Improving Access to Integrative Oncology Through Group Medical Visits: A Pilot Implementation Project

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Abstract

Objectives: This article describes the implementation of a group medical visit (GMV) model to increase access to integrative oncology (IO) care. The most challenging and critical time to access high-quality IO care is while patients are receiving conventional cancer therapy. Often demand for individual IO clinic consultations precludes this from occurring. A three-session GMV program was designed to alleviate barriers to receiving integrative care during active cancer treatment.

Design: A consolidated framework was used for implementation research and focused ethnography methods to describe the IO GMV implementation process. Data sources included patient evaluations, participant observation, and brief provider and patient interviews.

Setting: A pilot program was created to assess the feasibility and acceptability of implementing IO GMVs at a comprehensive cancer center.

Intervention: Each three-session GMV consisted of a didactic session, followed by individual visits with the integrative oncologist.

Results: The setting, intervention, and implementation process of the IO GMV program were described. Thirty-two patients participated in the first five cohorts of the program. Twenty-two were women; 24 were White. The median age of participants was 52. Patient evaluations demonstrate high levels of satisfaction with the program with all scored aspects rated >4.0 on a five-point Likert scale. For the medical center, group visits are a financially viable alternative to individual IO visits; revenue from group visits exceeded the revenue potential of 6 h of individual visits by an average of 38%.

Conclusion: GMVs are a feasible and promising model for increasing access to IO. Patients in active cancer treatment were able to participate in the program. Future research and implementation efforts could examine health outcomes over time after participation in GMVs, as well as the feasibility of using this model with more diverse patient populations.

Keywords: integrative oncology, group medical visits, integrative medicine, access to care, quality improvement

Introduction

USE OF COMPLEMENTARY AND INTEGRATIVE medicine during active treatment for cancer is common—prior research reports prevalence as high as 91% among patients

undergoing chemotherapy or radiation¹—but patients often do not discuss these therapies with their oncologists. This article describes the implementation of a group medical visit (GMV) model to increase access to specialized integrative care, in this case integrative oncology (IO). An ideal time to

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access high-quality IO care is while patients are receiving conventional cancer therapy, so that conventional and complementary interventions can be used concurrently. Benefits of early IO support may include optimization of symptom management and improved quality of life, as well as potentially enhanced ability to deliver chemotherapy due to mitigation of side effects by IO approaches. The complexity of cancer treatment regimens coupled with the potential of complementary and integrative care to either enhance or interfere with treatment underscores the need for IO providers.²

GMVs, also known as shared medical appointments, combine medical care, health education, and peer interaction.³ GMVs are growing in use across medical specialties, including oncology. Existing research on oncology GMVs primarily describes their use in cancer survivorship care, including for patients with melanoma⁴ and breast cancer.^{5–7} Single-session GMV models have been used for presurgical consultation for patients with skin cancer,⁸ chemotherapy preparation in gynecologic cancer patients,⁹ and follow-up after bone marrow transplantation,¹⁰ with high levels of patient satisfaction. Ongoing research, the first to describe IO GMVs, has found them to be a feasible approach for patients with multiple forms of cancer, and noted that patients preferred to be separated by gender and stage of disease but not diagnosis.¹¹

GMVs were designed to address barriers to receiving IO care during active cancer treatment. Barriers include long wait times to see an IO provider, geographic and financial impediments; it was reasoned that GMVs would allow more patients to receive efficient and timely care.¹² Quality improvement questions included were as follows: What facilitates the implementation of IO GMVs? How do patients with cancer engage with GMVs? Are IO GMVs financially sustainable?

Methods

Design and framework

Multiple forms of data were collected throughout the implementation of the GMVs using a focused ethnography approach.¹³ Consistent with this genre of ethnography, data were gathered through a discrete period of participant observation and interviews of key informants with specific relevant knowledge. The evaluation was developed to generate practical knowledge that could be applied to advance quality improvement efforts by triangulating multiple kinds of information. In this article, the SQUIRE guidelines for quality improvement reporting¹⁴ were drawn, and the consolidation framework for implementation science¹⁵ for organization and analysis was used. To describe the development and implementation of the GMV, the five key elements of CFIR were used: intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and process of implementation.

