Although interactive educational seminars that target physicians require a large investment of resources, they can be cost-effective if medical care is improved as a result.

Improving Physician Attendance At Educational Seminars Sponsored By Managed Care Organizations

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ABSTRACT

Purpose: To enhance primary care provider participation in a multifaceted interactive asthma teaching program sponsored by managed care organizations.

Design: Case series of six MCO-sponsored continuing medical education (CME) sessions.

Methodology: MCOs were provided with a standard set of recruitment materials. The MCO disease management divisions invited pediatric primary care providers of several types to attend the asthma teaching sessions and tracked the type of contacts employed and the success rate. Participants were awarded CME and were provided with a meal to encourage attendance. The faculty included a local physician-leader and a regional asthma expert. The sessions were scheduled by the MCO, but were given by the study group using a previously developed curriculum that emphasized material endorsed by the National Heart Lung and Blood Institute. Direct costs were tracked.

Principal findings: Overall, 53 of 299 (18 percent) providers participated in the two-part asthma CME sessions. Recruitment was significantly more successful when a physician leader participated in solicitation of providers ($P<.01$). Successful recruitment generally necessitated two points of contact, and phone contact appeared to yield greater success than e-mail. Scheduling conflicts and inconvenient location were the most common reasons given for not attending the seminars. Ninety percent of providers who attended the first session completed the program. The average direct cost per provider was $370.

Conclusion: Even when offering primary care providers a multifaceted interactive asthma-teaching program, physician recruitment necessitates personal and multiple contacts, and careful planning in terms of seminar location, time, and content. Interactive physician education seminars necessitate a large investment of resources but may be cost-effective if care is improved.

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This paper has undergone peer review by appropriate members of MANAGED CARE's Editorial Advisory Board.

INTRODUCTION

Educational seminars for health care providers are a popular component of quality-improvement initiatives for managed care organizations. State-of-the-art educational strategies to influence physician practice successfully include using interactive formats, incorporating influential physicians as faculty, and scheduling sessions so that new information can be integrated into practice and then reinforced through supplemental education (Thomson-O'Brien 2003, Mazmanian 2002, Davis 1997). Nevertheless, providing repeated, intensive educational sessions for physicians can be expensive as well as challenging. Because time and resources must be invested to carry out such continuing medical education events, provider attendance is central to the success and cost-effectiveness of these programs.

In partnership with five different MCOs, our team recently facilitated the presentation of an asthma education seminar for primary care providers on six separate occasions (two sessions per event). We specifically selected this program because it had been previously evaluated and was shown to improve pediatric asthma care and patient outcomes (Clark 1998).

Asthma is a common pediatric challenge that many MCOs face. Low-income children, particularly

those with Medicaid insurance, are more likely to have asthma but less likely to receive appropriate care (Finkelstein 2000, Lieu 2002, Ortega 2002, Halterman 2002, Clark 2002). In addition, significant gaps in physician adherence to national asthma guidelines are well documented (Cabana 2001, Diette 2001, Scarfone 2001). As a result, we targeted physicians who provided care for asthmatic children enrolled in qualified Medicaid managed care plans.

Each MCO employed varying strategies to improve physician attendance. This case-series report describes our experience and observations about the success of these techniques in promoting physician attendance at the educational seminar and includes the reasons for physician nonattendance and estimates of program costs relative to attendance.

METHODS

Educational program

The interactive seminar focuses on enhancing physicians' therapeutic skills in treating childhood asthma and developing physicians' ability to educate and counsel families about asthma self-management. The program has been evaluated in a randomized controlled trial and was shown to improve patient outcomes (Clark 1998, 2000).

The program includes brief lectures from a local asthma expert, a video showing effective clinician teaching and communication behavior, case studies regarding clinical issues, a protocol for physicians to assess their communication behavior, a review of important messages to communicate, and materials to distribute to families (Clark 1997, 1998).

