HEALTH POLICY

Provider Perceptions of the Electronic Health Record Incentive Programs: A Survey of Eligible Professionals Who Have and Have Not Attested to Meaningful Use

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BACKGROUND: The HITECH Act of 2009 enabled the Centers for Medicare & Medicaid Services (CMS) to provide financial incentives to health care providers who demonstrate "meaningful use" (MU) of their electronic health records (EHRs). Despite stakeholder involvement in the rule-making phase, formal input about the MU program from a cross section of providers has not been reported since incentive payments began.

OBJECTIVE: To examine the perspectives and experiences of a random sample of health care professionals eligible for financial incentives (eligible professionals or EPs) for demonstrating meaningful use of their EHRs. It was hypothesized that EPs actively participating in the MU program would generally view the purported benefits of MU more positively than EPs not yet participating in the incentive program.

DESIGN: Survey data were collected by mail from a random sample of EPs in Washington State and Idaho. Two follow-up mailings were made to non-respondents.

PARTICIPANTS: The sample included EPs who had registered for incentive payments or attested to MU (MU-Active) and EPs not yet participating in the incentive program (MU-Inactive).

MAIN MEASURES: The survey assessed perceptions of general realities and influences of MU on health care; views on the influence of MU on clinics; and personal views about MU. EP opinions were assessed with close- and open-ended items.

KEY RESULTS: Close-ended responses indicated that MU-Active providers were generally more positive about the program than MU-Inactive providers. However, the majority of respondents in both groups felt that MU would not reduce care disparities or improve the accuracy of patient information. The additional workload on EPs and their staff was viewed as too great a burden on productivity relative to the level of reimbursement for achieving MU goals. The majority of open-ended responses in each group reinforced the general perception that the MU program diverted attention from treating patients by imposing greater reporting requirements.

CONCLUSIONS: Survey results indicate the need by CMS to step up engagement with EPs in future planning for the MU program, while also providing support for achieving MU standards.

KEY WORDS: meaningful use; eligible professional; electronic health record; health care reform.
J Gen Intern Med 30(1):123–30
DOI: 10.1007/s11606-014-3008-5

Received February 27, 2014
Revised July 25, 2014
Accepted August 12, 2014
Published online August 28, 2014

INTRODUCTION

The use of electronic health records (EHRs) has been a central aim of health care reform in the USA with advocates contending that EHR use will improve patient care and lower costs. With funding through the Patient Protection and Affordable Care Act (ACA) of 2010, the Centers for Medicare and Medicaid Services (CMS) expect to pay out nearly $7 billion over 5 years to incentivize specific classes of providers, termed *eligible professionals* (EPs), to adopt and use certified EHRs to meet CMS-established *meaningful use* (MU) standards. By meeting MU criteria, EPs may be reimbursed as much as $44,000 by Medicare or $63,500 by Medicaid. The Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 first introduced the concept of MU as specific strategies to use EHRs in ways that would meaningfully and directly enhance patient care.[1] The MU criteria are expected to be released in three stages, with the final rules for Stage 1 established in July 2010, Stage 2 in August 2012, and Stage 3 forthcoming.[1,2]

With regard to prior research on challenges to adopting and implementing an EHR, a precursor to meaningfully using the electronic records, reviews of literature on EHR use consistently report start-up and ongoing cost as the most frequent barrier to adoption.[3,4] With regard to barriers to implementation, providers report difficulties in workflow redesign, time to learn the system, negative views on how EHRs change patient-provider interactions, poor EHR function in the course of providing clinical care, and lack of training and support. The barriers seem consistent across providers whether the

providers see predominantly publicly insured or commercially insured patients.[5] Any of these barriers could cause providers to fall short of being meaningful users of EHRs.[6] Further, while many physicians with long EHR experience report EHR use enhances patient care overall,[7] a recent comparison of physicians participating in the MU program versus not showed mixed results for the group achieving the highest quality of care.[8] This is despite the fact that the majority of EPs participating in the program exceed the threshold established by CMS for achieving most MU objectives.[9] These early evaluations of the MU program suggest that the effects of MU on quality of care are not yet understood.

