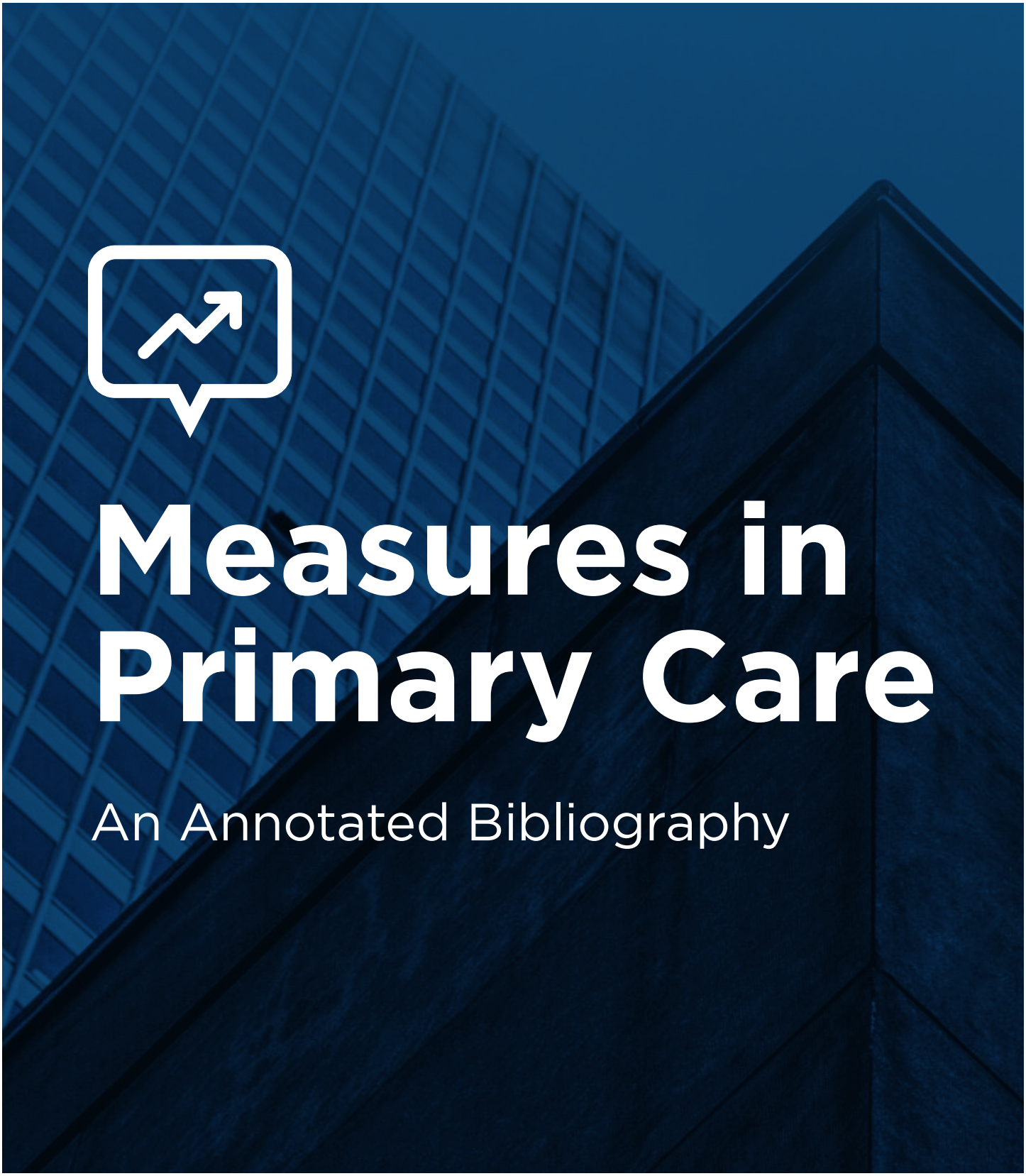

Measures in Primary Care

An Annotated Bibliography

STARFIELD SUMMIT

...where primary care research inspires policy and practice

ACKNOWLEDGEMENTS

We would like to thank the sponsors of the Starfield Summit who made this work possible: the Pisacano Leadership Foundation, the American Board of Family Medicine, and Family Medicine for America's Health.

