LITERATURE REVIEW AND SYNTHESIS OF PHYSICIAN PRACTICES IN NURSING HOMES

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INTRODUCTION AND BACKGROUND

Changes in Medicare payment policy (e.g., implementation of the inpatient prospective payment policy) and in the structure of long-term care (e.g., the growth in the assisted living industry) have led to a nursing home population that is increasingly frail and medically complex.[1] With almost 2 million Americans currently residing in nursing homes and an expected increase to almost 5 million by 2030, understanding the role of physician oversight in the medical care of nursing home residents is of critical importance.[1]

Nursing home residents are becoming increasingly sick and frail. Between 1997 and 2000, the percentage of nursing home residents receiving at least nine prescription medications increased from 18% to 27%.[2] Trends such as these suggest the need for active oversight of and consistency in patient care from nursing staff and physicians to ensure that complications do not arise. The attending physician is responsible for supervising the medical care of nursing home residents, yet very little is known about the practices of physicians in nursing homes.

In 1987, Congress passed the Omnibus Budget Reconciliation Act (OBRA '87) that specified the role of physicians in the medical care of nursing home residents, as well as other major changes in the operation and oversight of nursing homes. OBRA '87 required that nursing homes ensure that: (1) the health care of every resident is supervised by a physician[3]; and (2) the initial and periodic reviews of the care plan are completed by a team that includes the physician.[4]

Federal regulations specify that physicians are required to participate in care planning for nursing home residents and that each resident's comprehensive care plan include measurable objectives and a timetable to meet a resident's medical needs.[5] In addition, federal regulations require that physicians supervise the medical care of each resident.[6]

Physicians monitor current clinical conditions and provide evaluation and management of new conditions or symptoms. However, how physicians provide such oversight in nursing homes is not described well in the literature. The few studies available on physician practices in nursing homes suggest that physician presence in nursing homes is limited and that the majority of nursing home visits are made by a limited number of physicians.[7] In a 1997 survey completed by the American Medical Association, most physicians reported spending no time in treating nursing home patients (77%) and among physicians who did practice in nursing homes, most reported spending two hours or less per week caring for their nursing homes patients.[7] This lack of physician presence is reflected in resident reports of dissatisfaction. Complaints for unattended symptoms, which include the failure to provide physician services for a change in condition, were the 10th most common complaint in 2000, up 44.4% from 1996.[8]

Against the backdrop of sicker patients needing more physician care, there is a physician workforce with the interest, experience, and skill in nursing home care that is shrinking. In a survey of physicians who provide nursing home care, 50% indicated that they planned to decrease their involvement in the care of nursing home residents.[9] Physicians planning to reduce their nursing home caseloads cited poor reimbursement by Medicare Part B for their physician services, a high volume of telephone calls from the nursing homes, onerous paperwork, and a lack of physician authority in nursing homes as reasons for leaving the nursing home environment.[9]

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) contracted with the University of Colorado to examine physician services in nursing homes delivered to an increasingly medically complex nursing home population. ASPE set forth the following objectives: (1) describe physician practice models used to deliver medical services to nursing home residents; (2) describe the financing arrangements, methods, and rates associated with various physician practice models in nursing homes; and (3) determine what is known about the impact of physician practice models on the quality of care received by nursing home patients and on the quality of care provided in nursing homes. In addition, the University of Colorado was asked to propose research designs that could be used in future research efforts to better understand how physician practice models impact access, quality, and costs associated with providing care to nursing home residents.

In the context of the overall project goals, this literature review first summarizes the current knowledge of physician practice in nursing homes and identifies gaps in the knowledge base. It then presents the physician practice models applied in nursing homes, including integrated and managed care delivery models, and describes the characteristics of physicians who practice in nursing homes. After describing the current state of nursing home practice, as found in the literature, factors that determine physicians' choice to practice in a nursing home and affect the quality of physician care within a nursing home will be presented. The expert opinions offered during a Technical Advisory Group (TAG) meeting that was conducted as an objective of this project are incorporated to substantiate or expand on the literature findings. The project also involved discussions with stakeholders in nursing home care. The results of these discussions are not presented in this literature but are contained in the final project report.

DESIGN AND METHODS

The literature synthesis was distilled from published literature and supplemented with sources of information such as professional associations, government agencies, and expert opinions derived during a TAG meeting of professionals working in the field of nursing home care.

Topics and phrases for the literature search included the following terms in combination with the words nursing home and/or long-term care: cost, practice patterns, models of care, utilization, quality, outcomes, staffing, acute care, guidelines, visits, training, experience, physician misconduct, discipline, reimbursement, and malpractice. Pertinent citations from the selected literature also were reviewed. Finally, a list of authors who were encountered frequently in the physician practice pattern literature was compiled and a search by author name was performed. Literature with data prior to OBRA '87 was not reviewed due to the fundamental changes this act created in nursing facilities. Other sources were scanned for relevant information such as the Robert Wood Johnson Foundation Project listings and the web sites of the American Medical Directors Association (AMDA) and the Centers for Medicare & Medicaid Services (CMS).

Three investigators completed the literature review. As new articles were obtained, the reference was entered into a Reference Manager database to avoid duplication of effort. After approximately 50 articles were obtained, the investigators performed an initial overview of the available literature to develop a conceptual framework around the following topics: physician characteristics, physician payment structure, nursing home traits and practice organization. Four tables were constructed, one for each of these four topics (Appendices I-IV).

As a mechanism for organizing the literature into the conceptual framework, subheadings pertaining to each of these four topics were proposed with the expectation that some subheadings would be revised, deleted, or added as necessary, as the references were entered into the tables. To ensure that the three investigators reviewing the selected articles were extracting similar information from the articles, each of the three investigators randomly selected two articles previously reviewed by the other two investigators for a second and third review. The results then were compared among reviewers. All three investigators were consistent in selection of material from the articles.

Finally, after the references with relevance to topics in more than one column in each table were entered, investigators developed the following themes: practice organization and design, access to physician care and physician workforce, and quality of physician care. In this report, we first describe the current, traditional organization of physician services in nursing homes, followed by a discussion of alternative practice models. We then present the barriers to accessing physician services in nursing homes and finally the impact of physician practice on nursing home care.

Technical Advisory Group (TAG) Meeting

On April 29, 2004, stakeholders with expertise in nursing homes and physician practices in nursing homes were asked to participate as members of a TAG in Washington, DC. The purpose of the meeting was to: (1) present the available literature on physician practice patterns in nursing homes, (2) allow the panel of experts to discuss the available body of literature and add their practical knowledge of physician practice patterns, and (3) identify areas in need of additional research regarding physician practice patterns in nursing homes.

The ten member expert panel consisted of six physicians, two nurses, one geriatric nurse practitioner (GNP), and one nursing home administrator. In some cases, specific physicians were asked to participate in the meeting because of their prior research or practical experience with nursing home physician practice models. In other cases, advocacy or professional organizations were asked to nominate a member of their organization with knowledge and interest in physician practice models. The following organizations were represented: American Geriatric Society, AMDA, National Coalition for Nursing Home Reform, American Medical Association, American Academy of Nurse Practitioners, American Health Care Association, American Association of Homes and Services for the Aging, National Association of Directors of Nursing Administration in Long-term Care, and CMS.

The TAG members' opinions and comments were added later to the information gleaned from the review of published literature and were incorporated into the literature synthesis document.

CURRENT ORGANIZATION OF PHYSICIAN SERVICES IN NURSING HOMES

Regulations and Guidelines

OBRA '87 and its amendments are the basis for federal regulations pertaining to physician care of nursing home residents. They are documented in the *State Operations Manual*, which contain the federal interpretive guidelines for states to conduct survey and certification of nursing homes. While most physician nursing home visits occur at the discretion of physicians and are determined by medical necessity, a set of minimum required visits for nursing home residents are mandated by CMS in regulations and the *State Operations Manual*.[6] Surveyors verify that physician services adhere to the following regulations:

(1) Physician must see each resident for <u>routine</u> evaluation every 30 days for the first 90 days and every 60 days thereafter (Appendix V). Physicians may delegate every other visit to a physician extender (physician assistant (PA), nurse practitioner (NP), or clinical nurse specialist, as state law permits), except for services that explicitly require the services of a physician (i.e., initial comprehensive visit for skilled nursing facility (SNF) patients). The physician must supervise all services performed by a physician extender,[6] and

(2) Physicians must be available or arrange for the provision of emergency services 24 hours/day.[10]

In addition, within seven days of the completion of the required comprehensive assessment, a care plan must be prepared by an interdisciplinary team that includes the attending physician, a registered nurse, and other staff such as a physical therapist or nutritional therapist, and, when possible, the resident and resident's family.[5]

Federal regulations also include a few, minimum requirements regarding delivery of medical care. For example, laboratory and radiology services can be provided only to facility residents when ordered by a physician, and the physician is to be "promptly notified" of the results of such tests (42 CFR 483.75(j) and (k)).[12] The physician requirements outlined by CMS can be reviewed in Appendix V.

In addition to the required federal survey and certification, some nursing homes elect to be accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The JCAHO is a voluntary, nongovernmental organization that establishes standards for the operation of hospitals and other health care facilities, including nursing homes. Compliance with JCAHO standards is recognized by the issuance of certificates of accreditation and, to date, it accredits more than 2200 organizations offering long-term care and sub-acute care.[11] Nursing facilities may seek JCAHO accreditation because of the marketing advantages such accreditation

may provide (e.g., encouraging contracting arrangements with managed care organizations).

JCAHO accreditation requirements include a focus on the organization's quality improvement efforts, professional staff recruitment, and staff education. JCAHO accreditation may not substitute for the federally required state survey and certification process. The requirements focus on the items listed in Appendix V.

Certain JCAHO standards are more comprehensive than general CMS requirements with regard to physician visitation. For example, the timing of the first comprehensive visit under JCAHO standards is more specific than under CMS regulations. JCAHO requires that the initial physician visit cannot be more than 24 hours before admission or later than 72 hours after admission. Specific details comparing physician visits defined by CMS and JCAHO are outlined in Appendix V.

The Commission on Accreditation of Rehabilitation Facilities (CARF) is another mechanism for achieving certification beyond the federal requirements. However, CARF accreditation is not widely sought with some states having no or only a very few CARF-accredited facilities (i.e., one CARF accredited nursing home in California).[13] We observed no literature commenting specifically on CARF accreditation of nursing homes.

Physician Practices in Nursing Homes

Residents are admitted into nursing homes predominately from the community or a hospital. Admissions directly from the community in 1999 accounted for 29% of all nursing facility admissions while 46% were admitted from a hospital and 11% from another nursing home.[14] The remaining residents were admitted from retirement homes and board and care homes. Data are not readily available regarding the number of physicians who provide care across care settings from the hospital or community into the nursing home. Admissions to a nursing home after a minimum of a three-day hospital stay for a Medicare beneficiary who requires daily skilled care are covered by Medicare in SNFs. Medicare pays for 13% of nursing home residents. The average length of stay for SNF care is 23 days.

While federal and state requirements and JACHO provide some guidelines for physician care of nursing home residents after admission, these entities do not require physicians to follow their patients from the community or hospital setting into nursing homes. In fact, the trend in physician specialization in delivery of care in one care setting undercuts the ability of physicians to provide this continuity of care. For example, in recent years, the "hospitalist" specialty has emerged specializing in the delivery of care in the hospital environment.[15] Increasing specialization in one site of care reduces the number of physicians who are following patients from the office to the hospital and then to the nursing home setting.

There are no specific, current statistics available on the number of physicians who continue to follow patients into the nursing home, but the TAG commented that there are fewer in practice each year. The group suggested that some physicians who remain in nursing home care also are beginning to specialize in this type of care in a manner similar to physicians who specialize in hospitals as their sites of care.[16]

Traditionally, the majority of physicians who care for nursing home residents are community physicians with both an office and hospital-based practice as opposed to practicing in one of these settings exclusively. In a cross-sectional survey of 170 family physicians, 55% followed at least one patient into the nursing home.[17]

A second study comparing physicians with nursing home practices to physicians without nursing home patients indicated that physicians with nursing home practices were more likely to have a hospital practice (60% vs. 39.5%); see more outpatients each week (105 vs. 78), and work more hours each week (57 vs. 49). Physicians in rural communities also were more likely to have a nursing home practice.[18] This does not imply that rural areas have an adequate supply of physicians caring for nursing home residents, but it is a reflection of the tendency for rural physicians to care for patients during the entire lifespan from birth to death.

Because physicians are not required to follow their patients after transfer to a nursing home, they often are unaware of what happens to their patients. Processes and mechanisms to exchange health information to and from nursing homes and other settings and providers of care (e.g., physician offices, emergency rooms, hospitals, etc.), including the use of electronic health information systems to exchange information, are often not available in long-term care environments. Failure to exchange information across care settings, may engender unfamiliarity on the part of the physicians with processes of care in nursing homes and the unique needs of nursing home residents.

Physicians visit their nursing home residents when not in clinic or performing hospital rounds. Thus, the ability to perform urgent visits is dictated by the flexibility of their nonnursing home clinical responsibilities, with nursing home residents typically accounting for a small fraction of their caseloads. One study of physician staffing patterns in 353 nursing homes in New York with an average of 167 residents per facility, indicated that 60% of facilities had no daily physician presence; nonstaff physicians (physicians from the community who were not employed by the facility) cared for 70% of residents; there were an average of 8.6 attending physicians per facility; and on average, each physician followed 32 residents in each facility.[19]

The average number of attending physicians and number of residents followed by a physician provide some of the only descriptive information on physician staffing patterns in nursing homes. It is unlikely that physicians would follow 32 patients from their office practices into a single nursing home, unless they are in a rural community where there is only one or a few nursing homes, or they have a largely geriatric practice with many patients needing nursing home care on a regular basis. Thus, the

implications of this descriptive data suggest that once patients are admitted to nursing homes, they are unlikely to be followed by their physicians who had been treating them in office practices.

Physician Training and Specialization

To be competent in the care of nursing home residents, physicians should, at a minimum, develop skills in the management of multiple and interacting illnesses and conditions, such as delirium, dementia, rehabilitation and the propensity for falls, behavioral disorders, incontinence, pressure ulcers and wound care, and malnutrition; and the management of multiple and interacting medications. These competencies are described well in two textbooks which serve as guides to physicians providing medical care to nursing home residents.[20;21]

Most of the physicians who provide nursing home care as part of their practices are family physicians or internists with no specialized training either in nursing home care or in the care of older patients (geriatrics).[22] This may be expected, given that training specific to the medical care of nursing home residents is largely confined to a few hours during geriatric rotations in internal medicine or family practice residency.

While 86% of family practice residency programs require geriatric medicine training, only 25% of internal medicine residency programs require any training in geriatric medicine and fewer still in nursing home care.[23] This suggests that many medical residents are completing training with little to no instruction in the care of nursing home residents.

In recent years, the Residency Review Committee of Family Practice and Internal Medicine has acknowledged the importance of specific training in the care of nursing home residents and recommended nursing home rotations during medical training. In addition, the Institute of Medicine recently recommended nine months of geriatric experience for family practice and internal medicine residents.[24]

Physicians who complete a geriatric fellowship have the training to deal with the complex needs of frail, elderly patients. Geriatric fellowships consist of a one or two-year curriculum following residency training and focus on the care of older adults. In 2004, less than 1% of physicians had completed a geriatric fellowship. However, even among those with geriatric training, this specialized training in the care of older patients may not emphasize nursing home care.[25]

While physicians who complete a geriatric fellowship do obtain training in nursing home care, members of our TAG commented that the amount of nursing home exposure varies widely from one geriatric fellowship program to another.[16] Additionally, geriatric fellows in many programs complete their fellowships without having received extensive training in the care of nursing home residents.

