Title
Group medical visits as a teaching tool in a family medicine clerkship.

Permalink
https://escholarship.org/uc/item/72s4285d

Journal
Family medicine, 41(9)

ISSN
1938-3800

Authors
Najm, Wadie I
Lie, Desiree
Shapiro, Johanna
et al.

Publication Date
2009-10-01

Peer reviewed
Group Medical Visits as a Teaching Tool in a Family Medicine Clerkship

Wadie I. Najm, MD, MEd; Désirée Lie, MD, MEd; Johanna Shapiro, PhD; Hector J. Llenderrozos, MD, MPH

Objective: We sought to determine medical students’ learning outcomes following exposure to a 4-hour group medical visit (GMV) curriculum that focused on Spanish-speaking patients who had diabetes. The GMV was part of a 4-week block family medicine clerkship for third-year medical students. Methods: We conducted a 1-year longitudinal, prospective study using a before and after survey and a qualitative analysis of end-of-clerkship reflective essays. Eleven survey questions captured change in knowledge about GMV resources, cultural knowledge, and attitudes toward the GMV model. Results: Ninety students completed the surveys. Fifty students chose to write about the GMV experience in their reflective essays. On the survey, a significant change was found in students’ knowledge about culture-specific diabetic resources, cultural knowledge, and self-reported knowledge and attitude about GMVs. Qualitative analysis of the narratives and essays supported and strengthened this finding of positive attitudes about the importance of cultural competency and physician role modeling in the context of the patient-doctor relationship. Conclusions: Exposure to a 4-hour GMV curriculum is associated with knowledge gain. It is also associated with a positive attitude change, congruent with learning about the relevance of patient-doctor relationship within a cross-cultural setting.

(Fam Med 2009;41(9):625-31.)

Current medical practice puts a number of pressures on primary care physicians. They must see more patients in less time. They must remain up to date with an increasing amount of medical information. And, they must deal with administrative paperwork and many insurance restrictions. Simultaneously, while new technology has enhanced diagnostic and procedural skills, it also has contributed to rising overall US health care spending and a decline in attention to patients, their narratives, and the context of their illness.1 These changes can translate into a style of communication by physicians that may serve as a negative role model for medical students and resident physicians.

Leading organizations have been working to develop ways to address the influence of technology on patient-doctor communication.2-4 For example, the American Academy of Family Physicians recently published “The Future of Family Medicine,”5 which focused on five issues pertinent to patient-physician communication, including (1) patient expectations, core values, reintegration, and the New Model of Family Medicine,6 (2) medical education,7 (3) continuous personal, professional, and practice development in family medicine,8 (4) marketing and communications,9 and (5) family medicine’s role in shaping the future health care delivery system.10 The group medical visit (GMV) model has potential to address some of these areas.

Group Medical Visits

GMVs are a relatively new strategy for health care delivery in the United States,11 designed to improve flow and efficiency and increase patient education—particularly for patients with chronic or common medical conditions. GMV models have been used and described for geriatric care,12 coronary artery disease,13 diabetes,14 obesity,15 and others.

In the GMV model, several patients are invited to schedule with their usual physician in a setting in which the clinician introduces the session, then introduces a
Institutional Review Board (IRB). was approved by the University of California- Irvine

The study fit into the students’ education about GMVs.

Pre- and Post-GMV Survey. A pre-GMV survey was administered on the first day of the family medicine clerkship (Table 2). The survey was re-administered at the end of the clerkship with two additional open-ended questions that allowed narrative responses. The two additional questions were: “What did you like most about
the GMV?" and "What would you change about the GMV experience?" We designed this survey de novo for the project because no similar validated surveys were identified based on a literature review.

**Reflective Essays.** Students participating in the family medicine clerkship were required to write an essay that addressed the following issues: (1) How did cultural differences enhance the medical encounter? (2) How did cultural differences complicate the medical encounter? (3) What lessons about practicing medicine across cultures did you learn? (4) What were characteristics of positive and negative physician role-models?

They were required to write these essays about two different clinical settings that they had experienced during the clerkship, chosen from the following: (1) outpatient clinic, (2) visit to community *botanicas*, (3) home visits, and (4) GMVs. Open-ended responses were expected for the questions. The responses to the above questions were analyzed only for students who chose GMV as the topic of their essay.

**Table 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00–2:30</td>
<td>Introductory didactic to students</td>
<td>GMV purpose and form</td>
</tr>
<tr>
<td>2:30–3:15</td>
<td>Students meet and assess their patients</td>
<td>Chart, focused exam</td>
</tr>
<tr>
<td>3:15–3:20</td>
<td>Review group purpose with entire group (students and patients)</td>
<td>Review confidentiality</td>
</tr>
<tr>
<td>3:20–4:00</td>
<td>Topic of session and questions and answers</td>
<td>Varies with session</td>
</tr>
<tr>
<td>4:00–4:30</td>
<td>Discharge activities</td>
<td>Rx, labs, follow-up plan</td>
</tr>
</tbody>
</table>

GMV—group medical visit

**Table 2**

**Content of Pre-course and Post-course Survey Questionnaire**

- Questions 1 and 2 (Resources). Questions asked about resources students used to learn about culture-related issues in diabetes care. Scored based on the number of resources identified.
- Questions 3 to 7 (Cultural knowledge). Five questions tested students’ knowledge about Latino patients’ health beliefs/practices regarding the care of diabetes. Scored (maximum score of 5) based on the number of correct answers out of the 5 questions).
- Question 8 (Knowledge about group visits). Eight questions scored on a 1–5 point Likert scale with 1= least knowledgeable and 5=most knowledgeable.

