More quality measures versus measuring what matters: a call for balance and parsimony

Gregg S Meyer,1 Eugene C Nelson,1 David B Pryor,2 Brent James,3 Stephen J Swensen,3 Gary S Kaplan,5 Jed I Weissberg,6 Maureen Bisognano,7 Gary R Yates,8 Gordon C Hunt9

ABSTRACT

External groups requiring measures now include public and private payers, regulators, accreditors and others that certify performance levels for consumers, patients and payers. Although benefits have accrued from the growth in quality measurement, the recent explosion in the number of measures threatens to shift resources from improving quality to cover a plethora of quality-performance metrics that may have a limited impact on the things that patients and payers want and need (ie, better outcomes, better care, and lower per capita costs). Here we propose a policy that quality measurement should be: balanced to meet the need of end users to judge quality and cost performance and the need of providers to continuously improve the quality, outcomes and costs of their services; and parsimonious to measure quality, outcomes and costs with appropriate metrics that are selected based on end-user needs.

In the last half century, the USA has gone from defining quality, to measuring quality, to requiring providers to publicly report quality measures, and most recently, to beginning to hold providers accountable for those results. External groups requiring measures now include public and private payers, regulators, accreditors and others that certify performance levels for consumers, patients and payers. Our investment in required quality measures has served us well. First, it has stimulated the development of new quality measurement and improvement infrastructure within many health systems that was absent or less developed than in the past. Second, it has helped to make good on the call for transparent results reporting that was a central feature of the Institute of Medicine Chasm Report. Consumers, providers, governing boards, employers, payers and accreditors can view comparative results and take action to enhance accountability. Third, publicly reported measures have been associated with improved levels of quality; the hospital core measures programme shows that evidence-based care for hospitalised patients has increased rapidly across the country; and the QUEST programme (which includes over 150 hospitals that are voluntarily seeking to improve performance on a small, standard set of measures), has demonstrated rapid improvement in death rate, evidence-based care and inpatient costs per discharge. Fourth, publicly reported measures have created new opportunities for researchers to conduct comparative-effectiveness studies and for medical educators to advance practice-based learning and improvement.

The number of quality measures that healthcare providers are required to report has skyrocketed over the past decade and that trend is poised to continue. For example, the number of National Quality Forum approved measures has gone from less than 200 measures in 2005 to over 700 measures in 2011 (personal communication, Helen Burstin, MD Senior Vice President for Performance Measures, National Quality Forum, 26 February 2011). In just the past year the US Centers for Medicare and Medicaid Services recommended 65 quality performance measures to hold care organisations accountable and to make payments based on these performance metrics, and new measures are being introduced to ensure that providers are meaningfully using electronic health records.

Unfortunately, the accelerated deployment of quality measures has had some unintended consequences. First, the need to invest in capturing required metrics and to...
improve performance on these measures to reach the
top echelon has caused some providers to overinvest
measurement resources and improvement dollars in
these high-profile high visibility measures. This has led
organisations to deplete their quality measurement
budgets and ignore other important topics. To provide
just one example, the Massachusetts General Hospital
and Massachusetts General Physicians Organisation is
required to report over 120 quality measures to regula-
tors and payers necessitating an infrastructure which
consumes approximately 1% of net patient service
revenue. Consequently, this organisation has little left
in its measurement budget to pursue more important
topics, such as patient-centred health outcomes and
healthcare-associated harm. Second, different providers
will have different areas that are most in need of
improvement. The most productive improvement in
quality for a specific organisation depends upon where
they are in their quality journey (eg, going from 10⁻¹ to
10⁻² harm events needs different approaches than going
from 10⁻³ to 10⁻⁴ harm events). It may be better policy
to have a small required set of quality metrics and large
optional sets so that organisations can target their
improvements on areas where they are most needed.
Third, some providers appear to have made sham
improvements (eg, distributing a smoking cessation
leaflet to all heart failure patients at midnight to ensure
100% compliance with a particular core metric) that
meet the measurement requirement but not the patient
need for a meaningful intervention. Fourth, many
providers have reached high performance levels, not by
improving the efficient design of high-quality care but by
hiring a heart failure or pneumonia nurse to plug the
process holes before patient discharge, thereby scoring
high but adding costs without improving the reliability of
the basic process. This ‘whack-a-mole’ mentality to
quality improvement is unsustainable and will produce
only marginal benefit. Fifth, there are statistical consid-
erations. When the underlying measure is imperfect,
marginal improvements from 96% to 99% may reflect
error in measurement and denominator management
more than nearly perfectly reliable performance. Even
with a more error-proofed measure it is very difficult to
rank providers (physicians or hospitals) accurately due
to problems of collecting accurate data across multiple
sites, challenges of attribution, and difficulties in
forming comparable risk cohorts. Finally, a substantial
number of studies have shown that there is often a weak
association between high scores on process quality
measures for given conditions (eg, acute myocardial
infarction, heart failure) and health outcomes that
matter most to patients and payers.

