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Chapter 3

The Long-Term Care Industry

What You Will Learn

- The primary component of the long-term care industry consists of various providers in community-based settings, quasi-institutions, and institutional facilities. The industry cannot function without other key partners.
- Home health care is a prime example of community-based long-term care providers. Others include homemaker and personal care service providers, adult day care providers, and hospice service providers.
- Independent living and retirement centers and custodial care providers such as adult foster care facilities can be referred to as quasi-institutions.
- Institutional providers are the most visible sector of the long-term care industry. They range from assisted living facilities to a variety of providers that are commonly referred to as nursing homes. Some institutional long-term care services are based in hospitals.
- Commercial insurance companies and managed care organizations play a critical role in the financing of long-term care services.
- A variety of health care personnel are involved in the delivery of long-term care. They can be classified as administrative professionals, clinicians, paraprofessional caregivers, ancillary personnel, and social support professionals.
- The ancillary sector includes case management agencies that assist clients with identifying and obtaining appropriate long-term care services, long-term care pharmacies that provide drug management and pharmaceuticals to facilities, and developers of long-term care technology.

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Scope of the Industry

Efficient delivery of services to a nation's population necessitates a long-term care (LTC) industry. The industry in the United States has been shaped primarily by LTC policy. But, the government's role has been mainly indirect—as a financier and regulator. The government plays a very small role in the direct delivery of LTC services. The LTC industry mainly consists of providers of services other than informal caregivers and government agencies that deliver social services. Among the providers are hospital-based LTC services that emerged in the late 1980s. Hospice services provide end-of-life care and are regarded as a component of long-term care. The industry cannot function without other key partners. These partners include the insurance industry, managed care organizations, professionals employed in the LTC industry, case management agencies, long-term care pharmacies, and developers of technology.

The Provider Sector

Providers are organizations or individuals that deliver LTC services and get paid for the services delivered. The health care industry is replete with examples of providers, including hospitals, nursing homes, home health agencies, hospices, physicians, pharmacists, and laboratories. Various private organizations and facilities, both for-profit and nonprofit, are part of the LTC industry. Most of these organizations deliver institutional care, but the private sector that delivers community-based services has also grown. A prime example is home health care, which has been a growing industry in itself. The LTC industry is predominantly funded by the government, and certain sectors of the industry are more stringently regulated than others.

Community-Based Service Providers

Four main types of providers constitute the community-based sector of the LTC industry: (1) certified home health providers, (2) homemaker and personal care service providers, (3) adult day care providers, and (4) hospice service providers.

Certified Home Health Providers

Home health care is consistent with the philosophy of maintaining people in the least restrictive environment possible. Without the availability of skilled nursing care and rehabilitation services in patients' own homes, the patients would have to be in hospitals or nursing homes to receive the same services at a much higher expense.

As pointed out in Chapter 2, the 1988 class-action lawsuit of *Duggan v. Bowen* was instrumental in expanding home health benefits under Medicare. The new rules that took effect in 1989 (1) removed the requirement of a three-day hospital stay before home health visits would be covered under Medicare, (2) abolished the maximum limit of 100 visits, and (3) included coverage for skilled observation with stable health needs rather than expectations of improvement, as the former criterion had specified. In spite of these changes, Medicare criteria continue to focus on recovery from acute illness, not long-term maintenance or assistance with functional disability (Hughes & Renehan, 2005). Although visits continue until the client's plan of care is addressed, this period is short, often a few

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weeks in length for most clients (Dieckmann, 2005).

Between 1990 and 1996 alone, the number of home health care providers grew from 5,800 to 9,900 (Liu et al., 1999). In 2007, there were 9,284 Medicare-certified home health agencies. Of these, 17% were affiliated with an institution such as a hospital or nursing facility and 83% were freestanding (NAHC, 2008). Medicare is the largest single payer for home health services. For Medicaid beneficiaries, states pay for the same services that Medicare does. Private insurance also includes skilled home care benefits.

In addition to Medicare-certified agencies, there are numerous noncertified home care agencies, home care aide organizations, and hospices. Often, such agencies do not provide the breadth of services that Medicare requires. For example, home health aide organizations do not provide skilled nursing care (NAHC, 2008).

Homemaker and Personal Care Service Providers

Various private agencies offer services for in-home assistance. Some of these agencies are also Medicare-certified to deliver skilled nursing and rehabilitation care. Homemaker and personal care services, however, are not covered under the Medicare program. To varying degrees, states pay for homemaker and personal care for Medicaid beneficiaries. Personal funds are used to pay for these services by those who do not qualify for Medicaid. Homemaker and personal services include assistance with personal hygiene (such as bathing), light housework, laundry, meal preparation, transportation, and grocery shopping.

Adult Day Care Providers

Adult day care is a nonresidential, community-based extramural service. It enables people to live with their families and fulfills family caregivers' need for respite so they can go to work during the day. These centers may be located in senior centers, nursing facilities, churches or synagogues, or hospitals. Many centers also provide transportation from home to the center and back. On the other hand, lack of transportation and the high cost of transportation are also major impediments to the use of adult day services (O'Keeffe & Siebenaler, 2006).

Based on their focus, there are three main models of adult day services (NADSA, 2008): (1) the social model emphasizes recreation and furnishes meals and some basic health-related services; (2) the medical/health model provides nursing care and rehabilitation therapies in addition to social activities; and (3) the specialized model provides services only to specific care recipients, such as those with dementia or developmental disabilities. Many programs combine the first two models. Among those using adult day services nationwide, 52% have some cognitive impairment and are the largest users of this type of service. Other users are frail elderly who need supervision and those with mental retardation/developmental disabilities (PIC, 2003).

In 2002, more than 3,400 adult day centers were operating in the United States, and they provided care to 150,000 adults each day (PIC, 2003). The vast majority were operated by a parent organization, such as a hospital or nursing facility, on a nonprofit basis. Adult day care has become a growth industry because of rising demand, and an increasing number of for-profit centers are being opened.

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The national average for adult day care cost is around $56 per day (Feldstein, 2008). Costs often vary by the type of service, particularly the extent of health care services the participant requires. Medicare does not pay for adult day care, but expenses can be covered through a variety of other sources. Under the home- and community-based services (HCBS) waiver program, introduced in Chapter 2, Medicaid is the leading source of payment for adult day care. Other sources of funding include Title III of the Older Americans Act, Veterans Health Administration, private long-term care insurance, and private out-of-pocket funds. Some rehabilitation therapies may be covered under Medicare.

Hospice Service Providers

Hospice services were introduced in Chapter 1. Medicare added hospice benefits in 1983, 10 years after the first hospice opened in the United States. For a patient to receive hospice benefits, a physician must certify that the patient is terminally ill and that the patient's life expectancy is six months or less. Benefit payments by Medicare, however, are not limited to six months. The patient must also agree to waive the right to benefits for the medical treatment of the terminal illness.

People most commonly served by hospice have cancer, heart disease, unspecified debility, dementia, or lung disease. Cancer accounts for approximately 41% of all diagnoses. In 2007, 39% of all deaths in the United States occurred in hospices (NHPCO, 2008).

