

Development of a Visit Facilitator Role to Assist Physicians in an Ambulatory Consultative Medical Practice

Elizabeth A. Gilman, MD; Christopher Aakre, MD; Adam Meyers, MBA; Nerissa Collins, MD; Chrissy VerNess, MA; Brian Dougan, MD; Xiomari Davis, MEd; Lindsey Philpot, PhD, MPH; Priya Ramar, MPH; Ivana Croghan, PhD; Darrell R. Schroeder, MS; Erin Pagel, MS, MHI; Karthik Ghosh, MD; and Ryan T. Hurt, MD, PhD

Abstract

Objective: To decrease the electronic health record (EHR) clerical burden and improve patient/clinician satisfaction, allied health staff were trained as visit facilitators (VFs) to assist the physician in clinical and administrative tasks.

Patients and Methods: From December 7, 2020, to October 11, 2021, patients with complex medical conditions were evaluated by an internal medicine physician in an outpatient general internal medicine (GIM) consultative practice at a tertiary care institution. A VF assisted with specific tasks before, during, and after the clinical visit. Presurvey and postsurvey assessments were performed to understand the effect of the VF on clinical tasks as perceived by the physician.

Results: A total of 57 GIM physicians used a VF, and 41 (82%) physicians and 39 (79%) physicians completed the pre-VF and post-VF surveys, respectively. Physicians reported a significant reduction in time reviewing outside materials, updating pertinent information, and creating/modifying EHR orders ($P < .05$). Clinicians reported improved interactions with patients and on-time completion of clinical documentation. In the pre-VF survey, “too much time spent” was the most common response for reviewing outside material, placing/modifying orders, completing documentation/clinical notes, resolving in-baskets, completing dismissal letters, and completing tasks outside of work hours. In the post-VF survey, “too much time spent” was not the most common answer to any question. Satisfaction improved in all areas ($P < .05$).

Conclusion: VFs significantly reduced the EHR clinical burden and improved GIM physician practice satisfaction. This model can potentially be used in a wide range of medical practices.

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The consultative medicine (CM) practice within general internal medicine (GIM) at Mayo Clinic Rochester is a specialty practice that spearheads the evaluation of patients with medically complex, undiagnosed illnesses and patients seeking second opinions. This practice sees more than 5000 unique patients each year. The administrative burdens of complex care management, such as an extensive review of outside records and electronic health record (EHR) interactions, have contributed to physician burnout. Physician interactions with the EHR have

contributed to the burdens and dissatisfaction related to the clinical practice.¹ This trend of EHR burden and its association with burnout has been studied at a national level.¹ In a study describing the results of a survey of more than 6000 physicians nationally, only 36% were satisfied with their EHR and the interactions with it.¹ Most of the respondents enter their own notes directly into the EHR. A systematic review targeting interventions for physician burnout revealed that aiding with EHR interactions has the greatest effect on burnout,² reiterating that the EHR is one of the most

From the Division of General Internal Medicine (E.A.G., C.A., A.M., N.C., C.V., B.D., X.D., I.C., E.P., K.G., R.T.H.), Division of Community Internal Medicine, Geriatrics, and Palliative Care (L.P., I.C.), Division of Epidemiology, Department of Quantitative Health Sciences (L.P., I.C.), Department of Medicine (P.R.), and Division of Clinical Trials and Biostatistics, Department of Qualitative Health Sciences (D.R.S.), Mayo Clinic, Rochester, MN.

significant drivers of physician burnout. Similarly, inefficient processes, such as documentation and ordering, contribute to burnout in the health care setting.³

The CM concept has been recognized as an emerging subspecialty with a focus on patients with complex, medically unexplained symptoms.⁴ This is a specialty practice within tertiary care medical centers where patients with complex medical needs undergo a multi-specialty evaluation, spearheaded by an internist over the course of 3 to 7 days. At the initial visit, the CM internist often reviews many pages of outside notes and tests to find the information relevant to the evaluation. Subsequently, the patient undergoes a detailed medical evaluation, testing, and specialty consultations and then returns to the internist for a wrap-up visit. At the final visit, a list of recommendations is summarized for patients and their local medical team.

