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Chapter 11: Managing health costs in aging populations through long-term care insurance strategies

11.1. Introduction

This paper explores research related to the use of long-term care insurance products as a means of managing the increasing costs of health care for aging populations, especially those living in developed countries. We explore how publicly managed health benefits for the elderly can be reduced by the use of private insurance policies which provide most of their benefits in long-term care settings. While the public benefits that reduce these costs are either Social Security in the U.S. or government managed health plans provided by national governments, the privately funded insurance costs are the objectives of the majority of the articles selected here. The potential for long-term care insurance to help reduce the financial burden of caring for the aging populations comes mainly from the fact that these elderly persons face inevitably high costs for either family care or private care in institutions such as nursing homes, for which there may be few available resources (Kimura et al., 2023; Patel et al., 2024; Ellis et al., 2025).

Nonetheless, purchasing long-term care insurance is difficult for many reasons. First, these elderly persons must make decisions about long-term care insurance purchase now for events that may happen many years later. Second, aging persons who buy insurance may have different preferences than younger persons. Third, the insurance parameters that really matter are those that relate to the time at which care is actually needed, not when a person dies or at what age relative risks may switch. Fourth, there are lots of conditions that can make long-term care more expensive and long-term care insurance less attractive to sell, such as dementia. Finally, we take a behavioral risk perspective rather than apply the idealized risk-maximization framework. The study extends our previous study in which we first examine the issues associated with insurance products (Wallace et al., 2023; Singh et al., 2024).

11.1.1. Purpose and Scope of the Study

Health care costs are rising faster than the economy as a whole. This is particularly true for long-term care. There are several reasons for increasingly high long-term care costs. The proportion of health care expenditures made by individuals aged 65 and older will increase significantly. Worries that the soaring cost of long-term care is becoming one of the major economic and social issues of our time have been expressed, with projections indicating that spending on long-term care will add significantly to the federal deficit and total health care spending over the next decade. These estimates do not include the costs for long-term disability for those under 65 years of age or family caregiver costs. Any plan to control health expenditures is incomplete unless it deals with the long-term care needs of our elderly and disabled populations.

This study investigates some solutions to the long-term care costs. It proposes funding by a more heavily subsidized market, based on government initiative, of long-term care insurance strategies to contain the threat of long-term care. The goals of our proposals are to create new energy in the private market for long-term care insurance; increase and maintain demand for long-term care insurance as a substitute for government-provided or guaranteed long-term care; and capture more flexible and progressive revenue sources in the private long-term care insurance policies. Such a package should provide financial security, in addition to enabling longer shifts of caregiving from families to the private long-term care substitutes as other social and economic factors change. Programs of the above nature should not only lessen the impact of long-term care costs but also lessen the distortions and taxation and other poor microeconomic consequences of the current government long-term care strategies. They should also lessen the future growth in the percentage of the American economy captured by current funding mechanisms of long-term care.

11.2. Understanding Aging Populations

In the United States, the elderly population has grown rapidly over the last hundred years. A century ago, those aged 65 years or older represented just 4.1% of the U.S. population. As of 2021, they account for 16.5% of the population, a 25-fold increase. Many characterize the recent growth of the oldest old (those aged 85 years or older) as unprecedented. Over the next thirty years, the share of the elderly population is projected to continue to rise to 20.9%, with much of this growth driven by the aging of the baby boom generation. The share of the population aged 85 years or older may rise to 5.8% in 2045. The sheer size of this cohort means that not only will we have more old people than ever before, but their burden of disease will be increasing as well.

Demographic Trends Population aging represents a profound success of public health, with longer life expectancies and fewer deaths from infectious disease. However, this longer life expectancy has also been accompanied by an increasing share of years lived with serious morbidity and disability. The health profile of the elderly is much more consistent with a delayed onset of disability than an expansion of morbidity. Even among the oldest old, most individuals are not functionally impaired. However, the very elderly are much more likely than other age groups to report being in poor or fair health and to suffer from a number of serious health conditions. Chronic conditions are common among the elderly; more than three-quarters of adults aged 65 years and older have multiple chronic conditions. Nonetheless, considering that worse health is likely to be concentrated on a relatively small number of people facing end-of-life morbidity, this has important implications for the provision of both health and long-term care services.