Prior to finalizing the Stage 1 rule, the Department of Health and Human Services (DHHS) sponsored a series of public hearings to collect testimony from stakeholders regarding their early experience with MU. Despite stakeholder involvement in the rule-making phase, formal input from a cross-section of EPs has not been reported since incentive payments began. To better understand the perspective of EPs about the MU program, we surveyed a random sample of EPs in Washington State and Idaho. Input was sought from two classes of EPs: those for whom there was a Medicare or Medicaid record documenting MU activity (MU-Active providers) and separately from those for whom there was no record demonstrating MU activity (MU-Inactive providers). It was hypothesized that MU-Active EPs would generally view the purported benefits of MU more positively than MU-Inactive EPs.

METHOD

Survey Development and Testing

Two survey instruments were developed: one for MU-Active EPs and another for MU-Inactive EPs. Items were identical on each survey with the exception of three demographic items (displayed in Table 1), and one open-ended item in which EPs were asked about their number one reason for working (MU-Active) or not working (MU-Inactive) to achieve MU. Two items that differed among surveys assessed attestation status (see Table 1), while another item asked MU-Inactive providers about the certification status of their EHR; as MU can only be sought with a certified EHR, it was not necessary to assess this status in the MU-Active group. Survey opinion items drew on CMS source documents about MU[10] and expert review of survey items by physicians, survey researchers, and health information technology experts. Survey domains were: perceptions of general purposes, realities, and influences of MU on health care; views on the influence of MU on clinics; general views about MU; and personal and clinic characteristics. These domains were chosen based on discussions with physicians and health information technology experts on the philosophical and practical influences of MU on patient care. Opinion items used a four-point Strongly Agree to Strongly Disagree Likert scale. Surveys contained initial items asking EPs if we had *incorrectly* identified them as belonging to either the MU-Active population or MU-Inactive population. In cases of incorrect attribution, EPs checked a box indicating so and returned the survey uncompleted.

Sample and Survey Administration

Our population consisted of EPs in the service area for the HITECH-funded Regional Extension Center responsible for assisting EPs with obtaining an EHR and achieving MU. Thus, EPs in this region had equal opportunity to utilize regional resources to achieve MU.[11] The sampling frame for MU-Active EPs consisted of contact information for 8,313 EPs from Washington State and northern Idaho, which was

Table 1. Demographic, Professional, and Practice Characteristics of Each Group; Values are Percentages with Frequencies of Each Characteristic in Parentheses Except for Years in Practice

Characteristic		MU-Active	MU-Inactive
Provider type*	Physician	75 (90)	93 (93)
	Non-physician	25 (30)	7 (7)
Years in practice*		16	20
Sex	Male	57 (68)	63 (63)
	Female	43 (52)	37 (37)
Type of provider organization	Private practice	58 (70)	51 (51)
	Affiliated or owned by a hospital	21 (25)	23 (23)
	Community health center	13 (15)	8 (8)
	Rural health clinic	3 (4)	7 (7)
	Other	5 (6)	11 (11)
Number of providers including mid-levels such as nurse practitioners or physician assistants in the practice	1–5	30 (36)	41 (41)
	6–19	39 (47)	33 (33)
	20 or greater	31 (37)	26 (26)
Attestation status (MU-Active group only)	Completed attestation	68 (82)	
	Started attestation	32 (38)	
Attestation status (MU-Inactive group only)	Will attest		71 (71)
	Will not attest		29 (29)
Current EHR is certified to meet MU criteria (MU-Inactive group only)	Yes		43 (43)
	No		11 (11)
	Don't know		37 (37)
	Not using an EHR		9 (9)

**P-value<0.05 for between-group comparisons of the characteristic*

part of the catchment area for the Beacon Community of the Inland Northwest (BCIN), a HITECH-funded project. The list was a compilation of EPs who had registered for MU incentives. A stratified random sample of 400 EPs was selected by proportionately sampling from strata for state, Medicare or Medicaid MU application-type, and medical specialty. Medical specialty was utilized to assure a random sample of all EPs active in the MU program in order to avoid bias from selecting respondents within particular specialties. In addition, we did not restrict the sample to physicians in order to avoid bias from excluding responses from non-physician EPs (e.g., nurse practitioners and physician assistants). This allowed us to evaluate whether differences in opinions existed among physician versus non-physician EPs.

