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Old Age and Catastrophic Health Costs

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ACRONYMS AND ABBREVIATIONS

CASEN	<i>Encuesta de Caracterización Socioeconómica Nacional</i>
FONASA	National Public Health Insurance Fund/ <i>Fondo Nacional de Salud</i>
GDP	Gross Domestic Product
GNP	Gross National Product
ICD	International Classification of Disease
ISAPRE	Private Health Insurance/ <i>Instituto de Salud Previsional</i>
MAI	<i>Modalidad de Atención Institucional</i>
MIDEPLAN	Ministry of Planning/ <i>Ministerio de Planificación</i>
MLE	<i>Modalidad de Libre Elección</i>
MoH	Ministry of Health
MTC	Mean Total Cost
RCU	<i>Red Catastrófica y de Urgencias</i>

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TABLE OF CONTENTS

SUMMARY

INTRODUCTION

1. ANALYTIC APPROACH.....	2
METHODOLOGICAL ISSUES.....	3
2. PRINCIPAL FEATURES OF THE CHILEAN HEALTH CARE SYSTEM.....	4
3. ELDERLY CARE AND THE EFFECTS OF AGING OF THE POPULATION ON HEALTH CARE COSTS.....	8
HEALTH INSURANCE FOR THE ELDERLY IN CHILE: COVERAGE, NET COST, AND MIGRATION BETWEEN INSURERS.....	8
<i>Insurance Coverage</i>	8
<i>Contributions and expenditure associated with the elderly</i>	9
<i>Migrations between insurance groups</i>	11
WHAT ARE THE FINANCIAL IMPLICATIONS OF THE AGING OF THE POPULATION FOR FONASA?.....	13
<i>The financial effect of aging (Scenario 1)</i>	13
<i>The financial effect of mobility (Scenarios 2 and 3)</i>	14
4. CATASTROPHIC COSTS.....	16
WHAT IS CATASTROPHIC?.....	16
<i>Choice of Criterion</i>	17
APPLYING THE VARIOUS DEFINITIONS TO THE CASE OF CHILE.....	18
<i>The List Criterion</i>	18
<i>Expenditure Criterion</i>	19
<i>Income Criterion</i>	21
<i>The Overlap Criterion</i>	21
<i>Type of insurance and health establishment</i>	22
CONCLUDING OBSERVATIONS.....	23

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5. FINANCING ELDERLY AND CATASTROPHIC HEALTH CARE.....	26
RECENT PUBLIC PROGRAMS.....	26
<i>Programa de Prestaciones Complejas.....</i>	<i>26</i>
<i>Programa del Adulto Mayor.....</i>	<i>27</i>
PROPOSALS DEVELOPED BUT NOT YET IMPLEMENTED.....	28
<i>Ley de FONASA.....</i>	<i>28</i>
<i>Red Catastrófica y de Urgencias.....</i>	<i>30</i>
OTHER POTENTIAL MECHANISMS FOR DEALING WITH CATASTROPHIC AND ELDERLY CARE.....	32
<i>Dealing with catastrophic costs: potential alternatives.....</i>	<i>32</i>
<i>Health care for the elderly: potential alternatives.....</i>	<i>34</i>
6. BIBLIOGRAPHY.....	40

SUMMARY

The Chilean health system is characterized by a large group insured under the public system (FONASA), and a smaller, younger and richer population privately insured by the ISAPREs. Not only are age and income differences found between FONASA and ISAPRE beneficiaries, but health service utilization patterns as well. The issues of population aging and of catastrophic costs have been in the frontline of the health policy agenda in recent months, and the Treasury is concerned about potential increases in the fiscal burden due to aging of the population and the presumed migration of the retired population from ISAPREs to FONASA.

This paper analyzes Chilean data in search of answers to questions about the effects on health care costs of population aging and of catastrophic events. Its main purpose is to ground current discussions about these aspects of the country's health care system in empirical data and to analyze alternatives to deal with catastrophic and elderly health care costs. The purpose of this research is not, however, to provide specific recommendations on how to shape the health care system in Chile.