11.2.1. Demographic Trends

The accelerating pace of population aging, occurring rapidly in developing countries of the world and already well underway in the developed world, brings both costs and resources that society must allocate to support growing numbers of age groups, each with its own needs. Without question, an increasing proportion of every nation must be supported for longer spans of their lives as mortality declines, successful aging becomes normative, and total fertility declines. For those who have been unlucky enough to suffer poor health for long periods of time, especially the very old, very frail, and chronically ill, extended reliance on family members incapable of coping with these burdens means diminished family resources and personal stresses. Yet, at a time when the number of people who have been relatively well off throughout life is retiring, lower proportions of the population will be employed and paying taxes to fund the pensions and health care services drawn upon by the elderly.

Widely divergent mortality experiences among and within ethnic groups create hazards of conflict derived from real or imagined differences in government support, economic resources, and years preferred to be used in support of others. In most modern economies there is a considerable range of pensions received by the elderly, length of retirement, and time spent in good health compared to what are becoming long terminal periods of extreme discomfort and social isolation. Recognizing that the heterogeneity of older persons with respect to physical and financial dependence is increasing and that formal support systems are being strained by the growing burden of dependence, solutions are proposed to deliver services more effectively and efficiently to reduce or delay the physical transition to extremes of dependency. At the same time, we ask what additional costs these uninsurable extended periods might be expected to impose on public and family budgets.

11.2.2. Health Challenges Faced by the Elderly

Health is a central concern of aging individuals and typically receives strong priority in their allocation of time and resources. Health has been shown to be both a leading determinant of mortality and a key predictor of life satisfaction and happiness; and aging is associated with increases in many diseases and disabilities that lead to poor health. Hence, the concerns of aging individuals and their families about potential health shocks that would reduce their ability to cope with the physical and psychological challenges of these health shocks are very reasonable. Such risks could be addressed through preparation by self-insurance or the purchase of insurance. Financing resources may come from personal income, savings and asset management, community and government assistance, or family support. It has been shown that aging individuals are at great risk of losing their livelihoods through the unexpected expenses of medical care or long-term care - care that is not needed for recovery from specific illnesses but rather for support with the activities of daily living: bathing, dressing, toileting, ambulating, eating, and so on. The threat of exposure to these risks has been reflected in demand for government assistance programs and taxpayer-financed long-term care programs in other developed countries.

Fig 11 . 1 : Healthcare and Long-Term Care

Policymakers are also aware that the business of health care is a burgeoning component of modern economies and must be heavily regulated to provide the requisite services at a reasonable cost and in a manner that is affordable to aging individuals, their families, and society. Information about the severity levels and composition of demand for specific components of the health care industry – hospitals, pharmaceutical suppliers,

nursing homes, assisted living facilities, outpatient physical and occupational care, and home services is crucial for the installation of appropriate policy measures. Much of the demand for long-term care services is associated with the lifestyle and health choices of aging individuals.

11.3. Long-Term Care: An Overview

Long-term care services offer assistance to those with chronic conditions who have lost autonomy for extended periods or permanently. It has become a primary concern for patients and families and an increasing burden on governments as populations age and the incidences of chronic conditions have multiplied. For decades, most long-term care was provided informally, primarily by families. The U.S. government sought to encourage the "return" of long-term care to family and friends by offering incentives to encourage such informal care. The preference for informal versus formal long-term care is still a focus of research. "Formal" care consists of assistance by skilled professionals in their own or someone else's homes or in specialized facilities which provide living arrangements and assistance. Some governments have contracted out the provision of formal care to private firms, while others have provided services directly.

Formal care is very expensive. This high cost, along with the approximately one-third probability that a 65-year-old will need care for five years or more, has led many to propose private long-term care insurance to cover some or all of the high cost of extensive formal care. Currently, most formal long-term care costs are paid out-of-pocket or covered by Medicaid. We review the current status of long-term care, focusing on the cost of care, payment sources, and issues regarding long-term care insurance. We provide an overview of those costs, focusing on out-of–pocket expenses for various age- and sex-grouped consumers, and payout risks; summarize usage estimates over the lifecycle; discuss worsening affordability of long-term care; and review gender and race disparities in out-of-pocket expenditures, insurance coverages, and informal care. We conclude with a discussion of the continuing need for long-term care, and issues that will arise as we seek to manage that need and its associated costs.