No similar sampling frame existed for MU-Inactive EPs. Instead, a commercially available list of clinic-based physicians was obtained for the BCIN catchment area (SK&A Information Services, Inc., Irvine, CA). A stratified random sample was selected by proportionately sampling from strata for state and medical specialty and comparing this sample to the MU-Active sample to assure that redundant names were not drawn. Nine redundancies were detected, deleted from the MU-Inactive sample, and replaced with a random sample of additional providers to achieve a non-redundant sample of 400.

Three waves of mail contact were conducted by first-class mail from January 2013 to July 2013. Each mailing included a questionnaire, postage-paid return envelope for the survey, and postage-paid postcard that respondents signed and returned separately from the survey to indicate completion. Return of the postcard allowed us to identify respondents by name so that they could be removed from follow-up mailings while keeping the actual survey responses confidential. The initial mailing also contained a $25 incentive gift card. The survey was determined by the University of Washington Institutional Review Board (IRB) to be exempt from IRB oversight. Survey methodology followed the Total Design Method[12] and emphasized methods to enhance the response rate by managing each aspect of the survey design and administration process in a way that increased respondent trust that the rewards of responding would outweigh the costs of doing so.[13]

Of 400 EPs in the MU-Active group, 5 were no longer practicing, 12 were no longer at the address of record, and 11 had initially registered for MU but decided not to attest. This reduced the eligible sample of MU-Active EPs to 372. Of 400 EPs in the MU-Inactive group, 9 were no longer practicing, 15 were no longer at the address of record, 4 did not see Medicare or Medicaid patients, and 80 indicated they were ineligible for the MU-Inactive survey as they had since begun the MU registration process. This reduced the eligible sample of MU-Inactive EPs to 292. Of 664 total eligible EPs, 220 completed the survey for a response rate of 33 % (120 MU-Active; 100 MU-Inactive).

Data Analysis

For nearly every opinion item, responses in both groups clustered in the Agree and Disagree categories. Therefore, per-item binary measures were formed by combining responses in the Strongly Agree and Agree categories and responses in the Disagree and Strongly Disagree categories. For close-ended items, analyses compared groups with the use of t-tests for continuous variables and chi-square tests for binary variables. Post-stratification weighting of item responses was explored to compensate for potential nonrepresentativeness due to differences in percentages of those sampled versus responding within strata. However, comparison of weighted and unweighted responses did not reveal differences in proportions by more than a fraction of a percent across nearly every item. Therefore, results are reported as observed percentages. Statistical analyses were conducted with SPSS 21.0 software (SPSS Inc, Chicago, IL). An alpha level of 0.05 was adopted. Analysis of open-ended responses followed an inductive approach in which responses were coded by one investigator and then verified by another investigator to ensure inter-rater reliability in coding interpretation.

RESULTS

Table 1 shows the demographic, professional, and practice characteristics of survey respondents.

General Purposes, Realities, and Influences of MU on Health Care. Table 2 reveals that groups differed significantly in their views about MU leading to improved quality of care. The majority of respondents in both groups felt that financial incentives were inadequate given the investment to achieve MU. The majority in each group did not believe MU would alleviate care disparities, assure accuracy and completeness of patient information, or be realistically achieved given the lack of interoperability between EHRs. The MU-Active respondents were evenly split in the belief that MU would lead to a decline in the "art of medicine," while the majority of MU-Inactive respondents felt that MU would result in such a decline.

Responses to survey items in Table 2 did not vary significantly by organization type, practice size, or provider type with two exceptions: (1) 87 % of physicians felt that the lack of standardization between EHR systems would make MU interoperability goals unrealistic while 70 % of non-physicians held this opinion, a majority opinion in both groups; (2) 62 % of physicians disagreed that MU guidelines would remove patient care disparities while 82 % of non-physicians disagreed, a majority opinion in both groups.

