# Use of Evidence-Based Practice Center Comparative Effectiveness Reviews by Clinical Point-of-Care Tools



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#### **Preface**

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-based Practice Centers (EPCs), sponsors the development of evidence reports and technology assessments to assist public- and private-sector organizations in their efforts to improve the quality of health care in the United States. The reports and assessments provide organizations with comprehensive, science-based information on common, costly medical conditions and new health care technologies and strategies. The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments.

To improve the scientific rigor of these evidence reports, AHRQ supports empiric research by the EPCs to help understand or improve complex methodologic issues in systematic reviews. These methods research projects are intended to contribute to the research base in and be used to improve the science of systematic reviews. They are not intended to be guidance to the EPC program, although may be considered by EPCs along with other scientific research when determining EPC program methods guidance.

AHRQ expects that the EPC evidence reports and technology assessments will inform individual health plans, providers, and purchasers as well as the health care system as a whole by providing important information to help improve health care quality. The reports undergo peer review prior to their release as a final report.

We welcome comments on this Methods Research Project. They may be sent by mail to the Task Order Officer named below at: Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850, or by email to epc@ahrq.hhs.gov.

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# **Use of Evidence-Based Practice Center Comparative Effectiveness Reviews by Clinical Point-of-Care Tools**

#### **Structured Abstract**

**Objective.** We conducted a pilot project to evaluate the use of Agency for Healthcare Research and Quality (AHRQ) Evidence-based Practice Center (EPC) comparative effectiveness reviews in clinical point-of-care tools.

**Methods.** We selected a sample of AHRQ EPC comparative effectiveness reviews, traced reports to publications, and reviewed relevant evidence summaries from three clinical point-of-care tools (DynaMed, UpToDate, and First Consult) for citation of reports or publications.

**Results.** We found moderate use of AHRQ EPC comparative effectiveness reviews in the three clinical point-of-care tools.

**Conclusions.** Use of AHRQ EPC products was moderate, and no clear patterns were identified in this pilot project. Results should be used to develop more comprehensive assessments of the use of AHRQ EPC comparative effectiveness reviews in the increasingly popular clinical point-of-care tools.

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# **Background**

The Agency for Healthcare Research and Quality (AHRQ) established its Effective Health Care Program to help providers, patients, and other stakeholders make informed health care decisions about medical care. One of the primary ways they aim to accomplish this objective is through the funding of comparative effectiveness reviews (CERs). These systematic literature reviews compile data from completed clinical research to assess the evidence on specific medical interventions. Many CERs are conducted by Evidence-based Practice Centers (EPCs) which are funded though the Effective Health Care Program. EPCs conducting CERs submit comprehensive reports to AHRQ. These reports are posted for public review on the AHRQ Effective Health Care Web site. Condensed versions of the CERs are also typically published in one or more peer-reviewed journal articles that, in addition the reports, are meant to inform decision-making by providers, patients, and other stakeholders.

Evaluation of systematic review outputs and outcomes is necessary to ensure user needs are being met, demonstrate impact, plan future dissemination, and justify funding.<sup>2</sup> While the EPC program has been in operation for some time, efforts to evaluate the use of our CERs are still being developed. One important ongoing activity is conducted by one of the AHRQ-funded EPCs, ECRI, which monitors and documents CER use as measured by citation in clinical practice guidelines. The RTI-UNC EPC conducted a special project to analyze the impact of two CERs, with emphasis on the creation of new research opportunities.<sup>3</sup> AHRQ, with assistance from a student intern, completed a Web utilization project, based upon report hits and downloads, for a sample of CERs.<sup>4</sup> Other efforts have assessed utilization by third party payers. None of the use monitoring activities or projects to date has addressed an increasingly popular type of resource for clinicians, clinical point-of-care (POC) tools.

Clinical POC tools (also called evidence-based textbooks, decision support aids, computerized decision-support systems, clinical reference tools, etc.) are electronic tools that clinicians can use anywhere and everywhere to find up to date summaries of research findings that can be applied in daily clinical practice. Several POC tools are available in the United States. Table 1 lists a few of the more popular POC tools. While some POC tools that interact with information in electronic health records to tailor information specifically to individual patient encounters have been developed<sup>5</sup>, our analysis focuses on the POC tools that provide general information not contextualized to the patient.

These tools vary considerably in format, scope, content development methodology, quality, timing of information updates, and reporting format. 6-8 Researchers at McMaster University evaluated 10 of these tools on three domains: quality (measured using a previously developed and validated scale), breadth of coverage, and timeliness of updates. They found DynaMed and UpToDate to have the best overall scores across the three domains. However, Clinical Evidence had the highest quality score, but was rated poorly for timeliness and breadth. UpToDate, DynaMed, and Micromedex tied for second in quality. UpToDate was ranked fifth for timeliness and first for breadth. This study limited selection of tools to those available at their library. Banzi, et al. conducted a comprehensive search to identify 18 point-of-care tools meeting specific inclusion criteria. They then assessed the POC tools on three domains: volume of medical conditions covered, editorial quality, and evidence-based methodology. Again, no POC tool was a clear frontrunner. Clinical Evidence, UpToDate, and eMedicine scored highest on editorial quality. BestBETs, Clinical Evidence, EBM Guidelines, and UpToDate scored the maximum number of point for evidence-based methodology. DynaMed, e-Medicine, First

Consult scored highest on volume of topics covered. We did not review the literature on these tools systematically; however several other studies evaluating POC tools were identified. 9-15

These tools are widely available and a frequently used resource by clinicians. Increasing use of these tools is likely as millennials (digital natives) continue to graduate to clinical positions and older clinicians (digital immigrants) leave the field, experience with electronic health records is gained, and POC tool industry marketing and product development grow in response to clinicians' need for easily accessible and digestible summarized evidence. This pilot study is a first step towards assessing whether AHRQ dissemination efforts reach POC evidence summary developers and therefore may be more likely to impact health care decisions through that channel.

Table 1. Point-of-care tools: access and publisher

Point-of-Care Tool (Access)	Publisher
ACP Pier	American College of Physicians
(open access to ACP members)	(ACP)
BestBets	Department of Emergency Medicine,
(open access)	Manchester Royal Infirmary
Clinical Evidence	BMJ Publishing Group
(fee-based)	
DynaMed	EBSCO Publishing
(fee-based)	-
eMedicine	WebMD-Medscape
(open access)	
EBM Guidelines	Wiley Blackwell Interscience and
(fee-based)	Duodecim
Essential Evidence Plus	Wiley Blackwell Interscience and
(fee-based)	Duodecim
First Consult	Elsevier
(fee-based)	
Micromedex	Thomson Reuters
(fee-based)	
UpToDate	UpToDate, Inc.
(fee-based)	

Note: Additional information about specific POC tools can be found at www.slideshare.net/ntorabi/point-of-care-tools-comparison-chart-2013.

To address the gap in current utilization monitoring activities, we conducted a pilot study to document and analyze the use of AHRQ CERs in three popular clinical POC tools: DynaMed, UptoDate, and First Consult. Specifically, we addressed the following Key Questions in this pilot project:

**Key Question 1**: Are EPC CERs used in clinician POC tools evidence summaries?

- 1a. Which type(s) of EPC CER products are used?
- 1b. Does time since review publication affect use?

**Key Question 2**: Is the information provided in select clinical POC evidence summaries consistent with relevant review findings?

# **Methods**

We selected a convenience sample of AHRQ EPC CER reports for which to track citations in POC tools. First, we included all CERs that were examined in the 2012 Web utilization project (n=13). We included these reports to compare use across resource type in a subsequent stage of this project. We next established criteria to select a second group of reports. Selection criteria were 1) report date between 2008 and 2012, 2) clinical topic commonly diagnosed and initially treated or referred from primary care. These report date criteria allowed time since the CER availability for the POC products to find the new information and update relevant evidence summaries. We narrowed the list of topics to those addressed in primary care because this audience appears to be the target of many clinical POC tools. We first applied these criteria to all Minnesota EPC reports that had not already been selected (n=3 met criteria). We focused on our EPC's reports because we were knowledgeable about these reports, had a database listing all associated journal articles, and had a vested interest in evaluating their utilization. We then applied the criteria to the population of CER reports conducted across all EPCs and selected those meeting the criteria (n=7) that were not already selected in a previous step. If two versions of a CER on the same topic appeared, we selected the most recent version. We arrived at a total sample of 23 reports.

