

# Do Clinical Experts Rely on the Cochrane Library?

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In part because of limited public access, Cochrane reviews are underused in the United States compared with other developed nations. To assess use of these reviews by opinion leaders, we examined citation of Cochrane reviews in the Clinical Expert Series of *Obstetrics & Gynecology* from inception through June of 2007. We reviewed all 54 articles for mention of Cochrane reviews, then searched for potentially relevant Cochrane reviews that the authors could have cited. Thirty-six of 54 Clinical Expert Series articles had one or more relevant Cochrane reviews published at least two calendar quarters before the Clinical Expert Series article. Of these 36 articles, 19 (53%) cited one or more Cochrane reviews. We identified 187 instances of relevant Cochrane reviews, of which 40 (21%) were cited in the Clinical Expert Series articles. No tem-

poral trends were evident in citation of Cochrane reviews. Although about one half of Clinical Expert Series articles cited relevant Cochrane reviews, most eligible reviews were not referenced. Wider use of Cochrane reviews could strengthen the scientific basis of this popular series.

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## *Cochrane systematic reviews of randomized controlled trials are underused in the United States.*

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Cochrane systematic reviews provide high-quality evidence about the effectiveness of health care interventions.<sup>1</sup> Systematic reviews are superior to traditional narrative reviews,<sup>2</sup> textbook chapters,<sup>3</sup> and expert opinion.<sup>4</sup> For example, medical experts lag more than a decade behind the best available evidence, which indirectly causes preventable suffering and deaths.<sup>4,5</sup> Hence, the need for access to the best and most current clinical evidence is compelling.<sup>6</sup>

To examine the uptake and use of Cochrane reviews by opinion leaders, we examined the popular Clinical Expert Series articles in *Obstetrics & Gynecology*.<sup>7</sup> This series is designed to be “practical, evidence-based, and . . . reflect the author’s clinical

experience when appropriate.”<sup>7</sup> Our goals were to document citation of Cochrane reviews in these review articles and to see if trends in their use were evident.

## METHODS

We identified all “Clinical Expert Series” articles through a volume-by-volume search of *Obstetrics & Gynecology*’s Internet web site ([www.greenjournal.org/contents-by-date.0.shtml](http://www.greenjournal.org/contents-by-date.0.shtml)). The series was launched in January of 2002,<sup>7</sup> and we included all Clinical Expert Series articles through June of 2007. This yielded 54 articles. We then examined each for mention of Cochrane reviews in the methods, the text, or the reference list of the article. For our study, citation of a Cochrane review could include either the original Cochrane Library publication or duplicate publication of a Cochrane review in a medical journal.<sup>8</sup> We electronically searched the Portable Document Format (PDF) copy of each article using the truncated search term “Cochran;” in addition, “systemat” was used to identify citations of systematic reviews that might be a duplicate publication of a Cochrane review in another journal. Our modified search terms successfully captured Cochrane review citations, as confirmed by a manual search of all 54 articles.

In a second step, we established whether any relevant Cochrane reviews had been published before

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the Clinical Expert Series article was published. We used overlapping approaches to judge the availability of Cochrane reviews that clinical experts could have cited. First, we searched PubMed using Medical Subject Headings (MeSH), limiting the search by journal (Cochrane Database of Systematic Reviews). Because Cochrane reviews are regularly updated and because documentation of the update history on PubMed is inconsistent, we determined the date of first publication of each potentially relevant Cochrane review from the “cover page” section of each. To be eligible for citation in a Clinical Expert Series article, a Cochrane review had to have been published for the first time at least two calendar quarters before publication of the expert article, to account for time from submission to publication of the expert articles. Reviews that had been withdrawn were excluded from consideration, regardless of the date of withdrawal.

Second, we searched for Cochrane reviews by using text words from the Clinical Expert Series articles as search terms in PubMed, again limiting the journal to the Cochrane Database of Systematic Reviews. Third, we supplemented the PubMed searches with a search of the Cochrane Database using the same MeSH or key words. For key terms, we used the Cochrane “advanced search” within title, abstract, or keywords. Any systematic reviews identified in the Clinical Expert Series articles were checked against the Cochrane database to determine if they were duplicate publications of a Cochrane review. Some Clinical Expert Series articles cited Cochrane reviews on tangential topics that were not identified in our searches; we included these as well. Two authors independently performed the searches for Cochrane reviews, and dispari-

ties were then resolved by discussion among three of the authors.