The main findings can be summarized as follows:

Catastrophic care, however defined, is not primarily a problem affecting the elderly. For most age groups the most frequent interventions are not necessarily the most expensive, with the exception of the very young. The events that occur most frequently for the elderly are not the most expensive ones for the population as a whole. The population over 65 does experience more frequent events, but these events are not the individually most expensive ones. The highest cost episodes of care occur among infants. Technological change in the last decade has introduced the possibility of delivering care, at very high cost, to infants who would otherwise either have died or suffered from congenital disorders. Technological change has largely shaped the current age distribution of catastrophic care.

Apparently FONASA does not assume a disproportionate relative burden of catastrophic events. However, FONASA is responsible for a large absolute number of them in the case of the elderly, because most of the elderly population is affiliated to FONASA. The number of catastrophic events per hundred beneficiaries in the groups of 0-1 and 65 and older, is slightly less in ISAPRE than in the case of FONASA; however, both systems share the catastrophic burden. It is not possible to conclude that such difference is the result of moral hazard.

An important number of catastrophic cases among children less than one year old are assisted in public facilities, regardless of patient's affiliation. Almost half of ISAPRE catastrophic events among children 0-1 are treated in public hospitals while most of these cases among the elderly use private facilities. Perhaps this is due to the

type of medical technology available in the public sector to deal with catastrophic cases among infants, or for moral hazard reasons.

Elderly beneficiaries are neither the sole nor the most substantial drain on FONASA resources. Because of the relatively small numbers of elderly beneficiaries (compared to younger age groups), and because retirees contribute proportionately more than their younger counterparts, care for the elderly is neither solely nor primarily responsible for FONASA's chronic shortfalls.

The aging of the population will worsen FONASA's finances. The net fiscal burden of FONASA is expected to increase by 31 percent between now and 2015 from the sole effect of the aging of its population, assuming current unit costs of services and utilization patterns. However, the biggest contributor to FONASA's financial deficit will continue to be the population under 65 years of age.

Future migrations of ISAPREs elderly to FONASA will have a negligible financial impact on FONASA. The aging effect dominates the potential effect of migrations of the elderly to FONASA. The financial effects of the poorer individuals in the private sector moving to FONASA at retirement, or of all individuals moving from the private to the public sector at retirement age are negligible.

Migration of elderly individuals does not seem to be the present problem for FONASA. While substantial migration of retirees from the private to the public system took place a decade ago, today the elderly beneficiary populations are stable.

Attracting the elderly beneficiaries currently in ISAPREs will improve the financial condition of FONASA, assuming they would receive the same type and level of services presently delivered to FONASA's elderly. The elderly currently in the ISAPRE system are relatively well-off; if they were to migrate to the public sector, their contributions would exceed the costs of the services they would use.

INTRODUCTION

Past successes are creating new challenges for the Chilean health care system. As a result of historical trends of increasing life expectancy and declining fertility, Chile's population is aging. In Chile, as elsewhere, an older population creates concerns about greater use of health services, and a corresponding financial burden. At the same time, Chile's medical system increasingly is using advanced technologies to provide care for serious health conditions affecting all ages. The expansion in access to costly, high-technology services puts additional pressure on health care financiers.

Given the structure of health financing in Chile, the impact of demographic and technological changes on health spending is of great interest to policymakers—and particularly those concerned with the competing demands for public funds. Currently, a large share of health spending is financed by a payroll tax, which can be directed toward the National Health Fund (FONASA), or private insurance (ISAPREs). However, the vast majority of costs not covered by workers' contributions and beneficiaries' co-payments are borne by the public sector and financed by general tax revenues. Therefore, if the dual factors of an aging population and expanded catastrophic care result in an increase in costs that outstrips an increase in labor incomes, the public budget will have to take up the slack.

The purpose of this paper is to contribute to current discussions about two related aspects of the future of Chile's health care delivery and financing: the effects of the aging of the population, and the increasing demand for catastrophic care. Using data from several sources, we attempt to decompose the complex questions and draw conclusions regarding the magnitude of the problem facing the Chilean government currently and in the foreseeable future. In addition, the paper describes and, to a limited degree, evaluates the programs that have been implemented and proposed to assure access and contain costs, and assesses the strengths and weaknesses of other options for financing catastrophic and elderly care.¹ The paper presents a discussion of possible alternatives for dealing with catastrophic and elderly health care costs at the end of the analysis.

