PROVISION OF EYE CARE SERVICES IN NURSING FACILITIES:
Impact of Access Issues

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Chapter Overview

Access to eye care for seniors in nursing homes is a nationwide problem. In April 2005, there were a total of 16,094 nursing homes in the United States. On an average day, nearly 4% of the US population (1.6 million Americans) is residing in a nursing home. In 2020, 12 million Americans will need long-term care. Defined eye care protocols exist for glaucoma and diabetes, but nursing home residents may not be seen if there is no provision for on-site eye care. Eye care should be established as a priority in nursing homes for every resident, and a protocol for patient identification – based on health care status – would provide the best and safest outcomes for the visual needs of the patient.

Objectives

After reading this chapter, the optometrist should:

- Understand and be able to articulate five specific issues impacting vision care access for nursing home patients.
- Be able to describe the history of eye care policy and what influence it has had on present day services in nursing homes.
- Describe a methodology of patient care in nursing homes that are designed to overcome access barriers.

History and Description of the Public Health Problem

The typical candidate for nursing home admission is the elderly patient. Elderly patients are documented to be at highest risk of suffering one of three major catastrophic events:

- Stroke: 5.8 million annually; 8.1% age 65+ vs .8% 18-44. (1)
  (See Table 1)

- Myocardial Infarction/Coronary Heart Disease: 356 thousand annually; 8% age 65+ vs 1.8% 18-44. (2) (See Table 2)

- Diabetes: Age 65+ have highest percentage of diagnosed diabetes (3) (See Table 3) and are typically admitted to nursing homes for rehabilitation and treatment for post acute care.
During a rehabilitative or long-term stay at a nursing home, eye care for patients is de-prioritized in light of the serious nature of their acute health care needs, and eye care services play a minor role to other healthcare treatment concerns. However, the assigned low priority of eye care continues after the patient has been managed through the acute crisis and rehabilitated.
Table 2- From 1980 through 2006, the percentage of diagnosed diabetes increased in all age groups. In general, throughout the time period, people aged 65–74 years had the highest percentage, followed by people aged 75 or older, people aged 45–64 years, and people younger than 45 years of age. In 2006, the percentage of diagnosed diabetes among people aged 65–74 (18.4%) was about 12 times that of people younger than 45 years of age (1.6%). (CDC Data and Trends, October, 2008) Also available from CDC website.

Access to eye care for seniors in nursing homes is a nationwide problem. In April 2005, there were a total of 16, 094 nursing homes in the United States. On an average day, nearly 4% of the US population (1.6 million Americans) is residing in a nursing home. In 2020, 12 million Americans will need long-term care (4). Historically, there have been 1.9 million beds and 84% occupancy in nursing homes nationwide (5). The provision of eye care services at these facilities varies from state to state. Most facilities do not have a plan for eye care services for their residents. The nursing home facilities provide limited eye care support to residents. They arrange for eye care services to be administered to residents suffering urgent or emergent eye problems, or those requested by the family or responsible guardian. The facility responsibility for eye care does not extend to preventative eye care. Defined eye care protocols exist for glaucoma and diabetes, but access to the services is ignored or superceded by other systemic issues or logistic issues. Further, there are no nursing home protocols or guidelines for comprehensive eye exams for patients who suffer stroke, hypertension, or coronary artery disease - where there is risk for catastrophic vision loss.
Estimated Specific Prevalence Rates for Vision Impairment and Blindness
It is predictable that, when a patient suffers a systemic breakdown, there is an increased risk for catastrophic vision loss, and visual function and eye health concurrently suffer in conjunction with the co-morbidities associated with declining health. Therefore, emphasis should be placed on early detection and diagnosis of vision impairment and blindness, and eye care delivery prioritized as a crucial component of nursing home patient health care. Advances in public health emphasis as a part of medical care, advances in medical technologies, and an interdisciplinary team approach to nursing home care have a positive impact on the quality of life for nursing home residents, especially those with progressive chronic ailments accompanied by altered mental conditions (6).

Many nursing home residents do not receive eye and vision care because of a number of factors that will be elaborated in this chapter including:

Patient-Related:
- The patient not appreciating the need or relevance of the care
- Confusion concerning the insurance reimbursement and expenses associated with receiving eye care while in a nursing home
- Patient unable ask for eye care when needed
- Patient’s family unaware of need for eye care

Institution-Related:
- Transportation limitations
- Patient logistics, difficulties and ambulatory limitations
- Staff to accompany the resident outside the nursing home
- Long waits in waiting rooms
- Permission needed from family member or power of attorney to access services
- Primary or specialty care providers do not request consultation
- Practice guidelines not present or poorly communicated
- Lack of incentive for facility to administer or coordinate eye care

Community-Related:
- Shortage of eye care providers with geriatric and low vision training
- Barriers to eye care providers getting on insurance provider panels
- Shortage of eye care providers accepting Medicaid or other insurances
- Lack of coverage for refraction or low vision services

All of these factors influence access to the patient and the delivery of timely eye care. Each nursing home has its own restrictions and limitations that limit resident availability. These restrictions and limitations may interfere with services that could: (7)
• Preserve the patients’ vision and enhance their quality of life
• Combat depression
• Facilitate patient mobility.

Limiting Factors in Resident Access

PERCEPTIONS AND MISCONCEPTIONS IMPACTING ACCESS

Vision care is not mandated in nursing facilities and, because of issues of expense, logistics, and transportation, few residents receive eye care services. As few as one in eight nursing homes have eye care services on site. Even in nursing homes where eye care service is contracted, more than half of nursing home residents don’t receive eye care (8). The issues surrounding eye care access in nursing homes are further exacerbated by the influence of perception (e.g. “eyecare is no longer needed since the person is in a nursing home facility”) and environment (e.g. poverty, broken homes).

