Translating comparative effectiveness research into Medicaid payment policy: views from medical and pharmacy directors

Background: As the USA seeks to expand the conduct and dissemination of comparative effectiveness research (CER), views of key stakeholders will help guide the way. Methods: We surveyed 60 medical and pharmacy directors from 46 state Medicaid programs. Results: Over 90% felt that CER would lead to better clinical decision-making and overall value within 5 years and were willing to consider cost-effectiveness in setting medical policy. However, perceived poor quality, inconclusive research, restrictive legislative mandates, lack of budget impact and coverage recommendations, and lack of an independent body to interpret study results were major barriers cited to using CER evidence. Conclusion: Given the significant resources being invested in CER, it is critical that these barriers are overcome to maximize its usefulness for stakeholders.

Keywords: barriers • CER • comparative effectiveness research • decision-making • evidence • Medicaid • medical policy • patient-centered outcomes research • PCOR • PCORI • recommendations • usefulness

Background
The USA is embarking on an unprecedented era of spending on comparative effectiveness research (CER). Following over a billion dollars allotted by the American Recovery and Reinvestment Act of 2009 for CER, the Patient-Centered Outcomes Research Institute (PCORI) was created under the Patient Protection and Affordable Care Act to move the field rapidly forward. CER is a cornerstone of efforts to employ the best available medical evidence to reduce the use of less effective practice patterns and ensure that patients receive the optimal treatment for their particular conditions. If properly employed, CER can lead to improved patient outcomes and thus add value to our healthcare system.

Investment of public funds alone will not guarantee that the results of CER will spread to the areas that do the most good. Barriers in the health system that may slow its application include the slow rate at which research in general is translated into practice, lack of familiarity with CER and the failure to consider the needs of end users [1,2]. PCORI puts a high priority on considering the needs of stakeholders when deciding on the merits of research proposals. Nevertheless, Alan Garber asks, 'How will the institute [PCORI] ensure that comparative effectiveness research is practical and useful for a diverse set of stakeholders? How can the research contribute to better healthcare decisions?' [3]. Understanding the views of stakeholders is therefore critical to the successful dissemination of CER results.

In the USA, public payers represent an important group of CER stakeholders. Medicaid is the largest insurance program in the country [4], and over half of the 32 million people who stand to gain coverage under healthcare reform could do so via Medicaid [5]. Furthermore, a majority of adult Medicaid enrollees aged 21–64 years have at least one potentially serious health condition [6]. Medicaid beneficiaries are entitled by federal statutes and regulations to a broadly defined set of benefits. Nevertheless, coverage poli-
cies for specific services are determined by each state Medicaid program. Medical directors and pharmacy directors of state Medicaid programs are the key decision makers in the development of coverage policies for pharmaceuticals and other medical services.

Despite the importance of Medicaid and its coverage policies, little is known about how policy makers in state Medicaid programs perceive CER or how they intend to apply CER to their coverage decisions. To address this, we surveyed medical and pharmacy directors in all 50 state Medicaid programs in order to answer the question, ‘How do senior coverage policy makers in the nation’s Medicaid programs view CER, and how do they currently use CER in setting coverage policy?’

Methods

Questionnaire development & testing
We developed a draft questionnaire through focused interviews with experts in the field and with current or former health plan medical and pharmacy directors about the types of evidence they used to set coverage policies for drugs and other services. Initial items were cognitively tested with former medical directors from three states to identify questions that were difficult to understand or answer, and a modified version was pre-tested. The protocol was approved by the Institutional Review Board at the Brigham and Women’s Hospital.

Description of questionnaire
Separate questions with relevant terminology were developed for medical and pharmacy directors, although the domains were virtually the same. In some cases, the medical director also oversaw the Medicaid formulary and so answered both sets of questions. In a few states, the medical director delegated some authority to make medical or formulary policy decisions to third parties such as other staff, technology assessment teams, and Physician Advisory committees. In such cases, they were instructed to answer ‘where necessary on behalf of those delegated third parties.’

The final version of the questionnaire first asked about the types of CER methods or evidence that were used “for comparing the relative effectiveness of treatments and interventions.” Choices included randomized controlled trials (RCTs), consensus statements/guidelines, observational studies, and other forms of information (complete list in Figure 1). If respondents answered positively to the ‘use’ question, they were asked, ‘...how useful to your organization is each ... type of evidence in making decisions about ... coverage policy?’ Next, we posed hypothetical scenarios that asked about their willingness to change existing coverage policy in reaction to the emergence of new CER evidence. For example, one item asked, “If new CER evidence showed that a currently covered medical/surgical treatment was less clinically effective than other available treatments, how likely would you be to recommend a change in medical policy to limit coverage of the current treatment?”

