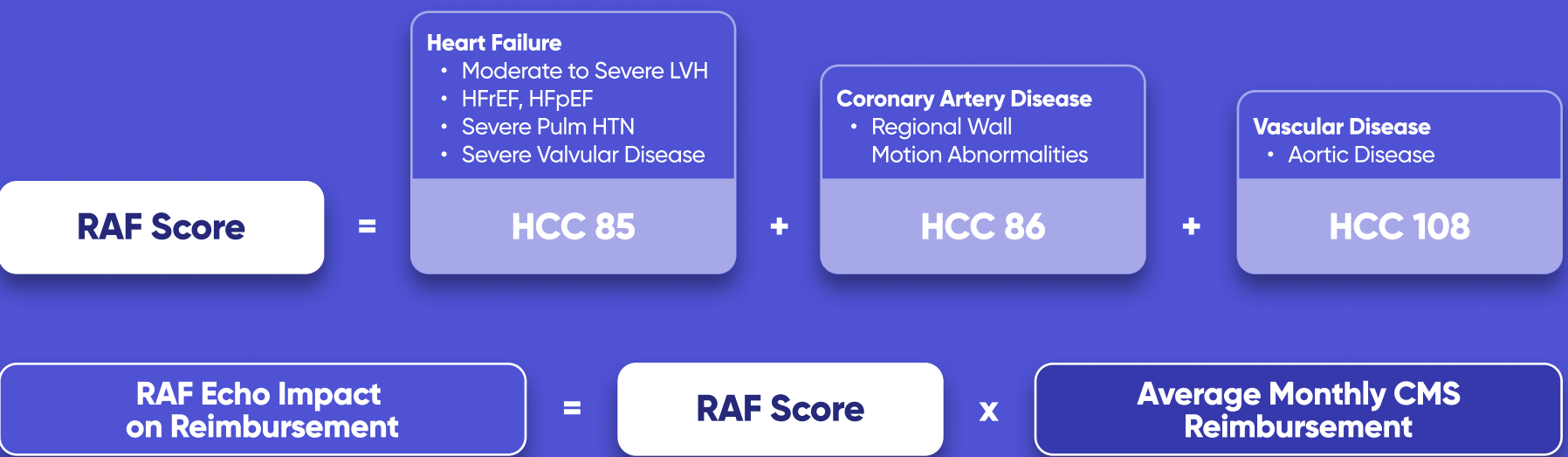


Figure 1. Schematic for Risk Adjustment Calculation from Echocardiograms and Impact on CMS Reimbursement



Echocardiograms provide significant clinical information for risk assessment for purposes of CMS RAF calculation.

In a **Medicare Advantage** population, a clinically-indicated **echocardiogram** corresponded to an average potential increase in RAF of **0.097** and **annual CMS reimbursement of \$926**.

Further research into **RAF impact** is necessary given the growth of **value-based care models**.



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Results

Low-Risk Findings

Finding	Prevalence
Mild LVH	49.2%
Moderate LVH	14.1%
Moderate Valvular Disease	8.8%
Mild Pulmonary Hypertension	12.2%
Aortic Disease	5.2%
Pericardial Effusion	1.8%

Table 1a. Low-Risk Findings across echocardiograms

High-Risk Findings

Finding	Prevalence
Severe LVH	2.2%
Severe Valvular Disease	0.95%
HFpEF	13.3%
HFrEF	5.6%
Coronary Artery Disease	1.6%
Moderate/Severe Pulmonary Hypertension	5.3%
Reduced RV Function	0.87%

Table 2. High-Risk Findings across echocardiograms

Indications	Prevalence
Hypertension	75%
Hyperlipidemia	14%
Heart Failure	11%
Diabetes	10%
Coronary Artery Disease	6%
Valvular Disease	6%
CKD	5%

Table 3. Indications Prevalence

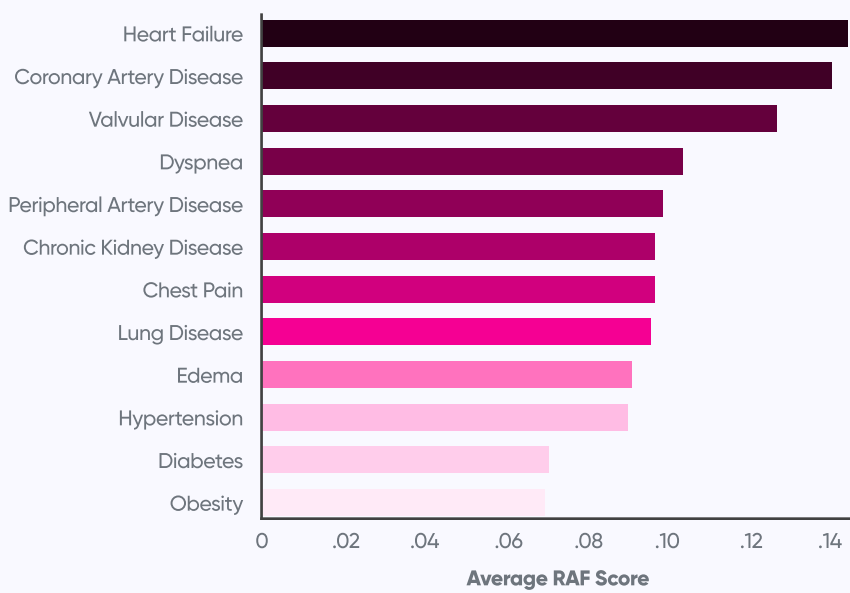


Figure 2. RAF Impact by Indication

\$3,630* per high-risk echo (RAF: 0.388)
\$505* per low-risk echo (RAF: 0.054)
\$4.8 million* across 5,182 patients

*Annually

Conclusion

Cardiac diagnostics are a **critically important risk stratification** tool for care management programs.

Further investigation is warranted into other diagnostic tools.

Healthcare providers should evaluate the **clinical and economic utility of expanding early screening** in elderly, Medicare advantage populations.

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