Measuring Cost Efficiency Performance in P4P Programs

Bill Thomas

University of Southern Maine

ISSUES

- P4P programs seek to improve quality and/or cost efficiency performance by providing differential financial rewards to high performing providers.
- The ability of P4P programs to achieve their goals of improving quality and/or cost efficiency performance requires, among other things, that high performing providers be identified accurately.
- Are cost efficiency scores accurate enough to be used in P4P programs?

How are physician economic profiles constructed?

1. Health plan claims are processed through computer software that identifies “episodes of care.” An episode includes multiple claims, and it refers a period during which a disease process is present and is being managed – diagnosed and treated – by health care providers.

   Examples of episodes: septicemia, acute bronchitis, viral meningitis, congestive heart failure, emphysema, and malignant neoplasm of the prostate.

How are physician economic profiles constructed?

2. The actual cost of each defined episode is calculated as the sum of costs of the claims included in the episode.
3. Responsibility for each episode is attributed to a specific physician.
4. An expected cost is calculated for each episode.
5. Sums of actual costs and of expected costs are calculated for each physician based upon his or her attributed episodes.

How are physician economic profiles constructed?

6. Each physician's cost efficiency score is calculated as a function of his/her sums of observed (actual) and expected costs.

   The most common used cost efficiency measure is the ratio of observed to expected costs (O/E Ratio). Ratios > 1.0 suggest relative cost inefficiency; those < 1.0 suggest relative cost efficiency.

Are there problems that might make profiles inaccurate?

There are quite a few methodological issues that can lead to inaccurate measurement and misclassification of physician performance. Among these are:

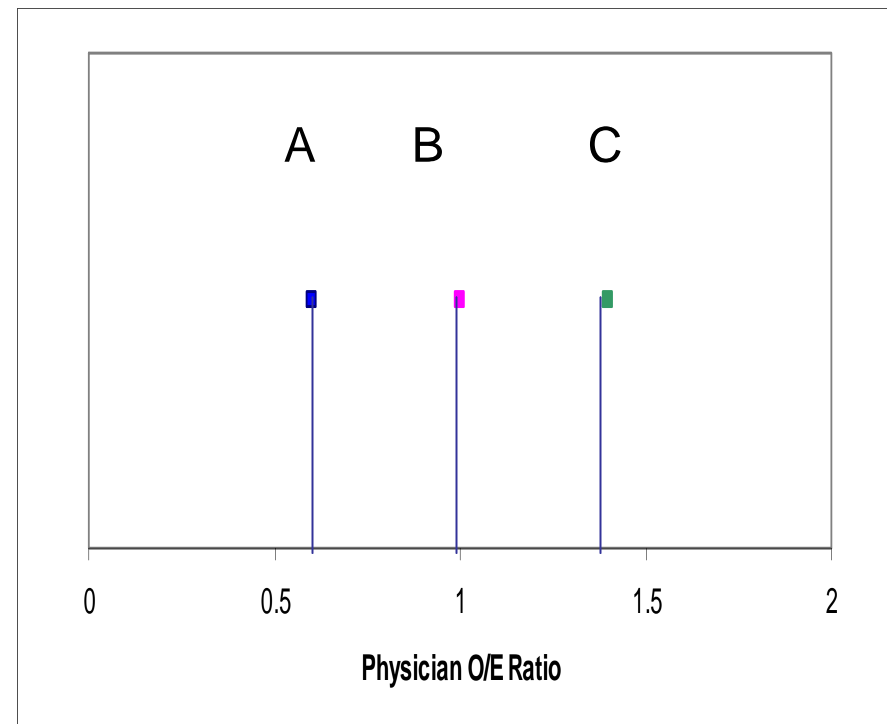
1. Rules for attributing episode responsibility
2. Risk adjustment of episode expected cost
3. Identification of physician specialty for within-specialty comparisons
4. Cost efficiency metric used

Are there problems that might make profiles inaccurate?