APRIL 2016

Yalda Jabbarpour, MD

Robert L. Phillips, Jr. Health Policy Fellow
Robert Graham Center
Georgetown University School of Medicine

ROBERT GRAHAM CENTER
Policy Studies in Family Medicine and Primary Care

METHODS

An Ovid Medline search was conducted using the terms primary care, quality healthcare indicators and quality measures from 2010- present in the English language and yielded 288 results. Abstracts were scanned for relevance to the topic and cross referenced with the IOM Report, “Measuring Vital Signs”. A snowball method of scanning bibliographies of included articles and publications yielded additional results. The opinions of local experts in the field of primary care measurement were solicited to help narrow and identify additional articles for inclusion.

ABBREVIATIONS USED IN THIS BIBLIOGRAPHY

HIT	Health information technology
EHR	Electronic health record
IOM	Institute of Medicine
NCQA	National Committee for Quality Assurance
PCMH	Patient Centered Medical Home
QOF	Quality and Outcomes Framework
CQM	Clinical Quality Measures

Avoiding the Measurement Morass in Service of Primary Care

The reports, policy statements and editorials below all agree that measurement in health care should be outcomes oriented and aligned, and infrastructure changes, particularly in HIT need to take place in order to efficiently measure health care. The issue remains that there is no consensus as to which outcomes we should be measuring and how to measure those outcomes effectively and efficiently. The development of a central, nationally recognized organization that validates and updates measures in a timely fashion was a key suggestion of a majority of the articles.

Blumenthal, D., & McGinnis, J. M. (2015). Measuring Vital Signs: an IOM report on core metrics for health and health care progress. JAMA, 313(19), 1901–1902. A Summary of: Institute of Medicine. Vital Signs: Core Metrics for Health and Health Care Progress. Washington, DC: National Academies Press; 2015. http://www.iom.edu/coremetrics.

This article summarizes the key finding of the IOM report on core metrics which evaluated the current system of outcomes measurement, sought to develop a set of aligned core outcome measures and attempted to give steps in order to implement and refine those measures. Although the committee was not equipped to give specific metrics to measures, they do identify 15 core areas that measurements should address, and believe these core areas represent the true health of the community. They suggest that a central body, in particular the Secretary of Health and Human Services, should be responsible for coordinating the measures presented in this report, as well as those put forth by the NCQA and Healthy People 2020, thereby creating a system of aligned metrics. They site many barriers to doing this including misaligned interests of stakeholders, a fragmented healthcare system, and inefficient EHR's.

Berenson, R. A., Pronovost, P. J., & Krumholz, H. M. (2013). Achieving the potential of health care performance measures. Princeton (NJ): Robert Wood Johnson Foundation.

This report summarizes the issues surrounding healthcare measurement and then calls for policy changes to avoid these pitfalls. The authors propose that measures should be outcomes based, the results of these measures should be used for quality improvement purposes, quality should be measured at the level of the organization not the clinician, patient experiences of care should be measured, a national infrastructure to develop and scientifically test a consensus on measures should be created, and a single entity should be tasked with defining standards for measurement and reporting quality and cost data (similar to the role of the SEC).

Damberg, C. L., Sorbero, M. E., Lovejoy, S. L., Lauderdale, K., Wertheimer, S., Smith, A., Schnyer, C. (2011). An evaluation of the use of performance measures in health care.

This report completed by RAND and sponsored by the NCQA summarizes the benefits and limitations of NCQA performance measures as reported by interviews with key informants in health care. The authors conclude that measures should be outcomes based, need to be standardized or aligned but at the same time malleable to avoid measurement fatigue, research on the validation of measures should be published and readily available, EHR's should be designed to help support measurement and support tools should be created to help clinicians.