Another item addressed comparative safety, and another addressed comparative cost. Respondents replied on an ordinal scale of ‘Strongly Disagree’, ‘Somewhat Disagree’, ‘Neither Agree nor Disagree’, ‘Somewhat Agree’, ‘Strongly Agree’. Pretesting suggested that respondents had difficulty answering this question without knowing the quality of the research, so we prefaced the questions with the instruction to “Please assume that the studies producing the CER evidence are of adequate quality.”

Another question asked respondents about the extent to which they considered heterogeneity, defined as “the variability of individual responses to treatments and interventions,” when they were setting medical policy.

We next asked a series of questions to obtain respondents’ opinions about national issues. These items included ‘How much confidence do you have in the accuracy and reliability of the following sources of CER evidence?’ (e.g., the Agency for Healthcare Research and Quality, PCORI, Cochrane reviews, The Drug Effectiveness Review Project, the pharmaceutical industry, and others) and ‘How much of a barrier, if any, are each of the following in preventing the use of CER results to set medical policy in your organization?’ The final question asked them to agree or disagree with statements about the impact of CER on the future of US healthcare in the next 5 years. The instrument is shown in the Supplementary Material (see online at: www.futuremedicine.com/doi/suppl/10.2217/cer.14.68).

Study sample
We compiled a list of names and email addresses of all state program directors and pharmacy directors. After obtaining contact information from each state’s Medicaid internet site, we called each state Medicaid office to confirm the name and contact information of the medical director and pharmacy director. The list of 100 state Medicaid medical and pharmacy directors included all 50 states.

Survey administration
The survey was administered by the University of Massachusetts Medical School’s Office of Survey Research from October 2012 to May 2013. Survey subjects were initially contacted by email. We sent web survey links, although we also offered paper surveys and telephone interviews if requested. Follow-up phone calls and multiple mailings encouraged subjects to complete the survey. No financial incentives were offered. Completion of the survey indicated consent.
Figure 1. Types of evidence and perceived usefulness in setting medical/formulary policy. Survey questions: Which of the following types of evidences does your organization use in making decisions about medical/formulary coverage policy? In general, how useful to your organization are each of the following types of evidence in making decisions about medical/formulary coverage policy?

† All 60 respondents answered each question on types of evidence used.
‡ Only respondents that used each type of evidence indicated level of usefulness.

Statistical analysis
The unit of analysis was the respondent, not the state, because we were interested in individuals’ perceptions and not necessarily state-specific policy. We assessed the simple proportions of the responses to the different items in the questionnaire. In preliminary analyses, we analyzed the responses of the medical and pharmacy directors separately and then compared them using $\chi^2$ tests. The differences in opinions between the two strata were generally small and not statistically significant. Subsequently, we analyzed them together and report them as a single group. Because the sample of 50 states represents the universe of Medicaid payers, we do not provide confidence intervals. All data were analyzed using Stata version 11 (StataCorp 2009, College Station, TX, USA).

Results
We obtained responses from 46 states (92%), with a total of 60 out of 100 directors (60%) participating in the survey. In 14 states, both medical and pharmacy directors responded. State Medicaid programs varied in their leadership structure. In some cases, it was determined that the Medicaid director also served as the medical director, and in some cases the medical director set coverage policies for drugs as well as medical services. Of 60 directors who responded to the survey, 12 answered the medical policy questions alone, nine answered both medical and pharmacy policy questions, and 39 answered the pharmacy policy questions alone.

Usefulness of evidence
Health plan directors used a variety of information sources to guide coverage policy. Nearly 90% said they used RCTs, consensus statements or guidelines from national professional societies, and systematic reviews (Figure 1). About three-quarters used expert opinion, and over half used published observational studies from external sources or patient experience/consumer advocacy. Nearly half (45%) relied on observational studies using their own state data despite the fact that such data are usually not peer-reviewed.