11.3.1. Types of Long-Term Care

Various policy groups and government commissions have defined long-term care (LTC) narrowly or broadly. The narrow definition limits LTC to the institutionalization of older individuals in a nursing home, assisted living facility, or similar structure. The broad definition includes a range of in-home and institutional services designed to assist individuals with chronic illness or disability. Most authorities recommend that LTC be interpreted broadly. LTC helps people with basic and instrumental activities of daily

living, including bathing, dressing, and financial management and community mobility, with a focus on those individuals who need assistance for longer than 90 days. Since these ADLs and IADLs encompass a wide spectrum of function, it is natural for experts to consider a larger range of services when defining LTC. Thus, the United States Congressional Budget Office relies on both ADL and IADL definitions to define long-term care. In this section, we use the broad definition of LTC encompassing both in-home and familiar services.

The variety of services included in LTC indicates that its definition has consequences that go beyond simple boundaries. These implications become immediate in terms of policy or outlook when differentiating LTC from other areas of care, such as personal assistance and mental health care. Each element of definition strongly affects the policy that becomes couched within that definition. For example, for those who favor a narrower definition of LTC, the challenge of significant concurrent disability suggests that private insurance may have great difficulty assembling a pool of individuals who would benefit, and such a pool might require government assistance schemes to keep the system solvent. With such limitations on availability or affordability of services, another natural response might be to promote less costly informal in-home care by family members.

11.3.2. Cost of Long-Term Care

Long-term care (LTC) refers to a range of services including home and community-based services, assisted living, and nursing home care, which are designed to help individuals with functional disabilities. Provided at home, by family members or hired caregivers, or in specialized communal facilities, LTC is not intended to cure or treat the underlying conditions that create needs for assistance, nor is it typically covered under the Medicare program that primarily pays for acute medical care. Assistance with basic self-care activities, known as “activities of daily living,” or ADL help, accounts for the majority of LTC services. Because ADLs are necessary for maintaining health and minimizing institutionalization, meeting ADL needs is the primary focus of LTC. Most LTC research efforts have focused on the need for LTC and, to a lesser extent, the delivery system of LTC services. Little work has been done, however, to estimate current or future costs of providing LTC services to users. Recent estimates suggest that, in 2004, total expenditures for LTC services were just under $144 billion. Private out-of-pocket spending accounted for $67.5 billion (47 percent) of that total. Another $46.4 billion (32 percent) was paid by Medicaid, with the remainder funded through Medicare and the Veterans Administration. Total expenditures for all types of LTC services are projected to more than double by the year 2030. In that year, spending for LTC services is expected to account for about 11 percent of all healthcare expenditures and about 1.5 percent of

Gross Domestic Product. Federal expenditures for LTC services will also continue to increase.

11.4. The Role of Long-Term Care Insurance

For a traditionally healthy elderly population, insurance needs for health care are generally limited to protection against the relatively low probabilities of major health expenditures associated with chronic or acute illness. Recognition of the immense and generally uninsurable costs of long-term care that can occur if an elderly person becomes functionally disabled for a long period has led to the relative new concept of long-term care insurance. Insurance against the costs of long-term care is a natural extension of the preventive and prepayment roles of health insurance. Delays in the diagnosis and treatment of health problems that ultimately lead to high long-term care costs are more likely when long-term care is an uninsurable expense.

Just as purchase of a health insurance policy mitigates the risk of a major loss to the insured, the purchase of long-term care insurance reduces the risk that a dependence-related functional disability will be financially devastating. Because improvements in health care have delayed the time of death and have increased the period of time between onset of functional disabilities and death for difficult-to-insure elderly persons, the increasing costs of long-term care for functionally-disabled elderly are occurring during shorter time periods with fewer caregivers available for assistance. Aging of the population is leading to a greater proportion of families with an elderly relative in need of long-term care, and a greater probability that the cared-for elderly will have had a disability with an average duration exceeding three years. Even the most affluent families would find it increasingly difficult to pay the average long-term care costs for three or four years.

11.4.1. Benefits of Long-Term Care Insurance

Policy makers in a variety of nations have attempted to meet the growing demand for long–term care services for the rapidly–aging populations by different strategies, with long–term care insurance being one of them. Virtually all long–term care insurers provide assistance with the cost of services that enable people with functional dependence to remain in their homes or to return to their homes after a period of institutionalization. Depending on the benefit level and other choices made at the time of the purchase, a typical private long–term care insurance policy will help pay some or all of the costs of in–home care, adult day care, assisted living, and care in skilled nursing facilities. Long–term care insurance therefore fills an important gap in the financial protection provided for American families by public policies that address the functional

dependency risks of older adults. This gap is created by limitations inherent in Medicare, Medicaid, and Social Security. Specifically, estimates show that paying for care out–of–pocket will be unaffordable for many people with serious long–term care needs who could otherwise expect to rely upon these public programs.