The perception of the appropriateness and need of eye care delivery to residents in nursing homes is based on a variety of factors, including the influence of socioeconomic status and family member’s impressions of what “eye care” entails. Residents of inner city nursing homes may have no family and no funds. Some state inner city facilities have a higher prevalence of minority residents that suffer from complications associated with drug and alcohol abuse. Concurrently, they suffer from ailments that include: uncontrolled diabetes and hypertension, Hepatitis C, HIV/AIDS, dementia and mental illness. Some of these patients have neglected their own medical care and will not receive eye care, unless the medical staff requests the exam.

Conversely, there are residents of nursing homes who have strong family support units that are caring and concerned about the residents’ welfare. However, even supportive families commonly misunderstand the value of eye care service that can be provided to elderly, frail residents. The reasons that eye care service is not sought, and not accepted when offered, vary widely; from ignorance of the public health nature of the service, confusion about incurred costs, perception that the services are “just for glasses,” or the resident is either too cognitively impaired or too infirm and frail to benefit from eye care. In some isolated circumstances, there are families that request that no care be provided, and others abandon the resident once the admission process is finalized. These and many other cultural, societal, and socioeconomic factors, are reflected in health care statistics, showing that few residents receive vision care after admission into a nursing home, in spite of data that indicate that vision impairment is 13-15 times more common among institutionalized elderly than among non-institutionalized elderly (8). Therefore, early intervention through regular vision exams should be emphasized. Blindness and visual impairment can be managed with early detection and treatment; however, it is well known that most eye diseases lack symptoms until vision is lost and vision that is lost usually cannot be restored.
HEALTHCARE POLICY BARRIERS: Medicare and Medicaid Policies and Solutions

Medicare and Medicaid are the main sources of payment for healthcare services delivered to nursing home residents, particularly Part B Medicare for eye care services. Medicare may require that an optical exam (refraction) be performed on every new resident, however, in some states refractions are not paid for by Medicare or Medicaid. The eye doctor is required to bill for the refraction, so the payment burden for the refraction fee is typically assumed by the patient or their family. This single issue can lead to the patient not receiving the needed eye care, because neither the patient nor the family is willing or able to incur the debt and refuses the care.

The foundation for the nursing home eye care delivery model proposed in this chapter is based on a medical model. The model is composed of a cooperative interdisciplinary team that appreciates the need for the service. The most fundamental concept of this model is that the resident’s primary care physician and the medical director of the facility understand and agree that eye care be included as a core service, and that good vision contributes to the well being of the nursing home resident. Once it is agreed that good vision is a core value, and criteria for referral are established, the primary care provider or nursing home medical director verbally orders (note: since 2007, written consults are no longer mandated by Medicare, and the consult can be verbally transmitted as an order) the on-site eye care provider provide the service. The consult is the most appropriate medical mechanism for the delivery of care because:

- It provides a vehicle for communication of the details of the eye exam. The formal diagnosis and treatment recommendations are communicated in writing to the primary care provider concerning the patient’s specific visual problems, in the context of concurrent systemic ailments.
- It opens avenues of communication with other health care providers on the team; providing insights for mobility to physical and occupational therapy, diabetic treatment to podiatry, and medical management for nursing care.
- It provides a vehicle for communication of differential diagnosis for subspecial referral (e.g., neurology, retinal, endocrinology) and testing (e.g., x-ray, CT scan, MRI, carotid doppler).
- It provides a vehicle, under Medicare guidelines, between the in-house eye care provider and the resident’s existing health care delivery team. Recommendations for that resident’s eye care are directly incorporated into the patient healthcare record as a common resource of reference by the entire medical team.

DURABLE MEDICAL EQUIPMENT CENTER (DMERC)

Recently, the DMERC Medicare Administrative Contractor proposed that all eye care providers who supply spectacles to post-cataract patients, and receive DMERC reimbursement, go through a certification program. It is difficult to
understand the motivation for this proposal as there are no professional organizations in favor of it, there are no reports of poor spectacle prescriptions being made, and there are no reports of nursing home patients being harmed by spectacle prescriptions. Further, state laws prohibit unlicensed practitioners from conducting eye exams and issuing prescriptions and most nursing homes have procedures for accreditation before privileges are given. Had this proposal passed, there would have been a devastating impact on the nursing home population of post-cataract patients as it would resulted in further delays and reticence on the part of eye care providers to continue to participate in the program – restricting or eliminating this service to the nursing home residents. Currently, the model described in this chapter proposes that all post-operative care, from the day-one visit, be done by the in-house eye care provider. The last post-operative visit includes a current refraction and the provision of spectacles at no cost to the resident.

*Prevalence of Abnormal Age-Related Vision Change: Setting the Stage for Eye Care in Nursing Homes*

The population of the United States in 2004 totaled 130 million individuals age forty and older. From 1950-2005 the population of individuals 65 and older grew by 2% per year from 12-37 million; the population age 75 grew 2.8% from 4-18 million, making them the fastest growing age group (9). In addition, those individuals age 80 and older (termed old, old population) are also amongst the fastest growing age groups in the U.S. (10). These census data also provide insights for populations of residents in nursing homes. Vision impairment is one of the most common disabilities among nursing home residents, where 27% of nursing home resident’s ages 65 and older have vision impairment (N = 396, 700) (11). It has been estimated that 80% or more of all nursing home residents received no vision care at any point after their admission into the nursing facility (5). In a 2007 multi-center study of nursing homes in Alabama, it was noted that almost two thirds of the residents were visually impaired and two thirds had no record of an eye examination in their medical charts; one third of the residents said they did not know when they had their last eye exam (8).