Among those who used each type of evidence or information, large majorities (87–100%) found them to be at least ‘somewhat useful,’ except for patient experience/advocacy which was deemed at least somewhat useful by only 70% of respondents (Figure 1). The percentage who said each type of evidence or information was ‘very useful’ in setting policy was highest for RCTs (73%), followed by 68% for guidelines, 53% for systematic reviews, 42% for expert opinion,
20–21% for observational studies and 8% for patient experience/advocacy (results not shown).

Effects of new CER on medical & pharmacy policies

We posed a series of hypothetical questions asking respondents how likely it was that they would recommend a change in coverage policy if new CER evidence of adequate quality were to emerge (Table 1). For example, 94–95% of respondents said they were ‘very likely’ or ‘somewhat likely’ to recommend a change in coverage policy if new CER evidence showed that a currently covered product had more harms than benefits or if a new product was found to be less clinically effective than a current one. And 95% responded that they were at least ‘somewhat likely’ to limit coverage of a new treatment or drug that was shown to be less cost effective than a current treatment or drug. Finally, 83% would be at least ‘somewhat likely’ to recommend a change in policy if new CER evidence showed that a currently covered product was less clinically effective than other available options.

Consideration of heterogeneity

When asked how often they considered heterogeneity in setting coverage policies, respondents reported ‘usually’ or ‘always’ half of the time or less, with 13–31% answering ‘don’t know/not applicable’ (Table 2). Heterogeneity was considered most often when designing ‘Prior authorization’ policies (50%), followed by ‘inclusion in the formulary’ and ‘step therapy’ requirements (both 41%), ‘determination of coverage for individual cases’ (38%) and ‘tiering of pharmaceutical treatments’ (30%).

Confidence in CER sources

Respondents were asked about their confidence in different sources for CER results and CER reviews. The source with the highest level of confidence was the NIH for which 67% of respondents reported ‘a lot of confidence’, and an additional 24% had ‘moderate confidence’ (Figure 2). The only other source for which at least half of respondents had a lot of confidence was the Agency for Healthcare Research and Quality. The lowest level of confidence was in industry sources, with 65% expressing little or no confidence. Cochrane reviews were rated third highest among those who were familiar with them. However, more than one-third of respondents were unfamiliar with Cochrane. Other sources that were unfamiliar to state policy makers included the Blue Cross Blue Shield’s Technology Effectiveness Center and PCORI (52 and 64%, respectively, responding ‘don’t know’). The high number for PCORI possibly reflected the fact that no research had been published at the time of the survey that was explicitly funded by PCORI.

Barriers to using CER

Only a small minority of respondents did not perceive at least moderate barriers to using CER to set coverage policy (Figure 3), while one-third or more identified significant barriers to using CER in their roles as policy makers. The two barriers presenting the biggest problems were ‘lack of high-quality research’ and ‘lack of conclusive results’ (Figure 3). In addition, perhaps because state agencies can be subject to political pressures, approximately half of respondents thought that legislative mandates and the lack of an independent body that provides legitimacy to interpretations of

<table>
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<th>If new CER evidence showed that:</th>
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<th>Percentage who would recommend a change or limitation in policy</th>
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<tr>
<td></td>
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<td>Very unlikely</td>
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<td>Currently covered treatment/drug had more harms than benefits compared with other treatments/drugs</td>
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<td>New treatment/drug was less cost effective than currently covered treatments/drugs</td>
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Survey question (example): If new CER evidence showed that a currently covered medical/surgical treatment had more harms than benefits compared with other available treatments, how likely would you be to recommend a change in medical policy to limit coverage of the current treatment? Survey answer (example): Very unlikely (1), Somewhat unlikely (2), Somewhat likely (3), Very likely (4).

CER: Comparative effectiveness research.
CER results were important barriers. Notably, nearly one-half (47%) cited the lack of budget impact analyses and 38% cited lack of coverage recommendations as large barriers.

**Effects of CER on US healthcare delivery**

State medical policy makers were overwhelmingly in agreement that in the future, CER would result in better clinical decision-making and improved quality and healthcare value (Figure 4). However, only about 50% of respondents thought that CER would actually reduce cost, with more than one-third being neutral or undecided. Respondents were evenly divided with respect to the effect of CER in the future on the influence of the pharmaceutical industry, with half agreeing that CER would limit its influence and the other half either neutral or in disagreement. On the contrary, very few (14%) thought that CER would lead to greater government involvement in healthcare.