Physicians who pass an examination in geriatric care given by the American Board of Medical Examiners obtain a certificate of added qualification in geriatrics. While geriatric fellows may take this examination, fellowship is not a requirement. Physicians with any training background are eligible to take the examination. However, currently only 8,800 physicians (1.2%) possess this certificate.[25] One possible explanation for the low level of interest in this added qualification is that the certificate of added qualification in geriatrics does not enhance career growth or increase salary, thereby negating the desire for physicians to obtain this added qualification. Physicians who do obtain the certification generally are fellowship trained in geriatrics and complete the certification as a part of the fellowship requirements. Research on how the quality of medical care differs between physicians with standard residency training versus those who have completed a geriatric fellowship or obtained a certificate of added qualification in geriatrics does not exist.

Another method by which physicians may acquire competence and skill in nursing home care is as a nursing home medical director. The designated role of nursing home medical directors, as specified in the *Code of Federal Regulations*, Title 42 §483.75(i)(2), is to assume responsibility for the *implementation of resident care policies and coordination of medical care services in the facility*. Several studies have examined the role of medical directors in the physician care of nursing home residents. In an Office of Inspector General report on medical directors, all medical directors reported having professional medical training, primarily in family practice (44%) or in internal medicine (47%).[26] Twenty-two percent sought training in geriatrics during their medical training; 4% completed geriatric fellowships, and 30% had a certificate of added qualifications in geriatrics. While medical directors are not required to be practicing or licensed physicians (although they must be a physician), 92% reported being licensed to practice medicine.

Another study reported that, on average, medical directors spent 29% of their time as medical directors on resident care activities (not related to their attending physician responsibilities), including emergency care, comprehensive care plan development, and communication with attending physicians on individual resident problems.[27] However, in the pursuit of these activities as medical director (as opposed to as an attending physician), physicians who serve as medical directors of nursing homes are estimated to spend less than 1.5 minutes per resident each day, suggesting that medical directorship is not a sufficient criterion to define one who specializes in the care of nursing home residents.

Medical directors also often provide direct care to nursing home residents. Those who serve as both medical directors and attending physicians may represent a group of physicians who could be considered specializing in the care of nursing home residents. One study indicates that approximately two-thirds of medical directors serve as the attending physician for some residents and, on average, care for 43% of patients in their facilities.[19] In a more recent investigation, involving a survey of medical directors in 1999, nearly 80% of medical directors served as attending physicians and, on average, were the attending physician to 44% of the patients in their facilities.[28;29] While medical

directors who also serve as attending physicians seem to play important roles in the nursing home physician work force, the role and qualifications as a physician specializing in the care of nursing home residents has not been explored beyond several surveys.

Given the minimal exposure to and emphasis on nursing home care in medical training, it is not surprising that very little attention has been focused on physicians "specializing" in nursing home care. In summary, the concept of physician specialization in nursing home care is not clearly defined, and while there are several concepts that potentially could be used to define specialization (e.g., advanced training, serving as medical director, physicians that follow patients across the continuum of care including into nursing homes, or time spent in practicing in nursing homes), the number of physicians that would meet these criteria is limited.

ALTERNATIVE PHYSICIAN PRACTICE MODELS

Physicians also may be a part of practice models that differ from the traditional physician practice model providing community and hospital-based care. These models may involve community physicians operating under alternative reimbursement programs, including those with nursing home-only practices, that employ physician extenders. Other models include physicians employed directly by managed care entities or nursing facilities to care for nursing home patients. This section provides an overview of the Medicare program requirements related to physician extenders and then describes alternative physician practice models in nursing homes.

Physician Extenders

Some nursing home practices incorporate physician extenders to assist physicians in caring for nursing home patients. Medicare regulations permit the use of physician extenders (NPs and PAs) in lieu of physicians for some visits, such as visits for acute illnesses and every other required nursing home visit.[30]

Advanced practice nurses (APNs) currently are used throughout various models of primary care delivery. An APN's role and qualifications for licensure as defined by the National Council of State Boards of Nursing, consistent with the Nurse Practice Act, include nurses who have successfully completed the requirements to practice as and hold a current national certification as a nurse midwife, clinical nurse specialist, or NP from an appropriate national certifying body. Additionally, an APN must have successfully completed a post-basic advanced practice formal education program in his or her nursing specialty.[30]

For the purposes of this literature review, we will refer to APN physician extenders as NPs or GNPs. The reviewed literature indicates that APN physician extenders in nursing homes are primarily NPs or GNPs.[31-38] The NP is a subcategory of APNs that primarily focuses his/her clinical practice on primary care in community settings, rather than acute care in inpatient or ambulatory settings.

Although NPs and PAs both are considered physician extenders, NP and PA roles differ in practice. NPs traditionally work under an independent nursing license, billing their time separate from the physician. In some states, they can have an independent practice with prescribing authority.[38] PAs customarily practice under a physician's license, with close supervision from a physician.

TAG members consistently commented that both NPs and PAs enhance the overall quality of care in nursing homes. They also mentioned that NP/GNPs are more prevalent than PAs in nursing homes because NP/GNPs are trained in a nursing model

of education. This background facilitates communication with the nursing home nurses who also were trained under a nursing educational model. CMS allows physician extenders to substitute for physician care in nursing homes to the extent noted in Appendix VI.[30]

The Balanced Budget Act of 1997 granted NPs direct Medicare reimbursement for Part B services, separate from physician billing. Prior to this legislation, NPs were able to receive reimbursement only in rural areas and SNFs. Overall, NPs are reimbursed at lower rates for the same services provided by physicians.[38] In an exploratory survey designed to establish relative work values using magnitude-estimation scaling, NP relative work values did not differ significantly from physician relative work values. In fact, NPs spent significantly more time with residents, whereas physicians spent significantly more time prior to and following resident visits in care coordination activities such as speaking to families, reviewing medications and arranging for discharge follow-ups.[37]

Medicare will reimburse 85% of the physician fee schedule to extenders employed by physicians for services as described in the schedule of allowable substitution for physician nursing home visits found in Appendix VI. As outlined in Appendix VI, physician extenders may not perform the initial comprehensive visits, but they may perform other medically necessary visits. Appendix VI illustrates the services that can and cannot be performed by physician extenders with specific comparisons between SNF care and nonSNF care.

In addition, NPs may provide other services that a nursing home or physician finds valuable.[39] For example, NPs who are employed within the facility can monitor patient conditions on a daily basis, decreasing inconvenient visits for physicians. NPs can increase patient access to medical care and assist physicians by reducing the number of telephone calls physicians would take from or make to the nursing home. NPs participate in family conferences, coordinate care between the physician and the nursing staff, and address minor patient problems.

However, current federal guidelines from the CMS places limitations on the utilization of NPs substituting for all physician services.[40] Specifically, CMS prohibits the use of NPs to perform the initial comprehensive visits, and NPs must alternate visits with physicians for required nursing home visits.

Evercare

The Evercare project, employing community physicians and physician extenders in a demonstration program, is an innovative practice model providing for the health care needs of elderly nursing home residents. Evercare is a variant of the Medicare+Choice health maintenance organization (HMO)[31;41] providing benefits under both Medicare Parts A and B.[32] The goal of the Evercare program is to reduce unnecessary

hospitalizations and costs by providing more intensive primary care for residents who experience a clinical decline.

Nursing homes operating an Evercare program receive a fixed capitated amount for each long-stay nursing home resident. Evercare employs NPs as physician extenders to work with the residents' primary care physicians. Evercare NPs spend more time than physicians in each nursing home, allowing for more regular resident and family contact, and for the opportunity for formal and informal in-service staff training.[31;41] Although NPs provide most of the direct primary care to residents, Evercare primary care physicians assume ultimate responsibility for physician services for nursing home residents and must see their residents a minimum of every 30 days for the first 90 days and every 60 days thereafter.

Evercare contracts with physicians to accept Evercare patients and be paid by Evercare instead of by Medicare with fee-for-service (FFS) rates at least equivalent to Medicare Part B rates. The Evercare FFS payment model also includes payment to physicians for emergency visits to the nursing home and for the time spent in care planning conferences and family consultations.[32] Evercare programs are currently serving nearly 600,000 individuals nationwide, with 1,500 employees in 15 states.[42]

Closed Staffing

Closed staffing models refer to the use of physicians salaried or employed by a nursing facility as opposed to an open staff where community physicians, who are neither salaried by, nor employed by the nursing facility, care for residents in the facility. The current number of nursing homes in the United States with closed physician staffs is not known. However, a study conducted in 1994 found closed staffing models were used by 43% of the 636 facilities in New York state.[43]

In addition to employing physicians, these facilities typically employed more physician extenders and tended to have more beds than facilities with open staffing models. This study found that closed staff physicians were more likely than community physicians to be on site daily; to provide cross-coverage for acute and emergency cases; to provide emergency responses; to build greater accountability, responsibility, and allegiance; and to promote more efficient communication and supervision than community physicians not in a closed model.

Managed Care and HMOs

Some physicians see nursing home residents under managed care plans. These physicians generally are either salaried by the plan or receive a capitated payment to manage individual patients in the plan. They may be assigned a panel of patients and follow those patients if they enter a nursing home, or the physicians may be dedicated to treating only nursing home residents. Also, at least in the past, some Medicare

managed care plans would provide an additional payment to a physician who continued to manage a patient's care when the patient was admitted to a nursing home.

HMOs deliver physician care to nursing home residents through many organizational approaches. As an example, Kaiser Permanente employs physicians who devote 100% of their practice to the care of nursing home residents. In a study that reviewed the records for 24% of Medicare HMO enrollees in 21 HMOs with a primary care nursing home program, all but one program used a common model of physicians and physician extenders.[35] HMOs with primary care nursing home programs tended to have more enrollees than HMO's without primary care nursing home programs, an average of 71 residents per NP and 270 residents per physician.

Another study that looked at panel size found a typical panel for an office-based HMO physician consists of 1000-1250 older patients, while a panel of nursing home residents for a nursing home-based physician was as low as 300-400 residents.[44] Only three of 21 programs reported that the physicians followed their residents into the hospital when they needed acute care. Most physicians had dedicated nursing home practices with no competing clinical duties. HMOs that had not developed a primary care nursing home program explained that there were too few enrollees in nursing homes to justify the cost.[35]

Nursing Home Specialists

The Netherlands currently has a unique specialization for nursing home physicians. At present, it is the only country in the world where nursing home patients receive care from a physician specifically trained to care for nursing home residents.[45] This model of care originated in 1972 with the creation of the Dutch College of Nursing Home Physicians (NVVA). It was recognized that family physicians and other consulting physicians did not have enough time or experience to treat nursing home patients with the quality of care they deserved. The NVVA's goals were to conduct research for evidence-based nursing home medicine and care, create a residency training program in nursing home medicine, initiate academic teaching of medical students in nursing home medicine, and construct continuing medical education in nursing home medicine.

Under this model, the Dutch frail elderly can receive medical services from three types of physicians:

(1) The family physician, who provides medical care to the elderly in residential homes and in the community,

(2) The nursing home specialist, who provides medical care to nursing home and institutionalized patients, and

(3) The hospital geriatrician, who focuses on medical care for the elderly within the hospital setting.

Today, Dutch nursing homes have care teams, consisting of nursing home physicians and nurses; occupation, speech, physio- and physical therapists; dietitians; psychologists; social workers; and pastoral workers who are all employed by the nursing facility. Promising benchmark outcomes have been noted among patients cared for by specialized nursing home physicians. Results show increased satisfaction among nursing home residents cared for by nursing home specialists when compared to residents treated by physicians not specializing in nursing home care.[45]

Several British studies suggest that having one physician in the nursing home may be more beneficial than current models of multiple physicians in nursing homes. In a retrospective cohort study done in Mansfield, Nottinghamshire, it was found that nursing home patients received twice as many physician contacts when one physician was caring for all of the nursing home patients as compared to a model where multiple physicians provided care to patients in a given facility.[46]

Additionally, a quantitative analysis completed in Darlington, County Durham, found that large proportions of nursing home patients served by only a few general practitioners caused an increased workload, presenting problems in the organization of care. Each nursing home patient was found to equal three practice patients under 65 years of age, indicating that some general practitioners were reluctant to become involved in nursing home care due to the time requirements. Given this information, physicians considering a nursing home-only practice may need to maintain a reduced patient load to account for the additional time required to care for these complex patients.

One doctor in sole charge of the nursing home may benefit the nursing home residents by providing consistent quality of care compared to multiple physicians who are less consistent in quality of care as a result of having only a few nursing home residents.[47] A prospective comparative study completed in Glasgow supports medical care in a nursing home provided by one practice, finding that this type of "specialization" enabled more proactive and preventive interventions for all residents compared to models where physicians followed their patients into nursing homes.[48]

BARRIERS TO ACCESSING PHYSICIAN CARE IN NURSING HOMES

Recruiting and retaining physicians in nursing homes is difficult. Many barriers, some of which have been discussed, exist to discourage physicians from choosing to establish nursing home practices or adding nursing home care to their practices. Other obstacles are causing physicians with nursing home practices to consider scaling back or dropping their nursing home practices altogether.

A study published in 1998 by a Los Angeles, California, physician, interested in the reasons why physicians specific to that region either hesitate or refuse to see nursing home patients, found reimbursement, nursing facility traits, patients' family involvement, location of facility, practice model, and reputation of nursing home care as the top six barriers to providing nursing home care.[49] In 1970, a Senate Subcommittee on Long-Term Care published findings on reasons physicians avoid nursing homes, and the findings were almost identical to those in the more recent 1998 study. It appears that although the government in 1970 studied this topic area, 28 years later the state of barriers to nursing home care is the same as before.

Training and Experience

Physicians may not consider nursing home care because they generally have not received training that encourages or prepares them for such care. General practitioners who provide the majority of nursing home care may not be trained to provide care in nursing homes, as reported from a survey of recent medicine residency graduates. When graduates were asked if their formal medical training did at least a "good" job of preparing them to be a general practitioner, 42% of family practice and 62% of internal medicine graduates reported spending too little training time in nursing homes. Only 1% in each of these two specialties reported spending too much time in nursing homes.[50]

Training and preparedness influence the willingness of a physician to participate in nursing home care. Family practice residents with nursing home experience during training tend to continue to provide nursing home care after graduation, and internal medicine residents who provide primary care to nursing home residents have improved attitudes toward seniors and improved skills in the assessment of geriatric syndromes.[33] Similarly, graduates of family practice residencies who rate their training in geriatrics favorably are significantly more likely to make nursing home visits after graduation.

Increased training in nursing home care may be difficult to achieve. As previously noted, the extent to which geriatric fellowship programs emphasize nursing home care varies significantly across programs. In a study conducted in 1994, researchers estimated that in order to develop the capacity to train academic geriatric leaders, the

number of geriatric fellowship graduates would need to increase from 100 per year to 250 per year to meet the goal of 2100 academic geriatricians by the year 2000.[24] This goal still has not been met in 2004.