**Data Analysis**

Results on the pre-GMV and post-GMV surveys from the 90 students were analyzed using the Statistical Package for the Social Sciences (SPSS) version 16. Quantitative responses were analyzed using *t* tests to compare mean scores on the two administrations of the survey.

Fifty-five of the 90 students provided narrative comments in response to the two questions on the post-course survey. Narrative data were independently coded by two faculty using a thematic approach. The two coders read all comments in response to the two narrative questions and identified the predominant theme for each response. This coding method had previously been successfully applied to two other student-centered learning settings in which themes were identified to document the most likely learning outcomes reported by students.

Fifty students wrote about GMVs in their reflective essays. The 50 essays were reviewed using a grounded theory approach. The initial review yielded 91 categories based on distinguishing various words and phrases. These were consolidated into eight major themes: (1) cultural competence/knowledge, (2) language, (3) communication, (4) mutual learning between doctor and patient, (5) empowering patient/group dynamics, (6) nature of patient education process, (7) lack of connection with patients, (8) physician attitudes. Within these major themes, two to three subcategories that were frequently mentioned were also retained. These themes and categories were used to code each essay. Each theme and subcategory was coded only once for each of the above four questions.

**Results**

**Pre-course and Post-course Survey Results**

All 90 clerkship students (51 male, 39 female) completed the surveys (response rate of 100%). Partially completed surveys were included in the analysis.
Cultural Resources

In response to the questions about resources for learning about diabetes care in Hispanic patients, the mean number of resources identified was 1.13 (standard deviation [SD]=0.94), while the post-clerkship mean (n=88) was 1.47 (SD=0.98). The difference between the pre-clerkship and post-clerkship responses was small but statistically significant (P=.015) (Table 3).

Cultural Knowledge

Eighty-nine students provided answers to the five questions about their knowledge about patients’ health belief and practices. They answered a mean of 2.73 questions correctly on the first day of the clerkship and a mean of 4.02 questions correctly at the completion of the clerkship. The paired difference was 1.29 (SD=1.76), 95% confidence interval [CI]=0.92, 1.66 (P<.000).

Self-reported Knowledge of GMVs

All 90 students completed the questions about their understanding of GMVs and their role in health care delivery. Students’ responses indicated more agreement with survey statements after the course than before. The differences between the pre- and post-course responses were significant (P<.00) (Table 4).

### Table 3

Sources of Information Identified by Students on the Pre-clerkship and Post-clerkship Surveys to Learn About Diabetes Care in Hispanic Patients (Question# 2).

<table>
<thead>
<tr>
<th># of Resources Identified</th>
<th>Pre-clerkship Survey</th>
<th>Post-clerkship Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Students*</td>
<td>%</td>
</tr>
<tr>
<td>0</td>
<td>30</td>
<td>33.3</td>
</tr>
<tr>
<td>1</td>
<td>33</td>
<td>36.7</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>24.4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>6</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

* A total of 90 students responded to the survey

### Table 4

Survey Responses Regarding Knowledge of GMV

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-clerkship Mean (SD)</th>
<th>Post-clerkship Mean (SD)</th>
<th>Mean Pre/Post Difference (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Scope of care provided by GMV</td>
<td>1.4 (1.08)</td>
<td>3.06 (1.35)</td>
<td>1.66 (1.29; 2.02)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>b Usefulness of GMV for chronic diseases</td>
<td>1.5 (1.2)</td>
<td>3.29 (1.45)</td>
<td>1.74 (1.35; 2.14)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>c Impact of health beliefs on chronic disease</td>
<td>2.5 (1.4)</td>
<td>3.56 (1.35)</td>
<td>1.03 (0.61; 1.45)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>d Action plan implementation and follow-up</td>
<td>2.2 (1.37)</td>
<td>3.33 (1.23)</td>
<td>1.18 (0.78; 1.58)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>e Patients’ role in their own health care.</td>
<td>2.8 (1.59)</td>
<td>3.6 (1.4)</td>
<td>-0.8876 (-1.3; 0.4)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>f Importance of training in GMV on patient care.</td>
<td>1.7 (1.26)</td>
<td>3.23 (1.4)</td>
<td>1.54 (1.16; 1.93)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>g Role of GMVs in answering patient’s questions/concerns re: diabetes</td>
<td>1.7 (1.39)</td>
<td>3.29 (1.44)</td>
<td>1.58 (1.17; 1.98)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>h Role of patient as an educator</td>
<td>2.5 (1.53)</td>
<td>3.57 (1.32)</td>
<td>1.08 (0.63; 1.52)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

