

Aligning Clinical Quality Measures for Blood Pressure Control: Potential Impact on Public Health and Healthcare Reporting and Quality Improvement Efforts

Blood pressure control is a key measure used in many clinical quality measure sets. Lack of measure alignment at both the “macro” and “micro” levels creates challenges for national-, state- and local-level public health and healthcare stakeholders. Aligning clinical quality measures has the potential to improve resource use efficiency, facilitate public health and healthcare integration, and support innovation in healthcare delivery. This white paper provides an overview of clinical quality measures commonly used in relation to blood pressure control, examines the potential impact of aligning these measures, and describes approaches federal partners and states in the [ASTHO Million Hearts State Learning Collaborative](#) are using to address such alignment.

Types of Measure Alignment

Clinical quality measure alignment can exist at both the “macro” and “micro” levels. “Macro-level alignment” refers to whether or not a in indicator for a specific health issue—in this case, blood pressure control—is included in a particular clinical quality measure set. “Micro-level alignment” refers to the extent to which the detailed specifications about the measure, including numerator and denominator age ranges and diagnostic codes to include and exclude,¹ are consistent across different clinical quality measure sets.

Current Blood Pressure Control Clinical Quality Measures

There are several clinical quality measures used for blood pressure control, and the most commonly used include:

- The [National Quality Forum measure 18 \(NQF 0018, “Controlling High Blood Pressure”\)](#), which is the preferred blood pressure control reporting measure for CDC grant programs and the national [Million Hearts Initiative](#). NQF 0018 is also a key clinical quality measure in numerous other reporting programs, including the [Centers for Medicare & Medicaid Services’ Electronic Health Records Incentive Program](#) and [Physician Quality Reporting System](#).
- HRSA’s [Uniform Data System \(UDS\) measure for blood pressure control](#).
- The National Committee for Quality Assurance’s [“Controlling High Blood Pressure”](#) measure from the Healthcare Effectiveness Data and Information Set (HEDIS). This measure was recently revised to reflect [2014 recommendations](#), which establish different systolic blood pressure control goals for individuals aged 60 to 85, and are published in the *Journal of the American Medical Association*.

Potential Impact of Aligning Blood Pressure Control Clinical Quality Measures:

- Stronger, sustained partnerships between public health and healthcare.
- Greater ability of healthcare partners to devote more time and resources to panel management and quality improvement activities.
- Increased time and resources for public health and healthcare partners to advance innovative healthcare delivery.

Each of these measures has slightly different definitions and specifications, which could have implications when comparing results across different measure sets and among clinical practice sites. A list of definitions can be found in Table 1 on page 6.

Potential Impact of Measure Alignment

Micro-level alignment, in particular, presents several challenges for state and local stakeholders. In many cases, the slight variation between blood pressure control measure specifications require healthcare providers, health centers (community-based primary care delivery sites that are often federally funded), health IT experts, and public health professionals to generate unique reports from their health centers' electronic health record (EHR) systems. This adds time and administrative burden to the public health and healthcare workforce. Aligning measures could allow health centers and public health agencies to devote more time to quality improvement efforts, rather than creating, analyzing, and interpreting duplicative reporting. States participating in the ASTHO Million Hearts State Learning Collaborative have expressed strong support to align blood pressure control measures across federal reporting systems. ASTHO conducted interviews with representatives from four states revealing several key themes about the potential positive impact of aligning blood pressure control measures:

Aligning measures will support stronger, sustained partnerships between public health and healthcare.

- HRSA-funded health centers are required to report the UDS measure to meet federal requirements. However, state health agencies generally collect NQF 0018 data for CDC grant reporting. This makes it difficult for state health agencies who partner with these health centers to meet the reporting requirements of both systems.
- Health centers in three of the four states interviewed experience reporting fatigue due to the additional time and resources needed to report on both UDS and NQF 0018. In some cases, state health agencies have lost participation in quality improvement initiatives from some health centers because reporting requirements are overwhelming.
- Participants in ASTHO's Million Hearts State Learning Collaborative identified HRSA's UDS and CDC's grant reporting (specifically 1305 "basic" and 1305 "enhanced" funding) as the highest-priority systems for alignment.ⁱ However, participants said that aligning HEDIS, Meaningful Use, and Patient-Centered Medical Home measure sets are also important.