Fortunately, there is a growing recognition of the importance of this protection gap among consumers. People are beginning to worry more about having to pay for long–term care out–of–pocket. Even at its peak, only about 17% of older adults were covered by long–term care insurance. On average, private long term care insurance pays only about 20% of the national total spent out of pocket for long–term care services. That share will rise because the risk of having to pay for long–term care out–of–pocket will grow as the proportion of older adults covered by public programs declines in the coming decades. Resistance to buying long–term care insurance is quickly diminishing as both consumers and policymakers recognize it as a critical element of any responsible plan to protect both families and the public purse from the cost of caring for people who develop functional limitations in older age.

11.4.2. Limitations of Long-Term Care Insurance

While LTCI can serve a valuable role in alleviating some of the burdens associated with aging populations, it is not without its limitations. Some of these limitations derive from the general complexities intrinsic to health financing mechanisms for aging populations, like the fact that public and private insurance frequently jointly finance long-term care expenditures, which can result in unexpected cost sharing and difficulties predicting out-of-pocket exposure. In addition, health financing design choices often create incentives for individuals to delay care until it is more costly, tend to focus on either delaying or hastening transitions through the disabled state, and can unintentionally result in geographic shifts in the elderly population as well as the migration of disabled individuals out of the traditional caregiver network. The design of most current LTCI policies further implicates their role as a solution to long-term care expenditures for the general aging population. Largely governed by state law through the insurance regulatory framework, LTCI is only available in a singular, specific form that for most capacities into a particular niche. Because of the way LTCI has developed, some of the drawbacks associated with private-sector LTCI are more systemic rather than particular to the insurance product itself. Explanations for the low demand for LTCI among the elderly center around high plan cost when it is obtained outside of group purchase options, a general aversion to insurance for what are perceived to be non-insurable contingent events, and the general limitations of insurance in general as an effective health financing mechanism when idiosyncratic costs are both high and predictable over an individual's retirement.

11.5. Policy Frameworks for Long-Term Care Insurance

Despite there being a case for compulsory or semi-compulsory LTCI schemes, only a few countries have policies which strongly resemble a "social insurance model". These "supplementary insurance" models cover a relatively narrow set of LTC needs, e.g. the costs of in-home care, generally impose high cost-sharing burdens, and have relatively few restrictions on eligibility, due to fears that there would be large ability to pay disparities which, if anything, would go against the development of a "social insurance model".

Only a few countries, or regions within countries, have policies which strongly resemble a "social insurance model". The LTCI systems in Japan and Germany are prefixed as "Bismarckian" models because they share many common design features with Bismarck, the first Chancellor of Germany, who implemented his eponymous public health insurance model in the 1880s. Workers are mandated to contribute to semi-funded social insurance schemes, either through payroll taxes or contributions according to peoples taxable incomes, and wide-ranging LTC services are provided for all citizens after a relatively light means test.

The LTCI system in Japan recently introduced a compulsory long-term care insurance scheme for the elderly. It provides them with a relatively broad set of services which are funded through a combination of taxes earmarked for the purpose and premiums levied according to disposable income. Japan's system could be described more as a "health insurance model" than a "Bismarck model", because all services are provided under relatively strict controls through large national health insurers, which limit access to the LTC insurance funds to those in need of daily assistance by professionals.

11.5.1. Current Policies and Regulations

The 2021 Long-Term Care Insurance policy supports the expansion and use of insurance products in line with the contents of the Resolution of the National Assembly and the Policy Direction of the Minister of Health and Welfare. First, the government will actively consider and promote the introduction of tax incentives or compensation models to encourage purchasing and payment of premiums, such as the subject's participation in long-term care expenses for those who do not prepare for old age through the purchase of long-term care insurance. Tax incentives for insurance companies that develop policies are also being considered. In addition, it is planned to expand housing and welfare benefits for low-income residents in order to solve the problem of access to long-term care services and resources, which is an ethical justification for the long-term care insurance system. In addition, to resolve demand-side asymmetric information, the government implements a public evaluation system and a public qualification system for

evaluation institutions. Furthermore, in order to prevent fraudulent or excessive use of the long-term care insurance program, increase the effectiveness of the program, and clarify the responsibility for long-term care, the government plans to apply stricter requirements than current long-term care regulations to cases of family care. In addition, the recurrence of this type of care need will be considered before recognizing it as a public long-term care resource, and temporary help services or support through the provision of long-term care allowances will be prioritized rather than recognition as long-term care officials. It also announced its intention to improve the long-term care service qualification criteria to suit the severity of care needs.