TAG members supported such findings from the literature.[16] TAG members identified: (1) a lack of continuity of physicians between the hospital and nursing home, and (2) a lack of academic leadership with expertise in nursing home care as potential barriers to training physicians in the care of nursing home residents. Characteristics considered important by members of the TAG were early and continued exposure to nursing home care. One TAG physician recalled that his sole experience in nursing homes prior to going into practice 20 years ago was one visit on one occasion during his residency.

TAG members added that the educational component has not changed drastically since that point in time.[16] The group believed that more physicians would choose to deliver care in nursing homes if they had a comprehensive clinical experience in nursing homes during medical school or during the first year of residency. At many academic programs, the geriatric rotation is not completed until the third year of residency training. By then, the majority of residents are well on their way to having identified their area of specialized interest and it is too late to consider geriatrics and/or nursing home care. One suggestion for improving exposure to nursing home care during training was to require resident physicians to visit their patients once they are transferred from the hospital to a nursing home.

Additionally, TAG participants considered "continued medical education" courses, the medical courses that follow formal medical residency training, as an important opportunity to both expose physicians to nursing home care and retain physicians in nursing homes who already care for nursing home residents.[16] Unfortunately, the TAG members noted a paucity of and resistance to incorporating training on nursing home care into national medical conferences providing continuing medical education. For example, at a recent national adult primary care meeting, only three courses out of hundreds of courses focused on the care of nursing home residents. Physicians with knowledge in the area of nursing home care reported offering to provide sessions on the care of nursing home residents at this conference, but the Academy of Family Practice responded that the training necessary for those interested in nursing home care is provided. This suggests that leaders in primary care are either not aware of and/or not interested in providing education on the care of nursing home residents.

Further encouragement of nursing home specialists may be difficult. On one hand, most physicians who see nursing home residents are family practitioners or internists with no training in nursing home care. On the other hand, geriatricians also may not receive adequate training in nursing home care.

The training and experience of the available NPs may limit the ability to implement physician extender models. TAG participants cautioned that the amount of geriatric and nursing home care taught during the training of NPs depends largely on the interest of

the faculty in geriatrics and nursing home care. The scope of the training programs may influence the decision to use such practitioners. One participant, who routinely hires NPs, noted that NPs without geriatric training are far less prepared to practice in nursing homes than those who received such specialized training. Many of the physician extenders hired for his practice require specific education in the care of older adults before they can care independently for nursing home residents. For example, according to the expert TAG member, NP and GNP students receive minimal information on falls and pressure ulcers, two of the most common geriatric problems in nursing homes. Another barrier identified for GNPs is the availability of faculty with academic credentials to train GNPs and infuse more NPs with geriatric training into the medical community.

The existing labor supply of physician extenders may also constrain their use and their cost-effectiveness. For example, the Evercare demonstration project was unable to find enough GNPs and was forced instead to employ general NPs.[32] A New York State demonstration project that required nursing homes to hire NPs found that the increased demand for NPs and PAs drove salaries for physician extenders to nearly double the national average in some areas of the state.[43] The cost of utilizing NPs may be borne by third-party payers, such as Medicare, or shared with the NPs' employers. Employing an NP requires a large volume of nursing home visits to be cost effective. It is estimated that to support an NP's salary entirely through Medicare reimbursable services, an NP would need to perform an average of 16 visits per day at the 99312 code (the most common subsequent visit coding level).[39]

Reimbursement

Payment incentives affect physician practice choices, including nursing home care. For most nursing home residents, Medicare reimburses physician care in the nursing home through Medicare Part B insurance. Nursing home residents with Medicare Part B coverage (approximately 95% of those enrolled in Part A coverage) will have physician visits paid by Medicare, regardless of the payer that covers the cost of the nursing home stay, which may be a private payer, Medicaid, or Medicare Part A. Medicare determines physician payments through the Medicare Physician Fee Schedule. There are eight Current Procedural Terminology (CPT) codes assigned to nursing home care. Three codes apply to increasingly complex evaluation and assessment visits, three to increasingly complex subsequent care visits, and two to services provided on the day of nursing home discharge. The descriptions and guidelines for each of the six nursing home codes can be found in Appendix VII, and a detailed description of how the payment amounts are determined is in Appendix VIII.

Physicians may prefer to avoid nursing home care and focus on office and hospitalized patients due to the relative payments for nursing home, office, and hospital visits for the same type of service. Appendix X presents the 2004 Medicare payment schedule in Colorado and in Philadelphia for all nursing home CPTs, as well as the CPTs for similar care in other settings: office visits, hospital consults, emergency room

visits. It presents the values associated with each of the three components of payment formula: professional work, overhead, and malpractice. For example, the CPT code (99301) for a 30-minute new nursing home assessment would pay $64.76 in Philadelphia. In comparison, the same physician in Philadelphia would receive $102.49 (CPT 99203) for a 30-minute new office visit with a Medicare patient and $70.38 for a new 30-minute hospital care visit. Physicians are paid less per hour for nursing home care than care in other settings and, thus, may have no incentives to see patients in nursing homes.

Medicare Part B payments change each year in response to alterations in relative value units (RVUs), the Geographic Practice Cost Index, and the conversion factor. For example, the work component for nursing home visits was very low when the system was first implemented, but it was upgraded significantly between 1992 and 1996 to reduce the gap between nursing home visits and hospital visits.[51] The nursing home component still is lower, however, and the 2004 RVU for the work component of a 30-minute service is 1.20, 1.34, and 1.28 for nursing home, office, and hospital, respectively.

Recently, the proposed 2004 fee schedule had deep cuts in the practice expense RVUs for nursing home care that would have dropped payment rates between 15% and 22%. The final fee schedule did not adopt these cuts in response to protests from organizations involved in long-term care, but the threat of future cuts may deter physicians from starting a nursing home practice.[52]

The level of reimbursement is speculated to influence physician decisions to decline to treat nursing home residents.[53] Some investigators argue that the current payment structure for physician services in nursing homes does not support the nursing home workforce and is insufficient to maintain numbers, skills, and stability of staff caring for an increasingly frail older population.[54]

Nonreimbursable Activities

Another concern is the time spent on nonreimbursable activities. A time and motion demonstration project in New York State determined that 64% of a physician's time practicing in a nursing home was spent on nonreimbursable activities compared to 30% in an office setting.[43] Four common nonreimbursable activities for physicians in nursing homes were found to be: telephone evaluation, care planning meetings, staff communication about the resident, and meetings with family members. While all physician specialties face a range of nonreimbursable activities, nursing home care and other types of care for frail elderly patients (e.g., home health care) require more of these activities than other types of practice, according to physicians responding to a survey issued by the AMDA.[55] The survey found physicians were performing a significant number of tasks for each nursing home visit. More than half of all physicians reported spending time in the following seven tasks for each billed nursing home visit: scheduling, reviewing, and obtaining clinical reports; coordinating home/outpatient care;

coordinating therapy; making phone calls; coordinating ancillary services; responding to or monitoring change in condition; and responding to pharmacist or nutritionist questions. Most of these are nonreimbursable activities.[56]

TAG members agreed that a significant amount of time is spent in family care planning, making telephone calls, and communicating with other providers regarding the patient's health. This time is not reimbursable under most practice organization models. However, TAG members again mentioned the importance of paying close attention to documentation and explained that physicians can receive reimbursement for certain activities that do not involve direct patient care by documenting the time spent performing these activities in their progress notes.

Medicare and Medicaid nursing facility requirements specify that the medical record must contain discharge information documented either by: (1) "a physician" because the resident is being transferred or discharged because the health of others in the facility would otherwise be endangered, or (2) the "resident's physician" because the resident's needs cannot be met in the facility or because the individual has improved and no longer requires the services provided by the facility (*42 CFR §483.12(2)(i), (ii), and (iv), and (3)*). Resident records also are required to contain a final resident discharge summary that describes the resident's stay, summarizes the resident's status, and addresses the resident's post-discharge needs *(42 C.F.R. §483.20(l))*. Facilities must develop a post-discharge plan of care that is developed with the participation of the resident and his or her family, which will assist the resident to adjust to his or her new living environment. (*42 C.F.R. §483.20(l)*). This requirement applies to discharges to a private residence, to another nursing facility, or to another type of residential facility such as board and care or nursing facility. Physicians can bill for services provided on the day of nursing home discharge (Appendix VII).

In hospitals, the Medicare conditions of participation specify that a hospital must have a discharge planning process; discharge plans must be developed by qualified personnel; and that patient transfers must occur with the necessary medical information.[57] While Medicare pays physicians a higher rate for the production of discharge summaries for patients being discharged from hospitals (in comparisons to Medicare payment rates for discharge summaries for patients being discharged from nursing homes, see Appendix X), hospital discharge summaries are often absent or incomplete which contribute to poorly executed transitions across care settings and increased physician time obtaining necessary records. An AMDA survey of 3000 sequential admissions to ten Long Island nursing homes from 25 different hospitals found the following: 22% of transfers had no formal summary of information; legible summaries were available only 56% of the time; test results were omitted in 31-67% of transfers; advance directives and code status were absent in 81% of transfers; and a legible phone number for the transferring physician was present in only 33% of transfers.[55]

These poorly executed transitions increase physician burden and nonreimbursable activities associated with tracking down and completing needed paperwork for nursing

home visits may be attenuated by electronic medical records.[60] Further, poor information exchange at times of transition is known to increase costs because of the associated inefficiencies, potential medical errors, and duplication of tests and services leading to greater utilization of hospital, emergency, post-acute, and ambulatory services. Electronic medical records, which are not currently available widely in nursing homes, may be an important future direction to improve transfer of the discharge information.[58] In a study completed by Kramer, *et al.*, one of the most highly valued functions of the electronic health information systems used by post-acute care and long-term care settings was access to real time information at times of transition.[59] The time spent in acquisition and review of medical reports may be reduced by the introduction of standardized electronic medical records across settings.

Other nonreimbursable time is the travel time to the nursing home and, thus, it may only be cost-effective for a physician to follow nursing home residents in nursing homes where he/she treats multiple residents in that facility. Further, when a physician is called concerning an individual resident who is experiencing acute decline, a single visit in the facility may not be cost effective and creates incentives for physicians to request that the resident be sent to the hospital or emergency room.[61] Again, the use of electronic health information systems and telemedicine could mitigate these costs. However, Medicare payment policy presently does not pay for physician or physician extender services delivered via telehealth to nursing home residents.[65]

Another aspect of payment that may discourage physicians from nursing home care is a concern that their nursing home claims will be denied. A carrier is the entity contracted by Medicare to determine payment. Claims submitted in excess of the required monthly visits must contain documentation to support the medical necessity of both the service and the frequency of visits or they will be identified as "routine" rather than medically necessary.

Billing requirements also may influence physicians' choices to practice in nursing homes because the billing process is more complex in nursing homes. Learning to bill properly takes time and practice. While federal requirements do not dictate a minimum number of medically necessary visits for community-dwelling elderly who are chronically ill, federal requirements do dictate the minimum number of physician visits to nursing home residents (Appendix V). Visits that occur in excess of the 30 or 60-day window must be deemed medically necessary by the physician's carrier. Carriers commonly disallow visits between the required 30-day or 60-day intervals as routine when not well documented.[51]

TAG members identified a need to address the misperceptions and fears of coding and billing for nursing home physicians. Several participants reported very low denial rates once billing codes and documentation for visits were carefully examined for accuracy. In particular, one participant estimated that physicians could expect to achieve denial rates less than 1% with attention to billing practices. Participants agreed that the source of physician denials and subsequent perception that reimbursement for nursing home work is poor is more likely due to misunderstanding or lack of adequate

education about correct billing and coding procedures than the actual reimbursement rates. However, with little training or education in nursing home care, physicians are not likely to feel comfortable in their billing practices for nursing home care.

In summary, the extent of nonreimbursable time necessary for the care of geriatric patients contributes to physicians' attitudes toward caring for these residents. The full range of primary care tasks performed by physicians in the nursing home and the time spent on each can be found in Appendix XI.

Burden of Practicing In Nursing Homes

Many barriers discussed in the literature related to establishing and maintaining a nursing home practice focus on the inconveniences inherent in nursing home practice. Nursing homes are required to immediately report any change in a resident's physical, mental or psychosocial status condition to the resident's attending physician.[62] When called for a change in condition, the physician has several options, including: (1) an urgent visit to the nursing home, (2) management by phone, or (3) transfer to a hospital. An urgent visit to the nursing home may avoid a hospitalization and yield better diagnostic accuracy than treatment by phone, but it generally is not convenient or possible due to the demands of a busy clinic or inpatient practice and the typically remote location of the nursing home relative to the physician's office/hospital practice.

Physicians are required to monitor changes in the medical status of their residents and to provide consultation or treatment when called by the facility.[6] While such calls are designed to be in the best interest of the resident, this requirement frequently results in many unnecessary calls, according to physician organizations such as the AMDA, and suggests the need for refinement of the federal definition of significant change in condition. For example, in November 2000, the Minnesota Department of Health issued a formal statement regarding unnecessary phone calls, urging facilities to develop notification policies that ensure adequate care of their residents but that avoid unnecessary contacts.[63] AMDA also published guidelines in response to the complaint from physicians that too many calls from nursing homes were unnecessary. "Protocols for Physician Notification" in the long-term care setting was created to guide nurses in avoiding unnecessary phone calls.[64]

The activity most likely to deter physicians from seeing nursing home residents is the expectation of a large number of phone calls from the nursing home.[25] In addition, the inconvenience of seeing residents outside of the office also is speculated to influence physician decisions to decline to treat nursing home residents.[53]

Malpractice

Malpractice is one of the biggest issues in physician practice today, and nursing home care exposes physicians to the additional financial risk associated with a lawsuit against the nursing home. If a nursing home resident dies at the nursing home, the physician may fear that he/she will be sued for failure to respond to a change in condition. In addition, physicians may fear that not hospitalizing a patient who subsequently dies in the nursing home will lead to a lawsuit. In lawsuits directed against a nursing home for poor care, the physician is named directly in approximately 10% of cases.[66] Recently, insurance companies who have settled lawsuits against a nursing home where the physician was not named then have sued the physician after the settlement in order to recoup some of the losses associated with paid claims.[66] Physicians who feel they are accepting legal responsibility for the care delivered by the nursing home staff may be reluctant to see nursing home residents or may be more selective in declining residents from specific nursing homes. As nursing homes face increasing liability insurance premiums, many, where licensure laws permit, are choosing to go "bare," or without coverage, making the physician's personal malpractice insurance a more attractive target for litigation.

Increasingly, both nursing homes and physicians that practice in nursing homes are finding it difficult to obtain insurance coverage or, at minimum, affordable insurance coverage. The inability to get coverage for nursing home care or the increasing cost of such coverage may deter physicians from providing care to nursing home residents. Physicians report difficulty obtaining coverage for their nursing home work and note malpractice insurance policy renewal premium increases of up to 300 times previous premiums.[67]

A recent AMDA survey found that 27% of nursing home medical directors claimed they had reduced patient care hours, no longer provided certain services, or referred complex cases to other physicians as a result of malpractice concerns. Of physician and medical director respondents, 5.6% were unable to get liability coverage because they worked in nursing homes. Additionally, in 2002, more than 20% of respondents who work in nursing homes reported that while they were able to ultimately obtain malpractice insurance, they did have problems doing so because carriers had stopped providing malpractice insurance in nursing home markets in their region or premium costs were too high.[67] Some experienced average premium increases of 154% in one year. One in 20 medical director respondents indicated they had stopped working in nursing homes due to lack of liability coverage.[67] Many people expect a surcharge to be added to malpractice premiums for all physicians who see nursing home residents, similar to the add-on for physicians who assist in surgeries.[66]

At present, if a physician practices in a nursing home that does not have liability insurance, many malpractice insurance organizations will refuse to insure the physician, which is a significant concern for medical directors in nursing homes.

