# Quality conceptualization in the era of measurement: A qualitative study of primary care physicians in Medicare's Merit-Based Incentive Payment System

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# Abstract

*Background*: While governmental programs seeking to improve the quality and value of healthcare through pay-for-performance initiatives have good intentions, participating physicians may be reluctant to participate for various reasons, including poor program alignment with considerations relevant to daily clinical practice. In this study, we sought to characterize how primary care physicians (PCPs) participating in Medicare's Merit-Based Incentive Payment System (MIPS) conceptualize the quality of healthcare to help inform future measurement strategies that physicians would understand and appreciate.

*Methods*: We performed semi-structured qualitative interviews with a nationwide sample of 20 PCPs participating in MIPS who were trained in internal medicine or family medicine. We asked PCPs how they would characterize quality in healthcare and what distinguished exceptional, good, and poor quality from one another. Interviews were transcribed and two coders independently read transcripts, allowing data to emerge from the interviews and developing theories about the data. The coders met intermittently to discuss findings, harmonize the coding scheme, develop a final list of themes and sub-themes, and aggregate a list of representative quotations.

*Results*: Participants described quality in healthcare as consisting of two components: (1) evidence-based care that is safe, which included appropriate health maintenance and chronic disease control, accurate diagnoses, and adherence to guidelines and (2) patient-centered care, which included spending enough time with patients, responding to patient concerns, and establishing long-term patient-physician relationships that were founded upon trust.

*Conclusions*: PCPs consider patient-centered care to be necessary for the provision of exceptional quality in healthcare. Program administrators for quality measurement and pay-for-performance programs should explore new ways to reward PCPs for providing outstanding patient-centered care. Future research should be undertaken to determine whether patient-centered activities such as forging long-term, favorable patient-physician relationships, are associated with improved health outcomes.


# Background

The primary care physician (PCP) practice environment has been changing rapidly over the last several decades due to many factors,(1) including the development of quality measurement and pay-for-performance programs. In 2015, for example, Congress passed the Medicare Access and CHIP Reauthorization Act (MACRA), thereby firmly establishing a payment system that alters physician payment based on performance on measures of healthcare quality and value.(2) Under MACRA, physicians participate in the Quality Payment Program either through the default track—the Merit-Based Incentive Payment System (MIPS)—or via Advanced Alternative Payment Models, such as risk-bearing accountable care organizations. In the first year of participation, approximately 700,000 physicians participated in MIPS by submitting data related to (1) quality, (2) cost, (3) improvement activities, and/or

(4) use of certified electronic health record technology to the Centers for Medicare and Medicaid Services (CMS).(3–5) CMS reported that 94% of all eligible physicians participated, and 74% of clinicians reported quality data for a full twelve months.(6)

Meanwhile, a counter-movement against quality measurement and pay-for-performance programs has been occurring. In a 2015 survey of PCP experiences and reactions to changes in health care payment, 67% of physicians reported believing that quality measures were having negative or no impact on their ability to provide high-quality healthcare to their patients.(7) Additionally, some evidence indicates that increased burden of administrative rules and regulations has negatively impacted physician satisfaction,(8) and that diversion of physician attention from patient-centered concerns may worsen health outcomes.(9–11) Prominent stakeholders now advocate for measurement parsimony,(12) a decrease in the amount of resources dedicated toward quality measurement,(13–15) and a reduction of administrative burdens for physicians.(16) In particular, the MIPS program has fostered controversy and criticism from physician groups because of the burdens of data collection and reporting.(17, 18) Thus in a contemporary clinical practice environment characterized by both physician ambivalence to measurement and an expansion of quality measurement activities, there is a need to examine physician conceptualizations of the quality of healthcare so that quality measurement program administrators can align future measurement programs to optimize physician engagement.(19, 20) Thus, our objective was to describe how PCPs characterize the nature of quality in healthcare by performing interviews with PCPs reporting under MIPS.

## Methods

# Design, Setting, and Participants

We conducted a qualitative study using semi-structured interviews with MIPS-eligible PCPs in 2017 and 2018. To facilitate investigation of a variety of clinical experiences, we recruited PCPs from diverse practice settings across the United States by using maximum variation sampling.(21) We considered PCPs who were trained in Family Medicine or Internal Medicine to be eligible for the study if they were expected to report under MIPS. We verified MIPS expected reporting status by using an online tool.(22) PCPs were recruited by word-of-mouth, using a mixture of referrals from study investigators and physician organizations, including the Los Angeles County Medical Association. Interviews were planned to last approximately thirty to sixty minutes, and participants were additionally asked specific questions about the MIPS program as described in a related manuscript.(23) We provided a $50 gift card as compensation for participation.

