

# METRICS for Metrics

Melissa M. Stiles, MD; Bruce Barrett, MD, PhD; John W. Beasley, MD

Metrics are pulling medicine into a large data vortex at the potential expense of patient care and physician satisfaction. Primary care clinicians are inundated with data from patient satisfaction scores, patient panel size reports, quality metrics, and electronic medical record (EMR) meaningful use metrics. The use of metrics, like other medical interventions, has potential costs and harms as well as benefits and should be based on good science and a careful analysis of outcomes.

As physicians, we have a professional and ethical obligation to apply the same rigor of evidence to implementing metrics as we do for diagnostic testing and therapeutic decision-making. In this essay, we ask the following questions: Do metrics lead to positive patient care outcomes? What is the cost of measuring and reporting metrics? What are the risks and unintended consequences of focusing on metrics? We cannot definitively answer these questions, but we do provide a rubric to guide such endeavors.

## Do Metrics Improve Patient Outcomes?

Of all the metric systems, the most studied are pay-for-performance programs (P4P). To date, these programs have failed to achieve the Institute of Healthcare Improvement Triple Aim of high quality care, improved population health,

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**Author Affiliations:** Department of Family Medicine and Community Health, University of Wisconsin-Madison, Madison, Wis (Stiles, Barrett, Beasley).

**Corresponding Author:** Melissa M. Stiles, MD, Department of Family Medicine and Community Health, University of Wisconsin-Madison; 1100 Delaplaine Court, Madison, WI 53715; phone 608.424.3384; fax 608.263.5813; email Melissa.stiles@fammed.wisc.edu.

and lower health care costs.<sup>1</sup> Several systematic reviews have concluded that P4P programs have not consistently shown improvements in quality measurements.<sup>2-4</sup>

For example, the United Kingdom has a 10-year history of national-level systematic P4P experience that includes clinical metrics, patient

satisfaction, and organizational indicators. The Quality and Outcomes Framework (QOF) was initiated in 2004 and included paying primary care physicians up to 25% of their income for achieving 147 quality metrics. Initially there were minor improvements in a few of the quality metrics related to diabetes and asthma, but they were not sustained after 2 years.<sup>5-7</sup> In response to these results, the program is now undergoing a major revision in England and has been abandoned altogether in Scotland in favor of local “quality circles” of 10 to 15 practices working collaboratively on quality improvement.

Similarly, a P4P program in the state of Washington was not associated with any significant changes in quality measures over 4 years.<sup>8</sup> A recent analysis assessing the validity of 86 Quality Payment Program measures in the United States found only 32 (37%) were rated as valid and 24 (28%) were deemed of uncertain validity.<sup>9</sup>

## What is the Cost of Tracking Metrics?

Tracking metric costs include payment to physicians; administrative cost of developing, implementing, and maintaining programs;

committee time in deciding what metrics to use; and administrative staff, including highly trained professionals with data-management and statistical experience. The current cost of the QOF program in England is approximately 1 billion English pounds per year (1.4 billion US dollars), which would make cost-effective-

"Sometimes the more measurable drives out the more important."

—*Rene Dubos*

ness questionable even if improvements were clearly shown.<sup>10</sup> In the United States, the total cost of implementing and sustaining outpatient and inpatient P4P programs is unknown. A recent study estimated that US physician practices spend more than \$15.4 billion each year reporting quality metrics, which equals about \$40,000 per physician per year.<sup>11</sup> To our knowledge, there are no cost-effectiveness studies.

## Unintended Consequences

All practice changes have unforeseen consequences, and the focus on metrics is no exception: there are negative effects on the physician-patient relationship and workforce satisfaction.<sup>12</sup>

P4P programs may shift the focus of the visit towards data collection and questions relevant to what is being measured rather than what is actually important.<sup>13</sup> This is often at the expense of the patient's agenda, with a “by the way, what brings you in?” question at the end of a litany of metric-aimed questions. P4P programs have the potential to disrupt the physician-patient relationship. In the QOF experience, there were no significant improvements

in patient satisfaction between 2003 and 2007.<sup>7</sup> Although mean scores on the physician-communication scales and wait times did not change, continuity of care decreased significantly.<sup>6</sup> There is also a potential to discharge patients from the practice if they are not meeting targets. In a qualitative study comparing English physicians with California physicians, California physicians were more likely to express frustration with non-adherent patients, sometimes discharging these patients from their practices.<sup>14</sup>