The paper is organized as follows: The first section describes the approach used in the analysis. The second section summarizes the basic features of the Chilean health care system, including coverage and financing. The third section seeks to estimate changes in total and net health care costs associated with the aging of the population. In the fourth section, we turn to the complex question of catastrophic care. In the fifth and final section, we discuss policy options to address the potential financial pressures generated by catastrophic and elderly care.

¹ This summary paper is based on a technical paper, which contains much more detail about both the methodology and the results of the analysis.

1. ANALYTIC APPROACH

1.1 Two fundamental questions drive the analysis presented in this paper: First, what effect will the aging of the population have on the Chilean health system? Second, what are the prospects for financing catastrophic care, and to what extent are elderly and catastrophic care linked? We address these questions principally from the perspective of government, although each has ramifications for private financiers and households.

1.2 Far from being part of an academic exercise, the answers to these questions are being energetically debated in Chile, often in the absence of sound empirical analysis. Several beliefs prevail: It is widely thought that the aging of the population will inexorably lead to dramatic escalation in the nation's health care bill. This is held to be the case in part because, it is assumed, the elderly are primary users of costly catastrophic health care. It is also believed that as people age they tend to move from private insurers to the public health insurance fund (FONASA), thereby placing a disproportionate burden on the public sector. Fortunately, data exist to shed light on these issues, and the discourse can be enriched by moving from assumptions to facts.

1.3 To address the first question—what effect will the aging of the population have on the Chilean health system?—we examine where the elderly currently obtain care (public or private providers), and what type of care they receive. We estimate the current costs of health care for the elderly, in absolute terms and compared to the costs for other age groups. We make comparisons across income groups, and assess the extent to which beneficiaries of private insurance shift to public coverage as they age. Using several different sets of assumptions, we project the total and net health care costs associated with the aging of the population through the year 2015.

1.4 In considering the second question—what are the prospects for financing catastrophic care, and to what extent are elderly and catastrophic care linked?—we first confront the nettlesome issue of how catastrophic care is defined. Then we examine patterns of use of catastrophic care, with explicit attention to its relationship to age. We estimate the current costs of catastrophic care, and present the determinants of future cost increases.

METHODOLOGICAL ISSUES

1.5 The analyses presented in this paper draw on several excellent sources of information (Box 1.1). For several parts of the study (characteristics of risk pools, health service utilization, beneficiaries' mobility, and others), the nationally representative CASEN household surveys of 1994 and 1996 are used; even the very recent 1998 survey was

Box 1.1. Data Sources

- FONASA beneficiary utilization and cost data
- Hospital discharge data (FONASA 1993, National 1996, 1998 - complex care only)
- ISAPRE beneficiary and utilization data
- Household surveys (CASEN 1994, 1996 and 1998)
- Mobility Survey (Superintendencia de ISAPREs)
- Price data (FONASA 1998)
- Expenditures/budget (FONASA/MOH)
- Demographic data (INE 1998)

made available for some of the analyses. To answer questions related to mobility of the beneficiary populations, we also used information from a survey from the Santiago metropolitan area.² Examination of the cost of catastrophic care was greatly facilitated by the availability of a data set that linked International Classification of Disease (ICD-9) diagnostic codes to information on the cost of interventions financed by FONASA. In addition, we were able to obtain useful, though limited, information about the features of private insurers.

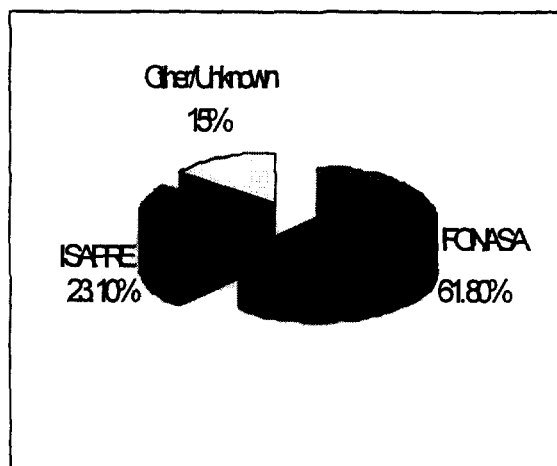
² Because the Santiago survey data were not collected specifically for the purpose of studying mobility, and obviously are not nationally representative, we have been cautious in our interpretation of the information.