# Description of interview sessions

At the beginning of each interview session, a brief pre-session survey was administered to confirm eligibility for the study and ascertain physician and practice characteristics. One author (CTB) performed all interviews either in person, for participants local to the Los Angeles area, or by telephone, for participants in other regions. In-person interviews were completed in participants' offices and audio

recorded. Telephone interviews were performed using secure audio recording. The interviewer used a semi-structured interview guide. (See Box 1 for a brief overview of interview questions. Appendix A1 provides the pre-session survey and the full semi-structured interview guide.) A professional transcription service transcribed all interviews. It should be noted that a related publication focusing on the MIPS policy itself describes results from the same interview sessions with the same PCPs.(24)

# Analysis

We utilized a two-step process to allow data to emerge from the semi-structured interviews, developing theories about the data and maintaining a log of ideas about the meaning of its content. Two coders, CB and ME, independently read transcripts of the first five interviews and flagged all instances of responses related to the study questions using the text analysis software Atlas.ti Version 8 (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany). We had an initial meeting to discuss and harmonize our coding schemes based on the emerging themes. We reviewed and coded through the eighteenth interview and then met again to discuss themes and sub-themes. At this point, we decided that thematic saturation had likely been reached. We coded two final interviews without discovering new themes, confirming that thematic saturation had been achieved. We met once more to discuss findings and develop a final list of themes and sub-themes, aggregating representative quotations from participants.

# Ethics

The institutional review boards of both Cedars-Sinai Medical Center and the University of California, Los Angeles, approved this study. We obtained verbal consent from all study participants, which included consent for audio recording.

## Results

# Descriptive characteristics of the sample

Twenty PCPs participated in the study between November 2017 and June 2018. Eighteen of the twenty PCPs were board certified at the time of interview (seven in Family Medicine and eleven in Internal Medicine). Nine physicians worked in small practices (groups of fewer than fifteen providers), and five worked in rural areas. Most PCPs worked in practices where the majority of income arose from fee-for-service payment arrangements. Table 1 describes participants and their practice environments in further detail.

Table 1
Characteristics of participating physicians and their practices, N = 20

| Do you consider yourself a primary care physician? | Response | n (%) |
|---|---|---|
| | Yes | 20 (100) |
| | No | 0 |
| **Within the last 12 months have you had an active medical license?** | | |
| | Yes | 20 (100) |
| | No | 0 |
| **Are you board certified in Family Medicine or Internal Medicine?** | | |
| | Yes - Family medicine | 7 (35) |
| | Yes - Internal medicine | 11 (55) |
| | No | 2 (10) |
| **How many physicians are in your practice?** | | |
| | 1 to 14 (small) | 9 (45) |
| | 15 (large) | 11 (55) |
| **How many years have you been practicing after residency?** | | |
| | 1 to 4 | 3 (15) |
| | 5 to 9 | 5 (25) |
| | 10 to 14 | 1 (5) |
| | 15 to 19 | 5 (25) |
| | 20 or more | 6 (30) |
| **How would you define your practice setting?** | | |
| | Urban | 9 (45) |

| Do you consider yourself a primary care physician? | Response | n (%) |
|---|---|---|
| | Suburban | 6 (30) |
| | Rural | 5 (25) |
| **In what region of the United States do you practice?** | | |
| | Mid-Atlantic or Northeast | 2 (10) |
| | Midwest | 3 (15) |
| | Northwest | 5 (25) |
| | South | 2 (10) |
| | West | 8 (40) |
| **What percent of your patients are covered by Medicare Part B?** | | |
| | 0 to 19 | 1 (5) |
| | 20 to 29 | 2 (10) |
| | 30 to 39 | 10 (50) |
| | 40 to 49 | 4 (20) |
| | >+50 | 3 (15) |
| **What percent of your patients do you think suffer from financial challenges such as housing, utility, or food instability?** | | |
| | 0 | 1 (5) |
| | 1 to 9 | 6 (30) |
| | 10 to 19 | 3 (15) |
| | 20 to 29 | 2 (10) |
| | 30 to 39 | 2 (10) |

| Do you consider yourself a primary care physician? | Response | n (%) |
|---|---|---|
| | 40 to 49 | 1 (5) |
| | >=50 | 5 (25) |
| **How large is your personal panel of patients?** | | |
| | < 1000 | 9 (45) |
| | 1000 to 1499 | 3 (15) |
| | 1500 to 1999 | 2 (10) |
| | 2000 to 2499 | 1 (5) |
| | >=2500 | 5 (25) |
| **How are you primarily compensated?** | | |
| | Fee for service | 9 (45) |
| | Capitation | 2 (10) |
| | Salary | 9 (45) |
| **What percent of your practice's income comes from fee-for-service payments?** | | |
| | 0 | 1 (5) |
| | 1 to 24 | 3 (15) |
| | 25 to 49 | 1 (5) |
| | 50 to 74 | 2 (10) |
| | 75 to 99 | 9 (45) |
| | 100 | 3 (15) |
| | Not sure | 1 (5) |
| **Do you have staff on hand to help manage quality of care?** | | |