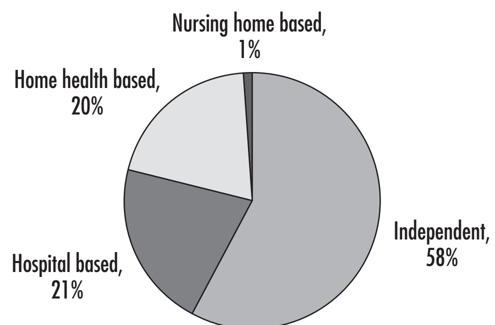
Hospice can be a part of home health care when the services are provided in the patient's home. In other instances, services are taken to patients in nursing homes, retirement centers, or hospitals. Services can be organized out of a hospital, nursing home, freestanding hospice facility, or home health agency. In 2007, there were roughly 4,700 hospice providers located in all 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. The majority of hospices are independent, freestanding agencies (Figure 3–1). These hospices served 1.4 million patients in 2007 (NHPCO, 2008).

Medicare is the primary source of payment (83.6% in 2007) for hospice care (NHPCO, 2008). Other sources include private insurance and Medicaid.

Quasi-Institutional Providers

As noted in Chapter 1, the institutional continuum of LTC includes a range of facilities that often do not have clear-cut distinctions. Yet, these facilities can be classified into three main categories: (1) independent living

Figure 3–1 Types of Hospice Agencies, 2007



Total hospices: 4,700
Nonprofit 49%, for-profit 47%, government-owned 4%

Sources: Data from National Hospice and Palliative Care Organization, 2008; and *NHPCO Facts and Figures: Hospice Care in America*, retrieved October 2008 from http://www.nhpco.org/files/public/Statistics_Research/NHPCO_facts-and-figures_2008.pdf.

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facilities, which are not truly institutions because they do not generally deliver health care; (2) custodial care providers that limit their services to social support and personal care; and (3) assisted living facilities and nursing homes. Here, the first two categories are referred to as quasi-institutions because clinically oriented services are either nonexistent or minimum in these facilities.

Independent Living and Retirement Centers

The variety of community-based LTC services that are now available have enabled many older and disabled adults to live independently in supportive housing units. The residents can come and go as they please. Facilities include designated parking spaces.

The two main independent living categories are (1) government-assisted housing and (2) private-pay housing. These dwellings differ from other institutional settings in that staff are generally not present 24 hours a day. A business manager generally maintains office hours five days a week and may be available on-call for emergencies.

Government-Assisted Housing

The U.S. Department of Housing and Urban Development (HUD) administers three different housing programs:

1. Under the Public Housing program, HUD administers federal aid to local housing agencies that manage the housing for low-income residents at rents they can afford. Anyone with low income, including the elderly and disabled persons, can apply for the program.
2. The Section 8 program offers vouchers or certificates that allow people to choose any housing in the private market that meets certain requirements and apply the voucher or certificate toward rent. Section 8 program is also managed by local public housing agencies.
3. The Section 202 Supportive Housing for the Elderly program is specifically meant for low-income people who are at least 62 years old at the time of initial occupancy.

HUD provides interest-free capital advances to private, nonprofit sponsors to finance the development of supportive housing for the elderly. HUD also provides rent subsidies for the projects to help make them affordable. The capital advance does not have to be repaid for 40 years as long as the project serves very-low-income elderly persons. A similar program is Section 811 Supportive Housing for Persons with Disabilities. Additional supportive services such as Meals On Wheels, homemaker services, and transportation are arranged from community-based providers.

Private-Pay Housing

Many upscale retirement centers abound, in which one can expect to pay a fairly substantial entrance fee plus a monthly rental or maintenance fee. These complexes have various types of recreational facilities and social programs. The fees often include the evening meal. Cleaning services, transportation, and other types of basic assistance may be provided at an extra charge. Many of these facilities provide monthly blood pressure and vision screenings, and many organize local

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outings for shopping and entertainment. Nursing or rehabilitation services, when needed, can be arranged with a local home health agency.

Custodial Care Providers

Custodial care is nonmedical care that includes routine assistance with the activities of daily living (ADLs), but does not include active nursing or rehabilitative treatments. Such care is provided to maintain function because the person's overall condition is not likely to improve. It is the focus of residential or personal care. Custodial services are rendered by ***paraprofessionals***, such as aides, rather than licensed nurses or therapists. The facilities in this sector go by various names: adult foster care homes, board-and-care homes, personal care homes, sheltered care homes, and domiciliary care homes. Each state has established its own standards to license these facilities. Funding typically comes from Medicaid, private insurance, and personal sources. Medicare does not pay for custodial care alone. Depending on temporary needs, home health care can be called in to deliver skilled nursing and rehabilitation services.

Adult foster care (AFC) homes (also called adult family homes or adult family care) are family-run homes that provide room, board, supervision, and custodial care. The homes are modified to accommodate people with disabilities and prevent unsupervised wandering because many residents have some degree of dementia or psychiatric diagnosis. There is 24-hour supervision in the homes. Typically, the caregiving family resides in part of the home. To maintain the family environment, most states license fewer than 10 beds per family unit. However, many people have made a business of AFC by buying several houses and hiring families to live in them and care for the residents. A skeleton staff is employed to provide assistance with ADLs, to clean, and to cook meals.

Some states are trying to boost capacity of custodial care providers. Under the Money Follows the Person program, states see a greater need for quasi-institutional alternatives. However, in some states, such facilities are declining in numbers. Low reimbursement rates relative to assisted living are seen as one factor in the declining number of persons willing to be AFC providers (Mollica et al., 2008).

Institutional Providers

Institutional providers are the most visible sector of the LTC industry. Most people equate LTC with long-term care institutions. Institutional care generally connotes some degree of confinement to an institution because of a relatively high level dependency.

Assisted Living Facilities

For lack of clear-cut distinctions, there can be considerable overlap among personal care, custodial care, and assisted living. Here, assisted living facilities are regarded as those facilities that provide services that range between custodial care and skilled nursing care. Most assisted living residents require assistance with some ADLs, such as bathing, dressing, and toileting, but do not need intensive medical and nursing care. Flexible services that meet residents' scheduled and unscheduled needs and allow residents to age in place are key elements of the philosophy of assisted living (Hawes, 2001).

Assisted living has been the fastest growing type of LTC institution in the United States. These facilities generally have a skeleton staff of licensed nurses, mostly licensed practical (or vocational) nurses, who perform

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admission assessments and deliver basic nursing care. Advanced nursing care and rehabilitation therapies can be arranged through a home health agency.

There are an estimated 39,500 assisted living facilities serving more than 900,000 residents in the United States (AAHSA, 2008). Assisted living is paid for on a private basis for the most part. The average monthly charges are approximately $3,200, which is about half of what a private room would cost in a skilled nursing facility (Prudential, 2008). Costs, however, vary considerably among states. Costs also vary according to amenities, room size and type (e.g., shared versus private), and the services required by the resident. Most facilities charge a basic monthly rate that covers rent, board, and utilities. Additional fees are charged for nursing and personal care services. Many facilities also charge a one-time entrance fee, which may be equal to one month's basic rent. In some states, assisted living care may be covered under the Medicaid program for the recipients of Supplemental Security Income (SSI) or may be funded through Title XX Social Services Block Grants or 1915(c) HCBS waivers. The main purpose of these grants and waivers is to extend Medicaid services to people who otherwise would have to reside in nursing homes at a much higher cost to the Medicaid program. Upscale facilities, however, do not participate in public payment programs.