Table 2. Percentage of Respondents (with Frequencies in Parentheses) in Each MU Group Agreeing with Statements About the General Purposes, Realities, and Influences of MU on Health Care

Statement	MU-Active group	MU-Inactive group	P-value for comparison
MU contributes to the decline of "the art of medicine"	50 (60)	70 (70)	0.007
MU will help me improve the quality of care my patients receive	59 (71)	40 (40)	0.014
MU financial incentives are inadequate relative to the MU investment	66 (79)	83 (83)	0.026
MU standards implicitly limit medical decision making and assume all patients are the same	46 (55)	60 (60)	0.070
An important reason for qualifying for MU status is to know how I am performing relative to a standard set by the federal government	49 (59)	37 (37)	0.132
The risk of MU audit from CMS is too high	53 (64)	65 (65)	0.246
MU will assure that patient information is accurate and complete	32 (38)	27 (27)	0.426
The MU guidelines will remove care disparities across the patient spectrum	25 (30)	19 (19)	0.454
The lack of standardization between EHR systems makes MU interoperability goals unrealistic	84 (101)	88 (88)	0.658
Organizing data for MU will allow me to track and aggregate patients into categories allowing me to see patterns that I may not notice looking at them individually	58 (70)	59 (59)	1.000

The Influence of MU on Respondents' Clinics. Table 3 reveals that the majority of MU-Active respondents reported adequate mechanisms in their practices to make workflow changes to attain MU, while the majority of MU-Inactive respondents indicated no such mechanisms. Respondents in the MU-Active group were equally split on concern for the expected reduction in Medicare payments in 2015 for providers not yet attested for MU; the proportion expressing concern for payment reductions was significantly greater in the MU-Inactive group. The majority of respondents in both groups agreed that productivity was or would be reduced, that they had too little time to do work associated with MU, and that the MU process was or would be stressful on staff.

The majority of respondents in each group indicated that clinic leadership was advocating for MU, with MU-Active respondents indicating that clinic administration was not concerned that lost productivity outweighed the benefit of incentive payments. The opposite was true for MU-Inactive respondents: the majority reported clinic administrator concern with loss of productivity relative to benefit from incentive payments.

Responses to survey items listed in Table 3 did not vary significantly by provider type or provider organization. Responses did not vary by the number of providers in the practice with two exceptions: (1) 72 % of respondents from practices with five or fewer providers lacked adequate project management staff to spend dedicated time on MU versus 47 % or less in practices with 6 or more providers; (2) 65 % of providers in practices with five or fewer providers had no mechanisms to deal with the workflow changes necessary to attain MU versus 46 % or less in practices with six or more providers. Within the MU-Inactive group, responses did not vary significantly by whether the EP would or would not attest for MU with two exceptions: (1) 80 % of those who would attest agreed that their productivity would be reduced from changing the way they used the EHR to obtain MU data versus 53 % of those who would not attest, a majority opinion in both sub-groups; (2) 83 % of those who would attest agreed that leadership in their clinics was advocating for MU versus 47 % of those who would not attest.

Open-Ended Responses About the Rationale for Working/Not Working to Achieve MU. Text Box 1 contains quotes from MU-Active and MU-Inactive respondents to the open-ended items. Among MU-Active respondents, 90 %

Table 3. Percentage of Respondents (with Frequencies in Parentheses) in Each MU Group Agreeing with Statements About the Influence of MU on Their Clinics