In a similar series of questions, respondents overwhelmingly (90%) thought that CER would encourage the adoption and use of new health treatments that were more effective than other current treatments, while discouraging less effective treatments (75%; results not shown). Very few (12%) thought that CER would discourage innovation in medical research.

**Discussion**

We surveyed medical and pharmacy directors of state Medicaid programs about their use of CER for making coverage decisions and found a great deal of optimism. In fact, the vast majority of respondents thought that they would be likely to recommend changes to coverage policy in the face of new CER evidence assuming that it was of adequate quality. Preference for RCTs was common, but somewhat surprisingly a majority of respondents also used observational data in making coverage decisions, and even more relied on expert opinion. As for the future, they held generally favorable views about the ability of CER to improve value in US healthcare delivery via better clinical decision-making. Despite this optimism, Medicaid decision makers identified major barriers to applying CER to everyday determinations of coverage policy. These included lack of high-quality or conclusive research, lack of a legitimate, independent body with authority to interpret findings and lack of information on the budget impact of different treatment options. These findings, particularly the ambiguity of research results, corroborate what has been discovered in earlier studies [2]. Although the evidence exists, many decision makers are unsure how to translate the information into action either because the studies contain so many distracting details that obscure the main take-home message or because the suggested applications of the studies are not tailored to the unique needs of the system.

Our results clearly show that Medicaid coverage decisions are based on many different types of information. Although RCTs are often viewed as the gold standard of evidence, conducting trials is not always feasible or even desirable. They can be expensive, require an extended time horizon and typically do not represent the ‘real world.’ Furthermore, subjects in the RCTs often lack representation by minorities which may further limit their usefulness for Medicaid populations. Observational research can serve as a valuable ‘real-life’ alternative. Besides, it would be impractical to conduct RCTs in some particular human research areas especially with the strict legislation and ethical considerations that surround such research. Over half of respondents were using either their own or others’ data for observational studies and found those studies to be at least somewhat useful, suggesting an important and potentially growing role for nonexperimen-

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<th>Types of policy</th>
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<th>Frequency of consideration of heterogeneity in setting policy (%)</th>
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<td>Never</td>
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<tr>
<td>Determination of coverage for individual cases</td>
<td>21</td>
<td>10</td>
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<tr>
<td>Prior authorization</td>
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<td>Inclusion in the formulary</td>
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Table 2. Heterogeneity of treatment effects in setting medical/formulary policy.

Survey question: “How often do you consider heterogeneity for setting the following types of medical/formulary policy?”.

1Medical directors, only.
2All respondents.
3Pharmacy directors, only.
4DK: Don’t know.
Figure 2. Confidence in sources of comparative effectiveness research information. Survey question: How much confidence do you have in the accuracy and reliability of the following sources of comparative effectiveness evidence? Number of respondents in parentheses.


tal evidence. At the same time, our results may reflect some ambivalence if respondents were thinking of observational studies when they expressed concerns about the lack of high-quality research and conclusive results from CER studies.

Our study also sheds light on the phenomenon of heterogeneity. In the past, payers and providers likely relied on average study results to make coverage policies and individual-level treatment decisions. However, healthcare interventions vary in their effectiveness for individuals. For example, lack of an average effect may mask positive effects for subpopulations, and, conversely, positive effects on average may not reflect poor outcomes for subgroups of patients. Today, larger and more sophisticated studies often take into account heterogeneous treatment effects. Our results suggest that such heterogeneity is only occasionally considered when setting coverage policy.

Another barrier to using CER evidence is the dearth of national or regional independent bodies to help policy makers and others interpret CER and provide recommendations for its application to practice and policy. Several examples exist of such initiatives. In Washington state, the Health Technology Assessment Program was created by statute in 2006 to consider safety, clinical effectiveness, and cost–effectiveness in making coverage decisions for the state’s Medicaid, workers’ compensation program and the public employee self-funded plan [7]. More recently, the New England Comparative Effectiveness Public Advisory Council was formed to provide independent guidance on how information from Agency for Healthcare Research and Quality evidence reviews supplemented with budget impact and cost–effectiveness information can best be used by public and private payers, clinicians and patients [8]. The Washington state program has legal authority to set policy, while the New England Comparative Effectiveness Public Advisory Council does not make specific coverage recommendations but serves as an independent, objective source of interpretation and guidance. Medicaid policy makers in other states may be interested in having exter-
Figure 3. Top barriers to using comparative effectiveness research evidence to set policy. Survey question: How much of a barrier, if any, are each of the following in preventing the use of comparative effectiveness research results to set medical/formulary policy in your organization? Number of responses in parentheses; respondents marking ‘not applicable’ were counted as missing.