There are an estimated 3.6 million visually impaired individuals who are age 40 and older, and 1 million who are blind (See Table 4). Vision impairment is defined as the best corrected visual acuity of either eye that is 20/40 or worse, and legal blindness is defined as the best corrected visual acuity of either eye that is 20/200 or worse - or a visual field restriction to less than 20 degrees in diameter. The leading organic causes of visual impairment and blindness in the U.S. as well as in nursing home populations are: age-related macular degeneration, cataracts, glaucoma, and diabetic retinopathy. However, refractive error is the most common eye problem in the United States. Approximately 40 million individuals in the U.S. who are age 40 and older need a spectacle correction for their refractive error (12). Spectacle correction and low vision aids are in the armamentarium of the eye care provider, and these tools provide a
relatively simple means to restore vision and immediately improve the patient’s quality of life.

A Brief Review of the Epidemiology of Eye Disease in the Aged

Four of the most prevalent vision threatening eye diseases suffered by institutionalized and non-institutionalized elderly in the United States are (13):

- **Age-related macular degeneration (AMD):** Affects the central vision, the region responsible for optimal visual acuity. The causes of AMD are unknown, but a significant risk factor is age. AMD occurs in non-exudative (dry) and exudative (wet) forms. In the late stage of AMD, each of these forms has the potential for advancing, and destroying central vision. There is no widely accepted treatment for the dry form, though intraocular injection of vascular endothelial growth factor inhibitors or laser treatment can benefit the wet form in certain cases. Over 2 million Americans over age 50 have late stage AMD, and significantly more older Whites suffer late stage AMD than other races. There is also a higher risk of acquiring AMD in individuals who smoke. Individuals rarely acquire AMD if they are less than age fifty.

- **Cataract:** Is a progressive clouding of the eye’s natural lens that increases with age. There are a number of types of cataract, and combinations of the types were included in the prevalence estimates. Approximately 1 in 6 Americans - 22 million individuals age forty and older have cataracts. By the time Americans reach age 80, the majority suffer from the formation of cataracts. Exposure to ultraviolet radiation from the sun is the leading cause of cataracts, but smoking and diabetes are also significant risk factors for their development.

- **Diabetic retinopathy:** Residents of nursing homes exhibit the most advanced complications of diabetes, including end stage retinal bleeding and retinal detachment. Resident’s also suffer peripheral neuropathy (numbness) and poor vascular perfusion to the extremities that results in gangrene and amputation of the legs, feet, and toes. However, some nursing home residents do not acquire diabetes until after their admission into the nursing home. Those residents with late-onset diabetes, typically do not receive timely eye care exams to rule out retinal involvement. It is estimated that diabetic retinopathy affects over 4.4 million Americans age 40 and older. In nursing homes a resident with long-standing diabetes, is more likely to have received laser treatment and to inhibit advanced retinal disease. Diabetes affects the smaller vessels throughout the body. In the feet and legs small vessel damage leads to neuropathy, and in the eye it leads to fluid leakage and hemorrhage into the retina and the inner eye. If diabetic eye signs are left undetected and untreated, the patient
may suffer catastrophic vision loss. It is nationally mandated that diabetics receive a dilated retinal examination at least once a year, or more frequently if the disease progression dictates. However, in some nursing facilities, the recommendations that apply to the general diabetic population are not applied to diabetic residents. If it is the professional opinion of the primary care provider, that there is no value or benefit from recommended retinal exams, or because of other life-threatening health complications retinal health is overlooked, the eye exam is not ordered. Early detection and treatment take on new meaning in nursing home settings. The visual impact of diabetic retinopathy can be de-prioritized in light of mortality considerations. Choice of triage options are influenced by the PCP’s options for treatment, based on the patient’s health status. Some PCP’s temper the implementation of clinical guidelines and safeguards when managing life-threatening co-morbidities.

- Glaucoma: Traditionally diagnosed on the basis of three factors: increased intraocular pressure, visual field loss, and excavation of the optic nerve. The type of glaucoma most commonly encountered in nursing homes is Primary (open angle) glaucoma. While there is no cure for this type of glaucoma, it may be readily managed with eye drops, oral medication, and/or laser or invasive surgery and regular follow-up eye exams. The vision loss associated with glaucoma is insidious and starts in the peripheral visual field, therefore, while it is prevalent in nursing homes, it is never named as a source of referral for the comprehensive exam, unless there is a documented prior history. It is estimated that glaucoma affects more than 2.3 million Americans age forty and older, and represents about 1.9% of this specific population. Glaucoma is clearly related to age and race, with elderly Blacks and Hispanics being particularly vulnerable populations. Comprehensive eye health assessments for nursing homes with these typical high risk patient populations are especially important.

Many times the above mentioned four major vision threats do not exhibit overt signs or symptoms, so it is not possible for their diagnosis to be made on the basis of what can be objectively seen by the attending staff, or subjectively reported by the patient. The fact that there may be no signs or symptoms associated with vision loss or immediately preceding the vision loss is the source of a crucial referral dilemma surrounding the provision of eye care in nursing homes. Some PCP’s do not refer visually asymptomatic residents for eye care, and this results in the significant shortfall in residents receiving eye care, and a significant number of residents who suffer from missed diagnosis and treatment. However, with overwhelming statistical evidence demonstrating the need for eye care, (based on the prevalence of organic or optical vision problems) in nursing home populations, and the absence of referral guidelines, it is in the best interest of every patient that guidelines be established assuring residents access for comprehensive and regular eye care. Referral guidelines should be based on
known prevalence of eye disease and systemic ailments in nursing home populations.