Data were deidentified and gathered as part of clinical activities, and met the definition of quality improvement activities that do not require approval from the Institutional Review Board. The intended use of the information collected was to inform GMV program implementation and make the program sustainable at the UCSF cancer center.

The authors of this study consulted with the UCSF IRB, which confirmed the assessment that this project would be classified as quality improvement rather than human subjects research.

Outer setting

This quality improvement pilot was conducted at the University of California San Francisco, an urban, quaternary health care system with multiple campuses. The GMV intervention was localized to the comprehensive cancer center in proximity to outpatient oncology clinics and the infusion center, whereas individual IO visits typically take place across town at the integrative medicine clinic.

Inner setting

The authors of this study engaged leadership of the cancer center and integrative medicine clinic alike to support the development of a financially feasible GMV model that sought to expand patient access to IO. GMVs were provided by an integrative oncologist (D.I.A.), in part because insurance will typically cover IO visits with an MD or NP, but visits with other complementary care providers, such as naturopaths and acupuncturists, often result in high out-of-pocket costs. Patients were referred to the GMV by UCSF oncologists using the electronic health record. A designated administrative staff person called referred patients, scheduled them, and obtained insurance authorization if necessary. Participation in Series 1 and 2 was restricted to UCSF Gastrointestinal (GI) Oncology patients currently receiving chemotherapy (Series 1) and/or patients with metastatic cancers on a break from chemotherapy (Series 2). After Series 2, patients with any cancer diagnosis, actively receiving cancer treatment, and/or with metastatic disease were welcome to participate. All participating patients were age >18, able to speak English (no translator needed), and not established with or scheduled to see an IO provider.

Intervention Characteristics

The GMV consisted of up to eight patients, each of whom could bring a caregiver or other guest, the integrative oncologist (D.I.A.), and a group coordinator (C.P.). The group coordinator's role was to set up the room, check the patients in at the visit location, facilitate timing of the individual visits, and collect patient evaluations.

Each of the three sessions (Table 1) included distinct content and lasted 2 h, including didactic content presented by the physician, time for patient questions, and individual consultations in a nearby room. Handouts on the content were provided. Generic advice was given during the didactic portion of the group, and individualized advice based on diagnosis was provided during one-on-one consultations and documented in the electronic health record. Participants were informed at the first session that the goal of the GMV was to present IO information to a larger number of individuals at one time and not to serve as a support group. Although there was informal peer interaction throughout the group, this was not the primary focus.

TABLE 1. INTERVENTION PROCEDURES

	<i>Didactic content</i>	<i>Interactive content</i>	<i>Individual medical visits</i>	<i>Evaluations and paperwork</i>
Session 1	Nutrition	Participant introductions, Q&A	All after group session	Intake and demographics survey, session evaluation
Session 2	Supplements and cannabis	Q&A	Half before group session, half after	Session evaluation
Session 3	Other integrative therapies	Reflections using Angel® Cards, Q&A	Half before group session, half after	Session and overall evaluations

Session 1: Nutrition and cancer

Relying on the World Cancer Research Fund/American Institute for Cancer Research guidelines,¹⁶ this session outlined the optimal dietary regimen for reducing the risk of cancer, which is suggested for cancer survivors as well; and the basics of an organic, plant-based, anti-inflammatory whole-foods diet.

Session 2: Supplements and cannabis

This session covered common concerns about using over-the-counter natural products while receiving conventional cancer therapies; vitamins and supplements that are compatible with radiation, chemotherapy, and targeted interventions; and the potential benefits of cannabis for symptom management and the lack of definitive human evidence, suggesting that it has anticancer activity.¹⁷

Session 3: Other integrative therapies

This session introduced additional integrative interventions, including physical activity, yoga, laughter yoga, Traditional Chinese Medicine, and techniques for reducing stress, including massage, guided imagery, and mindfulness-based stress reduction.^{2,18}

Data sources and analysis

Sources of data included patient demographics and evaluations, qualitative data, and materials from the program development process. Brief, structured interviews with the integrative oncologist (D.I.A.) were completed by co-authors (C.E.A. or A.T.-L.) after most sessions. These interviews facilitated iterative processing of what was working and areas of improvement. It was specifically drawn from the following:

- Self-reported patient demographics (e.g., household income, cancer stage) and evaluations.
- Focused ethnography
 - Participant observation of six group sessions across three cohorts.
 - Structured interviews with the integrative oncologist at least once during each cohort.
 - Sample question: any suggested refinements to the evaluation of group visits?
 - Structured interviews with patients in the first and fifth cohorts.
 - Sample question: What was your experience of the group visits?

