The Nursing Home in Long-Term Care Education

Heidi K. White, MD, MHS, CMD

Nursing homes have long been used to teach geriatric medicine to medical students, primary care residents, and geriatric medicine fellows, but we may be able to more appropriately use this clinical setting by addressing principles of long-term care in addition to general geriatrics. Long-term care education starts with developing an understanding of the health care system and how to use services to maximize the functional abilities of our frailest elderly, and, depending on the needs of specific learners may incorporate skills such as quality improvement methodology, interdisciplinary team participation, managing infection risk within a community, and optimally transitioning patients between care venues. At each level of medical education, specific long-term care learning outcomes should be established with attention given to appropriate assessment of these outcomes. Curricular elements should be directed by the needs of the specific group of learners and the resources of the institution. (J Am Med Dir Assoc 2008; 9: 75–81)

Keywords: Long-term care education; nursing home; geriatrics education; medical student education; graduate medical education

In the United States over the past 30 years, geriatric medicine has been established as an important component of medical education for all physicians and as a viable specialty for research and clinical expertise. Long-term care is recognized as an indispensable domain of geriatric medicine and geriatric education. Geriatric education is learning to care for older adults; long-term care education is learning to care for the most frail and vulnerable older adults within the context of available services. Geriatrics encompasses the care of older adults and includes an understanding of the basic science of normal aging, theories of aging, demography and epidemiology of aging, pharmacological changes with aging, assessment and management of geriatric syndromes (eg, falls, dementia, delirium, incontinence), geriatric assessment skills (eg, gait assessment, cognitive assessment), ethical issues, palliative care, prevention, nutritional care, and cultural aspects of aging. Long-term care encompasses the services and care settings that are available to care for individuals with chronic, subacute, and terminal medical conditions. This includes services that support individuals in their homes such as meals on wheels, transportation services, home health services, and senior centers to name a few. It also includes congregate living arrangements from senior housing to assisted-living to nursing homes. As older adults seek alternatives to nursing home care, the array of services and settings of care are becoming more diverse. These services are often difficult to access because of a lack of coordination of services in most communities. The nursing home is a frequently used site for geriatrics education, and it is an appropriate and accessible site for long-term care education.

Long-term care services represent a growing aspect of our medical system that receives little attention in medical education. As the baby boomers become senior citizens, older adults will access long-term care services in greater numbers and will expect their physicians to be adept at helping them to transition between care settings and to appropriately use available services to maximize their independence. Yet most physicians have little exposure or training that will prepare them to meet these expectations. There is a growing need for medical education at all levels to incorporate long-term care content. This review will highlight the need for medical education to include long-term care content that will prepare physicians to work within these settings, to understanding the benefits, limitations, financing and regulatory environment, to advocate for enhanced quality of care, and to adequately transition patients between acute, subacute and chronic care settings (see Table 1).
THE CASE FOR LONG-TERM CARE EDUCATION

Approximately 1.5 million older adults live in nearly 17,000 nursing homes across the United States by 1996 data. Nearly the same number of severely impaired older adults (needing assistance with 3 or more activities of daily living) live in the community receiving long-term care services. The likelihood of needing long-term care services increases with age and a large proportion of older adults will use long-term care services for some period during their lifetime. In a recent survey of internal medicine (IM) and family medicine (FM) residents completing their final year of training, 31% of internal medicine residents and 21% of family medicine residents indicated that they considered themselves unprepared to care for nursing home patients. This is in contrast to 0% of internal medicine residents and 4% of family medicine residents who felt unprepared to care for hospital inpatients or 8% and 13% respectively who felt unprepared to care for the terminally ill. Furthermore, these graduates felt unprepared for several long-term care–associated tasks such as participation in quality improvement (29% IM, 29% FM), care for populations of patients (29% IM, 41% FM), and collaboration with nonphysician caregivers (11% IM, 16% FM). Another survey of practicing physicians’ perceptions of the adequacy of their chronic illness training found that the majority of family medicine and internal medicine practitioners felt that their chronic illness training was less than what was needed in all competencies tested including assessment of caregiver and family needs for patients with chronic illness, coordination of in-home and community services, and interdisciplinary teamwork with nonphysician providers of care.4

