Improving Quality of Care and Guideline Adherence for Asthma Through a Group Self-Assessment Module

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Background: The quality of care for asthma remains suboptimal. Compliance with guidelines remains low, but improved adherence to guidelines may increase the quality of care. We conducted a trial to determine whether group Self-Assessment Module (SAM) activities led by a facilitator and conducted as part of Maintenance of Certification for Family Physicians (MC-FP) would increase knowledge of and adherence to asthma guidelines.

Methods: Participating physicians completed audits of the charts of patients with asthma before and 6 months after a group SAM. Surveys of physicians’ knowledge of asthma guidelines were administered immediately before, immediately after, and 6 months after the group SAM. We tested for differences in knowledge of and adherence to guidelines before and after the SAM using chi-squared and t-tests.

Results: Thirty-eight physicians in Virginia completed the SAM and had complete data. Participants completed more MC-FP activities than other physicians but were comparable in other characteristics. Except for prescribing controller medications for persistent asthma, all other quality measures significantly improved 6 months after the group SAM. Diagnosis by severity improved from 48.3% to 80.2%, and the use of action plans increased from 8.1% to 54.1%. Physicians’ knowledge of guidelines improved immediately after the SAM and was sustained at 6 months. Increased knowledge translated into clinical skills: 30% of participants reported comfort with assessing control after the SAM, which increased to 97.5% 6 months after the SAM.

Conclusions: Group SAMs may be an effective method to increase physicians’ knowledge of and adherence to clinical guidelines. (J Am Board Fam Med 2014;27:391–398.)

Keywords: Asthma, Certification, Educational Assessment, Guideline Adherence

Asthma continues to represent a major cause of emergency department visits and excess hospitalizations. Appropriate therapy and management of triggers of asthma can greatly ameliorate these adverse outcomes, as well as morbidity and mortality. To promote appropriate asthma management, the National Heart, Lung and Blood Institute (NHLBI) periodically produces guidelines that summarize current evidence and outline optimal management strategies.

Dissemination of guidelines has been a major challenge, and multiple studies have shown lack of awareness and implementation of guidelines across...
Despite evidence-based guidelines being available for >20 years and concomitant research demonstrating improved outcomes associated with guideline adherence, health care providers do not consistently follow asthma guideline recommendations. In fact, available data continue to indicate less-than-optimal care for asthma in primary care. For example, despite its central importance in asthma management, asthma control is not appropriately evaluated for many patients, and minority children are half as likely as white children to receive inhaled steroids and other standard elements of asthma treatment. In addition, when patients are properly assessed, as few as 30% of persistent asthmatics have prescribed controller medication, and the use of action plans remains low.

Following the development of the 2007 Expert Panel Report 3 (EPR-3), the NHLBI convened the Guidelines Implementation Panel to develop recommendations for accomplishing greater utilization of the guidelines. The Guidelines Implementation Panel report focused on 6 key messages from EPR-3: (1) the use of controller medications (eg, inhaled corticosteroids) for persistent asthma; (2) written asthma action plans; (3) standardized assessment of asthma severity; (4) standardized assessment of level of control; (5) scheduled periodic follow-up visits; and (6) control of asthma triggers (eg, mold and other allergens). To encourage innovative programs for promoting these recommendations, the NHLBI also created the National Asthma Control Initiative (NACI) as a vehicle for funding demonstration projects that could explore best practices for disseminating these management strategies among patients, health care professionals, organizations, and leaders.

The American Board of Family Medicine (ABFM) implemented its Maintenance of Certification for Family Physicians (MC-FP) program in 2004. Part II of the MC-FP consists of self-assessment modules (SAMs) that contain 2 parts: a 60-item knowledge assessment, with references and critiques, and a simulation that focuses on managing a patient with the module’s clinical focus (eg, asthma.) In 2005, the ABFM deployed an asthma SAM, which contained content that largely reflected the material presented in the 1997 NHLBI asthma guideline and the associated 2002 update. Following the release of the 2007 EPR-3 guideline, the ABFM revised the asthma SAM content to support these new recommendations. Over the next several years, the ABFM noted increased use of asthma simulations of particular EPR-3-recommended management strategies (eg, written action plans and use of controller medications for persistent asthma).