THE IMPACT OF PHYSICIAN PRACTICE PATTERNS IN NURSING HOMES

Although many factors such as director of nursing tenure, facility size, and management practices are believed to influence nursing home quality, there has been little investigation of the effect of physicians practice patterns on the overall quality of care provided.[19] The quality of care delivered by physicians in nursing homes is difficult to measure, but we can observe some activities that are associated with physician/ medical care services in nursing homes, such as frequency of physician and other medical care services, hospitalization rates, and patient satisfaction.

Frequency of Physician and Other Medical Care Services

Nursing home patients have been found to receive significantly more visits from physicians or physician extenders under various alternative models compared to traditional models. For example, physician and NP visits in the Evercare model were more frequent for Evercare enrollees as compared to nonEvercare residents.[41]

In addition, one study compared HMO to FFS plans and found HMO patients in nursing homes received more combined visits (physician and NP) than FFS patients.[68] In this investigation, HMO physicians were paired with NPs, and HMO physicians averaged 0.63 physician visits per month, and FFS physicians averaged 0.83 physician visits per month. HMO NP visits averaged 0.93 visits per month. There were no NP visits in FFS. The average number of combined visits per month was 1.63 in the HMOs versus 0.83 in FFS.

In a study of HMO nursing home care, the approaches of three HMOs were compared against each other and against nonHMO plans.[34] Overall, the response to acute problems, such as falls and fever, was better documented and more prompt among HMO residents compared to residents not enrolled in an HMO. One of the plans that partnered NPs and physicians had fewer emergency room visits and lower hospitalization rates. Satisfaction did not differ between HMO and nonHMO. The most successful HMO provided the same number of physician visits as nonHMO, but supplemented with NP or PA visits. Reasons for less success in certain HMO plans was attributed to needing a very strong physician component, including frequent visits and close supervision to reduce hospitalization. The program must be maintained meticulously with very little margin for error, and dedicate physicians solely to the care of these patients to achieve the best results.

Health Partners, a nonprofit HMO with a Tax Equity and Financial Responsibility Act (TEFRA) risk contract, located in Bloomington, Minnesota, contracts with nursing homes in the area to reserve beds for members of the HMO who would benefit from an acute nursing home stay. Board-certified geriatricians are employed by the HMO to

care for these geriatric residents. A short nursing home stay with care from geriatricians avoids hospitalization. A total of 1144 patients participated in the one-year program and 100 Health Partners physicians were surveyed about the program. Post-acute length of stay in the program was significantly lower than that in nonparticipating nursing homes (14.3 vs. 20.5 days). In addition, re-hospitalization rates from these units were comparable to or better than those from nonparticipating nursing homes. Patient and primary care physician satisfaction with the units was high.[69]

Hospitalization and Other Measures of Quality and Cost-Effectiveness

Unnecessary hospitalization of nursing home residents is an area of concern. Beyond the disruption and discomfort to the resident of a hospitalization, there is significant risk in hospitalization of older patients, including a greater risk of complications unrelated to the reason of hospitalization and other hazards such as functional deterioration from immobilization while hospitalized.[70] To promote patient safety and quality of life, hospitalization should be used only when medically necessary.

A number of factors encourage physicians to hospitalize patients that could be successfully treated in the nursing home. Past studies have found up to 76% of hospitalized nursing home patients could have been treated in the nursing home.[71] The following issues, already discussed in this paper, contribute to the unnecessary hospitalization of nursing home residents:

- Physician time commitment to conduct an urgent nursing home visit;
- Current reimbursement rates;
- Methods for physician visits in nursing homes, hospital and outpatient settings; and
- Fear of a medical malpractice claim arising from treating patients in nursing homes.

Some practice models and demonstration projects have redesigned the payment structure to provide incentives for fewer hospitalizations. These structures tend to increase the payment for providing physician and medical services in the nursing home, sometimes resulting in a reduction in overall costs by avoiding expensive hospital days.

One demonstration project encouraged the treatment of acute conditions due to a "sudden decline" within the nursing home using a case management system that involved Medicare and Medicaid waivers. The program provided additional payments to nursing homes and physicians who chose to diagnose and treat an acute illness in the nursing home rather than hospitalize the resident. The program encouraged SNFs to treat acutely ill patients in the nursing home when safe and feasible. Physicians were paid for daily visits as long as the patient qualified for acute care services, up to 100 days.[71]

The project observed 112 acute episodes treated under the "sudden decline" benefit. Of these, independent evaluations determined that 76% of the episodes would have required at least an emergency room visit under the traditional Medicare and Medicaid system and that 88.4% of the cases were appropriately covered under the program. The cost for the patients with acute episodes treated under the program was $83 per patient day. Treating the acute episodes in the nursing home resulted in an estimated Medicare cost savings of $3,000 per episode of illness, not including the savings to Medicaid of holding the beds open while patients would have been in the hospital.[71]

A quasi-experimental study investigated the use of hospital services for nursing home residents participating in the Evercare program.[32] Evercare enrollees from five sites across the nation were compared with two control groups that included both nursing home residents of Evercare facilities, but not enrolled in the Evercare program, and nursing home residents at facilities that did not have an Evercare program. Unlike traditional nursing homes, the Evercare program offers payment incentives by reimbursing nursing homes for NP care and providing care for residents who otherwise would be hospitalized. This incentive component is referred to as intensive service days, or ISD. Evercare also reimburses unlimited physician visits.

Results of the study indicated that the Evercare sample population had fewer hospitalizations than the control sample. However, it was noted that the Evercare program is expensive to implement and operate, with costs to Medicare higher than in the traditional nursing home medical model. Increased Medicare costs arise from Medicare capitated payments being higher than comparable costs in the Medicare SNF payment.[32] This indicates that, although cost savings through reduced hospitals costs are apparent, those saving may be offset by the increase in costs to implement and run the program.[41]

Research suggests that geriatricians are more efficient than practitioners without training in geriatrics at treating older patients and that specialized training in geriatrics may lower hospitalizations.[72] In a comparison of long-term care facilities, a facility served primarily by geriatricians had lower hospitalization rates than a facility served primarily by general primary care physicians, after adjusting for case-mix. Overall, monthly Medicare Part A and B costs also were lower in the facility served primarily by geriatricians. In this analysis, costs included reimbursement for physician and therapy services; laboratory tests; X-ray services; and hospitalizations. The first facility (60% of primary care visits by geriatricians) had an average monthly Medicare Part A and B cost per resident that was $162 lower than the second facility (25% of primary care visits by geriatricians).

Research studies consistently demonstrate that the integration of physician extenders can reduce hospitalizations and overall costs.[31;32;73-76] For example, in a 92-bed, private, for-profit teaching nursing home facility in central Georgia, a PA practice model was introduced.[77] The PA made three-to-four weekly visits to the nursing home to complete the initial assessments, provided nearly all acute care visits, received calls

during business hours, and consulted daily with attending physicians and residents. In the facility studied, the number of hospital days utilized per year declined by 68.6% after implementation of the model compared to the pre-implementation time period. Most residents in the study were managed by the same group of health care providers allowing for continuity of care practice protocols in the management of acute illness. They observed a decline in aggregate hospital DRG reimbursements of $96,043 because of reduced hospitalizations.[77]

Within three models of care delivery in HMOs, Reuben, *et al.*, found residents enrolled in a model that paired physician extenders with physicians had fewer emergency room visits, and a smaller number were hospitalized compared to enrollees in a model that utilized only physicians.[34] TAG members also associated the use of PAs/NPs with fewer hospital visits overall in their practices.

Research at three geriatric teaching centers indicates that the use of geriatrician faculty and GNPs with daily presence in the nursing home and focus on avoiding unnecessary hospitalizations by timely management of acute clinical decline, results in lower hospitalization and improved care processes with lower use of inappropriate medication.[33;36]

While some research has reported an overall decrease in Medicare's aggregate costs as a result of using physician extenders, the use of and payment to physician extenders does increase the cost of providing medical visits to the nursing home. The Georgia study, mentioned previously, found the payments for physician/PA services to increase by $22,304 per patient each year in the nursing home. In that study, the associated savings from the decline in hospital costs was more than quadruple the cost for additional physician/PA visits.[77]

Nursing home traits may limit the ability of physicians to provide the "best practice" model. Specifically, the technology available in nursing homes may be below the standard needed to effectively treat a patient for an acute event. For example, physicians may not be confident in their abilities to effectively treat an acute respiratory illness when it may take two days to obtain the results of a chest radiograph performed in the hospital.[78]

In a six-year case study series (1992-1997) with pre and post-experimental design, the availability of prompt lab, radiologic, and electrocardiographic services and the ability to administer intravenous medications allowed serious diseases to be evaluated and treated in study nursing homes in lieu of hospitalization to perform these functions.[77] This study found that 78% of nursing home residents with pneumonia could be managed in the nursing home if the nursing home had daily physician presence, availability of mobile radiographic services, and the ability to administer intravenous antibiotics.

Patient Satisfaction

Another outcome measure is patient satisfaction. Closed staffing models may be associated with higher patient satisfaction. Three experimental models of care in New York with closed staffing were compared to the traditional FFS model.[43] The three models included an NP model where staff NPs worked collaboratively with the facility medical director, a PA model where the PA was supervised by staff physicians or the medical director, and a physician model where only staff physicians cared for the nursing home residents. In this investigation, resident satisfaction was significantly better in the closed models. Residents reported improved access to providers, more comprehensive examinations, and more compassionate care.

Other studies find no differences in patient satisfaction between practice models. The *Evaluation of the Evercare Demonstration Program Final Report* indicated that quality of care and patient satisfaction of Evercare enrollees were equivalent to the care received by control patients in nursing homes participating in the Evercare program and nonparticipating Evercare nursing homes. However, both Evercare residents and their families reported an appreciation for the close attention and care coordination from primary caregivers, and they were more confident that hospitalization would occur when indicated.[32]

In a study of HMO nursing home care, the approaches of three HMOs were compared to a traditional model of care.[34] Satisfaction did not differ between HMO and nonHMO plans. A final study comparing HMO and FFS plans asked two questions of patients to assess satisfaction. No differences were found between HMO and FFS residents when asked: "Does your doctor see you often enough?" "Were you treated for sickness as well as you could have been?" Further, the majority of residents and their families responded "yes" to the latter question under both plans.

Unanswered Questions

The published literature on physician practice patterns in nursing homes is limited, and several questions remain unanswered or only partially answered, including:

- Amount, duration, and scope of physician (and/or nonphysician provider) visits to nursing homes;
- Financing methods, coverage requirements, and rates for physician (and/or nonphysician provider) services in nursing homes;
- Perceived impact of physician (and/or nonphysician provider) visits to nursing homes;
- Any policy issues/concerns that arise from the physician practice models and financing arrangements;

- How physician presence in nursing homes affects the medical care of residents beyond decreasing hospitalizations; and
- Potential use of electronic medical records in improving transfer of information among hospitals and nursing homes, and other settings/providers of care.

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APPENDIX I

The Influence of Training and Experience on Physician Practice Patterns in Nursing Homes				
Study Title	**Training**	**Time in NH**	**Labor Market**	**Comments**
Bad Medicine: How Government Oversight of Nursing Homes is Threatening Quality Care (Meyer, GS & Gibbons, RV, 1997)	Physicians in geriatrics are more likely to make house calls.			Those who made house calls more likely to be generalists, osteopaths, older, male, board-certified, practicing in the northeast and in solo practice.
Physician Career Satisfaction Across Specialties (Leigh, JP; Kravitz, RL; Schembri, M; Samuels, SJ; & Mobley, S, 2002)	Nonlinear relations of satisfaction among physicians in west, north, central and northeast states. Geriatric internal medicine ranked in high % of "very satisfied" category. Older, higher income, board-certified, rural/town residence, northeast or west central location positively associated with satisfaction.			Survey of 12,474 MDs across specialties.
Alternative Models of Ensuring Access to Primary Medical Care in Nursing Facilities Demonstration Project (Moore, S & Martelle, M, 1996)	MD-model (staff physicians only) -- 7 facilities PA-model -- 7 facilities Control -- FFS physicians Experimental groups could not have physician services in Medicaid rate.			Difficult to recruit and retain MDs.
Effects of Physician Experience on Costs and Outcomes on an Academic General Medicine Service: Results of a Trial of Hospitals (Meltzer, D; Manning, WG; Morrison, J; Shah, MN; Jin, L; Guth, T; *et al.*, 2002)	Hospitalists vs. nonhospitalists; 2 general internists in practice for 2 and 10 yrs. respectively; 58 nonhospitalist physicians with 9 yrs. experience after residency (24 having subspecialty training).			Hospitalist care was associated with lower costs and short-term mortality.
Medical Practice with Nursing Home Residents: Results from the National Physician Professional Activities Census (Katz, PR; Karuza, J; Kolassa, J; & Hutson, A, 1997)	Survey results indicate lack of academic physicians with NH involvement; Residency Review Committee of Family Practice and Internal Medicine recommended mandated NH rotations; IOM recommends 9 mos. of geriatric experience for medical residents; Education Committee of AGS recommends significant expansion of geriatrics in medical school curriculum.	77.4% spend NO time with NH patients 5.1% spend 2-5 hrs. 1.4% spend 5-10 hrs. 1.7% spend >10 hrs. Physicians with a NH practice spent less than 2 hrs. per week with patients.		General Practice -- N=4935; Family Medicine -- N=1941; Internal Medicine -- N=2924; Psych/Neurology -- N=1505; Surgery -- N=1483; Other Specialty -- N=8562, ⅓ of physicians in primary care reported caring for NH patients compared to 15% of specialists.

Study Title	Training	Time in NH	Labor Market	Comments
Geriatric Medicine Training and Practice in the United States at the Beginning of the 21st Century (Warshaw, GA; Bragg, EJ; & Shaull, RW, 2002)			Disincentive -- income of academic and nonacademic primary care physicians and geriatricians remains low compared to other specialties.	Need for resource investments to train faculty in roles as teachers/researchers in geriatrics.
Physician Supply and Demand Indicators in New York and California (2003)	Number of graduate medical education (GME) programs in geriatrics -- 1993 (117) compared to 2001 (276).		Starting GME geriatric salary -- 2001 ($125,000 in NY, $123,000 in CA). Mean of all medical subspecialties (147,000 in NY and 160,000 in CA). Rank out of 35 specialties. 29 highest in % difficulty finding job; 21 highest in % who had to change plans; 22 in mean of job offers.	
OIG Medical Director Survey (U.S. Department of Health and Human Services, 2003)	All medical directors in study report professional medical training; 44% in family practice, 47% in internal medicine. Few report specialization in caring for elderly; 22% specialized in geriatrics in medical school, 30% have certificate of added qualifications in geriatrics, 4% completed geriatric fellowships.	Medical directors: 72% <=4 hrs./week, 14% 5-8 hrs., 14% >8 hrs.; Medical directors: 70% <=10% of practice, 23% 11-33%, 7 % >33%.		Medical directors: 39% member of AMDA, 25% currently AMDA certified, 3% lapsed certified.
Long-Term Care for the Disabled Elderly: Current Policy, Emerging Trends and Implications for the 21st Century (Stone, R, 2000)	8,800 (1.2%) are certified in geriatrics; (<3%) of medical school graduates have taken geriatrics electives; 86% of family practice residencies (25% of internal medicine) require geriatrics.			
Preparedness for Practice: Young Physicians' Views of Their Professional Education (Cantor, JC; Baker, LC; & Hughes, RG, 1993)	Survey of young MDs: Did formal medical training do at least a 'good' job of preparing you to be a physician? General internal medicine and general/family practice had two of the three lowest percentages at 75% and 77%, respectively; 42% of family practice and 62% of internal medicine reported spending too little training time in LTC facilities while only 1% in each specialty reported spending too much time; 40% and 50%, respectively, reported a less-than-good job of education to prepare them to 'manage care needs for the frail elderly'.			