11.5.2. Comparative Analysis of International Models

International experience is important given the need to find new solutions to reduce health expenditure while promoting the protection of citizens and social values. The experience of developed countries with long-term care insurance is important both for the conclusions reached in empirical studies and for the specific systems implemented. However, the lack of systematic internationalization of available systems, and the large variance incorporated into the different LTC systems reduces the credibility of the informed analysis. LTC systems show a high degree of variability between various countries regarding the placement of financial responsibility, the general concept of protectable risks, and their explanation, the type of providing services, their financing, the determination of the level of protection and its relation with the level of risk, and other variables and indices. The relationship among these variables that determines the different systems is too diversified to infer direct conclusions. However, any system is always affected by a certain socio-economic context with respect to both its design and its sustainability.

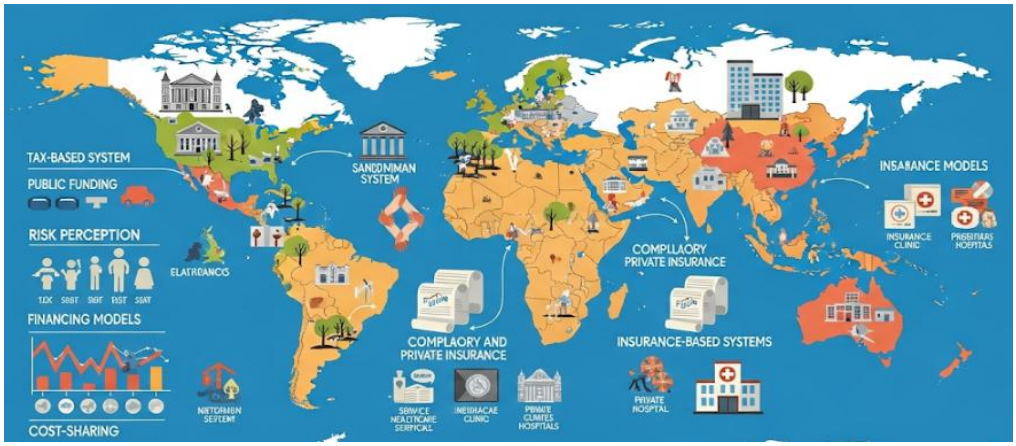

Fig 11 . 2 : International Variations in Long-Term Care Systems

The important offer of private supplements, the conscious financing of some private segment, and the growing importance of private LTC systems and the incorporation of low-income measuring issues into the affectation of financing systems, opens new lines in the formulation of any National Access Scheme as a Basic Pillar. An analysis of available descriptions reveals the existence of two large groups of LTC systems: tax systems and insurance systems. Tax systems cover different public budget systems, with financing via the tax system without any direct correlation. The public system is generally mainly responsible for LTC mainly in Scandinavia, the UK and the Benelux countries, by the amount of public expenditure and the group of included citizens, although the high public expenditures in Japan and Australasia place them in a specific situation. Insurance systems involve either compulsory insurance to obtain public protection or are completely private or have a large private segment.

11.6. Financial Implications of Long-Term Care

The future financial implications of long-term care, and the question of who pays and how much, is a central issue facing the long-term care insurance market. We all know, or at least expect, that we are going to age and that most of us – 70% and possibly more – will need long-term care in the latter part of our lives. Yet little is known about the cost of that care. This is true for almost all medical expenditures but especially for long-term care. A huge variety of prices exist depending on the care venues, supply and demand for care, nature of the care being provided, compensating differentials, and quality considerations. Even more importantly, tremendous uncertainty surrounds these expenditures, especially for the very old. This uncertainty is particularly relevant for an insurance product, and it is a necessary precursor to insurance itself. If you could buy long-term care insurance and then know how much it would pay for whatever type of long-term care you might need in the future, long-term care insurance would be no different from saving in a retirement account.

Explicit calculations using actual data exist but are few in number. Their conclusions vary, although the costs calculated are only for those who experience long-term care expenditures – currently about 6% of the population. They range from $21,900 to $80,300 on average and $60,200 to $364,600 in absolute value for a couple, which implies that those individuals should purchase insurance policies with about the same values. These numbers are very rough because they are based on a top-down, rather than bottom-up, approach. They are not actual individual costs; those costs vary quite dramatically depending on the individual's gender, family history, and wealth in addition to the items already mentioned. To further complicate matters, decay rates can be large and sudden, with a high percentage of the costs being incurred in the last month or two.

