

Author's response to reviews

Title: Economics of implementation: a case study of QUERI

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Author's response to reviews: see over



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Dear Dr. Eccles:

I would like to resubmit the manuscript “Economics of implementation: a case study of QUERI” for publication in Implementation Science. It is a revised version of an earlier manuscript entitled “QUERI and the economics of implementation studies.”

My coauthor and I appreciate the thoughtful comments on the previous version provided by the guest editors. We have made every attempt to refashion the manuscript according to the plan they suggested. Below we lay out in detail how this was done. If you or the guest editors have additional comments, please let us know.

Thank you for your consideration.

Sincerely,

Mark W. Smith

Responses to comments by the editors and reviewers.

1. Responses to the editors' general comments for authors of all articles

[1] Please remember that you are writing for an international audience... The DETAILS of VHA structures are of no interest to an international audience....

We make reference to VHA structures only to indicate how QUERI has integrated economics into its management of the implementation process:

Economic analyses have played an important role in QUERI since its inception. Researchers with experience in health economics were engaged in the creation of QUERI in the late 1990s. Annual oversight on the progress and plans of QUERI centers comes from the QUERI Research and Methodology Committee, which has engaged an economist to provide reviews and advice on the economic analyses within each center. The QUERI program funds economic research projects on a regular basis as part of larger implementation projects and through stand-alone pilot grants. (pp. 9-10)

Related to [1], all articles have a plethora of abbreviations...

We have eliminated nearly all abbreviations. The only abbreviations that pertain to VA are "QUERI" and "VA." The only abbreviations used besides those are CEA (cost-effectiveness analysis) and CUA (cost-utility analysis). All abbreviations are written out the first time they appear.

You need to be clear about who will be the main audience ... We think the readership is the interested implementation researcher or policy maker.

We have written with this audience in mind. The article does not presuppose advanced knowledge about economic methods. Due to space concerns it does not explain terms like "cost" or "cost-effectiveness"; the interested reader could find definitions for these in references cited throughout the paper.

You should use a standard description of the QUERI process...

Brian Mittman and Cheryl Stetler provided a standard description. We were instructed to feature it as a table. It is Table 1 in our manuscript.

Overall could you ensure that the article conforms to the journal style as specified in...

We have made every effort to do so.

2. Responses to the editors' specific comments on the earlier manuscript

Somewhere, early in the background you need to locate the paper within QUERI. Could you use the standard description...

The standard description is now Table 1.

and then locate what you subsequently write within this framework.

We address this comment below.

This will also involve shortening or removing the description of QUERI on pp. 11-12.

That description was removed entirely.

The reviewers and at least one of the editors had some problems working out the intended/best focus for the paper. ... As judged by the referees' comments, framed as either an essay or a general framework it would need considerable rewriting. If you write it as a case-study (economic evaluation is important in implementation; here is what has been done to date; here is what VA does and why; here are the strengths and weaknesses of the VA approach and a number of alternative methods) then many of the issues about alternative methods of economic evaluation becomes things that can be mentioned in the discussion as you critique the pro's and con's of the VA approach.

We appreciate the editors' suggestion. Following it required us to largely rewrite the manuscript. Showing this in detail would require quoting the entire text, and so instead we will list and then describe the sections:

- Background
- Research outside VA
 - Methods
 - Applied Research
- Implementation Research in VA QUERI
 - Methods
 - Applied Research
 - Collaborative depression care
 - HIV screening
 - Influenza vaccination
- Critique of QUERI
 - Identifying a best practice (step 2)
 - Implementation (steps 4-6)
- Conclusion

The background (pages 4-5) notes that economic implementation is important in QUERI. We feel that this point doesn't need elaboration.

We interpreted "**here is what has been done to date**" to be asking for a summary of research outside VA (pp. 5-9). This paper is not intended to be a literature review, and so we stuck to the high points as we see them.

The section implementation research within VA QUERI (pp. 9- 14) addresses the third point, "**what VA does and why**".

The section critique of QUERI (pp. 14- 19) addresses the "**strengths and weaknesses**" of QUERI economics to date. As the editors suggested, it also gives an opportunity to discuss "**alternative methods of economic evaluation.**" For example, we discuss budget impact analysis on pp. 16-18 and address the comments raised by the editors and both reviewers in regard to it.

The conclusion (pp. 19-21) summarizes our conclusions and suggests areas for further research.