Once we established the list of CERs, we compiled a list of published articles that emerged from those reviews. We used several methods to identify journal articles related to AHRQ reports. We conducted forward citation searching in Google Scholar to identify journal articles that cited the full report and searched for author names and titles consistent with the report. We also conducted MEDLINE searches for topic, dates, and author names consistent with the report.

Using this sample of reports and related articles, we conducted topic searches in three POC tools available through the University of Minnesota Libraries (DynaMed, UptoDate, and First Consult). We used search terms for the condition being addressed in the CER. When this search did not identify relevant evidence summaries, we searched using other relevant terms to identify any evidence summaries for which the CER would be relevant. We typically did not review evidence summaries on specific interventions, such as specific drugs or drug classes, unless a specific condition was not addressed in the CER. We reviewed the relevant evidence summaries provided in each POC tool to determine and document whether the CER report and/or journal article(s) were cited. We also noted the date that the POC evidence summary was updated to compare timing of the POC update relative to publication of the CER products.

We prepared tables documenting CER use across topic, POC tool, and publication year. Patterns of use are numerically summarized by CER and POC tool. We also include a narrative summary of findings within each product to provide more information than possible with numerical summaries.

#### Results

Our sample included 23 CERs. We identified published journal articles emerging from the review for 17 CERs. The full listing of CER report and journal article citations appears in Appendix A.

#### Use

Table 2 provides a concise summary of the use of CER reports and journal articles by Dynamed, UpToDate and First Consult. A more detailed Evidence Table is provided in Appendix B. We identified citations (report or journal article citation) in one or more POC products for 13 of the 23 CER topics for which we searched for evidence summaries. Within CER topic, none of the CERs were used by all three POC tools. UpToDate used EPC CERs more often than DynaMed or FirstConsult. FirstConsult used the reviews the least. Many of the evidence summaries in FirstConsult had update dates before CER availability. Seven CER topics were cited by two POC tools. When two POC tools cited EPC CERs, it was most often DynaMed and UpToDate (5 CER topics), less often UpToDate and FirstConsult (2 CER topics). DynaMed and FirstConsult never both cited the same CER topic.

Searching clinical POC tools for evidence summaries relevant to selected CERs was often straightforward (i.e., searching for evidence summaries relevant to the CER on second generation antidepressants for depression in adults identified evidence summaries titled "depression" and "antidepressant medication overview" as relevant). However, other CER topics did not always map as cleanly to POC evidence summaries (i.e., searching for evidence summaries relevant to the CER on dietary supplements in adults taking cardiovascular drugs identified vitamin supplementation for cardiovascular disease as one of the most relevant evidence summaries). In only one case, we could not identify an evidence summary we thought was relevant enough to warrant review. In another case, we searched for a specific condition that was addressed in a CER and the most relevant evidence summaries addressed broader topics (i.e., our search for evidence summaries addressing overactive bladder in women identified evidence summaries on the broader condition of urinary incontinence).

# **Publication Type Used**

Reports were cited by at least one POC tool for seven CER topics and journal articles were cited for nine. The publication type cited by at least one POC tool was the report in 30 percent and journal article in 39 percent of the CER topics we investigated. Both the report and the journal article were cited by at least one POC tool in 17 percent of the CER topics we investigated.

Table 2. Citation of EPC CERs in DynaMed, UpToDate, and FirstConsult

CER Topic, Year	Product	DynaMed	UptoDate	First Consult	Total POCs
Overactive Bladder in Women 2009 <sup>a</sup>	Report <sup>16</sup>				0
Lipid-Modifying Agents 2009	Report <sup>17</sup>				0
	Journal article <sup>18</sup>				1
Breast Lesion Diagnosis: Core Needle and	Report <sup>19</sup>				0
Surgical Excision Biopsy 2009	Journal article <sup>20</sup>				0

CER Topic, Year	Product	DynaMed	UptoDate	First	Total
	.21			Consult	POCs
Childhood Obesity Intervention Programs	Report <sup>21</sup>				0
2010	Journal article <sup>22</sup>				0
Exercise-Induced Bronchoconstriction and	Report <sup>23</sup>				0
Asthma 2010	Journal article <sup>24-26</sup>	1			0
Treatments for Rotator Cuff Tears 2010	Report <sup>27</sup>	V	1		1
One I Dielegte - Madientiere for Adulta With	Journal article <sup>28</sup>	<b>√</b>	V		2
Oral Diabetes Medications for Adults With Type 2 Diabetes-Update 2011	Report <sup>29</sup>	<b>√</b>	,		1
Type 2 Diabetes-Opdate 2011	Journal article <sup>30,</sup>	$\sqrt{}$	<b>√</b>		2
Drugs for Essential Hypertension-Update	Report <sup>32</sup>				0
2012	Journal article <sup>33</sup>		,	V	1
Management of Gastroesophageal Reflux Disease -update 2011	Report <sup>34</sup>		V		1
Analgesics for Osteoarthritis-update 2011	Report <sup>35</sup>				0
Diagnosis and Treatment of Clostridium	Report <sup>36</sup>				0
difficile Infection 2011	Journal article <sup>37</sup>		<b>√</b>	<b>V</b>	1
Second generation Antidepressants for	Report <sup>38</sup>				0
Adult Depression 2011	Journal article <sup>39-42</sup>		V	V	2
Antipsychotics in Children and Young	Report <sup>43</sup>				0
Adults 2012 <sup>a</sup>	Journal article <sup>44</sup>				0
Treatments to Prevent Fractures in Low Bone Density-Update 2012	Report		<b>V</b>		1
Drugs for Rheumatoid Arthritis 2012	Report <sup>45</sup>				0
Drugs for Psoriatic Arthritis (PA) 2012	Report <sup>46</sup>				0
Dietary Supplements in Adults Taking	Report <sup>47</sup>				0
Cardiovascular Drugs 2012 <sup>a</sup>	Journal article <sup>48</sup>				0
Nonsurgical Treatments for Urinary	Report <sup>49</sup>		<b>√</b>		1
Incontinence in Women 2012	Journal article <sup>50-52</sup>	V	V		2
Methods for Insulin Delivery and Glucose	Report <sup>53</sup>	,	,		0
2012	Journal article <sup>54,</sup>	V	<b>V</b>		2
Screening and Diagnosis of Gestational	Report <sup>56</sup>		V		1
Diabetes Mellitus 2012 <sup>b</sup>	Journal article <sup>57,</sup>				0
Physical Therapy for Osteoarthritis-related	Report <sup>59</sup>				0
Knee Pain 2012	Journal article <sup>60</sup>				0
Treatment for Restless Legs Syndrome	Report <sup>61</sup>		<b>√</b>		1
2012	Journal article <sup>62</sup>				0
Allergen-specific Immunotherapy: Rhino-	Report <sup>63</sup>				0
conjunctivitis and/or Asthma 2013	Journal article <sup>64,</sup>			<b>V</b>	1
Total CER products cited		8	12	4	
Total CER topics cited		6 (33%)	10 (43%)	4 (17%)	13 (56%)
Reports cited		2 (9%)	5 (22%)	0	7 (30%)
CERs w/out journal articles		0	3 (50%)	0	2 (33%)
CERs with journal articles		2 (12%)	2 (12%)	0	5 (29%)
Topics cited by at least one POC Tool		Z (1Z/0)	2 (12/0)	J J	9 (39%)
<sup>a</sup> We did not identify a relevant evidence summar	===				J (3970)

<sup>&</sup>lt;sup>a</sup> We did not identify a relevant evidence summary topic in either POC tool.
<sup>b</sup> We did not identify specific summaries for Overactive Bladder; we therefore reviewed evidence summaries for Incontinence

### **DynaMed**

All evidence summaries we reviewed had been updated since the relevant CER report was available. DynaMed cited a relevant CER for 5 of the 23 topics (26 percent). Only two reports were cited, one on oral diabetes medications and another on treatments for rotator cuff tears. The journal article was cited for 5 of the 17 topics with journal articles. Both times the report was cited, a journal articles was also cited for that topic. DynaMed evidence summaries did not cite any reports for which there was no journal article.

# **UptoDate**

All evidence summaries we reviewed in UpToDate had been recently updated according to the listed dates. These summaries cited EPC CERs for 10 of the 23 topics (43 percent). They cited reports for five topics, the journal article(s) for six topics, and both for one topic. Of the reports used by UpToDate, three related to CER topics without journal articles and two related to topics with journal articles.

#### **First Consult**

First Consult was the only POC tool where the evidence summaries had not been updated recently. Nearly half (nine) of the evidence summaries we identified as relevant to the CER topic had not been updated since the AHRQ reports were posted. Only five of the updated and relevant evidence summaries cited four EPC CERs. Only journal articles (not full CER reports) were cited.