Study Title	Training	Time in NH	Labor Market	Comments
Residency Education in the Nursing Home (Katz, P; Karuza, J; & Hall, N, 1992)	NH rotation offered in 86.5% of family practice and 32.2% of internal medicine residencies; supervising faculty training: 6% in internal medicine and 1% family practice had formal geriatrics; 10% in internal medicine and 14% in family practice had added certification in geriatrics.			
Physician Staffing Patterns Correlates of Nursing Home Care (Karuza, J & Katz, PR, 1994)	42% family and general practitioners, 55% internists, 2% surgeons, 1% psychiatrists; 73% of facilities did not have medical directors with certificates in geriatrics; 7.5 yrs. tenure as medical director.	⅓ of medical directors do not serve as attending physician for any residents; the ⅔ who do serve as attending are for less than half the residents (43%).		8.6 attending physicians average per facility, 32 residents per MD, 70% nonstaff physicians, and no daily presence in 60%. Integrating physicians by recruiting and maintaining a closed staff may enhance medical care.
Health Care Utilization by Old-Old Long-Term Care Facility Residents (Phillips, VL; Paul, W; Becker, ER; Osterweil, D; & Ouslander, JG, 2000)		Comparison of two facilities. In facility 1, only 25% of primary care visits were by geriatricians while in facility 2, 60% of primary care visits were geriatrician visits.		Facility 2 had fewer physician visits (9.7 vs. 19.2 PC and 6.1 vs. 8.8 specialist); fewer hospitalizations (17% vs. 25%). Hospitalizations are 60% of total Part A and Part B costs. Facility 2 had Part A + Part B costs, on average, of $162 less per mo. per patient.
NH Medical Directors: Ideals and Realities (Zimmer, JG; Watson, NM; & Levenson, SA, 1993)				Medical directors, directors of nursing, and administrators felt more time ideally should be spent on direct patient care in the areas of emergencies and in comprehensive care plan development.
Improving Geriatrics Training in Internal Medicine Residency Programs: Best Practices and Sustainable Solutions (Thomas, DC; Leipzig, RM; Smith, LG; Dunn, K; Sullivan, G; & Callahan, E, 2003)	Most internal medicine residency programs provide geriatrics training to residents. In a 1997-1998 National Study of Graduate Education in Internal Medicine, 99% of respondents indicated geriatric topics part of curriculum and 79% gained ambulatory geriatrics experience; however, 31% indicated being somewhat or very unprepared to care for NH patients near the completion of their training; barriers to increased geriatrics training in medical school include attitudes, few faculty, need for relationships with nontraditional training sites, and lack of funding.			Systematic review of literature to identify educational interventions and curriculum recommendations for training residents in geriatrics; integrated curricular guidelines from Education Committee on AGS and list of competencies for internal medicine residents from Federal Council of Internal Medicine published.
Factors Affecting Physician Participation in Nursing Home Care (Kane, RS, 1993)			Reputations of MDs not enhanced; viewed with suspicion by colleagues if work in NH.	

Study Title	Training	Time in NH	Labor Market	Comments
Academics and the Nursing Home (Katz, P; Karuza, J; & Counsell, S, 1995)	Internal medicine residents' attitudes and skills improve by providing primary care to NH patients for which they receive additional monetary compensation.		Family practice residents with NH experience continue activity in NH care as private practicing physicians. Family practice residents who rate training in geriatrics favorably are significantly more likely to make NH visits.	
Report of the Institute of Medicine Academic Geriatrics for the Year 2000	Approach public and private resources for support of geriatric medicine training.		Develop the capacity to train academic geriatric leaders; double the number of graduates from 100 per yr. to 250 per yr. to meet conservative goal of 2100 academic geriatricians.	Establish Centers of Excellence that have faculty and support personnel with strong research, clinical and educational aspects; launch a national campaign to attract medical students, residents, fellows, and practicing physicians into geriatrics.
Physician Demographics and the Risk of Medical Malpractice (Taragin, M; Wilczek, AP; Karns, ME; Trout, R; & Carson, JL, 1992)	Specialties strongly associated with claims rate; neurosurgery, orthopedics, and obstetrics/gynecology having 7-12 times the number of claims per yr.			Retrospective cohort study with 11,270 physicians insured from 1977 to 1987.
Physicians Who Have Lost Their Malpractice Insurance (Schwartz, WB & Mendelson, DN, 1989)	Neurosurgery and plastic surgery have the highest claims associated with malpractice insurance loss; internal medicine has the lowest claims.			
Physicians Disciplined by a State Medical Board (Morrison, J & Wickersham, P, 1998)	Disciplined physicians more likely to lack specialty certification than controls.			Case-control study matching 375 disciplined physicians with two groups of control physicians for locale and for sex, type of practice and locale in CA from October 1995 through April 1997.
Predictors of Physician Nursing Home Practice: Does What We Do in Residency Training Make a Difference? (Gazewood, JD & Mehr, DR, 2000)		170 family physicians in private and academic practice; 55% had an active NH practice.		Cross-sectional survey study: physicians with an active NH practice were more likely to reside in a smaller community, have a hospital practice, see more outpatients per week, and work more hrs. per week.

APPENDIX II

The Influence of Payment Structure on Physician Practice Patterns in Nursing Homes						
Study Title	**Part B Payment**	**NonPart B Payment**	**Claim Denial**	**Physician Extenders**	**Unreimbursed Services**	**Comments**
Improving Geriatrics Training in Internal Medicine Residency Programs: Best Practices and Sustainable Solutions (Thomas, DC; Leipzig, RM; Smith, LG; Dunn, K; Sullivan, G; & Callahan, E, 2003)					No reimbursement provided for telephone calls, family meetings, office time and space, or geriatric procedures (i.e., depression or CF screening).	Lack of reimbursement clearly influences physicians' attitudes about caring for older patients, affects ability to model appropriate geriatric care, and contributes to high rate of specialist referral for geriatric patients when internists know best practice.
Factors Contributing to the Hospitalization of NH Residents (Kayser-Jones, JS; Wiener, CL; & Barbaccia, JC, 1989)			MD cited reasons for hospitalization include reimbursement for hospital visits, while it is difficult to be paid for more than a monthly NH visit.			
Decision-Making in the Treatment of Acute Illness in Nursing Homes (Kayser-Jones, J, 1995)			Claim denial is one reason physicians may refuse to see acutely ill patients.			
Bad Medicine: How Government Oversight of Nursing Homes is Threatening Quality Care (Roberts, GN, 2001)						Low reimbursement; rates for house calls cited as deterrent to care.
Alternative Models of Ensuring Access to Primary Medical Care in Nursing Facilities Demonstration Project (Moore, S & Martelle, M, 1996)		Physicians were salaried employees of the NH.		Use of NPs and PAs in the project increased regional salaries for physician extenders to nearly double the national average.	64% of time spent on nonreimbursable activities, including phone calls, meetings with family, staff communications.	Used Medicare Part A and Part B claims, Medicaid claims, residential. Health Care Facility Cost Report (RHCF4). Most cost savings found to be in Medicare-supported services. MD model found to be most cost-effective team model.

Study Title	Part B Payment	NonPart B Payment	Claim Denial	Physician Extenders	Unreimbursed Services	Coments
Managing a Successful Nursing Home Practice (Barnard, L; Fedderly, B; Lange, G; London, R; & Doniparthis, A, 2002)					Expectation of a large number of phone calls is the most likely deterrent to physicians seeing NH patients.	
The Effect of a Physician Assistant on the Hospitalization of Nursing Home Residents	During study period, medical care reimbursed by traditional FFS system, with no capitated contracts or other forms of managed care.			PA/physician visits recorded with Medicare-approved charges.		Compared model employing physician extenders to traditional Part B; increased billing for MDs/PAs ($22,304) more than offset by decreases in hospital DRG reimbursements ($96,043).
Medical Practice with Nursing Home Residents: Results from the National Physician Professional Activities Census (Katz, PR; Karuza, J; Kolassa, J; & Hutson, A, 1997)						Adequate reimbursement factors for physician staffing exist for NHs, but financial incentives are not likely to be sufficient to ensure quality in LTC setting.
Nursing Homes as Acute Care Providers (Zimmer, JG; Eggert, GM; Treat, A; & Brodows, B, 1988)		Demonstration of a 'sudden decline' benefit that paid physicians to diagnose and treat acute illnesses in the NH.				Of 112 acute episodes that used the 'sudden decline' benefit, 76% would have required at least one ER visit otherwise and so realized cost savings of $3000 per patient treated in the program.
Post-Hospital Sub-Acute Care: An Example of a Managed Care Model (von Sternberg, T; Hepburn, K; Cibuzar, P; Convery, L; Dokken, B; Haefemeyer, J; et al., 1997)	Staff HMO	Yes -- TEFRA risk contract -- per diem rate.				Per diem 38% in noncontracted facilities compared to TCC facilities.

Study Title	Part B Payment	NonPart B Payment	Claim Denial	Physician Extenders	Unreimbursed Services	Comments
Evaluation of the Evercare Demonstration Program: Final Report (Kane, RL; Keckhafer, G; & Robst, J)		Physicians are paid on a FFS basis at least as well under the Evercare model as under conventional Medicare (team meetings and family consultations not covered by Medicare are covered by Evercare as well as other services).		NPs are salaried. The demonstration was forced to employ general NPs in place of GNPs due to limited supply of GNPs.		Although use of NPs in Evercare model save money through reduced hospitalizations, the costs of the program to Medicare are substantially higher than the costs of the same care in the FFS market.
Do Yourself a Favor - Take Care of Nursing Home Patients (Waltman, R.E., 1999)						The level of reimbursement and the inconvenience of seeing patients outside the office are speculated to influence physicians' decisions to refuse to treat NH patients.
AMDA Averts Steep Pay Cuts (Kreizman, J & LaPorte, M, 2003)	The 2004 proposed fee schedule had a large drop in practice expense that was not imposed in the final rule for 2004 after intervention from AMDA.					
Long-Term Care Reimbursement Issues (Stone, D & Reublinger, V, 1995)	Between 1992 and 1996, the work component for NH visits was upgraded significantly to near hospital visit level.		Intermediaries disallow visits they perceive as 'routine'.			

Study Title	Part B Payment	NonPart B Payment	Claim Denial	Physician Extenders	Unreimbursed Services	Comments
AMDA Letter to Scully (Lett, J.E., 2003)					7 services noted by >= 50% in AMDA survey to have some time spent by staff for each NH CPT code: scheduling, reviewing clinical reports, coordinating home/outpatient care, coordinating therapy, phone calls, coordinating ancillary services, monitoring/notifying physician of changes in condition, and responding to pharmacist or nutritionist.	
The Role of the Geriatrician in Managed Care: Opportunities and Responsibilities (Waltman, RE, 1999)		Typical panel of patients in an HMO is 100-1250; panel of NH patients as low as 300-400.				Geriatricians have opportunities in the HMOs, both in seeing patients and coordinating NH care.
Efforts to Improve Primary Care Delivery to Nursing Home Residents (Fama, T & Fox, PD, 1997)		Evercare physicians under contract are compensated by modified capitation or enhanced FFS.			Evercare MDs can make unlimited visits.	Fewer hospitalizations than traditional FFS, but may be more costly overall.

APPENDIX III

The Influence of Nursing Home Traits on Physician Practice Patterns in Nursing Homes						
Study Title	**Size**	**Location**	**Closed vs. Open Medical Staff**	**Barriers/ Easements**	**Medical Directors**	**Comments**
Alternative Models of Ensuring Access to Primary Medical Care in Nursing Facilities Demonstration Project (Moore, S & Martelle, M, 1996)	Bed number range of experimental. facilities, 42-320; overall sample, 3592. Bed number range of control facilities, 90-378; overall sample, 3087. All facilities in study could only be included if not provided Medicaid rate for physician services.		Closed staff had cost savings of $508/per patient per yr. on nonMD and MD extender costs. Patient satisfaction better in closed models: access, friendlier MDs, more careful examination, felt MD cared. No difference in closed model for other quality indicators. $1.7 million in savings for reduced hospitalizations, but $4.27 million subsidy from NY to the facilities.	Allowed to admit sicker patients in closed model.		Up-front money provided by NY.
The Effect of a Physician Assistant on the Hospitalization of Nursing Home Residents (Ackermann, RJ & Kemle, KA, 1998)	92-bed, private, for-profit teaching NH facility in central GA.	Central GA	Closed medical staff pre-experimental, and open post-experimental; closed medical staff; pre-experimental design -- 5-6 faculty physicians at family practice residency 10 miles away.	Only one NH facility studied, results not generalizable; 68.6% decline in number of hospital days utilized per yr. and 19.7% decline in selected Medicare costs after introduction of PA model.	Medical director was family physician with certification in geriatric medicine, not fellowship trained in geriatrics.	80% of patients categorically or partially covered by Medicaid. No Medicare-reimbursed beds.
Decision-Making in the Treatment of Acute Illness in Nursing Homes: Framing the Decision Problem, Treatment Plan, and Outcome (Kayser-Jones, J, 1995)				Lack of technology; MDs may not feel comfortable treating acute illnesses (2-3 days for an X-ray); inadequate staff results in little actual time for nurses with patients; well qualified nurses do not choose NH work due to low salary, difficult working conditions, and lack of prestige.		

Study Title	Size	Location	Closed vs. Open Medical Staff	Barriers/ Easements	Medical Directors	Comments
Evaluation of the Wellspring Model from Proving Nursing Home Quality (Stone, RI; Reinhard, SC; Bowers, B; Zimmerman, D; Phillips, CD; Hawes, C, *et al.*, 2002)				Increase in RN retention rates from 64 to 82%, compared to a decrease by nonWellspring facilities from 74 to 72% during the same period. Improved performance on federal surveys.		Staff more vigilant in assessing problems and more pro-active. Better quality of life observed for residents and staff. No additional increases in net resources required for implementation. Lower costs than comparison group.
Evaluation of the Evercare Demonstration Program: (Kane R; Keckhafer G; Flood S; Bershadsky B; Siadaty MS, 2003)	Enrollment (2/98): Atlanta -- 1200; Baltimore -- 1902; Boston -- 1760; Denver -- 482; Phoenix -- 1136; Tampa -- 862	Atlanta, Baltimore, Boston, Denver, Phoenix, Tampa		More than one NP per facility can get confusing to families and residents. Study reveals cost containment regarding utilization and patient/proxy satisfaction with care. Cost containment figure not exact because researchers were not given the necessary financial documentation from Evercare for actual analysis.	Atlanta -- 50% very involved in Evercare; Baltimore -- 1 medical director and 3 associate medical directors; Boston -- 25-30% effort and 1 asst. medical director; Denver -- 2 medical directors (1 in Denver and 1 in Colorado Springs); Phoenix -- 25-30% effort and medical directors also head of geriatric division at Med Pro.	Medicare risk-based managed care program.
How EverCare Nurse Practitioners Spend Their Time (Kane, RL; Flood, S; Keckhafer, G; & Rockwood, T, 2001)	17 NPs employed by Evercare in five sites.	Atlanta, Baltimore, Boston, Denver, Phoenix, Tampa		Much of NPs time spent communicating with vital parties that support physicians' primary care role and enhancing families' satisfaction with care.		Medicare risk-based managed care program.