Cassel, C. K., & Jain, S. H. (2012). Assessing individual physician performance: does measurement suppress motivation? JAMA, 307(24), 2595–2596.

Based on the known science behind motivation, the authors conclude that in order to motivate physicians, measurement needs to be outcomes based and ideally representative of the entire care of a complex patient and not piecemeal proxies of measurement (i.e. A1C or LDL). They also argue that to achieve this end, clinical support tools should provide checklists, diagnostic reminders, and clinical guidelines to recommend the most proven course of action for a particular patient rather than for a generic diagnosis.

Casalino, L.P, Gans, D, Weber, R., Cea, M., Tuchovsky, A., Bishop, T.F., Miranda, Y., Frankel, B.A., Ziehler, K.B. US Physician Practices Spend More Than $15.4 Billion Annually To Report Quality. Health Affairs, 35, no.3 (2016):401-406

This study on the amount of money and time spent by physicians and their support staff on reporting quality measures highlights the inefficiency of the current system of quality measures. Primary care physicians spent the greatest amount of time reporting measures as compared to other specialists. The authors suggest that the inefficiencies in the system stem from lack of an aligned set of measures and EHR's which are not efficient in extracting data for reporting of measures.

Measuring the C's of Primary Care: Comprehensiveness, Coordination, Continuity

Primary Care is complex, and the core attributes of this discipline including comprehensiveness, coordination and continuity are difficult to adequately and efficiently measure. Lack of a clear definition for comprehensiveness and limitations of our current HIT system make the C's of primary care difficult to measure. Using some already available data sources, the articles below attempt to provide examples on how to effectively measure primary care, yet all conclude there is much work to be done in creating a framework for effective measurement of the C's of primary care.

O'Malley, A. S., Rich, E. C., Maccarone, A., DesRoches, C. M., & Reid, R. J. (2015). Disentangling the Linkage of Primary Care Features to Patient Outcomes: A Review of Current Literature, Data Sources, and Measurement Needs. Journal of General Internal Medicine, 30(S3), 576–585.

The authors examine the complexities of primary care, particularly in terms of measurement of the 5 components central to primary care. They delineate a list of available data sources that could potentially be used to measure the components of primary care and offer suggestions for adaptation of HIT to better support the primary care function.

O'Malley, A. S., & Rich, E. C. (2015). Measuring Comprehensiveness of Primary Care: Challenges and Opportunities. Journal of General Internal Medicine, 30(S3), 568–575.

This article highlights the challenges of measuring comprehensiveness in primary care, including a lack of standard definition for comprehensiveness, difference in the medical needs of different communities, a lack of agreement on indications for referrals to specialists and inadequate data sources. The authors examine proposed methods for measuring comprehensiveness including patient or physician surveys, claims based measures and EHR based measures. They conclude that each method has its limitations and it is of utmost importance to develop valid and reliable measures of comprehensiveness.

Stange, K. C., Nutting, P. A., Miller, W. L., Jaén, C. R., Crabtree, B. F., Flocke, S. A., & Gill, J. M. (2010). Defining and Measuring the Patient-Centered Medical Home. Journal of General Internal Medicine, 25(6), 601–612.

This article examines the current ways in which PCMH's are defined and measured, gives limitations to the currents methods of measurement and proposes solutions and future directions for measurement of comprehensiveness, coordination, continuity and other core aspects of the PCMH. An overarching theme of the articles is that current metrics set forth by the NCQA may not actually reflect the goals of the PCMH, they are burdensome to measure given lack of interoperability of the EHR and they don't necessarily reflect higher order primary care functions such as integration and personalization of care.

Advancing Primary Care Function through MACRA, MIPS, & Measures

(What existing measures best support the Primary Care function that How can PC evidence makers engage in measure-making for MIPS? Shape the APM?)