Understanding the areas of the highest clinical burden for physicians in CM and to improve clinical efficiency and physician satisfaction, the visit facilitator (VF) role was created and embedded in the practice. The desk operations specialists (DOSs) typically perform patient check-in and scheduling of orders for tests and consultations. In January 2020, a DOS was trained to function as a VF. In the VF role, the DOS organized outside records brought by the patient before the initial encounter with the internist. If additional records were needed, the VF reached out to outside facilities to gather the relevant information on tests and consultations completed locally. The VF also initiated a clinical note for the internist including information such as current medications and medical and surgical history from patient-provided information. In this study, we report the results of a pilot study of the VF program aimed at improving clinical efficiency and physician satisfaction.

PATIENTS AND METHODS

Pilot and Study Overview

This VF pilot was a practice initiative implemented as a quality improvement project in the clinical practice in CM. Based on the responses submitted for this activity through the Mayo Clinic Quality Improvement Wizard

tool and in accordance with the Code of Federal Regulations, 45 CFR 46.102, this project was determined to not require review and approval by the institutional review board.

Initially, process maps of existing DOS and clinician workflows were created and analyzed by DOS and clinician champions to identify pain points and potential workflow changes. Interventions were applied across 1-week Plan-Do-Study-Act cycles to mirror the clinicians' weeklong assignment in this clinic. Feedback on current interventions was solicited toward the end of each clinical week, and practice improvement interventions were adjusted for the following week. To collect information about the effectiveness of the VF program, we also had clinicians complete a survey before (presurvey) and after (postsurvey) their week spent within the CM clinic ([Supplemental Figure](#), available online at <http://www.mcpiqjournal.org>). The presurvey and postsurvey were created in partnership with experts in survey design within the Mayo Survey Research Center and validated for content by multiple stakeholders including the CM physician team, operations managers, DOS leadership, and the VFs. Study data were collected and managed using REDCap electronic data capture tools hosted at the Mayo Clinic.^{5,6}

VF Roles and Responsibilities

Indication-specific record retrieval, order entry, and documentation of clinical visit discussions that included an aggregation of clinical recommendations from specialty consultations were identified as high-priority pain points to target with initial interventions. To aid the VF team, the physicians curated the lists of tests and note types for retrieval for the most common chief concerns seen in CM, created standardized order lists, and customized shared documentation templates for initial and summary visits. At the beginning of the pilot, the VF was physically present in the room with the physician and the patient. During the encounter, the VF pulled up outside records on the EHR, placed orders as the physician was making these recommendations, and scribed in the medical history information. However, this was reevaluated at the start of the COVID-19 pandemic, and ultimately, it was deemed unnecessary for the VF to be in

TABLE 1. VF Services Offered to Physicians

Tasks trialed but not continued	Finalized list of tasks
<ul style="list-style-type: none"> • Querying OSM for the provider • Be part of video preconsult visit for complex patients • Assisting with clinical visit note • Medication reconciliation • Verify/update diagnoses, past medical/social/allergy information • Prescription benefit verification • Teeing up prescription(s)/refill(s) • Printing off patient education materials • Schedule/itinerary review with patient • Resolving in-basket results covered by the provider during the visit • Assisting with forms (disability, return to work, etc) • Requesting additional OSM not available during the visit 	<ul style="list-style-type: none"> • Summarizing OSM with emphasis on chief symptom • Start stub note in EHR • Print off a copy of the ARF, triage notes, and schedule at-a-glance for your reference • Review patient itinerary and consolidate/move up appointments • Start and format notes • Tee up orders • Assist with after-visit/dismissal letter summary

Abbreviations: OSM, outside materials; EHR, electronic health record; ARF, appointment request form.

the room with the patient and physician. Many different tasks for the VF were trialed over the course of the intervention period. In the weekly feedback sessions, the list was reviewed and revised as needed. For example, scribing the patient's medical history was trialed as noted earlier, but these efforts conflicted with other high-value priorities and ultimately were deemed to not be scalable, and this intervention was quickly discontinued. A list of interventions trialed and a final list of available services are presented in Table 1.