A better alignment of the paper with the VA/QUERI steps would help contextualize the role of economics in the QUERI framework – e.g., p5 1st heading (CEA) is related to step 2- best practice and the 2nd heading (BCA) about step 3-developing the intervention.

Also, an earlier comment asked us to "**locate the paper within QUERI.**"

Given the structure suggested by the editors, these comment seemed to apply to the sections implementation research within VA QUERI (pp. 9-14) and critique of QUERI (pp. 14-19). In both sections we locate the paper within QUERI by making specific reference to QUERI steps.

One of the referees suggests that the work could be better referenced.

As requested, we now cite the Mason et al. 2001 JAMA paper and the Severens et al. 2004 chapter. A number of additional references have been added as well.

I am not sure I buy why BCA should not consider costs to the patient and quality of life. And what about health outcomes improved by the implementation of best practices – shouldn't that also be figured into this (see the Mason ref above). Longer term thinking about implementation needs to occur (by my paying for the implementation of cancer screening – the care providers in the health service will benefit from more early stage disease discovery and this will save \$ on care in the long run.

We appreciate these concerns about budget impact analysis. The manuscript was revised to state the following (pp. 16-18):

A third approach to assessing costs and benefits in Stage 4 is the budget impact analysis. We see it as a useful adjunct to standard cost-effectiveness analyses. Health care managers in many organizations have made clear that short-term budget implications play an important role in determining whether a clinical intervention and associated implementation intervention are approved [40, 41]. Moreover, clinical leaders in VA

have often expressed skepticism about claims of cost-offsets presented by clinical researchers. A budget impact analysis that allows the user to carry out sensitivity analyses, such as the model being prepared by the HIV QUERI, will help to address this skepticism.

Researchers have offered two major normative critiques of these analyses. In essence they reflect the reasoning that led to development of the reference case CEA. First, a short time horizon discounts the value of programs that achieve health improvement only over the longer term, such as smoking cessation. Second, making decisions solely on the basis of a business case analysis could lead to a socially worse set of health programs if it persuaded managers to adopt a program that caused more loss to patients than gain to the provider.

Both of these concerns may be assuaged by understanding the place of the budget impact analysis in decision-making. Several surveys have found that cost is just one of several factors considered in making health care decisions; scientific evidence of clinical improvement is also essential, and political support or opposition, particularly in the U.S., can loom large [20, 36, 42]. There is no reason to expect that cost will be the sole, or even primary, driver. Second, health care managers often have clinical training that well acquaints them with the long-term benefits of disease-prevention measures such as smoking cessation. This recognition, however, does not alter the fact that they face short horizons for budgeting. Indeed, the short-term nature of decision-making has been named by health care administrators as a barrier to using traditional health-economic studies [5, 36, 40].

A technical critique is that budget impact analysis could result in a different decision than would a cost-utility analysis (CUA). In reality this is no problem at all because the two address different questions and do not share the same widely thresholds that divide “acceptable” from “not acceptable.” Commonly stated thresholds for CUA in the United States vary from \$50,000 to \$100,000 per QALY. There is no similar threshold for budget impact analyses. The distinction between negative and positive net cost is an appealing divide, but it does not correspond mathematically to the CUA threshold.

We believe that the fundamental unease with budget impact analysis comes from a fear that an implementation intervention found to be cost-effective through a CUA will be rejected if a budget impact analysis reveals high initial costs without quick gains in clinical outcomes. In our experience with VA senior managers, however, we have found that they are keen to know both costs and outcomes. If cost data are not provided, they may assume a worst-case scenario that overstates actual costs. Moreover, there is no reason to believe that managers will automatically disregard any intervention with a positive short-term cost. In VA, for example, the widespread availability of outpatient smoking-cessation clinics implies that the agency takes a long-run view.

We do not advocate for the exclusive use of budget impact analyses. Rather, economic analyses should serve the needs of health care decision-makers, one of which is a defensible estimate of the provider’s costs over a relatively short timeframe. Budget impact analysis is insufficient as a stand-alone method but provides a key additional benefit to the most important consumers of these economic analyses: the managers who are highly influential in deciding whether to implement a clinical best-practice and its associated implementation intervention.

It would be helpful to give more detailed examples from the tides study rather than referencing a relatively inaccessible set of published abstracts that the reader will find difficult to get at.