**BRFSS survey on visual impairment: Relevance to accessible eye care for older patients at the State Level:** (14)

“The Behavioral Risk Factor Surveillance System” survey, known as the BRFSS, is a state-based, random-digit dialed telephone survey of the non-institutionalized, Americans aged ≥18 years and is administered by state health departments in collaboration with CDC. In 2005, the median response rate among states, based on Council of American Survey and Research Organizations guidelines, was 51.1% (range: 34.6%--67.4%). This rate accounts for the efficiency of the telephone sampling method used and participation rates among eligible respondents who were contacted. A total of 356,112 respondents from all 50 states, DC, Puerto Rico, and USVI participated in the survey. State (including DC) and territory sample sizes ranged from 2,422 (USVI) to 23,302 (Washington). The racial/ethnic national sample sizes ranged from 5,535 (AI/ANs) to 279,419 (whites). All prevalence estimates in this report have a numerator >50 and a relative standard error <30% to ensure that estimates are stable. The BRFSS is unlike other national health monitoring systems in that it allows the collection of state-specific data.” (From CDC BRFSS description website)

This survey instrument provides an exceptional means to assess a wide variety of health care conditions, from non-institutionalized patients, that can be the minimal expected prevalence in nursing home data. Visual impairment, one of the ten most common causes of disability in the U.S., was assessed using the BRFSS survey. CDC data reported earlier came from a BRFSS survey and these data are published in the Centers for Disease Control and Prevention’s (CDC) Morbidity and Mortality Weekly Reports (MMWR). Visual Impairment and Eye Care among Older Adults - Five States, 2005 (14) was the first MMWR to incorporate vision data in BRFSS format. Estimates of state-specific prevalence of visual impairment and eye diseases were unknown prior to the publication of this report. In 2005, individuals age 50 and older, from five states (Iowa, Louisiana, Ohio, Tennessee, and Texas) participated in a survey that provided information concerning self-reported prevalence of visual impairment, eye disease, and patient-based experiences with access to eye care.

This study substantiated trends from established nationwide data indicating that:

- Visual impairment was more prevalent in older age groups; particularly female respondents.
- Cataracts, glaucoma, macular degeneration, and diabetes all increased with age, however at age 80 and older, the prevalence of diabetic retinopathy dropped significantly- probably due to earlier death of persons with diabetes.
BFRSS VISION STUDY SUBSTANTIATED LACK OF EYE CARE

Patients were asked if they had received a dilated eye exam within the past twelve months, and if not, the respondents were asked the main reason for not seeing an eye care professional. The most common reasons for not visiting an eye care provider in the past 12 months were: “no reason to go,” cost and lack of insurance. Men were more likely than women to report not having a dilated eye exam or not having an eye care visit in the prior twelve months. The number of people failing to receive a dilated eye exam or an eye care visit in the prior 12 months decreased with increasing age in populations that were ambulatory. Populations confined to long-term care facilities were not specifically addressed in the survey, but nursing home residents have similar, or more advanced eye and vision care needs. However, some facts may not be generalizable to nursing home residents. Because women far out number men in nursing care, they may have the same or less frequent visits for eye care services.

This eye care survey was the first to estimate the self-reported prevalence of visual impairment, eye diseases, and access to eye care at the state level. The findings suggest the need for detailed eye care surveillance at the state-level and highlighted the importance of increasing access to eye care in nursing homes.

Bailey reinforced factors influencing eye care delivery. There is clear evidence demonstrating that early detection and timely treatment can prevent visual impairment and blindness. “The vision community should heighten its efforts to raise the public’s awareness of eye diseases as common, serious, costly and, with early detection, treatable – thereby, preventing or minimizing visual disability.” Said Dr. Bailey (14). This survey emphasizes the need for eye health interventions with supporting public health policy. Each year the survey will be expanded to include more states, and it is anticipated that similar findings will be encountered throughout the country.

The Public Health Role of Comprehensive Eye Care

The 21st Century will bring significant challenges to health care providers to accommodate the growing needs of the aging baby boomer population. By 2030, approximately 52 million people will be age 65 or older (15). Currently, approximately 12% of the U.S. population is 65 years or older with this percentage expected to grow to 20% by the year 2030 (16).

The National Institutes of Health recognized the importance of vision and eye health in the growing elderly population when it first introduced vision objectives in its Healthy People 2010 initiative (17). This national disease preventative initiative outlines opportunities for health improvement of all Americans. Currently, 5% of the general population age 65 and older resides in nursing homes. The proportion of severely visually impaired residents in nursing homes is 25-48% and 3% have no vision (13). In the past century, the population of elderly in the U.S. has tripled, and more than 60% of those age 65...
and older can expect to live to their mid-80s (18). These numbers will double by 2020, largely because of the aging U.S. population. Optometrists in every community have an opportunity to serve this growing population by providing comprehensive vision care through a multi-disciplinary setting and making a positive impact on each resident’s quality of life.

“Visual impairment, compared to no visual impairment, is associated with over $1,000 of excess medical expenses...blindness, compared to no visual impairment, is associated with over $2,000 of excess annual medical expenditures per year. The annual excess monetary impact from individuals with visual impairment and blindness, caregivers and other healthcare payers is calculated at $5.48 billion.” On top of the $5.48 billion is an annual health utility loss of approximately $10.5 billion (19). The cost associated with all adult vision problems in the United States is $51.4 billion. A major portion of this economic burden is contributed by individuals 65 and older (See Tables on Prevalence of Vision Impairment and Blindness). Therefore, public health emphasis of early detection and treatment of vision impairment and blindness should extend to residents of nursing homes, and must incorporate interdisciplinary quality-of-life services as well as address the potential fiscal impact on total health care costs.

Nursing home care represents a significant portion of the cost associated with the care of the visually impaired elderly. By 2040 the Urban Institute reports that the number of nursing home residents will nearly double, from 1.4 million in 2000 to 2.7 million. Most facilities do not have a plan for eye care services for their residents (20).