If the USA continues with the proliferation of required
quality measures, we will go from hundreds of required
metrics to thousands. There are thousands of diseases,
injuries, clinical states and interventional procedures that
have a large and growing list of evidence-based care
processes, and every special interest group could lobby
for ‘their’ disease, injury or procedure to enjoy the
‘legitimacy’ and command for resources that are associ-
ated with being designated as a required quality metric.
At the same time, providers of care have a genuine
need to develop internal mechanisms to continuously
measure and improve the processes of care delivery (ie,
what they do) and the outcomes and costs of care that
they provide.

We believe that if current trends in the growth of
required quality measures continue, providers will need
to invest so much money to report externally imposed
measures that there will be scant funds left to support
provider-specific internal measurement systems needed
for monitoring and improving quality and for capturing
longitudinal measures and cascading them to major
clinical programmes and front-line clinical micro-
systems. Unchecked growth in mandated quality
measures will lead to a commensurate growth in quality
metric budgets devoted to ‘required metrics’ and
thereby leave few ‘discretionary’ dollars to focus on
internal quality measurement systems or on the results
that matter most to the end users. In short, the drive to
increase the scope and depth of required measures to
tackle quality could have the unanticipated consequence
of decreasing providers’ ability to manage and improve
quality and meet our need for better quality, better
outcomes and lower per capita costs.

To summarise, the growth in the number of publicly
reported and externally mandated quality measures has
generated positive and negative effects. We ask, has the
time come to provide guidance and principles for the
future development of quality metrics that providers are
required to produce? We think the answer to this ques-
tion is ‘yes’. Even if we can shift some of the measure-
ment burden to patients through greater reliance on
patient reported measures, a development we support,
the exponential growth of other measures will overtake
our limited resources. Thus, the resources that might
be devoted to ‘end user’ value will be diverted to cover
a plethora of quality-performance metrics that may have
a limited impact on the things that patients and payers
want and need (ie, better outcomes, better care and
lower per capita costs).

A PROPOSITION

We offer this proposition. The investment in required
metrics is warranted to the extent that it meets external
stakeholders’ authentic need to have accurate data to
hold providers accountable for the overall quality and
value of care that they produce (ie, degree to which care is guided by informed decisions by patients and is safe, timely, effective, efficient, equitable and patient centred and thereby generates the best outcomes at the lowest cost). To achieve this we should adopt a new policy on required quality and value metrics that embodies balance and parsimony and is guided first and foremost by the end-user (ie, patients, families, consumers, employers and payers) needs for data on providers’ performance. This policy should be balanced to meet the need of end users to judge quality and cost performance and the need of providers to continuously improve the quality, outcomes and costs of their services; and parsimonious to measure quality, outcomes and costs with appropriate metrics that are selected based on end-user needs.

We make the following recommendations:

- Approximately 30% of the quality measurement dollar spent by providers should be invested in metrics required by external stakeholders and 70% should be invested based on the provider’s assessment of what most needs improving ‘now’ to improve performance (currently the balance is more on the order of 90% and 10% respectively). The provider’s assessment will vary across organisations and should reflect where they are on their improvement journey.

<table>
<thead>
<tr>
<th>Measure name</th>
<th>IOM quality dimension</th>
<th>Triple aim domain</th>
<th>Outpatient focus</th>
<th>Inpatient focus</th>
<th>Population focus</th>
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<tr>
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<td>Outcome</td>
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<td>Safe practices implementation‡</td>
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<td>Process</td>
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<td>Safe</td>
<td>Outcome</td>
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<td>Outcome</td>
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<tr>
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<td>Experience</td>
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<tr>
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<td>Hospital days per decedent last 6 months of life†††</td>
<td>Efficient</td>
<td>Costs</td>
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<td>All</td>
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</tr>
</tbody>
</table>

*Contents of table 1 based on the IHI White Paper15: Whole System Measures (2007); recommendations from the Marketplace Collaborative sponsored by Virginia Mason; and recommendations from the National Quality Forum, National Priorities Partnership and Centers for Medicare and Medicaid Services (CMS) for high-priority quality measures. To balance metrics across the continuum of care future metrics for home health, skilled nursing facilities and hospice will need to be incorporated.

