Short Report

Continuing Education That Matters: A Successful, Evidence-Based Course With Minimal Pharmaceutical Funding

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“Among the essential characteristics that define high-quality education are that it is critical, unbiased, and based only on the best and broadest evidence.”

Arnold S. Relman MD1

Context and Setting

Concerns about the influence of the pharmaceutical and medical device industries on continuing medical education (CME) have been voiced frequently over the past decade.1 Reliance on industry funding increases the potential for bias. Industry-supported CME often emphasizes conditions that can be treated with newer drugs or devices rather than those with the greatest public health impact, and risks becoming a tool for drug promotion.

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While concerns about industry influence on CME continue, the total amount of industry support has decreased in recent years from a total of $1.2 billion in 2007 to $856 million in 2009. Commercial support to physician member organizations for CME peaked in 2007 and declined by 25% between 2007 and 2009.2 The Josiah Macy Jr. Foundation recommended that CME should not be funded by industry.3 The Institute of Medicine has also called for high-quality CME free of industry influence.4 It is not clear, however, if physicians are willing to support industry-free CME.

Why We Undertook This Initiative

The Arizona Academy of Family Physicians (AzAFP) has provided continuing medical education as one of its primary strategic goals and member services for many years. However, competition from for-profit medical education and communication companies and decreasing industry support has severely challenged the financial viability of the annual AzAFP CME meeting. Additionally, Academy leadership and national CME experts have recognized the importance of incorporating evidence into CME.3,4 In part, this means that speakers should base their recommendations on the best available clinical research, provide quantitative interpretation of the data using absolute risk reduction (ARR) and the number needed to treat (NNT), and explicitly describe the strengths and weaknesses of studies.5 Several Academy members learned of a new evidence-based CME format and proposed a trial annual meeting using this approach with minimal pharmaceutical industry support.

What We Did

The general format involves discussion of abstracts, little or no use of PowerPoint slides, and a strict focus on the evidence. We used the “Information Mastery” framework of Slawson and Shaughnessy6 to guide our selection of studies for each topic. Thus, most studies selected for the
syllabus meet the criteria for being “Patient Oriented Evidence That Matters” (POEMs): highly relevant because they report patient-oriented outcomes, and valid because they avoid important methodological flaws and are potentially practice changing.

The AzAFP planning committee provided a list of potential topics to the presenters based on a needs assessment survey completed by attendees at previous CME meetings. For each topic, an evidence summary was generated using a custom-designed software program that searches a database of 4,000 critical appraisals (Essential Evidence InfoPOEMs), 4,000 systematic reviews (Cochrane Database of Systematic Reviews), and evidence-based guidelines from the National Guidelines Clearinghouse. The evidence summary tool also searched databases of clinical decision rules (n = 380), diagnostic test accuracy (n = 2,000), and history and physical examination maneuvers (n = 2,000) that are part of the Essential Evidence online reference. Finally, a limited PubMed search was provided using the Clinical Queries filter that is part of PubMed.

This evidence summary and the PubMed search were used by presenters to create a syllabus that contained between 15 and 30 abstracts per topic. The priority was to first identify relevant POEMs critical appraisals, because they are specifically designed to change practice. A printed syllabus that included all abstracts, key questions, and linking paragraphs for each topic was provided to each participant (a sample chapter from the syllabus is available as Supporting Information for this article.)

The vast majority of topics were 30 minutes, with a new presenter every 30 minutes. Use of PowerPoint slides was minimal, approximately 20 or 30 during the entire 16-hour course. During each 30-minute session, the presenter briefly highlighted the key points, strengths, and weaknesses of each study in the handout. Discussion with audience members was encouraged, and principles of evidence-based medicine were reviewed as needed (eg, definition of NNT, likelihood ratio, allocation concealment). The registration fee was increased by $100 to $125 and the promotional materials for the course emphasized the evidence-based focus and minimal pharmaceutical support.

What We Learned

Attendance/Financial Performance

The attendance and financial data for the ACE Conference from 2006 to 2011 are summarized in TABLE 1. The highest attendance in the history of the meeting occurred in 2010 and 2011, when the fully evidence-based format was introduced, and no industry-sponsored speakers were included on the program.