THE TEACHING NURSING HOME

Part of the difficulty in providing good long-term care education especially in the nursing home setting has been the lack of infrastructure to support such efforts. However, in the 1980s and 1990s the idea of the teaching nursing home began to gain attention. Major components of a teaching nursing home are outlined in Table 2. This was modeled after the teaching hospital, a formalized arrangement between a school of medicine and a hospital. Teaching hospitals have become an essential element of medical education over the past 100 years. Both institutions share common goals of teaching, patient care, research, and community service. In the teaching hospital, medical school faculty serve as the attending physicians for patient care and as the primary instructors for learners; in addition, they facilitate or conduct research to improve care. Although there has been a role for community preceptors without close institutional affiliation to precept learners in certain ambulatory and rural clinic sites, the goal of the teaching nursing home is to have medical school faculty caring for patients while providing high-quality instruction to trainees and conducting research in this setting to improve the care that is provided. As our health care system becomes more complex there will be additional needs for teaching home care agencies and teaching hospice providers. These venues and others may become important avenues for long-term care education.

From a historical perspective, nursing homes developed outside the mainstream of the US health care system, evolving from charitable community projects that originally served the poor, mentally ill, and the elderly. Establishing and maintaining close ties to nursing homes is not an easy task. While there are many excellent nursing homes, it cannot be denied that the quality of nursing home care has been a continuing public concern in this country. Despite numerous efforts to enhance the care that is provided, issues of quality remain and hamper the recruitment of faculty willing to undertake the task of developing and maintaining the teaching nursing home. However, many successful examples now exist and have substantially contributed to the improvements in care that have been accomplished.5,9

Table 2. Features of a Teaching Nursing Home

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Administration</td>
<td>Formal (legal documents) comprehensive administrative links with the school of medicine</td>
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<tr>
<td>Patient Care</td>
<td>Closed or limited panel of physicians with formal privileges procedure. Faculty has responsibility directly or with fellows/residents for patient care. Expanded role of nursing and use of nurse practitioners.</td>
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<tr>
<td>Ethics</td>
<td>An ethics committee is a formal part of patient care and reviews issues such as no hospitalization orders, competency evaluations, and informed consent procedures.</td>
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<tr>
<td>Teaching</td>
<td>Formal teaching programs on-site involve lectures, bedside teaching, and various disciplines.</td>
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<tr>
<td>Research</td>
<td>Extensive clinical, epidemiologic, and health services delivery research.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Quality of Care committee and evaluation procedures. Process and outcomes are evaluated.</td>
</tr>
<tr>
<td>Personnel</td>
<td>Physicians, nurses, nurse practitioners, social workers, rehabilitation personnel, and others are involved and have a direct role in patient care as well as faculty positions in their corresponding academic institutions.</td>
</tr>
<tr>
<td>Environment</td>
<td>Physical facility and equipment conducive to meeting TNH objectives. Nursing home is part of a continuum of care.</td>
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Summarized from Weiler, 1987.5

Table 1. Long-Term Care Education Competencies

- Clinical care of cognitively and/or physically dependent older adults.
- Implementation and documentation of care transitions.
- Consideration of administrative, regulatory, and policy issues.
- Skills in quality improvement methodology.
- Skills in interdisciplinary team participation and leadership.
- Knowledge of infection control and disease prevention.

Summarized from Weiler, 1987.5
Finally, medical students should appreciate the professional
rately and safely transition their patients between care venues.
addition, medical students should be learning how to accu-
those with acute illness in need of rehabilitation services. In
the growing number of older adults with chronic illness and
home care services. This basic understanding of the long-term
care services including the nursing home, assisted living, and
related to appropriate geriatric medicine education for medical students.
The number of medical schools that provide geriatrics education
is growing and the scope of that training is increasing, yet
further expansion is necessary to meet the needs of an aging
society. The effort to establish standards has recently been
promoted by an initiative funded by the John A. Hartford
Foundation in conjunction with the American Association of
Medical Colleges (AAMC). Since 2000 this initiative has
provided $4.8 million to 40 medical schools to integrate
geriatrics education into their 4-year curriculum. Although
many medical schools have had fourth year elective courses in
geriatrics, the concern has been that this encourages medical
students to view geriatrics as yet another subspecialty rather
than a set of knowledge, skills, and attitudes that is integral to
every physician's training and practice of medicine. Furthe-
more, these electives reach too few physicians-in-training
since they are generally undersubscribed. The John A. Hart-
ford initiative has promoted the model of introducing geriat-
rics concepts as an integrated part of the curriculum from day
1 that continues throughout the 4 years of education to reach
all medical students with basic concepts that will apply to a
large proportion of their future patients. Many of the objec-
tives, case studies, and instructional settings that have been
developed through this initiative incorporate long-term care-
specific content. For example at the University of Rochester,
a Year 1 problem-based learning case of an 85-year-old nurs-
ing home resident with Alzheimer's disease and a marked
decline in his baseline mental status illustrates principles of
dehydration, pre-renal azotemia, and hypernatremia, as well
as decision making and issues surrounding feeding tubes.