The program, named Michigan Physician Asthma Care Education (MiPACE), was augmented by two case studies emphasizing barriers to asthma care relative to Medicaid patients. These case studies were developed from themes identified by focus groups with the caregivers of asthmatic children insured by Medicaid, and they were structured in a problem-based format (Zeitz 1999).

The seminars have been designed to be delivered in two 2- to 3-hour sessions, over the course of 2 to 3 weeks. Typically, the seminars are held during the evening in a centrally located venue selected by the MCO, and a meal is provided to participants.

Organizational partners

After approval by the University of Michigan Institutional Review Board, we contacted managed care organizations in Michigan that provide medical care for a large Medicaid population (Michigan Department. of Community Health 2004). Because the purpose of the educational seminar was to improve asthma care and outcomes, we reasoned that these companies would be motivated to support the program and promote it to network practices. We approached MCOs serially, based on the number of Medicaid patients enrolled in their program, until five had agreed to participate.

We also approached local asthma coalitions to form a cooperative partnership with the MCOs to recruit pediatric primary care providers for the asthma teaching session. The names of asthma coalitions came from the State Health Department and from the Internet.

Physician incentives

There was no cost to attend the educational seminar. The seminar was approved for CME credit of 5 hours for participants who completed the program. A meal was provided during each session.

Physicians received a complete toolkit of asthma educational materials including patient handouts, asthma action plans, asthma placebo devices,* educational posters, and Web site information. The educational materials were prepared and printed professionally. These included a copy of *Pediatric Asthma: Promoting Best Practices* (AAAAI 1999) and the Michigan Department of Community Health's Asthma Blue Print for Action, which contains information regarding asthma care as well as asthma resources in the state (Michigan Department of Community Health 2001).

The kit also included asthma action plans in English, Arabic, and Spanish, samples of medication delivery devices, and peak flow meters, as well as a poster from the American Lung Association's Open Airways for School Program (2003).

Lastly, copies of the program slides for the cases were included. The complete set of educational materials was worth approximately $100. The study team provided the seminar faculty, staff, supplies, room rental, and participant meals for the educational program. Physicians received no honoraria, but the MCO provided a new stethoscope to each participant in seminars 2 and 3.

Recruitment strategies

Our goals were to recruit 10 to 12 pediatric providers per seminar and for participants to complete both sessions. Potential participants included primary care pediatricians, family practitioners, nurse practitioners, and physician assistants.

Recruitment was organized through each MCO's disease management division. MCOs had the option of recruiting providers with the local asthma coalition. Members of the study team met with the MCO administration and/or asthma coalition members when appropriate to discuss strategies for improving physician attendance.

Recruitment materials included a

*The placebo devices included a multidose inhaler, turbohaler, aerolizer, and discus. All the devices had no active medication. As a result, they could be used for teaching purposes by providers to demonstrate appropriate technique for their use.

standard invitation and program announcement for each potential attendee. The invitation was printed on MCO letterhead with a program announcement that included participating faculty and information regarding CME credit.

The staff and asthma coalitions were given a suggested telephone script to use for contacting potential attendees. A member of the staff telephoned each potential attendee. Once a provider agreed to participate, a confirmation letter was mailed from the disease management division. Another potential method to be used at the MCOs' discretion was to have calls placed by the local asthma coalition staff. Electronic mail and faxing were also available.

Participating organizations and asthma coalitions were asked to record the types of contact used, the MCO staff member who made the calls, the number of providers who were approached to participate, the number who agreed to participate, and who completed the program.

Data collection

We surveyed providers who attended the seminar regarding their practice and demographic characteristics. Surveys also were mailed once to nonparticipating providers without any financial inducements, asking about their practice and the reasons that they did not participate in the seminars. We also collected their demographic characteristics.

The medical director and administrator who organized the seminar recruitment also were surveyed regarding methods used to recruit physicians to attend and the perceived success of such methods.

Analysis

The type and number of contacts used in provider recruitment were compared across the six teaching sessions with the proportion of successfully recruited providers. We used simple counts and descriptive statistics. We used student t-tests and chi-squared tests to compare differences between participant and nonparticipants (STATA 7.0, College Station, Texas).