# **Use by Publication Date**

To enhance our understanding of the time lag between CER availability and use, we calculated use rates by CER publication year. This analysis appears in Table 3. In our convenience sample, we did not see trend in CER use by age of the CER. However, our small sample per year and CER selection criteria do not allow for meaningful interpretation of these data.

Table 3. CER use by publication year

Year	CERs Selected	Number of CERs (Reports and/or Journal Articles) Cited	Proportion Cited (report or journal article) by At Least One POC
2009	3	1	33%
2010	3	1	33%
2011	6	5	83%
2012	10	5	50%
2013	1	1	100%

# Consistency

Of the AHRQ CERs that were cited in POC tool evidence summaries, most were listed within the bibliography rather than in support of specific points. We did identify exceptions to this trend. Citations associated with specific content were identified for two CER topics in DynaMed. The Rotator Cuff Tear review was listed as general references and cited in a subsection about surgical techniques. The Methods for Insulin Delivery and Glucose Monitoring journal articles was also cited in reference to specific content in DynaMed's Insulin management evidence summary. The use of the information in these two citations was consistent with the AHRQ report findings.

# **Discussion**

We identified citations in one or more clinical POC tools for slightly more than half of the CERs we analyzed. Journal articles were used slightly more frequently that reports. Use of the CERs may be influenced by several factors, including POC evidence summary update timing, topic, POC tool, and accessibility of CER publication(s). UptoDate included more AHRQ CER product citations than DynaMed or First Consult. Evidence summaries in FirstConsult often lacked recent updates, making citation impossible. Citation of the CERs was typically to acknowledge reviews that had been conducted on the topic and not to make specific clinical points.

We hope to expand upon this pilot project and continue to collect and analyze data to identify patterns of use. Because use appears to be topic dependent, it was difficult with a small sample size to attempt to generate hypotheses about topic classification (general or specific, conditionfocused vs. intervention focused, primary care vs. subspecialist, prevalence of condition, etc.), publication number and types, or publication timing on rate of use. Our results appeared to be a function of the convenience sample of reports we selected and our somewhat subjective selection criteria for what constituted a matching POC product. This could distort the findings, so our ability to analyze use patterns was limited. Additionally, simple numerical reporting and accounting may not be sufficient to fully understand use. Some CER topics better matched POC evidence summary topics, this is another pattern that could be explored in future research. We will gain more information to enhance the ability to identify trends as we expand data collection and analysis. We also expect that other factors we did not address might influence CER use. These include factors describing the topic nomination (guideline group vs. community member) or the degree of buy-in from experts in the field for CER topics (which could somehow be measured using a Technical Expert Panel and/or peer review recruitment information or acceptance of the findings based upon the peer reviews), the number of existing systematic reviews on the topic, etc. A more in-depth analysis specific to each POC tool might present useful information that could potentially influence uptake.

# **Next Steps**

This pilot project was conducted to provide quick information about the use of AHRQ EPC reports in clinician POC tools to determine whether more scientific and ongoing monitoring of these increasingly important clinician resources would be worthwhile. The information provided is interesting and valuable. However given the necessity of a quick turn-around, the methodology has significant limitations preventing more useful analysis and interpretation. We plan to enhance this pilot investigation to provide more in-depth, accurate, and meaningful analysis that will lead to generalizable conclusions. We specifically plan to address:

• <u>Selection of POC tools/enhanced background information.</u> We selected those available at the University of Minnesota. More in-depth investigation to the background, methodology, and aims of widely available POC tools would allow a more informed, contextualized, scientific (potentially), and appropriate-to-topic selection of tools. Additionally, an improved understanding of how the evidence summaries are created and updated within studied tools would provide valuable contextual information that may help to explain CER use.

- Matching of CERs and POC tools. Our pilot project selected a convenience sample of CERs and investigated their use in the most closely matched product within each POC tool. In some cases, the POC product did not exactly match the CER topic and this may have affected the rate of use. A larger sample may provide categorization of topics to calculate rates of use using more appropriate denominators. Another would be to identify as set of POC products for which a closely matched EPC CER was available and relevant to that evidence summary to assess use. This will be explored in future efforts.
- <u>Communication with POC tool vendors.</u> Our pilot project did not attempt to collect information from the creators or vendors of the POC tools. Our next phase of this project will begin with a more in-depth understanding of the POC tools and how they are used. We will also explore contacting the vendors of these tools for information or commentary considered important to understanding their use of our products.

#### Conclusion

This pilot project represents an important first step in documenting use of EPC CERs in the increasingly popular clinical POC tools. We found evidence of moderate use of EPC CERs in three common POC products. Further research is necessary to identify patterns in these rates of use. POC tools are expected to become increasingly important resources for clinicians. Improved understanding of their use of EPC CERs could assist AHRQ in dissemination planning.

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- 18. Sharma M, Ansari MT, Abou-Setta AM, et al. Systematic review: comparative effectiveness and harms of combination therapy and monotherapy for dyslipidemia. Ann Intern Med. 2009 Nov 3;151(9):622-30. PMID 19884623.
- 19. Bruening W, Schoelles K, Treadwell J, et al. Comparative Effectiveness of Core-Needle and Open Surgical Biopsy for the Diagnosis of Breast Lesions. Comparative Effectiveness Review No. 19. (Prepared by ECRI Institute Evidence-based Practice Center under Contract No. 290-02-0019.) Agency for Healthcare Research and Quality. Rockville, MD: December 2009. http://www.effectivehealthcare.ahrq.gov/reports/final.cfm.
- Bruening W, Fontanarosa J, Tipton K, et al. Systematic review: comparative effectiveness of core-needle and open surgical biopsy to diagnose breast lesions. Ann Intern Med. 2010 Feb 16;152(4):238-46. PMID 20008742.
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- 23. Dryden DM, Spooner CH, Stickland MK, et al. Exercise-induced bronchoconstriction and asthma. Evidence Report/Technology Assessment No. 189 (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021-I) AHRQ Publication No. 10-E001. Rockville, MD: Agency for Healthcare Research and Quality. 1530-4396 (Print) 1530-4396 (Linking). January 2010. http://www.effectivehealthcare.ahrq.gov/reports/final.cfm.
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- 27. Seida JC, Schouten JR, Mousavi SS, et al. Comparative Effectiveness of Nonoperative and Operative Treatments for Rotator Cuff Tears. Comparative Effectiveness Review No. 22. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-02-0023.) AHRQ Publication No. 10-EHC050. Rockville MD: Agency for Healthcare Research and Quality; July 2010. www.effectivehealthcare.ahrq.gov/reports/final.cfm.
- 28. Seida JC, LeBlanc C, Schouten JR, et al. Systematic review: nonoperative and operative treatments for rotator cuff tears. Ann Intern Med. 2010 Aug 17;153(4):246-55. PMID 20621893.
- 29. Bennett WL, Wilson LM, Bolen S, et al. Oral Diabetes Medications for Adults With Type 2 Diabetes: An Update. Comparative Effectiveness Review No. 27. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-02-0018.) AHRQ Publication No. 11-EHC038-EF. Rockville, MD: Agency for Healthcare Research and Quality; March 2011. www.effectivehealthcare.ahrq.gov/reports/final.cfm.
- Bennett WL, Bass EB, Bolen S. Correction: Comparative effectiveness and safety of medications for type 2 diabetes. Ann Intern Med. 2011 Jul 5;155(1):67-8. PMID 21858938.
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  Angiotensin-Converting Enzyme Inhibitors
  (ACEIs), Angiotensin II Receptor Antagonists
  (ARBs), and Direct Renin Inhibitors for
  Treating Essential Hypertension: An Update.
  Comparative Effectiveness Review No. 34.
  (Prepared by the Duke Evidence-based Practice
  Center under Contract No. 290-02-0025.)
  AHRQ Publication No. 11-EHC063-EF.
  Rockville MD: Agency for Healthcare Research
  and Quality; June 2011.
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- 34. Ip S, Chung M, Moorthy D, et al. Comparative Effectiveness of Management Strategies for Gastroesophageal Reflux Disease: Update. Comparative Effectiveness Review No. 29. (Prepared by Tufts Medical Center Evidence-based Practice Center under Contract No. 290-2007-10055-I.) AHRQ Publication No. 11-EHC049-EF.2011. Rockville MD: Agency for Healthcare Research and Quality; September 2011.
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- 46. Donahue KE, Jonas D, Hansen RA, et al. Drug Therapy for Psoriatic Arthritis in Adults: Update of a 2007 Report. Comparative Effectiveness Review No. 54. (Prepared by RTI-UNC Evidence-based Practice Center under Contract No. 290-02-0016-I.) Rockville MD: Agency for Healthcare Research and Quality; April 2012. www.effectivehealthcare.ahrq.gov/reports/final. cfm.
- 47. Seely D, Kanji S, Yazdi F, et al. Dietary Supplements in Adults Taking Cardiovascular Drugs. Comparative Effectiveness Review No. 51. (Prepared by the University of Ottawa Evidence-based Practice Center under Contract No. 290-2007-10059-I). Rockville MD: Agency for Healthcare Research and Quality; April 2012.
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- Shamliyan T, Wyman JF, Ramakrishnan R, et al. Benefits and harms of pharmacologic treatment for urinary incontinence in women: a systematic review. Ann Intern Med. 2012 Jun 19;156(12):861-74, W301-10. PMID 22711079.
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- 54. Golden SH, Sapir T. Methods for insulin delivery and glucose monitoring in diabetes: summary of a comparative effectiveness review. J Manag Care Pharm. 2012 Aug;18(6 Suppl):S1-17. PMID 22984955.
- 55. Yeh HC, Brown TT, Maruthur N, et al. Comparative effectiveness and safety of methods of insulin delivery and glucose monitoring for diabetes mellitus: a systematic review and meta-analysis. Ann Intern Med. 2012 Sep 4;157(5):336-47. PMID 22777524.
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- 58. Donovan L, Hartling L, Muise M, et al. Screening tests for gestational diabetes: a systematic review for the u.s. Preventive services task force. Ann Intern Med. 2013 Jul 16;159(2):115-22. PMID 23712349.
- 59. Shamliyan TA, Wang S-Y, Olson-Kellogg B, et al. Physical Therapy Interventions for Knee Pain Secondary to Osteoarthritis. Comparative Effectiveness Review No.77. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC115-EF. Rockville, MD: Agency for Healthcare Research and Quality; November 2012.