Study Title	Size	Location	Closed vs. Open Medical Staff	Barriers/ Easements	Medical Directors	Comments
Physician Staffing Patterns Correlates of Nursing Home Care (Karuza, J & Katz, PR, 1994)	Larger facilities are more likely to have closed staff. Most of the nursing facilities were larger than the national average of 85 beds; # of residents is negatively correlated to emergency response time.	NY	43% closed; 12% MD contracts; average 8.6 attending MDs per facility; 32 residents per MD in each facility; 70% cared for by nonstaff MDs; 60% of facilities have no daily MD presence. Closed staff used more physician extenders and more residents per nurse; facilities with MD contracts are more likely to have university-affiliated research and funded grants.	Closed staff barriers -- constraint in patients' choice of physician, practice in-breeding, concentration of power and authority given to few individuals, segregation of facility from medical community, cost may be prohibitive. Closed staff assessments -- more likely to have physicians on site daily, cross coverage for acute and emergency cases, quicker physician emergency response time, more physician involvement with teams -- builds in greater accountability, responsibility, and allegiance and promotes more efficient communication and supervision. No advantages in results of facilities having formal contracts with physicians.	Medical directors -- family practice (42%), internal medicine (55%), had average tenure of 7.5 yrs. and no certificate in geriatrics (73%).	
OIG Nursing Home Medical Directors Survey (U.S. Department of Health and Human Services, 2003)	Sites chosen based on states relative proportion of certified NH beds to national number of certified NH beds.	Study sites included NHs in CA, ME, NY, OH, SD, TN and TX.		Barriers -- purposive sample; easements -- sites chosen because illustrate variety of factors which may impact role of NH Medical Director; medical intervention-expected 92% should 97%; monitor attending physicians -- expected 68% should 85%.	191 NH medical directors surveyed. Results indicated quality improvement, patient services, resident rights, and administration as the four keys areas they are expected to perform frequently.	ME and TN chosen as sites because 13% (+/-) Medicare and Medicaid enrollment as a percentage of population; SD chosen because low percentages of Medicare physicians; SD chosen because less than 75% physicians and other practitioners participate in Medicare Part B.
Factors Differentiating Hospital Transfers (Teresi, JA; Holmes, D; Bloom, HG; Monaco, C; & Rosen, S, 1991)				No IV capability and malpractice concerns are important discriminators for transfer to hospital.		

Study Title	Size	Location	Closed vs. Open Medical Staff	Barriers/ Easements	Medical Directors	Comments
Factors Contributing to the Hospitalization of NH Residents (Kayser-Jones, JS; Wiener, CL; & Barbaccia, JC, 1989)				48.2% of hospitalizations were unnecessary and 70% of those could have been treated if IV therapy had been available. Hospitalizations can occur when staff request transfer of difficult patients (e.g., those with extensive decubitus ulcers). MDs cite higher quality nursing in hospital as one reason for transfer.		
Improving the Quality of Nursing Home Outcomes: Are Adequacy- or Incentive-Oriented Policies More Effective? (Nyman, J, 1998)						Nonprofit NHs are motivated to provide quality care regardless of whether they have beds to fill, whereas for-profit NHs are concerned more with filling beds with private-pay persons.
Factors Affecting Physician Participation in Nursing Home Care (Kane, RS, 1993)			A small number of MDs; many medical directors attended for a large proportion of residents.			
Academics and the Nursing Home (Katz, P; Karuza, J; & Counsell, S, 1995)						NHs offer excellent teaching sites because of time, space, and available patient caseload. Teaching NHs defined as those in which physicians received 20 hrs. of training annually and showed positive changes in health care delivery.

APPENDIX IV

The Influence of Practice Organization on Physician Practice Patterns in Nursing Homes				
Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Alternative Models of Ensuring Access to Primary Medical Care in Nursing Facilities Demonstration Project (Moore, S & Martelle, M, 1996)	Difficult to retain and recruit NPs.	MD model -- staff physicians only NP model -- collaborate with medical director PA model -- supervised by staff physician or facility medical director Control – FFS physicians		Reduced hospitalization costs. NP model -- collaborate with medical director PA model -- supervised by staff physician or facility medical director Control -- FFS physicians
Effects of Physician Experience on Costs and Outcomes on an Academic General Medicine Service: Results of a Trial of Hospitals (Meltzer, D; Manning, WG; Morrison, J; Shah, MN; Jin, L; Guth, T, *et al.*, 2002)				Academic general medicine services assigned to teams of hospitalists vs. nonhospitalists. Hospitalists saw 35% of admitted patients a day, and nonhospitalists saw 27%.
Evaluation of the Wellspring Model from Proving Nursing Home Quality (Stone, RI; Reinhard, SC; Bowers, B; Zimmerman, D; Phillips, CD; Hawes, C, *et al.*, 2002)	Uses CNAs as "frontline" workers.	11 nonprofit NHs in WI. Model based on premise that the strongest predictor of low turnover rates is the organization's management style. Discussion of care plans with aides reduced turnover rates by ⅓. Certified nursing assistants who were involved with care plans had 50% lower turnover. Six key elements of Wellspring: (1) alliance with top management, (2) GNP, (3) interdisciplinary care resource teams, (4) involvement of all departments in facility, (5) empowerment of NH staff, and (6) continuous review by CEOs of performance data.		Retention for Wellspring nursing staff increased to 76% during four-year study period vs. dropping to 68% for nonWellspring NHs.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Medical Practice with Nursing Home Residents: Results from the National Physician Professional Activities Census (Katz, PR; Karuza, J; Kolassa, J; & Hutson, A, 1997)		Prevalence of practice greatest with solo practice and physicians in partnerships. Solo -- 73.4%, no time in NH; 24.3%, 0-10 hrs in NH; 2.3%, >10 hrs in NH per week. Partnership -- 74.4%, no time in NH; 24.2%, 0-10 hrs. in NH; 1.5%, >10 hrs. in NH per week. Group -- 78.7%, no time in NH; 20.1%, 0-10 hrs. in NH; 1.2%, >10 hrs. in NH per week (other categories include hospital, medical school, local government, VA, federal [nonVA], and other).	Prevalence of NH practice least likely among academic and hospital-based physicians and physicians in group practice or employed by the government; group practice or academically based physicians less likely to have high level of practice.	Questions raised by study: What is optimal structure of NH practice? Can adequate continuity of care be maintained when physician with NH practice spends only 2 hrs. per week caring for NH patients? Should NH involvement be defined by "generalist" approach or by "specialist" approach? Family practitioners and internists are more likely to have NH practice, solo practices are more likely to have NH practice, physicians in hospitals or government employees are more likely to have high level of practice compared with solo practitioners (given that only 15% or less of these physicians have a NH practice; spending more hrs. per week in medical practice indicated higher level of NH practice).
Post Hospital Sub-Acute Care: An Example of a Managed Care Model (von Sternberg, T; Hepburn, K; Cibuzar, P; Convery, L; Dokken, B; Haefemeyer, J, et al., 1997)	Ongoing clinical monitoring 2-3x/wk.; assigned to specific facilities.	TEFRA risk contract TCC 21,000 geriatric patients enrolled in HMO; update primary care doctor each week; 4-month blocks of rotation through the units. HealthPartners -- staff model nonprofit HMO, Bloomington, MN; 15 beds in five facilities reserved for TCC pts.; board-certified geriatricians in HealthPartners.		
Managing a Successful Nursing Home Practice (Barnard, L; Fedderly, B; Lange, G; London, R; & Doniparthi, A, 2002)			Number of phone calls deters physicians from treating NH patients.	

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Evaluation of the Evercare Demonstration Program: (Kane R; Keckhafer G; Flood S; Bershadsky B; Siadaty MS, 2003)	Uses at least one if not two NPs per facility to supplement medical care provided by physicians (80-100 patients per NP). NPs provide care, but the original primary care physicians continue to assume ultimate responsibility and must see their patients at least once every 60 days.	NPs assigned to PCP; collaborate/ communicate extensively and provide most direct primary care to patients. Physician paid on a FFS arrangement and for making emergency visits to the NH and for other activities not routinely covered by Medicare.	Recruitment of facilities, GNPs, and accurate financial data for the three separate studies conducted in the final demonstration project. Atlanta -- limited geriatric expertise; scarcity of NPs; Baltimore -- competition from Elder Health; marketing slowed down; Boston -- competition from Urban Health and Secure Horizon. HMOs focus on younger Medicare population. Some HMOs have Evercare exclusion clause for physicians; Denver -- several large MD groups that specialize in NH care; Phoenix -- dropped from study because operated through subcontract of larger HMO; Tampa -- little market experience with managed care; inefficient market.	Participants/proxies more satisfied with NP communication and follow-through; cost savings realized through reduced hospital utilization.
How EverCare Nurse Practitioners Spend Their Time (Kane, RL; Flood, S; Keckhafer, G; & Rockwood, T, 2001)	Uses at least one if not two NPs per facility to supplement medical care provided by physicians (80-100 patients per NP). Defined caseload with services of case manager and primary care provider. NP spends 35% direct patient care, ⅓ of direct care = change of condition response; 26% indirect care (46% with NH staff, 26% family, 15% MDs); 42 min. per patient per day.	NPs assigned to PCP; collaborate/ communicate extensively and provide most direct primary care to patients. NPs are salaried professionals.	Difficulty locating GNPs to work within the Evercare model as originally designed.	Participants/proxies more satisfied with NP communication and follow-through; cost savings realized through reduced hospital utilization.
The Effect of Physician Assistant on the Hospitalization of Nursing Home Residents (Ackermann, RJ & Kemle, KA, 1998)	Uses a gerontologist PA.	PA visited NH 3-4x/wk. did initial history, physical exam, alternated monthly routine visits with attending physician, took all telephone calls during business hours, and consulted daily with physicians. Prior to introduction of PA, acute care generally managed by physician telephone triage. MD care provided by 5-6 faculty physicians in a family practice residency. Most patients in study managed by same group of health care providers which allowed for continuity of policies toward management of acute illness.	Only one facility studied. Financial barriers to providing acute care in LTC facilities need to be removed; FFS model provides financial disincentives for acute care in NH.	Annual Medicare charges for MDs and PAs went up by 46.6% but was more than offset by the drop in hospitalization reimbursement so that total Medicare charges decreased 19.7% in central GA. The number of hospitalizations dropped by 38%, and the number of hospital days per 100 patient yrs. fell 68.6%. MD provision of visits dropped, and MDs provided only 68.9% of services to NH residents. Above average PA with specialized training makes generalizability difficult.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Decision-Making in the Treatment of Acute Illness in Nursing Homes: Framing the Decision Problem, Treatment Plan, and Outcome (Kayser-Jones, J, 1995)			View NH visits as burdensome and a bother. Additional visits = extra paperwork, and payment still not guaranteed so many refuse to see acutely ill patients; rely on nursing assessments by phone rather than face-to-face contact. Nurses must call for all changes in condition. Too many unnecessary calls.	Visits often brief -- example of one MD who saw 37 patients in 40 minutes; treat by phone rather than visit.
Physician Staffing Patterns Correlates of Nursing Home Care: An Initial Inquiry and Consideration of Policy Implications (Karuza, J & Katz, PR, 1994)	Physician extenders -- mean is 12%.	Open staff versus closed staff. Open staff -- use of community physicians who were neither salaried by nor employed by nursing facility. Closed staff -- use of physicians salaried or employed by nursing facility; 43%, closed medical staff, 12%, MD contracts.	Closed staff barriers -- constraint in patient's choice of physician, practice in-breeding, concentration of power and authority given to few individuals, segregation of facility from medical community, cost may be prohibitive. No advantages in results of facilities having formal contracts with physicians.	Integrating physicians by recruiting and maintaining a closed staff may enhance medical care. Primary care assigned according to specific days in 32%. Closed staffing meant faster response times and more frequent participation. Formal contracts were no advantage. Closed staff in larger facilities, more Medicaid residents and physician extenders used. Closed staff easements -- more likely to have physicians on-site daily, cross coverage for acute and emergency cases, quicker physician emergency response time, more physician involvement with teams -- builds in greater accountability, responsibility, and allegiance and promotes more efficient communication and supervision. Closed staff nursing facilities significantly more likely to have dementia unit, higher percentage of residents receiving Medicaid, larger number of residents, more likely to have higher ratios of residents to RN, physician, and SW and more likely to use physician extenders.
Use of Primary Care Teams by HMOs for Care of Long-Stay Nursing Home Residents (Farley, DO; Zellman, GL; Ouslander, JG; & Reuben, D, 1999)	NPs and PAs used as MD extenders; 38% have MD/NP teams; 71 residents/NP.	All except one used a common model of physicians and physician extenders; 270 residents/MD; dedicated MDs to care for NH patients; only 3 of 21 programs had MDs who followed into the hospital.	Not developing primary care program attributed to cost, small numbers of NH residents and was "not HMO's responsibility."	HMOs that operate a primary care program are larger with more enrollees; study surveyed 24% of Medicare HMO enrollees.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Projecting the Need for Physicians to Care for Older Persons: Effects of Changes in Demography, Utilization Patterns, and Physician Productivity (Reuben, T; Bradley TB; Zwanziger J; Beck, JC, 1993)		Found that 26% of internal medicine and 23% of family practice currently delegate care of >65% of patients to mid-level providers. These physicians delegate an average of 19% of care to the mid-level providers. When asked for their "ideal," 57% of internal medicine and 53% of family practice would like to delegate to mid-level practitioners, and the average delegation was 24% for internal medicine and 29% for family practice.		The level of delegation to mid-level provider was a powerful influence on the number of MDs necessary to treat the elderly in the future.
The Role of the Geriatrician in Managed Care (von Sternberg, T, 1999)				In HMO, focus of geriatrician is on reducing hospitalizations; in MC, there often are good information systems for clinical data, and the focus is on the integration of patient care.
OIG Nursing Home Medical Directors Survey (U.S. Department of Health and Human Services, 2003)				Study did not discuss specific practice organization regarding specific practice models; rather it discussed practice organization regarding medical director's role. Results indicated quality improvement, patient services, resident rights, and administration as the four key areas they are expected to perform frequently.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Primary Care of Long-Stay Nursing Residents: Approaches of Three Health Maintenance Organizations (Reuben, D; Schnelle, JF; Buchanan, JL; Kington, RS; Zellman, GL; Farley, DO, *et al.*, 1999)		Plans A, B, and C were organized as follows. Plan A: physician and sometimes NP completes initial history and physical. Follow-up visits alternated by NP and physician; daytime urgent calls handled by NP or physician; nights and weekends handled by physician. Physician does not follow hospitalized patients. Average number of physicians, 20; NPs, 0. Under Plan B: Initial history and physical completed by NP, follow-up visits alternate NP and physician. Daytime urgent calls handled by NP; nights and weekend urgent calls, physician or NP. Physician follows patient when hospitalized. Physicians, 12; NP, 5. Plan C: Initial history and physical, physician. Follow-up visits -- NP, monthly; physician, every other mo.. Daytime urgent calls, handled by NP; nights and weekend urgent calls, physician. Physician does not follow when patient is hospitalized. Physicians, 7.5; NP, 0.		HMO A provided more NP and MD visits per mo. than HMO C and more total visits than either HMO B or HMO C. Responses to acute problems such as falls and fever were better documented and more prompt among HMO residents. Plan A went to the emergency department less often and had fewer ER visits. Also, a smaller number were hospitalized. Plan C: higher number of hospitalizations compared with nonHMO patients. Satisfaction did not differ between HMO and nonHMO. The most successful HMO provided the same number of MD visits as nonHMO, but supplemented with NP or PA visits. Reasons for less success in certain HMO plans was attributed to needing a very strong MD component, including frequent visits and close supervision to reduce hospitalization. The program must be maintained meticulously with very little margin for error, and dedicating physicians solely to the care of these patients achieves the best results.
Improving Geriatrics Training in Internal Medicine Residency Programs: Best Practices and Sustainable Solutions (Thomas, DC; Leipzig, RM; Smith, LG; Dunn, K; Sullivan, G; & Callahan, E, 2003)	Several collaborative practice models were designed using APNs and attending physicians for patients followed by residents.		Barriers to implementing NH experience into resident training include full programs, few qualified faculty, and residents' lack of interest.	US currently has fewer than 9000 certified geriatricians, and only small percentage are academicians.
Comparison of Nurse Practitioner and Family Physician Relative Work Values (Sullivan-Marx, EM & Maislin, G, 2000)	BBA 1997 NPs granted direct Medicare reimbursement for Part B services, prior to BBA 1997, NPs only able to receive reimbursement in rural areas and SNFs.			Exploratory survey designed to establish relative work values using magnitude-estimation scaling; conclusions indicate NP relative work values did not differ significantly from physician relative work values. NPs estimated significantly higher inter-service time with patients than physicians, and physicians had significantly higher pre-service time and post-service time.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Nurse Practitioner and Physicians: A Collaborative Practice (Neale, J, 1999)	NPs and PAs roles differ in that NPs work under independent nursing license and PAs practice under physician license; PAs' practices traditionally based on medical model. NP role designed to enable nurse to practice within extended scope of practice to include primary care.		Issues of reimbursement, territorialism, and role confusion are key areas that impede NP model practice. Overall, NPs are reimbursed at lower rate for same services provided by physician.	Study indicated quality of care delivered by NPs paralleled/exceeded that of physicians. Author proposed model of professional interdisciplinary collaboration within NP and physician practice; no legal restriction to independent NP practice throughout most of US.
Objective and Subjective Measures of the Quality of Managed Care in Nursing Homes (Schnelle, JF; Ouslander, JG; Buchanan, JL; Zellman, GL; Farley, DO; Hirsch, S, *et al.*, 1999)			Despite differences in processes of care, HMO families and residents did not perceive improved medical care in HMO vs. FFS.	Does your doctor see you often enough -- no difference between HMO and FFS. Were you treated for sickness as well as you could have been? Residents and families responded yes. HMO -- 0.63 physician visits per mo.; FFS, 0.83; number of physician visits per mo.; HMO number NP visits -- 0.93; FFS, none; combined visits per mo., 1.63 HMO, 0.83 FFS. Combined visits were the only significant difference between FFS and HMO.
Efforts to Improve Primary Care Delivery to Nursing Home Residents (Fama, T & Fox, PD, 1997)		Mountain States Health Corporation GNPs employed full time by NH and complement MDs; Urban Medical Group NPs and PAs hired as part of physician group to substitute MD care; teaching NH program GNPs and geriatricians with SON faculty provide primary care to patients; Veterans Affairs Program -- geriatrician faculty and GNPs. Kaiser Permanente -- 2 GNPs, 1 PA, with backup by geriatrician on-call 24 hrs. GHC HMO -- Cadre of physicians and NPs, GNP primary provider and MD is consultant. Computerized information system and heavy use of voicemail.	HMOs have much difficulty recruiting NPs and MDs. Difficult to implement outside pre-paid setting because of special waivers.	All models demonstrated lower hospitalization and improved care processes with lower medication use. Physicians reported 50% reduction in telephone calls, no new Stage 3 or 4 decubitus ulcers. Patients and families had high satisfaction with Kaiser care. GHC model decreased ER visits.