The articles below suggest that outcomes measures and those measures rating the patient experience best support the primary care function, yet creating those measures and testing their validity across a variety of patient populations is difficult. Furthermore developing an accurate way to collect data on those measures is much harder to do with our current EHR's. Measures that have focused primarily on compliance with evidenced based practice guidelines have led only to inconsistent and non-sustained improvements in patient outcomes in the UK, and although they have streamlined some aspects of care, they have led to less continuity of care and, anecdotally, to a more mechanistic approach to medicine.

Meltzer, D. O., & Chung, J. W. (2014). The Population Value of Quality Indicator Reporting: A Framework for Prioritizing Health Care Performance Measures. Health Affairs, 33(1), 132–139.

The authors in this article attempt to develop a framework for evaluating the vast array of quality measures that exist with the hopes of identifying those measures that may have the greatest benefit to the population as a whole as measured by quality adjusted life years. They suggest that applying their framework will allow us to prioritize and align quality measures. Limitations to their results were that outcome measures and those reporting on patient experience were more difficult measures to apply their framework.

Dassow, P. L. (2007). Measuring Performance in Primary Care: What Patient Outcome Indicators Do Physicians Value? The Journal of the American Board of Family Medicine, 20(1), 1–8.

This was the first study to document the opinions of primary care physicians regarding the relative value of various patient outcomes indicators. They mention that numerous studies have shown the importance of physician involvement in the creation of quality measures. The authors considered those measures that were important or very important to at least 75% of the respondents as measures to be highly considered. 19 measures were included in this category, 5 were related to behaviors and only three were related to objective data (i.e. labs or vital signs), demonstrating that physicians valued patient oriented outcomes over disease oriented outcomes. Interestingly social determinants of health were not included as metrics that should be measured, indicating that physicians felt this was an area that they could not change based on practice changes.

Rollow, W., & Cucchiara, P. (2016). Achieving Value in Primary Care: The Primary Care Value Model. The Annals of Family Medicine, 14(2), 159–165. http://doi.org/10.1370/afm.1893

The authors propose a new model for care, the Primary Care Value Model, which they argue is more patient-centered than the current PCMH model. In this framework 5 concepts can be used to describe what patient's value: health, cure, healing, preconditions of health and experience of care. Based on this, metrics used to base payment should include self-reported outcomes (via a system such as the Patient Reported Outcomes Measurement Information System), healing (via the Self-Integration scale), therapeutic relationships (via the 10-item CARE questionnaire) and self-management capacity.

Porter, M. E., Larsson, S., & Lee, T. H. (2016). Standardizing Patient Outcomes Measurement. New England Journal of Medicine, 374(6), 504–506.

The authors of this editorial argue that we have allowed value in healthcare to be defined as compliance with evidenced based practice guidelines rather than improvement in outcomes. They propose an institutional approach in which minimum standard outcome sets for a variety of conditions are defined, such as the work being done by the International Consortium for Health Outcomes Measurement. Once these minimum standards are defined, outcomes measurements can be easily created, validated and aligned.

Downing, A., Rudge, G., Cheng, Y., Tu, Y.-K., Keen, J., & Gilthorpe, M. S. (2007). Do the UK government's new Quality and Outcomes Framework (QOF) scores adequately measure primary care performance? A cross-sectional survey of routine healthcare data. BMC Health Services Research, 7(1), 166.

The QOF scores in the UK are a standardized set of measures based on four domains: clinical, organizational, patient experience, and additional services. The aim of this study was to assess the extent to which measures of health observed in practice populations are correlated with their QOF scores. The authors used emergency room and mortality data and matched it against QOF scores for a practice. They found that results were very inconsistent and no clear conclusion can be drawn based on practice QOF scores. They found that social determinants of health were much more likely to predict emergency room visits and mortality data.

Gillam, S. J., Siriwardena, A. N., & Steel, N. (2012). Pay-for-Performance in the United Kingdom: Impact of the Quality and Outcomes Framework--A Systematic Review. The Annals of Family Medicine, 10(5), 461–468.