| Do you consider yourself a primary care physician? | Response | n (%) |
|---|---|---|
| | Yes | 17 (85) |
| | No | 3 (15) |
| **Did you or your group participate in the Physician Quality Reporting System (PQRS)?** | | |
| | Yes | 12 (60) |
| | No | 6 (30) |
| | I don't know | 2 (10) |

# Physician conceptualizations of healthcare quality: Overview

A conceptual framework describing PCPs' characterization of quality in healthcare emerged via inductive analysis of the interviews. When asked to define healthcare quality, many respondents described the concept as consisting of two components: 1) *evidenced-based care* that is safe, and 2) *patient-centered care* that is responsive to individual patients' needs. Most PCPs described that their first responsibility was to deliver evidence-based care, which consisted of routine health maintenance, chronic disease management, care consistent with current recommendations, diagnoses that were accurate, and high-value care. Providing evidence-based care was viewed as necessary, but not sufficient, for the provision of exceptional healthcare. Delivering evidence-based care along with patient-centered care was viewed as exceptional. Physicians often described examples of outstanding care as offering care that was particularly timely, responding to patients' individual needs, or advocating for a patient under special circumstances. See Fig. 1 for a graphical depiction of this conceptual framework, Table 2 for a complete list of themes and sub-themes, and Appendix A2 for a list of sample quotes exemplifying all sub-themes. The following paragraphs explore the components of evidence-based and patient-centered care in further detail.

Table 2
List of study themes, associated study sub-themes, and relevant Institute of Medicine Domains

| Study themes | Study sub-themes | Relevant IOM* Domain |
|---|---|---|
| Evidence-based care that is safe | Providing recommended health maintenance | Effective |
| | Controlling chronic diseases | Effective |
| | Knowing and following current recommendations | Effective |
| | Making accurate diagnoses; not missing diagnoses | Safe |
| | Delivering efficient care (not too much and not too little) | Efficient |
| Patient-centered care | Providing personalized care | Patient-centered |
| | Providing well-coordinated care | Patient-centered |
| | Spending enough time with patients | Patient-centered |
| | Responsiveness to patient concerns | Patient-centered |
| | Being an advocate for patients | Patient-centered |
| | Understanding social needs | Patient-centered |
| | Helping patients achieve their goals | Patient-centered |
| | Prioritizing quality of life | Patient-centered |
| | Listening to patients | Patient-centered |
| | Educating patients | Patient-centered |
| | Establishing trust and long-term relationships | Patient-centered |
| | Demonstrating compassion | Patient-centered |
| | Providing timely care | Timely |
| *IOM: Institute of Medicine | | |
| Note: Participants did not mention the concept of equity, which is one of 6 IOM Domains of the quality of healthcare | | |

# Component 1: Evidence-based care that is safe

When asked to provide specific examples of high-quality care, many participants focused on providing recommended health maintenance: “I believe that there are certain elements of providing care that are standard of care and that are proven to be beneficial to patients. Flu vaccine, pneumonia vaccine,

vaccines in general, cancer screenings, like breast screening, colon cancer screening, cervical cancer screening." Participants also commonly mentioned control of chronic disease as important to healthcare quality: "When a physician is taking care of a patient with diabetes… The patient should come in at 1 month, then 3 months, then 6-month intervals. [The physician] should know what blood work they're getting at that interval. At every visit, [the physician] should take off their shoes and socks, check monofilaments on them, make sure that the medications are reconciled and that this information is communicated with the patient's other physicians. This should be a set protocol." Many physicians mentioned that they relied on evidence-based recommendations from trusted organizations to guide diagnostic and treatment decisions, stating that it was the PCP's responsibility to stay up-to-date with these standards: "I would say that practices [providing high-quality care are practices that are] making every effort to ensure that they are meeting the standard of care as put forth from well-established bodies such as US Preventive Services Task Force, from [Medicare], and from our own organizations such as the American Academy of Family Physicians."