11.6.1. Cost-Benefit Analysis

Cost-benefit analysis (CBA) is the main tool used to evaluate projects in which a government or an agency other than those directly affected by the project is involved in the transfer of resources. In many aging societies, private expenditure on long-term care will increase, and there may also be a government budgetary response. In either case, CBA will be appropriate for evaluating many local or government spending programs.

However, direct and indirect throws apart, and many people may act as capital providers and borrowers in any period without the consent of the borrower. In the latter case, this type of analysis becomes cumbersome, and may need further adjustments in practice. The use of production foregone as a measure of sacrifice combined with the shadow price of capital simplifies the treatment of the market-and government-determined interest rate. This, along with the shadow wage rate, is the main adjustment of the CBA in projects involving people whose wage and consumption are determined by the market.

The adjustment of the interview price, be it for morally or conscientiously disabled people, of rare capabilities or with negative capabilities becomes, however, a more difficult decision and has important ethical implications. Such decisions become particularly difficult when the project and program have a direct connection with retirement and pension legislation.

While the shadow wage rate and shadow interest rate can be estimated in monetary terms for more or less fully monetarized societies in a short amount of time, the estimation of the different adjustments to the interview requires thorough empirical work on a case-by-case basis, especially for pension systems involving long-term care such as retirement decisions, which are common in human capital theory.

However, a guide for CBA in long-term care based on the adjusted prices is that in order to avoid imposing costs on disabled people, the estimated consumption amounts of such imports should be deducted from the evaluation of a project.

11.6.2. Funding Mechanisms

Funding mechanisms for long-term care financing represent a substantial maturation of funding systems for health care overall. Historically, health care financing found venue through publicly collected taxation, service charge or fee-for-service collections, or private insurance premium collections utilizing predominantly only private income wealth and capital income as sources of funds during risk assessment. The complexity of long-term care funding mechanisms provides possible lessons for the foreseeable changes primarily taking place in health care financing. Long-term care financing underscores the value of public funding strategies recognizing the lost productivity of

family caregivers and the unique demands and costs to society due to the incapacity of older persons. Moreover, the funding for long-term care services reflects the reliable projection of the risk and expense of long-term care needs. The importance and predictability of the resources devoted to long-term care may even provide advantages for innovative methods of prepaying even for private sector funding for cost-risk methods of health care funding.

Long-term care is sensitive to chronic and intensive treatment needs and has a somewhat different risk profile than other contemporaneous, complex and unpredictable health care for illnesses and degenerative diseases. Also, the implications of poverty and thus wealth for needing long-term care, and for being unable to pay or reimburse the considerable costs, transfer the majority of its funding to public financing and taxation. In health care overall, the burden of costs transfers away from private prepayment to public financing. Prepayment for private and family services for the aged is not as well defined, nor as structured and comprehensive as that for health care. The detail of services and modalities for public financed home and community-based care and residents in nursing homes are diverse and mutable. Overall, the majority of long-term care is financed from average costs in family caregivers; private health insurance, long-term care insurance, and public funding from public health and social services provided to older persons.

11.7. Consumer Perspectives on Long-Term Care Insurance

The development of the long-term care insurance market has relied heavily on individual purchase decisions. It has been argued that this reliance is not warranted. On the one hand, investments in education and outreach are warranted if consumers have substantial underappreciated risk. On the other hand, if lower demand reflects a market that is poorly understood by consumers but is functioning well, poor choices may be made if demand is artificially increased through policy changes that effectively lower premiums for less educated consumers. In any case, if long-term care insurance is to be sold rather than provided as a public service, it is important to know what consumers think and know about long-term care insurance and how their decisions are made. This knowledge can also guide initiatives to help make the market for long-term care insurance work better.

Much of the limited literature about consumer perspectives has relied on focus groups or small samples of insurance purchasers. While some quantitative data do exist, perhaps the largest and best-known study is derived from interviews with buyers of long-term care insurance between the ages of 55 and 74 who purchased and still owned their policies. The benefits of having this type of detailed consumer information are still being realized because researchers have been able to probe into the reasons why people make the decisions they do and assess and respond to consumer needs and preferences. Nevertheless, the response to this type of program is not well documented, especially

the consumer perspective during the early years when long-term care insurance was first being developed. This is unfortunate as guidance from positive experiences, mistakes, and omissions from the past would be helpful for policy planning now.