- 60. Wang SY, Olson-Kellogg B, Shamliyan TA, et al. Physical therapy interventions for knee pain secondary to osteoarthritis: a systematic review. Ann Intern Med. 2012 Nov 6;157(9):632-44. PMID 23128863.
- 61. Wilt TJ, MacDonald R, Ouellette J, et al.
  Treatment for Restless Legs Syndrome.
  Comparative Effectiveness Review No. 86.
  (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC147-EF. Rockville, MD: Agency for HealthcareResearch and Quality; 2012.
- 62. Wilt TJ, MacDonald R, Ouellette J, et al. Pharmacologic therapy for primary restless legs syndrome: a systematic review and meta-analysis. JAMA Intern Med. 2013 Apr 8;173(7):496-505. PMID 23460396.
- 63. Lin SY, Erekosima N, Suarez-Cuervo C, et al. Allergen-Specific Immunotherapy for the Treatment of Allergic Rhinoconjunctivitis and/or Asthma: Comparative Effectiveness Review. Comparative Effectiveness Review No. 111. (Prepared by the Johns Hopkins University Evidence-based Practice Center under Contract No. 290-2007-10061-I.) AHRQ Publication No. 13-EHC061-EF. Rockville, MD: Agency for Healthcare Research and Quality; March 2013.
- 64. Lin SY, Erekosima N, Kim JM, et al. Sublingual immunotherapy for the treatment of allergic rhinoconjunctivitis and asthma: a systematic review. JAMA. 2013 Mar 27;309(12):1278-88. PMID 23532243.
- 65. Kim JM, Lin SY, Suarez-Cuervo C, et al. Allergen-specific immunotherapy for pediatric asthma and rhinoconjunctivitis: a systematic review. Pediatrics. 2013 Jun;131(6):1155-67. PMID 23650298.

# **Appendix A. CER Report and Journal Articles**

Selection	Journal Article(s); Comments
Roudon	
All EPC	None identified;
CERs	Cited as the primary source in AUA/SUFA Guideline:
	Gormley E, Lightner DJ, Burgio KL, et al. Diagnosis and treatment of
	overactive bladder (non-neurogenic) in adults: AUA/SUFU guideline.
	The Journal of Urology. 2012.
	Sharma M, Ansari MT, Abou-Setta AM, et al. Systematic review:
	comparative effectiveness and harms of combination therapy and
Project	monotherapy for dyslipidemia. Ann Intern Med. 2009 Nov
	3;151(9):622-30. PMID 19884623.
	Sharma M. Combination therapy for dyslipidemia. Current opinion in
\A/ab	cardiology. 2011;26(5):420-3.
	Bruening, W., et al. "Systematic review: comparative effectiveness of
	core-needle and open surgical biopsy to diagnose breast lesions."
Froject	Ann Intern Med 2010;152(4): 238-246.
	Reason  All EPC

Report Citation	Selection Reason	Journal Article(s); Comments
2010 (3)		
Whitlock EP, O'Connor EA, Williams SB, Beil TL, Lutz KW. Effectiveness of Primary Care Interventions for Weight Management in Children and Adolescents: An Updated, Targeted Systematic Review for the USPSTF. Evidence Synthesis No. 76. AHRQ Publication No. 10-05144-EF-1. Rockville, MD: Agency for Healthcare Research and Quality, January 2010.	Web Utilization Project	Whitlock EP, O'Connor EA, Williams SB, et al. Effectiveness of weight management interventions in children: a targeted systematic review for the USPSTF. Pediatrics. 2010 Feb;125(2):e396-418. PMID 20083531.
Dryden DM, Spooner CH, Stickland MK, Vandermeer B, Tjosvold L, Bialy L, Wong K, Rowe BH. Exercise-Induced Bronchoconstriction and Asthma. Evidence Report/Technology Assessment No. 189 (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021-I) AHRQ Publication No. 10-E001. Rockville, MD: Agency for Healthcare Research and Quality. January 2010 (Web site posting); revised March 2010.	All EPC CERs	Stickland MK, Rowe BH, Spooner CH, et al. Accuracy of eucapnic hyperpnea or mannitol to diagnose exercise-induced bronchoconstriction: a systematic review. Annals of Allergy, Asthma & Immunology. 2011;107(3):229-34. e8.  Stickland MK, Rowe BH, Spooner CH, et al. Effect of warm-up exercise on exercise-induced bronchoconstriction. Med Sci Sports Exerc. 2012;44(3):383-91.  Stickland MK, Spooner CH, Dryden DM, et al. The need for standardization in exercise challenge testing for exercise-induced asthma/bronchoconstriction. J Allergy Clin Immunol. 2010 Oct;126(4):878-80 e6. PMID 20920779.
Seida J, Schouten J, Mousavi S, Tjosvold L, Vandermeer B, Milne A, Bond K, Hartling L, LeBlanc C, Sheps D. Comparative Effectiveness of Nonoperative and Operative Treatment for Rotator Cuff Tears.  Comparative Effectiveness Review No. 22. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-02-0023.) AHRQ Publication No. 10-EHC050. Rockville, MD: Agency for Healthcare Research and Quality. July 2010.	All EPC CERs	Seida JC, LeBlanc C, Schouten JR, et al. Systematic review: nonoperative and operative treatments for rotator cuff tears. Ann Intern Med. 2010 Aug 17;153(4):246-55. PMID 20621893.