Although most states license assisted living facilities, the trend is toward increasing the regulatory oversight of these facilities. This is mainly because there is a general trend for assisted living providers to expand services to keep their residents as long as they are able to stay. For example, many assisted living facilities are providing specialized care for the elderly who have dementia and Alzheimer's disease. On the other hand, moderate to severe cognitive impairment and behavioral problems in particular are often the most common reason for discharging a resident from an assisted living facility (Mead et al., 2005).

Nursing Homes

In the minds of many people, long-term care is synonymous with nursing homes. The appellation "nursing home," however, has no specific meaning. In health care literature, the term "nursing home" is generally used for facilities that are licensed as nursing homes and are often certified by the federal government. Licensing of nursing homes is mandatory in every state. In addition to licensing, certification enables a nursing home to participate in the Medicare and Medicaid programs. Details on licensure and certification of nursing homes are covered in Chapter 5.

Skilled Nursing Facilities

A skilled nursing facility (SNF) provides a full range of clinical LTC services, from skilled nursing care to rehabilitation to assistance with all ADLs. ***Skilled nursing care*** is medically oriented care provided by a licensed nurse. Examples of skilled nursing care include monitoring of unstable conditions; clinical assessment of needs; and treatments such as intravenous feeding, wound care, dressing changes, or clearing of air passages. Examples of skilled rehabilitation include post-surgical orthopedic care after knee or hip replacement, cardiopulmonary rehabilitation that is necessary after heart surgery or heart catheterization, and improvement of physical strength and balance. A variety of disabilities—including problems with ambulation, incontinence, and behavior—often

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coexist among a relatively large number of patients in need of skilled care. Compared with other types of facilities, nursing homes have a significant number of patients who are cognitively impaired because of depression, delirium, or dementia. The social functioning of many of the patients is also severely impaired.

A physician must authorize the need for skilled care. An attending physician must approve the plan of treatment. Delivery of care is also periodically monitored by the attending physician who makes rounds and follows up on the course of various treatments being given. Rehabilitation services are provided by registered therapists—physical therapists, occupational therapists, and speech/language pathologists—who may be employed in-house or contracted from a therapy services provider. The majority of direct care with ADLs is delivered by paraprofessionals, such as certified nursing assistants and therapy assistants, but under the supervision of licensed nurses and therapists.

In June 2006, there were 15,899 nursing homes in the United States (National Center for Health Statistics, 2007). According to a 2008 industry survey, 17% of skilled nursing facilities had an assisted living unit or wing and 30% had an Alzheimer's unit or wing (MetLife, 2008). Between 1995 and 2006, the number of nursing home beds declined by 2%, and the number of residents receiving care in these facilities declined by 3% (see Table 2–1 in Chapter 2). This is mainly because government policy has increasingly supported utilization of community-based LTC alternatives. On the other hand, there is some evidence that occupancy rates in nursing homes may be gradually creeping up (Kramer, 2003). This trend is expected to continue as the community-based LTC industry matures. A growing population with chronic conditions, comorbidities, and subsequent disability along with increased lifespans will eventually need nursing home care.

The nursing home industry in the United States is dominated by private, for-profit nursing home chains that operate a group of nursing homes under one corporate ownership. Approximately 54% of all nursing home beds in the United States are chain affiliated because chains have acquired an increasing number of independent facilities. In 2007, the 10 largest nursing home chains operated at least 100 nursing homes each (Sanofi-Aventis, 2008a). About 62% of all nursing home beds are operated by proprietary (for-profit) nursing homes, and 29% are operated by private nonprofit entities (U.S. Census Bureau, 2008, Table 183). The remaining 9% are government owned (most of which are owned and operated by local counties; approximately 135 are operated by the Veterans Health Administration). The average size of a nursing home (108 beds) has changed little over time.

Although the charges for services vary quite substantially among states, the national average for a private room in 2008 was $217 per day (Prudential, 2008). Medicaid is the largest single source of payment for nursing home services. Coverage under Medicare is for a short duration subsequent to a hospital stay. Less than 8% of institutional LTC services are paid through private insurance. Some LTC insurance policies may cover only a portion of the total expenses—especially when care in a nursing home is needed over several years.

Subacute Care Facilities

Subacute care includes post-acute services for people who require convalescence from acute illnesses or surgical episodes. These

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patients may be recovering but are still subject to complications while in recovery. They require more nursing intervention than what is typically included in skilled nursing care. According to the National Association of Subacute/Post Acute Care (NASPAC), the severity of a patient's condition often requires active physician contact, professional nursing care, involvement of an interdisciplinary team in total care management, and complex medical or rehabilitative care (NASPAC, 2005). The patients may still have an unstable condition that requires active monitoring and treatment, or they may require technically complex nursing treatments such as wound care, intravenous therapy, blood transfusion, dialysis, ventilator care, or AIDS care.

Subacute services are generally found in three types of locations:

1. ***Transitional care units (TCUs)***, which are skilled nursing units located within hospitals. Hospitals entered into this service after they started facing severe occupancy declines because of payment restrictions from the government, starting in the mid-1980s. They generally have higher staff-to-patient ratios and can provide more intensive rehabilitation and nursing therapies than freestanding skilled care facilities.
2. Unlike TCUs that are certified as skilled nursing facilities, long-term care hospitals (LTCHs) are certified as acute care hospitals. Here, LTCHs are classified as nursing homes because they compete with other types of LTC institutions. LTCHs treat patients with subacute or multiple chronic problems requiring long-term, hospital-level care. Many LTCH patients are admitted directly from short-stay acute-care hospital intensive care units with complex medical needs. Not surprisingly, LTCHs are the most expensive of the three types of subacute settings. Skilled nursing facilities are often a more cost-effective alternative, and at least some physicians think that the level and intensity of care in the two settings is comparable. LTCHs play an important role in providing high-level continuity of care to Medicare patients. Nationwide, the number of LTCHs has grown rapidly from 105 facilities in 1993 to 392 in 2006 (MedPAC, 2004, 2008).
3. Many skilled nursing facilities have developed subacute units by offering technology intensive services and by raising the staff skill-mix by hiring additional registered nurses and having therapists on staff. Some subacute type services are also rendered by community-based home health agencies.

Specialized Facilities

Specialized facilities generally provide special services for individuals with distinct medical needs. For example, inpatient rehabilitation facilities (IRFs) provide intense therapies, an intermediate care facility for the mentally retarded (ICF/MR) has specialized programs for the mentally retarded and/or developmentally disabled populations, and Alzheimer's facilities have developed a specialized niche within the institutional continuum of LTC.

Inpatient Rehabilitation Facilities

IRFs are either freestanding facilities, sometimes called rehabilitation hospitals, or they may be rehabilitation units located within

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acute care hospitals. These specialized facilities provide intensive rehabilitation therapies that can last three hours or more per day, five days per week. The most common rehabilitation diagnoses include spinal cord and traumatic brain injuries, orthopedic conditions, stroke, and complex arthritis-related conditions.