The Hartford Foundation and the AAMC are in the pro-
cess of co-sponsoring the development of minimum compe-
tency standards in geriatrics education for medical students.
Guidelines such as these should reflect the importance of
long-term care. At the undergraduate level of medical educa-
tion learning objectives should focus on the capabilities, lim-
itations, financing, and regulatory constraints of long-term
care services including the nursing home, assisted living, and
home care services. This basic understanding of the long-term
care health system will facilitate appropriate use of services for
the growing number of older adults with chronic illness and
those with acute illness in need of rehabilitation services. In
addition, medical students should be learning how to accu-
rately and safely transition their patients between care venues.
Finally, medical students should appreciate the professional
scope of other healthcare disciplines to facilitate effective
interdisciplinary team participation.

For the medical student it is especially important to recog-
nize that long-term care education is not synonymous with
nursing home experience. Educational experiences in the
nursing home can easily be viewed in a negative light by
medical students. Perhaps this should not be surprising
since many Americans have a negative view of nursing
homes. It is reasonable to believe that the views of medical
students would mirror the views expressed by the general
public. The learning objectives related to long-term care
education at this level should focus on positively influencing
the attitudes of young physicians-in-training. When nursing
home environments are used, the learning objectives must be
perceived as relevant and achievable. Medical students must
have adequate supervision by faculty physicians to help them
navigate an unfamiliar environment and potentially negative
experiences such as behavioral outbursts during examinations,
outraged documentation systems in comparison to hospital
procedures, and physically frail older adults who require mod-
fications to typical examination procedures. Many medical
schools use nursing homes to teach geriatric assessment skills,
geriatrics syndromes, and even more specifically long-term
care objectives. Appropriate long-term care—specific objec-
tives would include describing care settings (eg, care in the
home, assisted living, nursing home), their benefits and limit-
atations, and financing. However, at this level of training it
is not imperative that students spend time in the nursing home
to learn aspects of long-term care. They can learn principles
of long-term care through case studies, senior mentor programs,
and even acute care settings when learning objectives incor-
porate transitioning patients to and from long-term care ven-
ues. If not done well, nursing home experiences can serve to
facilitate negative stereotypes and future avoidance of this
care setting.

Learning assessment methodology should match the learn-
ing outcomes that are desired. Objective knowledge tests are
appropriate for knowledge-based learning outcomes, but if the
outcome desired is attitudinal then other methods of assess-
ment should be considered. Reflective writing and small group
discussions are more likely to reflect the impact of the instruc-
tional experience and provide evidence that attitudes are
indeed improving.

LONG-TERM CARE EDUCATION IN RESIDENCY
TRAINING PROGRAMS

Despite my assertion that nursing home experience is not
essential to the long-term care education of medical students,
at more advanced levels of medical education the importance
of specific experience within the nursing home becomes more
important especially for physicians who will serve as primary
care providers, oversee mid-level practitioners (ie, physician
assistants and nurse practitioners) in the nursing home, or
participate in the specialized medical needs of this population.
A collaborative effort of the Society of General Internal
Medicine, the Society of Teachers of Family Medicine, the
American Medical Directors Association, and the American
Geriatrics Society resulted in published recommendations for
resident training in nursing home care. The goals and objectives recommended by this expert panel are outlined in Table 3. In addition to setting forth goals and objectives, this group of experts strongly recommended a longitudinal nursing home experience as a primary instructional strategy.