Aligned measures will allow healthcare partners to devote more time and resources to quality improvement activities and data quality assurance, rather than measurement.

- Health centers are required to report up to 40-60 different measures to meet various funding and quality improvement plan requirements. Due to limited time and resources, some large health systems choose to focus on only four-six measures from specific domains.² This indicates a need to reduce the total number of measures to make quality improvement plans more focused, effective, and attainable.

ⁱ "1305" is the unofficial short name for the "State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health" CDC funding opportunity announcement (FOA). This FOA supports statewide implementation of cross-cutting approaches to promote health and prevent and control chronic diseases and their risk factors. Four chronic disease prevention programs (Diabetes; Heart Disease and Stroke Prevention; Nutrition, Physical Activity, and Obesity; and School Health) are included in this FOA. (Source: CDC. "Chronic Disease Prevention and Health Promotion." Available at <http://www.cdc.gov/chronicdisease/about/statepubhealthactions-prevcd.htm>. Accessed 8-4-14.)

- Some health centers receive health IT support through [health center controlled networks](#) to generate and run reports on various measures. However, others do not have access to these services. Health centers that must conduct their own reporting have additional administrative burden to generate a different report for each measure, which can be time consuming for both health center staff and their support networks.
- Most quality improvement models assume the presence of a Clinical Information System that produces high quality information to accurately measure impact of an initiative. Alignment of measures would improve data quality by focusing quality assurance activities on just a few key measures.

Data harmonization has the potential to free up public health and healthcare partners to advance innovative healthcare delivery.

- Aligning reporting for incentive-based federal initiatives, such as Meaningful Use or Patient Centered Medical Home certification, would reduce burden on health centers interested in pursuing recognition.
- As more federal funding is invested to support clinical quality improvement initiatives (for example, through the [State Innovation Models Initiative](#), which provides financial and technical support to states to develop and test state-led, multi-payer healthcare payment and service delivery models for Medicare, Medicaid, and the Children’s Health Insurance Program), it will become important to ensure federal reporting requirements align.
- States in the learning collaborative expressed that the need for alignment across clinical quality measure sets is not unique to blood pressure control and that many other health conditions and efforts, such as diabetes and cancer screening, face the same challenges.

The benefits of focusing on a single blood pressure control measure are demonstrated through ASTHO’s Million Hearts State Learning Collaborative.

- States appreciated that ASTHO’s Million Hearts State Learning Collaborative focuses on just a single measure (NQF 0018), which is helping health centers to see positive, measureable changes in blood pressure control among their patient populations in a short timeframe.

In addition, states indicated that aligning Meaningful Use standards for Certified EHR Technology (CEHRT) would help support health IT systems that can report on required measures (NQF 0018 and UDS). One state conducted an audit of 29 clinics and found that, even though 10 different EHRs used by these clinics met Meaningful Use 1 or 2 standards and had received the CEHRT designation, they were not capable of running a useable NQF 0018 or NQF 0059 report without vendor intervention. This resulted in additional cost and burden for health centers to work with vendors to create the reports. Aligning Meaningful Use standards for software capabilities with the most commonly used clinical quality measure sets would incentivize health IT vendors to create software that creates the required reports upon purchase.

Federal agencies including CDC, HRSA, and others, also experience challenges with the lack of alignment across clinical quality measures. In general, federal partners are challenged with lengthy and unsynchronized timelines for modifying clinical quality measures to reflect new evidence. For example, new cholesterol treatment guidelines were released by the American College of Cardiology and American Heart

Association in 2013, but the updated clinical quality measures for cholesterol will not be available for use until 2016 (Wall H, personal communication May 29, 2015).