We calculated direct costs for the seminar. Items in the calculation include seminar supplies, educational staff, meals, and venue charges. Indirect costs, such as participant time and MCO administrative time, were not included.

RESULTS

We contacted nine HMOs, five of which agreed to coordinate an asthma educational event. One of the HMOs agreed to coordinate separate seminars in two geographically distinct areas of the state, resulting in a total of six events. Each event consisted of two separate seminars, with distinct sequential curricula, presented on two different dates.

In Wayne County, we worked with two of the three largest Medicaid-qualified MCOs. Likewise, in Genesee County, we recruited two of the three largest Medicaid-qualified MCOs, and in Kalamazoo County, the largest Medicaid-qualified MCO agreed to participate.

Recruitment and attendance

Table 1 summarizes the number of providers who were contacted, agreed to attend, and actually attended each of the six events. For all six events, the MCOs contacted a combined total of 299 providers. The number of providers contacted ranged from 20 to 93 providers per event.

Of the 299 providers contacted, only 70 (23 percent) agreed to attend the event. The success rates for recruitment ranged from 10 percent (9 out of 93 contacts; event 6) to 51 percent (19 of 37 contacts; event 3).

Of the 70 providers who agreed to attend, 11 providers attended one of the two seminars (16 percent). Six (9 percent) providers attended neither one of the two seminars. Thus, 53 providers of the 70 who agreed to attend (76 percent) went to both seminars. For all six events combined, the total number of physicians who attended both seminars was 18 percent (53/299).

Methods of recruitment

The method of contact affected the percentage of providers who agreed to participate, as well as the percentage of those who actually attended the events. For example, the highest nonparticipant rate of 90 percent was seen in an MCO that recruited providers via electronic mail.

From survey results, event organizers reported that, on average, successful recruitment necessitated 2 contacts with a provider. Face-to-face and telephone contact were reported by the disease management coordinator and the MCO medical directors to be the most successful methods. A follow-up letter that was sent from the disease management division of the MCO after the initial letter that included the program announcement was also helpful. None of the MCOs that met with a local asthma coalition chose to use the coalition to help with

TABLE 1 MCO recruitment of pediatric asthma providers

	Event					
	1	2	3	4	5	6
Agreed/attended entire event	8	3	14	12	8	8
Agreed/did not attend entire event	2	6	5	3	0	1
Did not agree to attend	10	20	18	60	37	84
Total number of providers	20	29	37	75	45	93

provider recruitment, with the exception being that two MCOs included an endorsement of the seminars by the local coalition in the initial invitation letter sent to the providers.

Event groups 1, 2, and 3 had direct involvement of the local MCO medical director, who helped to call providers to solicit their participation in the educational program. Event groups 4, 5, and 6 had a disease management member — either a nurse or a respiratory therapist who contacted providers to ask for participation. When the medical director was involved in recruitment, 40 percent (38 of 94) of providers participated — compared to 15 percent (32 of 215) when the medical director was not directly involved ($P<.01$, chi-squared test). In terms of actual attendance, 27 percent of providers attended both sessions, compared to 13 percent of providers who received calls from a nonphysician MCO disease management coordinator ($P<.01$, chi-squared test).

Participants/nonparticipants

Characteristics of participants and nonparticipants are shown in Table 2. Note that only 92 of the 229 (40 percent) nonparticipants completed surveys.

Overall, primary care providers who attended the seminars were fairly similar to those who refused participation. There were no statistically significant differences among physician primary care specialties ($P>.05$), but nurse practitioners were more likely to participate (11 percent vs. 1 percent of participants vs. nonparticipants, respectively; $P<.01$, chi-squared test).

Nonparticipants more commonly were male (60 percent vs. 42 percent; $P<.05$, chi-squared test) and self-employed (59 percent vs. 42 percent; $P<.05$, chi-squared test). There were no differences in solo-practice status or provider estimates of their patients with asthma.