2. PRINCIPAL FEATURES OF THE CHILEAN HEALTH CARE SYSTEM

2.1 The basic feature of the Chilean health care system is that it has a dual insurance system, comprised of the public National Health Fund (*Fondo Nacional de Salud*, or FONASA), and the set of private insurers (*Instituciones de Salud Previsional*, or ISAPREs). Under a 1981 law, the employed population contributes 7 percent of their wage income, and may direct this

contribution to FONASA, or buy a policy (individually or through their employers or other groups) from an ISAPRE.³ Periodic movement is permitted between FONASA and ISAPREs. In addition to providing coverage for workers who select it, FONASA is the insurer of last resort for unemployed and very low-income Chileans. More than half of the population is publicly insured while the private sector and other alternatives such as the armed forces, and other smaller groups, are responsible for about one third of the population. (See Figure 2.1)

Figure 2.1 Total Beneficiaries by Insurance type (percentages)



2.2 Within the FONASA system, for any episode of health care use, beneficiaries can choose to pay a moderate co-payment and obtain care from any provider on a pre-approved list (*Modalidad de Libre Elección*, or MLE); or they may choose to pay little or nothing out-of-pocket to obtain care at public facilities (*Modalidad de Atención Institucional*, or MAI).⁴ Unsurprisingly, the poorer beneficiaries tend to opt for the lower-priced MAI option, obtaining care only at public facilities; the better-off beneficiaries tend to use the MLE option for most of their care, and their utilization patterns mimic those of ISAPRE beneficiaries of similar means.

2.3 ISAPREs offer myriad and widely varying combinations of premia and co-payments, depending on the beneficiary's age and sex.⁵ Exclusive of co-payments, ISAPREs cover the cost of care by networks of private providers (physicians and hospitals), and are also

³ Prior to 1981, all contributions went to FONASA. The policy change was intended to improve access, contain costs and improve quality through the mechanism of the market.

⁴ All FONASA beneficiaries *except* those with the lowest incomes (group A) have this option. The poorest beneficiaries are entitled only to the MAI mode.

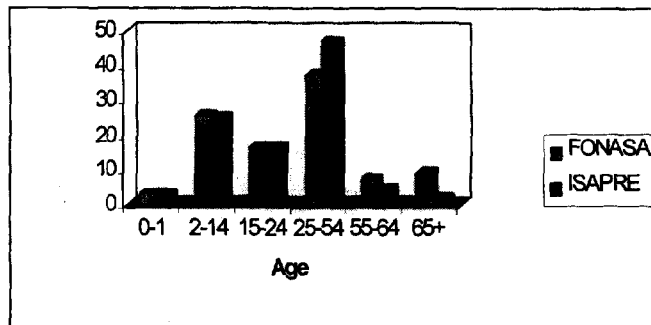
⁵ There is an exception to this: Clients who have contributed for 10 years cannot have their premia raised on an age-specific basis, but only inasmuch as premia are increased for all holders of the same policy.

expected to reimburse the public sector for care that beneficiaries seek at public facilities.⁶

2.4 ISAPREs are relatively free to ration care, to price clients out of the market, and to reject applicants in the first place. ISAPREs are regulated, in a limited way, by a superintendency that concentrates primarily on issues of contractual compliance, rather than on the content of the policies (or provider-beneficiary contracts) themselves. FONASA, in contrast, cannot select out any individual or group of beneficiaries, and cannot base co-payments on the beneficiary's characteristics.

2.5 The private and public insurance systems differ in size and structure of the risk pool. (See Figure 2. 2) Risk pools differ mostly among the population over 65 years of age and in the economically active population. Nine percent of FONASA's risk pool is over 65 while only 2 percent of ISAPREs' beneficiaries are among the elderly. Needless to say, the public system has the responsibility of providing health care for most of the elderly population of the country—eighty percent in 1998.