Participants also expressed the belief that safety was an important dimension of healthcare quality: They strived to make accurate diagnoses and avoid low-value care to ensure that patients received high-quality, evidence-based care. One PCP explained that making an accurate diagnosis could be challenging, but also believed doing so consistently was a physician's responsibility: "Everybody can do checklist medicine and check [a hemoglobin A1C] twice this calendar year. [On the other hand,] when you have a patient with a difficult diagnosis which you establish and come up with an effective treatment for–now that's good care." There was also a sense among participants that low-value care could be harmful to patients, either because of costs or adverse consequences related to testing or treatments that were not indicated. One PCP provided an example by describing that his grandmother might demand care, but the right course of action was to withhold care in cases where potential harms outweighed potential benefits: "My grandma was a very wealthy person and she was very demanding. Basically, she would want you to forget about standards in healthcare and spend every healthcare dollar on her and waste everything on her to get every test possible, which is absolutely not right because [it's wasteful and potentially harmful.]" See Table 2 for more examples of sub-themes that were categorized as related to evidence-based care.

# Component 2: Patient-centered care

Many respondents reported believing that a good PCP provided patient-centered, personalized service. In other words, simply providing evidence-based medicine was not enough because patients needed and deserved excellent service as well. One respondent relayed, "I think broadly about right care, right place, right time for the patient, in a patient-centered way. I mean, I think in my own terms, I would think of quality care being all the care you need and none of the care that you don't need, delivered in a personalized way, in accord as much as possible with the best available evidence and done efficiently and in the flow of…working within the flow of patients' lives." Several participants mentioned that helping patients achieve personalized goals was more important than scoring well on quality measures: "I think our job as doctors is to help patients achieve their life goals, their health-related life goals. So for me,

that's what quality is about….At the end of the day, if I'm achieving perfect scores [on quality measures] but not meeting the patients' goals, helping advance what they want, I'm not doing a good job." Providing unusually timely care was a sub-theme that many participants discussed. PCPs tended to believe that providing easy, open access to patients was an important way to systematically deliver outstanding care: "I personally give my patients my email address so they can directly contact me with any concerns without being filtered by my staff. I try to have good hours, leave slots for urgent care, essentially have them be able to access me so that they can get care." Finally, ensuring that patients actually received the care that PCPs prescribed was a common challenge that PCPs noted: "I think developing systems as an individual or with teams in your clinic to ensure good follow-up for patients. So, seeing patients and tracking patients over time–Looking across your panel…and trying to be systematic and proactive about having patients come back in or refer to sites of care expeditiously and effectively."

Several PCPs spoke about the importance of establishing long-term relationships with patients founded on trust. For example, one physician in a large group practice mentioned, "What people don't get is that if patients go to the person that they trust, they're more likely to be adherent to their medication or adherent to whatever regimen, if they know and trust the physician." PCPs considered demonstrating caring and compassion to be important, and they believed that this helped establish good rapport with patients: "I think the patients are looking for someone who will listen, someone who seems to be interested in the problems that they're presenting…Obviously, they want you to be knowledgeable and compassionate and timely and everything else, but I think patients want to be listened to and taken more seriously than anything else." PCPs perceived a contrast between evidence-based care, which tends to be feasible to measure, and patient-centered care, which tends to be hard to measure. Several physicians lamented that measurement priorities may be misaligned simply because measurement of patient-centered care is challenging: "The quality movement has been perverted to a kind of big data enterprise now and really, I think the focus of primary care is actually about relationships and building sort of meaningful relationships with people over time."

# Conceptualizing exceptional and poor healthcare quality

To further refine the PCP definition of healthcare quality, we asked participants to describe what separated exceptional care from good care. In describing exceptional care, respondents tended to emphasize the patient-centered component of quality even more, including relationship-building and shared decision-making. One respondent explained, "I think, also, there's that human component that is hard to measure, the connection that people feel with their primary care doctor for those who feel connected." Respondents also tended to include immediate access and timely responses in their definition of exceptional care, whether that was a patient's ability to obtain an appointment immediately, or engage in brief conversations with PCPs by phone or email: "I think it's about hearing people and really listening, engaging them, letting them know that you're there, even when they're not in the office. So they can run something by me either by email or call my office. I guess for me, exceptional care has been really more about the relationship." Some respondents included patient advocacy in their definition of exceptional healthcare quality: "When I think of a doctor who is exceptional, I just think of someone who

is an awesome patient advocate and making sure that the patients get what they need to the best of their ability."