Report Citation	Selection Reason	Journal Article(s); Comments
2011 (6)		
Bennett WL, Wilson LM, Bolen S, Maruthur N, Singh, S, Chatterjee R, Marinopoulos SS, Puhan MA, Ranasinghe P, Nicholson WK, Block L, Odelola O, Dalal DS, Ogbeche GE, Chandrasekhar A, Hutfless S, Bass EB, Segal JB. Oral Diabetes Medications for Adults With Type 2 Diabetes: An Update. Comparative Effectiveness Review No. 27. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-02-0018.) AHRQ Publication No. 11-EHC038-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2011.	Web Utilization Project	Bennett WL, Maruthur NM, Singh S, et al. Comparative effectiveness and safety of medications for type 2 diabetes: an update including new drugs and 2-drug combinations. Ann Intern Med. 2011 May 3;154(9):602-13. PMID 21403054.
Sanders GD, Coeytaux R, Dolor RJ, Hasselblad V, Patel UD, Powers B, Yancy Jr WS, Gray RN, Irvine RJ, Kendrick A. Angiotensin-Converting Enzyme Inhibitors (ACEIs), Angiotensin II Receptor Antagonists (ARBs), and Direct Renin Inhibitors for Treating Essential Hypertension: An Update. Comparative Effectiveness Review No. 34. (Prepared by the Duke Evidence-based Practice Center under Contract No. 290-02-0025.) AHRQ Publication No. 11-EHC063-EF. Rockville, MD: Agency for Healthcare Research and Quality. June 2011.	Web Utilization Project	Powers BJ, Coeytaux RR, Dolor RJ, et al. Updated report on comparative effectiveness of ACE inhibitors, ARBs, and direct renin inhibitors for patients with essential hypertension: much more data, little new information. J Gen Intern Med. 2012 Jun;27(6):716-29. PMID 22147122. Powers B, Greene L, Balfe LM. Updates on the treatment of essential hypertension: a summary of AHRQ's comparative effectiveness review of angiotensin-converting enzyme inhibitors, angiotensin ii receptor blockers, and direct renin inhibitors. Journal of Managed Care Pharmacy. 2011;17(8).
Ip S, Chung M, Moorthy D, Yu WW, Lee J, Chan JA, Bonis PA, Lau J. Comparative Effectiveness of Management Strategies for Gastroesophageal Reflux Disease: Update. Comparative Effectiveness Review No. 29. (Prepared by Tufts Medical Center Evidence-based Practice Center under Contract No. 290-2007-10055-I.) AHRQ Publication No. 11-EHC049-EF. Rockville, MD: Agency for Healthcare Research and Quality. September 2011.	Web Utilization Project	None identified
Chou R, McDonagh MS, Nakamoto E, Griffin J. Analgesics for Osteoarthritis: An Update of the 2006 Comparative Effectiveness Review. Comparative Effectiveness Review No. 38. (Prepared by the Oregon Evidence-based Practice Center under Contract No. 290 2007 10057 I) AHRQ Publication No. 11(12)-EHC076-EF. Rockville, MD: Agency for Healthcare Research and Quality. October 2011.	Web Utilization Project	None identified

Report Citation	Selection Reason	Journal Article(s); Comments
Butler M, Bliss D, Drekonja D, Filice G, Rector T, MacDonald R, Wilt T. Effectiveness of Early Diagnosis, Prevention, and Treatment of <i>Clostridium difficile</i> Infection. Comparative Effectiveness Review No. 31. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-02-0009.) AHRQ Publication No. 11(12)-EHC051-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2011.  Gartlehner G, Hansen RA, Morgan LC, Thaler K, Lux LJ, Van Noord M,	Web Utilization Project Web	Drekonja DM, Butler M, MacDonald R, et al. Comparative effectiveness of Clostridium difficile treatments: a systematic review. Ann Intern Med. 2011 Dec 20;155(12):839-47. PMID 22184691.  Gartlehner G, Hansen RA, Morgan LC, et al. Comparative benefits
Mager U, Gaynes BN, Thieda P, Strobelberger M, Lloyd S, Reichenpfader U, Lohr KN. Second-Generation Antidepressants in the Pharmacologic Treatment of Adult Depression: An Update of the 2007 Comparative Effectiveness Review. (Prepared by the RTI International–University of North Carolina Evidence-based Practice Center, Contract No. 290-2007-10056-I.) AHRQ Publication No. 12-EHC012-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2011.	Utilization Project	and harms of second-generation antidepressants for treating major depressive disorder: an updated meta-analysis. Ann Intern Med. 2011 Dec 6;155(11):772-85. PMID 22147715.  Thaler KJ, Morgan LC, Van Noord M, et al. Comparative effectiveness of second-generation antidepressants for accompanying anxiety, insomnia, and pain in depressed patients. Depression and anxiety. 2012;29(6):495-505.  Morgan L, Gartlehner G. Comparative efficacy, effectiveness and harms of second-generation antidepressants in the pharmacologic treatment of adult depression. European Psychiatry. 2011;26:1266.
		Morgan L, Gartlehner G. Comparative benefits and harms of second- generation antidepressants in the pharmacologic treatment of depression in older adults and populations with comorbid conditions. European Psychiatry. 2012;27:1.

Report Citation	Selection Reason	Journal Article(s); Comments
2012 (9)		
Seida JC, Schouten JR, Mousavi SS, Hamm M, Beaith A, Vandermeer B, Dryden DM, Boylan K, Newton AS, Carrey N. First- and Second-Generation Antipsychotics for Children and Young Adults. Comparative Effectiveness Review No. 39. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021.) AHRQ Publication No. 11(12)-EHC077-EF. Rockville, MD. Agency for Healthcare Research and Quality. February 2012.	Web Utilization Project	Seida JC, Schouten JR, Boylan K, et al. Antipsychotics for children and young adults: a comparative effectiveness review. Pediatrics. 2012 Mar;129(3):e771-84. PMID 22351885.
Crandall CJ, Newberry SJ, Gellad WG, Diamant A, Lim YW, Suttorp M, Motala A, Ewing B, Roth B, Timmer M, Shanman R, Shekelle PG. Treatment to Prevent Fractures in Men and Women with Low Bone Density or Osteoporosis: Update of a 2007 Report. Comparative Effectiveness Review No. 53. (Prepared by Southern California Evidence-based Practice Center under Contract No290-2007-10062-I.) Rockville, MD: Agency for Healthcare Research and Quality; March 2012.	All EPC CERs	None identified
Donahue KE, Jonas DE, Hansen RA, Roubey R, Jonas B, Lux LJ, Gartlehner G, Harden E, Wilkins T, Peravali V, Bangdiwala SI, Yuen A, Thieda P, Morgan LC, Crotty K, Desai R, Van Noord M. Drug Therapy for Rheumatoid Arthritis in Adults: An Update. Comparative Effectiveness Review No. 55. (Prepared by RTI-UNC Evidence-based Practice Center under Contract No. 290-02-0016-I.) Rockville, MD: Agency for Healthcare Research and Quality. April 2012.	Web Utilization Project	Desai RJ, Hansen RA, Rao JK, et al. Mixed treatment comparison of the treatment discontinuations of biologic disease-modifying antirheumatic drugs in adults with rheumatoid arthritis. The Annals of pharmacotherapy. 2012;46(11):1491-505.  Donahue KE, Jonas DE, Hansen RA, et al. Clinical and Self-Reported Scales and Instruments Commonly Used in Studies of Drug Therapy for Rheumatoid Arthritis and Psoriatic Arthritis. 2012.
Donahue KE, et al., Drug Therapy for Rheumatoid Arthritis in Adults: An Update. Comparative Effectiveness Review No. 55. (Prepared by RTI-UNC Evidence-based Practice Center under Contract No. 290-02-0016-I.) Rockville, MD: Agency for Healthcare Research and Quality. April 2012.	All EPC CERs	None identified.
Seely D, Kanji S, Yazdi F, Tetzlaff J, Singh K, Tsertsvadze A, Sears ME, Tricco A, Ooi TC, Turek M, Tsouros S, Skidmore B, Daniel R, Ansari MT. Dietary Supplements in Adults Taking Cardiovascular Drugs. Comparative Effectiveness Review No. 51. (Prepared by the University of Ottawa Evidence-based Practice Center under Contract No. 290-2007-10059-I.) AHRQ Publication No. 12-EHC021-EF. Rockville, MD: Agency for Healthcare Research and Quality. April 2012	All EPC CERs	Kanji S, Seely D, Yazdi F, et al. Interactions of commonly used dietary supplements with cardiovascular drugs: a systematic review. Syst Rev. 2012;1:26. PMID 22651380.