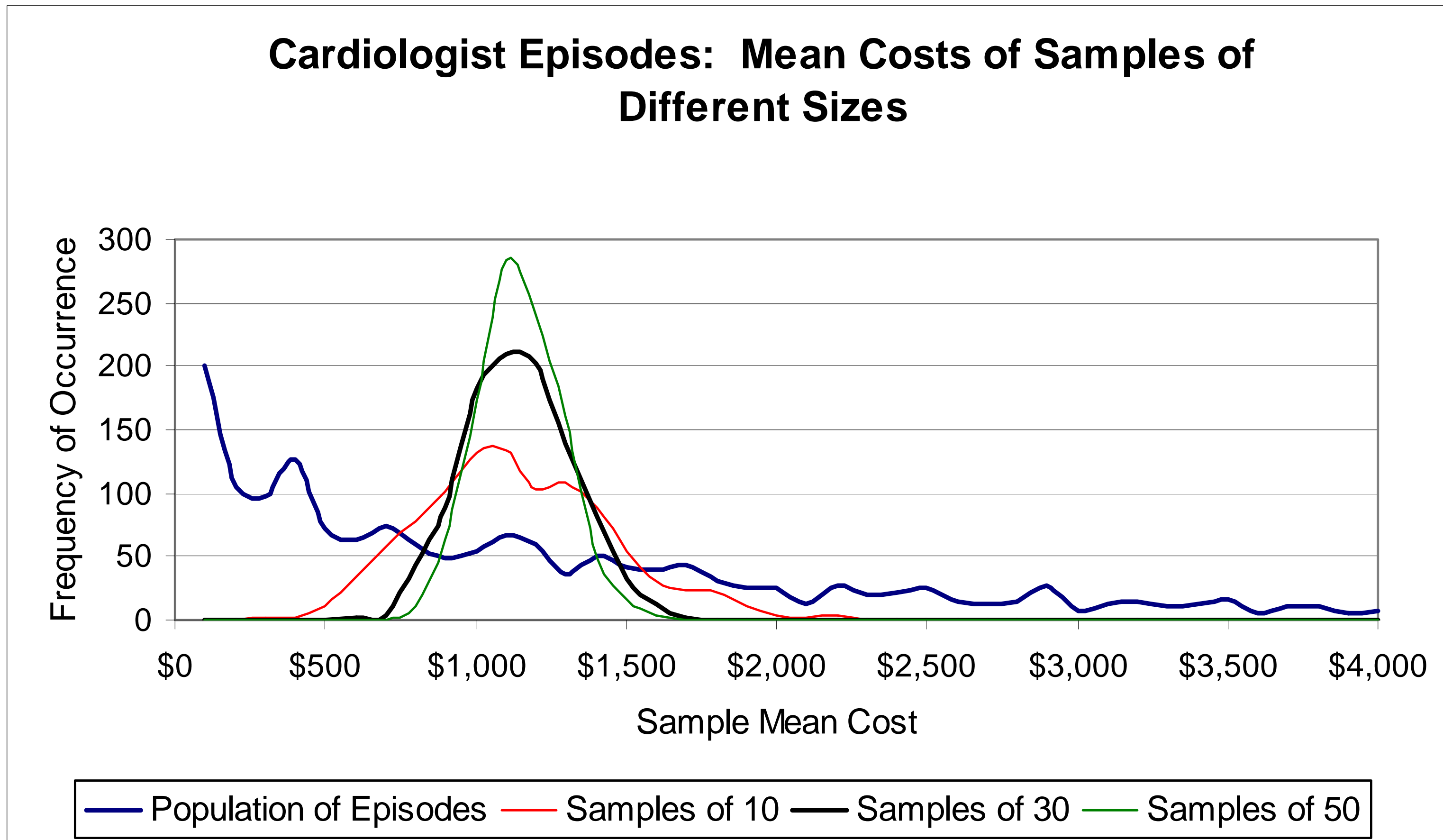
5. Availability of pharmacy claims in database
6. Methodology for dealing with cost outlier episodes
7. Potential bias from benefit differences among health plans in multi-plan databases
8. Number of episodes available for profiling each physician or group (episode sample size)

Of these issues, the most significant is episode sample size. Why?