Our study addressed three questions: What proportion of Clinical Expert Series articles cited one or more relevant Cochrane reviews? What proportion of all relevant Cochrane reviews were cited in Clinical Expert Series articles? Were temporal trends evident for either? We calculated proportions overall and by year, and we calculated 95% confidence intervals by the binomial distribution (Epi Info 6, Centers for Disease Control and Prevention, Atlanta, GA).

## RESULTS

Fifty-four Clinical Expert Series articles were published from inception of the series in 2002 through June of 2007. Relevant Cochrane reviews were available at least two calendar quarters before publication of 36 Clinical Expert Series articles. Nineteen of the 36 (53%; 95% confidence interval [CI] 36–70%) cited one or more relevant Cochrane reviews. Only one expert article (2%; 95% CI 0.1–10%) specifically mentioned a search of the Cochrane Library in its methods section.

We found 187 instances of Cochrane reviews that were potentially relevant to the Clinical Expert Series articles. In some cases, an individual review was pertinent to more than one expert article, so we used the total number of opportunities to cite a review rather than unique reviews. Of the 187 opportunities, 40 citations were found in the articles (21%; 95% CI 16–28%). No temporal trends were evident either in the proportion of Clinical Expert Series articles citing one or more relevant reviews or in the overall proportion of relevant reviews cited. The overall proportion of eligible reviews cited by year ranged from 5% to 32%.

## DISCUSSION

About one half of invited clinical experts cited relevant Cochrane reviews, but less than one quarter of potentially relevant reviews were referenced. Although clinical experts rely on the Cochrane Library for scholarly purposes, greater use of Cochrane reviews is clearly possible.

Several explanations may account for most relevant Cochrane reviews not being cited. Some authors may have been unaware of the Cochrane Library. This seems unlikely, because Cochrane abstracts have been included in PubMed since 2000, well before the Clinical Expert Series began. Although invited authors are asked to make their manuscripts evidence-based, they are not explicitly advised to search the Cochrane Library (Database) for relevant reviews. Lack of access to full texts of Cochrane reviews should not have posed a problem, because Clinical Expert Series authors were based in medical schools. Medical school libraries commonly subscribe to the Internet version of the Cochrane Library.

Other authors may have been aware of relevant Cochrane reviews but preferred to cite primary sources (specific randomized controlled trials) rather than systematic reviews. Some may have identified Cochrane reviews but considered them irrelevant to the intended message. Still other authors may not have cited Cochrane reviews because of unfamiliarity with the format; with its emphasis on research methods and eclectic terminology, the Cochrane Library is “user unfriendly” to many.<sup>9</sup>

This study has both strengths and weaknesses. One strength is the efficient identification of all Clinical Expert Series articles mentioning “Cochrane” because of an electronic word search through the



54 PDF documents. Another is the complete enumeration of all Clinical Expert Series articles from inception through June 2007, thus precluding selection bias.

On the other hand, determining the pool of potentially relevant Cochrane reviews was necessarily subjective, so the denominators for these proportions should be interpreted with caution. This problem became acute in judging what Cochrane reviews were relevant to “new methods” in treating leiomyomas and heavy uterine bleeding. For example, how “new” are endometrial destruction techniques for heavy menstrual bleeding? In addition, the sample size was limited to the 54 published Clinical Expert Series articles; small numbers lead to statistical imprecision, as revealed in the 95% confidence intervals.

Despite their clinical usefulness, Cochrane systematic reviews of randomized controlled trials are underused in the United States. For example, a Cochrane review documenting that magnesium sulfate is ineffective as a tocolytic agent received little attention in the United States and Canada, where this treatment has dominated practice

for several decades.<sup>10</sup> This therapy had been abandoned in other industrialized nations, where access to the Cochrane Library is easier.<sup>11</sup> Citizens of many countries have free online access to the Cochrane Library through governmental or other funding. In the United States, only Wyoming residents have public access through libraries, thanks to funding by its State Legislature.

Cochrane reviews merit wider use. Providing invited Clinical Expert Series authors with specific instructions to search the Cochrane Library first might increase the use of Cochrane reviews in this widely read series.<sup>12</sup>

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