It is evident that visual function, eye health, and the co-morbidities associated with aging should be crucial areas of health care emphasis. Concurrently, increased prevalence of visual impairment with increasing age further emphasizes the importance of providing comprehensive eye care to residents of nursing facilities. A comprehensive adult eye and vision examination serves many significant purposes:

- It gives a functional status of the eyes and the visual system,
- It takes into account the special vision demands of the patient,
- It provides crucial data about ocular health and related systemic health conditions, and
- It allows for the formulation of a treatment, management, counseling and education plan for the patients’ future care.

Family member’s who are responsible for medical decision making for the resident, as well as physicians and health care providers, are not aware of eye exam guidelines, and yet, family members must actively provide support to overcome barriers of resident access to eye care.
blindness and visual impairment can be managed with early detection and treatment. Therefore, early ocular intervention strategies are crucial and must be supported by facility administrators and families. It is incumbent upon eye care professionals to partner with health care providers to set eye exam guidelines, and encourage family members to provide active support for the resident to overcome these barriers to personalized healthcare. The creation of a proactive and cooperative professional team approach to senior eye care will optimize quality of life.

**EARLY DECISIONS THAT SET THE STAGE**

The American Public Health Association (APHA) recognized the importance of delivering eye care services to institutionalized elderly as early as 1995, when they passed a resolution titled "Improving Access to Vision and Eye Health Services for Long-Term Care Facility Residents." (21). In this resolution, they noted that adequate refractive correction could reduce the prevalence of blindness by 20% and visual impairment in this population by 37%.

The American Optometric Association (AOA) created its own position statement on the eye care services in nursing facilities in 1992 and again in 1997. The AOA recommended "...the modification or amendment of rules and regulations that directly or indirectly restrict or encumber access to eye care services within nursing facilities." (22).

Issues related to nursing home residents were also addressed by the CDC's Advisory Committee to the Director when they identified five roles for CDC to promote health and prevent

The APHA therefore resolved to:

- Support the modification of laws and regulations governing long-term care facilities that would improve the access of residents to vision and eye health services upon admission and periodically thereafter, as required by the resident's ocular and systemic health conditions.
- Support the modification of laws and regulations that would protect recipients of the eye and vision health services from fraud and abuse.
- Encourage long-term care facilities to include an optometrist or ophthalmologist in an advisory role to the nursing staff.
- Encourage long-term care facilities to maintain an agreement with an optometrist or ophthalmologist to provide primary vision and eye health services to residents of the facilities on site.
- Encourage long-term care facilities to assist the residents in making appointments with and in arranging for transportation to and from the office of an optometrist or ophthalmologist for those services and procedures that could not be provided on site.

Taken from APHA 1995 resolution (21)

Advisory Report on aging to the Director of the CDC

- To provide high-quality health information and resources to public health professionals, consumers, health-care providers, and aging experts;
- To support health-care providers and health-care organizations in prevention efforts;
- To integrate public health prevention expertise with the aging services network;
- To identify and implement effective prevention efforts; and to monitor changes in the health of older adults.

The commitment of the AOA, CDC and APHA to the healthcare needs of the elderly is a significant step towards improving quality of life issues that affect this population of patients. However, national acceptance of these recommendations by nursing homes throughout the country has been spotty or nonexistent since the recommendations were made. In 1986, the Institute of Medicine (IOM) Committee on Nursing Home Regulations issued a report titled “Improving the Quality of Care in Nursing Homes.” Recommendations from this committee stimulated Congress to enact major reforms in nursing home regulations under the Omnibus Budget Reconciliation Act of 1987 (OBRA 87). This Act resulted in many positive changes; however, there were persistent concerns about the quality of long-term care. Another quality assessment committee was formed in 1999 and was charged to examine.

The Institute of Medicine conducted the National Nursing Home Survey in 1999 (24). This Committee made recommendations from five specific categories: 1) Access to services, 2) Quality assurance through external oversight 3) Strengthening the workforce, 4) Building organizational capacity, and 5) Reimbursement issues. The Committees’ recommended changes are being methodically addressed, but long-term eye care services were not specifically addressed.

One possible explanation for the sluggish response to the creation of eye care programs in nursing homes may be attributable to concerns over the perceived increased burden on society of additional healthcare costs (25). assessed the economic impact of excess medical and informal care and the health utility loss associated with visual impairment and blindness in U.S. adults aged 40 years and older. More than $5.5 billion was spent for direct medical
costs, other direct costs, such as nursing home care and government programs, for an average of $1400 per year for 3.7 million visually impaired or blind patients from 1996 to 2002. Further, more than 209,000 quality-adjusted life years were lost due to visual impairment and blindness. It is estimated that the financial impact to the individual, caregivers and others at $16 billion. The total financial impact, described earlier in this chapter, is $51.4 billion.

"As the baby boomer generation is aging, my research shows that the number of people in the United States with impaired vision -- including blindness -- could increase by at least 60 percent over the next three decades," said Dr. Frick." It is a troubling reality that an increasing number of Americans are going to be faced with escalating costs due to vision loss unless we focus on prevention." (19).

Remedies for Vision Care Access

The Formation of Interdisciplinary Team

Nursing homes are excellent settings for interdisciplinary health care, and are logical sources for models of a health care team approach to elder care (11).

Long-term care includes a vast array of services provided over a long period to patients that suffer from chronic illnesses and functional loss. The care provided may range from minimal services to total care. The population of those aged 85 and older are experiencing the most rapid growth, and while their overall health has allowed them to live longer, many elderly are more frail and dependent upon total care because of chronic and disabling conditions that occur with old age. The prevalence of severe visual impairment in this elderly population is expected to increase more than four-fold from 1960 to 2020 (26).