Efforts to Address Measure Alignment

There are a wide range of efforts at the federal level focused on clinical quality measure alignment and specification harmonization. For example, HHS' Measurement Policy Council directs broad efforts around clinical quality measure alignment. In addition, the Affordable Care Act requires the publication of a [measures under consideration list](#), as well as the development of the [Measure Applications Partnership](#), which is a multi-stakeholder partnership that guides HHS on the selection of performance measures for federal health programs.

Within the context of Million Hearts, federal partners are addressing the challenges of both macro- and micro-level alignment in several ways. For example, the [Million Hearts Clinical Quality Measures Dashboard](#), developed by the CDC, is designed to display cardiovascular disease-related measures from a variety of quality reporting initiatives and systems focused on Million Hearts metrics related to the [ABCS of heart health](#). This dashboard allows Million Hearts partners to access and view quality measures from a variety of systems, including HEDIS, NQF, UDS, and others, all in the same place. In addition, because CDC recognizes the challenges in working with different measure specifications, the agency allows grantees to report blood pressure control measures using NQF 0018 or other "close analogs," such as UDS.

States in ASTHO's Million Hearts State Learning Collaborative are also addressing challenges and actively facilitating state-level dialogue related to measure alignment. Some of the states' progress is highlighted below.

The Vermont Department of Health (VDH) is informing conversations at the state level about including hypertension as a quality performance measure for shared savings programs among commercial and Medicaid accountable care organizations (ACOs) across the state. These conversations recently resulted in unanimous approval to include blood pressure control as a measure for these programs, and the measure is now under review by the [Green Mountain Care Board](#). VDH has found it very helpful to speak with many different health systems to determine the capabilities of their EHR systems in mining data from large patient populations.

The New York State Department of Health (NYSDOH) facilitated a discussion to develop a hypertension measurement and data plan for ASTHO's Million Hearts State Learning Collaborative to ensure aligned measurement across participating clinical and public health partners. This initial plan allowed stakeholders to build a hypertension registry. In addition, in partnership with a regional health information organization, NYSDOH is exploring opportunities to work with EHR vendors and clinical partners to standardize blood pressure data entry and reporting into a regional health information exchange.

In New Hampshire, a team of partners, including the New Hampshire Department of Health and Human Services, Cheshire Medical Center, and others, leveraged the Community Health Access Network (CHAN), the only health center controlled network in New Hampshire. CHAN hosts a robust data warehouse that supports the creation of clinical and operational reports for health center members, and has the capacity to develop reports as needed for multiple blood pressure control measures. One challenge involves the fact that the largest health system in the state, Dartmouth-Hitchcock, developed a different blood pressure

control measure, which creates a barrier to comparing blood pressure control rates statewide across providers. Continued statewide conversations will be needed as smaller health systems, commercial insurers, and other key clinical partners are engaged.

The Oklahoma State Department of Health (OSDH) partnered with the Oklahoma Foundation for Medical Quality (OFMQ), the state's regional extension center, to assess the reporting capabilities of EHR systems in clinical sites participating in the Million Hearts State Learning Collaborative and 1305 funded activities. An initial assessment found that many of these sites did not have EHR systems that could generate reports on blood pressure control. With OFMQ support, these sites have improved capacity to generate reports that help providers understand blood pressure control rates among their patients. In addition, as part of its SIM grant activities, OSDH is hosting a meeting of state-level stakeholders including payers, hospital associations, and other key partners to discuss broad issues around payment reform including measure alignment.

Conclusion

While challenges continue to exist, there are a wide variety of efforts to address clinical quality measure alignment at both the state and national levels. Ongoing dialogue about these challenges, as well as innovative strategies to address them, will help partners to support effective resource allocation and strengthened public health and healthcare partnerships, particularly around blood pressure control.

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¹ Wall H. "Hypertension Control Clinical Quality Measures: The Joys and Challenges of Micro- and Macro-level Alignment." Presented during the ASTHO webinar "Working Across Federal Hypertension Measures" on April 20, 2015. Available at <https://astho.adobeconnect.com/a1142349279/pzi31r7cc7/?launcher=false&fcsContent=true&pbMode=normal>. Accessed 5-13-15.

² Nerenz DR, Neil N. "Performance Measures for Health Care Systems." Center for Health Management Research. 2001.

