



## Pilot Testing a Rural Health Clinic Quality Measurement Reporting System

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### INTRODUCTION

More than 4,000 Rural Health Clinics (RHCs) serve the primary care needs of rural communities.<sup>1</sup> As such, RHCs are an important source of primary care and other essential health services for rural residents. Unfortunately, the Rural Health Clinic Program is plagued by a lack of data on the financial, operational, and quality performance of participating clinics.<sup>2</sup> In light of the significant expansion of quality performance reporting and growing use of performance-based payment approaches, however, it is critically important that RHCs not be “left behind,” unable to compete in this changing health care market. To this end, we piloted the reporting and use of a small set of primary care-relevant quality measures by a geographically diverse sample of RHCs. This Policy Brief reports on the results of this pilot with a focus on assessing the feasibility and utility of the reporting system and quality measures for the participating RHCs.

### BACKGROUND

The growing focus on accountable care, pay for performance, and other quality and value-based health care incentive payments systems has accelerated interest in and the use of quality measures as part of provider strategies to improve health care quality.<sup>3-4</sup> In addition to pay for performance, other public and private organizations have developed measurements systems to enable consumers, employers, and health plans to assess provider quality.<sup>3-4</sup> These quality-monitoring systems include the Centers for Medicare & Medicaid Services’ (CMS) Hospital Compare and Physician Quality Reporting System (PQRS); the Federal Office of Rural Health Policy’s (FORHP) Medicare Beneficiary Quality Improvement Program (MBQIP); the Leapfrog Group’s Hospital Safety Score; the Joint Commission’s Oryx system; and the National Committee for Quality Assurance’s Healthcare Effectiveness Data and Information Set (HEDIS).<sup>3-5</sup> Increasingly, private and public accountable care/shared savings and other payment methods are tied to quality performance.<sup>4</sup>

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### Key Findings

This study demonstrates the feasibility of a Rural Health Clinic (RHC) quality measurement and benchmarking (QM/BM) system.

Core RHC quality measures should focus on diabetes, blood pressure control, immunizations, medication management, and tobacco use interventions.

Elements of a successful quality measurement and reporting system include easy to use data entry and analysis tools, technical support, peer groupings for benchmarking, and shared learning opportunities.

Pilot RHCs used quality data primarily for internal quality improvement and reported improved quality performance.

Reported barriers to participation include data extraction difficulties from clinic records, limited staff time to collect and report data, and overall clinic reporting burden.

Dissemination of the lessons learned from clinics already participating in quality measurement and reporting are needed to support other RHCs interested in reporting quality data.

The lack of financial and/or other incentives inhibits RHC participation in quality reporting systems.

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In January 2015, Health and Human Services (HHS) Secretary Burwell announced HHS's delivery system reform initiative to accelerate the adoption of value-based payment systems within the Medicare and Medicaid programs.<sup>6</sup> The goals of this initiative are to test new alternative payment models (APMs); increase the linkage of Medicaid, Medicare fee-for-service, and other payments to value; and create transparency on cost and quality information. The Medicare Access & CHIP Reauthorization Act of 2015 (MACRA) supports HHS's Delivery System Reform Initiative by creating two paths to participation in Medicare quality programs: the Merit-Based Incentive Payment System (MIPS) and APMs.\*<sup>7</sup>

Since HHS's Delivery System Reform Initiative and the APMs and MIPS implemented under MACRA target providers reimbursed under the Medicare physician fee schedule, these changes are not immediately relevant to RHCs. Nevertheless, these initiatives are likely to accelerate the growing adoption of pay-for-performance payment systems by commercial insurers that are not required to reimburse RHCs on a cost basis. Over time, RHCs will likely be expected to participate in quality reporting programs.

The limited availability of RHC quality and performance data is due principally to the fact that RHCs are not currently eligible to participate in PQRS because of their unique Medicare and Medicaid RHC cost-based reimbursement systems.<sup>†1,8,9</sup> RHC participation in private quality reporting and performance-based payment systems is unknown. Additional factors may also contribute to the limited availability of RHC quality information. In our work with the RHC program and RHCs, we have observed that compared with other federally recognized providers such as Federally Qualified Health Centers (FQHCs), RHCs tend to be more heterogeneous in structure and identity. For example, FQHCs have similar organizational structures and group identity in that they all must be non-profit organizations focused on serving low income and uninsured individuals. In contrast, RHCs may be freestanding entities (i.e., independent) or provider-based practices (i.e., owned and operated under the auspices and supervision of the parent organization, most

typically a hospital). In terms of ownership, they may be government-owned, not-for-profit, or for-profit entities. Many RHCs are private physician practices that converted to RHC status.<sup>10</sup> As a result, many tend to identify more as physician practices than as RHCs. A Commonwealth Fund/Kaiser Family Foundation survey found that 50 percent of primary care physicians and close to 40 percent of nurse practitioners and physician assistants hold a negative view of quality metrics and believe their use has a negative impact on quality of care.<sup>11</sup> RHC providers likely share this view. These attitudes, combined with the diversity of RHCs and the lack of consistent identity across RHC practices, pose challenges for efforts to promote consistent quality and performance measurement.

## ORIGINS AND DESIGN OF THE PILOT

This project had two principal aims: (1) to engage RHC leaders, quality experts, and others to develop a core set of RHC relevant quality measures, and (2) to develop and pilot the reporting of those measures with a national cohort of RHCs. These aims frame the two phases of this project, described below.