Elderly people suffer vision problems as co-morbidities with systemic conditions like hypertension, diabetes, and stroke. There is a significant decrement in the activities of daily living in patients with visual impairment versus non-visually impaired. For example, difficulty walking occurs at nearly double the prevalence for visually impaired versus non-visually impaired (27). It is important that professional academic institutions equip healthcare providers with skill sets to succeed and competently create strategies for care of the elderly. Further, it is important that the delivery of care be within a public health framework, with special emphasis placed on "sustainability." Assuring sustainability demands that the healthcare providers be organized into interdisciplinary teams in their delivery of care and that they understand the importance of establishing sound healthcare policies. Sustainability also requires a restructuring and accommodation of health care industries as well as government agencies to create a physical environment and support system that insures that the special health care demands of the elderly are met, as they become less independent and more frail. The interdisciplinary team approach represents a dramatic change in the way health care services are currently delivered. While there are current examples of the team approach in some health care settings, the growing demands of the elderly will far exceed the capabilities of these programs. Future
health care delivery should involve teams of providers who work cooperatively to address social, psychological, and physiological needs of the patient.

**Establish a Model of Vision Care Delivery**

It is evident from data compiled in this chapter, that eye care should be established as a priority in nursing homes for every resident, and a protocol for patient identification – based on health care status – could be derived that would provide the best and safest outcomes for the visual needs of the patient. The positive impact of ocular health and visual needs assessment have been suggested to directly impact the patient’s: (28)

- Mobility
- Activities of Daily Living
- Likelihood of falls and resultant hip fractures
- Physical ailments and appetite
- Success of other rehabilitative and restorative programs
- Morale, Depression, Social Isolation, Self Worth and Emotional Security

**CASE STUDY**

**A CURRENTLY ESTABLISHED NURSING HOME EYE CARE DELIVERY MODEL**

**The Problem:**

A for-profit, 200 bed, skilled-care facility in Northern Delaware wishes to establish an in-house eye care program. The residents are middle-income, with Medicare and secondary insurance coverage. The population is 70% white females, 10% Hispanic, 5% African American, and the remainder are Asian. The prevalence of eye disease in this population is approximately 34% diabetic, 14% glaucoma, 22% post-stroke, 70% hypertensive, and 47% cataracts. The facility requests the service of an eye care provider that can provide the full scope of eye care services, including diagnosis, medical management, appropriate referral, and the provision of spectacles to those residents who would benefit from optical correction. They have contacted your practice and are asking for a meeting to discuss the feasibility of using your services as their eye care provider.

1. Initial dialog and interaction with the nursing home administrative team:

   - Setting the operating rules and guidelines for patient eye care at the facility.
   - The key decision makers at nursing homes are the administrator, medical director, director of nursing, and social worker. Each of these individuals have influence over the success or failure of the eye program at the facility.
i. The administrator must understand policy and guidelines influencing delivery of eye care and must support a positive implementation and execution of the eye care delivery model.

ii. The medical director determines which residents are eligible for eye care. The resident’s are identified on the basis of high risk criteria and the consult process is implemented, as mentioned earlier in this chapter.

iii. Director of nursing is in charge of the nursing staff and certified nursing assistants (CNA’s). CNA’s are the backbone of the facility. If there is no cooperation from the nursing staff, it is extremely difficult to make the eye clinics work and almost impossible to deliver timely and efficient eye care to the residents.

iv. Social Workers are ambassadors and liaisons to the families, and they assist in identifying patients who need eye exams. Their support insures that the family and patient understand that the purpose of the eye exam is preventative eye health care and the preservation of vision. Patient and family perception can be a barrier to access, as mentioned, if the program is presented solely as an optical model.

- When the eye care provider schedules the initial planning visit to the facility, all of the key individuals should be present and participate in discussions. A plan of action is agreed upon and implemented. The level of support that the facility providers agree upon at the initial meeting dictates the frequency and level of care the resident’s will receive. The criteria for consult requests are also defined at this meeting; the facility point of contact is identified, and the logistics of patient access during the on-site visit if organized.

2. What care is provided and how it is delivered:
   - The consult generated by the primary care provider (PCP) or medical director identifies the ailment and patient. A complete and comprehensive eye health and optical assessment is performed on each patient. As of 2007, Medicare guidelines no longer require a written consult from the PCP, the eye care consult may be verbal, however, the eye care provider is still required to provide a complete written consult report for each patient seen. The consult report is a permanent part of the patient record, and is available for access and review by every member of that patient’s health care delivery team.

3. The Schedule and Logistics
   - Once patients are identified by the social worker, PCP, nursing staff, or family, a schedule is prepared that identifies which patients are to be seen and the time of the exam. Typically, the logistics and timely access to the patients is the responsibility of the nursing staff, and it is the sole responsibility of the CNA’s to have the
patient up, dressed and ready for their exam. Patient logistics and punctuality truly reflect the flexibility and willingness of the nursing facility staff, to accommodate variations in their routine schedule to accommodate the eye care program.

4. Equipment
   - Currently, it is possible to purchase portable equipment for every aspect of the comprehensive exam, including: refraction, tonometry, biomicroscopy, ophthalmoscopy, and photography. Other special testing, like visual fields can be performed by non-portable means or the service referred outside the facility. The service is typically provided to residents in a convenient location within the facility that is large enough to accommodate the equipment and patients in wheel chairs. The room also should be equipped with adjustable lighting. In cases where the patient is bed ridden, the equipment is moved to the patient’s bedside and the complete exam is performed in the patient’s room.