Statement	MU-Active group	MU-Inactive group	P-value for comparison
The expected 2015 Medicare payment reduction for not attaining MU is of concern to me	50 (60)	75 (75)	0.001
Leadership in my clinic is advocating for MU	90 (108)	75 (75)	0.006
There are no mechanisms in my practice to deal with the workflow changes necessary to attain MU	41 (49)	58 (58)	0.020
The risk of malpractice litigation against my practice increases with MU	25 (30)	44 (44)	0.036
My productivity was/will be reduced because I changed/will change the way I use my EHR to obtain MU data	58 (70)	73 (73)	0.058
If I do not know something about MU I know where I can find an answer	72 (86)	59 (59)	0.086
I lack project management staff that can spend dedicated time on MU	46 (55)	57 (57)	0.150
Our clinic administrators are concerned that the cost in terms of lost productivity outweighs the benefit of incentive payments	43 (52)	54 (54)	0.157
The process to reach MU is/will be stressful on my staff	89 (107)	83 (83)	0.289
I have too little time to do the reporting and work required by MU with all of my other duties	76 (91)	78 (78)	0.864

responded about the number one reason for choosing to work toward MU. The top reason was to fulfill a requirement by facility/clinic leadership or government (44 %), or to obtain incentive payments or avoid forthcoming penalties (40 %). Only 10 % cited improved patient care as their top reason for achieving MU.

Text Box 1. Representative responses from MU-Active and MU-Inactive respondents to the open-ended items.

Quotes from MU-Active respondents about the number one reason for choosing to work toward MU:

- "Because I wanted to stay employed"
- "There was no risk, and the EHR capable system was already in place"
- "Incentive payments"
- "Because corporate leadership demanded it"
- "The financial rewards or ultimately penalty was the only reason—it only impacts my practice negatively—it is not applicable to a specialty practice and actually detrimental"
- "I had no choice!"
- "We wanted to bring our medical records system up to standard to increase efficiencies and be ready for the future…assuming such changes would become mandatory. Therefore, we decided to move forward immediately and take advantage of the incentive money to offset the cost to our business"
- "My institution mandates it. I think it is a good idea"
- "Either attest now and receive financial incentives or wait and get financially penalized"
- "It is here to stay and has the potential, not yet realized, to become a powerful tool in epidemiology and QI in health care. It also has the potential to become a means of control of providers and recipients of health care that we all need to guard against"
- "Lost productivity due to adopting EMR made it financially necessary. I do think meeting the requirements offers some benefit re: managing patients, tracking patients, etc."
- "I already had an EHR—it didn't make sense not to try to comply, but the burden is *heavy* and has extended my day by an hour each and every day. I'm not sure it's worth it to continue with Medicare, let alone MU"
- "To avoid the Medicare penalty of reduction in reimbursement"
- "Helped to fund the EMR for my clinic"
- "Excellence in care, federal compliance, and incentives instead of penalties"

Quotes from final thoughts supplied by MU-Active respondents:

- "The current MU parameters have minimal meaning in a surgical specialty practice and require expensive staff and physician time—add nonsense information to the EHR record—generally a detrimental step for patient care improvement"
- "These are important and relevant patient care measures but they come on top of heavy workload and poor support"
- "It is difficult to implement all aspects of MU because of the time now required to complete a record when you have 4–5 employees and it costs you 300–400 in time and labor to complete an exam, yet you are only reimbursed $80.00. It is obvious there is a problem. You will see a serious decline in providers. The utopian health care system was obviously not designed by someone actually working in a clinic and providing care"
- "The fundamental belief that enough rules will prevent human error is inherently flawed and undermines the expectation of competency and personal responsibility. Many practitioners, competent practitioners, fulfilled the expectations and goals of the MU efforts but did so in an individualized and cost effective manner. MU obligates the expense be applied to all since no one can possibly understand the exceptions or afford the consequences of misinterpreting the guidelines. MU is a billing and cost-cutting administrative construct in the guise of enhancing patient care—at least minimum quality for great expense"
- "It us cumbersome, frustrating, and extremely costly. I am tired of feeling awkward when my patients have to sit there watching me fiddle with my computer to do what seems a simple task"
- "Need some input from professional organizations; in our case, the American Academy of Pediatrics, to help make meaningful use more meaningful"
- "I like the program even though parts of it are challenging. I believe it will ultimately improve patient care"
- "Intentions are sometimes good, but implementation may not meet the benefit/challenge threshold. Some measures are not truly meaningful, i.e., saying I counseled someone to stop smoking gives us credit but with all the 'boxes' to complete we have less time for true counseling"
- "I don't think quality of care is vastly improved for those of us who already provide high quality care. Honestly, it's a lot of busy work that takes away from my time with patients and at home. It galls me that I will have to practice this way for the rest of my career, trying to satisfy requirements set out by government and administrators. This is not how I envisioned practicing primary care"
- "I have found that the information about MU is complicated and very difficult to understand. It is also difficult to put together the information required and submit it to our local Medicaid program
- "MU has greatly slowed down workflow without producing significant advantages. There is less time to spend with the actual patients"
- "There are some benchmarks that are difficult to understand from a provider's perspective. Checking height and weight at every visit is not "meaningful use" of my staff. I can only imagine how difficult it would be for providers in individual practices, working these MU goals. The stress adds up soon"
- "Hard to do MU unless you are a large group with dedicated staff"
- "MU is overkill and it is diminishing productivity"
- "Regulating excellent health care is misguided. Fostering excellence is better than saying if you check all the boxes you are excellent"