**Phase One-Quality Measure Development:** The overall goals of Phase One of the project were to identify a set of 15 to 20 RHC quality measures, and to develop a framework and process to pilot the reporting of the measures with a cohort of RHCs. In September 2012, the FORHP convened a meeting of RHC experts and stakeholders in Washington, DC to begin the process of identifying a set of RHC quality measures. The meeting participants (Steering Committee) examined a wide range of potential quality measures, ultimately narrowing the list to 57 potential measures. Recognizing that the measure set needed additional work, we held multiple conference call meetings with the Steering Committee to develop a smaller, more targeted set of measures. Committee members reviewed existing primary care quality measures and identified a set of quality measures specific to RHCs using a ranking tool with which each committee member ranked each potential quality measure's importance, usability, feasibility, and scientific acceptability. The Committee also considered whether measures were consistent with those used by other primary

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\*The MIPS, which will be implemented in 2019 and apply to Medicare Part B providers, combines parts of the Physician Quality Reporting System (PQRS), the Value Modifier (VM or Value-based Payment Modifier), and the Medicare Electronic Health Record (EHR) incentive program into one single program based on quality, resource use, clinical practice improvement, and meaningful use of certified EHR technology.

†Under Medicare and Medicaid, RHCs are paid on a cost-based, all-inclusive rate per covered visit for a defined set of "RHC services" which includes core physician and non-physician outpatient services. Medicare claims for the defined set of RHC services are submitted using Medicare Part A billing methodology on the Uniform Bill-04 (UB-04) form using a defined set of Revenue Codes while claims for non-RHC services are submitted to Medicare Part B on the CMS 1500 form using current procedural terminology codes.

care providers and existing quality reporting programs to allow comparisons across RHCs and other primary care provider types and settings (e.g., FQHCs, private practices) and the extent to which measures were actionable by RHCs. Through the ranking process, the Committee developed a consensus set of 18 RHC measures, including 5 required core measures, and 13 optional measures (Table 1). The project team submitted this list of measures to FORHP in November 2013 along with a plan to recruit a cohort of RHCs to test the measures.

**Phase Two-RHC Recruitment and Reporting:** Based on the deliberations of the Steering Committee, the original plan was to pilot the reporting and use of the RHC quality measures with approximately 100 RHCs recruited from 10 to 13 states. No attempt was made to randomly select RHCs to participate. Anticipating that it would be difficult to recruit RHCs into the pilot, we chose to target volunteer RHCs. The idea behind this strategy was that if we

could demonstrate the feasibility and utility of the quality reporting systems with this cohort of “early adopter” clinics, that it would then be possible to recruit others into the system.

With input from the Steering Committee, we identified 12 states with large numbers of RHC practices to target for recruitment into this pilot: California, Colorado, Illinois, Iowa, Louisiana, Maine, Michigan, North Carolina, Oregon, South Carolina, Texas, and Washington. In addition to considering the number of RHCs, we sought states in which the State Offices of Rural Health (SORHs) and/or State Rural Health Clinic Associations were actively engaged with RHCs. State partners were asked to assist in recruiting and retaining RHCs and to help support RHC participation in the data collection and evaluation process.

Evaluating options for establishing a data-reporting portal that RHCs could easily use to report their quality measures was a key component of our Phase Two work. We had three key requirements for our

**Table1: Consensus Rural Health Clinic Measures Set\***

<b>Core Measures</b>
NQF #18 – Controlling High Blood Pressure
NQF #28b – Tobacco Use Cessation Intervention
NQF #38 – Childhood Immunization Status
NQF #59 – Diabetes: Hemoglobin A1c Poor Control
NQF #419 – Documentation of Current Medications – Adult/Geriatric
<b>Optional Measures</b>
NQF #24 – Weight Assessment & Counseling for Nutrition & Physical Activity for Children/Adolescents
NQF #36 – Asthma – Appropriate Medications for People with Asthma
NQF #41 – Influenza Immunization
NQF #43 – Pneumonia Vaccination Status for Older Adults
NQF #56 – Diabetes: Foot Exam – Adult/Geriatric
NQF #57 – Diabetes: Hemoglobin A1c Testing
NQF #61 – Diabetes: Blood Pressure Control
NQF #62 – Diabetes: Urine Protein Screening/Medical Attention for Nephropathy
NQF #63 – Comprehensive Diabetes Care: LDL-C Screening
NQF #68 – Ischemic Vascular Disease – Use of Aspirin or Another Antithrombotic – Adult/Geriatric
NQF #73 – IVD: Blood Pressure Management – adult/geriatric
NQF #75 – Ischemic Vascular Disease: Complete Lipid Profile and LDL-C Control <100 mg/dL
NQF #421 – Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up

\* See Appendix A for National Quality Forum’s specifications for each measure.



data portal. First, the portal had to be secure and protect the confidentiality of participating clinics. Second, the portal needed to minimize the burden on clinics in terms of uploading their data. Third, it had to allow the production of benchmarking reports for the participating clinics. After exploring potential vendors, we chose to use the Quality Health Indicator (QHi) project for our data and reporting portal. QHi is a web-based quality and performance-benchmarking program for small rural hospitals.†

QHi offered access to an established data portal, well received by Critical Access Hospitals and other rural hospitals from the participating states. It also was a cost effective option with an annual fee of \$200 for RHCs associated with a participating QHi hospital and an annual fee of \$500 for RHCs not associated with a participating hospital. We were also able to utilize QHi's reporting mechanisms and trained staff. Additionally, QHi and the Michigan Center for Rural Health and member hospitals had begun to identify a set of core RHC quality measures that aligned closely with our measures set. We entered into an agreement with QHi beginning in 2014.