A survey of directors of accredited internal medicine and family medicine residency programs conducted in 1991–92 found that nursing home experiences were required in 86% of family medicine programs but only 25% of internal medicine programs. The greater success of family medicine programs probably relates to the requirement of a nursing home experience by the Residency Review Committee for Family Practice since 1983. The Residency Review Committee for Internal Medicine requires formal instruction and assigned clinical experience in geriatric medicine that may occur in a variety of settings including long-term care facilities but specific experience in the nursing home is not required. The survey by Counsell and colleagues asked respondents to review a list of learning objectives to determine what specific objectives were emphasized. Geriatric curriculum content seemed to be emphasized in the nursing home context such as respect and compassion for older adults; principles of medical ethics; age-related changes in pharmacokinetics and pharmacodynamics; differences in the diagnosis, management, and outcomes of common medical problems in the elderly; and diagnosis and management of elderly patients with multiple chronic illnesses. Less attention was given to principles of rehabilitation, coordination of care between settings, and the organization and financing of health care despite the nursing home being an ideal site to cover these long-term care-specific topics. Perhaps this oversight was in part related to the fact that only 52% of the IM programs and 49% of the FM programs had learning objectives written specifically for the nursing home experience. Recommendations by the responding program directors for successful implementation of a nursing home curriculum included having an organized curriculum, interdisciplinary team involvement, a longitudinal rotation format, enthusiastic faculty and direct supervision by faculty. Programs without nursing home experiences identified several barriers including availability of faculty, conflict with other rotations, low interest of residents, low interest of faculty, cost, lack of a relationship with nursing home admin-

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**Table 3. Curriculum Recommendations for Resident Training in Nursing Home Care**

<table>
<thead>
<tr>
<th>Goals</th>
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<tbody>
<tr>
<td>1. Provide formal training in nursing home care to all internal medicine and family medicine residents as a component of the geriatrics curriculum.</td>
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<td>2. Provide residents with specific learner objectives that will prepare them for the provision of quality patient care in the nursing home.</td>
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<td>3. Increase the number of physicians who extend their care of older adults to include the nursing home setting.</td>
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<tr>
<td>1. Respect and compassion for older persons, specifically of their autonomy and dignity.</td>
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<td>2. Appreciation of the importance of maintaining and restoring function and quality of life in older adults, especially in those with chronic and incurable conditions.</td>
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<td>3. Realization of the importance of family and the entire social network, including nursing home staff, in patient care.</td>
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<td>4. Appreciation of the value of an interdisciplinary team approach.</td>
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<td>1. Adjustments in history-taking and physical examination.</td>
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<td>2. Standardized instruments for assessing physical function, cognition, affect, and gait.</td>
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<td>3. Advance directives and competency.</td>
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<td>4. Assessment of nutritional needs and treatment of malnutrition, including appropriate use of oral supplements and parenteral feeding.</td>
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<td>5. Evaluation and management of infections common to the nursing home setting.</td>
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<td>7. Evaluation and management of the behavioral and psychological symptoms of dementia.</td>
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<td>8. Nursing home regulations (physical restraints, psychotropic drug use)</td>
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<td>10. Function of interdisciplinary teams.</td>
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<td>11. Therapeutic capabilities of the nursing home.</td>
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<td>12. Strategies to minimize hospitalization and improve transition to and from the hospital.</td>
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<td>13. Role of the nursing home medical director.</td>
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<td>1. Administration and interpretation of standardized assessment instruments.</td>
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<td>3. Medical decision-making and goal setting that incorporates the patient's values and preferences.</td>
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<td>5. Effective participation in interdisciplinary teams.</td>
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<td>7. Coordination of care between settings, especially between acute care and the nursing home.</td>
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Summarized from Counsell, 1994.
istration, inadequate support of the program director, and
unavailability of patients. A more recent systematic review
of the literature regarding geriatrics training in internal
medicine residency programs found that successful nursing
home educational sites used nursing home faculty members
who were salaried to teach and assigned a panel of patients
to each internal medicine resident.21 Situations that lead
to failure included a lack of continuity and difficulties
providing longitudinal care, residents’ concern about cost-
benefit ratio of travel off site for a half-day, and residents’
thinking that nursing home rounds are too slow, ineffici-
cient, and uninteresting.