5. Documentation, Communication, Interdisciplinary Referral
   - A comprehensive consult report prepared and inserted in the patient record for every patient eye exam. The consult addresses the specific diagnosis the PCP identified as high priority, and describes the resultant systemic impact on that patients’ visual status. If specific ocular medical management, special treatment, supplemental laboratory or other tests are required, these are recommended in the consult to the PCP for review and action.
   - The eye care specialist also uses the consult as a vehicle to recommend strategies and action for other members of the health care delivery team. For example, a consult note might be addressed to physical or occupational therapist’s to make them aware of visual field or ocular motility restrictions that may influence their rehabilitative strategies for that resident’s care.
   - A hard copy completed electronic consult is printed, and inserted into the patient’s record in the same day. This document is a complete summary of the exam as well as the written consult to the referring PCP, and is used to recommend to the PCP that the resident be referred for subspecial retinal, corneal or glaucoma care, or that the patient have supplemental laboratory or clinical tests, such as carotid doppler, CT scan, or MRI. Consults may also be used to recommend that the resident be referred for cataract surgery. Typically, cataract surgery, using this model for delivery includes only two visits outside the facility: the cataract surgery consult visit, and the actual surgery visit. Once the surgery has been performed, all follow-up post-ops are performed in the facility. In-house follow-up care saves transportation and logistics costs for three additional post-op visits mandated by Medicare. At the third post-op visit, approximately three months after surgery, glasses are
provided to the patient at no cost (see DMERC discussion earlier in this chapter).

6. **Complete Optical Care and Low Vision Care**
   - Due to the near 100% prevalence of refractive errors, pseudophakia, and presbyopia, most nursing home residents need glasses. This nursing home eye care model allows for all residents who receive a comprehensive exam to also receive glasses. If the patient has no funds, or is a ward of the state, glasses are provided at cost or for free, depending on the financial ability of the patient and their family.
   - A low vision specialist provides care to residents who suffer visual impairment or blindness. Low vision is a specialty service within the on-site team, or this service may be provided by the state blind agency.

**Vision Rehabilitation and Low Vision Services for the Older Patient**

Visual impairment is defined as a best corrected acuity in the better eye of 20/40 or worse. Legal blindness is defined as the best corrected visual acuity being 20/200 or less in the better eye or visual field loss reduced to 20 degrees or less. While these are legal definitions, neither visual impairment nor legal blindness implies total loss of visual function. However, most nursing home patients who are afflicted with visual impairment maladies act and think that they are totally blind, and many give up trying to use their remaining functional vision. This fact is substantiated by data that indicate that individuals who suffer vision impairment are more likely to be admitted into nursing homes than those without vision impairment (11).

**Value of Low Vision Services**

Low vision services provide a unique resource for nursing home patients to appreciate their full visual capability, and allows them to perform desired tasks that they assumed were no longer possible - like activities of daily living (ADL). This unique vision rehabilitation service is not available to most residents of nursing homes because they lack transportation and escorts to the low vision provider, and most other consultant providers (29). Low vision services complement the comprehensive eye exam in a manner that assures the resident’s optimal visual capability is attained. Low vision is part of the continuum of eye care that places a high emphasis on the visual needs of the resident, and broadens the positive impact of vision care. A broad spectrum of optical and lighting options are explored, then designed, to optimize the patient’s remaining useful vision. Low vision can be expensive due to the length of testing, patient training, and cost of magnifiers, telescopes, and electronic devices. For residents with limited hearing and physical handicaps, any degree of vision improvement can have significant impact in quality of life. Minimally, nursing homes should have some devices, especially closed circuit televisions,
available in a common area for residents to share use. They could also consider weekly classes by a vision rehabilitation teacher or appropriately trained occupational therapist in use of magnifiers, eccentric viewing, tracking, and high plus reading glasses. Nursing homes might collaborate with Lion’s clubs or other nonprofit to provide devices and services. Nursing homes with top care who wish to set the benchmark would need medical eye service, refractive service, and low vision service integrated in their medical care.

The example model outlined above is one that is currently being utilized in state nursing homes. The model has been validated in the field, and is a turn key, efficient method for eye care delivery to nursing home residents. This model has, as its basis, a public health emphasis for the delivery of eye care, and its success is contingent upon each team member taking an active role in patient identification, logistics, and delivery of optimal care.

Public Health Vs Traditional Practice Eye Care – The Importance of Multi-disciplinary Team in Nursing Home Settings

Vision Care Working Group Summary Report

In November 2006, the Vision Care Section of the American Public Health Association, voted to create a working group (WG). The WG was composed of representatives from audiology, physician assistants, optometry, dentistry, pharmacology, public health, geriatricians, and the health care industry. This WG was tasked to explore how academia was preparing health care students to care for the growing population of elderly patients. In particular:

- What geriatric curriculum, programs, and rotations are offered to students during the course their health care training?
- Were there any current attempts to train students to be members of a multi-disciplinary team of providers?

The WG discovered very few professional academic programs that singled out geriatric training as a separate and distinct discipline. In fact, it was difficult for the WG to find a single model that solely emphasized geriatric training. Of the six professional disciplines represented in the WG, it was not possible to identify a separate and distinct geriatric model in their academic programs. Most training programs incorporated geriatric education as a subset of subjects in the traditional curriculum i.e. pharmacology, psychology, pathology, rather than using the geriatric patient as a model of the expression of these disciplines. The special needs of geriatric patients were also represented in public health academic programs. While most disciplines agree that geriatric education should be a goal, the WG discovered few specific programs that singled out geriatric training as a separate and distinct discipline. In fact, it was difficult for the WG to find a single model that solely emphasized geriatric training. Currently, interdisciplinary models of health care delivery exist in some health care industries or large academic facilities, however, there are data indicating that of the 125 medical schools in the U.S., only five have gerontology programs (7).
There is a shortage of geriatricians in nursing homes now, and will be in the future. Much emphasis is being given to other medical specialties, one in particular, the internist. Currently persons over 65, who are 13% of the population, account for 40% of visits to internists and this number is rising. Care for elderly patients demands knowledge and use of diagnostic and therapeutic interventions while concurrently recognizing the variability in the health status, values, and wishes of older persons. The health care professional must understand normal and abnormal aging, atypical presentation of illness, common geriatric syndromes, and differences in the natural history and preferred management of specific diseases in older adults. In addition, the provider must have the necessary skills to manage patients in a wide array of health care settings, with acute and chronic conditions. Finally, collaboration with other health care providers is essential in order to achieve high quality health care for the older patient.