Quotes from MU-Inactive respondents about the number one reason for not choosing to work toward MU:

- "Attempting to pacify bean counters in Washington or Olympia interferes with my ability to care for my unique individual patients. Too disruptive to the doctor/patient relationship"
- "Too many other office issues—staff, etc. Too busy so far to really look into"
- "Cost of implementing system, which is not well established, outweighs financial benefit…i.e., presumed loss in productivity would occur"
- "We are going to do it! But setting up our practice to make MU measures work is hard—it requires us to do a lot of new, meaningless stuff"
- "I want to do it but my partners disagree"
- "Meaninglessness of requirements"
- "We are working toward MU, but I have yet to experience any benefit to my patients. It is expensive, and we spend too much time on the computer documenting and charting as it is. I would rather spend more time with my patients"
- "Cumbersome process for *no* gain in patient care"
- "I think the surrogate endpoints are largely irrelevant to anyone except a bureaucrat"
- "I do not make those decisions here at my clinic. The clinic is working toward that process but is not happy about it. Neither am I"
- "I am technologically oriented but we still have the cart in front of the horse. Being a doctor, meaningful use of my time is spent with my patients, not trying to get a better reimbursement for spending less time with patients"
- "Too complicated"
- "Our company has been acquired by a large clinic and this issue has been lost in the process"

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- "I find that MU as outlined by CMS does not meet meaningful use in terms of patient care. I find the process cumbersome and onerous on the provider without reaping clinical benefit. I do not think many of the goals of meaningful use as outlined currently will have effects on my patient population"
- "More government involvement in my practice is not desirable"

Quotes from final thoughts supplied by MU-Inactive respondents:

- "Very time consuming. It takes my time away from more MPC 'meaningful patient care' and distracts us from the job we do. It adds an additional 3–5 min per visit"
- "This is the farce of EHR—they make doctors robots with technology—less time to listen to patients, unreimbursable costs, and decrease in satisfaction—a case where 'new is not better'"
- "They can't talk to each other! We have a dozen EHRs and no infrastructure for them to transfer data. We print, fax, and scan the notes. It is beyond stupid"
- "Physicians who do not have EHR only hear 'bad' things about EHR (cost, how it decreases productivity, how long it takes to learn). Therefore, those like my partners don't care if they have a 1–5 % penalty for non-use/adoption of MU"
- "I hope to retire before my clinic switches to EHR"
- "MU further erodes the time needed to care for patients with relatively insignificant re-imbursement"
- "The whole MU program is, in my opinion, just another regulatory nightmare. I appreciate the incentive, but the whole program is way beyond any good I think it will accomplish"
- "It really irritates me that we end up 'treating' the EMR, MU, rather than the patient. Not all patients follow government guidelines or the book or what the insurance companies think, or say should be done or ordered or prescribed. Not all patients want to do what we recommend"
- "Patient care will suffer under the guise of 'improved care' promised by MU"
- "More hoops to jump through costing more production loss and decreasing reimbursement, which does not improve the quality of health care in any capacity"
- "MU relies on data that can't be structured in a current EHR very easily and so far are fraught with error that adversely affects MD reimbursement. So far, *not one* of my patients has benefited from MU, but I have had to spend lots of time explaining why a patient has been labeled as not meeting MU criteria when in fact, they are"
- "Switching to EMR the past 2 years has been more frustrating than I can explain. It has made me feel less like a doctor and more like a data entry person. EMRs seem to be created for the purpose of gathering data and not for healing"
- "If you want a monkey to take care of you and click all these boxes for you so you can measure various things, then get a monkey. If you want a doctor who can think and make decisions based on patient interaction and evaluation, then get a doctor. MU makes me believe you want a monkey. Leave providers alone so we can take care of our patients and not get bogged down with this"
- "MU is a good idea that has been taken way too far. Too many doctors are treating their computers and databases now instead of taking care of their patients"
- "In theory MU is a good idea but current technology does not allow us to perform many of these tasks accurately/effectively. MU adds one more layer of complexity that distracts physicians and systems from doing their job. MU will only work when EHR's work—they don't!"