**RHC Recruitment:** We began recruiting and enrolling RHCs in early 2014; enrollment continued slowly through May 2015. Through the efforts of the study team, state stakeholders, and QHi, 61 RHCs (56 provider-based and 5 independent clinics) were enrolled in the QHi portal as of August 2015. This was far below our projected enrollment of 100 RHCs in this pilot as were the number of states participating. Michigan and Kansas had the greatest number of participants at 35 and 14 respectively. The remaining twelve participating clinics were located in California, Colorado, Maine, and Wyoming. The project team has access to the measures for all clinics registered and reporting data through QHi through September 2015.

As anticipated, recruiting clinics was a significant challenge despite the best efforts of the participating state partners, QHi staff, and our project team. The fact that some of the targeted state partners were unable to participate fully in this project for reasons related to staff turn-over and the development of other priority initiatives contributed to low RHC participation in those states. In addition, the general disinclination of RHCs to participate in research or

other special projects (due to the relative lack of staff and other resources to do so, as well as perceptions of limited returns to individual clinics), which we have encountered in numerous other RHC-related projects, was undoubtedly a factor.

The following sections describe the extent of participation and reporting by measure by RHCs. This is followed by a discussion of the results of our survey of participating RHCs, which was intended to help learn more about the measures and the clinics' reporting experience.

## **PARTICIPATION AND DATA REPORTING BY MEASURE**

We analyzed 21 months of data submitted by the clinics beginning in January 2014 and ending in September 2015. Despite having 61 clinics registered in the program, the level of reporting on any given measure was substantially lower as RHCs did not report on all measures.

**Utilization of Core Measures:** Appendix B summarizes the five core measures originally selected for this pilot as well as an additional sixth QHi core measure (NQF #421-Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up) which is an optional measure in the pilot. The tables report the number of clinics reporting each month, the mean value for the measures, and the range of values reported by participating clinics. The most commonly reported measures were:

- NQF #18-Controlling High Blood Pressure with between 16 to 21 clinics reporting each month in 2014, and 4 to 24 clinics reporting each month through September 30, 2015;
- NQF #28b-Tobacco Use Cessation Intervention with between 17 to 22 clinics reporting each month in 2014, and 6 to 26 clinics reporting each month through September 30, 2015;
- NQF #59-Diabetes Hemoglobin A1c Poor Control with between 18 to 27 clinics reporting each month in 2014, and 7 to 36 clinics reporting each month through September 30, 2015; and
- NQF #421-Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up with between 7 to 23 clinics reporting each month in

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†The Quality Health Indicator (QHi) Project was developed through a partnership of the Kansas Rural Health Options Project (the State Flex Program), the Kansas Department of Health and Environment's Office of Rural Health (KDHE), the Kansas Hospital Association (KHA), and the Kansas Hospital Education and Research Foundation (KHERF). QHi is currently used by more than 270 small rural hospitals and 86 clinics in 16 states (i.e., Arizona, California, Colorado, Illinois, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Missouri, Nebraska, New Mexico, Oregon, Washington, and Wyoming). Medicare Rural Hospital Flexibility Program (FLEX) grant funds from the Federal Office of Rural Health Policy, Health Resources and Services Administration supported the development of QHi and continues to support hospital (Critical Access Hospital) participation.

2014, and 5 to 34 clinics reporting each month through September 30, 2015.

Among the core measures, NQF #38 – Childhood Immunization Status and NQF #419 – Documentation of Current Medications-Adult/Geriatric were the least reported of the measures. The level of reporting for NQF #38 ranged from a low of 3 clinics per month to a high of 9 clinics per month during the 21-month period. Monthly reporting for NQF #419 ranged from a low of 2 to a high of 18 during the reporting period with a peak in reporting during January, February, and March of 2015.

We examined variations in reporting patterns for the core measures for 2014 and 2015. We observed that participants generally reported on a consistent set of measures over time. In 2014, we observed relatively consistent reporting across the time period with some new clinics participating and some that ceased to report. A small number would report inconsistently from month to month. In 2015, we observed consistent reporting for the first three months of the year, and a relatively large drop off in monthly reporting beginning in April and a second, smaller wave of drop offs in June. Unfortunately, we do not have enough information to determine the reasons behind these changes in reporting patterns.

**Utilization of Optional Measures:** In general, the optional measures were not heavily reported by participating RHCs. (Data not reported, tables are available by request.) The exceptions were the diabetes-related measures that were more frequently used by participants as follows:

- NQF #56 – Diabetes: Foot Exam – Adult/Geriatric with between 9 to 16 clinics reporting each month in 2014, and 5 to 16 clinics reporting each month through September 30, 2015;
- NQF #57 – Diabetes: Hemoglobin A1c Testing with between 9 to 16 clinics reporting each month in 2014, and 4 to 14 clinics reporting each month through September 30, 2015;
- NQF #61 – Diabetes: Blood Pressure Control with between 9 to 16 clinics reporting each month in 2014, and 4 to 14 clinics reporting each month through September 30, 2015;
- NQF #62 – Diabetes: Urine Protein

Screening/Medical Attention for Nephropathy with between 5 to 13 clinics reporting each month in 2014, and 5 to 14 clinics reporting each month through September 30, 2015; and

- NQF #63 – Comprehensive Diabetes Care: LDL-C Screening with between 8 to 13 clinics reporting each month in 2014, and 5 to 14 clinics reporting each month through September 30, 2015.