We contacted the lead author of the TIDES economics study and were told that we could not cite the paper, even in manuscript form or even for one or two details. We share the editors' unhappiness over citing a presentation but see no alternative. Nevertheless we have added a few more details that do appear in the presentation:

A unique aspect of the TIDES economic evaluation is careful measurement of time spent on translation prior to kick-off of the clinical best practice intervention. In particular, researchers documented the effort needed to spread the collaborative-care intervention at seven VA sites. Costs include time spent writing and reading email messages, in telephone calls, face-to-face meetings, and training. Over two years elapsed between initial contact and kick-off on average; research consultants, local and regional VA managers, and clinical providers spent hundreds of hours per site [32]. (p. 12)

More detail would again illuminate the HIV example.

As with the TIDES study, the HIV study has no published paper to cite and so there were no numeric outcomes to put in the paper. The only document we could cite is the annual report of the HIV QUERI center (ref 33), which describes things in qualitative terms. Here is the revised text in the manuscript:

Two types of economic analyses will be performed: a cost-utility analysis and a budget impact analysis. The cost-utility analysis of the initial implementation trial will follow the 'reference case' methods of Gold et al. [6] and is aimed to both academic and managerial audiences. Working with a university collaborator, the researchers developed a decision model that allows managers to input local costs, staff time, HIV prevalence, and anticipated effect sizes. This flexibility enables the user to enter values that he or she finds credible and to carry out sensitivity analyses. The study team is preparing a second budget impact analysis populated with actual costs and outcomes from the ongoing implementation programs noted above, in order to develop presentations on the net costs of wider HIV testing. Leaders of the HIV QUERI report that providing likely costs and effects through the budget impact analysis has already assisted in removing barriers to implementing the screening program described above and in opening discussion with additional VA regional managers about implementing the programs in their facilities.[33]

P14 – “There is little point developing an implementation program for a best practice intervention that is only marginally cost-effective.” – is this not a value judgement? Depends on whose perspective you have I would like you to explain this more.

The quoted statement did not fit into the new structure of the paper and so was removed.

The discussion is more of a re-statement of the body of the text. It doesn't discuss the pro's and con's of the method discussed and could usefully address these issues.

Following the editors' suggested structure, there is no longer a section titled 'discussion.' The discussion of pros and cons appears in the Critique of QUERI section (pp. 14-19). The Conclusion section (pp. 19-21) avoids a lengthy restatement of our findings:

Our review of QUERI economic research has revealed strengths in some areas but considerable room for growth. QUERI researchers have made notable contributions to the qualitative methods of implementation research, and several QUERI centers are exemplary in incorporating a variety of economic evaluations into multi-site implementation projects. Other centers, however, have missed opportunities to study the costs of the interventions they are testing and do not appear to use economic data explicitly when choosing a best-practice intervention to implement. One solution is to institute processes for sharing methodological knowledge to researchers elsewhere in the system. In VA this is accomplished in part through Agency-sponsored conferences, but it appears that more needs to be done.

QUERI economists could also contribute to general methods of implementation economics. For example, we believe further discussion is needed on development and dissemination costs. Luce et al. [39] argued over 10 years ago that such costs could be included or excluded depending on the perspective and the decision the analysis addresses. More recently, however, several others [8, 10, 38] have included development costs without comment on whether they should ever be excluded. The issue is particularly important in implementation research because the process of formative evaluation often leads to additional development costs at each stage of implementation. As well, the review by Vale et al. [16] shows that many implementation programs employ multiple implementation interventions, thereby adding additional complexity to the calculation of development costs.

Dissemination costs also raise important questions. For example, should one count the cost of emails, telephone calls, and meetings as the implementation intervention is broached with managers at a new site? This approach has been taken by the Mental Health QUERI center in the ReTIDES project. Several recent authors have noted the importance of counting dissemination costs [8, 9, 38], but the examples given relate to contacts with clinical staff once a decision has been made to carry out the intervention. Another question is how to treat time spent in discussion with national- and regional-level VA managers who may have considerably sway over the decision to begin an implementation trial at a particular VA facility. The effort needed to collect such data is nontrivial. Once enough implementation projects have occurred in VA, it may be possible to develop estimates of the average cost of engagement with VA managers for use in place of the labor-intensive micro-costing approach.