Reasons for nonparticipation

Table 3 presents the reasons for nonattendance. The most common reasons identified for nonparticipation were schedule conflict (75 percent) or location of venue (29 percent). In addition, a large number of providers (22 percent) said that they already were in compliance with the National Heart, Lung, and Blood Institute guidelines for asthma management in children and listed this as a reason not to attend the seminar. Despite the length of the program (5 hours over the course of 2 sessions), only 16 percent of the respondents cited the time commitment as a barrier to attendance. Nevertheless, this may be an artifact of the survey design, as the burden of attending 2 sessions may relate to a schedule conflict rather than the length of the program.

TABLE 2 Characteristics of participants and nonparticipants

	Participants N=53 n (%)	Nonparticipants* N=92 n (%)
Male	22 (42)	55 (60)
Age in years (median)	51	51
Board-certified	44 (83)	83 (90)
Medical specialty		
Family practice	13 (25)	25 (27)
Pediatrics	29 (55)	65 (71)
Nurse practitioner	6 (11)	1 (1)
Other/missing	5 (10)	1 (1)
Self-employed	22 (42)	54 (59)
Solo practice	12 (35)	18 (20)
Provider estimate of patients with asthma (median)	10%	14%

*40 percent response rate to nonparticipant survey

Costs of the educational intervention

The costs of the seminars are presented in Table 4. The average cost of the six seminars was $3,295 or approximately $370 for each provider who completed the program.

Some local asthma experts donated their time, thus reducing faculty expense. The University of Michigan study group provided most of the faculty: an asthma specialist, a general pediatrician, an asthma communication expert, and a local physician-leader. The honorarium for each faculty member was $250 per session. The CME application was a shared expense for each session. Group 3 had substantially higher food costs due to its location in a large metropolitan area.

DISCUSSION

Our experience documents how academic health centers and MCOs can collaborate in an area of mutual interest — physician education. The description of the outreach to the physicians also can serve as a template for other MCOs that have an interest in leveraging the classic "educational-dinner seminar" in their network. This experience also can serve as a benchmark in estimating participation. We found that approximately one quarter of physicians agreed to participate; of this number, 5 of 7 actually attended two sessions, as both were required. Intensive out-

TABLE 3 Reported reasons for not attending seminars*

Scheduling conflict	69	(75%)
Location of program	27	(31%)
Provider already in compliance with asthma management guidelines	20	(22%)
Length of commitment	14	(16%)
Inconvenience to practice	9	(10%)
Lack of payment	9	(10%)

*42 percent response rate to nonparticipant survey.

TABLE 4 Estimated direct costs of continuing medical education events

	Event					
	1	2	3	4	5	6
Faculty honorarium	$500	$625	$125	$500	0	$250
Food	$1,505	$1,979	$1,555	$3,896	$1,438	$1,049
CME fees	$225	$105	$270	$225	$165	$150
Equipment rental						$465
Teaching packets	$1,000	$900	$1,900	$1,500	$800	$900
Mailing						
CME application	$50	$50	$50	$50	$50	$50
Totals	$3,280	$3,034	$3,725	$5,671	$2,453	$2,614

reach strategies (phone calls and personalized letters, especially from the MCO's medical director) performed better in encouraging physicians to participate. Local community group endorsement and involvement was not as effective.

Our experience illustrates many of the issues involved in implementing a state-of-the-art educational intervention to primary care physicians. Below, we discuss in further detail the lessons learned from this experience.

1. The method of contact affects attendance. Primary care physicians are inundated with multiple CME opportunities from multiple sources. Personal and repeated contact by a respected colleague improved physician attendance at the educational events. Participation was almost twice as high when a physician-leader in the HMO helped with telephone recruitment. Successful recruitment generally necessitated at least 2 points of contact, and telephone contact appeared to be more effective than electronic mail. In addition, follow-up contact by the organizers helped reinforce attendance.

