Measuring Provider Performance

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Overview

- In 2011 the National Quality Forum (NQF) endorsed several HCI[3] measures as comprehensive outcome measures.

- The measures represented rates of Potentially Avoidable Complications (PACs) for defined episodes attributed to physicians or hospitals.

- We have recently submitted new measures for endorsement and re-submitted the prior ones for review.

- The recent submissions required testing the measures for reliability in order to answer the key question of whether they can reliably distinguish provider performance.
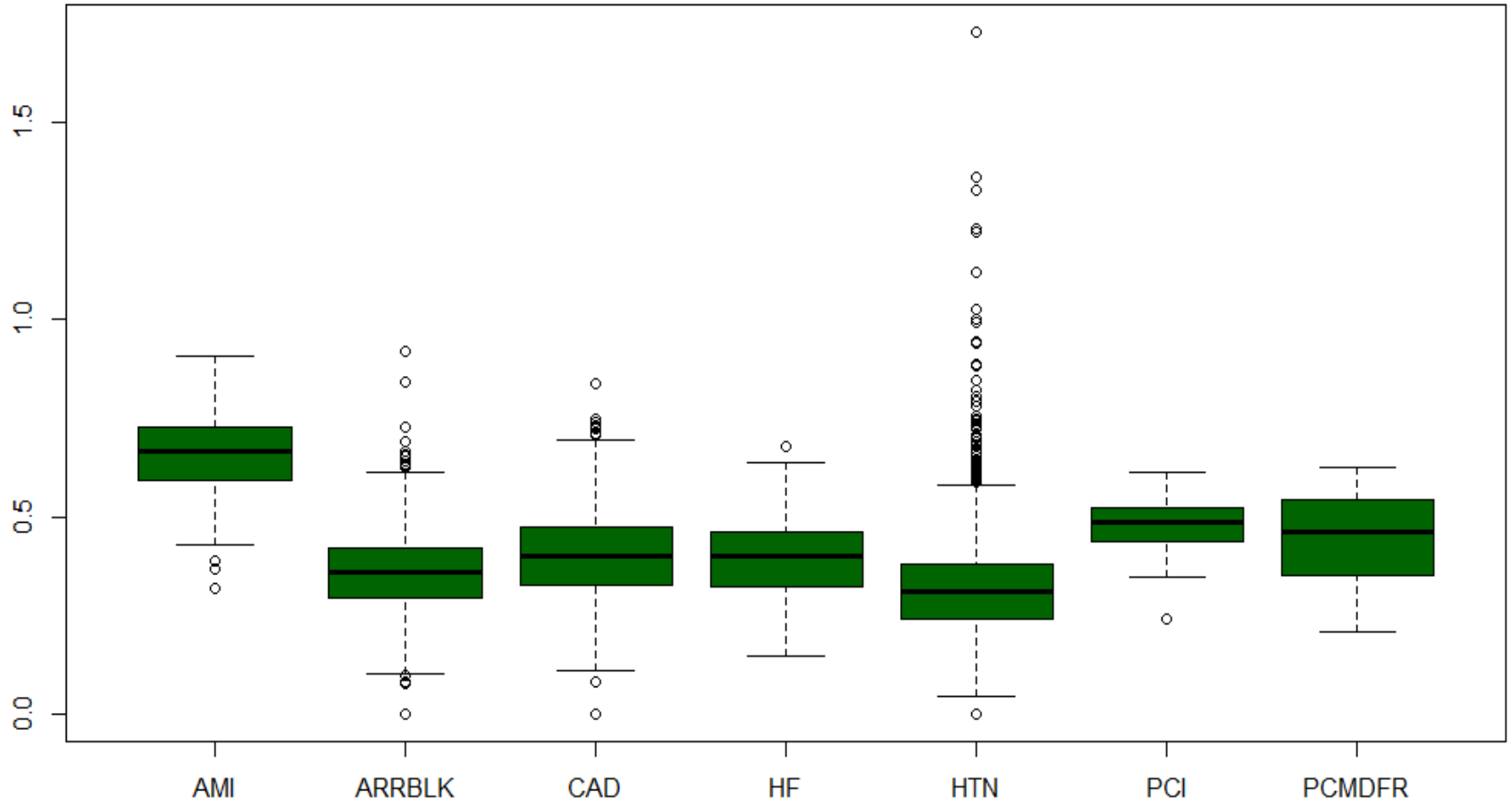
What Are Reliable Measures?