We believe the QUERI experience illustrates several points that apply more generally to implementation in large health systems. First, it is feasible to incorporate economics at every phase of implementation. A key element is a sustained philosophical and financial commitment to economic research from senior managers. Second, there is

path dependence in economic research: centers with experience in economic research tend to continue incorporating it into ever larger research agendas, while those having little acquaintance with economics seem slow to take it up. Increasing the use of economic research may require surveys of implementation researchers themselves in order to learn the barriers they perceive. In VA, for example, a survey of QUERI researchers indicated that many were interested in economics training but were unaware that such training was already available. Finally, we would highlight the importance of developing economic analyses that meet the needs of health care managers. An important initial step is to determine what types of analyses will be useful in decision-making between alternative implementation programs. In VA this includes both cost-utility and budget impact analyses; in other systems a different or larger set of analyses may be indicated.

3. Responses to comments from Referee #1

My first general point is that this is quite a 'dry' article from a health economics perspective; nothing new here at all in that many economists for many years have been saying that we need to wider views than simply cost effectiveness. In fact, that wider view is what economics qua economics would take. Every now and then someone seems to 'discover' this position without reference to the earlier literature.

The manuscript has been completely revised. We disagree with the referee's implication that having a few papers in the literature with suggestions about "wider views" is sufficient. In our manuscript we note that Grimshaw and others (refs 15-16) found a substantial gap between what a few authors have recommended and what is actually done. We also note that there is no standard reference for implementation economics the way there is for typical CEA alongside a clinical trial.

Another observation is that, after starting from saying a wider view is needed, we end up with a narrower one; which is what happened with cost per QALY and is also the case with the method proposed in this article! Thus, the wider view I thought was going to be taken is not developed in the way promised. In paragraph, 2, for example, it is stated that managers must decide whether the benefits of an implementation program justifies the cost. This is the part that is not developed in my view. Presumably, the VA is cash limited, like the UK NHS; in which case, what is required is a framework that allows rivals for the resources to be compared with each other, and perhaps even consideration of what might be cut back to allow in something that might require extra resources.

This comment refers to suggestions in the previous version that do not appear in the revised manuscript.

This is never done in this paper; all we get is a kind of payback model that, in the end takes quite a narrow (provider) perspective. This deflated me! Business cases are very much the norm in many health care systems (and, although I might be wrong, I would be surprised if

they are not so in the US VA). But, still business cases deflect the decision maker away from the really difficult choices related to how meet need (or improve health) in situations of scarce resources where choices and trade-offs need to be made. I would worry about an analysis form that leaves health out of that equation.

We believe the referee misunderstands the place of budget impact analysis (business case analysis) in decision-making. We have addressed this on pages 17 and 18 (quoted above on pp. 3-4 of this letter).

Related to the above general points, the issue is never addressed of what would happen if the CEA and the BCA results conflict.

We do not share the view that CEA and BCA are competing alternatives whose results a decision-maker must choose between. We address this on pages 17-18:

A technical critique is that budget impact analysis could result in a different decision than would a cost-utility analysis (CUA). In reality this is no problem at all because the two address different questions and do not share the same widely thresholds that divide “acceptable” from “not acceptable.” Commonly stated thresholds for CUA in the United States vary from \$50,000 to \$100,000 per QALY. There is no similar threshold for budget impact analyses. The distinction between negative and positive net cost is an appealing divide, but it does not correspond mathematically to the CUA threshold.

We believe that the fundamental unease with budget impact analysis comes from a fear that an implementation intervention found to be cost-effective through a CUA will be rejected if a budget impact analysis reveals high initial costs without quick gains in clinical outcomes. In our experience with VA senior managers, however, we have found that they are keen to know both budgetary impacts and cost-effectiveness. If cost data are not provided, they may assume a worst-case scenario that overstates actual costs. Moreover, there is no reason to believe that managers will automatically disregard any intervention with a positive short-term cost. In VA, for example, the widespread availability of outpatient smoking-cessation clinics implies that the agency takes a long-run view.

We do not advocate for the exclusive use of budget impact analyses. Rather, economic analyses should serve the needs of health care decision-makers, one of which is a defensible estimate of the provider’s costs over a relatively short timeframe. Budget impact analysis is insufficient as a stand-alone method but provides a key additional benefit to the most important consumers of these economic analyses: the managers who are highly influential in deciding whether to implement a clinical best-practice and its associated implementation intervention. If budget impact analysis finds a low net cost up front, they will be more likely to approve an implementation scheme even if its incremental cost-effectiveness ratio is relatively high.