Report Citation	Selection Reason	Journal Article(s); Comments
Shamliyan T, Wyman J, Kane RL. Nonsurgical Treatments for Urinary Incontinence in Adult Women: Diagnosis and Comparative Effectiveness. Comparative Effectiveness Review No. 36. (Prepared by the University of Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 11(12)-EHC074- EF. Rockville, MD. Agency for Healthcare Research and Quality. April 2012.	MN	Shamliyan T, Wyman JF, Ramakrishnan R, et al. Benefits and harms of pharmacologic treatment for urinary incontinence in women: a systematic review. Ann Intern Med. 2012 Jun 19;156(12):861-74, W301-10. PMID 22711079  Shamliyan TA, Kane RL, Wyman J, et al. Results availability from clinical research of female urinary incontinence. Neurourol Urodyn. 2012 Jan;31(1):22-9. PMID 22038753.  Hong H, Carlin BP, Shamliyan TA, et al. Comparing bayesian and frequentist approaches for multiple outcome mixed treatment comparisons. Med Decis Making. 2013 Jul;33(5):702-14. PMID 23549384.
Golden SH, Brown T, Yeh HC, Maruthur N, Ranasinghe P, Berger Z, Suh Y, Wilson LM, Haberl EB, Bass EB. Methods for Insulin Delivery and Glucose Monitoring: Comparative Effectiveness. Comparative Effectiveness Review No. 57. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-2007-10061-I.) AHRQ Publication No. 12-EHC036-EF. Rockville, MD: Agency for Healthcare Research and Quality. July 2012.	All EPC CERs	Yeh HC, Brown TT, Maruthur N, et al. Comparative effectiveness and safety of methods of insulin delivery and glucose monitoring for diabetes mellitus: a systematic review and meta-analysis. Ann Intern Med. 2012 Sep 4;157(5):336-47. PMID 22777524.  Golden SH, Sapir T. Methods for insulin delivery and glucose monitoring in diabetes: summary of a comparative effectiveness review. J Manag Care Pharm. 2012 Aug;18(6 Suppl):S1-17. PMID 22984955.
Hartling L, Dryden DM, Guthrie A, Muise M, Vandermeer B, Aktary WM, Pasichnyk D, Seida JC, Donovan L. Screening and Diagnosing Gestational Diabetes Mellitus. Evidence Report/Technology Assessment No. 210. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021-I.) AHRQ Publication No. 12(13)-E021-EF. Rockville, MD: Agency for Healthcare Research and Quality. October 2012.	All EPC CERs	Donovan L, Hartling L, Muise M, et al. Screening tests for gestational diabetes: a systematic review for the u.s. Preventive services task force. Ann Intern Med. 2013 Jul 16;159(2):115-22. PMID 23712349. Hartling L, Dryden DM, Guthrie A, et al. Benefits and Harms of Treating Gestational Diabetes Mellitus: A Systematic Review and Meta-analysis for the U.S. Preventive Services Task Force and the National Institutes of Health Office of Medical Applications of Research. Ann Intern Med. 2013 Jul 16;159(2):123-9. PMID 23712381.
Shamliyan TA, Wang S-Y, Olson-Kellogg B, Kane RL. Physical Therapy Interventions for Knee Pain Secondary to Osteoarthritis. Comparative Effectiveness Review No.77. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC115-EF. Rockville, MD: Agency for Healthcare Research and Quality; November 2012.	MN	Wang SY, Olson-Kellogg B, Shamliyan TA, et al. Physical therapy interventions for knee pain secondary to osteoarthritis: a systematic review. Ann Intern Med. 2012 Nov 6;157(9):632-44. PMID 23128863.
Wilt TJ, MacDonald R, Ouellette J, Tacklind J, Khawaja I, Rutks I, Butler M, Fink HA. Treatment for Restless Legs Syndrome. Comparative Effectiveness Review No. 86. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC147-EF. Rockville, MD: Agency for HealthcareResearch and Quality. November 2012.	MN	Wilt TJ, MacDonald R, Ouellette J, et al. Pharmacologic therapy for primary restless legs syndrome: a systematic review and meta-analysis. JAMA Intern Med. 2013 Apr 8;173(7):496-505. PMID 23460396.

Report Citation	Selection Reason	Journal Article(s); Comments
2013 (1)		
Lin SY, Erekosima N, Suarez-Cuervo C, Ramanathan M, Kim JM, Ward D, Chelladurai Y, Segal JB. Allergen-Specific Immunotherapy for the Treatment of Allergic Rhinoconjunctivitis and/or Asthma: Comparative Effectiveness Review. Comparative Effectiveness Review No. 111. (Prepared by the Johns Hopkins University Evidence-based Practice Center under Contract No. 290-2007-10061-I.) AHRQ Publication No. 13-EHC061-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2013. Errata added May and August 2013.	Web Utilization Project	Erekosima N, Suarez-Cuervo C, Ramanathan M, et al. Effectiveness of subcutaneous immunotherapy for allergic rhinoconjunctivitis and asthma: A Systematic Review. Laryngoscope. 2013 Jul 6PMID 23832632.  Kim JM, Lin SY, Suarez-Cuervo C, et al. Allergen-specific immunotherapy for pediatric asthma and rhinoconjunctivitis: a systematic review. Pediatrics. 2013 Jun;131(6):1155-67. PMID 23650298.
		Lin SY, Erekosima N, Kim JM, et al. Sublingual immunotherapy for the treatment of allergic rhinoconjunctivitis and asthma: a systematic review. JAMA. 2013 Mar 27;309(12):1278-88. PMID 23532243.

# **Appendix B. Relevant Point-of-Care Evidence Summaries**

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
2009							
Hartmann KE, McPheeters ML, Biller DH, Ward RM, McKoy JN, Jerome RN, Micucci SR, Meints L, Fisher JA, Scott TA, Slaughter JC, Blume JD. Treatment of	Urinary Incontinence		Urinary Incontinence		Urinary Incontinence		
Overactive Bladder in Women. Evidence Report/Technology Assessment No. 187 (Prepared by the Vanderbilt Evidence-based Practice Center under Contract No. 290-2007-10065-I). AHRQ Publication No. 09-E017. Rockville, MD: Agency for Healthcare Research and Quality. August 2009.							0
Sharma M, et al., Comparative Effectiveness of Lipid-Modifying Agents. Comparative Effectiveness Review No. 16. (Prepared by the University of Ottawa Evidence-based Practice Center under contract No. 290-02-0021.) Rockville, MD: Agency for Healthcare Research and Quality. September 2009.  a. Sharma M, Ansari MT, Abou-Setta AM, et al. Systematic review: comparative effectiveness and harms of combination therapy and	Lipid-lowering pharm therapy overview [4/7/2013]	J	Treatment of lipids - secondary prevention July 2013		Hyper- lipidemia 6/17/10		
monotherapy for dyslipidemia. Ann Intern Med. 2009 Nov 3;151(9):622-30. PMID 19884623.	Statins for prevention of CV disease 6/24/13						

Table B1. Review of point-of-care tool evidence summaries for EPC CER citations (continued)

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Bruening W, et al., Comparative Effectiveness of Core-Needle and Open Surgical Biopsy for the Diagnosis of Breast Lesions. Comparative Effectiveness Review No. 19. (Prepared by ECRI Institute Evidence-based Practice Center under Contract No. 290-02-0019.) Rockville, MD: Agency for Healthcare Research and Quality.	Palpable breast mass evaluation [11/16/2012]		Breast Biopsy [7/2013]	J	Breast cancer [5/29/2010]		
December 2009.  a. Bruening W, Fontanarosa J, Tipton K, et al. Systematic review: comparative effectiveness of core-needle and open surgical biopsy to diagnose breast lesions. Ann Intern Med. 2010 Feb 16;152(4):238-46. PMID 20008742.	Breast cancer in women [7/11/2013]		Diagnostic Evaluation of Women with Suspected Breast Cancer [7/2013]				
0040							1
Whitlock EP, O'Connor EA, Williams SB, Beil TL, Lutz KW. Effectiveness of Primary Care Interventions for Weight Management in Children and Adolescents: An Updated, Targeted Systematic Review for the USPSTF. Evidence Synthesis No. 76. AHRQ Publication No. 10-05144-EF-1. Rockville MD: Agency for Healthcare Research and Quality, January 2010.  a. Whitlock EP, O'Connor EA, Williams SB, et al. Effectiveness of weight	Obesity in children and adolescents <sup>1</sup> [6/28/2013]		Mgmt of Childhood Obesity in a Primary Care Setting [7/2013]	J	Obesity in children [8/24/2007]		
management interventions in children: a targeted systematic review for the USPSTF. Pediatrics. 2010 Feb;125(2):e396-418. PMID 20083531.							0
Dryden DM, et al., Exercise-Induced Bronchoconstriction and Asthma. Evidence Report/Technology Assessment No. 189 (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021-I) AHRQ Publication No. 10-E001. Rockville, MD: Agency for Healthcare Research and Quality. January 2010 (Web site posting); revised March 2010.	Exercise- induced broncho- constriction [5/9/2013]		Exercise- Induced Broncho- constriction [7/2013]		Asthma in Children [8/19/2010] <sup>2</sup>		
<ul> <li>Stickland MK, Spooner CH, Dryden DM, et al. The need for standardization in exercise challenge testing for exercise-induced asthma/bronchoconstriction. J Allergy Clin Immunol. 2010 Oct;126(4):878- 80 e6. PMID 20920779.</li> </ul>			Overview of Asthma Management [7/2013]		Asthma in Adults [12/15/2009] <sup>2</sup>		0