- Materials created in the process of developing and implementing the GMV, including e-mails, fliers, and institutional-level data on patient demographics and catchment area.

Descriptive data were collated, and means were calculated in Excel. Qualitative data were analyzed using thematic analysis¹⁹; coded by the first author and sorted thematically through consultation with other authors. Financial efficiency of the GMV program was calculated by the author most familiar with institutional billing practices (C.P.). Efficiency was calculated based on the relative value units the physician earns and the payments made back to his department, comparing the billing practices used in typical one hour individual consultations with the same amount of time spent seeing patients in GMVs.

Results

Patient demographics

Thirty-two patients participated in five cohorts of the GMV (Table 2). In the first cohort, the most common reasons for nonparticipation were being previously scheduled with another integrative provider, not in active chemotherapy, and transportation/travel challenges. Of participating patients across all five cohorts, median age was 52. Twenty-two (72%) of the patients were women, 24 (75%) White/Caucasian, and most had household incomes >\$100,000/year and a bachelor's or advanced degree. Patients had a wide range of cancer diagnoses, with colorectal and breast being most common, and most had undergone surgery and/or chemotherapy, and over half reported having stage III or IV disease.

Attendance

The program goal was to include eight patients per session. Median cohort size was eight patients (range 5–9). Average attendance per session was 5.9 patients, typically with one or two caregivers also present.

Caregiver participation

A total of 10 caregivers participated in the program, 9 of whom were women. Six were partners/spouses; the remainder included friends, a parent, and a child. Caregivers' primary reasons for participation in the GMV included supporting the person they cared for, learning more about IM and cancer care, and "openness to anything that might help."

TABLE 2. PATIENT DEMOGRAPHICS

Patient demographics	N = 32
Median age	52 (range: 32–83)
Median travel time to GMV site	45 min (range: 10–120 min)
Race/ethnicity, % (n)	
White	75 (24)
Asian/Asian American	19 (6)
African American/Black	3 (1)
Hispanic/Latino/a	3 (1)
Gender, % (n)	
Female	72 (25)
Male	28 (9)
Sexual orientation, % (n)	
Heterosexual	84 (27)
Lesbian, gay, bisexual	16 (5)
Household income, % (n)	
<\$50,000	6 (2)
\$50,000–100,000	13 (4)
\$100,000–200,000	19 (6)
>\$200,000	41 (13)
Missing/prefer not to answer	22 (7)
Mean household size	2.8 (range: 1–5)
Education, % (n)	
Some college	6 (2)
Bachelor's degree	56 (18)
Graduate degree	38 (12)
Missing	3 (1)
Employment status, % (n)	
Currently working	34 (11)
On disability or unable to work	31 (10)
Retired or homemaker	22 (7)
Looking for work	6 (2)
Missing	6 (2)
Self-rated health, % (n)	
Poor	3 (1)
Fair	34 (11)
Good	16 (5)
Very good	13 (4)
Excellent	19 (6)
Missing	16 (5)
Type of cancer, % (n)	
Colorectal	38 (12)
Breast	13 (4)
Hepatobiliary	9 (3)
Gastric	6 (2)
Pancreatic	6 (2)
Ovarian	6 (2)
Prostate	6 (2)
Other or unknown	16 (5)
Cancer stage, % (n)	
III	22 (7)
IV	53 (17)
Not reported or unknown	25 (8)
Cancer treatment, % (n)	
Chemotherapy	88 (28)
Surgery	75 (24)
Radiation	13 (4)

All monetary values are in USD.
GMV, group medical visit.