On the basis of this encouraging pattern of guideline-recommended behaviors, ABFM responded to the NACI call for proposals for organizations to become NACI Strategic Partners in promoting the EPR-3 key asthma management messages. For the proposal, the ABFM (MDH) partnered with investigators from Virginia Commonwealth University (KE) and the Virginia Tech Carilion School of Medicine and Research Institute (MG). Based on the previous results with EPR-3 emphases in the asthma SAM, in our response we proposed further augmentation of the EPR-3 key messages through a process of delivery via a group SAM. The objectives of this study were to evaluate the effectiveness of a facilitator-led group SAM for guideline dissemination and adherence to guidelines in practice.

**Methods**

We constructed an experimental design with 2 arms: (1) a group of physicians engaged in group SAM activities that were conducted by trained facilitators who emphasized the 6 key messages of the EPR-3 guideline (intervention group) and (2) a control arm of physicians taking the asthma SAM in the usual online individual format. To identify potential control participants, the ABFM searched SAM completion data to identify diplomates in Florida, Colorado, Oklahoma, and Virginia who had not previously completed the asthma SAM. The identified diplomates were invited via E-mail (all current ABFM diplomates have E-mail addresses on record with the ABFM) to participate in the study. The invitation included a description of the purpose and study design as well as indication of incentive payments available to participants. The ABFM has created 15 SAMs for use in the MC-FP process; historically, only approximately 11% of diplomates have chosen the asthma SAM for completion of their part MC-FP Part II requirements.

SAMs are typically conducted as an individual learning exercise via the ABFM website (www.theabfm.org). In this study we implemented a standardized
They identified facilitators to conduct group SAM activities at state Academy of Family Physician chapter meetings in Virginia, Florida, Colorado, and Oklahoma. The facilitator training focused on content of the asthma SAM that was revised to further emphasize the 6 key EPR-3 messages: use of inhaled corticosteroids for control of persistent asthma; use of written asthma action plans; assessment of asthma severity; assessment and monitoring of asthma control; scheduled follow-up visits; and control of environmental triggers. The intervention was provided during 6 sessions at meetings of the 4 state chapters in the fall of 2011 and used a facilitated group learning process in which the participants review and discuss the SAM material together. This process allowed major teaching points to be highlighted, unclear areas to be clarified, and the most important material to be summarized. Participants in the group and control processes completed surveys regarding their knowledge of guidelines and other aspects of asthma care before, immediately after, and 6 months after completing the SAM. To assess effects on the quality of care and adherence to the 6 key messages from the EPR-3 guidelines in practice, participants completed chart audits of 15 patients before the SAM and 6 months after completing the SAM.

Physicians were included in the analysis if they completed the entire process and all surveys and chart audits were available for analysis. This included a consent form, before and after chart audits, and 3 surveys (before, immediately after, and 6 months after the SAM). All the physicians (except one) who had complete data available for analysis were from Virginia. We excluded the one person not from Virginia to have a more cohesive sample. With this knowledge, we compared the demographics of the diplomates in the intervention group to all other diplomates from Virginia in the ABFM database who have taken the certification or recertification examination since 2000. Despite the targeted recruiting (including financial incentives) for control participants, as described above, we did not achieve sufficient responses to support inclusion of the originally proposed control arm in the final analysis.

Each chart audit (before and 6 months after the SAM) contained 15 patients and asked about the 6 key messages for each patient: (1) Is the asthmatic diagnosed according to National Asthma Education and Prevention Program criteria? (2) Was an asthma control test or asthma therapy assessment questionnaire used at the last asthma visit? (3) Was there a planned asthma visit in the past year? (4) Is there an asthma action plan in the chart? (5) Was a controller medication prescribed for persistent asthmatics? and (6) If there was a controller medication prescribed, was it an inhaled corticosteroid (ICS), leukotriene agonist, or a combination?