Our study contributes to the policy debate relating to use of information on cost-effectiveness. Table 1 notes that 95% of respondents said they would be likely to act on evidence that a drug/treatment was less cost effective than alternatives. In practice, however, the necessary data may not be available. Nearly 80% of respondents said that lack of cost/budget impact was a barrier to using CER evidence in policy making.

Our survey adds to what is currently known about how payers perceive the utility of CER. A 2013 survey of stakeholders who reported being knowledgeable about CER (including government, researchers and thought leaders, insurers and health plans, employers, business coalitions and HR specialists, trade groups) found general agreement that CER was important for healthcare decision-making [9]. However, respondents believed that its impact on healthcare decision-making was a few years away, with only 37% believing that CER would bring a moderate to substantial improvement to decision-making over the next year. That share grew to three-quarters when the time horizon was increased to three years and to 92% when a five-year window was considered. This is consistent with the views of state policy makers expressed in this study when asked about the impact of CER on the healthcare system in the next 5 years.

In order to achieve an improvement in the impact of CER on decision-making, several barriers may need to be addressed. For example, to address concerns about the quality of CER research, one strategy would be to develop agreed-upon research standards to help decision makers identify CER that is of high enough quality and relevance to support decision-making (and that which is not of sufficient quality or relevance), regardless of the source of CER. Such standards could overcome the reluctance to embrace observational studies as a meaningful source of evidence and provide confidence in the value of research from a wider variety of research programs. Although the Meta-analysis Of Observational Studies in Epidemiology (MOOSE) and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines provide practical steps to maintain quality [10,11], there is no oversight system in place to encourage adherence. More recent advancements in attempts to outline standards in comprehensive and practical ways include the development of the Good ReseArch for Comparative Effectiveness Initiative [12,13] and the CER Collaborative [14]. The Good Research for Comparative Effectiveness checklist is an 11-item survey that was designed to assess the appropriateness of data used for
research and the conduct of the studies. The CER Collaborative was formed by a consortium of the Academy of Managed Care Pharmacy, the International Society for Pharmacoeconomics and Outcomes Research, and the National Pharmaceutical Council. This group has produced a website and series of Value in Health manuscripts all to support the assessment by payers of whether published research meets accepted standards. These are good steps toward creating standards and need to be widely known and utilized as a means for rating evidence from such CER.

Second, in order to maximize utility to public and other payers, one solution is to provide opportunities for these stakeholders to influence the content and type of CER. PCORI employs a multistakeholder approach in the choice of study objectives and requires patient engagement in all aspects of the research that is conducted, yet there remains a mismatch between the apparent results of the studies and the questions to which policy makers seek answers. Perhaps PCORI could strengthen the role that payers play in its panels, in order to ensure that the information from studies is presented in a way that is readily applicable to policy makers and to eliminate, or at least reduce, the ambivalence that sometimes accompanies CER results. Finally, even good studies must be disseminated in order to be used. The requirement that all PCORI grant recipients specify how they will disseminate the results of their research is commendable. Further efforts to publicize CER results with nonconventional formats such as social and traditional media could create better awareness of results both to policy makers and their constituents. Success of such methods has been seen in research on tobacco control and diet and can easily be adapted to CER [15].

This study has several strengths. First, it gathered opinions from 46 out of the 50 states in the country, and therefore should be representative of the opinions of Medicaid policy directors in the country. Second, this survey assessed perceptions over a wide variety of CER issues among policy makers. This gives vital information that could be used by bodies like PCORI in ensuring that the results of CER are put to their full potential, although the lack of familiarity of our respondents with PCORI is worrisome if it continues. There are limitations as well. Like any survey, it was challenging to convey the same intended interpretation of questions to every respondent. Although we cognitively tested the questionnaires and made alterations based on our findings, it is still possible that some responses were inaccurate due to misinterpretation. Also, since opinions are not the same as actions, we cannot conclude that the responses adequately represent the future actions of medical policy.

Figure 4. Effects of comparative effectiveness research on the future of US healthcare. Survey question: Please say whether you agree or disagree with the following statements with respect to the effects of comparative effectiveness research on healthcare delivery in the USA. Over the next 5 years, comparative effectiveness research will... All 60 respondents answered each question.
makers. Results from public payers should not be
generalized to private payers. In addition, the num-
ber of respondents included in the study was small
which affects the precision of the estimates, and some
states contributed two responses versus only one from
others.