TABLE 1: Comparison of Blood Pressure Control Measure Specifications Across Common Clinical Quality Measure Sets

Note: significant differences in specifications are underlined

Measure Name	NQF Measure 0018 (“Controlling High Blood Pressure”)	UDS measure for high blood pressure control	HEDIS 2015 “Controlling High Blood Pressure” Measure*
Description	The percentage of patients 18-85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90) <u>during the measurement year</u> . ³	The percentage of patients 18-85 years of age with diagnosed hypertension whose blood pressure was less than 140/90 <u>at the time of the last reading</u> . ⁴	The percentage of members 18-85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled <u>during the measurement year</u> . ⁵
Numerator	The number of patients in the denominator whose last blood pressure reading was less than 140/90.	The number of patients in the denominator whose last blood pressure reading was less than 140/90.	<ul style="list-style-type: none"> • Members <u>18-59 years of age</u> as of Dec. 31 of the measurement year whose most recent blood pressure reading was less than 140/90 mm Hg. • Members <u>60-85 years of age</u> as of Dec. 31 of the measurement year with a <u>diagnosis of diabetes</u> whose blood pressure was less than 140/90 mm Hg. • Members <u>60- 85 years of age</u> as of Dec. 31 of the measurement year without a <u>diagnosis of diabetes</u> whose blood pressure was less than 150/90 mm Hg
Denominator	All patients 18-85 years of age as of Dec. 31 of the measurement year, <ul style="list-style-type: none"> • With a diagnosis of hypertension (ICD-9-CM codes: 401.0, 401.1, 401.9),⁶ 	All patients 18-85 years of age as of Dec. 31 of the measurement year, <ul style="list-style-type: none"> • With a diagnosis of hypertension (ICD-9-CM codes: 401.xx - 405.xx),⁷ 	Members 18-85 years of age as of Dec. 31 of the measurement year <u>with at least one outpatient visit with a diagnosis of hypertension during the first six months of the measurement year</u> .

	<ul style="list-style-type: none"> Who were first diagnosed by the health center as hypertensive at some point before June 30 of the measurement year, and <u>Who had at least one outpatient encounter with a diagnosis of hypertension during the first six months of the measurement year.</u> 	<ul style="list-style-type: none"> Who were first diagnosed by the health center as hypertensive at some point before June 30 of the measurement year, and <u>Who have been seen for medical services at least twice during the reporting year.</u> 	
Exclusions	Pregnant patients, patients with end-stage renal disease (ESRD), and <u>all patients who had an admission to a non-acute inpatient setting.</u>	Pregnant patients and patients with ESRD.	Pregnant patients, patients with ESRD <u>or kidney transplant, or patients with non-acute inpatient encounter during the measurement year. (Optional)</u>

***NOTE:** The HEDIS measure was recently revised to reflect [2014 recommendations](#) published in the *Journal of the American Medical Association*, which establishes different systolic blood pressure control goals for individuals 60-85 years of age.

³ National Quality Forum. "Measure 0018: Controlling High Blood Pressure." Available at <http://www.qualityforum.org/QPS/0018>. Accessed 7-14-14.

⁴ HRSA Health Center Program. "Clinical and Financial Performance Measures." Available at <http://bphc.hrsa.gov/qualityimprovement/performance/performancemeasures/index.html>. Accessed 5-13-15.

⁵ AHRQ. "Measure Summary: Controlling high blood pressure." Available at <http://www.qualitymeasures.ahrq.gov/content.aspx?id=48620>. Accessed 5-13-15.

⁶ American Urological Association. "Measure #236 (NQF 0018): Controlling High Blood Pressure." Available at <https://www.auanet.org/common/pdf/practices-resources/quality/pgrs-toolkit/2014/2014-Measure-236.pdf>. Accessed 6-20-15.

⁷ HRSA Bureau of Primary Care. "UDS Reporting Instructions for Health Centers: Calendar Year 2014." Available at http://www.bphcdata.net/docs/uds_rep_instr.pdf. Accessed 6-10-15.