Finally, we asked PCPs to distinguish poor care from good care. Participants cited faults in evidenced-based care that resulted in missed diagnosis or inappropriate treatment: "I guess I would say low quality of care, if I meet people who have been with other physicians, I would say honestly, either under- or over-treatment…. So, I see people who are getting annual chest x-rays and cardiac stress tests for no reason. So, I find that as painful as people who are not receiving great care. So, I'll get people who have never been asked if they've had their screening colonoscopy and they're 60 or are overdue for screening mammograms." Another participant agreed, also adding that lack of care coordination contributes to low quality care: "So, I think low quality of care could be a couple of different things. One could be—unfortunately, I have seen providers in practice that are not maybe following evidence-based recommendations or maybe don't have the skill level to address the problem they're trying to address but they're not kind of seeking out help. So, I guess I have seen misdiagnoses, mistreatments, so that's low quality of care definitely. Then I think also the other piece of it could be that they tend to just really not follow up well with their own patients and not coordinate care back to the primary care doctor well. That can sometimes result in low quality of care too because things that they recommend never get carried out".

# Discussion

Quality of healthcare is notoriously challenging to define, and varying stakeholders have often defined it differently. In this qualitative investigation of PCP opinions about the nature of healthcare quality, participants revealed that they conceptualize healthcare quality as having two components: (1) evidence-based care that is safe and (2) patient-centered care. Moreover, evidence-based care that is safe is necessary but not sufficient in the provision exceptional care. According to our panel of physicians, patient-centered care is an important component of the care experience, especially the establishment of long-standing patient-physician relationships built upon trust. Understanding how physicians conceptualize quality is important to optimizing engagement in quality improvement efforts.(20)

The Institute of Medicine identified six domains of healthcare quality: safety, effectiveness, timeliness, patient-centeredness, equity, and efficiency.(25) Physicians in our study identified all of these sub-themes except equity, and it is difficult to know whether this sub-theme might have emerged with a larger sample size or a different sample of PCPs. The framework that emerged from our data (Fig. 1) appears to be a simplified version of the IOM's framework, though our framework highlights the finding that PCPs believe the provision of patient-centered care is what distinguishes exceptional care from good care. Alternative conceptual frameworks relating to quality of healthcare have been promulgated by various organizations including the Council of Europe,(26) the Organization for Economic Cooperation and Development (OECD),(27) the World Health Organization,(28) and the European Commission.(29) The OECD reviewed these models in a 2019 publication and proposed three core dimensions of quality that align with our

components: effectiveness, safety (which we refer to collectively as “evidence-based care that is safe”) and responsiveness (“patient-centeredness”).(30)

Our interviews revealed physician beliefs that providing patient-centered care was necessary for care to be exceptional. If MIPS is intended to distinguish exceptional from good care, it may underemphasize the provision of patient-centered care, probably due to lack of availability of valid measures. In a 2018, a panel convened by the American College of Physicians (ACP) to review MIPS measures relevant to PCP practice, and they found only 37% (32 of 86) were valid measures of physician performance.(31) Of 86 total measures, the only one relevant to patient-centered care was the CAHPS for MIPS measure. This measure assesses Medicare beneficiaries’ experiences with the care experience including interactions with physicians, office staff, care coordination, and more.(32) The ACP panel deemed CAHPS for MIPS to have uncertain validity in measuring physician performance for several reasons, including limited physician influence on components of the measure and the measure’s questionable relationship with health outcomes.(31) Moreover, submission of the CAHPS measure is limited to groups and virtual groups, and it requires MIPS participants to pay for a CMS-approved vendor to administer the survey,(33) further constraining physician participation. Thus, to better align the MIPS program with physician conceptualization of what makes quality outstanding, program administrators could consider providing financial support for CAHPS survey administration, developing a new CAHPS measure that is more sensitive to physician performance, developing other measures relevant to patient-centered care, and providing new types of incentives for patient-centered care.

Finally, our findings may have additional implications for the quality measurement and pay-for-performance movements, since our participants communicated that PCPs believe long-standing, trust-based relationships are important in the provision of exceptional healthcare. Further research is warranted to verify our findings across a larger population of physicians and determine whether rewarding performance on other aspects of patient-centered care, such as development of long-term patient-physician relationships founded on trust, could improve health outcomes for patients.

# Limitations

Our study has several limitations. First, small-sample qualitative studies are useful for developing theories and identifying questions that should undergo further inquiry. Therefore, this study may be limited in its generalizability, though we attempted to minimize this risk by recruiting PCPs in different areas across the national and different practice environments. Second, because of our decision to use maximum variation sampling, the characteristics of our sample may not reflect those of the population of physicians nationwide. Third, our interviews included questions about the MIPS program, and recruiting physicians for a study involving questions about a quality measurement program may have biased responses about the nature of quality in healthcare. Finally, while we made attempts to ensure rigor and limit biases by employing reflexivity and bracketing[33] during study design, recruitment, data collection, and analysis, there remains risk that investigator and coder biases may have limited the reliability and/or validity of our findings.