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Seida J, et al., Comparative Effectiveness of Non-operative and Operative Treatment for Rotator Cuff Tears. Comparative Effectiveness Review No. 22. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-02-0023.) AHRQ Publication No. 10-EHC050. Rockville, MD: Agency for Healthcare Research and Quality. July 2010.	Rotator Cuff Tear [1/17/2013]	R, J	Management of Rotator Cuff Tears [7/2013]	J	Rotator cuff syndrome [8/24/2007] <sup>2</sup>		
a. Seida JC, LeBlanc C, Schouten JR, et al. Systematic review: nonoperative and operative treatments for rotator cuff tears. Ann Intern Med. 2010 Aug 17;153(4):246-55. PMID 20621893.							2
Bennett, W.L. et al., Oral Diabetes Medications for Adults With Type 2 Diabetes: An Update. Comparative Effectiveness Review No. 27. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-02-0018.) AHRQ Publication No. 11-EHC038-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2011 a. Bennett WL, Maruthur NM, Singh S, et al. Comparative effectiveness and safety	Glucose lowering medications for type 2 diabetes [7/29/2013]	R, J	Initial mgmt of blood glucose in adults with type 2 DM [7/2013]	J	Diabetes mellitus type 2 in adults [5/11/2012]		
of medications for type 2 diabetes: an update including new drugs and 2-drug combinations. Ann Intern Med. 2011 May 3;154(9):602-13. PMID 21403054.  Sanders GD, et al., Angiotensin-Converting Enzyme Inhibitors (ACEIs), Angiotensin II Receptor Antagonists (ARBs), and Direct Renin Inhibitors for Treating Essential Hyper-tension: An Update. Comparative Effectiveness Review No. 34. (Prepared by	Antihyper- tensive Medications		Overview of Hypertension in Adults		Hyper- tension 11/1/2012	J	2
the Duke Evidence-based Practice Center under Contract No. 290-02-0025.) AHRQ Publication No. 11-EHC063-EF. Rockville, MD: Agency for Healthcare Research and Quality. June 2011.	Overview [3/01/2013] HTN		[7/2013] Choices of		11/1/2012		
a. Powers BJ, Coeytaux RR, Dolor RJ, et al. Updated report on comparative effectiveness of ACE inhibitors, ARBs, and direct renin inhibitors for patients with essential hypertension: much more data, little new information. J Gen Intern Med. 2012 Jun;27(6):716-29. PMID 22147122.	[7/15/2013]		Therapy in Primary Hypertension [7/2013]				
	First-line therapy for HTN [7/15/2013]						

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Ip S, et al., Comparative Effectiveness of Management Strategies for Gastroesophageal Reflux Disease: Update. Comparative Effectiveness Review No. 29. (Prepared by Tufts Medical Center Evidence-based Practice Center under Contract No. 290-2007-10055-I.) AHRQ Publication No. 11-EHC049-EF. Rockville, MD: Agency for Health-care Research and Quality. September 2011.	Gastro- esophageal Reflux Disease [7/15/2013]		Management of GERD in Adults [7/22/2013]	R	GERD in Adults [6/30/2012]]		
Chou, R., et al., Analgesics for Osteoarthritis: An Update of the 2006 Comparative Effectiveness Review. Comparative Effectiveness Review No. 38. (Prepared by the Oregon Evidence-based Practice Center under Contract No. 290 2007 10057 I) AHRQ Publication No. 11(12)-EHC076-EF. Rockville, MD: Agency for Healthcare Research and Quality. Oct. 2011	Degenerative Joint Disease of Hip [11/29/2012]		Pharm. therapy OA [7/2013]		Osteoarthritis [12/11/2010]		1
	Degenerative Joint Disease of Knee [5/7/2013]						
Butler M, et al., Effectiveness of Early Diagnosis, Prevention, and Treatment of <i>Clostridium difficile</i> Infection. Comparative Effectiveness Review No. 31. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-02-0009.) AHRQ Publication No. 11(12)-EHC051-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2011.  a. Drekonja DM, Butler M, MacDonald R, et al. Comparative effectiveness of	C. difficile infection [7/15/2013]	No	C. difficile in Adults: clinical manifestation and diagnosis [7/2013]		Clostridium difficile infection 8/28/12	J	0
Clostridium difficile treatments: a systematic review. Ann Intern Med. 2011 Dec 20;155(12):839-47. PMID 22184691.			C. difficile in Adults: Treatment [7/2013]	J			2

Table B1. Review of point-of-care tool evidence summaries for EPC CER citations (continued)

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Gartlehner G, et al., Second-Generation Antidepressants in the Pharmacologic Treatment of Adult Depression: An Update of the 2007 Comparative Effectiveness Review. (Prepared by the RTI International—University of North Carolina Evidence-based Practice Center, Contract No. 290-2007-10056-I.) AHRQ Publication No. 12-EHC012-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2011.  a. Gartlehner G, Hansen RA, Morgan LC, et al. Comparative benefits and harms of second-generation antidepressants for treating major depressive disorder: an			Anti- depressant Medications in Adults: switching and discontinuing [7/2013]	J	Depression in Adults [4/19/2012]	J	
<ul> <li>updated meta-analysis. Ann Intern Med. 2011 Dec 6;155(11):772-85. PMID 22147715.</li> <li>b. Thaler KJ, Morgan LC, Van Noord M, et al. Comparative effectiveness of second-generation antidepressants for accompanying anxiety, insomnia, and pain in</li> </ul>	Antidepressan t Efficacy in Depression [7/19/2013]		Atypical Anti- depressants [7/16/2013]	J			
depressed patients. Depression and anxiety. 2012;29(6):495-505.  c. Morgan L, Gartlehner G. Comparative efficacy, effectiveness and harms of second-generation antidepressants in the pharmacologic treatment of adult depression. European Psychiatry. 2011;26:1266.  d. Morgan L, Gartlehner G. Comparative benefits and harms of second-generation	Antidepressan t Medication Overview [7/25/2013]		Initial Treatment of Depression in Adults [7/2013]				
antidepressants in the pharmacologic treatment of depression in older adults and populations with comorbid conditions. European Psychiatry. 2012;27:1.	Depression [7/19/2013]						2

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
2011 Seida JC, et al. First- and Second-Generation Anti-psychotics for Children and Young Adults. Comparative Effectiveness Review No. 39. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021.) AHRQ Publication No. 11(12)-EHC077-EF. Rockville, MD. Agency for Healthcare Research and Quality. February 2012.	Anti- psychotics [8/5/2013]		Second Generation Antipsychotic medications [7/2013]		Schizophreni a [9/6/2007]		
<ul> <li>a. Seida JC, Schouten JR, Boylan K, et al. Antipsychotics for children and young adults: a comparative effectiveness review. Pediatrics. 2012 Mar;129(3):e771-84. PMID 22351885.</li> </ul>			First Generation Antipsychotic medications [7/2013]		Bipolar disorder [2/5/2013]		
Crandall CJ, et al. Treatment to Prevent Fractures in Men and Women with Low Bone Density or Osteoporosis: Update of a 2007 Report. Comparative Effectiveness Review No. 53. (Prepared by Southern California Evidence-based Practice Center under Contract No290-2007-10062-I.) Rockville, MD: Agency for Healthcare Research and Quality; March 2012.	Osteoporosis [7/29/2013]		Overview of Management of Osteoporosis in Postmeno- pausal Women	R	Osteoporosis [5/9/2013]		0
	Bisphos- phonates for Treatment and Prev-ention of Osteoporosis [4/6/2013]		Use of Bisphospho- nates in Postmenopau sal Women	R			
			Treatment of Osteoporosis in Men				1

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Donahue KE, et al., Drug Therapy for Psoriatic Arthritis in Adults: Update of a 2007 Report. Comparative Effectiveness Review No. 54. (Prepared by RTI-UNC Evidence-based Practice Center under Contract No. 290-02-0016-I.) Rockville, MD: Agency for Healthcare Research and Quality; April 2012.	Psoriatic arthritis		Treatment of for Psoriatic Arthritis [7/1/2013]		Psoriatic Arthritis [1/8/2013]		0
Donahue KE, et al., Drug Therapy for Rheumatoid Arthritis in Adults: An Update. Comparative Effectiveness Review No. 55. (Prepared by RTI-UNC Evidence-based Practice Center under Contract No. 290-02-0016-I.) Rockville, MD: Agency for Healthcare Research and Quality. April 2012.	RA [7/12/2013]		Overview: Immuno- supressive and disease- modifying drugs in RA [7/2013]		Rheumatoid Arthritis <sup>1</sup> [7/29/2011]		
	Corticosteroid s for RA [8/26/2012]		RA: General Principles of Mgmt <sup>3</sup> [7/2013]				
	NSAIDs for RA [11/9/2012]		Treatment of RA resistant to DMARD therapy in adults [7/2013]				
	Nonbiologic DMARDs [6/19/2013]						
	Biologic DMARDs [6/19/2013]						0