Intermediate Care Facilities for the Mentally Retarded

Federal regulations provide a separate certification category for LTC facilities classified as ICF/MRs. In 1971, Public Law 92–223 authorized Medicaid coverage for care in ICF/MR facilities. States have been required by federal law to provide appropriate services to each person with MR/DD in an ICF/MR or in a community-based setting outside of institutional care (see *Olmstead v. L.C.* in Chapter 2). However, all 50 states have at least one ICF/MR facility for those who cannot be housed in community settings. This program serves approximately 129,000 people with mental retardation and other related conditions. Most have other disabilities in additional to mental retardation. Many of the individuals are nonambulatory and have seizure disorders, behavior problems, mental illness, visual or hearing impairments, or a combination of these. All beneficiaries must qualify for Medicaid assistance financially (CMS, 2006).

Alzheimer's Facilities

Alzheimer's disease is a progressive degenerative disease of the brain, producing memory loss, confusion, irritability, and severe functional decline. The disease becomes progressively worse and eventually results in death. Alzheimer's facilities provide special programming and have special security features because the residents tend to wander. Carefully designed lighting, color, and signage are used to orient the residents (Skaggs & Hawkins, 1994).

Continuing Care Retirement Communities

Full-service continuing care retirement communities (CCRCs)—also called life-care communities—integrate and coordinate the independent living and other institution-based components of the LTC continuum. Different levels of services are generally housed in separate buildings, all located on one campus. The range of services is based on the concept of ***aging-in-place***, which accommodates the changing needs of older adults while living in familiar surroundings. The range of services includes housing, health care, social services, and health and wellness programs. The residents' independence is preserved, but assistance and nursing care are available when needed. Approximately 1,900 CCRCs operate in the United States (AAHSA, 2008).

The CCRC living option is directed at middle- and upper-middle-income clientele. Communities are operated by both for-profit and nonprofit organizations. Residents typically choose to enter these communities when they are in their late 70s and are still relatively healthy. A CCRC commonly has the following levels of LTC services available:

- Independent living units may be in the form of cottages or apartments. Generally, various size options are available from studio apartments to two- or three-bedroom apartments.
- Custodial care and assisted living are available in an adjoining facility.
- A skilled nursing facility is located in a separate building. Residents of the CCRC receive priority in admission.

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CCRCs, for the most part, require private financing, with the exception of services delivered in a Medicare-certified SNF. To become a resident in a CCRC, customarily the client must pay an entrance fee that can range between $60,000 and $120,000 (AAHSA, 2008). In addition, a monthly accommodation fee is charged (average monthly cost is about $2,700). The monthly charges are adjusted when a resident needs personal or nursing care. A contract, called a continuing care agreement, which lasts for more than one year and that describes the service obligations of the CCRC and the financial obligations of the resident, must be signed. The contract often has a cancellation clause that specifies the amount of refund a resident may be entitled to upon leaving the community.

Three types of CCRC contracts are common in the industry: extensive, modified, and fee-for-service. Extensive contracts include a complete package of services and a commitment to provide unlimited future LTC services when needed. A modified contract promises to offer future LTC services at a discounted fee. The fee-for-service contract has the lowest entrance fee, but future LTC services are billed at the full rates applicable at the time.

The Insurance Sector

The insurance sector plays an important role in the financing of LTC services. It includes numerous commercial insurance companies. Companies that have the largest market share are Genworth Life Insurance Company, John Hancock, and Metropolitan Life Insurance Company, although there are many others that offer LTC insurance. These companies offer individual and group LTC insurance. Employees of the federal government can purchase LTC insurance at group rates through the Federal Long-Term Care Insurance Program.

Individual insurance is purchased by people directly through insurance companies or insurance brokers very much like they would purchase auto insurance or home insurance. ***Group insurance*** is made available to individuals through their employers, unions, professional organizations, or consumer organizations such as the AARP. Generally, group premiums are lower than those for individually purchased insurance because a large number of people band together to purchase insurance through a group sponsor. Managed care organizations (MCOs) are also involved in LTC insurance.

Commercial Insurance

Approximately 8 million Americans have LTC insurance; 400,000 people obtained coverage in 2007 alone. In 2007, 180,000 individuals received insurance benefits, and the insurance industry paid out $3.5 billion in claims for the three main types of covered LTC services (Figure 3–2). Alzheimer's is the primary reason for claim payment; 27% of Alzheimer's-related claims are paid for nursing home care and 18% for home health care.

Half the people who apply to purchase insurance are between the ages of 55 and 64; the average age is 57 (American Association for Long-Term Care Insurance, 2008). Purchase of insurance becomes increasingly unaffordable later in life, and the denial rates of people applying to purchase insurance increase because of the presence of chronic conditions. Besides a person's age, premium costs also vary according to the type of coverage and the state in which a person resides. A typical plan may offer $150 in daily benefits with a 5% compounded increase in benefits each

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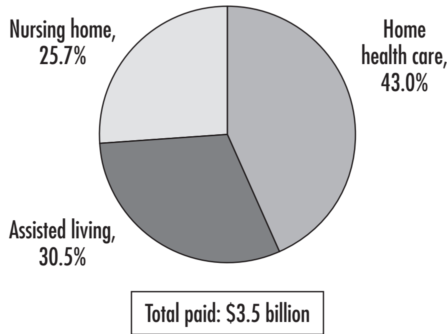
Figure 3–2 Claims For Services Paid Under Long-Term Care Insurance Coverage, 2007



Sources: Data from American Association for Long-Term Care Insurance. 2008; and *The 2008 Sourcebook for Long-Term Care Insurance Information*. Westlake Village, CA: AALTCI.

year, a coverage period of 36 months, and a 90-day ***elimination period***, which is the initial waiting period during which LTC services are used but not covered by insurance.

Commercial insurance companies are risk underwriters. They determine the level of premiums necessary to cover potential claims in the future. They collect premiums and pay claims arising from the utilization of LTC services when the covered beneficiaries use the services in accordance with the insurance contract. Commercial insurance companies, however, do not select the providers of services. That choice is left to the beneficiaries.

Managed Care

Managed care is an approach to delivering a comprehensive array of health care services to a defined group of enrolled members through efficient management of service utilization and payment to providers. The most common type of MCO that is active in the delivery of LTC services is health maintenance organizations (HMOs). HMOs enter into financial contracts with Medicaid and Medicare to deliver health care services to the beneficiaries enrolled in these programs.

HMOs are also insurance entities that underwrite risk. In contrast with commercial insurance companies, however, HMOs select the providers of services. The selected providers are those with whom the HMO has payment contracts. Under the Medicaid program, the Balanced Budget Act of 1997 gave states the authority to enter into contracts with two broad types of managed care entities: HMOs and Prepaid Health Plans (PHPs). HMOs take the responsibility to provide a comprehensive package of health care services included in the Medicaid benefits. PHPs offer a less comprehensive package of Medicaid benefits. For example, a PHP may only deliver services covered under an HCBS waiver program.

Both HMOs and PHPs employ a utilization management function in which a primary care physician or some other managing entity authorizes medically necessary services before care is delivered. Beneficiaries must use approved providers for receiving various health care services.