†Adverse event rate based on selected global trigger tool score or CMS metrics from Partnership for Patients.


§Healthcare acquired condition rate based on CMS inpatient care quality measure.

¶Functional health outcome score based on Veterans RAND 12-Item Health Survey or PROMIS-10 annual change scores for selected populations of chronic disease patients (eg, heart failure, asthma, osteoarthritis of knee, depression, etc.).

**Hospital 30-day readmission rate based on CMS inpatient care quality measure.

††Evidence-based care score based on core measure composite scores for outpatient and inpatient care.


§§Care transition measure (CTM) score based on Coleman’s three-item CTM index.

¶¶Health risk status score based on an index of major risks of morbidity and mortality such as the Framingham Index or alternate validated measure of health risk based on biometric variables (eg, blood pressure, cholesterol, haemoglobin A1c) and health behaviours (eg, tobacco use, alcohol use and seat belt use) and demographic variables (eg, age, gender, race, ethnicity).

***Rate of same day access based on patient-reported questions in CGCAHPS or data on third next available appointment in outpatient scheduling system for patients seeking an appointment as soon as possible.

††††Hospital days per decedent last 6 months of life based on Dartmouth Atlas and/or other claims data.

†††††Healthcare costs per capita based on Dartmouth Atlas data and/or other claims data.

§§§§The Institute of Medicine aim of equity can be measured under this framework by reporting the metrics included herein by race, ethnicity and socio-economic status.

¶¶¶¶Population focus refers to a geographically defined population such as community residents or another type of population such as people who are attributed to an accountable care organization or to a primary care medical home or employees and dependants of an employer organisation.
The set of quality and performance measures should be balanced to address end-user value: better outcomes, better care and lower per capita costs.

HOW WE CAN ACHIEVE BALANCE AND PARSIMONY

A few simple rules can guide the selection and use of measures required for transparent quality reporting as well as for value-based payments. Examples of such rules are as follows:

- **Measure process quality**: select a balanced and small set of measures to assess the quality and safety of the process of delivering care based on a small set of critical evidence-based practices that have a strong relationship with health outcomes.

- **Measure value**: select a balanced and small set of measures to reflect health outcomes, patient experience and per capita costs for individual patients and clinical populations to reflect the triple aim and to anticipate value-based payment mechanisms for accountable care organisations, bundled payments and patient-centred medical homes.

- **Design data systems to support internal quality needs and spinoff external quality measures**: use a four-step process to support internal quality measurement and external reporting for selection and accountability; build quality metrics into workflows on the basis of key process analysis, to have the greatest impact on the most patients; for a high-priority key process, explicitly design a data system (intermediate processes, final outcomes, patient experience and cost results) around the care delivery process, ‘roll up’ accountability measures at a clinic, hospital, region, system, state and national level; and provide transparent reporting on quality and value to promote learning, healthy competition on key results and to ensure public accountability. Current systems are far from these capabilities but they are consistent with the long-term goals of the Office of the National Coordinator’s Healthcare Information Technology meaningful use programme.

- **Use return on measurement investment**: select measures taking into account the cost of data collection and reporting relative to the measure’s impact on quality, outcomes and costs.

- **Establish ongoing process for refining and selecting core measures**: build stakeholder agreement on vital, standard measures of performance that are used by payers, regulators, consumers and accreditors to promote public reporting and value-based purchasing schemes across different payers and to harmonise regulation, accreditation and certification.

Table 1 provides an example of a parsimonious yet powerful and balanced set of quality and cost metrics that the authors support and that our organisations would welcome testing. Our recommendations for required measures are based on multiple sources, including the Institute for Healthcare Improvement’s whole system measures, national quality and safety strategies, and recommendations from consumers and employers that our health systems serve.

In conclusion, as representatives of organisations that are working to improve quality and value (and who are blessed with far more resources than most to do so) we are calling for a new, more practical quality measurement policy. We cannot wait for the ideal measure set yet we need to move towards adopting an ever-improving set of metrics that can strengthen healthcare and improve results. It is time for a new direction; the clock is ticking. We must stop the avalanche of an ever-increasing number of mandated quality metrics so we can get to work on using measures that really matter and thereby focus on what we need to do for our patients, our communities and our country to provide better health outcomes, better care and lower per capita costs.

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**REFERENCES**