The formatting of the surveys before, immediately after, and 6 months after the SAM was slightly different, and some items that were eliminated because of feedback about their wording. These items were not included in the analysis. There were variations in the 6-month survey because of specific issues that were addressed in the different group SAM sessions. For analysis we combined all similar questions from these 6-month surveys. The majority of questions used a modified Likert scale. For analytic purposes, we collapsed the responses to each Likert-style question into 2 categories: strongly agree/agree or strongly disagree/disagree, or never/rarely a problem or likely/very likely a problem versus other. To gauge the possible effect of the SAM on specific areas of asthma care, surveys after the SAM asked about changes made in the physician’s practice. Survey instruments were pretested by focus groups conducted by the Kentucky Ambulatory Network.

For the questions that were comparable across all 3 surveys, $\chi^2$ tests were used to determine statistical significance over time. Statistical significance was measured at $P < .05$. Statistical analysis was done using SAS software version 9.3 (SAS, Inc., Cary, NC). The protocol received approval as an exempt study by the University of Kentucky Medical Institutional Review Board (IRB no. 11-0077X2B, on file with the ABFM).

**Results**

Of the 114 physicians who started in the intervention group, 39 (34.2%) completed the process with all data available for analysis. The 114 physicians were from Virginia (54.4%), Oklahoma (22.8%), Colorado (18.4%), and Florida (4.4%). Of those who completed the entire study protocol, 38 were from Virginia and one was from Florida. Compared with all the Virginia family physicians in the ABFM database, the intervention group completed
more total MC-FP modules and had a higher score
on the most recent primary certification examina-
tion. Although not statistically significant, physi-
cians in the intervention were more likely to be
women, an MD versus DO, and currently be board
certified (Table 1).

Physician adherence to asthma care guidelines
improved after participating in the group SAM (Table 2). Having an asthma action plan in the
chart markedly increased from 8.1% to 54.1% of
patients, and using an asthma control test or asthma
therapy assessment questionnaire increased from
11.2% to 53.3%. The severity of asthma based on
National Asthma Education and Prevention Pro-
gram criteria was reported for nearly half of patient
visits before the group SAM and for 80.2% of visits
after the group SAM. Prescribing a controller in-
haler medication increased significantly after the
group SAM; the increase was seen exclusively for
ICS at the expense of either an leukotriene agonist
or a combination ICS/long-acting β-antagonist.

Physicians’ knowledge of the EPR-3 guidelines
improved after the group SAM and was largely
sustained in the 6-month survey (Table 3). All re-
spondents immediately and 6 months after the
SAM agreed that ICSs are recommended for all
persistent asthmatics, consistent with the increase
in the prescription of ICSs as abstracted during
chart review. Physicians’ comfort with assessing
control improved nearly 30% from the survey be-
fore to that immediately after the SAM and further
increased to 97.8% at 6 months. In contrast, agree-
ment on assessing severity and the classification
system improved dramatically from before to im-
mEDIATELY after the SAM but were reduced at 6
months.

In the survey before the SAM, 7.9% of physi-
cians reported few or no problems with using ac-
tion plans (Table 4). Immediately after the SAM
and at 6 months, 94.7% and 75.0%, respectively,
reported the SAM helped them feel more confident
in using action plans (Table 5). Despite a decrease
in confidence with action plans, the reported in-
crease in written action plans in the chart increased
from 8.1% to 54.1%.

The group SAM process improved physicians’
confidence in many areas (Table 5) when compared
with their reported challenges in providing asthma
care (Table 4). For example, only a third of physi-
cians reported that assessment of severity as never
or rarely a problem before the SAM. All these
physicians reported a boost in confidence in their
ability to assess severity after the SAM: >90%
reported sustained confidence at 6 months. This
confidence carried over to both reported likelihood
of assessing severity based on the EPR-3 criteria
(Table 5) and documented patient assessments (Table 2).