The case studies are very descriptive and do not really get to the issues raised above or demonstrate in much of a what the usefulness of BCA.

We have added detail where we could, given that there is no publication to cite. We address the issue of usefulness on page 13:

Leaders of the HIV QUERI report that providing likely costs and effects through the budget impact analysis has already assisted in removing barriers to implementing the screening program described above and in opening discussion with additional VA regional managers about implementing the programs in their facilities.[33]

A wider international literature needs to be referred to; the work of Birch and colleagues criticising CEA and the advances that have taken place in the UK, Canada, New Zealand and Australia on the revitalized framework of programme budgeting and marginal analysis.

We have added many new references, including many from people outside the United States. We reviewed publications by Birch and colleagues but decided that there was not a strong need to reference them. Birch seems to reject CUA altogether, which we do not.

In the end, a business case is a sensible approach (and one that any organisation should be taking), but what is the wider economic framework within which it sits? It is that wider framework whose development and application will enhance human welfare, but it does not get taken up.

We place the budget impact analysis (business case analysis) within the framework of QUERI economics research, noting its role in VA decision-making (cf. the quote above about its usefulness).

Scarcity avoidance rather than scarcity recognition seems to be the order of the day, but that might also apply to QUERI more widely too!

The referee raises an interesting philosophical point that falls outside the scope of this manuscript.

There is a rather odd looking italicized sentence on page 5.

That sentence was removed.

4. Responses to comments from Referee #2

My main revisions begin on p.5 of the manuscript - in the section on 'BCA', the last paragraph and into p.6, I feel that the authors firstly need to explain why this cannot be done in a CEA framework(as implied) before going on to highlight the advantages of the BCA.

These comments refer to sections of the earlier version that were eliminated when it was revised.

On p6 of the manuscript. To summarise my first 'concern' it would be that the authors write the paper very much as a type of thinkpiece/wishlist of approaches to the economics of implementation and whilst many of the ideas are, in theory, commendable I think the paper falls down by having too many of these suggestions, none of which are fully developed. This latter feature leaves the paper reading like an early draft as opposed to a polished and substantive novel contribution.

We have redeveloped the manuscript according to the structure suggested by the editors.

The argument on p.6 for BCA is not convincing i.e. from para 1 I have the following points to make:

- Is it really a good thing that costs and benefits in BCA are tailored over a relatively short period? Would this not exclude any significant long term effects and potential savings? Such short-termism is not good economics. It sounds like the BCA approach is being tailored to meet short-termist decision makers objectives without giving thought to longer term costs/benefits. I dont believe we as economists should be pursuing such a route.

We believe the referee misperceives how budget impact analysis is used. One cannot ignore short-term budgetary impact. The two paragraphs quoted on page 8 of this letter address this.

The author also raises a philosophical point about the proper role of economists. We feel that economic analyses should be useful to stakeholders. In VA that group includes senior managers. We state this belief near the end of the Conclusion section, noting that budget impact analysis may not be right for every health care system:

Finally, we would highlight the importance of developing economic analyses that meet the needs of health care managers. An important initial step is to determine what types of analyses will be useful in decision-making between alternative implementation programs. In VA this includes both cost-utility and budget impact analyses; in other systems a different or larger set of analyses may be indicated.

Further to this, in BCA patient costs and quality of life outcomes are also not counted - these all seem to be portrayed as advantages, I see them however as methodological limitations. I think there is scope for BCA as a first stage in the analysis, a type of 'Base

case' scenario whereby further, more developed scenarios are then added (as in a decision analytic model).

The referee is essentially criticizing budget impact analysis for not being CUA. We address this on page 17:

Researchers have offered two major normative critiques of these analyses. In essence they reflect the reasoning that led to development of the reference case CEA. First, a short time horizon discounts the value of programs that achieve health improvement only over the longer term, such as smoking cessation. Second, making decisions solely on the basis of a business case analysis could lead to a socially worse set of health programs if it persuaded managers to adopt a program that caused more loss among patients than gain to the provider.

Both of these concerns may be assuaged by understanding the place of the budget impact analysis in decision-making. Several surveys have found that cost is just one of several factors considered in making health care decisions; scientific evidence of clinical improvement is also essential, and political support or opposition, particularly in the U.S., can loom large [20, 36, 42]. There is no reason to expect that cost will be the sole, or even primary, driver. Second, health care managers often have clinical training that well acquaints them with the long-term benefits of disease-prevention measures such as smoking cessation. This recognition, however, does not alter the fact that they face short horizons for budgeting. Indeed, the short-term nature of decision-making has been named by health care administrators as a barrier to using traditional health-economic studies [5, 36, 40].