The importance of the nursing home as an educational
setting rests not only in the opportunity to teach geriatric
syndromes and geriatric principles through exposure to an
easily engaged and available group of older adults, but more
primarily in the opportunity to teach these objectives within
the organizational structure of the nursing home with atten-
tion to long-term care principles. Much of long-term care
content fits well into 3 of the American College of Graduate
Medical Education (ACGME) competency categories that
program directors may be struggling to cover adequately in
their curriculum: practice-based learning and improvement,
terpersonal and communication skills, and system-based
practice. The American Medical Directors Association has
developed a curriculum for clinical practice in long-term care
that can be easily adapted and incorporated into residency
training programs.22 The opportunity to develop an under-
standing of the financing and regulation of the nursing home,
to participate in quality improvement initiatives, to consider
issues regarding infection control, to participate in interdisci-
plinary team care, and to hone communication skills through
discussions with sensory-impaired patients and involved fam-
ily members should not be overlooked. This type of experi-
ence and instruction is extremely important for trainees who
will ultimately devote at least some of their practice of med-
icine to older adults who will use such services. For these
trainees a longitudinal rather than block rotation clinical
experience in the nursing home is most ideal. Patient panels
should be small (3 to 5 patients) given other block rotation-
related clinical responsibilities and limited ability to respond
to urgent care needs. Creative means of providing on-call
coverage and even daytime cross-cover may be necessary
when residents are off-site in clinical rotations that do not
incorporate time for longitudinal responsibilities.

However, the needs of every family medicine and internal
medicine training program may not be the same in regards to
long-term care education. For example, the Duke University
Internal Medicine Residency Program graduated 53 physi-
cians in 2004. Sixteen pursued cardiology fellowship training,
another 8 pursued oncology training, and 5 became hospital-
ist; only 4 individuals pursued fellowship training or emplo-
ment opportunities in general internal medicine while the
rest pursued another subspecialty training.23 In this type of
program, the learners’ assessments of their need to know about
long-term care settings may be low and serve as a barrier to
implementing a long-term care curriculum that is based in the
nursing home, especially if it is modeled after generic guide-
lines rather than taking into account the specific needs of the
learners. In this program during a 4-week required geriatrics
rotation for interns we provide long-term care–specific learn-
ing outcomes through nursing home rounds, a care transitions
experience, and exposure to other community-based re-
sources. Additionally, we provide a series of 3 half-day learn-
ing sessions on long-term care issues for all internal medicine
residents that include lecture, Web-based information, and
peer-teaching. A longitudinal long-term care experience is
available as a subspecialty clinic elective and has been used by
4 individuals over a 3-year period. At the present time it
seems most prudent for LTC curriculum to accurately reflect
the needs, resources, and opportunities of individual programs
while providing a minimal standard of competence in this
area. Additional refinement of that level of competency may
be needed.

Learner assessments need to be tailored to the specific
outcomes that are desired. At this level of training faculty
observation and evaluation are usually a primary means of
assessment. In this case it is imperative that all faculty and
learners are well apprised of the desired learning outcomes.
Learners should be told ahead of time that they will receive
feedback on their performance and that some of this feedback
will be formative occurring during the course of an afternoon
in the nursing home or the course of an entire rotation and
that some of this feedback will be summative in the form of a
final evaluation. Additional means of learner evaluation could
include pre- and posttests at the beginning and end of a
rotation or didactic session. Self-efficacy surveys allow learn-
ers to gage their own knowledge, skills and attitudes toward
specific learning outcomes. This should be done at the begin-
in and end of a learning experience. However, some learn-
ers do not become aware of their prior deficits in knowledge,
skills, and attitudes until after the learning has occurred so
some educators have advocated giving learners an oppor-
tunity at the end of a learning experience to indicate both
their prior self-efficacy and their current self-efficacy. The
ACGME provides a helpful table of appropriate evaluation
methods according to the competency and skill that is
being assessed.24 Descriptions and examples of these meth-
ods are also available.25