Figure 2.2 Demographic distribution within insurance group, 1998 (percentages)



ISAPREs, whose beneficiary population has grown from about 62,000 in 1981 to 3.8 million today (or 23 percent of Chile's population), tend to have beneficiaries in the working ages, with relatively high incomes. ISAPREs' beneficiaries have a mean income of Ch\$331,840. Nearly 70 percent of ISAPRE

beneficiaries are ages 15-64; a mere 2.2 percent are 65 and older. The average annual income of ISAPRE beneficiaries was estimated to be about Ch\$359,000 in 1998 while most of FONASA beneficiaries earn on average less than Ch\$100,000. Among the elderly there are also important differences in income level. While 86 percent of the elderly in ISAPREs earned annually more than Ch\$700,000, by contrast most of the elderly in FONASA earned less than Ch\$200,000 in 1996. FONASA covers 8.8 million individuals—62 percent of Chile's population—with low-income households and the elderly making up a disproportionate share of the risk pool. More than half of FONASA's beneficiaries fall into the lower income groups (A and B, up to Ch\$80,500 per month).⁷ FONASA beneficiaries are not only poorer, on average, than those in ISAPREs, they are also older. About 62 percent of the FONASA beneficiary population falls within the working ages (15-64 years), and slightly more than 9 percent are age 65

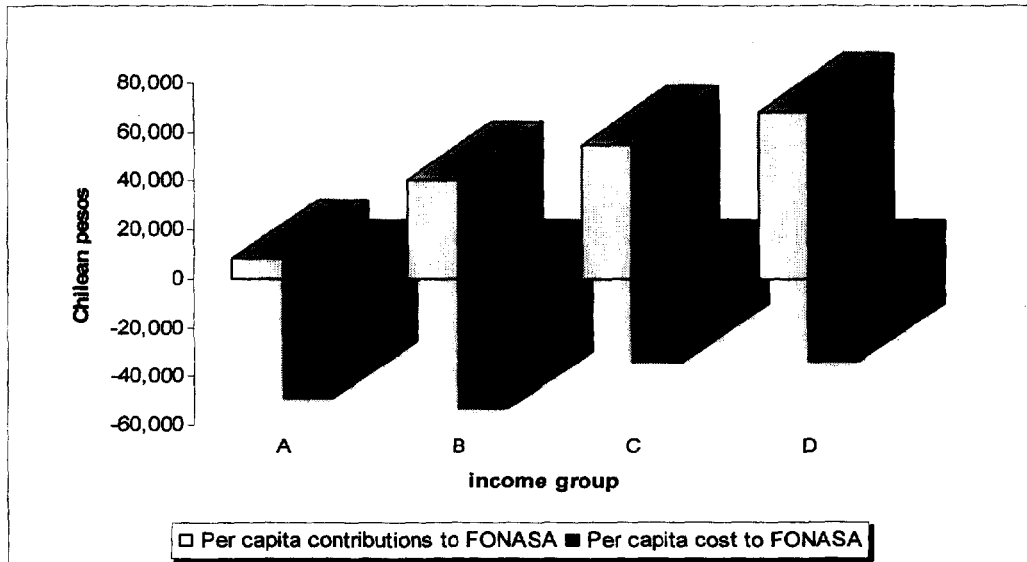
⁶ In practice, however, there is little reimbursement.

⁷ Despite the general observation that FONASA beneficiaries, on average, come from the lower income groups, higher income individuals have increasingly been selecting FONASA coverage. Between 1994 and 1998, the number of FONASA beneficiaries grew slightly (by 1.8 percent); over that period, however, the proportion from the lower income groups (A and B) declined by 11 percent, and the proportion from the higher income groups (C and D) increased by nearly 41 percent.

and over. Even within the working ages, the FONASA population is older, on average. About 7 percent of FONASA's beneficiaries are 55-64 years of age, compared to 5 percent of ISAPRES' (see Figure 2.2).

2.6 The structure of FONASA's risk pool drives another of its features: the cross-subsidization from better-off to poorer beneficiaries. An analysis of data from 1995 (Bitran et al, 1996) demonstrated that the poorest beneficiaries (FONASA group A) use nearly Ch\$50,000 worth of benefits and contribute only Ch\$8,000 (a subsidy to them of Ch\$42,000); at the same time, the best-off beneficiaries (group D) use Ch\$34,000 worth of benefits and contribute far more—Ch\$68,000—from their wages. In sum, income groups A and B are subsidized by their better-off counterparts in income groups C and D (see Figure 2.3).