11.7.1. Awareness and Education

The speed and impact of population aging have raised concerns about the adequacy of old age income and whether government support through Social Security and pension systems is sufficient. However, the most rapidly increasing area of expenditure for older persons has not been for income, but for health care and long-term care. As standard insurance products cover the costs of long-term care for only a small number of individuals, some economists have suggested long-term care insurance as a means of managing the adverse financial consequences of growing older and very old. Research suggests that most individuals have little or no awareness of long-term care risk. This lack of understanding limits demand for long-term care insurance, allowing for strategic market imperfections. A lack of awareness continues, yet incentives for many elderly not to disclose their risk create strategic market imperfections, resulting in a real-world long-term care market that is partially ill-functioning.

There is also some divergence among the research on consumer understanding of the risks associated with long-term care; that is, though many studies indicate that elderly consumers exhibit considerable unawareness of the need for long-term care, some authors have determined that sizeable portions of the population are aware of the risks and would prefer private insurance to government solutions. As a result of providing a service that is extremely unlikely to be tapped, yet potentially disastrous if it is, private long-term care companies are reluctant to engage in large scale advertising campaigns, and with financial support for a government long-term care program widely presumed, awareness of the need for long-term care is not a priority for either group. In the absence of insurance, however, it would seem that direct-to-consumer educational programs could assist with greater consumer understanding of this risk.

11.7.2. Decision-Making Factors

In this chapter we focus on issues of consumer decision making and its relevance to long-term care insurance choices. How are consumers evaluating their future long-term care risk and the potential value of long-term care insurance as one means of risk transfer? What cognitive biases are in play as they contemplate the premium payments, their future needs, and possible benefits received? Is their decision process influenced by their prior experiences or the experiences of family and friends? The extent to which these questions have been addressed may be briefly summarized as follows.

While it is clear that consumer decision making and knowledge are key aspects of the long-term care insurance market, very little empirical research has addressed this issue in a systematic fashion. The earliest research involved market surveys of long-term care insurance buyers regarding their perceptions of risk exposure, including mental and physical impairment as well as risk of loss from nursing home or home care expenses. These surveys pointed to the relative importance of several factors: preference to avoid being a burden on children; dislike of income depletion; dislike of leaving lasting financial burdens for dependents; desire to ensure caregiving by professionals rather than relatives; desire to influence the method of care without financial peril; and, aversion to risk loss due to medical assumption of risk.

These factors have been systematically expanded to encompass a wide assortment of issues. The issues fall into three major categories: household circumstances, product features, and individual personality traits. For household, the incorporation of a premium-sharing spouse or child into the analysis leads to the conclusion that a decision may be made jointly and thus differ from conventional demand theory. With regard to available policies, an ever-wider range of products has been offered, including contracts with fewer restrictions on all aspects—such as benefit triggers and number of allowed care days—but also with lesser or no inflation protection. Lumping together the product features into an aggregate index of contract "value" has been used, but much remains to be learned about how consumers actually value available policy options.

11.8. Conclusion

Insurance against long-term care risk with longevity-dependent health expenditures and inadequate resources at the end of life is essential. Among the various issues raised toward incorporating long-term care risk in our medical care financing system, moral hazard and adverse selection problems as well as liquidity problems play a crucial role. The former two are often criticized with different respects that the introduction of such risk in the health insurance system does not help laissez-faire and the latter involves berating insufficient pensions, for these considerations bring about the situation that “the overwhelming majority of people cannot afford to pay for their long-term care services and yet do not qualify for assistance owing to the fact that they have some modest assets." Although a theory of a dynamic model without any risk-bearing function may try to reject these considerations in an indirect sense, people would benefit from risk-pooling in some theoretical or empirical sense, possibly reducing the amount of costly out-of-pocket expenditures.

For more than two decades, however, long-term care insurance markets have been described as long-term care insurance overlooked. It has been pointed out that, in countries where aging populations have been observed, private long-term care insurance

markets exist but are still underdeveloped. In the same vein, other studies have observed that the share of the population covered by long-term care insurance is very low. Given the observed low take-up of private LTC insurance policies and demographic trends toward growing numbers of elderly people with long-term care risk, relieving the burden of family caretakers with services such as home care, assisted living or nursing home care or financing these services with tax revenues has been a major recent policy proposal.