Pilot Assessment

For the presurveys and postsurveys (Supplemental Figure), questions related to satisfaction with various aspects of the consultative medicine practice were assessed using a 4-point ordinal scale: very satisfied, satisfied, dissatisfied, and very dissatisfied, and questions related to the amount of time spent on different visit-related activities were assessed using a 5-point ordinal scale: no time, very little, just the right amount, more than expected, and too much. The responses to these questions were compared between before and after the intervention using the Cochran-Armitage trend test. In all cases, 2-tailed $P < .05$ was considered statistically significant. A copy of the full assessment can be found in Supplemental Figure.

RESULTS

Between December 7, 2020, and October 11, 2021, 57 physicians used 1 of the 3 VF during their CM service. Of the 57 physicians, 47 (82%) received complete services (previsit work, orders assistance, and discharge summary note) and, therefore, were sent pre-VF and post-VF surveys. Of these, 41 (82%) completed the pre-VF survey and 39 (78%) completed the post-VF survey. Among the pre-VF survey cohort, "too much time spent" was the most common response for the following tasks: locating and reviewing outside material, teeing up/modifying orders, completing documentation/clinical notes, completing documentation/clinical notes, resolving in-baskets, completing after-visit summary/dismissal letter, and completing visit-related work tasks outside work hours. Among the post-VF survey cohort, "too much time spent" was not the most common answer to any question (Table 2). All questions evaluating how much time was spent with each task were significantly improved post-VF vs pre-VF survey ($P < .05$). In addition, satisfaction with the practice significantly improved in all areas in the post-VF survey compared with that in the pre-VF survey ($P < .05$) (Table 3).

Comments were also gathered from physicians in the survey, and unsolicited comments were provided. From a qualitative perspective, several physicians noted improvements in their ability to spend time in patient care, as

TABLE 2. How Much Time Do You Normally Spend on the Following Consultative Medicine Visit-Related Activities^a

Activity	No time (%)	Very little (%)	Just right (%)	More than expected (%)	Too much (%)	P ^b
Locating/reviewing...						<.001
Presurvey	2	0	26	33	38	
Postsurvey	5	39	50	5	0	
Teeing up/modifying...						<.001
Presurvey	2	2	24	31	40	
Postsurvey	11	45	39	5	0	
Communicating with...						<.001
Presurvey	2	7	66	20	5	
Postsurvey	34	32	34	0	0	
Gathering patient...						.004
Presurvey	2	26	31	33	7	
Postsurvey	13	26	53	8	0	
Completing visit documentation						<.001
Presurvey	2	0	10	36	52	
Postsurvey	3	16	53	26	3	
Face-to-face patient...						.023
Presurvey	0	7	48	33	12	
Postsurvey	8	3	66	21	3	
Completing forms						<.001
Presurvey	19	36	19	19	7	
Postsurvey	74	8	13	5	0	
Resolving in-basket						<.001
Presurvey	0	0	14	38	48	
Postsurvey	8	11	58	13	11	
Completing after visit...						<.001
Presurvey	0	0	17	40	43	
Postsurvey	5	37	42	11	5	
Completing visit-related...						<.001
Presurvey	0	7	12	24	57	
Postsurvey	8	37	29	21	5	

^aThe percentage of individuals who provided the given response is presented separately for the presurvey and postsurvey.

^bCochran-Armitage trend test comparing presurvey vs postsurvey results.

opposed to documentation. One physician noted, “Working with the patient facilitator allowed me more flexibility and how much time was spent with each patient. The decreased administrative burden allowed me to spend more 1 on 1 time with more complicated patients.” Another physician noted, “I was able to spend more time with the patient doing doctor things rather than hurrying to get orders done.” In addition, 2 physicians noted improvements in feelings of teamwork:

“[The Visit Facilitator] decreases stress and builds teamwork.” We were also able to identify areas for improvement within the physician feedback, including, “I think it would be helpful for the facilitator if we had a standard process for starting the discharge or follow-up notes.”

