

Nurse-Practitioner-Led Home Care Curriculum for Third-Year Medical Students

MARINA BURKE, R.N., A.N.P.¹, AND LAWRENCE G. SMITH, M.D.²

Abstract

Recent data have shown that medical students do not receive adequate exposure to the practice of home care. The number of homebound people is expected to increase, and health care services for these patients will need to expand. A one-week didactic and clinical curriculum was designed and implemented by four nurse practitioners in the Visiting Doctors Program, to provide home care exposure to medical students. The program stresses the medical, psychosocial and palliative aspects of patient care. The students evaluated both the nurse practitioners and the program favorably, using a five-point Likert scale. Role modeling and professionalism were noted to be of value to the students, and bear further study in the context of medical school curricula for home care.

Key Words: Home care services, education, medical students, nurse practitioners, palliative care, patient care, curriculum.

Introduction

THE NEED TO PROVIDE HEALTH CARE SERVICES for homebound, chronically ill and dying persons is expected to increase in the coming years, as the life expectancy of the U.S. population continues to grow (1–4). Management of chronically ill patients is largely palliative, in that it emphasizes relief from pain, affirms life and accepts death as a normal process. Thus, it differs from the more diagnostic/curative medical management taught in medical schools and practiced in traditional clinical settings. As a result, medical students and residents have had limited exposure to palliative care theory and practice. The importance of palliative care approaches for both chronic and terminal conditions of the elderly has been well documented. Yet terminally ill patients frequently die in severe pain, and are often subject to invasive testing against their wishes (5, 6). Although medical educators are beginning to allot more curricular time to rotations in ambulatory settings (7–10), only one third of all U.S. medical schools include home care training in their curricula and fewer than 25% of internal medicine residencies include a homecall experience (11).

There is also a growing realization that medical training needs to place more emphasis on the psychosocial aspects of care. This is evident in the joint

American Board of Medical Specialties (ABMS) and Accreditation Council for Graduate Medical Education (ACGME) initiative that defines competency in terms not only of medical knowledge, but also of patient-centered “domains” such as patient care, professionalism and systems-based practice (12). Role models for these patient-centered competencies may not be as readily encountered among physicians practicing in traditional medical settings as they are among nurses practicing in the home care setting. This is particularly true of nurse practitioners (NPs)—registered nurses with master’s level training in medicine—who care for homebound patients in several programs across the country (13–20). The training of nurse practitioners, all of whom are also trained as registered nurses, emphasizes proficiency in understanding the psychosocial aspects of illness, as well as the value of family dynamics within the setting of illness (21, 22). Moreover, these nurses are skilled in counseling patients and families confronted with the anxieties and problems associated with chronic and palliative conditions (23–25).

With these considerations in mind, and understanding that although home care services are delivered by nurses, physicians are ultimately responsible (26), the NPs in the Mount Sinai School of Medicine Visiting Doctors Program designed and implemented a home care curriculum for medical students and residents in 2002. Since 2002, this rotation has been required for all third-year medical students. The purpose of this article is to describe the historical development of the program, outline the structure of the clinical curriculum, and report the results of students’ evaluations of the curriculum.

¹Visiting Doctors Program, and ²Dean for Medical Education and Professor of Medicine, Mount Sinai School of Medicine, New York, NY.

Address all correspondence to Marina Burke, Box 1216, Mount Sinai Medical Center, One East 100th Street, New York, NY 10029; email: marina.burke@msnyuhealth.org

Historical Background

Three residents in the Department of Medicine started the Mount Sinai School of Medicine Visiting Doctors Program in 1997. They began by providing comprehensive primary and palliative care to elderly homebound patients. These physicians were motivated not only by an obvious need for such services in the community, but also by the desire to rekindle the sense of altruism, humanism, and patient advocacy which they felt had been more evident in the earlier years of their medical education.

A majority of the elderly homebound population suffer from multiple chronic conditions, such as cognitive impairment, congestive heart failure, severe osteoarthritis and previous stroke. Because of their advanced age and debilitation, most of these patients and their families prefer that medical and nursing care focus on maximizing cognitive and physical functioning in the home setting. This approach is essentially palliative and emphasizes the relief of symptoms, rather than cure, and the use of resources to maximize patient function. A minority of this patient population consists of terminally ill patients requiring traditional, intensive palliative care. These patients are managed in coordination with the Palliative Care Consult Service of the Mount Sinai Hospital. The Visiting Doctors Program works closely with the consult service, identifying and hospitalizing patients whose symptom burden cannot be relieved with home therapies.

In 1999, four NPs joined the program and developed their own independent panels of homebound patients. The program grew steadily; by the beginning of 2004 it was staffed by four NPs, nine physicians, two registered nurses and a social worker, who together provided coordinated care to approximately 750 patients.

As indicated above, the nurse practitioners designed the original home care curriculum in 2002. Since then, all third-year medical students at the Mount Sinai School of Medicine have spent a one-week rotation in the Visiting Doctors Program. The program also serves as a required rotation for all second-year medical residents and as an elective rotation for many trainees, including medical students, residents in specialties other than internal medicine, and trainees from other institutions.