- Suppose we have 3 physicians: A, B, and C
- Physician A's true cost efficiency score is 0.6; B's is 1.0, and C's is 1.4
- Can we correctly classify these physicians using episode data?



How Many Episodes Should Be Required for Profiling?



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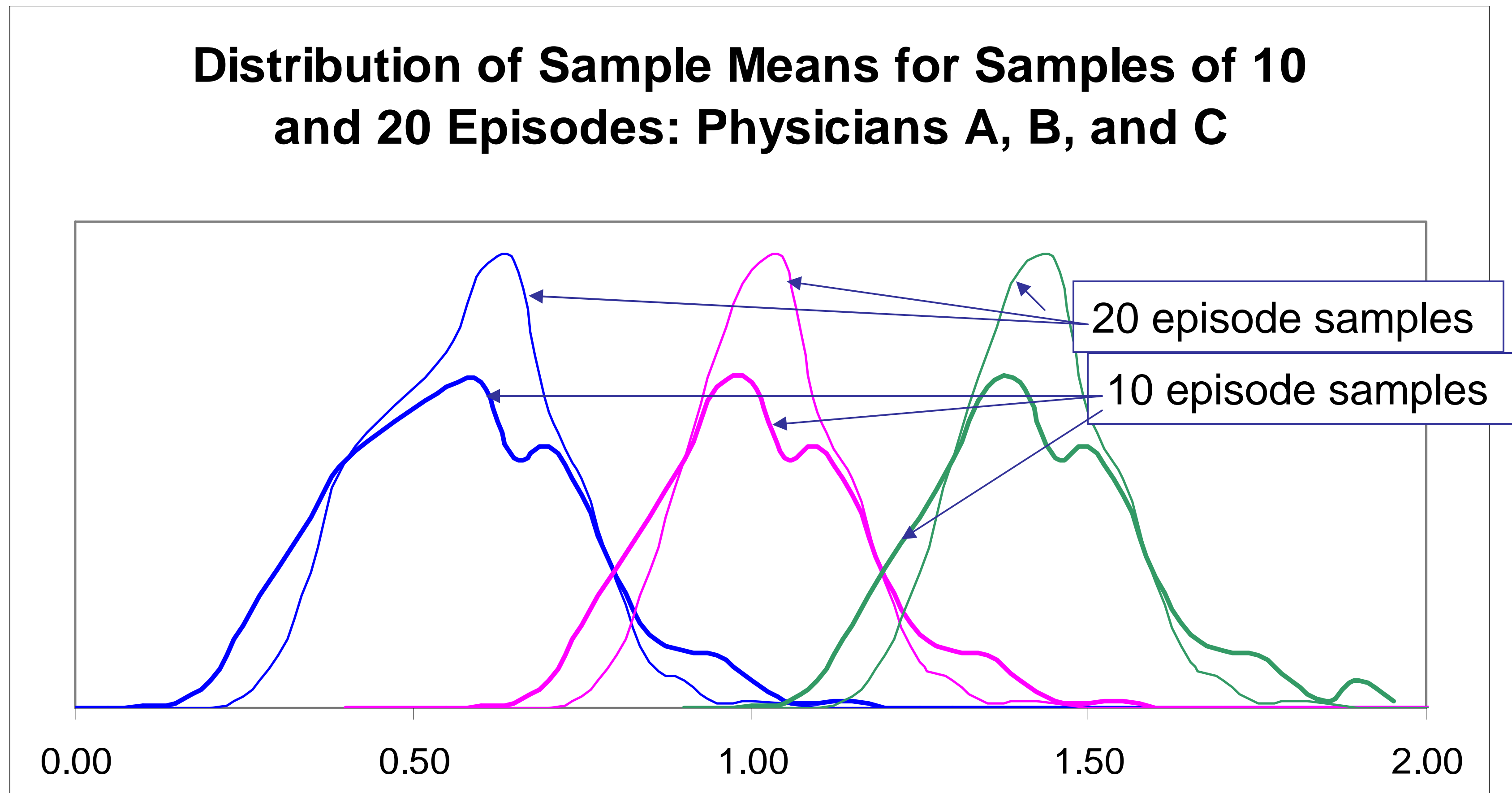