Throughout the pilot duration, feedback was incorporated into practice. For instance, multiple physicians made comments that it was a challenge to give up the computer

TABLE 3. Please Indicate Your Level of Satisfaction with the Following in the Consultative Medicine Practice^a

Practice area	Very satisfied (%)	Satisfied (%)	Dissatisfied (%)	Very dissatisfied (%)	P ^b
Clinical workload					<.001
Presurvey	0	48	31	21	
Postsurvey	29	63	5	3	
Efficiency at work					<.001
Presurvey	5	36	40	19	
Postsurvey	37	53	8	3	
Teamwork...					.005
Presurvey	38	48	7	7	
Postsurvey	63	37	0	0	
Quality of care...					.002
Presurvey	31	55	12	2	
Postsurvey	61	39	0	0	
Proportion of effort...					<.001
Presurvey	2	48	40	10	
Postsurvey	37	52	8	3	
Relationships with patients...					.004
Presurvey	19	62	12	7	
Postsurvey	45	50	5	0	
Overall work satisfaction					<.001
Presurvey	2	69	17	12	
Postsurvey	42	44	11	3	
Hope for practice changes...					.001
Presurvey	7	62	21	10	
Postsurvey	39	47	11	3	

^aThe percentage of individuals who provided the given response is presented separately for the presurvey and postsurvey.

^bCochran-Armitage trend test comparing presurvey vs postsurvey results.

during the encounter. We were able to provide each of the VF with a laptop computer to take into the room to perform the VF duties, freeing the desktop computer for the physician. In addition, a previsit huddle was implemented where the VF and the physician discuss how best to proceed with the weekly workload.

DISCUSSION

This report describes the outcome from a novel practice initiative that created a unique allied health role referred to as the VF. The overarching goal of the VF was to improve the clinical efficiency and improve physician satisfaction by alleviating some of the EHR burden, multitasking, and cognitive load physicians practicing in CM experienced after transitioning to the EHR EPIC platform (Epic Systems Corporation) in 2018. Physicians

who were surveyed before and after the VF experience had significant improvements in satisfaction in all 8 areas assessed, including the previsit, during the visit, and postvisit components. In addition, there were several very positive qualitative comments that physicians submitted after working with the VF. Although not specifically examined, VF-like programs could potentially help with significant physician burnout by managing the EHR-related burdens experienced by physicians in the specialty CM practice.

This study applied the novel VF role to the emerging field of CM, which focuses on patients with medically complex conditions. We developed this new role to providing support for CM physician encounters, in a way that is tailored to the unique needs of the physicians in our practice that focuses on patients with complex and often undifferentiated

conditions. Numerous studies have shown that scribes can positively affect physician satisfaction in other practices, such as primary care.⁷⁻⁹ A prospective cross-sectional 3-month trial-evaluated physician workplace satisfaction, burnout, time spent in the EHR, and patient satisfaction in an academic primary care GIM practice.⁸ A total of 6 GIM physicians responded to a 21-item questionnaire before an intervention using scribes and after scribe implementation. Responses demonstrated that 100% were satisfied after scribe implementation with the clinic workflow versus 33% before the use of scribes. In addition, 83% were satisfied with the EHR with a scribe compared with 17% without.⁸ EHR documentation time significantly decreased during each clinic session (1.65 to 0.76 hours; $P=.02$), and although patient satisfaction was not different, younger patients rated the physician as more attentive and offering more education during the visit when with a scribe. In our practice, scribing alone was not felt to be as effective likely because of the complexity of the medical information and complex decision-making in the practice.