Implementation

Because UCSF cancer center patients commute an average of 67 miles to their medical appointments (which are scheduled on multiple campuses around San Francisco),

GMVs were scheduled on the same campus as the cancer hospital during peak chemotherapy infusion treatment days. GMV participants reported a mean commute time of 56 min to the campus where GMVs were held, with wide variation (30–120 min). GMVs were held in a conference room with nearby private space for individual consultations. GMVs were typically held every other week to accommodate the physician's schedule, and patients expressed a preference for late morning visits due to regional traffic patterns. The physician reported high levels of enjoyment and satisfaction with the GMV experience, finding it to be a sustainable option from the clinician perspective.

Coding, billing, and financial viability

The physician used a short note template, different for each session, to document patient visits in the electronic health record. The use of the template and dot phrases* allowed him to quickly enter patient responses and his recommendations, and ensured the documentation would be adequate for coding and billing purposes. Prepopulated note content made documentation easy to complete, typically requiring only 5 min per patient to complete charting.

Standard billing codes were used, as is common in GMV programs.²⁰ The authors of this study found that it was more efficient for a provider to bill for more patients receiving shorter individual consultations as part of the GMV than to spend that time in private, 1-h consultations. For provider, it was 84% more efficient to see patients in GMVs. From a financial perspective, IO GMVs were viable. Not all patients attended all three visits due to conflicting medical appointments or feeling too ill to attend, and the payer mix varied from series to series. Despite this, the revenue from group visits significantly exceeded the revenue potential compared with the same amount of time spent in individual visits.

Patient evaluations

Patients completed evaluations of each session (Table 3). They rated all aspects of the program quite highly (mean >4 on a five-point Likert scale), with the highest mean score for likelihood of recommending the program to other patients (4.9) (Table 2). The lowest mean score was for adequate time to ask questions (4.3), which was the most commonly mentioned weakness in the open-ended part of the evaluations.

At the end of each session, patients also answered open-ended questions regarding the parts of the program they found most useful, and those that were least helpful or that they thought should be changed (Table 4). Overwhelmingly, patients described the information and content as the most helpful part of the GMV program, particularly nutrition information. Also commonly mentioned were specific recommendations for products, treatments, or resources, such as particular supplements and acupuncture treatment. Many patients also appreciated the group format, the opportunity to ask questions, and generally the benefit of the

*“Dot phrases” or “smart phrases” insert data or text into a note, and are convenient for frequently used phrases.

TABLE 3. PATIENT EVALUATIONS OF GROUP MEDICAL VISIT SESSIONS (N=82)

<i>Patient evaluations of GMV sessions</i>	<i>Mean rating (out of 5)</i>
Overall rating of session	4.7
Instructor's organization, knowledge, and attitudes	4.8
Group visit format	4.6
Adequate time to ask questions	4.3
Would you recommend to others?	4.9

physician's time and extensive knowledge of IO. Similar feedback was provided in individual patient interviews in cohorts 1 and 5.

Most patients (25) recommended minor changes to the program. Of these the most common change recommended was more time for questions, discussions, and longer individual visits. Some patients commented that information was presented very quickly and used technical language that was difficult to understand. Recommendations made by the earlier cohorts were often implemented in subsequent cohorts, such as providing handouts at the beginning, rather than at the end, of the sessions to inform note taking.

Discussion

This is the first published study that examines the implementation of IO in a group format. IO is highly sought out by patients and increasingly endorsed by clinical guidelines.² Although the field is burgeoning, access to integrative care for patients with cancer is severely hampered by the limited number of providers trained in IO, and other geographic and logistic barriers. The GMV successfully reached patients in active cancer treatment, including patients who attended groups with chemotherapy infusion pumps running. The location and timing of GMV sessions at the comprehensive cancer center as opposed to the integrative medicine center on a different campus facilitated this access. Scheduling GMV

sessions 2 weeks apart seemed optimal to allow patients to make changes based on what they learned in prior sessions and to share the impact of these modifications.