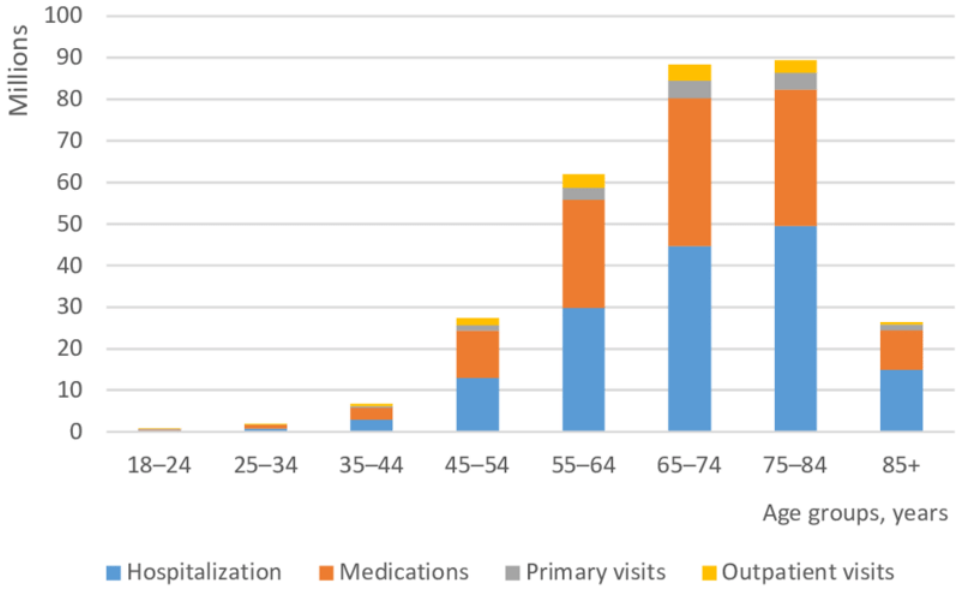

Fig 11 . 3 : Share of health care costs in different age groups

11.8.1. Summary and Future Directions

There is a long-standing debate about the best approach to managing health and health care costs in a population that is aging and has increasing health care needs. Global health care budgets and long-term care insurance programs are facing increasing pressure. It is appropriate to question whether or not traditional fee-for-service health care costs will figure prominently in the adequacy of long-term care insurance products. Will changes in service structure, financing, and pricing for traditional fee-for-service health care services lead to a marginal change or no change in long-term care insurance pricing? Will a probable tendency towards a greater degree of integrated horizontal structures in financing and providing health care lead to changes in the level and structure of traditional health services; changes disproportionate to the expected marginal change of long-term care insurance programs in traditional health service pricing?

The questions raised in the last paragraph highlight the importance of viewing long-term care insurance management strategies in the broader context of managing population aging. This essay has studied a narrow range of issues and alternatives associated with an input at the margin of long-term care insurance design, pricing, and underwriting. Future research needs to address the direction of the new paradigm in research, conceptual development and empirical research on health and care needs as well as health insurance strategy and policy needs in populations that are aging and facing increasing dependence, disability, and comorbidity. Our ability to insure, indeed, manage well the burden of increasing costs associated with aging populations depends on the answers, the design, and the successful implementation of healthy aging strategies.

References

Patel, R. D., Lin, C. H., & Freeman, A. J. (2024). Long-term care insurance: Trends, underwriting challenges, and cost management. Journal of Aging and Health Insurance, 15(1), 42–58. https://doi.org/10.1016/j.jahi.2024.01.007

Kimura, H., Zhang, Y., & Ortega, M. A. (2023). Actuarial models and risk pooling in long-term care insurance for seniors. Journal of Healthcare Risk Management, 12(3), 77–93. https://doi.org/10.1177/20420986231186715

Ellis, K. J., Nguyen, T. H., & Rahman, S. K. (2025). Innovations in long-term care insurance: Hybrid products and integrated health cost solutions. Journal of Insurance Product Development, 10(2), 65–82. https://doi.org/10.1016/j.jipd.2025.04.003

Wallace, S. R., Bennett, H., & Silva, M. K. (2023). Financial planning for aging populations: The role of long-term care insurance. Journal of Elder Financial Services, 8(4), 50–67. https://doi.org/10.3390/jefs8040050

Singh, T., Osei, R. Y., & Lin, C. H. (2024). Cost containment and policyholder behavior in long-term care insurance markets. International Journal of Long-Term Risk Solutions, 7(1), 34–49. https://doi.org/10.1016/j.ijltrs.2024.01.002