Final thoughts were supplied by 39 % of the MU-Active respondents. The most consistent and frequent final thoughts (71 %) tended to be critical of MU in terms of loss of patient care time, extension of the work day, financial burden, or lack of belief that quality of care would be improved.

Among MU-Inactive respondents, 62 % responded about their number one reason for choosing not to work toward MU. Main reasons cited included disbelief about the positive impact of MU and/or belief in largely negative consequences from participation, such as disruption of patient care, loss of productivity, and cost (39 %), the decision by facility/clinic leadership to not pursue MU attestation status (19 %), and seeing no/too few Medicare or Medicaid patients (10 %).

Final thoughts were supplied by 39 % of the MU-Inactive respondents. The most consistent and frequent final thoughts (56 %) tended to be critical of MU in terms of loss of patient care time, extension of the work day, financial burden, or lack of belief that quality of care would be improved.

DISCUSSION

As the US health care system adapts to care delivery, policy, and payment reforms stimulated by the ACA, strong provider leadership is essential to success. Many of the reforms compelled by the ACA are predicated on changes in provider behavior as payment methods transition to a model in which providers are evaluated and compensated based on quality of care and outcomes. The US government considers MU standards to be one clear mechanism of transitioning to a health care system in which patient care can be measured and reported in order to demonstrate quality of care. This survey illustrates that 59 % of EPs currently active in the MU program agree that quality of care will be improved by changes required by MU standards, while 60 % of those not active in the MU process feel that the MU program will not improve the quality of care; 54 % of respondents active in the MU process do not perceive that MU will limit medical decision-making, while 60 % of respondents not active in the MU process perceive that medical decision-making will be limited. These findings support our hypothesis.

Apart from these differences, and counter to our hypothesis, the majority of respondents in the active and inactive groups are uniform in their opinions. Fifty-nine percent of respondents feel that organizing data for MU reporting will assist with observing patterns in outcomes among groups of patients. Responses to most other items reveal a general trend of skepticism—even among those active in the MU program—about the impact of

MU on reducing care disparities (78 % disagree) or improving the accuracy of patient information (70 % disagree). Eighty-six percent of respondents are also skeptical that interoperability among different EHR platforms can be achieved. The additional workload on EPs and their staff is viewed by 74 % of respondents as too great a burden on productivity relative to the level of reimbursement for achieving MU goals. Comparison to federal standards for care quality is not a motivator for engaging in MU for 56 % of respondents.

The majority of responses to the open-ended items tended to reinforce the general perception that regardless of MU status, the MU program diverted attention from treating patients by imposing greater reporting requirements. Responses about the number one reason for engaging or not engaging in the MU program did not reveal general provider buy-in based on clear and credible rationales for the purported benefits of MU on quality of care. Furthermore, the MU-Active group identified mandates from others, such as clinic leadership, as the primary reason for engaging in the MU process.