We found large agreement between the physi-
cian-reported likelihood of adherence to the guide-

Table 1. Personal Characteristics of Group
Self-Assessment Module (SAM) Participants from
Virginia Versus All American Board of Family Medicine
Physicians

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Group Asthma SAM Participants (n = 38)</th>
<th>Virginia Family Physicians (n = 2812)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>50.9 (7.7)</td>
<td>50.3 (10.5)</td>
</tr>
<tr>
<td>Years practicing</td>
<td>19.7 (8.7)</td>
<td>17.9 (11.1)</td>
</tr>
<tr>
<td>Total MC-FP modules</td>
<td>5.5 (2.3)</td>
<td>4.4 (3.1)*</td>
</tr>
<tr>
<td>completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMs completed</td>
<td>3.9 (1.9)</td>
<td>3.6 (2.4)</td>
</tr>
<tr>
<td>PPMs completed</td>
<td>1.7 (0.9)</td>
<td>0.8 (0.9)*</td>
</tr>
<tr>
<td>Last primary exam score</td>
<td>557.9 (87.0)</td>
<td>512.5 (93.1)*</td>
</tr>
<tr>
<td>Male sex</td>
<td>55.3</td>
<td>62.1</td>
</tr>
<tr>
<td>MD degree</td>
<td>97.4</td>
<td>93.5</td>
</tr>
<tr>
<td>Currently board certified</td>
<td>97.4</td>
<td>90.3</td>
</tr>
</tbody>
</table>

Data are means (standard deviations) or percentages.

*P < .05.

MC-FP, Maintenance of Certification for Family Physicians; PPM, Performance in the Practice of Medicine module.

Table 2. Physicians’ Abstracted Adherence to Asthma
Guidelines Before and 6 Months After a Group
Self-Assessment Module (SAM)

<table>
<thead>
<tr>
<th></th>
<th>Before SAM</th>
<th>6 Months after SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosed according to NAEPP criteria</td>
<td>48.3</td>
<td>80.2*</td>
</tr>
<tr>
<td>ACT or ATAQ used at last asthma visit</td>
<td>11.2</td>
<td>53.3*</td>
</tr>
<tr>
<td>Planned asthma visit in the past year</td>
<td>50.7</td>
<td>75.0*</td>
</tr>
<tr>
<td>Asthma action plan in chart</td>
<td>8.1</td>
<td>54.1*</td>
</tr>
<tr>
<td>Controller medication prescribed for persistent asthma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS</td>
<td>32.1</td>
<td>48.7*</td>
</tr>
<tr>
<td>LTA</td>
<td>29.5</td>
<td>28.1</td>
</tr>
<tr>
<td>ICS/LABA combination</td>
<td>58.5</td>
<td>56.3</td>
</tr>
</tbody>
</table>

*P < .05.

ACT, Asthma Control Test; ATAQ, Asthma Therapy Assessment Questionnaire; ICS, inhaled corticosteroid; LABA, long-
acting β-agonist; LTA, leukotriene agonist; NAEPP, National Asthma Education and Prevention Program.
lines immediately and 6 months after the SAM (Table 5) and chart-abstracted adherence 6 months after the SAM. All of the physicians agreed that ICS was the preferred controller medication both immediately and 6 months after the SAM. Nearly half of the patients were taking an ICS alone after 6 months, and slightly more than half were taking an ICS/long-acting β-agonist combination (Table 2). Similarly, initial confidence in providing planned visits translated into both the reported likelihood and documented performance of these important asthma care services.

Discussion

Our study demonstrated that a facilitator-led group ABFM self-assessment activity can lead to meaningful improvements in both the quality of asthma care provided and adherence to guidelines. Physician performance improved for nearly all the key interventions recommended in the EPR-3 guidelines. Previous research suggests that providing abbreviated, focused guidelines can improve patient outcomes.23 Our NACI project seems to corroborate that insight and indicates that the Maintenance of Certification (MOC) paradigm can serve as a vehicle for delivering focused guideline-related content.

A number of authors have expressed concern regarding the value (real or perceived) of specialty board MOC programs.24,25 A growing body of literature, however, supports the value of MOC activities in improving physician performance and patient outcomes.26,27 Our results suggest an additional purpose to MOC: the promotion and dissemination of evidence-based guideline recommendations. The presenters of the group SAM intervention in this study (MG and KE) noted that many questions from the family physicians during the sessions focused on specific examples of how to implement the guidelines into real practice. Future guidelines may need to provide examples of use or online tutorials/practice vignettes to facilitate implementation in practice. In addition, access to the supporting literature is limited because of subscription fees. Developers of future guidelines should consider making key articles available free. The participants seemed to be