GMV—group medical visits
CI—confidence interval

Responses to survey question 8, which had eight parts (a–h). The stem question was “Please indicate your level of knowledge associated with each of the following aspects of the GMV model with 1= least knowledgeable and 5=most knowledgeable.” Ninety students responded.
Reflective Essay Findings

Of the students who chose the GMV to reflect on in their required essays, almost half (23/50) recognized the importance of group dynamics in providing social support and empowering patients. A smaller number specifically noted the possibilities for horizontal patient-to-patient education (n=11) and horizontal mutual learning between doctor and patient (n=15). A comparable number of students (n=14) continued to highlight a vertical doctor-patient relationship, seeing the group setting primarily as a time-efficient way for the doctor to reach a large number of patients but in a traditional top-down model in which the physician educates the patient.

Sixteen of the students reported the GMV to be an effective way for the physician (and themselves) to acquire cultural knowledge and develop greater cultural sensitivity about a group or groups of patients. Fourteen students expressed concerns about negative group dynamics, such as someone dominating the group discussion, violation of privacy, group members treating certain diseases as stigmatizing, and the risk of individual medical needs not being addressed. Similar numbers of students worried about the physician being unable to connect with the group either because of lack of language skills (16 students) or cultural competence (12 students). Fourteen students also noted that lack of cultural competence on the physician’s part in the GMV setting could result in diminished trust and non-adherence in patients.

Twenty-seven students said that the single most important lesson was the importance of cultural competence. Other lessons had to do with developing positive qualities (mentioned by 36%) such as openness and patience. Forty percent of students noted the value of communication skills, especially listening, and 24% mentioned the importance of group facilitation skills. Only a handful (14%) mentioned language skills.

In terms of positive physician role models, the largest number (31, or 62%) of students mentioned positive qualities such as openness, tolerance, and empathy, many of which might be especially relevant in cross-culture encounters. Almost half identified cultural competence as a critical attribute of positive role models. About a quarter of the students mentioned communication skills and group facilitation skills.

Negative role models were often hypothetical or referred to a physician other than the GMV facilitator. Fifty-six percent listed negative attitudes, such as being judgmental, dismissing patient beliefs/practices,

Survey questions #10 and #11. Ninety students responded.

GMV—group medical visits
and seeming rushed and impatient. Only a fifth were concerned about lack of cultural competence.

Discussion
Within a 4-week family medicine clerkship, we exposed students to a required 4-hour GMV model of care at a community clinic. The focus was on monolingual patients who had diabetes, and the curriculum and patient care were delivered by a fluently bilingual physician.

After participating in the experience, students demonstrated a significant increase in both measured cultural knowledge and self-reported knowledge about GMVs, and their narrative comments revealed themes relevant to enhanced patient education and empowerment. The reflective essay findings gave added support to improvements in post-test attitudes that recognized the importance of patient health beliefs in managing chronic illness, the role of GMVs in answering patients’ concerns about diabetes, and the role of patients as educators. Both survey and essay findings indicated a large number of students who identified and valued support group dynamics and patient empowerment aspects of GMV. Students enjoyed observing the shift in power that occurred in the GMV and specifically the opportunity for patients to support and empower each other. However, what they felt to be most significant in terms of alterations in the doctor-patient relationship was how the process of education shifted to become more mutual (doctor and patient) and, at least in the eyes of some students, more horizontal (patient to patient).

This study had several strengths. The dataset for the survey was complete. A mixed methods model was used to collect information on domains of knowledge and attitudes. This approach allowed us to examine both the formal (survey) and informal (reflective essays) aspects of learning within the GMV curriculum and to capture otherwise hidden aspects of attitude change. The reflective essays complemented the survey dataset, allowing linkage and confirmation of observations gathered from the survey.

There are, however, also some limitations of the study. The reflective essays are skewed toward students who chose to write about the GMV and a substantive proportion (just under half) chose to write about other delivery models. Further, the cultural knowledge questions were specific to the Latino patient, so the generalizability of these findings to other settings may be limited.

Overall, however, we conclude that the GMV model is feasible to implement in a clerkship as an educational model and is associated with gains in knowledge and positive attitudes toward not only the delivery model itself but also cultural aspects of care and better understanding of chronic disease.

Acknowledgments: We thank Ms Jennifer Encinas for her assistance with data collection and analysis.

This project was partially supported by a grant from the National Institutes of Health (NIH). National Heart, Lung, and Blood Institute, award # K07 HL079256-01, RFA-HL-04-012, “An Integrative, Evidence-based Model of Cultural Competency Training in Latino Health Across the Continuum of Medical Education” (2004–2009), and from the Association of American Medical Colleges (AAMC) grant initiative “Enhancing Cultural Competence in Medical Schools” (2005–2008) supported by the California Endowment. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIH or the AAMC.

Corresponding Author: Address correspondence to Dr Najm, University of California-Irvine, Department of Family Medicine, 101 The City Drive, Bldg 200 #512, Orange, CA 92868. winajm@uci.edu.

REFERENCES