Structure of the Program

In 2002, the four NPs designed a formal didactic and clinical curriculum for third-year medical students, as part of the medical school's integrated medicine and geriatrics clerkship. This curriculum was developed in response to student feedback to

the prior less-structured programs for the third-year students. It was felt that a more-structured, clinically intensive curriculum of four consecutive days would have a greater educational impact. The goals of the program were as follows:

1. To appreciate the medical and nursing needs of homebound, elderly, chronically ill and dying patients.
2. To appreciate the importance of an interdisciplinary approach to home care, which includes the ability to call on a variety of health care resources and agencies to ensure optimal patient care.
3. To develop skill in helping homebound dying patients.
4. To appreciate how cultural, family, and socioeconomic factors influence the delivery of care to homebound persons.

A specific objective was to determine the effectiveness of the nurse practitioner group in helping the students achieve the stated goals. This was conducted by giving participating students the opportunity to evaluate both the program and the faculty.

Didactic Curriculum

Four lectures were given each week on relevant geriatric topics. All the lectures were delivered by the NPs who had developed the curriculum and who conducted the home visits. The lecture topics were as follows:

Wound care. Following presentation of the basic principles of wound pathology, the etiology, diagnosis and management of commonly encountered wounds in homebound individuals were discussed. These discussions were supported by the week's clinical cases. The value of familiarizing family and caregivers with the performance of daily wound care was stressed.

Depression, delirium and dementia. Basic definitions of the syndromes were discussed within the context of a prepared learning case module. Differential diagnosis between the three syndromes was explored in three separate cases. Additionally, each case was discussed as if the patient had been homebound, with emphasis on how diagnosis and management would have differed from that provided in a clinic or hospital setting.

Advance directives and palliative care in the home. Advance care planning and palliative care were discussed, using the program's case studies. Discussion centered on the challenges of patient and family education concerning complex medical decisions, e.g., partnering with families in the decision to keep patients at home versus having them hospi-

talized, or implementing opioid treatment for shortness of breath in a terminal patient whose family was fearful of patient addiction. Specific clinical examples from the week's home visits were discussed.

Complex case studies. A prepared program case study chosen for a particularly complex combination of medical, psychosocial, and economic variables was discussed. The study elucidated the barriers that health care providers face in providing appropriate medical care to cognitively impaired persons. The discussion taught techniques for solving these problems.

Home visits provided ample time for discussion of the topics presented in the didactic phase of the program.

Clinical Curriculum

Students rotated through the program in groups of two or three. Each student was paired with an NP. There was an attempt to pair the student with the same NP for two days. A typical morning would entail visits to 4–6 patients. The patients were usually on the NP's patient panel, and for the most part the visits were routine. New patient visits and urgent visits of NPs to patients of other providers were also made. Students observed as well as participated in the taking of patient histories. History taking on a home visit requires advanced geriatric assessment skills, including assessment of home and environmental safety, social supports, and possible geriatric syndromes. Students initiated the majority of the physical examinations and observed the NP's confirmatory examination when there were abnormal findings. A Spanish translator was included when necessary. Students were also able to observe the NPs' interactions with registered nurses and physician consultants, as well as with hospital support systems, e.g., laboratory and radiology services. And students had the opportunity to observe NPs working with various agencies involved in patients' care.

Although many or even most of the visits could be described as clinically routine, from a psychosocial point of view they were valuable in illustrating problems or conflicts in the areas of caregiver burden, poor understanding of disease processes, family denial of advanced cognitive impairment, and challenges to maintaining patients' optimal personal care. Considerable time was devoted to discussions regarding these issues. The discussions were usually informal and included not only the clinical aspects of particular cases, but also how best to interact with other components of the health care and social service systems involved, to solve the various problems.

Evaluation

At the completion of the rotation, the participating students were given the opportunity to provide anonymous written evaluations of both the curriculum and the faculty, based on the objectives that had been developed for the program. Both the faculty and the curriculum were evaluated on a 5-point Likert scale from 1 (poor) to 5 (excellent). In evaluating the curriculum, students were asked to evaluate both the didactic and home-visit segments. Seventy (70) out of a total of 116 students responded: a response rate of 60%.

The four NP faculty were evaluated on four characteristics: teaching ability, attitudes and sensitivity in dealing with patients, effectiveness as role models, and ability to spark interest and student participation. Of the 70 students who evaluated the didactic and home-visit segments of the program, 56 completed evaluations of teaching ability and 52 rated attitude, role model effectiveness and the ability to spark interest and participation. The results are presented in the Table. (The faculty ratings were averaged for the four NPs.)

More than 75% of the responses ranked both the curriculum and the faculty as "5" or excellent on the Likert scale. Well in excess of 90% ranked both as very good or excellent.