## Conclusions

PCPs consider patient-centered care to be necessary for the provision of exceptional quality in healthcare. Program administrators for quality measurement and pay-for-performance programs should explore new ways to reward PCPs for providing outstanding patient-centered care. Future research should be undertaken to determine whether patient-centered activities such as forging long-term, favorable patient-physician relationships, are associated with improved health outcomes.

## Abbreviations

**PCP**
Primary Care Physicians
**MIPS**
Merit-Based Incentive Payment System
**MACRA**
Medicare Access and CHIP Reauthorization Act
**CMS**
Centers for Medicare and Medicaid Services
**OECD**
Organization for Economic Cooperation and Development
**WHO**
World Health Organization
**ACP**
American College of Physicians

## Declarations

# Competing interests

The authors declare that they have no competing interests" in this section.

# Funding

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# Authors’ contributions

CTB, GR, JN, and TKN collaborated to design the study. CTB recruited participants and collected data. CTB and MCE analyzed the data and wrote the manuscript. GR, JN, and TKN oversaw the research. All authors read and approved the final manuscript.

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# Ethics approval and consent to participate

The institutional review boards of both Cedars-Sinai Medical Center and the University of California, Los Angeles, approved this study. Waiver of signed consent was granted. We obtained verbal consent from all study participants, which included consent for audio recording.

# Consent for publication

Not applicable

# Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due to infeasibility of de-identification of audio and transcripts.

# Authors' information

CTB is an emergency physician and health services researcher who performed this study as part of his fellowship in the National Clinician Scholars Program at UCLA.

MCE is a pediatrician and health services researcher who performed this study during fellowship in the National Clinician Scholars Program at UCLA.

GR is a medical anthropologist with expertise in qualitative methodology, ethnographies of health care, and decision-making processes.

JN is a health economist with expertise in health policy, research design, and quality measurement.

TKN is a general internist and health services researcher with expertise in measurement of quality and value of health care.

# Prior Presentations

The research plan was presented as a poster at the National Clinician Scholars Program Annual Research Meeting in Atlanta, GA, on November 15, 2016.

# Related Work:

Results from the same participants and the same interview sessions (but relating to different research questions) are presented in the following manuscript: Berdahl CT, Easterlin MC, Ryan G, Needleman J, Nuckols TK. Primary Care Physicians in the Merit-Based Incentive Payment System (MIPS): a Qualitative Investigation of Participants' Experiences, Self-Reported Practice Changes, and Suggestions for Program Administrators. *J Gen Intern Med*. 2019;34(10):2275–2281.

Box 1: Key questions for study participants

What do you consider to be “good” quality of care? What does it “look” like?
What is exceptional quality of care, and how is it different than good quality of care?
What is low quality care, and how is it different than good quality of care?
What kinds of things can a primary care physician do to ensure he/she is providing exceptional quality of care?

# References


1. Laiteerapong N, Huang ES. The pace of change in medical practice and health policy: collision or coexistence? J Gen Intern Med. 2015;30(6):848–52.
2. Medicare Access, Reauthorization Act CHIP of 2015, Pub. L. No. 114 – 10. 2015. Accessed: 16 April 2015.
3. What’s the Merit-Based Incentive Payment System (MIPS)?: Centers for Medicare and Medicaid Services, United States Department of Health and Human Services; 2017. Accessed 9 Jun 2017. https://qpp.cms.gov/learn/qpp.
4. Centers for M, Medicaid Services HHS. Medicare Program; Merit-Based Incentive Payment System (MIPS) and Alternative Payment Model (APM) Incentive Under the Physician Fee Schedule, and Criteria for Physician-Focused Payment Models. Final rule with comment period. Fed Regist. 2016;81(214):77008–831.
5. Verma S. CMS Blog [Internet]. Baltimore, MD: The Centers for Medicare and Medicaid Services, US Department of Health and Human Services. 2018. Accesed: 3 Jun 2019. https://www.cms.gov/blog/quality-payment-program-qpp-year-1-performance-results.