This systematic review attempted to evaluate the impact of the UK's QOF on physicians, patients and the health care system. They found that although there were improvements in quality of care for incentivized conditions in the first year, these findings did not persist in subsequent years. Furthermore, outcomes for non-incentivized conditions did not improve. Anecdotally there were concerns that the QOF made physicians practice in a more algorithmic, less patient oriented fashion. More studies are needed to evaluate the actual cost effectiveness, professional behavior and patient experience.

Infrastructure & Data Requirements to Measure and Support Primary Care

The current functionality of available EHR's, including their lack of interoperability and varying accuracy in data retrieval and reporting, along with a lack of staffing and physician buy in limits a practice's ability to measure primary care outcomes that matter. These practice limitations are further exacerbated by a lack of a centralized national infrastructure for creating validated patient centered measures. Financial incentives and support are needed in order to create infrastructures that adequately measure primary care.

Anderson KM, Marsh CA, Flemming AC, Isenstein H, Reynolds J. Quality Measurement Enabled by Health IT: Overview, Possibilities, and Challenges (Prepared by Booz Allen Hamilton, under Contract No. HHSA290200900024I.) AHRQ Publication No. 12-0061-EF. Rockville, MD: Agency for Healthcare Research and Quality. July 2012.

This report summarizes the current state of health information technology, and proposes challenges to consider and overcome in order to create an infrastructure that can move from process based to a patient-centered outcome based measurement of primary care. Challenges they cite are a lack of interoperability of EHR's, security and privacy issues that may arise from sharing data, lack of accuracy in automated measures reporting of current EHR's, lack of agreement about who is responsible for funding infrastructure and IT changes to support measurement, and a lack of a centralized infrastructure to develop and validate measures.

Ornstein, S. M., Nemeth, L. S., Nietert, P. J., Jenkins, R. G., Wessell, A. M., & Litvin, C. B. (2015). Learning from primary care meaningful use exemplars. The Journal of the American Board of Family Medicine, 28(3), 360–370.

This article attempted to discern which characteristics of practices were associated with higher performance on clinical quality measures using survey and EHR data of those practices who have demonstrated high performance on CQM's. They found that a majority of these exemplar practices had frequent staff education on CQM's, used EHR reminders (such as standing orders for labs and immunizations), and used the EHR for population management (i.e. identifying care deficiencies).

Chan. 2010. Review: electronic health records and the reliability and validity of quality measures: a review of the literature., Medical care research and review, 67(5), 503

This systematic review of the literature attempted to discern the reliability of data extracted from EHR's. The authors found that although some data were reliable, valid and comparable across systems, most of the data used for quality measurements such as labs, medications and problem lists were highly variable in EHR reporting. These finding suggest that EHR's at the time the article were written were not well equipped to accurately report quality measures.

Longo DR, Rothemich SF, Krist AH, et al. Quality Performance Monitoring, Data Collection, and Reporting: Report of Experiences from Primary Care Practices in the Virginia Ambulatory Care Outcomes Network. (Prepared by the Virginia Commonwealth University under Contract No. HHSA 290-2007-10011-2.) AHRQ Publication No. 15-0024-EF. Rockville, MD: Agency for Healthcare Research and Quality. April 2015

This report identified and reported barriers experienced by primary care practices as they attempted to conduct performance monitoring and offered potential solutions to these barriers. The three main barriers they identified were physician/staff buy in, EHR inadequacies and lack of financial resources. They suggest implementing a physician champion as a leader in each practice, federal funding to support expansion and improvement of EHR's (including on-site support and expertise), and practice redesign to support the AAFP's model of "a primary care based, patient centered approach to service balanced with a team-based approach to improving office functionality. " Based on the best practices the authors developed a process model for quality performance monitoring and reporting (appendix A) and a web based practice self-assessment tool (appendix B.)

1133 Connecticut Avenue, NW
Suite 1100, Washington, DC 20036

graham-center.org

University of Colorado I Department of Family Medicine
12631 E. 17th Ave., MS F496 I Aurora, CO 80045

farleyhealthpolicycenter.org