In 2007, all states except Alaska, Mississippi, and Wyoming had Medicaid recipients enrolled in HMOs. Approximately 15 states had 80% or more of their Medicaid beneficiaries enrolled in HMOs. Of all Medicaid beneficiaries nationwide, 63.5% received health care services through HMOs in 2007 (Sanofi-Aventis, 2008b).

The Balanced Budget Act of 1997 also authorized the Medicare+Choice program, which was renamed Medicare Advantage in 2003. Medicare gives its beneficiaries the choice to either remain in the traditional Medicare program or enroll in Medicare

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Advantage, in which services are provided through various MCOs. In 2007, almost 20% of the beneficiaries were enrolled in Medicare Advantage (Sanofi-Aventis, 2008b).

Long-Term Care Professionals

A variety of health care professionals are involved in the delivery of long-term care. They can be classified as (1) administrative professionals, (2) clinicians, (3) paraprofessional caregivers, (4) ancillary personnel, and (5) social support professionals. The types of personnel involved vary according to the level of LTC services delivered in a given setting. For example, independent living and retirement centers may employ one or two administrative professionals and a small staff of ancillary personnel. A nursing home has all five categories of LTC professionals. Certain clinicians may be found only in specialized facilities. Growth of the LTC industry will continue to create jobs in all areas, many of which already have critical shortages.

Administrative Professionals

Every agency or organization requires at least one administrative professional to manage the organization. The number and types of administrative professionals increase with the organization's size and complexity.

Administrators

Administrators are needed to manage the organization. They must also oversee compliance with federal and state regulations and ensure that services are delivered in accordance with the organization's policies and established standards. Administrators must have a good understanding of financing and reimbursement systems pertinent to their organization. They must be knowledgeable about legal and ethical constraints. Administrators who manage larger organizations must also be skilled in managing human resources, marketing the facility's services, and overseeing the facility's quality improvement program. Leadership, communication, financial management, and problem-solving skills are also essential for effective management of LTC organizations.

The title for the administrator's position may vary, such as administrator, executive director, director, manager, or general manager. This section mainly focuses on administrators of home health agencies, assisted living facilities, and nursing homes.

Home Health Agency Administrators

According to Medicare Conditions of Participation for home health agencies, the administrator must either be a licensed physician, a registered nurse, or someone who has training and experience in health services administration and at least one year of supervisory or administrative experience in home health care or related health programs (CMS, 2005). Agencies often employ a registered nurse or someone with a business degree as administrator.

Assisted Living Administrators

A number of states now require administrators of assisted living facilities to be licensed. Education, experience, and examination requirements vary from state to state. On the other hand, the National Association of Long Term Care Administrator Boards (NAB) has established requirements for licensure as a

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residential care/assisted living (RC/AL) administrator. To be licensed, individuals must complete a 40-hour state-approved course covering the domains of practice and pass the NAB's licensure examination. To take the NAB's licensure exam, an individual must have a combination of education and experience (NAB, 2007): (1) a high school diploma and two years of experience in assisted living, including one year in a management position; or (2) an associate's degree and one year of experience in assisted living, including six months in a management position, or (3) a bachelor's degree and six months of management experience in assisted living. The NAB examination for RC/AL covers five main areas, referred to as the domains of practice: resident care management, human resource management, organizational management, physical environment management, and business/financial management. A state may also require working experience with a trained preceptor. A ***preceptor*** is a nursing home or assisted living administrator who meets prescribed qualifications and has been certified to mentor interns in an administrator-in-training (AIT) program. Generally, licensed nursing home administrators are allowed to manage assisted living facilities without any further training. Continuing education requirements are also becoming common for license renewal.

Nursing Home Administrators

A nursing home administrator (NHA) must be licensed by the state. Qualifications required for licensure vary widely from one state to another. The first step toward becoming a licensed NHA is to contact the particular state's licensing agency and obtain a copy of the state's licensure requirements. The prospective administrator must meet the minimum educational qualifications. Most states require a college degree; some states also require completion of a short course in long-term care. A common requirement by all states is passing the national examination administered by the NAB. In addition to the NAB examination, candidates must pass a shorter examination on state nursing home regulations. Some states may also require an internship with a state-certified preceptor who is also a practicing NHA. Many states have reciprocity agreements, meaning that an administrator licensed in one state can obtain a license in another state if that state has a reciprocity agreement with the other state.

Nursing homes are complex organizations to manage and have been the target of much regulatory oversight and public criticism. The NHA position is, in many respects, similar to that of a general manager in a complex human services delivery organization. The NHA must have a 24/7 commitment to an organization that must meet the patients' clinical needs, ensure their social and emotional well-being, preserve their individual rights, promote human dignity, and improve their quality of life. The NHA must have adequate understanding of the clinical, social, and residential aspects of care delivery.

The nursing home must also operate as an efficient business. The NHA must manage staff relations, budgets and finances, marketing, and quality. Hence, NHAs typically have a broad range of managerial responsibilities and are closely involved in day-to-day operational details.

Nursing home administration entails much more than overseeing the various functions in an organization or following set routines. Over time, effectively managed nursing facilities achieve acceptable levels of organizational stability and have predictable outcomes in patient care quality and financial

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performance. In the long run, success is achieved by managing six critical areas:

1. The community must come to view the nursing home as a vital service organization. One of the NHA's primary roles should be to serve the community in partnership with other public and private health agencies and care delivery organizations.
2. NHAs must understand and operate within the confines of what reimbursement will allow.
3. The LTC industry has evolved over time, and it will continue to change. The NHA must adapt to new trends and new demands as they become established.
4. Compliance with legal and regulatory requirements is essentials. The organization must also be managed according to the highest standards of ethical conduct.
5. The internal operations must be streamlined to deliver services in a seamless fashion.
6. NHAs must manage the operation through effective leadership, human resource development, strategic marketing, financial control, and data-driven quality improvement.

Risk taking and innovation will mark successful administrators of the future. Being an NHA is a rewarding career, both financially and professionally. The psychological rewards that can come from delivering quality care to patients, helping family members, supporting community initiatives, coaching the staff, and building excellence into the organization often exceed the financial rewards.

Department Directors

Department directors constitute the middle-management stratum of a nursing home. The organization of nursing homes is well established. The main department directors include the director of nursing, food service director or dietary manager, social worker or director of social services, activity director, business office manager, housekeeping/laundry supervisor, and maintenance supervisor. They report to the administrator and carry out supervisory functions in their respective departments. Their main role is to ensure adequate staffing, availability of supplies and materials, and coordination of service delivery that complies with established standards. Required qualifications are established by state nursing home regulations. Qualifications for the various department directors are covered in Part III of the book.

Other Administrative Personnel

Depending on the size and type of organization, administrative personnel may include assistant administrators, office managers, bookkeepers, and receptionists. Very large LTC organizations may also employ human resource or personnel directors, admissions coordinators, and marketing directors. At a minimum, most organizations need (1) a receptionist to greet visitors, provide information, and handle basic office tasks and (2) a bookkeeper whose main responsibility is to handle all billings and collections. Additional help is generally needed for payroll and accounts payable functions.

Clinicians

Various types of clinicians are employed in home health agencies, nursing homes, and

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assisted living facilities. They mainly include physicians, nurses, rehabilitation professionals, dietitians, and assistants and technicians who work under the direction of these professionals. With the exception of nurses, most others are generally contracted.