6. 2017 Quality Payment Program Reporting Experience. Centers for Medicare and Medicaid Services, US Department of Health and Human Services; 2018.
7. Ryan J, Doty M, Hamel L, Norton M, Abrams M, Brodie M. Primary Care Providers' Views of Recent Trends in Health Care Delivery and Payment: Findings from the Commonwealth Fund/Kaiser Family Foundation 2015 National Survey of Primary Care Providers. The Commonwealth Fund; 2015. Accessed: 5 Aug 2015.
8. Friedberg MW, Chen PG, Van Busum KR, Aunon F, Pham C, Caloyeras J, et al. Factors Affecting Physician Professional Satisfaction and Their Implications for Patient Care, Health Systems, and Health Policy. Rand Health Q. 2014;3(4):1.
9. Marmor RA, Clay B, Millen M, Savides TJ, Longhurst CA. The Impact of Physician EHR Usage on Patient Satisfaction. Appl Clin Inform. 2018;9(1):11–4.
10. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, et al. Association Between Physician Burnout and Patient Safety, Professionalism, and Patient Satisfaction: A Systematic Review and Meta-analysis. JAMA Intern Med. 2018;178(10):1317–30.
11. Kuhn T, Basch P, Barr M, Yackel T, Physicians MICotACo. Clinical documentation in the 21st century: executive summary of a policy position paper from the American College of Physicians. Ann Intern Med. 2015;162(4):301–3.
12. Meyer GS, Nelson EC, Pryor DB, James B, Swensen SJ, Kaplan GS, et al. More quality measures versus measuring what matters: a call for balance and parsimony. BMJ Qual Saf. 2012;21(11):964–8.
13. Casalino LP, Gans D, Weber R, Cea M, Tuchovsky A, Bishop TF, et al. US Physician Practices Spend More Than $15.4 Billion Annually To Report Quality Measures. Health Aff (Millwood). 2016;35(3):401–6.
14. Meltzer DO, Chung JW. The population value of quality indicator reporting: a framework for prioritizing health care performance measures. Health Aff (Millwood). 2014;33(1):132–9.
15. Panzer RJ, Gitomer RS, Greene WH, Webster PR, Landry KR, Riccobono CA. Increasing demands for quality measurement. JAMA. 2013;310(18):1971–80.
16. Reducing B, Baltimore MD. The Centers for Medicare and Medicaid Services; 2019. Updated 12 Dec 2019. Accessed: 9 Apr 2020. https://www.cms.gov/About-CMS/Components/CPI/Reducing-Burden.
17. Medicare Payment Policy. Report to Congress. Washington, DC: Medicare Payment Advisory Commission; 2018. Accessed: 28 Mar 2018.
18. Firth S. MIPS Takes a Beating at MedPAC - Medicare advisory panel says it needs to go. MedPage Today [Internet]. 2017. Accessed: 9 Apr 2020. https://www.medpagetoday.com/publichealthpolicy/medicare/68362.
19. Liao JM, Shea JA, Weissman A, Navathe AS. Physician Perspectives In Year 1 Of MACRA And Its Merit-Based Payment System: A National Survey. Health Aff (Millwood). 2018;37(7):1079–86.
20. Wiig S, Aase K, von Plessen C, Burnett S, Nunes F, Weggelaar AM, et al. Talking about quality: exploring how 'quality' is conceptualized in European hospitals and healthcare systems. BMC Health

Serv Res. 2014;14:478.

21. Patton MQ, Patton MQ. Qualitative research & evaluation methods. 3rd ed. Thousand Oaks, Calif.: Sage Publications; 2002. xxiv, 598, 65p.p.
22. QPP Participation Status Baltimore, MD: Center for Medicare and Medicaid Services. United States Department of Health and Human Services; 2020. Accessed: 9 Apr 2020. https://qpp.cms.gov/participation-lookup.
23. Berdahl CT, Easterlin MC, Ryan G, Needleman J, Nuckols TK. Primary Care Physicians in the Merit-Based Incentive Payment System (MIPS): a Qualitative Investigation of Participants' Experiences, Self-Reported Practice Changes, and Suggestions for Program Administrators. J Gen Intern Med. 2019;34(10):2275–81.
24. Berdahl C, Easterlin M, Ryan G, Needleman J, Nuckols T. Primary Care Physicians in the Merit-Based Incentive Payment System (MIPS): A Qualitative Investigation of Participants' Experiences, Self-Reported Practice Changes, and Suggestions for Program Administrators. J Gen Intern Med. 2019; In Press.
25. Crossing the Quality Chasm. A New Health System for the 21st Century. Washington (DC) 2001.
26. The development and implementation of quality improvement systems (QIS) in health care. Strasbourg: Council of Europe; 1997. Contract No.: Recommendation No. R(97)17 adopted by the Committee of Ministers of the Council of Europe on 30 September 1997 and explanatory memorandum.
27. Arah OA, Westert GP, Hurst J, Klazinga NS. A conceptual framework for the OECD Health Care Quality Indicators Project. Int J Qual Health Care. 2006;18(Suppl 1):5–13.
28. Organization WH. Handbook for national quality policy and strategy: a practical approach for developing policy and strategy to improve quality of care. Geneva: World Health Organization; 2018.
29. Commission E. Key findings and recommendations on Reporting and learning systems for patient safety incidents across Europe. Report of the Reporting and learning subgroup of the European Commission PSQCWG. 2014.
30. European Observatory Health Policy Series. In: Busse R, Klazinga N, Panteli D, Quentin W, editors. Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies. Copenhagen (Denmark) 2019.
31. MacLean CH, Kerr EA, Qaseem A. Time Out - Charting a Path for Improving Performance Measurement. The New England Journal of Medicine. 2018;378(19):1757–61.
32. 2019 Consumer Assessment of Healthcare Providers and Systems (CAHPS) for the Merit-based Incentive Payment System (MIPS). Survey via CMS-Approved Survey Vendor Reporting Baltimore, MD: Centers for Medicare and Medicaid Services, US Department of Health and Human Services; 2019. Accessed: Apr 2020: https://qpp.cms.gov/resource/CAHPS%20for%20MIPS%20Fact%20Sheet.
33. CAHPS for MIPS Survey: Centers for Medicare and Medicaid Services, US Department of Health and Human Services; 2020. Accessed: Apr 2020. https://www.cms.gov/Research-Statistics-Data-and-