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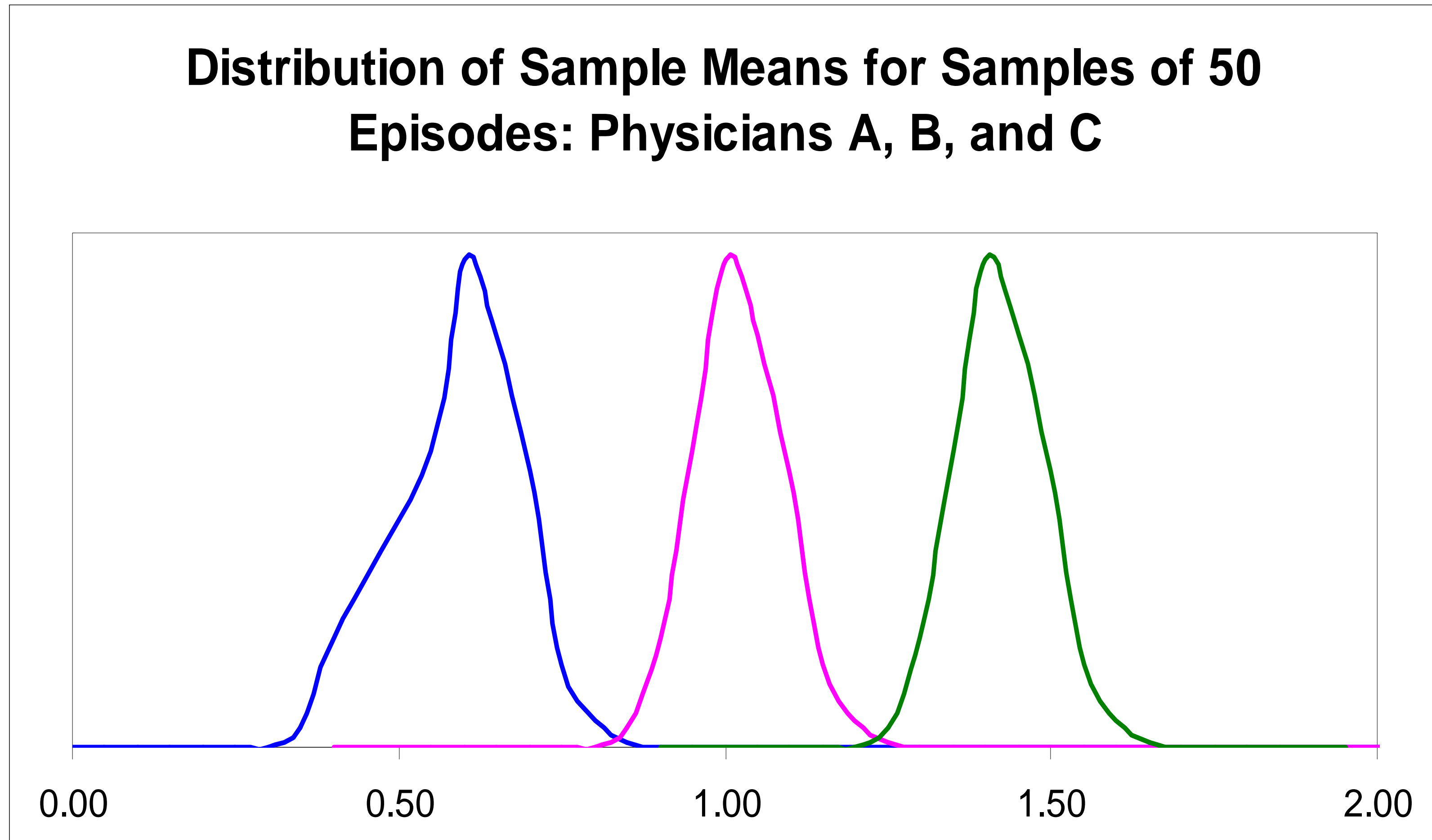
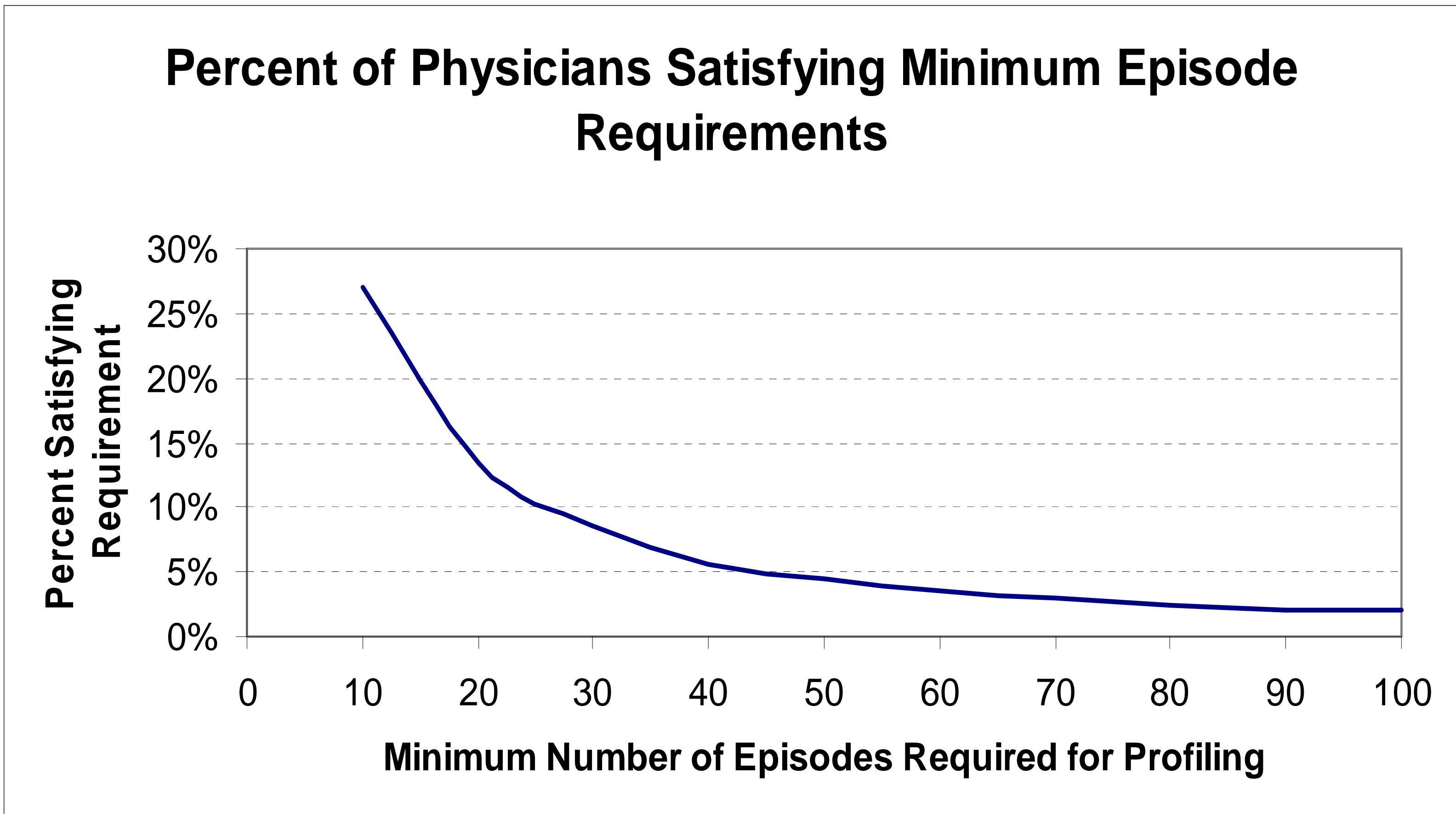


So, Why Not Require Large Sample Sizes for Profiles?



Conclusion

- Accurate measurement of provider cost efficiency performance using episode data is possible.
- But there are a number of methodological challenges that make such measurement difficult.
- And if these challenges are not met properly, P4P programs cannot achieve performance improvement goals.