The remaining measures were minimally reported by participating clinics, with no submissions during many months to a high of no more than six clinics reporting (NQF #24 – Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents) for any given month.

As with the core measures, we examined the variations in reporting patterns for the optional measures for 2014 and 2015. We observed more consistent reporting patterns for the optional measures throughout both time periods, particularly for the diabetes related measures. In 2014, the level of reporting increased throughout the year as new clinics began to report the measures. In 2015, the level of reporting stayed consistently high with some minor drop off towards the end of the reporting cycle. Again, we cannot determine why some of the clinics ceased to report the measures.

## **MEASURES, MEASURE USE, AND REPORTING EXPERIENCE: PARTICIPATING RHCs**

In the summer of 2015, we conducted a survey of all participating RHCs to gather clinic input on the measures, their perceived value to the clinic, their use in improving RHC quality performance, the reporting burden, the value of the data collected for internal and external reporting, and the extent to which participating clinics plan to continue using the measures following the conclusion of the pilot. We sent each clinic registered with QHi a unique link to the survey. Three additional email reminders were sent to non-respondent clinics and state contacts were asked to follow up with participating RHCs in their states to encourage participation. In total, 23 of the 61 participating clinics completed the survey for a response rate of 38 percent. Not all respondents answered every question, however. As a result, the tables report the actual number of respondents for each question.

Seventy eight percent (18 of 23) of respondents to the survey indicated they used an electronic health record (EHR) to calculate the measures. Seventeen percent (4 of 23) used a combination of an EHR and paper records. One clinic used paper records alone. All respondents reported they plan to continue to

report on and use the quality measures. It is worth noting that there is likely some response bias for those that report that they plan to continue to report on and use the quality measures as they are not only participants in the study but responded to the survey. As such, they may be more positive regarding the use of the measures than those that did not respond.

**Rankings of the Measures:** To assess the value of individual measures in the core and optional measures sets, we asked participants to indicate whether each measure was valuable to their clinic’s quality improvement activities. The results for the core measures are summarized in Table 2.

Among the core measures, all measures, with the exception of NQF #421 – Body Mass Index Screening and Follow Up, were considered valuable to their quality improvement activities by close to 60 percent or more of respondents. NQF #421, which is a core measure in the QHi measures set and an optional measure in the set we piloted was rated valuable by 41 percent (9 of 22) of respondents.

The respondents’ rankings of the value of core measures are often inconsistent with the extent of reporting of the measures by participating clinics. Although NQF #421 received the lowest ranking

**Table 2: Percentage of Respondents Identifying Core Measures as Valuable to RHC Quality Improvement Activities (n=22)**

	<b>Response</b>
NQF #59 – Diabetes: Hemoglobin A1c poor control	91%
NQF #18 – Controlling High Blood Pressure	77%
NQF #419 – Documentation of Current Medications – Adult/Geriatric	68%
NQF #28b – Tobacco Use Cessation Intervention	59%
NQF #38 – Childhood Immunization Status	59%
NQF #421 – Body Mass Index (BMI) Screening and Follow-Up (QHI Core and MHRHC Optional Measure)	41%

**Table 3: Percentage of Respondents Identifying Optional Measures as Valuable to RHC Quality Improvement Activities (n=22)**

	<b>Response</b>
NQF #57 – Diabetes: Hemoglobin A1c Testing	91%
NQF #61 – Diabetes: Blood Pressure Control	59%
NQF #41 – Influenza Immunization	59%
NQF #62 – Diabetes: Urine Protein Screening/ Medical Attention for Nephropathy	50%
NQF #63 – Comprehensive Diabetes Care: LDL-C Screening	46%
NQF #56 – Diabetes: Foot Exam – Adult/Geriatric	46%
NQF #28a – Tobacco Use Screening (QHi Optional Measure)	41%
NQF #43 – Pneumonia Vaccination Status for Older Adults	41%
NQF #68 – Ischemic Vascular Disease: Use of Aspirin or Another Antithrombotic – Adult/Geriatric	27%
NQF #36 – Asthma – Appropriate Medications for People with Asthma	23%
NQF #73 – IVD: Blood Pressure Control – Adult/Geriatric	23%
NQF #75 – Ischemic Vascular Disease/CVD: Complete Lipid Profile and LDL-C Control <100 mg/dL	23%
NQF #24 – Weight Assessment and Counseling for Nutrition and Physical Activity for Children/ Adolescents	14%
None of the Above/Not Applicable	5%



of the six measures (9 of 22 clinics found it to be valuable), it was one of the four core measures most frequently reported by participants. Conversely, a majority of respondents (13 and 15 of 22 clinics respectively) ranked NQF #38 and #419 as valuable, but these two core measures had the lowest level of reporting during the 21-month reporting period.

Among the **optional measures** (see Table 3), the following measures were considered valuable by 50 percent or more of participants: NQF #57 – Diabetes: Hemoglobin A1c Testing (20 of 22); NQF #61 – Diabetes: Blood Pressure Control (13 of 22); NQF #41 – Influenza Immunization (13 of 22); and NQF #62 – Diabetes: Urine Protein Screening/Medical Attention for Nephropathy (11 of 22). The remaining measures (Table 3) were considered valuable by less than 50 percent of survey respondents. One respondent reported that none of the optional measures were valuable or were not applicable to his/her clinic.