There were several unanticipated effects of implementation. First, IO GMVs placed less emphasis on peer interaction and support than other GMV models such as Centering.²¹ However, despite minimal time devoted to peer interaction, patients described a positive group dynamic and, in some cohorts, shared e-mail addresses to stay in contact after the program. This may have been because patients had unstructured time to interact while awaiting their individual medical visits. Second, the creation of detailed, customized visit note templates for each session greatly facilitated the electronic charting needed to generate billing information. In the GMV, many patients were found to have Vitamin D deficiency, which was then treated by the GMV physician.²²

The GMV was able to provide expanded access to IO care through colocation with other oncology services and group format. Existing research on GMVs has shown that these models can increase access to care, but efficiency of care has rarely been examined, particularly in specialty care settings.^{23,24} Although first iterations of the GMV suggested that patients benefited, important questions remain on broader implementation and scalability of this model. Having oncologists run the group visits may provide advantages not only in terms of bringing their expertise to the visits but also receiving a higher reimbursement rate than primary care providers. However, given the rarity of trained integrative oncologists, scalability of this is a concern.

GMV implementation examined in this study had several limitations. First, the study pilot sample is not representative of patients with invasive cancers served by UCSF, who are more racially diverse (68% White, 15% Asian, 11% Latina/o, and 5% Black), and includes more male patients (53%), as discussed in the unpublished materials Borno, et al. in *Minority Equity and Recruitment into Trials (MERIT)*. The cancer center cares for many non-English-speaking patients, but the GMV program was limited to patients fluent in English. The study sample also primarily includes patients from higher income households. These demographics are consistent, however, with patients attending the integrative medicine clinic referred in this study and other integrative clinics at academic medical centers.²⁵ Specific efforts to recruit more diverse groups of patients to the GMV have not yet been made. Existing literature demonstrates that GMV models can benefit both health outcomes and patient experience for patients from a wide range of racial/ethnic and socioeconomic backgrounds, and can be implemented in languages other than English.²⁶⁻²⁸ Given racial and socioeconomic disparities in access to IO and cancer care more broadly, this indicates the need for proactive outreach and a straightforward referral process to support the participation of all patients who might benefit from the program.

As a quality improvement pilot, this study focused on program implementation, and did not include data on patients' symptoms and quality of life. This article relies on patient-reported demographic and clinical data; for example, complete data on cancer stage is not included because eight patients said that they did not know this information or did not answer this question. An efficacy study that assesses potential changes in patient outcomes as a result of GMVs is

TABLE 4. PATIENT FEEDBACK ON PROGRAM

<i>Patient feedback on program including evaluations of each session and of overall program</i>
Favorite or most useful parts of program (ordered from most to least common)
Useful information and content, most commonly nutrition information
Specific recommendations for products and resources, most commonly supplements and acupuncture
Shared experiences, group format, community of patients
Least helpful part of the program and recommended changes (ordered from most to least common)
More time for questions/discussion, 1:1 visits
Information presented very quickly and/or with technical language
More structure for information, e.g., smaller number of supplements recommended, materials to follow along with

a potential future direction. In addition, it would be useful to collect longitudinal data on behavior change related to IO recommendations, such as changes to eating habits as well as subsequent participation in integrative therapies such as acupuncture or yoga.

Focused ethnography, sometimes known as rapid ethnography,¹³ is a method that supports collecting and triangulating qualitative data from multiple sources. However, it was acknowledged that the time period of this data collection was limited, and data collection and analysis are less immersive than in other ethnographic approaches. In addition, the patient evaluation tool used indicates a ceiling effect, given overwhelmingly positive evaluations; research on this model should use more precise and expansive measures of patient experience of care.

Finally, given the limited numbers of integrative oncologists, implementation of the model described here may be a challenge. Future research may investigate whether splitting visits with oncologists and other trained providers, such as nurse practitioners or nutritionists, might improve scalability, as well as provide opportunities to support clinician training in IO.

Conclusion

Access to IO care has not kept pace with patient interest in this kind of care. This implementation report finds that GMVs are a promising model for increasing access to IO in settings with clinicians already trained in IO. Patients in active cancer treatment were able to participate in the tailored program, and patient satisfaction levels were high. Future research and implementation efforts could examine health outcomes over time after participation in IO GMVs, as well as the feasibility of using this model with more diverse patient populations.

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Author Disclosure Statement

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