LONG-TERM CARE EDUCATION IN GERIATRICS
FELLOWSHIP TRAINING PROGRAMS

According to a survey of fellowship-trained geriatricians,
66% reported clinical activities in the area of long-term
care.26 Geriatric fellowships have been available in the
United States since the 1970s. In 1988, the American Board
of Internal Medicine and the American Board of Family
Practice agreed to jointly offer an examination for a Certifi-
cate of Added Qualification (CAQ) in Geriatrics, which is
currently available only to fellowship-trained individuals.
Originally, geriatrics fellowships were 2 years in duration, but
in 1995 the 2 boards agreed to shorten the eligibility require-
ments for the CAQ examination to one year. Despite these
changes, as of 2002, only 10,207 CAQs in geriatrics had been
awarded. Only 19% of these were awarded after geriatric
fellowship training was required. According to 2000 census

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data, this amounts to a national average of 5.5 geriatricians per 10,000 persons aged 75 and older.1 The number of fellowship-trained geriatricians is growing at a very slow rate despite a growing number of fellowship programs.2,3 This very slow growth may reflect the decline in American medical school graduates choosing primary care specialties since 1998.4 Some experts are predicting that this trend will continue in part due to the widening income gap between primary care physicians and specialists.5 We must provide excellent long-term care education for our geriatric medicine fellows not because they will be the primary work force for those in need of these services but because they will be the primary leaders advocating for quality improvements and teachers of all physicians who need the knowledge and skills necessary to navigate this aspect of our health care system.

The current requirements for long-term care education in geriatrics fellowship training are substantial. Each fellowship program must have a formal affiliation and a letter of agreement with one or more long-term care institutions. This formal agreement should provide the program director with appropriate authority at the long-term care institution to carry out the training program. “Fellows must have 12 months of continuing longitudinal clinical experience in the long-term care setting and manage an assigned panel of patients for whom the fellow is the primary provider. Additional block-time to provide long-term care experience is recommended.”6,7 Involvement of the fellow in coordination of the actions of multiple health professionals, including physicians, nurses, social workers, dieticians, and rehabilitation experts in patient assessment and implementation of treatment is encouraged in the long-term care setting. It is also stated that management of patients in long-term care settings should include palliative care, knowledge of the administration, regulation, and financing of long-term care, and the continuum from short- to long-term care. Furthermore, there are requirements for curricular content in noninstitutional long-term care including home care, hospice care, and community resources that support patients and their families at home.

Clearly, geriatric medicine fellowship training programs have the most detailed requirements for long-term care education and a large majority of graduates go on to provide this type of care in their practices. Yet there is still room for improvement. A recent survey of geriatric fellowship trained physicians reported that 53% of respondents identified the need for increased training in administration and business management including further experience in long-term care management (20%) and medical directorship of long-term care facilities (12%) while only 4% indicated that they needed more “clinical training” in long-term care.8,9

The learning objectives for long-term care education at the fellowship level of training should not only prepare graduates to provide excellent clinical care with an understanding of the financial systems of Medicare, Medicaid, and other insurance and out-of-pocket costs in these settings but also prepare them for the leadership roles and administrative responsibilities that are likely to be required of them in the long-term care arena. Similar to residency programs, fellowship programs should develop objectives in the 6 general competency categories promoted by the ACGME of patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and system-based practice.10 Providing opportunities for fellows to pursue quality improvement projects, participate in staff training, and even serve as assistant medical director can help them to gain needed experience with the administrative and leadership skills necessary to fulfill their professional roles in long-term care. At this level self-assessment evaluations can help these advanced learners to take an active role in prioritizing learning objectives at the start of an activity and provide self-assessments at interim points or at the end of an activity that can be discussed and expounded upon with faculty preceptors as part of the learner evaluation process. It is best to use self-assessments as a means of self-monitoring that encourages students to seek and incorporate external evaluations.11 Feedback from other professionals who interact with learners in patient care, interdisciplinary care planning, and administrative roles may also be an effective means of learner evaluation at this more advanced stage of LTC education.12

**SUMMARY**

Long-term care education as a specific domain of geriatric medicine should be formally incorporated into the medical curriculum of medical schools, primary care residency training programs, and geriatric medicine fellowship training. At each level of education specific objectives related to LTC education should be formalized with attention given to appropriate evaluation of whether the learning objectives have been met. Curricular elements should be directed by the needs of the specific group of learners and the resources of the institution. Consideration should be given to developing faculty expertise and closer relationships with nursing homes to facilitate curricular development beyond present capacity in order to adequately prepare new physicians for the practice of medicine in our aging society.

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**REFERENCES**