The higher percentage of respondents that considered the diabetes measures valuable to their quality improvement activities (NQF #57, NQF #61, and NQF #62) are consistent with the higher rates of reporting for these three optional measures. However, NQF #41 – Influenza Immunization was ranked as valuable by 59 percent of participants but was not reported consistently by a high percentage of participating clinics.

**Use of the Core Measures for Quality Improvement:**

The two most commonly reported uses of the quality measures by survey respondents include internal reporting of quality performance

(20 of 22 respondents) and benchmarking for performance improvement (18 of 22) (See Table 4). Forty one percent (9 of 22) use the measures for external or public reporting of quality data. Forty-six percent report (10 of 22) using the measures to monitor specific quality improvement initiatives (such as chronic care management). A similar percentage report using the measures to support participation in practice transformation initiatives (such as patient centered medical homes or accountable care organizations).

Twenty three percent (5 of 22) of respondents are supplementing the quality data from this pilot with additional data obtained from other sources (data not shown). These sources include data from peer reviews and chart audits; data from continuous quality monitoring for meaningful use, performance Improvement projects, and HEDIS; and utilization data obtained from accountable care organizations in which the RHC participates.

**Staff Access to Quality Data:** All participants reported sharing quality data with clinical and administrative staff. Table 5 summarizes the types of staff that receive their quality data. Participants share quality data widely with the clinical, quality improvement, and administrative staff and their boards of directors when relevant.

**Challenges and Barriers to the Use of Quality Measures:** Table 6 summarizes the barriers/challenges to use of the quality measures reported by participants. The most commonly reported barriers/challenges included difficulty extracting

**Table 4: Use of Measures by RHCs to Manage Quality (n=22)\***

	<b>Response</b>
Internal reporting of quality performance	91%
Benchmarking for performance improvement	82%
Monitor specific quality improvement initiatives (e.g., chronic care management)	46%
Participation in practice transformation initiatives (e.g., Patient Centered Medical Home)	46%
External/public reporting of quality performance	41%
Participation in state or national pay for performance initiatives	32%
Provide data to health plans and third party payers	23%
Share with patients	18%
Part of provider compensation strategies (e.g., performance bonuses, etc.)	5%
Part of provider evaluations	5%
Marketing/promotional purposes	0%

\* Respondents could select more than one response; percentages for this table do not equal 100%.

**Table 5: Types of RHC Staff Receiving Quality Data (n-22)\***

	<b>Response</b>
Physician(s)	100%
Nurse practitioner(s)	86%
Physician assistant(s)	86%
Quality improvement staff	82%
Administrative staff	82%
Board of Directors	68%
Nursing staff	64%

\* Respondents could select more than one response; percentages for this table do not equal 100%.

**Table 6: Challenges/Barriers to the Use of the Quality Measures (n = 22)\***

	<b>Response</b>
Difficulty extracting the data from their EHR	77%
Availability of staff time to collect and report measures	55%
Reporting burden	46%
Difficulty of manual data extraction from paper records for some / all of the measures	18%
The measures are not useful to staff / clinicians	9%
Measures not relevant to clinic quality management needs	9%
Prefer to use other quality measures	5%

\* Respondents could select more than one response; percentages for this table do not equal 100%.

**Table 7: Benefits to the Use of the Measures by RHCs (n = 22)\***

	<b>Response</b>
Improved clinic performance on the reported quality measures	73%
Improvements in clinical processes, clinical decision support, or care delivery	68%
Qualified for pay for performance/incentive payments	32%
Improved patient satisfaction	32%
Enhanced ability to attract new patients and retain existing patients	23%
Supported recognition as a Patient Centered Medical Home	18%
Improved clinical reputation	14%
Not applicable / no benefits from use	14%

\* Respondents could select more than one response; percentages for this table do not equal 100%.



data from their EHRs (17 of 22 respondents), availability of staff time to collect and report on the measures (12 of 22), and the burden of reporting (10 of 22). One respondent reported preferring to use other quality measures.

**Benefits to the Use of Quality Measures:** The benefits of using the measures reported by study participants are reported in Table 7. The two most commonly identified benefits were improved clinic performance on the reported quality measures (16 of 22 respondents) and improvements in clinical processes, clinical decision support, or care delivery (15 of 22). Close to one third of participants (7 of 22) reported that the use of the quality measures enabled their clinics to qualify for pay for performance/incentive payments and/or improve patient satisfaction. Fourteen percent (3 of 22) reported no benefits from their use.

**Opportunities to Enhance or Expand Use of Quality Measures:** Participants were asked to identify resources and opportunities that would enhance the use and reporting of the quality measures (Table 8).

the same measures across RHCs. Another noted that his clinic was part of an RHC quality group but that the members did not “get a lot of time together to really share improvement ideas.” He further noted that participants “certainly do learn and implement ideas from this group” but there is “little in the way of ready to go ideas and content that focuses on the actual quality improvement process.” A third respondent stated that a major reason why his clinic participated in the project was to be able to compare their performance against other provider-based RHCs. He noted that provider-based clinics are typically run by a hospital administrative team that does not know what ambulatory clinical data should look like. He thought that data reported through this project could provide a “real apples to apples” comparison for RHCs. Another commenter suggested it would be helpful to clarify and integrate either Stage 2 Meaningful Use and/or the CMS’ PQRS measures. The final respondent requested ideas to help “get providers on board with quality reporting.”