Similarly, the VF has allowed the CM physician more time for face-to-face interactions with the patient. One of the recently recommended core requirements for a CM approach to patients with complex conditions is the focus of time.⁴ Time commitment in a CM practice involves increased ability to listen, observe, and connect with patients. In addition, there is a need for time to review outside medical records that will often reduce duplicating tests, procedures, and consultations.⁴ In this study, many CM physicians greatly appreciated the VF compiling the outside records, whether on paper or in the EHR in anticipation of the initial encounter. Another of the most successful aspects of the VF assistance was the VF role in creating the initial care summary documentation created in anticipation of the summary/wrap-up visit. This ambulatory summary note is very similar to a hospital dismissal summary. This is often a time-consuming and tedious process for the CM physician; however, this summary note is of great value to patients and their local primary care physician. Enabling the VF to enter recommendations from the different consultations (eg, gastroenterology, neurology, and

rheumatology) seen during the episode of care in the document saved the CM physician a burdensome amount of time. A similar process could be implemented for an after-visit summary in other practices.

However, throughout the initial implementation of the VF, we did find that not all CM physicians found the utility in having the VF in the room during the initial encounter and that the scribing aspect of the VF during this visit was not the most useful of the services offered. Our VF are not trained scribes, and often the CM physicians were dictating or typing their own notes after the encounter owing to the complexity of the cases and the need for a high level of details and scientific terminology. Another area that CM physicians felt that VF did not add value was placing of orders. Because EHR orders need to have associated indications and/or clinical questions, it was often faster for the physicians to place their own orders in the system. Based on this feedback, the VF was pulled out of the initial patient encounter visit during implementation after the pilot, allowing them to focus on other tasks instead, such as scheduling and coordinating appointments. This also allowed for increasing the number of physicians who could have VF services.

For the next steps with our VF, we are implementing standardized note templates for the VF to initiate medical evaluation and summary notes. This standardization has allowed us to quickly onboard new VF to the practice and will allow for implementation in CM practices outside our institution. We have also provided guidance for the VF for the most common testing/consultations to look for outside records for given patient symptoms. Because having the VF in the room was discontinued, the VF can assist more than 1 physician.

In this pilot, we were able to train DOS staff on these additional VF responsibilities. Therefore, this was cost-neutral. However, when staffing shortages occurred, the VF assumed the role of the DOS, leaving no VF. The DOS/VF position is an entry-level health care position, so we feel it has a lot of potential to be generalizable outside our practice. By incorporating the scheduling responsibilities, the VF becomes a flexible position giving opportunities for entry-level staff to have further training.

The main limitation of this research is the small pilot nature of the study conducted at a single academic center. Although novel, the VF is a position that we created to facilitate a growing CM practice at our institution. Our VFs are also not trained as scribes, which have been implemented successfully at other institutions and even other practices in the Mayo Clinic. Having some scribe training might make having the VF in the room during the initial encounter a more valuable practice.

CONCLUSION

The VF is a novel way to address increased physician workload in the setting of widespread EHR implementation. VF improved satisfaction over a wide range of areas. Dissatisfaction in these areas may drive physicians to reduce clinical time or leave the practice of medicine altogether. In the setting of increased burnout due to the COVID-19 pandemic, we need to come up with novel solutions to increased workload and clinical demands that can drive burnout. The VF may be an option that can be readily adapted to a wide range of practices.

POTENTIAL COMPETING INTERESTS

The authors report no competing interests.

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SUPPLEMENTAL ONLINE MATERIAL

Supplemental material can be found online at <http://www.mcpiqjournal.org>. Supplemental material attached to journal articles has not been edited, and the authors take responsibility for the accuracy of all data.

Abbreviations and Acronyms: **CM**, consultative medicine; **DOS**, desk operations specialist; **EHR**, electronic health record; **GIM**, general internal medicine; **VF**, visit facilitator

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Correspondence: Address to Elizabeth Gilman, MD; Mayo Clinic, 200 First Street SW, Rochester, MN 55905 (gilman.elizabeth@mayo.edu).

ORCID

Ivana Croghan:  <https://orcid.org/0000-0003-3464-3525>

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