Physicians

Only very large and specialized facilities can afford to employ a full-time physician. Most organizations contract with a physician in the capacity of a medical director, which is typically a part-time position and is discussed in Chapter 10. It is not uncommon for the medical director to also provide medical services to many of the patients in nursing homes. The patient, however, has the right to choose his or her attending physician provided that the physician is willing to follow up on the patient's medical care while he or she is in the nursing home. The patient's physician is also involved in the plan of care for services provided by a home health agency. Admission to a nursing facility or care by a home health agency is also authorized by a physician. Physicians play a central role in the medical care of patients. Other clinicians follow physicians' orders for prescribed medical, nursing, rehabilitation, and dietary interventions. Most physicians practicing in the LTC field are generalists or family practitioners rather than specialists.

All states require physicians to be licensed in order to practice. The licensure requirements include graduation from an accredited medical school that awards a doctor of medicine (MD) or doctor of osteopathic medicine (DO) degree, successful completion of a licensing examination governed by either the National Board of Medical Examiners or the National Board of Osteopathic Medical Examiners, and completion of a supervised internship/residency program. Residency is graduate medical education in a specialty that takes the form of paid on-the-job training. Most physicians serve a one-year rotating internship after graduation from medical school and before entering a residency program. Both MDs and DOs use traditionally accepted methods of treatment, including drugs and surgery. The two differ mainly in their philosophies and approach to medical treatment. ***Osteopathic medicine***, practiced by DOs, emphasizes the musculoskeletal system of the body such as correction of joints or tissues. In their treatment plans, DOs emphasize preventive medicine such as diet and the environment as factors that might influence natural resistance. MDs are trained in ***allopathic medicine***, which views medical treatment as active intervention to produce a counteracting reaction in an attempt to neutralize the effects of disease. MDs trained as generalists may also use preventive medicine along with allopathic treatments (Shi & Singh, 2008).

Nurses

The two main categories of nurses in LTC settings are registered nurses (RNs) and licensed practical (or vocational) nurses (LPNs or LVNs). All nurses must be licensed by the state in which they practice. The two main educational programs today for RNs are associate's degree (ADN) programs offered by community colleges and bachelor of science degree (BSN) programs offered by four-year colleges and universities. Regulations require the delivery of skilled nursing services to be under the supervision of RNs. In LTC settings, RNs compose only a small percentage of the workforce. They mostly hold administrative and supervisory positions such as director of nursing or head nurse. A

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number of studies have shown that an adequate number of RNs in nursing homes positively affects quality outcomes.

The majority of nurses in LTC settings are LPNs/LVNs who are graduates of one-year practical nursing programs offered at community colleges or vocational technical schools. LPNs/LVNs render treatments and administer medications. LPNs also function as charge nurses and team leaders and supervise the work of paraprofessional caregivers.

Nonphysician Practitioners

Nonphysician practitioners (NPPs) are clinical professionals who practice in many of the areas in which physicians practice but who do not have an MD or DO degree. The two main types of NPPs who practice in LTC settings are nurse practitioners and physician assistants.

Nurse practitioners (NPs) are advanced practice nurses who provide health care services similar to those of primary care physicians. They can diagnose and treat a wide range of health problems. Some physicians employ NPs to follow up on the medical care of their patients. Studies of NPs in nursing homes suggest that they enhance the medical services available to residents and prevent unnecessary hospital admissions (IFAS, 2005). NPs receive advanced graduate-level education and clinical training beyond what is required for RN preparation. Most have master's degrees; some specialize in geriatrics (American Academy of Nurse Practitioners, 2007).

Physician assistants (PAs) are increasingly employed to provide LTC services under the direction of a physician. Both NPs and PAs are sometimes referred to as physician extenders because they enable physicians to see more patients and make better use of their skills and time. Admission to a PA training program requires roughly two years of science-based college coursework. After enrolling in a PA program, students study the basic medical sciences and physical examination techniques, followed by clinical training that includes classroom instruction and clinical rotations in primary care and several medical and surgical specialties. Overall, the PA student completes more than 2,000 hours of supervised clinical practice prior to graduation. The didactic and clinical training takes an average of 26 months. Their scope of practice includes performing physical examinations, diagnosing and treating illnesses, ordering and interpreting laboratory tests, and making rounds at LTC facilities (American Academy of Physician Assistants, 2007). Both NPs and PAs can prescribe drugs when authorized to do so under state law. Their generalist training and emphasis on patient relationships make them particularly valuable in LTC caregiving.

Rehabilitation Professionals

Rehabilitation therapies enable patients to regain lost functioning and improve current functioning. The most common rehabilitation services are provided by physical therapists, occupational therapists, and speech/language pathologists. Certain treatments can be provided by assistants under the direction and supervision of therapists. Services of a physiatrist are common in facilities that provide intensive rehabilitation.

Physiatrists

A ***physiatrist*** is a physician who has specialized in physical medicine and rehabilitation. Physiatrists can treat a variety of problems from pain to work- and sports-related injuries.

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Diagnoses may include severe arthritis, brain injury, spinal cord injury, stroke, multiple sclerosis, amputations, and various conditions requiring post-surgical recovery. Physiatrists may prescribe drugs or assistive devices and direct therapists to carry out various types of treatments to help restore, improve, or maintain function.

Physical Therapists and Assistants

Physical therapists (PTs) specialize in the treatment of musculoskeletal disorders (loss of function associated with bones, joints, spine, and soft tissue), neuromuscular disorders (loss of function associated with the brain and nervous system, such as stroke), patients recovering from cardiopulmonary problems, and severe wounds. They specialize in the restoration of various ADL functions.

PTs need a master's degree from a physical therapy program accredited by the Commission on Accreditation in Physical Therapy Education. Of the 209 accredited physical therapy programs in 2007, 43 offered master's degrees and 166 offered doctoral degrees. Master's degree programs typically last two years, and doctoral degree programs last three years. In the future, a doctoral degree might be the required entry-level degree. All states require PTs to pass national and state licensure exams before they can practice (BLS, 2007). The Federation of State Boards of Physical Therapy develops and administers the national examinations for both PTs and physical therapy assistants (PTAs).

PTAs can provide part of a patient's treatment under the direction and supervision of a PT. In many states, PTAs are required by law to have at least an associate's degree (BLS, 2007). Most states also require PTAs to be licensed.

Occupational Therapists and Assistants

Occupational therapists (OTs) are involved in a broad range of therapies that help patients recover or maintain the daily living and work skills. Their goal is to help patients achieve independence and satisfaction in all facets of their lives. For example, OTs can help patients learn how to use a computer or care for their daily needs such as dressing, cooking, and eating.

A master's degree or higher in occupational therapy is the minimum requirement for entry into the field. In 2007, 124 master's degree programs offered entry-level education, 66 programs offered a combined bachelor's and master's degree, and 5 offered an entry-level doctoral degree. OTs must be licensed to practice. To obtain a license, applicants must graduate from an accredited educational program and pass a national certification examination. Those who pass the examination are awarded the title "Occupational Therapist, Registered (OTR)" (BLS, 2007). OTR is a registered trademark of the National Board for Certification in Occupational Therapy (NBCOT), which administers the national certification examination.