2. MCO partnership with a university or asthma coalition can improve recruitment. These seminars were a partnership between these MCOs and a university academic center. Most MCOs continue to contract with academic medical schools to sponsor CME programs (Corrigan 1991). Just as previous studies have shown that physicians have little confidence in educational materials exclusively provided by third-party payers, physicians may be less likely to attend educational events exclusively sponsored by third-party payers or MCOs (Richards 1980).

Physicians may perceive that motives for such seminars include cost-containment. Involvement with and sponsorship by an asthma coalition or academic center may improve the credibility of such presentations that focus on improving quality of care or access to care. For example, the sessions presented local and statewide asthma resources that are available to physicians, as well as updates on national asthma guidelines (NHBLI/NAEPP 1997) designed to improve quality of care.

3. Making presentations convenient. Lack of time is a barrier to physician CME (Goodyear-Smith 2003). Although physicians prefer educational conferences as the primary methods to improve clinical care (Mamary 2003), self-employed physicians typically do not have time allotted in their schedules for CME and quality improvement. All MCOs worked to coordinate convenient session times and locations; despite this emphasis, both "schedule conflict" and "location" were identified as the most frequent reasons for nonparticipation among physicians.

Factors that may improve attendance include a location with easy access and seminar times (such as evening presentations) that do not conflict with traditional office hours. Other factors that may indirectly improve convenience include a dinner meal and CME accreditation, for example, because all physicians in Michigan are required to obtain CME credit to maintain licensure.

4. Content needs to be appropriate for the audience. As in previous studies, (Gercenshtein 2002, Grimshaw 2002), this report demonstrates the importance of the relevance of the CME topic in improving attendance and retention at CME events. The program we presented was designed specifically for primary care providers. With respect to group 2, however, many of the recruited providers were not primary care providers. Although they all demonstrated an interest in asthma, many of the topics (e.g., counseling in the pri-

mary care setting) and the case studies did not apply to their practices directly. As a result, many of the physicians did not attend the second session.

5. Short-term costs for intensive continuing medical education may be beneficial in the long run. This proven, state-of-the- art educational asthma session, which included multiple faculty presentations and instructional materials, cost about $370 per participant who completed the program. This is comparable to video conferences, which have been reported to be less expensive, with links for 10 physicians costing about $1,200 Canadian per module (Allen 2003).

If participants improve their asthma care and teaching skills, then theoretically, the program costs will be offset by lower use of inpatient and emergency services. Previous evaluation of the program showed fewer emergency department and inpatient charges for patients (Clark 1998, 2000). Hospital charges for inpatient asthma care vary by severity of illness; in 1995, however, median hospital charges for pediatric asthma were $3,168 for a mild asthma exacerbation and $19,689 for a severe one (Meurer 2000).

In theory, seminar costs would be offset if each seminar led to the avoidance of 1 to 2 asthma admissions. This program may improve provider behavior enough to have an effect on avoidable health care utilization, as outlined above. Nevertheless, physician adherence to benchmark standards is a challenge in community settings. There are also many other factors affecting asthma admissions that are beyond the control of health care providers (e.g., environmental air quality, housing quality).

Although additional interventions may be needed to address other factors, this seminar provides one method to help improve a key element in asthma care: physician asthma counseling and teaching skills.

SUMMARY

In summary, we found that even when offering primary care providers a multifaceted interactive asthma teaching program, physician recruitment necessitated personal and multiple contacts as well careful planning in terms of seminar location, time and content. Planning and presenting interactive physician education seminars necessitate a large investment of resources. Physician attendance is a critical factor in success. Although the cost of the program was substantial ($370/attending provider), documented long-term and unanticipated benefits of such programs suggest that such programs are warranted.

ACKNOWLEDGEMENTS

This work was funded by the Michigan Department of Community Health and by an unrestricted educational grant from GlaxoSmithKline. The authors are grateful to the MCOs and primary care providers who participated in the teaching programs, as well as Ricardo Vinuya, MD; Kathy R. Bishop, MHSA; Karen Meyerson, RN; Cheryl Schott, MPH; and Karla Stromer-Grosman, BSN, MS.

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