CER Report and Associated Journal Article(s) DynaMed Cited UptoDate Cited First Cite	
Relevant Relevant Consult Evidence Evidence Summary Summary [Date] [Date] [Date]	POCs Citing
Seely D, et al., Dietary Supplements in Adults Taking Cardiovascular Drugs.  Comparative Effectiveness Review No. 51. (Prepared by the University of Ottawa Evidence-based Practice Center under Contract No. 290-2007-10059-I.) AHRQ Publication No. 12-EHC021-EF. Rockville, MD: Agency for Healthcare Research and Quality. April 2012.  a. Kanji S, Seely D, Yazdi F, et al. Interactions of commonly used dietary supplements with cardiovascular drugs: a systematic review. Syst Rev. 2012;1:26.  Dietary recommendati ons for cardiovascular disease prevention [1/31/2014]  Lipid lowering with diet or dietary supplements [1/1/22/2013]	
PMID 22651380.  Vitamin supplementati on for cardiovascular disease prevention [3/4/2014]  Vitamin supplementati on for disease prevention [1/13/2014]	0
Shamliyan T, et al., Non-surgical Treatments for Urinary Incontinence in Adult Women: Diagnosis and Comparative Effectiveness. Comparative Effectiveness Review No. 36. (Prepared by the University of Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 11(12)- EHC074- EF. Rockville, MD. Agency for Healthcare Research and Quality. April 2012. a. Shamliyan T, Wyman JF, Ramakrishnan R, et al. Benefits and harms of pharmacologic treatment for urinary incontinence in women: a systematic review. Ann Intern Med. 2012 Jun 19;156(12):861-74, W301-10. PMID 22711079. b. Shamliyan TA, Kane RL, Wyman J, et al. Results availability from clinical research of female urinary incontinence. Neurourol Urodyn. 2012 Jan;31(1):22-9. PMID 22038753.	
	2

Table B1. Review of point-of-care tool evidence summaries for EPC CER				0'4	F:	0'4 1	<b>—</b>
CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Golden SH, Brown T, Yeh HC, Maruthur N, Ranasinghe P, Berger Z, Suh Y, Wilson LM, Haberl EB, Bass EB. Methods for Insulin Delivery and Glucose Monitoring: Comparative Effectiveness. Comparative Effectiveness Review No. 57. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-2007-10061-I.) AHRQ Publication No. 12-EHC036-EF. Rockville, MD: Agency for Healthcare Research and Quality. July 2012.  a. Yeh HC, Brown TT, Maruthur N, et al. Comparative effectiveness and safety of methods of insulin delivery and glucose monitoring for diabetes mellitus: a systematic review and meta-analysis. Ann Intern Med. 2012 Sep 4;157(5):336-47.	Glucose monitoring [5/20/2013]		Blood Glucose Self- monitoring in the Manage- ment of Adults with Diabetes mellitus [7/2013]	J (a)	Diabetes overview [7/30/2013]		
PMID 22777524. b. Golden SH, Sapir T. Methods for insulin delivery and glucose monitoring in diabetes: summary of a comparative effectiveness review. J Manag Care Pharm. 2012 Aug;18(6 Suppl):S1-17. PMID 22984955.	Insulin management [7/26/2013]	J			Diabetes Mellitus Type 1 in Adults [12/28/2011] <sup>2</sup>		
					Diabetes Mellitus type 2 in Adults [5/11/2012] <sup>2</sup>		
Hartling L, et al., Screening and Diagnosing Gestational Diabetes Mellitus. Evidence Report/Technology Assessment No. 210. (Prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-2007-10021-I.) AHRQ Publication No. 12(13)-E021-EF. Rockville, MD: Agency for Healthcare Research and Quality. October 2012. a. Hartling L, Dryden DM, Guthrie A, et al. Benefits and Harms of Treating Gestational Diabetes Mellitus: A Systematic Review and Meta-analysis for the U.S. Preventive Services Task Force and the National Institutes of Health Office of Medical Applications of Research. Ann Intern Med. 2013 Jul 16;159(2):123-9.	Gestational diabetes mellitus (GDM) [7/22/2013]	J (a)	Screening and Diagnosis of Diabetes Mellitus during Pregnancy [7/2013]	R, J (b)	Gestational Diabetes [9/5/2012] <sup>2</sup>		2
<ul> <li>of Medical Applications of Research. Ann Intern Med. 2013 Jul 16;159(2):123-9.</li> <li>PMID 23712381.</li> <li>b. Donovan L, Hartling L, Muise M, et al. Screening tests for gestational diabetes: a systematic review for the u.s. Preventive services task force. Ann Intern Med. 2013 Jul 16;159(2):115-22. PMID 23712349.</li> </ul>							2

CER Report and Associated Journal Article(s)	DynaMed Relevant Evidence Summary [Date]	Cited	UptoDate Relevant Evidence Summary [Date]	Cited	First Consult Relevant Evidence Summary [Date]	Cited	Total POCs Citing
Shamliyan TA, Wang S-Y, Olson-Kellogg B, Kane RL. Physical Therapy Interventions for Knee Pain Secondary to Osteoarthritis. Comparative Effectiveness Review No.77. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC115-EF. Rockville, MD: Agency for Healthcare Research and Quality; November 2012.	Degenerative Joint Disease of the Knee [5/7/2013]		Nonpharma- cologic Therapy for OA [7/2013]		Osteoarthritis [12/11/2010]		
a. Wang SY, Olson-Kellogg B, Shamliyan TA, et al. Physical therapy interventions for knee pain secondary to osteoarthritis: a systematic review. Ann Intern Med. 2012 Nov 6;157(9):632-44. PMID 23128863.							0
Wilt TJ, et al., Treatment for Restless Legs Syndrome. Comparative Effectiveness Review No. 86. (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-2007-10064-I.) AHRQ Publication No. 12(13)-EHC147-EF. Rockville, MD: Agency for Healthcare Research and Quality. November 2012. a. Wilt TJ, MacDonald R, Ouellette J, et al. Pharmacologic therapy for primary restless legs syndrome: a systematic review and meta-analysis. JAMA Intern Med. 2013 Apr 8;173(7):496-505. PMID 23460396.	Restless Legs Syndrome [3/7/2013]		Treatment of Restless Legs Syndrome in Adults [7/23/2013]	R	Restless Legs Syndrome [7/31/2011]		1
2013							
Lin SY et al., Allergen-Specific Immunotherapy for the Treatment of Allergic Rhinoconjunctivitis and/or Asthma: Comparative Effectiveness Review. Comparative Effectiveness Review No. 111. (Prepared by the Johns Hopkins University Evidence-based Practice Center under Contract No. 290-2007-10061-I.) AHRQ Publication No. 13-EHC061-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2013. Errata added May and August 2013.	Allergic rhinitis <sup>1</sup> [7/24/2013]		Immuno- therapy Treatment for Allergic Rhinitis [7/2013]		Allergen immuno- therapy [3/7/2013]		
a. Erekosima N, Suarez-Cuervo C, Ramanathan M, et al. Effectiveness of subcutaneous immunotherapy for allergic rhinoconjunctivitis and asthma: A Systematic Review. Laryngoscope. 2013 Jul 6PMID 23832632. b. Kim JM, Lin SY, Suarez-Cuervo C, et al. Allergen-specific immunotherapy for	Asthma in adults and adolescents [7/8/2013]		Asthma Overview [7/2013]		Allergic rhinitis [7/16/2013]	J(b)	
pediatric asthma and rhinoconjunctivitis: a systematic review. Pediatrics. 2013 Jun;131(6):1155-67. PMID 23650298. c. Lin SY, Erekosima N, Kim JM, et al. Sublingual immunotherapy for the treatment	Asthma in Children [6/10/2013]				Asthma in adults [12/15/2009]		
of allergic rhinoconjunctivitis and asthma: a systematic review. JAMA. 2013 Mar 27;309(12):1278-88. PMID 23532243.							1

R=cited CER report; J=cited journal article; OA=osteoarthritis; DM=diabetes mellitus

<sup>1</sup> Did not cite selected report, but cited previous version of CER.

<sup>2</sup> Evidence summary not updated since CER availability.