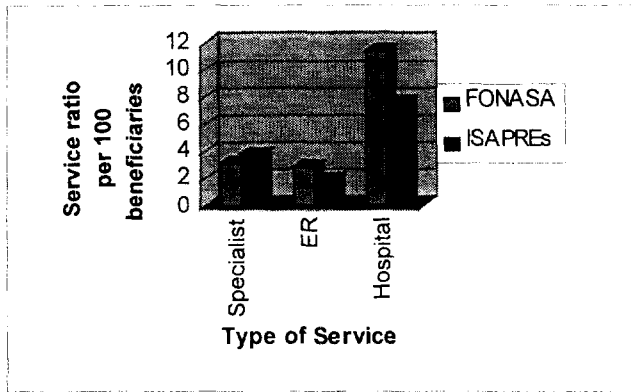
Figure 2.3 Per capita contributions and cost to FONASA by income group (1995)



Because of this feature and due to the fact that more than half of FONASA's revenue comes from the Treasury -general taxation, it is easy to infer that the health system in Chile is more equitable than it appears at a first glance. Not only those higher income individuals in FONASA but ISAPRE beneficiaries are also financing health care delivery through their tax contributions to the Treasury. So there is some cross subsidization of ISAPRES to FONASA via the Treasury⁸

⁸ It would be interesting to estimate how much ISAPRE population pays the Treasury in taxes that are directed to health financing. This would require some public expenditure review, more reliable income data, marginal tax rates and estimates of evasion.

Figure 2.4 Health Service Utilization by Insurance Type (1996)

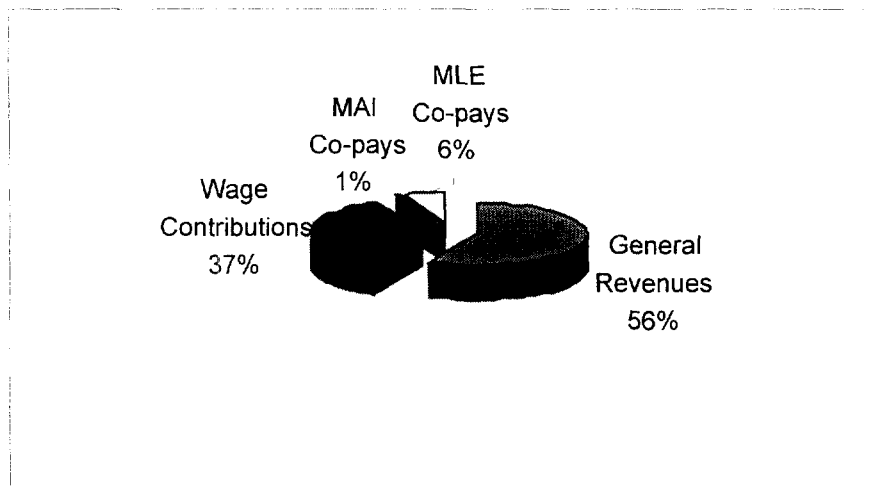


2.7 While the characteristics of FONASA's risk pool differ from ISAPREs', so does the behavior. According to household survey data, FONASA's beneficiaries are more likely than ISAPRE enrollees to report that they are ill. Within FONASA, the lower income groups—and particularly those in group B—report that they are ill more frequently than higher income

groups. As shown in Figure 2.4, FONASA's beneficiaries are less likely to seek specialist care than are ISAPREs', but they are more likely to make emergency visits and use inpatient services. However, FONASA beneficiaries using the MLE modality behave similarly to ISAPRE beneficiaries. Beneficiaries using MLE who are mostly among the economically active population and among the elderly, choose to use private inpatient services half the time, and are even more likely to have surgery than ISAPRE beneficiaries when hospitalized.

2.8 The financial implications of the differences between ISAPREs and FONASA are clear: ISAPREs are on relatively sound financial ground because, on the revenue side, they draw on a population that can afford relatively high contributions. On the expenditure side, ISAPREs can use a variety of methods to ration care and reduce their exposure to risk. The opposite is true of FONASA. Their beneficiaries can, on average, contribute less (in some cases nothing at all); the age and income structure of the beneficiary population connotes relatively high risk; and no explicit rationing occurs. It is not surprising, therefore, that of total FONASA resources in 1997, nearly 60 percent came from general tax revenues rather than wage contributions or co-payments (see Figure 2.5).