- **Can distinguish provider performance**
  - Answers the question: Is the performance different than the average
- **Reliability is a function of:**
  - Intrinsic variability of the measures – the less intrinsic variability, the less reliable a measure will be
  - Number of comparative providers – the fewer the number of providers to compare, the less reliable the result
  - Sample size for each provider – the lower the sample size, the less reliable the result
- **The criteria for achieving reliability (number of providers, sample size, degree of intrinsic variability) vary from episode to episode**

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Reliability Results of PAC Metrics, Commercial Insurer

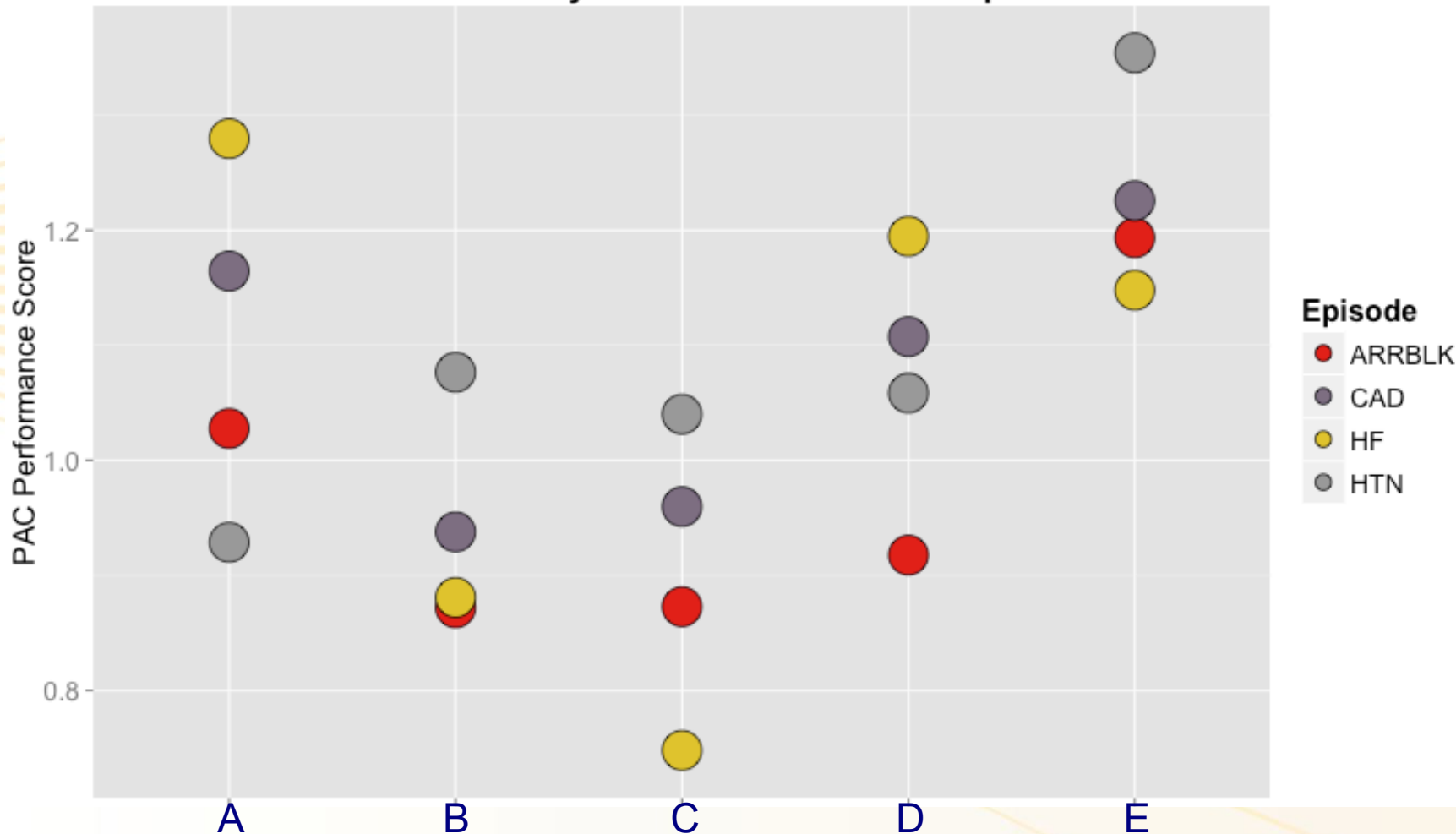| Episodes	Sample Size for Absolute Reliability >0.7	Sample Size for Median Reliability >0.7
PCI	185	175
CAD	21	10
Heart Failure	31	25
Hypertension	23	10
Arrhythmia / Heart Block	30	25

On average, higher sample sizes are required for procedural episodes because of the lower overall rates of complications, and vice versa for chronic condition episodes (lower sample size requirements because of much higher rates of complications.

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Distribution of Risk-standardized PAC Rate by Provider by Episode

Provider Comparison Using PAC Rates

PAC Performance by Provider for 4 Chronic Episodes

Summary

- Rates of potentially avoidable complications, adjusted for patient severity, can reliably differentiate provider performance

- Minimum sample sizes to achieve scoring reliability vary by episode

- PAC performance (as measured by provider-specific risk adjusted PAC rate compared to risk adjusted market average) varies by episode by provider, even for chronic conditions in the same clinical domain (e.g. cardiac care)

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