Occupational therapy assistants help patients with rehabilitative activities and exercises outlined in a treatment plan developed in collaboration with an OT. An associate's degree or a certificate from an accredited community college or technical school is generally required to qualify as an occupational therapy assistant. To be licensed in most states, occupational therapy assistants must pass a national certification examination administered by NBCOT after they graduate. Those who pass the examination are awarded the title "Certified Occupational Therapy Assistant (COTA)" (BLS, 2007).

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Speech/Language Pathologists

Speech/language pathologists (SLPs)—informally referred to as speech therapists—assess, diagnose, and treat speech, language, and cognitive disorders. ***Dysphagia***, that is, swallowing difficulty, is another common problem that SLPs are called upon to treat in LTC settings.

A master's degree is commonly required for licensure in most states; it is mandatory for receiving the Certificate of Clinical Competence from the Council of Clinical Certification of the American Speech-Language-Hearing Association (ASHA). In 2007, more than 230 colleges and universities offered graduate programs in speech/language pathology accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of ASHA (BLS, 2007).

Clinical Dietitians and Technicians

Clinical ***dietitians***, sometimes referred to as nutritionists, provide nutritional information and diet-related services to patients. They assess patients' nutritional needs, develop and implement nutrition programs, and evaluate the results. They also confer with physicians and other health care professionals to coordinate medical and nutritional needs. Clinical dietitians often develop diet plans for patients who have renal problems, diabetes, heart disease, and weight loss or weight gain issues.

Minimum qualifications for clinical dietitians include a bachelor's degree from a program approved by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association (ADA), completion of a CADE-accredited and supervised practicum at a health care facility that can be 6 to 12 months in length, and passing a national examination administered by the Commission on Dietetic Registration (CDR) of the ADA (ADA, 1997a). Those who complete these requirements are awarded the title "Registered Dietitian (RD)." As of 2007, there were 281 bachelor's degree programs and 22 master's degree programs approved by CADE (BLS, 2007).

Dietetic technicians assist dietitians in the delivery of food service in accordance with nutritional guidelines. Under the supervision of dietitians, they may plan and produce meals based on established guidelines, teach principles of food and nutrition, or counsel individuals. Becoming a Dietetic Technician, Registered (DTR), requires completion of at least a two-year associate's degree from a program accredited or approved by CADE, completion of 450 hours of supervised practicum, and passing a national examination administered by CDR (ADA, 1997b).

Paraprofessional Caregivers

Long-term care services heavily rely on paraprofessional caregivers, who give most of the hands-on personal care and assist patients with all ADLs. They also change bed linens and serve meals to patients. These paraprofessionals include certified nursing assistants (CNAs), therapy aides, personal care attendants, and home health aides. They constitute the largest group of health care workers in the LTC industry. Paraprofessional positions are at the bottom of the organizational hierarchy. These workers typically carry heavy workloads, are poorly paid, and are often treated with little respect.

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In most LTC organizations, such as nursing homes, assisted living facilities, and home health agencies, paraprofessionals work under the direction of licensed nurses. CNAs are also trained to take vital signs; watch for and report any changes in the patients' condition to nurses; and do simple urine tests for sugar, acetone, and albumin. The 1987 Nursing Home Reform Act mandated that CNAs receive a minimum of 75 hours of training. The training program must include 16 hours of hands-on training in which the trainee demonstrates knowledge while performing tasks for an individual under the direct supervision of a nurse. CNA students must also pass a state certification exam and skills test, and subsequently complete 12 hours of in-service or continuing education each year (Wright, 2006). CNAs can received further training to become rehabilitation aides who provide basic therapies such as walking and range of motion exercises under the supervision of licensed therapists and nurses. CNAs can also become medication aides after further training to safely give medications to patients.

Ancillary Personnel

A variety of ancillary personnel provide hotel services such as meals, cleaning, laundry, and maintenance of physical plant and equipment in LTC facilities. Food service personnel such as cooks and cook's helpers prepare meals. Dietary aides wash dishes and cooking utensils. Building cleaning workers include janitors and housekeepers. Laundry washers sort and wash linens. Others fold, store, and deliver clean linens to patient care areas. Maintenance personnel handle basic repairs and groundskeeping.

Social Support Professionals

Social support professionals include social workers and activity professionals. In LTC settings, social workers engage in diagnostic assessment of patients' cognitive, behavioral, and emotional status; counseling; and conflict resolution. They help people cope with various types of issues in their everyday lives. They also have community resource expertise that is often called upon to obtain professional services available in the community. A bachelor's degree in social work (BSW) is the minimum requirement for social work positions in nursing homes and assisted living facilities. The Council on Social Work Education accredits educational programs in social work. In 2008, there were 463 accredited bachelor's degree programs and 191 accredited master's social work programs (Council on Social Work Education, 2008).

Activity professionals provide a variety of recreational programs for groups and individuals to improve and maintain the patients' physical, mental, and emotional well-being. Programs include arts and crafts, games, music, movies, dance and movement, social celebrations, and community outings. Passive activities such as reading and working with puzzles are prescribed for those who prefer solitude. Although no specific degrees are specified for activity professionals, the National Certification Council for Activity Professionals (NCCAP) offers four different tracks, based on education and experience, for the credential, Activity Director, Certified (ADC). NCCAP also offers three different tracks for the credential, Activity Assistant, Certified (AAC). Another organization, the National Council for Therapeutic Recreation Certification (NCTRC) offers the Certified Therapeutic Recreation Specialist (CTRS)

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credential based on education, experience, and a certification examination.

The Ancillary Sector

The ancillary sector produces services and products that help people locate the right kind of services, facilitate caregiving, improve people's quality of life, or improve organizational efficiencies.

Case Management Agencies

Case management was discussed in Chapter 1. The myriad LTC services can present daunting challenges for most people who either need services for themselves or for those who need to help family or friends find appropriate services. Case management agencies do not provide actual LTC services. They assist clients in navigating the system by assessing client needs, identifying sources of payment, matching client needs with available services that are likely to best address those needs, making referrals to appropriate services, and providing ongoing follow-up and coordination as circumstances change over time. Services are often coordinated both within and outside the LTC system.

Case management agencies employ experienced nurses and social workers as case managers. These professionals have specialized training in patient need assessment and a comprehensive knowledge of both financing and service resources.

Long-Term Care Pharmacies

Historically, LTC facilities have experienced numerous challenges in providing pharmaceutical services to their residents. Medication errors, preventable adverse drug events, and delivery of pharmaceutical services, in general, have posed the main challenges (Stevenson et al., 2007). The Omnibus Budget Reconciliation Act of 1990 required pharmacies to review Medicaid recipients' entire drug profile and to evaluate therapeutic duplication, drug-disease contraindications, drug interactions, incorrect dosage, duration of drug treatment, drug–allergy interactions, and evidence of clinical abuse or misuse. In part because of this regulatory requirement, certain pharmacy providers have specialized in LTC pharmacy practice. Through their consultant pharmacists, LTC pharmacies offer comprehensive drug management services and often coordinate related quality improvement activities (Stevenson et al., 2007). Such comprehensive services, round-the-clock attention to critical and emergency medications, and dispensing of intravenous medication solutions are generally not available through retail community pharmacists.