The students were also given the opportunity to provide written comments. Comments were uniformly positive. The following are some examples:

- "I have had few opportunities to witness such genuine sensitivity towards patients."
- "Thank you for showing me so much during just one week."
- "Knowledgeable, inspiring, genuinely concerned about others."
- "Really excellent caregiver."
- "Wonderful at allowing me to be involved in discussions with the patients."
- "A good role model."
- "Excellent at explaining the patients' psychosocial situation and how that impacted the medical care."
- "Provided a very comfortable environment, making the student feel like part of the team immediately. She obviously cares a great deal about her patients and their families, which is crucial to this type of work."
- "Empathizes rather than sympathizing."

Discussion

It is expected that by 2030, 20% of the U.S. population will be older than 65 years of age (15). As a result, most adults are likely to be chronically

TABLE
Nurse-Practitioner Faculty Ratings

Program Segment	No. of Respondents	Likert Rankings				
		1	2	3	4	5
		No. of (%) of Respondents				
Curriculum	70	0 (0)	0 (0)	2 (3)	15 (21)	53 (76)
NP Faculty						
Teaching	56	0 (0)	0 (0)	2 (3)	12 (21)	42 (75)
Attitude	52	0 (0)	0 (0)	1 (1)	7 (13.5)	44 (85)
Role Model	52	0 (0)	0 (0)	3 (6)	9 (17)	40 (76)
Sparked Interest/Participation	52	0 (0)	0 (0)	2 (2.6)	11(20)	39 (77)

ill for several years before they die, and their need for home health care is expected to increase dramatically, especially as life expectancy in the U.S. continues to grow (1, 26). Chronically ill and dying persons have major health care needs, yet are often invisible in traditional medical settings. The reason is that traditional “doctor-centered” medical care focuses on curing illness and prolonging life; relief of suffering is not always emphasized, as it is in “patient-centered” palliative care (27, 28). Many patients with chronic diseases are homebound, and ideally they need homebound palliative care. The evidence is that medical students are not exposed effectively to the practice of home care (26). This student experience was created to address these educational gaps. Evaluation results indicated a high degree of acceptance on the part of the students of all aspects of the program, and suggest that NPs may be effective patient-centered care role models for medical students. Moreover, exposure to home care experiences of this sort is important in terms of the ACGME-endorsed core competencies now required of residency training programs.

The need for improved palliative care education in medical school curricula is being addressed. Currently, however, traditional, doctor-centered, predominantly didactic approaches are in the majority (29). In one recent study, students indicated that palliative care issues have not been sufficiently addressed, and that “instruction and role modeling have been inconsistent” (30). Students need clinical instruction and observational experiences to understand how to begin caring for dying patients.

A strong doctor-patient relationship is arguably crucial in good medical care, and this is especially true in home care. “Doctor-centered attitudes have been shown to be associated with lower patient satisfaction, and may contribute to decreased trust in the doctor-patient relationship” (30). Medical education has recently begun to focus on how to teach aspects of this, particularly given that the prevailing culture of medicine may be more focused on disease mechanisms than on developing this relationship or on pa-

tient preferences. Interestingly, training has started to address these issues in the preclinical years, but some studies have found that these interventions can become “overshadowed” by clinical experiences that are doctor- rather than patient-centered (28).

Role modeling is an important, maybe even crucial, part of how and what students learn (9). The kind of role modeling they receive probably helps shape their later practice styles as physicians. Students arguably spend too little time observing how experienced practitioners care for patients. There is evidence to suggest that such exposure helps influence students to adopt a more patient-centered approach to care (30, 31).

The current high specialization in health care requires that all participants be skilled in interdisciplinary team care. This is difficult with home care, because the patient is isolated from the necessary resources (32–34). The students observed, while at patients’ homes, how the NPs navigated the various agencies involved in patient care. The “systems-based practice” competency is well addressed in this experience.

Reflective learning may be central to learning in practice-based settings, but it has been undervalued in medical education (35–40). The clinical structure of home care rotations may promote a reflective process not possible in inpatient or outpatient settings. Being physically outside of the medical center both in transit and in the patients’ homes provided a neutral and possibly fertile space for better reflection. The structure of the rotation provides this neutral space, where students were surrounded by patients, one NP and family members, instead of the setting of their other rotations, with dozens of medical team members, overhead pages and patients in hospital gowns. This different physical structure and the fact that there was ample time for the student and NP to discuss the visits privately, constituted a unique “informal curriculum.” This type of informal curriculum can internalize “new values, attitudes and rationales about what is important in practicing medicine and how to be a good doctor” (28).

Discussions in the rotation exposed the students to different rationales and attitudes than they usually encountered in other rotations. Instead of the medically focused case presentations commonly employed in an inpatient or outpatient setting, in this rotation the medical management of patients was discussed within the context of family dynamics, palliative care choices made in partnership with patients and caregivers, and home safety.

Home care practice tends to build trust and empathy between caregiver and patient. Exposing medical students to this type of care may thus help foster more human relationships between them and their future patients.

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