Table 3. Physician-Reported Assessment and Perceptions of Asthma Treatment Guidelines Before, Immediately After, and 6 Months After a Group Self-Assessment Module (SAM)*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agreement</th>
<th>Before SAM (n = 39)</th>
<th>Immediately after SAM (n = 39)</th>
<th>6 Months after SAM (n = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhaled steroids are recommended for all persistent asthmatics</td>
<td>Agree</td>
<td>89.5</td>
<td>100</td>
<td>100†</td>
</tr>
<tr>
<td>The approach to severity assessment is clear for me.</td>
<td>Agree</td>
<td>55.3</td>
<td>100</td>
<td>86.2†</td>
</tr>
<tr>
<td>There are four steps in the asthma classification system: mild intermittent, moderate intermittent, moderate persistent and severe persistent.</td>
<td>Disagree</td>
<td>47.4</td>
<td>84.2</td>
<td>59.4†</td>
</tr>
<tr>
<td>I feel comfortable with my ability to assess control as recommended in the guidelines.</td>
<td>Agree</td>
<td>47.4</td>
<td>82.1</td>
<td>97.8†</td>
</tr>
</tbody>
</table>

*Before SAM indicates the initial assessment of EPR-3 guidelines. Immediately after SAM and 6 months after SAM indicate questions related to perceptions of the NHLBI asthma guideline recommendations and format.

†P < .05.


Table 4. Physician-Reported Challenges in Delivering Asthma Care Before Participation in the Group Self-Assessment Module (SAM) (n = 38)

<table>
<thead>
<tr>
<th>Major Challenges That Are Never or Rarely a Problem</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment of severity</td>
<td>31.6</td>
</tr>
<tr>
<td>Assessment of control (eg, using ACT or ATAQ)</td>
<td>18.4</td>
</tr>
<tr>
<td>Planned visits</td>
<td>23.7</td>
</tr>
<tr>
<td>Use of action plans</td>
<td>7.9</td>
</tr>
<tr>
<td>Environmental assessment</td>
<td>18.4</td>
</tr>
<tr>
<td>Use of inhaled steroids for persistent asthma</td>
<td>81.6</td>
</tr>
<tr>
<td>Making the diagnosis</td>
<td>62.5</td>
</tr>
<tr>
<td>Allergy evaluation</td>
<td>42.1</td>
</tr>
<tr>
<td>Time constraints for evaluation</td>
<td>21.0</td>
</tr>
<tr>
<td>Treatment grids</td>
<td>39.5</td>
</tr>
<tr>
<td>Referral criteria</td>
<td>63.2</td>
</tr>
</tbody>
</table>

*P < .05.

ACT, Asthma Control Test; ATAQ, Asthma Therapy Assessment Questionnaire.
challenged by the sheer volume of the guidelines and the lack of a paradigm or suggested practice plan tailored for primary care. The interactive environment of the group SAMs facilitated this discussion, but online support and interchange could be developed in the future to provide similar opportunities.

Limitations

This study is subject to several limitations. First, there was insufficient response from the planned control group, which limited our ability to determine conclusively that the improvements observed were derived solely from the intervention. The limited size of the NHLBI contract precluded extensive attempts to recruit additional control participants. Second, our sample was limited to one state, and regional differences in asthma care may affect this intervention in other settings. Although the facilitating faculty used an agreed-upon curriculum for conducting group SAMs, each state’s Academy chapter managed the recruitment and retention of participants differently. This heterogeneity led to optimal completion of the exercise among only the Virginia participants. In addition, the chart abstraction data represent self-reported results, which may be subject to reporting error. The contract did not have a budget for audit and validation of the reports; however, prior work has shown that physicians reliably and accurately abstract data when participating in MOC activities, which somewhat limits this concern. Also, only 34% of group SAM participants in Virginia elected to participate in the full study. This could introduce bias since these physicians may be more motivated to improve the quality of care they provide and may differ from other participants in other ways. Finally, we assessed care 6 months after the intervention; longer-term assessment of patient care may be needed to demonstrate sustained adherence to the guidelines.