An additional point here, since the manuscript objective is becoming clearer, i.e. to advocate BCA as a methodology then this should be reflected in the title of the paper.

We did not take this suggestion because the manuscript has a different purpose.

Also on p.6 I am not convinced by the terminology nor definitions of the three stages of 'identifying the complete cost of implementation' namely: engagement; other implementation activities and 'the effect on health care utilisation'. These components seem quite undefined by their titles and this is further confused by a lack of comprehensive set of resources to be included in each, possible in a table.

We no longer use these terms. As instructed, we now use terms found in the glossary provided to all authors of papers in the QUERI Series.

P.8 - I think the authors are correct to advocate a decision modelling approach however, as with above the sections on this are somewhat limited. These sections give only an insight to the real practical usefulness to implementation economists and I feel these sections should be developed more substantively. For example, the sections could be structured so that

'implementation' parameters are identified, or that the advantages of say, Markov modeling are outlined in more depth for implementation so that, for example, updating costs and benefits can be included in the cycles.

The referee suggests a new way of structuring the manuscript. We chose instead to follow the structure suggested by the editors.

The sentence 'Modeling is a complex undertaking because costs and benefits can change over time' seems confused - it is precisely when costs and benefits change over time that you would then use a modeling approach. Essentially, for this section to be improved the authors should be more committed to the fact that modeling is being advocated and then provide a more technical modeling/implementation section (which would be a novel contribution) and generally be more convincing that this is the way to go. I would be more inclined to follow this approach as a key focus of the paper, and to incorporate the BCA sections as a subset of the entire modeling exercise than to sell BCA as the focus of the paper.

The quoted sentence was dropped. As noted above, we chose not to restructure the manuscript as the referee suggested.

The remainder of the paper discusses case studies in QUERI however the summaries are relatively short and uninformative - I feel the substance of the paper is in the above issues and these sections read as add-ons. Further, this latter section makes the paper neither methodological nor applied but an underdeveloped mix of the two. I would recommend focusing on one key contribution and develop it more technically (i.e. modeling and BCA within that framework).

We chose not to restructure the manuscript as the referee suggested, but instead to follow the editors' suggestion to treat QUERI itself as a case study.

p.14 I do not agree with the sentence 'there is little point developing an implementation program for a best-practice intervention that is only marginally cost-effective'. If there is a common disease, even if it is only marginally cost-effective there could still be substantive QALYs gained as a consequence if it is rolled out.

The quoted sentence was dropped.

p.15 'Using economics in the formative evaluation' - This entire section is not in itself a contribution, this could all be dealt with in a sensitivity analysis.

We respectfully disagree on both points. Formative evaluation has traditionally focused on process issues more than costs, although in some cases the word "resources" is used without

much definition. We feel it should cover costs as a barrier in a straightforward way. Sensitivity analyses and formative evaluations are distinct efforts and do not cover the same ground.

p.16 The conclusion is somewhat empty, some more concrete applied research recommendations based on those outlined above would strengthen it.

We have substantially rewritten the Conclusion section (pp. 19-21), as noted above.

p.9 -Add a 'be' so the sentence 'found to economically acceptable' is 'found to be economically acceptable'.

This sentence was dropped.

Acronym for business case analysis should be used through out the paper (at the moment it is a mix of full term and acronym).

We have changed to using “budget impact analysis” (in place of “business case analysis”) as this seems to be the more commonly used term in published papers. We do not use an acronym for it in the revised version.

5. Other Notes

Reference #4 is the QUERI framework paper by Mittman et al. As of this writing it has not been distributed to the Series authors. When it does we will update the reference.

The following text on pp. 4-5 was inserted at the request of Brian Mittman and Cheryl Stetler. We have kept the italics and capitalized words as they were given to us.

This article is one in a *Series* of articles documenting implementation science frameworks and tools developed by the U.S. Department of Veterans Affairs (VA) Quality Enhancement Research Initiative (QUERI). QUERI is briefly outlined in Table 1 and described in more detail in previous publications [1, 2]. The *Series*' introductory articles [3, 4] highlight aspects of QUERI related specifically to implementation science and describe additional types of articles contained in the *QUERI Series*.