Figure 2.5 FONASA Resources by Source (1997): Co-pays



3. ELDERLY CARE AND THE EFFECTS OF AGING OF THE POPULATION ON HEALTH CARE COSTS

3.1 This section attempts, first, to examine the current status of the Chilean elderly in terms of health care coverage and costs and, second, to evaluate the likely financial effect of the aging of the Chilean population under various scenarios of mobility between insurance groups. To answer these questions, we first examine where the elderly currently obtain care (public or private providers). We then estimate the current costs of health care for the elderly, both in absolute terms and compared to the costs for other age groups. We next assess the extent to which beneficiaries shift between private insurance and social insurance. Finally, using several different sets of assumptions, we project the total and net health care costs associated with the aging of the population through the year 2015. It is important to note that the information available does not allow us to enrich our conclusions with estimates of unsatisfied demand in any age group. Therefore, this paper obtains its conclusions on both the aging and mobility effects, based on the assumption that observed utilization patterns at FONASA are indicative of population health needs. In other words, the public system is delivering to the elderly the level of care needed and it is also assumed that it could be maintained as such for any new member who moves from the private insurance system into FONASA. These findings are relevant for the discussion of possible alternatives on how to deal with elderly health care costs (Chapter 5).

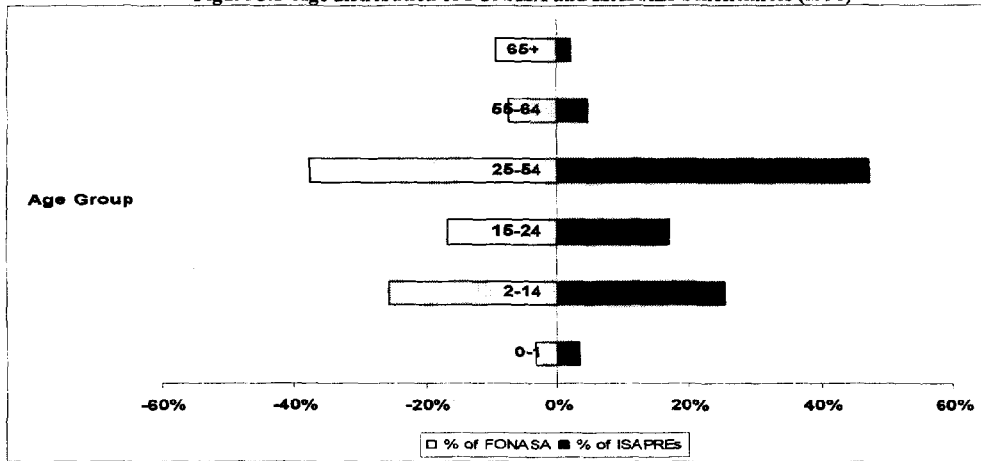
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Insurance coverage

3.2 As of 1998, FONASA provided health insurance to 80 percent of Chileans aged 65 and over, while ISAPREs provided coverage to another 7 percent. FONASA covers 62 percent of the population, and the elderly constitute a larger share of the FONASA than the ISAPREs' populations. Figure 3.1⁹ below shows how the risk pools of FONASA and the ISAPREs differed in 1998. The pattern seen has been generally true of the last few years. While the proportion of beneficiaries aged 0-24 years is similar for FONASA and ISAPRES, there is a sharp difference above 24: the ISAPREs have a significantly higher share of working-age beneficiaries, while FONASA caters proportionally more to retirees.

⁹ Note that the age intervals are unequal.

Figure 3.1 Age distribution of FONASA and ISAPREs beneficiaries (1998)



3.3 Health care for the elderly is generally believed to cost more than the average for the system as a whole. Because of this perception, policymakers in Chile have been worried that, should the ISAPREs risk-select against the elderly, the burden of care for the elderly would effectively be transferred to the public sector. We address both the implicit and the explicit concerns empirically. We examine, first, whether health care for the elderly is relatively more costly and, second, the extent of beneficiary migration between the ISAPREs and FONASA.