Conclusion

Our study found that group self-assessment activities based on asthma can serve as an effective means of disseminating new guidelines and promoting guideline adherence in clinical practice. We observed significant improvements in key asthma

Table 5. Physician-Reported Confidence in and Likelihood of Providing Guideline-Adherent Asthma Care After Participation in a Group Self-Assessment Module (SAM)

<table>
<thead>
<tr>
<th>The SAM helped me feel more confident in this area.</th>
<th>Agreement</th>
<th>Immediately after SAM (n = 38)</th>
<th>6 Months after SAM (n = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment of severity</td>
<td>Agree/strongly agree</td>
<td>100</td>
<td>93.8</td>
</tr>
<tr>
<td>Assessment of control (eg, using ACT or ATAQ)</td>
<td>Agree/strongly agree</td>
<td>94.7</td>
<td>96.9</td>
</tr>
<tr>
<td>Planned visits</td>
<td>Agree/strongly agree</td>
<td>100</td>
<td>90.6</td>
</tr>
<tr>
<td>Use of action plans</td>
<td>Agree/strongly agree</td>
<td>94.7</td>
<td>75.0*</td>
</tr>
<tr>
<td>Environmental assessment</td>
<td>Agree/strongly agree</td>
<td>94.7</td>
<td>80.7</td>
</tr>
<tr>
<td>Use of inhaled steroids for persistent asthma</td>
<td>Agree/strongly agree</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Making the diagnosis</td>
<td>Agree/strongly agree</td>
<td>92.1</td>
<td>93.8</td>
</tr>
<tr>
<td>Allergy evaluation</td>
<td>Agree/strongly agree</td>
<td>96.8</td>
<td>71.0</td>
</tr>
<tr>
<td>Time constraints for evaluation</td>
<td>Agree/strongly agree</td>
<td>67.6</td>
<td>65.6</td>
</tr>
<tr>
<td>Treatment grids</td>
<td>Agree/strongly agree</td>
<td>96.8</td>
<td>84.4</td>
</tr>
<tr>
<td>At the end of this SAM, how likely were you to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use inhaled corticosteroids as the preferred controller agent for treatment</td>
<td>Likely/very likely</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Begin planned asthma visits for patients with persistent asthma</td>
<td>Likely/very likely</td>
<td>100</td>
<td>92.0</td>
</tr>
<tr>
<td>Assess severity based on EPR-3 criteria</td>
<td>Likely/very likely</td>
<td>92.1</td>
<td>96.0*</td>
</tr>
<tr>
<td>Assess control using the ACT or ATAQ</td>
<td>Likely/very likely</td>
<td>94.7</td>
<td>88.0*</td>
</tr>
<tr>
<td>Refer for allergy evaluation</td>
<td>Likely/very likely</td>
<td>84.2</td>
<td>80.0</td>
</tr>
<tr>
<td>Seek an environmental assessment for persistent asthmatics</td>
<td>Likely/very likely</td>
<td>89.5</td>
<td>84.0</td>
</tr>
</tbody>
</table>

*P < .05.
ACT, Asthma Control Test; ATAQ, Asthma Therapy Assessment Questionnaire; EPR-3, Expert Panel Report 3.
guideline measures that have particular importance in primary care. The magnitude of the improvements suggests a substantial real impact of the intervention, despite the absence of a sufficient comparison group. In addition, these changes were largely sustained 6 months following the intervention.

A number of organizations have organized group activities to facilitate family physicians’ completion of their MOC requirements (eg, the Mayo Clinic,29 the American Academy of Family Physicians,30 and the Virginia Academy of Family Physicians31). We are unaware of literature reports published to date regarding the outcomes of these activities. However, information in the literature suggests that use of facilitators can indeed improve the uptake of clinical guideline recommendations.32–34 Our study similarly suggests—although it is subject to limitations—that a facilitated group SAM process represents a viable vehicle for promoting guideline recommendations and improving the quality of care that family physicians deliver.

We recognize the Virginia Academy of Family Physicians for their outstanding and consistent support in the original development of the group SAM used for this study.

References
20. Hagen MD, Ivis DJ, Puffer JC, et al. Maintenance of certification for family physicians (MC-FP) self...