The peak year for industry support was 2006, echoing a national trend. Support from pharmaceutical companies fell off sharply after 2007. For the 2010 meeting, the AzAFP refused to accept any sponsorship of speakers from drug companies and for the 2011 meeting the exhibit hall was closed to pharmaceutical companies except for those marketing immunization products. Some of the loss of marketing funding from PHARMA was offset by exhibitors who were recruiting family physicians to join their health care organizations and by companies marketing electronic health records platforms. The significant increase in registration fees in 2010–2011 indicates that providers are willing to bear a substantial portion of the shortfall created by eliminating industry support. Selection of a less expensive venue (the Phoenix Zoo’s conference facility instead of a local hotel) greatly reduced meeting site costs and drove down other expenses, especially those related to food.

Evaluations

The evaluation scores for the meetings in 2010 and 2011 with the new evidence-based format equaled or surpassed the highest rating previously obtained across all categories. Comments from attendees in 2008 and 2009 requested more

### TABLE 1. Attendance and Financial Data for Arizona Clinical Education Conference 2006–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Attendance</th>
<th>Sponsorship/Exhibitor</th>
<th>Registration</th>
<th>Income</th>
<th>Expense</th>
<th>Net Income</th>
<th>Registration Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>122</td>
<td>$108,699</td>
<td>$19,089</td>
<td>$127,788</td>
<td>$59,842</td>
<td>$67,946</td>
<td>$300</td>
</tr>
<tr>
<td>2007</td>
<td>105</td>
<td>$59,380</td>
<td>$23,535</td>
<td>$82,915</td>
<td>$48,216</td>
<td>$34,699</td>
<td>$300</td>
</tr>
<tr>
<td>2008</td>
<td>102</td>
<td>$58,353</td>
<td>$21,504</td>
<td>$79,857</td>
<td>$45,671</td>
<td>$34,186</td>
<td>$300</td>
</tr>
<tr>
<td>2009</td>
<td>92</td>
<td>$57,895</td>
<td>$20,119</td>
<td>$78,014</td>
<td>$65,894</td>
<td>$12,120</td>
<td>$300</td>
</tr>
<tr>
<td>2010a</td>
<td>127</td>
<td>$18,808</td>
<td>$37,554</td>
<td>$56,362</td>
<td>$56,144</td>
<td>$218</td>
<td>$400</td>
</tr>
<tr>
<td>2011a</td>
<td>124</td>
<td>$14,250</td>
<td>$42,362</td>
<td>$56,612</td>
<td>$19,772</td>
<td>$36,840</td>
<td>$425</td>
</tr>
</tbody>
</table>

*Years in which new evidence-based format was utilized.*
Lessons for Practice

- Physicians are willing to pay a significant portion of CME expenses even in an era of heavily industry-sponsored “free” CME.
- An evidence-based patient-oriented CME format was highly rated by a wide range of conference participants.
- A state medical association was able to generate significant nondues revenue from a CME conference with minimal pharmaceutical industry support.
- A CME program derived from an evidence-based informatics platform exposes physicians to resources and methods that can be used at the point of care.

Evidence-based material. The comments in 2010 and 2011 were overwhelmingly positive and many respondents noted that they considered these conferences to be the best CME events they had ever attended. The average score for the category “Met Educational Objectives” was 4.8 on a 5-point scale in 2011, the highest ever recorded for this meeting. Numerous attendees wrote comments indicating that they planned to incorporate more evidence-based resources in their practice as a result of participating in the conference.

In summary, we have described an evidence-based CME course presented with minimal pharmaceutical industry funding that was highly rated by participants and financially viable. The support and favorable feedback received for this conference have influenced the AzAFP to continue presenting an annual meeting with the same format. Furthermore, our experience with this course suggests that by partnering with other health care organizations and instituting cost reduction measures, a nonprofit physician association can utilize CME as a means to generate nondues revenue.

Groups that organize CME courses have been challenged to develop content that is both evidence-based and free of industry influence. With additional research and innovation we suspect that professional organizations will find that there are numerous viable ways to offer such courses. We look forward to the day when all CME for physicians is industry-influence free and truly evidence-based.

References


Supporting Information

Additional supporting information may be found in the online version of this article:

APPENDIX S1. Intelligent Imaging: What Should I Order?

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