**Table 8: Opportunities to Enhance/Expand Use and Reporting of Quality Measures\***

	Response
Enhanced reimbursement	64%
Availability of TA/support for data extraction and reporting	59%
Ability to participate in collaborative RHC-focused quality improvement networks	55%
Availability of technical assistance/support for data analysis and benchmarking	46%
Greater participation by other RHCs for purposes of benchmarking	41%
Availability of technical assistance/support for quality improvement tools and strategies	36%
Availability of technical assistance/support for use of data for decision making	14%

\* Respondents could select more than one response; percentages for this table do not equal 100%.

The most common responses were enhanced reimbursement (14 of 22 respondents), technical assistance (TA) for data reporting (13 of 22), ability to participate in collaborative RHC-focused quality improvement networks (12 of 22), TA for data reporting (10 of 22), and greater participation by other RHCs for purposes of benchmarking (9 of 22).

**Additional Observations on the Use of Quality Measures:** Finally, respondents were asked to provide additional qualitative comments/thoughts on the use of the RHC quality measures. Although few participants responded (n=5), the primary theme of these comments focused on the need for collaborative RHC-focused quality tools and initiatives. One respondent suggested the need to coordinate clinic measures (as is done for hospitals) to encourage the use and reporting of

## DISCUSSION AND POLICY IMPLICATIONS

While this pilot did not achieve the RHC enrollment we had hoped for, several important objectives were met. First, a Steering Committee of diverse RHC and rural health stakeholders identified a core set of set of quality measures relevant to the day-to-day clinical activities of RHCs. Second, the pilot demonstrated the technical feasibility of an RHC quality measurement and benchmarking system through a partnership with QHi with a cohort of 61 RHCs. QHi offered an established and reliable data portal operated by a trusted vendor. In addition, the reporting platform has numerous other benefits including access to needed technical support, an easy-to-use data entry, analysis, and reporting system, the ability to benchmark against relevant peer groups, and a process for shared learning

and information sharing. Through this pilot, we have gained insight into the ways in which cohort clinics used the quality data and measures developed through this project, the challenges and barriers they experienced to collecting, reporting, and benchmarking quality data through the QHi system, their perceived benefits from doing so, and opportunities to enhance and expand the use of quality measures and reporting systems. These findings should be used with caution however, as they represent the experiences of a group of “early adopter” clinics and may not be completely generalizable to all RHCs.

Participating RHCs reported they used the data primarily for internal purposes such as benchmarking for performance improvement, internal reporting of quality performance, and, to a lesser extent, monitoring specific quality improvement initiatives, external/public reporting of quality performance, and participation in practice transformation initiatives. Improved clinical performance on the reported measures and improvements in clinical processes, decision support, and/or care delivery were the two most commonly identified benefits reported by participants. Extracting data from the clinic’s EHR, the limited availability of staff time to collect data and report on the measures, and the overall reporting burden on the clinic were the most commonly reported barriers/challenges.

When asked about what would encourage them to expand the use of the quality measures and reporting system, RHCs noted the importance of (1) technical assistance and/or support for data reporting, data analysis, and benchmarking, (2) opportunities to participate in collaborative RHC-focused quality improvement networks, and (3) greater participation by other RHCs for purposes of benchmarking. They also mentioned the need for increased reimbursement to support the staff needed to participate.

The limited RHC enrollment in this pilot highlights the difficulty of voluntarily engaging RHCs in the use of quality measures for benchmarking and public reporting. It is important to examine some of the reasons for this. RHCs, by virtue of their Medicare Part A billing and Medicaid prospective payment methodologies, are exempt from CMS’ PQRS and other quality measurement programs.<sup>7</sup> As a result, many have limited experience with the reporting and use of quality metrics. Moreover, most RHCs have no real incentives (financial or otherwise) to participate in an RHC-focused quality reporting system.

Although RHCs in the pilot noted difficulties extracting the data from their EHRs necessary for the reporting of the pilot measures, EHR adoption is not likely to have affected participation in this pilot. In a recent study, we documented RHCs’ EHR adoption rates consistent with other types of physician practices. Nearly three-quarters (72 percent) of RHCs reported adoption and implementation of EHR technology and an additional 11 percent of clinics reported that they had purchased and were in the process of implementation.<sup>2</sup>

Key market and policy trends suggest that RHCs may soon face greater incentives and/or demands to participate in quality reporting and benchmarking systems, and to publicly report quality data. These trends include greater demands for provider accountability, quality, and cost transparency by patients, health care systems, and third party payers; the growing implementation of pay-for-performance reimbursement strategies (e.g., Accountable Care) across third party payers including Medicare, Medicaid, and commercial insurers; and the expansion of practice transformation initiatives including patient-centered medical homes.

With over 4,000 RHCs serving vulnerable populations and communities across the country, it is critically important that clinics have access to and use standard tools for quality improvement, including internal and external reporting of quality measures. This pilot demonstrated the feasibility of implementing an RHC-focused quality reporting and benchmarking system and identified key supports needed by RHCs to participate in such a system. It offers a proven model that could provide a foundation to meet the future quality reporting needs of RHCs as they respond to the changing health care environment.

At the same time, considerable effort by RHC leaders and champions is needed to encourage and support broader RHC involvement in quality reporting and benchmarking. Much can be done to prepare RHCs to participate in the evolving health care system by drawing on the lessons learned from this pilot, as well as established RHC quality improvement networks such as Michigan’s Rural Health Clinic Quality Network. Specific strategies might include: (1) building on the existing QHi platform to develop a Medicare Beneficiary Quality Improvement Program-type approach for RHCs; (2) expanding ongoing RHC education and technical assistance for quality improvement; (3) collecting and disseminating shared learning

from RHCs participating in ongoing quality improvement collaboratives; and (4) developing incentives to encourage RHC reporting.