In addition, to meet some of the workforce needs, attention has focused on the increasing role of the nurse practitioner (NP), physician assistant, optometrist, podiatrist, and audiologist to expand the depth of medical care in nursing homes.

It is clear that the collaboration with these providers is a relevant and an evolving influence on physician practice in the nursing home. The goal in utilizing interdisciplinary team providers is to improve the quality of medical services available to nursing home residents. This may be manifested as increased access to a complete gamut of care, including podiatry, optometry, audiology, physical therapy, pharmacy, dentistry and social services. This approach would lead to improvements in clinical outcomes, through active dialog, and continuity of care amongst all health care providers for that resident. Further, since the revenue streams are already established, this approach may result in health care cost savings.

The Vision Care Section of APHA is currently preparing a resolution emphasizing the importance of promoting inter-professional education focused on the delivery of better patient care. While this resolution addresses an inter-professional team approach for all ages, it has direct relevance to and complements the WG mission of inter-professional care for the elderly. Health professions education is a crucial factor to bridge the quality and effectiveness of health care to the elderly. The Committee on the Health Professions Education Summit recommended the following as their overarching vision for all health professional educational programs and institutions: (30)

“All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.”

The WG exploration of academia and industry, while not exhaustive, indicated a national awareness of the struggle health care providers, educators, and industry are experiencing in trying to meet the current and future healthcare needs of the elderly. Industry may be leading in terms of proactive responsiveness to growing
health care demands and issues; however, a partnership including all three 
entities (i.e. healthcare providers, educators, and industry) is crucial for 
responses to be optimally effective. One such example is the MetLife Foundation 
collaborating with communities around the country on a Blueprint for Aging (31). 
Government and industry programs are predicted to grow to serve the needs of 
the elderly, and providers will work together cooperatively to best serve the those 
needs.

Currently our academic institutions are struggling with gerontology 
programs. Professional students might benefit far more from an interdisciplinary 
approach to gerontological health than from a stand-alone program within an 
isolated discipline. One such model is the Downstate Team-Building Initiative 
(DTBI) program instituted by the State University of New York, Downstate 
Medical Center in 2000 (32): For six years, health care students from schools of 
medicine, nursing, physician assistants, physical and occupational therapy, 
midwifery and diagnostic medical imaging were partnered and trained in group 
decision making in a community action project that set a community health-
related goal. The educational objective of this program was to improve student 
ability to work in an interdisciplinary fashion in the delivery of quality care in a 
variety of health care settings. This approach represents the future emphasis on 
comprehensive team health care delivery for the growing population of elder 
patients.

WORKING GROUP RECOMMENDATIONS

In 2007, WG presented its interim report to the Vision Care Section (VCS) of 
APHA. After review of the interim report, it was recommended by the VCS that 
the WG include a draft curriculum. The WG curriculum might be applied across 
academic disciplines, and would bring structure and continuity to the concept of 
the interdisciplinary team approach to geriatric healthcare. The best 
approximation to such a curriculum was proposed in the final WG white paper: 
The Clinical Prevention and Population Health Curriculum Framework (33). This 
proposed curriculum framework is linked with the Healthy People 2010 initiative 
and was unanimously approved by a Task Force composed of seven clinical 
health professions, created by a cooperative project of the Teachers of 
Preventative Medicine and the Association of Academic Health Centers. The 
Department of Health and Human Services Office of Disease Prevention and 
Health Promotion and the Health Resources and Services Administration 
supported the project. The Curriculum Framework is composed of four 
components and nineteen domains, and defines the educational goals and 
objectives in the context of Healthy People 2010 guidelines.

While the WG recommended a interdisciplinary-team approach, they also 
noted the significance of providing timely healthcare services to residents of 
nursing homes. These recommendations could be initiated for future healthcare 
students by implementing the eye care delivery model described in this chapter, 
concurrent with the educational goals described in the Curriculum Framework.
Summary

The goal of this chapter has been to identify the environmental, social, policy and institutional barriers that currently limit eye care services in nursing homes, while suggesting an eye care delivery model to overcome these barriers. Implementation of the recommended model in this chapter may set the stage for more global applications of a broader spectrum of healthcare services in a majority of nursing homes, where those services are currently not available. Less than 20% of nursing homes in the U.S. make provision for consistent on-site eye and vision care services. This chapter has attempted to point out the need and benefit of delivering eye care in nursing home settings. It is possible, with the cooperation of nursing home administration, to create public health strategies, policies, and procedures that will optimize opportunities for the delivery of eye care in nursing homes. The key to this public health approach to nursing home eye care is the attainment of approval for sustained and continuous facilities support.

Study Questions:

1. Describe three specific factors that limit eye care access to nursing home patients, and suggest a means of overcoming these factors.
2. On the basis of the population and prevalence of ocular disease, explain why annual comprehensive eye exams are particularly important for nursing home residents.
3. Describe how you would approach a nursing facility to deliver eye care, then how you would deliver the service to its residents.

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