Study Title	Nurse Practitioner Usage	Characteristics of Model	Barriers	Findings
Factors Affecting Physician Participation in Nursing Home Care (Kane, RS, 1993)	Physician extenders recommended as a way to decrease telephone calls.		Low reimbursement, excessive administrative requirements, depressing case mix. ⅔ of NH visits were provided by 5% of physicians. Barriers included too few NH residents in practice, 58%; paperwork, 57%; payment delays, 43%; low reimbursement, 42%; and inconvenient location, 41%.	
Academics and the Nursing Home (Weiner, J, 1994)		Geriatric centers based in NHs are operational in Monroe Community Hospital, Rochester, NY; Johns Hopkins Geriatric Center, Baltimore, MD; and Baycrest Center, Toronto, Ontario.		Closed medical staffs improve quality and intensity of medical care because physicians are on-site daily. Provide cross-coverage for acute or emergent problems; provide quicker physician emergency response time and better communication and supervision.
The Effect of Evercare on Hospital Use (Kane, RL; Keckhafer, G; Flood, S; Bershadsky, B; & Siadaty, MS, 2003)	Evercare employs NPs who work in cooperation with primary care physicians. Work of NP is to supplement the physician. NPs spend more time than physicians in each NH.	Evercare is a for-profit variant of the Medicare+Choice HMO with benefits under both Medicare Part A and Part B. NHs operating an Evercare program receive a fixed capitated amount for each resident. Evercare employs NPs as physician extenders to work with the primary care physicians of the residents.	Increase in cost to implement and run Evercare program.	Cost savings through reduced hospital costs. Savings offset by increase in cost to implement and run Evercare program.

APPENDIX V

CMS Regulations and JCAHO Requirements for Physician Visits to Nursing Homes		
Type of Visit	**CMS Regulation**	**JCAHO Requirement**
Initial Visit	There is no requirement for an initial visit at the time of admission, since the decision to admit an individual to a nursing facility generally involves physician contact during the period immediately preceding the admission. **[42 CFR 483.40(c); Guidance to Surveyors for Tag # F386]**	The attending physician or licensed independent practitioner performs each resident's medical assessment, including a medical history and physical examination, within required time frames. The time frame cannot exceed 24 hrs. before admission or within 72 hrs. after admission. Durable, legible originals or reproductions of a completed medical history and physical examination obtained from the attending physician or licensed independent practitioner completed within 30 days before admission or readmission are acceptable. **(Sec.1, PE 1.3.1; related Tag # F273)**
Assessment	The facility must conduct initially and periodically a comprehensive, accurate, reproducible assessment of each resident's functional capacity. Assessments must be conducted no later than 14 days after the date of admission; for current NF residents not later than October 1, 1991; for current SNF residents, not later than January 1, 1991; promptly after a significant change in the resident's physical or mental condition; and in no case, less often than once every 12 mos. **[42 CFR 483.20(b)(4); Tag # F273, F274, F275]**	Each resident's initial assessment is completed within the time frame specified by organizational policy, by law and regulation, or within 14 days. **(Sec. 1, PE 1.3; related CMS Tag # F273)**
Emergency Visits	The physician must provide or arrange for the provision of physician services 24 hrs. a day, in case of emergency. **[42 CFR 483.40(d); Tag # F389]**	Each attending physician designates an alternate physician whom the organization can contact to obtain regular or emergency care when the attending physician is not available. **(Sec. 1, TX 1.4.1.1; related Tag # F385, F389)**
Content of Visits	"Must be seen" means that the physician must make actual face-to-face contact with the resident. **[42 CFR 483.40(c); Guidance to Surveyors on Tag # F386]** The physician must: (1) review the resident's total plan of care, including medications, treatments, at each visit...; (2) write, sign, and date progress notes at each visit; and (3) sign and date all orders. **[42 CFR 483.40(b) and (c); Tag # F386]** The physician's records resident progress and problems in maintaining or improving his/her mental and physical functional status. The physician must review the total plan of care at required visits, but need not review the total plan of care at other visits. **[Guidance to Surveyors on Tag # F386; 42CFR 483.40(b)]**	Assessing resident status and identifying resident's needs are the basis for determining the necessary care and appropriate setting for the resident. Residents are thoroughly assessed, including historical background, current status, and needs. The assessment process includes appropriate screening, observation, and examination procedures to determine each resident's functional status and needs related to these standards. When a resident is admitted, the organization gathers the necessary information to provide care. This information depends on the resident's needs and the setting in which he or she seeks care. Data from the resident's family are included, as appropriate. Data are gathered in a standardized format. These standards go beyond the requirements for the minimum data set (MDS) version 2.0. **(Sec.1, PE 2 through PE 2.1.13; related Tag # F272)** The care plan is evaluated and revised as necessary to reflect significant change in the resident's physical, communicative, psychosocial, functional, or emotional status, or at least every 90 days. **(Sec. 1, TX 3.1 through 3.1.1; related Tag # F280, F386)**

Type of Visit	CMS Regulation	JCAHO Requirement
Preparation of Care Plan	A comprehensive care plan must be developed within 7 days after the completion of the comprehensive assessment; prepared by an interdisciplinary team that includes the attending physician, a RN with responsibility for the resident, and other appropriate staff in disciplines as determined by the resident's needs, and to the extent practicable, the participation of the resident, the resident's family or the resident's legal representative; and, periodically reviewed and revised by a team of qualified persons after each assessment. **[42 CFR 483.20(d)(2); Tag # F280]**	An individualized, interdisciplinary care plan is developed by an interdisciplinary team representing all appropriate healthcare professionals as soon as possible after admission, but no later than one week after comprehensive assessments are completed (which occurs within 14 days of admission). **(Sec. 1, TX 1.1.1; related Tag # F280)**
Frequency of Visits	The timing of physician visits is based on the admission date of the resident. Visits must be at least once every 30 days for the first 90 days after admission. Visits then must be made at least once every 60 days thereafter. A physician visit is timely if it occurs not later than 10 days after the date the visit was required. **[42 CFR 483.40(c); Tag # F387]**	The attending physician visits the resident in accordance with the resident's needs, and at least once during the 30 days following admission. A physician supervises each resident's health care. The attending physician establishes a visiting schedule appropriate to the resident's needs. Physician visiting schedules comply with law, regulation, and organization policy regarding: (1) frequency and timing of visits and (2) visits by PAs or NPs instead of the attending physician. **(Sec. 1, TX 1.4.1; related Tag # F385) F387, F388, F390)**
Evaluation of Response to Care	A comprehensive care plan must be developed within 7 days after the completion of the comprehensive assessment, prepared by an interdisciplinary team that includes the attending physician, a RN with responsibility for the resident, and other appropriate staff in disciplines as determined by the resident's needs, and to the extent practicable, the participation of the resident, the resident's family or the resident's legal representative; and periodically reviewed and revised by a team of qualified persons after each assessment. **[42 CFR 483.20(d)(2); Tag # F280]**	The care plan is evaluated and revised as necessary to reflect significant change in the resident's physical, communicative, psychosocial, functional, or emotional status, or at least every 90 days. **(Sec. 1, TX 3.1 through 3.1.1; related Tag # F280, F386)**
Re-assessment	Resident assessments must be conducted promptly after a significant change in the resident's physical or mental condition **[42 CFR 483.20((b)(4); Tag # F273, F274]** and once every 12 mos. **[42 CFR 483.20((b)(4); Tag # F275]**	Each resident is reassessed at regularly specified intervals related to the course of treatment or when the resident's physical, psychosocial, functional, or nutritional status significantly changes. Reassessments are performed according to the time intervals specified by the organization and according to legal and regulatory requirements. Residents are reassessed at least quarterly. When a resident is admitted to an acute care facility for more than 24 hrs., the resident undergoes (at a minimum) a nursing reassessment once he or she returns to the LTC organization. If indicated, nursing refers the resident to other departments for reassessment (for instance, dietary, physical therapy, etc.). **(Sec. 1, PE. 3; related Tag # F274, F275, F276)**

SOURCE: CMS and JCAHO Requirements for Physician Visits. Retrieved March 16, 2004, from http://www.AMDA.com.

APPENDIX VI

Physician Extenders: Regulations for Nursing Home Tasks[a,b,c,d]				
	Initial Comprehensive Visit/Orders	Other Required Visits	Other Medically Necessary Visits and Orders	Certification/ Recertification
Skilled Nursing Facilities				
NP or CNS employed by the facility	May not perform/ may not sign	May perform	May perform and sign	May not sign
NP or CNS not employed by the facility	May not perform/ may not sign	May perform	May perform and sign	May sign and subject to state requirements
PA regardless of employer	May not perform/ may not sign	May perform	May perform and sign	May not sign
Nursing Facilities				
NP, CNS, or PA employed by the facility	May not perform/ may not sign	May not perform	May perform and sign	May sign and subject to state requirements
NP, CNS or PA not employed by the facility	May not perform/ may sign	May perform	May perform and sign	May sign and subject to state requirements

SOURCE: Center for Medicaid and State Operations/Survey and Certification Group memo, dated 11/13/03. Ref: S&C-04-08.

a. C.R.F. 483.40
b. C.R.F. 483.40 states that in SNFs, required visits after the initial visit may alternate between personal visits by the physician, PA, NP, or CNS and the physician may delegate tasks to a PA, NP, or CNS on the condition that this person is under the supervision of a physician, is acting within the scope of practice as defined by state law, and meets applicable definitions for practice, except when the regulations specify that a physician must perform it personally, or when delegation is prohibited under state law or by facility policy. In NFs, any required physician task, even those tasks that specifically state they must be performed by a physician, may be delegated to a PA, NP, or CNS who is not an employee of the facility, but who works collaboratively with the physician.
c. NPs traditionally work under independent licenses, bill their time separately from the physician and, in certain states, can have an independent practice with prescriptive authority. PAs customarily practice under a physician's medical license with close supervision by a physician.
d. When permitted by state regulations. Other required visits are the required monthly visits that may be alternated between physician and physician extender.

APPENDIX VII

CPT Codes Used in the Delivery of Nursing Home Care		
CPT Code	**Required Time[a]**	**Required Components[b]**
Initial Assessment Codes		
99301	30 min.	▪ Detailed interval history ▪ Comprehensive examination ▪ Straightforward or low complexity decision-making
99302	40 min.	▪ Detailed interval history ▪ Comprehensive examination ▪ Moderate to high complexity decision-making
99303	50 min.	▪ Comprehensive history ▪ Comprehensive examination ▪ Moderate to high complexity decision-making
Subsequent Care Codes		
99311	15 min.	▪ Problem-focused interval history ▪ Problem-focused examination ▪ Straightforward or low complexity decision-making
99312	25 min.	▪ Expanded problem-focused interval history ▪ Expanded problem-focused examination ▪ Moderate to high complexity decision-making
99313	35 min.	▪ Detailed interval history ▪ Detailed examination ▪ Moderate to high complexity decision-making
Discharge Service Codes		
99315	< 30 min.	▪ Nursing facility discharge day management
99316	> 30 min.	▪ Nursing facility discharge day management
a. von Gunde, *et al.*, 2000. b. *American Medical Directors Association*.		