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**Appendix A: NQF Measures Description and Specifications**

NQF Measure	Specifications
<b>Core</b>	
18 - Controlling High Blood Pressure	<u>(Patients in denominator whose most recent systolic and diastolic BP are &lt; 140/90)</u> <u>(Patients 18 to 85 during measurement year, outpatient dx of HTN in the first six months of the year)</u>
28b - Tobacco Use Cessation Intervention	<u>(Patients in denominator screened for tobacco who also received counseling and/or pharmacotherapy)</u> <u>(Patients ≥ 18 years old seen twice for any reason or once for preventive screening in prior two years)</u>
38 - Childhood Immunization Status	<u>(Patients in denominator who have received all recommended vaccines during the year)</u> <u>(Child patients who turn two years of age in the measurement year)</u>
59 - Diabetes Hemoglobin A1c Poor Control	<u>(Patients in denominator whose most recent HbA1c level is &gt; 9.0%, missing or not taken)</u> <u>(Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</u>
419 - Documentation of Current Medications - Adult/Geriatric	<u>(Patients in denominator for whom an eligible professional documents a list of all current medications)</u> <u>(Patients ≥ age 18 on day of an encounter submitting a CPT/HCP/CS code within the measurement year)</u>
421 - Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up *QHi Core Measure*	<u>(Patients in denominator with BMI calculated during visit or last six months, with a documented follow – up plan during last six months or current visit if the BMI is outside normal parameters)</u> <u>(All patients ≥ 18 years old at date of encounter)</u>
<b>Optional</b>	
24 - Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	<u>(Patients in denominator with BMI documentation as well as nutrition and activity counseling)</u> <u>(Patients 3 – 17 years of age with at least one visit with PCP/OB GYN during measurement year)</u>
28a - Tobacco Use Screening	<u>(Patients in denominator screened for tobacco)</u> <u>(Patients ≥ 18 years old seen twice for any reason in prior two years)</u>
36 - Asthma – Appropriate Medications for People with Asthma	<u>(Patients in denominator who receive at least one prescription for preferred therapy)</u> <u>(All patients ages 5 to 64 in measurement year who have moderate to severe persistent asthma)</u>
41 - Influenza Immunization	<u>(Patients in denominator receiving influenza immunization or reporting receipt of prior immunization)</u> <u>(All patients aged six months and older seen for a visit between Oct. 1 and Mar. 31)</u>



43 - Pneumonia Vaccination Status for Older Adults	<p>(Patients in denominator who responded "Yes" to "Have you ever had a pneumonia shot?")  (Patients 65 and older who respond "Y/N" to "Have you ever had a pneumonia shot?")</p>
56 - Diabetes: Foot Exam – Adult/Geriatric	<p>(Patients in denominator who received a foot exam during the measurement year)  (Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</p>
57 - Diabetes: Hemoglobin A1c Testing	<p>(Patients in denominator who had an HbA1c test performed during the measurement year)  (Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</p>
61 - Diabetes: Blood Pressure Control	<p>(Patients in denominator whose most recent BP reading in measurement year is &lt; 140/90)  (Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</p>
62 - Diabetes: Urine Protein Screening/ Medical Attention for Nephropathy	<p>(Patients in denominator evidencing or receiving a screening for nephropathy in measure year)  (Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</p>
63 - Comprehensive Diabetes Care: LDL-C Screening (NQF Endorsement Removed)	<p>(Patients in denominator who had an LDL – C test performed during the measurement year)  (Patients 18 to 75 by end of measurement year w/ type 1 or 2 diabetes dx during year or during prior year)</p>
68 - Ischemic Vascular Disease-Use of Aspirin or Another Antithrombotic – Adult/Geriatric	<p>(Patients in denominator who had documentation of use of aspirin or another antithrombotic during the measurement year)  (Patients ≥ 18 years old by end of measurement year discharged alive for AMI, CABG, or PCI during first 10 months of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to measurement year)</p>
73 - IVD - Blood Pressure Control – Adult/Geriatric	<p>(Patients in denominator whose most recent BP reading in measurement year is &lt; 140/90)  (Patients ≥ 18 years old by end of measurement year discharged alive for AMI, CABG, or PCI during first 10 months of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to measurement year)</p>
75 - Ischemic Vascular Disease: Complete Lipid Profile and LDL-C Control < 100 mg/dL (NQF Endorsement Removed)	<p>(Patients in denominator who had a complete lipid profile performed in the measurement year and whose most recent LDL – C was &lt; 100mg/dL)  (Patients ≥ 18 years old by end of measurement year discharged alive for AMI, CABG, or PCI during first 10 months of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to measurement year)</p>

## Appendix B: Core Measures

NQF #18 - Controlling High Blood Pressure						
	Calendar Year 2014			Calendar Year 2015		
	# Reporting	Value	Range	#	Value	Range
January	20	64.8	49.1-76.4	24	59.0	51.4-75.0
February	16	72.9	55.0-88.2	22	57.0	44.3-100
March	19	63.7	43.1-76.4	25	56.1	48.6-93.3
April	18	56.8	40.8-77.4	15	60.4	27.8-89.3
May	18	69.9	27.4-85.4	15	56.5	42.4-91.7
June	18	57.0	45.1-79.1	14	58.5	51.4-96.0
July	21	61.9	51.5-88.0	7	42.8	9.5-100
August	21	61.5	48.4-92.9	6	61.7	52.2-96.3
September	21	61.1	48.5-94.3	4	57.9	50.9-96.8
October	18	65.9	53.0-96.4	N/A	N/A	N/A
November	19	58.6	32.5-100	N/A	N/A	N/A
December	21	63.7	52.0-96.4	N/A	N/A	N/A