Long-term care pharmacies are estimated to serve three out of every five residents in LTC facilities (LTCPA, 2006). In 2007, there were 1,125 LTC pharmacies in the United States that derived at least half of their revenue from LTC facilities (Sanofi-Aventis, 2008a).

Long-Term Care Technology

Technology has been playing an increasing role in all aspects of health care delivery. Adoption of technology for LTC use has been slow, but it will continue to grow in homes, other residential settings, and LTC institutions. Innovative products are being brought

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to the market all the time. For example, various types of ***domotics*** technology, that is, "smart home" technology, can enable a growing number of elderly people live in their own homes. Long-term care technology can be classified into seven main categories:

1. *Enabling technology.* Also referred to as assistive technology, this includes various devices and equipment that enable people to do things independently despite functional impairments. Examples include hearing aids, simple self-feeding aids such as specially designed eating utensils, and custom-fitted mobility scooters that improve people's quality of life regardless of whether they are living independently in their own homes or in LTC institutions. Some newer technologies enable people to live independently. These technologies include reminder systems that are particularly useful for those with mild cognitive impairments. Automatic enunciators remind people of tasks they must do that day, such as keeping a doctor's appointment. Enunciators are also being integrated with medication administration systems to remind people when certain medications must be taken. Talking blood sugar monitors, thermometers, blood pressure monitors, and automated pill dispensers are now available for use in the home (Cheek et al., 2005). The National Association of Home Builders has developed an aging-in-place certification specialist program. A Certified Aging-in-Place Specialist (CAPS) has specialized skills in home remodeling solutions to enable older adults live in their own homes as they age. Various products and devices are used to promote accessibility and safety in the bathroom, bedroom, or kitchen. For example, clapper lighting systems turn on the lights at the sound of clapping.
2. *Safety technology.* Personal emergency response systems (PERS) are now widely available for people living alone to summon help in an emergency. Technology that uses signals, alarms, and wireless transmitters can be installed in nursing facilities to notify staff when a wandering patient opens a door to go out. Wireless sensors to ensure patient safety are also being developed. Fall detection devices can signal the staff when an at-risk resident attempts to leave a bed, wheelchair, or toilet unattended.
3. *Caregiving technology.* Feeding and nutritional therapies—such as enteral and parenteral feeding (discussed in Chapter 12)—have been around for a long time. Other technologies such as in-home dialyzers for people with kidney failure are more recent. Caregivers are now increasingly using automated medication dispensing systems that improve accuracy and efficiency. A variety of beds and overlays are available to reduce pressure to promote healing of pressure ulcers. Ultrasound bladder scanners are used for the management of urinary incontinence. Barcode technology has been adopted to verify patient identification and dispense medications. ***Home telehealth systems*** use telecommunication technology for the distance monitoring of patients and delivery of health care with or without the use of video technology. They have the potential to

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improve access and reduce costs by minimizing the need for the patient to make trips to physicians' offices or for home health nurses to make frequent visits to the patient's home. Interactive technology enables "virtual visits" between clinicians and patients. It enables distance monitoring of the patient and promotes self-management of chronic conditions. Remote patient monitoring systems collect data on vital signs and blood pressure and allow a nurse to also observe any behavior changes.

4. *Labor-saving technology.* Introduction of labor-saving technology is designed to improve worker efficiency and reduce physical injuries by decreasing the need for heavy transfers and lifting. Electrically operated ceiling-suspended dining tables can convert a dining room to a multipurpose room at the flip of a switch. Ceiling-mounted patient lifting and transfer equipment and labor-saving bathing systems are other examples of labor-saving technology. Computerized medical records that replace handwritten charting can save caregivers time that can be spent in delivering patient care.

5. *Environmental technology.* Products and fibers that have greater fire resistance; improved fabrics for upholstered furniture that resist soil and fluid absorption; new fibers for carpeting that resist soil, stains, and odors; and nonskid floor coverings are some examples that enhance the aesthetics and safety of living environments. Computerized controls for hot water systems are designed to save energy and prevent the supply of overheated water that can cause severe burns. Sensorial signals, such as color and textured materials, are employed to support orientation of cognitively impaired individuals in their own homes and in institutions (Cheek et al., 2005).

6. *Staff training technology.* Interactive tools, CD-ROMs, and remote video teleconferencing are available to provide training and continuing education on a large variety of topics.

7. *Information technology.* Information technology (IT) deals with the transformation of data into useful information and is covered in more detail in Chapter 14. IT is a broad area. In health care organizations, application of IT falls into four main categories:
   - ***Clinical information systems*** are designed to be used by various clinicians to support the delivery of patient care. Electronic medical records, for example, can provide quick and reliable information necessary to guide clinical decision making and to produce timely reports on quality of care delivered. Computerized provider order entry (CPOE) systems enable electronic transmission of medication orders to the pharmacy and help reduce errors. Clinical information systems also support patient assessment, care planning, and clinical documentation. These systems can be integrated with other applications such as administrative and financial systems, menu planning, and food ordering.
   - ***Administrative information systems*** are designed to assist in carrying out

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financial and administrative support activities such as payroll, patient accounting, billing, accounts receivable, materials management, budgeting and cost control, and management of residents' personal funds.

- ***Decision support systems*** provide information and analytical tools that support effective management. For example, the system can help analyze performance indicators, staffing adequacy, staff productivity, rates of infections and patient incidents such as falls, and staff injuries.
- ***The Internet***, or the Web as it is commonly called, is now widely used by clients and providers to access information. A vast amount of clinical and caregiving information can be accessed online. Various IT applications, however, have also become Web-based. In this manner, updated software applications can be accessed and used on the Internet at all times. Various LTC providers increasingly use the Web for advertising their services and provide other client-related information.

For Further Thought

1. In what ways is the long-term care industry likely to evolve in the future?
2. Are hospitals likely to play a bigger role in the future delivery of long-term care?

For Further Learning

Assisted Living Federation of America: A group that offers basic consumer-oriented information on assisted living and gives a directory of assisted living facilities. This trade organization represents assisted living and other senior housing facilities.

www.alfa.org

Home Care Research Initiative: This organization supports research projects to address issues in long-term care. Research articles and fact sheets can be downloaded.

http://www.vnsny.org/hcri/index.html

Hospice Foundation of America: A nonprofit organization that provides leadership in the development and application of hospice and its philosophy of care.

http://www.hospicefoundation.org

National Adult Day Services Association: This organization represents the adult day care industry and also furnishes consumer information.

http://www.nadsa.org

National Association for Home Care and Hospice: The nation's largest trade association representing the interests and concerns of home care agencies, hospices, home care aide organizations, and medical equipment suppliers.

http://www.nahc.org

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National Association of Long Term Care Administrator Boards (NAB). This organization administers the national licensure examinations for assisted living and nursing home administrators. It has publications available to prepare for the examination. The website also provides links to the licensing agencies in all states.

http://www.nabweb.org

National Association of Subacute and Post-Acute Care. The association was formed in 1995 through a consolidation of the International Subacute Healthcare Association and the American Subacute Care Association.

http://www.naspac.net/faq.asp

National Hospice Foundation: A nonprofit, charitable organization affiliated with the National Hospice and Palliative Care Organization that provides support and information about hospice care options.

www.nationalhospicefoundation.org

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