APPENDIX VIII
Medicare's Payment Formula for Physician Visits

Payment amounts for each code are determined using the resource-based relative value system (RBRVS), the geographic practice cost index (GPCI), and the conversion factor. RBRVS and GPCI assign values to three components for each code: professional work, practice overhead, and malpractice. RBRVS determines the RVUs for all CPT codes while GPCI determines the relative cost of practicing in 93 distinct geographic areas of the Unites States. The GPCI adjusts payments in different areas of the country (Appendix IX). For example, the areas with the highest malpractice GCPI are Detroit and Miami, while Manhattan and San Francisco have the highest practice overhead GCPI. The conversion factor is a dollar amount updated once a year and designed to maintain a constant rate of total Medicare spending on Part B as required by the 1997 Balanced Budget Amendment. The conversion factor is fixed across all physician specialties and all geographic areas. The fee schedule then multiplies the RVU by the GPCI for each component and then multiplies that number by the conversion factor to get the dollar payment for that CPT code. To illustrate how Medicare pays for nursing home visits:

CPT code 99302 -- Mid-level assessment code for nursing home care in Denver, CO

$$(1.61_{\text{RVU Work}} * 1.0_{\text{GPCI Work -Colorado}} + .54_{\text{RVU Practice}} * .992_{\text{GPCI Practice -Colorado}} + .06_{\text{RVU Malpractice}} * .821_{\text{GPCI Malpractice -Colorado}}) * \$ 37.34_{\text{2004 Conversion Factor}} = \$81.96$$

The above formula breaks down payment into payment for the three components: professional work, practice overhead, and malpractice. The first piece is the payment associated with the professional work; the professional expertise, time and effort of the physician required to complete the service. It is comprised of the relative value of that work and the geographic difference in the cost of providing it. The second piece is payment associated with practice overhead; the costs of providing the service not related to the physician including office overhead and ancillary personnel. Again, it is comprised of the relative costs to the service and the geographic variation in those costs. The final piece of payment is the malpractice component and it covers the liability cost to providing the service relative to other services and adjusted for geographic variation. The sum of these three components represents the relative physician weight of the service. It is then multiplied by a dollar value, constant across services, that CMS updates annually to maintain budget neutrality.

APPENDIX IX

Physician Payment Formula: Geographic Practice Cost Indices					
Carrier No	Locality	Locality Name	Work GPCI	Practice GPCI	Malpractice GPCI
00510	00	Alabama	1.000	0.870	0.779
00831	01	Alaska	1.670	1.670	1.670
00832	00	Arizona	1.000	0.978	1.090
00520	13	Arkansas	1.000	0.847	0.389
31146	26	Anaheim/Santa Ana, CA	1.037	1.184	0.955
31146	18	Los Angeles, CA	1.056	1.139	0.955
31140	03	Marin/Napa/Solano, CA	1.015	1.248	0.669
31140	07	Oakland/Berkeley, CA	1.041	1.235	0.669
31140	05	San Francisco, CA	1.068	1.458	0.669
31140	06	San Mateo, CA	1.048	1.432	0.663
31140	09	Santa Clara, CA	1.063	1.380	0.622
31146	17	Ventura, CA	1.028	1.125	0.763
31146	99	Rest of California*	1.007	1.034	0.740
31140	99	Rest of California*	1.007	1.034	0.740
00824	01	Colorado	1.000	0.992	0.821
00591	00	Connecticut	1.050	1.156	0.933
00902	01	Delaware	1.019	1.035	0.802
00903	01	DC + MD/VA Suburbs	1.050	1.166	0.917
00590	03	Fort Lauderdale, FL	1.000	1.018	1.790
00590	04	Miami, FL	1.015	1.052	2.399
00590	99	Rest of Florida	1.000	0.946	1.268
00511	01	Atlanta, GA	1.006	1.059	0.951
00511	99	Rest of Georgia	1.000	0.892	0.951
00833	01	Hawaii/Guam	1.000	1.124	0.817
05130	00	Idaho	1.000	0.881	0.478
00952	16	Chicago, IL	1.028	1.092	1.832
00952	12	East St. Louis, IL	1.000	0.924	1.720
00952	15	Suburban Chicago, IL	1.006	1.071	1.648
00952	99	Rest of Illinois	1.000	0.889	1.175
00630	00	Indiana	1.000	0.922	0.459
00826	00	Iowa	1.000	0.876	0.593
00650	00	Kansas*	1.000	0.895	0.738
00740	04	Kansas*	1.000	0.895	0.738
00660	00	Kentucky	1.000	0.866	0.875
00528	01	New Orleans, LA	1.000	0.945	1.240
00528	99	Rest of Louisiana	1.000	0.870	1.066
31142	03	Southern Maine	1.000	0.999	0.652
31142	99	Rest of Maine	1.000	0.910	0.652
00901	01	Baltimore/Surr. Cntys., MD	1.021	1.038	0.931
00901	99	Rest of Maryland	1.000	0.972	0.767
31143	01	Metropolitan Boston	1.041	1.239	0.803
31143	99	Rest of Massachusetts	1.010	1.129	0.803
00953	01	Detroit, MI	1.043	1.038	2.741
00953	99	Rest of Michigan	1.000	0.938	1.545
00954	00	Minnesota	1.000	0.974	0.431
00512	00	Mississippi	1.000	0.837	0.750
00740	02	Metropolitan Kansas City, MO	1.000	0.967	0.896
00523	01	Metropolitan St. Louis, MO	1.000	0.938	0.893
00740	99	Rest of Missouri*	1.000	0.825	0.842
00523	99	Rest of Missouri*	1.000	0.825	0.842

Carrier No	Locality	Locality Name	Work GPCI	Practice GPCI	Malpractice GPCI
00751	01	Montana	1.000	0.876	0.815
00655	00	Nebraska	1.000	0.877	0.442
00834	00	Nevada	1.005	1.039	1.138
31144	40	New Hampshire	1.000	1.030	0.883
00805	01	Northern NJ	1.058	1.193	0.916
00805	99	Rest of New Jersey	1.029	1.110	0.916
00521	05	New Mexico	1.000	0.900	0.898
00803	01	Manhattan, NY	1.094	1.351	1.586
00803	02	NYC Suburbs/Long I., NY	1.068	1.251	1.869
00803	03	Poughkpsie/N NYC Suburbs, NY	1.011	1.075	1.221
14330	04	Queens, NY	1.058	1.228	1.791
00801	99	Rest of New York	1.000	0.944	0.720
05535	00	North Carolina	1.000	0.931	0.618
00820	01	North Dakota	1.000	0.880	0.630
00883	00	Ohio	1.000	0.944	0.967
00522	00	Oklahoma	1.000	0.876	0.413
00835	01	Portland, OR	1.000	1.049	0.438
00835	99	Rest of Oregon	1.000	0.933	0.438
00865	01	Metropolitan Philadelphia, PA	1.023	1.092	1.400
00865	99	Rest of Pennsylvania	1.000	0.929	0.790
00973	20	Puerto Rico	1.000	0.712	0.268
00870	01	Rhode Island	1.017	1.065	0.896
00880	01	South Carolina	1.000	0.904	0.336
00820	02	South Dakota	1.000	0.878	0.385
05440	35	Tennessee	1.000	0.900	0.612
00900	31	Austin, TX	1.000	0.996	0.922
00900	20	Beaumont, TX	1.000	0.890	1.318
00900	09	Brazoria, TX	1.000	0.978	1.318
00900	11	Dallas, TX	1.010	1.065	0.996
00900	28	Fort Worth, TX	1.000	0.981	0.996
00900	15	Galveston, TX	1.000	0.969	1.318
00900	18	Houston, TX	1.020	1.007	1.316
00900	99	Rest of Texas	1.000	0.880	1.047
00910	09	Utah	1.000	0.941	0.653
31145	50	Vermont	1.000	0.986	0.527
00973	50	Virgin Islands	1.000	1.023	1.003
00904	00	Virginia	1.000	0.938	0.540
00836	02	Seattle (King Cnty.), WA	1.005	1.100	0.803
00836	99	Rest of Washington	1.000	0.972	0.803
00884	16	West Virginia	1.000	0.850	1.462
00951	00	Wisconsin	1.000	0.929	0.865
00825	21	Wyoming	1.000	0.895	0.970

* Payment locality is serviced by two carriers.

NOTE: Work GPCI is the ¼ work GPCI required by Section 1848(e)(1)(A)(iii) of the Social Security Act. GPCIs rescaled by the following factors for budget neutrality: Work = 0.99699; Practice Expense = 0.99235; Malpractice Expense = 0.00215.

APPENDIX X

Fee Schedule for Nursing Facility Visits and Similar Services Performed in Alternative Settings						
CPT Code	Description	Time Required*	Work RVU	Practice Expense RVU	Malpractice RVU	Medicare Payment in Colorado	Medicare Payment in Philadelphia
99301	Nursing facility care	30	1.20	0.40	0.05	$61.16	$64.76
99302	""	40	1.61	0.54	0.06	$81.96	$86.66
99303	""	50	2.01	0.67	0.07	$102.02	$107.76
99311	Nursing fac. care, subseq.	15	0.60	0.20	0.02	$30.43	$32.12
99312	""	25	1.00	0.34	0.04	$51.16	$54.15
99313	""	35	1.42	0.47	0.05	$71.97	$76.02
99315	Nursing fac. discharge day	<=30	1.13	0.37	0.05	$57.43	$60.87
99316	""	>30	1.50	0.51	0.06	$76.74	$81.23
99201	Office/outpatient visit, new	10	0.45	0.50	0.02	$35.94	$38.62
99202	""	20	0.88	0.79	0.06	$63.96	$68.96
99203	""	30	1.34	1.13	0.10	$94.96	$102.49
99204	""	45	2.00	1.51	0.12	$134.29	$144.24
99205	""	50	2.67	1.80	0.14	$170.66	$182.70
99211	Office/outpatient visit, est.	5	0.17	0.39	0.01	$21.10	$22.92
99212	""	10	0.45	0.54	0.02	$37.42	$40.25
99213	""	15	0.67	0.70	0.04	$52.17	$56.23
99214	""	25	1.10	1.05	0.05	$81.50	$87.45
99215	""	40	1.77	1.34	0.08	$118.18	$126.43
99241	Office consultation	15	0.64	0.65	0.05	$49.51	$53.56
99242	""	30	1.29	1.05	0.11	$90.43	$97.84
99243	""	40	1.72	1.39	0.12	$119.39	$128.65
99244	""	60	2.58	1.83	0.16	$169.03	$181.54
99245	""	80	3.42	2.29	0.19	$218.35	$233.95
99281	Emergency dept. visit		0.33	0.09	0.02	$16.27	$17.32
99282	""		0.55	0.15	0.04	$27.32	$29.22
99283	""		1.24	0.31	0.10	$60.85	$65.23
99284	""		1.95	0.47	0.14	$94.51	$100.97
99285	""		3.06	0.72	0.23	$147.98	$158.27
99221	Initial hospital care	30	1.28	0.45	0.06	$66.30	$70.38
99222	""	50	2.14	0.74	0.10	$110.38	$117.15
99223	""	70	2.99	1.04	0.12	$153.85	$162.89
99231	Subsequent hospital care	15	0.64	0.23	0.02	$33.03	$34.87
99232	""	25	1.06	0.37	0.04	$54.51	$57.67
99233	""	35	1.51	0.52	0.06	$77.48	$82.02
99238	Hospital discharge day		1.28	0.54	0.05	$69.33	$73.53
99239	""		1.75	0.74	0.06	$94.59	$100.16
99251	Initial inpatient consult	20	0.66	0.25	0.05	$35.44	$38.02
99252	""	40	1.32	0.50	0.10	$70.88	$76.04
99253	""	55	1.82	0.68	0.11	$96.52	$103.00
99254	""	80	2.64	0.99	0.13	$139.23	$148.01
99255	""	110	3.64	1.35	0.18	$191.44	$203.50
99261	Follow-up inpatient consult	10	0.42	0.16	0.02	$22.22	$23.61
99262	""	20	0.85	0.31	0.04	$44.45	$47.20
99263	""	30	1.27	0.45	0.05	$65.62	$69.48

NOTES: Highlighted codes are the most commonly billed codes in that category. RVUs are from the National Physician Fee Schedule Relative Value File Calendar Year 2004. CPT codes and descriptions are copyright 2002 American Medical Association.

* von Gunden, *et al.*, 2000.

APPENDIX XI

Time Spent on Primary Care Tasks for Nursing Home Patients			
Primary Care Task (minutes per patient per week)	Medical Doctor	Nurse Practitioner	Physician's Assistant
Cognitive assessment	0.2077	0.2422	0.3741
Complete physical	13.7550	3.1222	4.9639
Falls assessment	1.2670	0.9913	1.3718
Follow-up on orders	9.3939	8.2840	9.6158
History taking from resident	0.3322	0.1723	0.4410
History taking from other than resident	1.4365	1.5729	1.7836
Sick call	15.5360	10.0160	11.7580
Telephone evaluation	3.4015	1.1402	0.5475
Care planning meetings	3.5084	1.9102	1.4910
Arrange for off-unit services	0.6308	0.2615	0.4892
Consult/meeting with other services	5.3743	3.0015	2.7474
Discuss therapy preferences with patients	0.6864	1.6314	0.5430
Communications w/staff re: patients	2.8980	2.5590	2.2791
Informal resident interview	1.4422	0.3714	1.1716
Meeting with family members	2.9416	2.4590	2.3746
Advance directives	0.1069	0.0268	0.2165
Annual or initial MDS	2.6990	0.0000	1.6035
Discharge package/planning	2.8233	0.5923	1.2017
Quarterly review	0.6370	0.0687	1.2802
Significant change MDS	0.3666	0.0000	0.0000
Writing notes	23.1030	20.3270	15.4050
Fever work-up	0.4772	0.0000	0.5378
Screening and immunization	0.0457	0.1747	0.1386
Change trache, cysto, pegs, catheter	0.4968	0.2047	0.0880
IV	0.2102	0.0878	0.0000
Ulcer/wound debridement	0.7899	0.3966	0.6739
Wound care other than sutures	0.9649	0.5930	1.3596
Attend meetings	24.5150	5.2495	0.5268
Bedside teach medical trainees	1.2459	5.5915	1.6953
Supervise/collaborate w/phys. extenders	10.2650	1.6646	1.5202
Unit rounds	29.1860	12.6320	16.6470
Partial physical	25.1290	10.0020	15.9130
On-call off-site	54.4720	50.5970	9.2784
Total Amount of Time Spent	240.3449	145.9433	110.0371
SOURCE: Moore, S., and Martelle, M. Alternative Models of Ensuring Access to Primary Medical Care in Nursing Facilities Demonstration Project. RWJ Grant #20039, 1-15. 4-9-1996. New York Bureau of Health Economics, NYS Department of Health.			