CER is viewed as a promising tool for setting medi-
cal and formulary payment policy, but must overcome
significant barriers to meet the needs of the payer com-

munity. It is critical that CER be viewed as useful as
possible or the considerable resources being spent on
it will not reach their full potential. The type of stud-
ies being conducted should be consistent with the type
of information policy makers need to influence their
decisions. Methodologically sound CER that is con-
ducted in the areas that matter to patients and deci-
sion makers has the potential to transform medical
decision-making.

**Conclusion & future perspective**

Although PCORI and some other sources of CER have
not yet gained widespread acceptance among policy
makers, a large proportion of our respondents believed
that evidence from CER will be useful in improving
clinical decision-making, value and quality of care in
the near future. This optimism is a ray of hope espe-
cially as PCORI increases its funding of CER while
various stakeholders face increasing cost and budget
pressures leading to a renewed focus on improving the
applicability and credibility of CER. Studies like ours
will continue to serve an important purpose for the
producers of CER in understanding how the intended

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**Executive summary**

**Background**
- Billions of dollars are being spent in establishing the Patient-Centered Outcome Research Institute (PCORI) and comparative effectiveness research (CER) is the mainstay of decisions made by the institute.
- A large proportion of CER stakeholders in the USA are decision makers in the Medicaid insurance program with over 32 million people being covered by the program.

**The questions we asked**
- We wanted to understand how policy makers in the state Medicaid programs view CER and how they use CER in setting coverage policy.

**Sources of answers**
- Medical and pharmacy directors from all 50 state Medicaid programs were asked to complete a survey.
- Sixty directors from 46 states were included in the final analysis.

**Perceptions on CER**
- Over 80% of respondents used randomized controlled trials, systematic reviews and consensus statements from national professional societies in setting policy.
- Most respondents were likely to restrict new medical or formulary policy if CER showed new policy was less clinically effective or less cost effective than current policy. Ninety-five percent were likely to change policy if CER showed that current policy had more harms than other policies.
- The sources of CER evidence with the highest level of confidence by directors were NIH, Agency for Health Research and Quality and the Drug Effectiveness Review Project. There was least amount of confidence in evidence from industry sources. Over 60% of respondents were not familiar with PCORI.

**Barriers to the use of CER**
- Ninety percent of respondents considered lack of high-quality research, lack of conclusive results and legislative mandates as barriers to using CER evidence to set policy.
- Lack of cost/budget impact and the lack of an independent body that provides legitimacy to information were also considered as strong barriers.

**Potential useful strategies**
- Creating an independent body to oversee the conduct of CER will help ensure quality and increase the credibility of research from various sources.
- Tailoring the conclusions of studies to the circumstances of the policy makers will make research more discernible and applicable for policy making.
- Increasing the awareness of CER evidence will make more people embrace it and consequently apply it to their decision-making.

**What the future holds**
- Over 70% of respondents believed that CER will lead to better clinical decision-making, improve value and improve quality of care.
- With the increased awareness of PCORI and other sources of CER, and the wider use of set standards for carrying out CER, there is a great chance that CER will be better executed and will receive higher acceptance from policy makers in setting healthcare policy.
users of CER rate the usefulness of the research produced. This information will be critical to tackling the challenges of improving the value and quality of healthcare services.

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No writing assistance was utilized in the production of this manuscript.

Ethical conduct of research
The authors state that they have obtained appropriate institutional review board approval or have followed the principles outlined in the Declaration of Helsinki for all human or animal experimental investigations. In addition, for investigations involving human subjects, informed consent has been obtained from the participants involved.

References
Papers of special note have been highlighted as:
• of interest; •• of considerable interest

1 PCORI. Patient and clinician views on comparative effectiveness research and engagement in research: a panel discussion on PCORI survey results (2013). www.pcori.org

•• Highlights pertinent issues regarding the sources of health information for patients and clinicians.


•• Discusses barriers to translation of comparative effectiveness research evidence into relevant policy changes and proffer solutions.


• Suggest ways that comparative effectiveness research from Patient-Centered Outcomes Research Institute could be useful in improving healthcare quality.


• Highlights proven methods that have been used in improving population health.