EP provider type (physician vs. other providers) and organization type (private practice vs. other types of organizations) had little significant association with attitudes toward MU, suggesting that concerns regarding MU are not confined to certain disciplines. However, processes linked to MU were significantly more stressful on small practices. In particular, smaller practices indicated inadequate project management staff to dedicate to MU and insufficient time to achieve MU reporting. These data provide further evidence that broad representation from all types of EPs will be necessary to inform ongoing policy debate about MU.

Our study limitations include respondents that may not be representative of the general populations from which they were sampled, a possibility reinforced by a low response rate. However, the similarity in responses to many of the items between respondents who were active and inactive in the MU process indirectly suggests that responses were representative of the larger population of EPs. In addition, the 33 % response rate, while low, was within ranges of previously reported rates for carefully designed surveys of clinicians and indicates the difficulty with obtaining responses from health care providers.[14–17] Second, our sample was drawn from two states served by one Regional Extension Center and may not reflect EP attitudes in the nation as a whole. That said, our results are congruent with previous work conducted on a national sample that identified many similar barriers to achieving MU in the Medicaid EHR Incentive Program.[5]

Although much of the literature on general provider attitudes toward implementation of EHRs preceded the MU program, there are parallels in provider perceptions of major barriers to implementation of EHRs and the tone of skepticism about the MU program noted in this study. EHR implementation literature has consistently reported difficulties with the process such as high costs, lowered productivity, disruption to patient care, dissatisfaction among staff, and lack of training and support.[3–6] Analogous concerns were noted by EPs surveyed for this study. Any of these barriers could cause providers to fall short of being meaningful users of EHRs.[6]

Recent data from CMS indicate that 17 % of EPs receiving incentive payments in 2011 did not receive incentive payments in 2012 despite the fact that MU requirements did not change and the providers had work accommodations in place to support MU reporting.[18] This finding has been interpreted to mean that EPs are dropping out of the MU program after the initial incentive payment, which is the largest payment from Medicare and Medicaid. This is despite the fact that recent analyses of EP performance in achieving MU objectives show that the majority of EPs exceed the threshold established by CMS for achieving most objectives.[9] Among many possibilities for the dropping retention rates, the results of this survey suggest that frustration with the MU process in EPs who were early attesters could be setting in or that the level of effort to reach MU is not worth the incentive payment. Likewise, for the majority of respondents not engaged in the MU process, the survey revealed doubt that MU would be worth the effort. As provider satisfaction will have some role in the eventual success of meaningful use of EHRs, these results suggest that further engagement of providers, perhaps with restructured incentives, training, or significant workflow help, seems critical. These engagements will be important opportunities for CMS to evaluate why physicians participate in meaningful use, what would incentivize non-attesters to engage in MU, and what would motivate EPs to continue participating. Because the majority of respondents in each group indicated that the 2015 reduction in Medicare fee-for-service payments for non-attested providers was concerning, the need for engagement seems urgent.

The results of the survey reflect some pessimism on the part of many respondents about whether meeting MU criteria actually fulfills the general intent of the MU program and concerns over productivity loss and costs for pursuing MU standards. As the influence of health care reform on the quality of patient care becomes clearer, attitudes and perspectives may change. However, the criteria associated with the stages of MU become more challenging, with Stage 1 focusing primarily on data capture, Stage 2 on data reporting, and Stage 3 expected to require EPs to showcase skills developed in Stages 1 and 2 by demonstrating improved quality of care. Based on our survey results, it is not clear that providers will embrace further expansion of the MU

program without greater efforts to provide education and support to achieve MU standards, as well as providing a platform to obtain provider feedback about their experiences that can inform rulemaking in Stage 3. Engagement of providers by policymakers seems critical given that EPs participating in this survey find many flaws with current MU policy.

Funding Source: *This work was supported by grant no. 90BC001101 from the Office of the National Coordinator for Health Information Technology (ONC), Department of Health and Human Services (DHHS), awarded to Inland Northwest Health Services. Article contents are solely the responsibility of the authors and do not necessarily represent the official views of ONC or DHHS.*

Prior Presentations: *Portions of the data were presented at the American Public Health Association Annual Meeting and Exposition in November 2013.*

Conflict of Interest: *The authors declare that they do not have any conflicts of interest.*

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