Systems/Research/CAHPS/mips.html.

# Figures

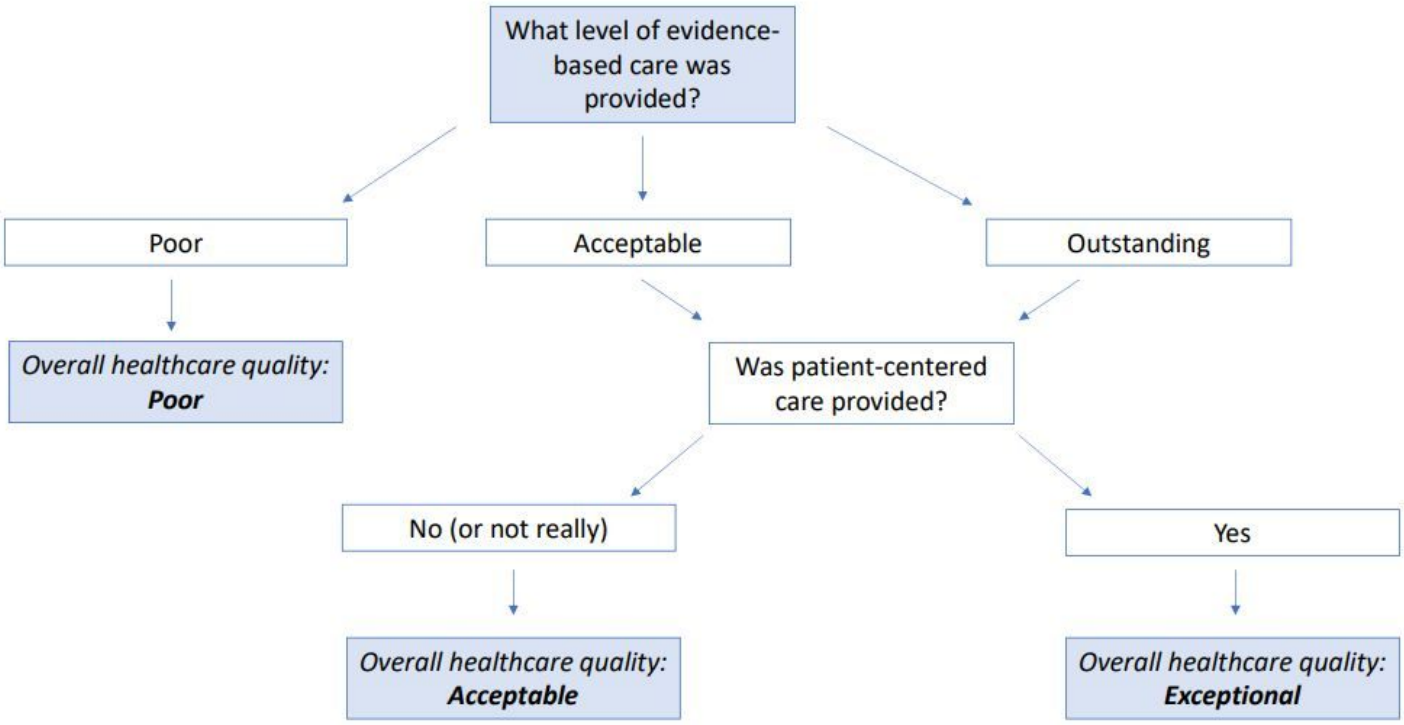


**Figure 1**

exceptional quality of healthcare