NQF #28b - Tobacco Use Cessation Intervention						
	Calendar Year 2014			Calendar Year 2015		
	# Reporting	Value	Range	#	Value	Range
January	20	80.0	6.3-95.2	26	70.9	6.0-100
February	17	69.8	0-96.4	26	68.5	0-96.4
March	19	49.6	20.5-100	25	68.0	0-95.9
April	17	80.8	22.6-95.6	15	60.4	0-89.5
May	19	63.1	0-97.0	17	58.1	0-86.2
June	19	72.6	0-96.0	16	56.3	0-91.9
July	22	69.4	0-94.9	9	37.5	5.9-86.6
August	22	69.0	0-93.8	8	51.0	0-100
September	22	68.8	0-95.9	6	45.9	0-100
October	18	71.9	14.9-95.0	N/A	N/A	N/A
November	19	72.1	0-97.8	N/A	N/A	N/A
December	21	80.6	0-99.3	N/A	N/A	N/A

NQF #38 - Childhood Immunization Status						
	Calendar Year 2014			Calendar Year 2015		
	# Reporting	Value	Range	#	Value	Range
January	6	67.1	0-100	7	66.3	0-100
February	4	43.6	0-75.7	7	73.6	0-100
March	6	10.7	0-77.8	7	64.2	0-100
April	4	50.0	0-77.8	5	79.8	0-90.6
May	5	58.5	0-90.9	9	53.5	0-87.0
June	6	59.3	0-90.9	6	41.7	0-84.6
July	7	53.3	0-90.9	5	55.1	0-100
August	7	64.5	0-100	5	75.0	0-100
September	7	63.0	0-100	3	85.3	0-100
October	5	66.7	0-100	N/A	N/A	N/A
November	6	73.3	0-100	N/A	N/A	N/A
December	7	89.4	0-100	N/A	N/A	N/A

<b>NQF #59 – Diabetes Hemoglobin A1c Poor Control</b>						
	<b>Calendar Year 2014</b>			<b>Calendar Year 2015</b>		
	<b># Reporting</b>	<b>Value</b>	<b>Range</b>	<b>#</b>	<b>Value</b>	<b>Range</b>
January	21	60.0	0-100	36	30.8	0-100
February	18	78.7	0-100	34	29.2	0-100
March	21	53.7	0-100	36	26.8	0-100
April	20	25.9	0-100	26	16.5	0-68.6
May	20	27.1	0-100	26	19.0	0-66.7
June	21	28.2	0-100	24	16.6	0-67.9
July	24	30.9	0-100	17	9.5	0-40.0
August	24	28.0	0-100	16	10.4	0-25.8
September	24	27.2	0-100	7	11.0	2.4-27.0
October	24	24.1	0-100	N/A	N/A	N/A
November	25	22.2	0-100	N/A	N/A	N/A
December	27	22.9	0-100	N/A	N/A	N/A

<b>NQF #419 – Documentation of Current Medications-Adult/Geriatric</b>						
	<b>Calendar Year 2014</b>			<b>Calendar Year 2015</b>		
	<b># Reporting</b>	<b>Value</b>	<b>Range</b>	<b>#</b>	<b>Value</b>	<b>Range</b>
January	4	88.4	79.9-90.4	17	80.6	0.2-100
February	2	46.0	15.6-67.6	17	83.3	0.5-100
March	3	73.2	14.7-92.7	18	85.1	1.6-100
April	4	85.6	31.7-91.1	11	82.8	45.1-99.5
May	4	84.1	55.9-89.2	11	86.9	71.0-99.2
June	5	84.2	69.7-100	10	89.1	72.4-99.7
July	5	90.4	82.7-100	6	92.0	79.0-98.8
August	6	86.2	79.2-100	5	90.6	76.9-98.8
September	6	85.4	74.9-100	3	91.8	86.1-99.6
October	5	84.9	77.-5-98.0	N/A	N/A	N/A
November	6	85.5	78.8-97.3	N/A	N/A	N/A
December	7	85.7	66.8-98.6	N/A	N/A	N/A

<b>NQF #421 – Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up *QHi Core Measure*</b>						
	<b>Calendar Year 2014</b>			<b>Calendar Year 2015</b>		
	<b># Reporting</b>	<b>Value</b>	<b>Range</b>	<b>#</b>	<b>Value</b>	<b>Range</b>
January	10	25.0	10.-91.8	23	40.4	3.1-100
February	7	39.2	14.2-90.4	24	39.2	2.4-97.8
March	21	36.4	16.1-90.8	24	38.2	6.7-96.6
April	20	40.6	8.9-91.3	14	42.7	8.9-92.9
May	19	45.7	11.4-98.6	17	32.9	0.5-87.7
June	20	45.3	9.8-87.7	15	31.3	0.7-88.2
July	19	50.7	14.8-100	8	12.9	0.5-39.3
August	18	48.8	17.7-100	7	24.4	0.4-57.1
September	23	46.5	17.5-100	5	11.6	0.6-84.6
October	22	48.9	20.4-100	N/A	N/A	N/A
November	23	50.3	12.5-100	N/A	N/A	N/A
December	20	55.0	15.9-100	N/A	N/A	N/A



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