### METRICS for Metrics

The judicious use of valid metrics has the potential to significantly improve quality of care, health inequities, and population health; their use should not be altogether abandoned. Going forward we propose the following basic principles for metrics, similar to those proposed by Young Roberts & Holden, and by Saver et al.<sup>15,16</sup>

1. Metrics should address patient-centered, clinically **M**eaningful outcomes.
2. Metrics should be **E**vidence-based.
3. Metrics should be re-evaluated in a **T**imely fashion when new evidence emerges.
4. The **R**eturn on investment, benefits and risks of measuring the metric should be evaluated.
5. Metrics should be **I**ndividualized.
6. Metrics should address meaningful **C**ommunity and population health outcomes.
7. **S**hared decision-making should be accounted for, whether or not a patient accepts or declines a test or treatment.

### CONCLUSION

As US health care systems continue to invest large sums while linking compensation to “quality metrics,” it is time to insist that the use of metrics be supported by evidence and guided by scientific and ethical principles. All interventions should be useful, cost-effective, and have limited “side effects.” To date, P4P metrics have not met that test. There are legitimate concerns that as more and more metrics are being measured, we may be losing focus on our patients’ concerns, and on the more meaningful but less measurable determinants of health. We should learn from the United Kingdom’s 10-year experience with P4P programs. Health care organizations and governmental bodies must pause and ask what has been achieved thus far—and

#### Box. METRICS for Metrics

<b>M</b>	Meaningful
<b>E</b>	Evidence-based
<b>T</b>	Timely
<b>R</b>	Return on Investment
<b>I</b>	Individualized
<b>C</b>	Community and Population Health Outcomes
<b>S</b>	Shared Decision Making

at what cost—before proceeding down a costly and potentially ineffective path.

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### REFERENCES

1. Institute for Healthcare Improvement. <http://www.ihf.org/engage/initiatives/TripleAim/Pages/default.aspx>. Accessed August 16, 2018.
2. Eijkenaar F, Emmert M, Scheppach M, Schöffski O. Effects of pay for performance in health care: a systematic review of systematic reviews. *Health Policy*. 2013;110(2-3):115-130.
3. Flodgren G, Eccles MP, Shepperd S, Scott A, Parmelli E, Beyer FR. An overview of reviews evaluating the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes. *Cochrane Database Syst Rev*. 2011(7):CD009255.
4. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev*. 2011(9):CD008451.
5. Roland M, Campbell S. Successes and failures of pay for performance in the United Kingdom. *N Engl J Med*. 2014;370(20):1944-1949.
6. Campbell SM, Reeves D, Kontopantelis E, Sibbald B, Roland M. Effects of pay for performance on the quality of primary care in England. *N Engl J Med*. 2009;361(4):368-378.
7. Gillam SJ, Sirwardena AN, Steel, N. Pay-for-performance in the United Kingdom: impact on the quality and outcomes framework: a systematic review. *Ann Fam Med*. 2012;10(5):461-468.

8. Blecker E. The challenges in achieving successful P4P programs. *Find Brief*. 2014;42(2):1-3. <http://www.hcfo.org/files/hcfo/HCFOfindingsBriefMarch2014FINAL.pdf>.
9. MacLean CH, Kerr EA, Qaseem A. Time out – charting a path for improving performance measurement. *N Engl J Med*. 2018;378(19):1757-1761.
10. Glasziou PP, Buchan H, Del Mar C, et al. When financial incentives do more good than harm: a checklist. *BMJ*. 2012;345:e5047.
11. Casalino LP, Gans D, Weber R, et al. US physician practices spend more than \$15.4 billion annually to report quality measures. *Health Aff*. 2016;35(3):401-406.
12. Zgierska A, Rabago D, Miller MM. Impact of patient satisfaction ratings on physicians and clinical care. *Patient Prefer Adherence*. 2014;8:437-446.
13. Steel N, Willems S. Learning from the QOF: a review of existing research. In: Gillam S, Sirwardena AN, eds. *The Quality and Outcomes Framework: QOF Transforming General Practice*. Oxford, UK: Radcliffe Publishing Ltd; 2010:31–69.
14. McDonald R, Roland M. Pay for performance in primary care in England and California: comparison of unintended consequences. *Ann Fam Med*. 2009;7(2):121-127.
15. Young RA, Roberts RG, Holden RJ. The challenges of measuring, improving, and reporting quality in primary care. *Ann Fam Med*. 2017;15(2):175-182.
16. Saver BG, Martin SA, Adler NR, et al. Care that matters: quality measurement and health care. *PLoS Med*. 2015;12(11):e1001902. doi:1371/journal.pmed.1001902.



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