Contributions and expenditure associated with the elderly

3.4 Data on age-specific health care costs and contributions to FONASA are summarized in Figures 3.2a and 3.2b. The first figure shows per capita costs and contributions (in Chilean pesos) for the young (0-64 years) and elderly (65 and over) population. The second figure depicts total benefits and contributions (in million Chilean pesos) for the same two age groups. The data confirm that health care for the elderly costs more per capita than for the rest of the FONASA population; indeed 2.6 times more in 1995. Data for the ISAPREs show similar differences in the relative cost of health care¹⁰.

Figure 3.2a Per capita benefits and contributions by age FONASA (1995)

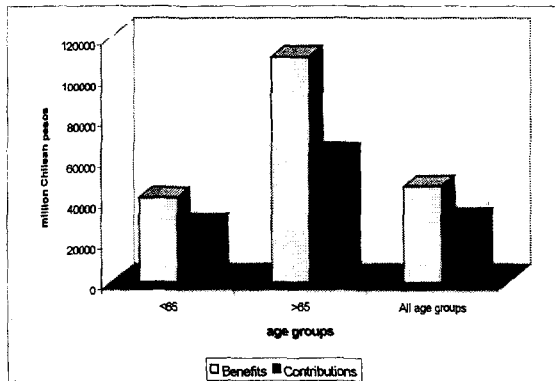
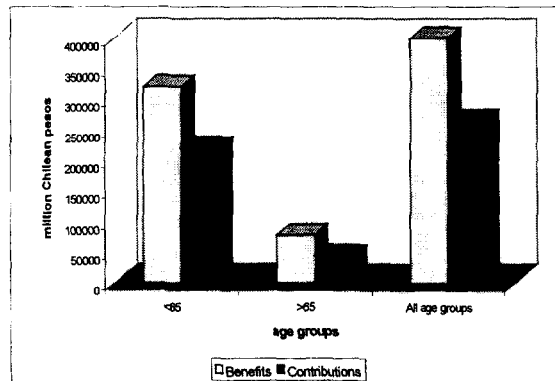


Figure 3.2b Total benefits and contributions by age FONASA (1995)



3.5 The figures hint at the complexity of the issue of the relative cost of health care for the elderly. Three features are of particular relevance for policy. First, the elderly contribute more per capita than the younger population – some 2.2 times more per capita. Second, the population below 65 years of age costs more than it contributes to FONASA, so that they cannot be said to be subsidizing the elderly population. Finally, the costs and contributions ascribable to the population age 65 and above represent only about one-fifth of the costs and contributions of FONASA affiliates overall. In other words, the financial situation of FONASA is largely dictated by the net cost of the population below 65.

3.6 All age groups in FONASA cost more than they contribute, thus age is perhaps not the most appropriate beneficiary characteristic to worry about. Indeed, beneficiary income level has a bigger impact than age on the financial status of FONASA. FONASA data show that beneficiaries in higher income groups (C and D) contribute more than they consume, *regardless of age*; in contrast, beneficiaries in the lower income groups (A and B) cost more than they consume, again regardless of age. This information is summarized in Figures 3.3a (in absolute terms) and 3.3b (in per capita terms). Note that the group that has the highest fiscal impact in absolute terms are those less than 65 years of age in the lowest income category (A). It can also be seen from Figure 3.3b that the elderly in the highest income category (D) contribute the most to FONASA and provide the greatest subsidies to other FONASA beneficiaries in per capita terms. If FONASA is seeking to improve its financial status, the appropriate focus should be on the income level of entering and exiting beneficiaries rather than on their age.

Figure 3.3a Per capita benefits and contributions by age and FONASA income group (1995)

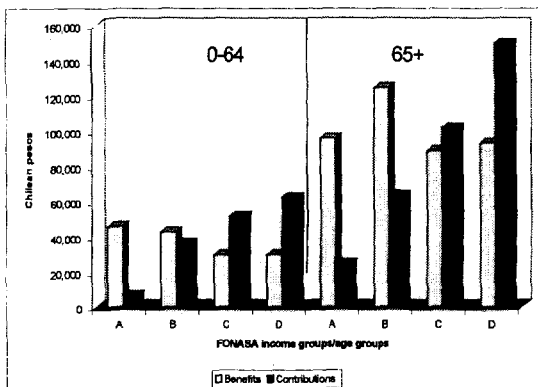
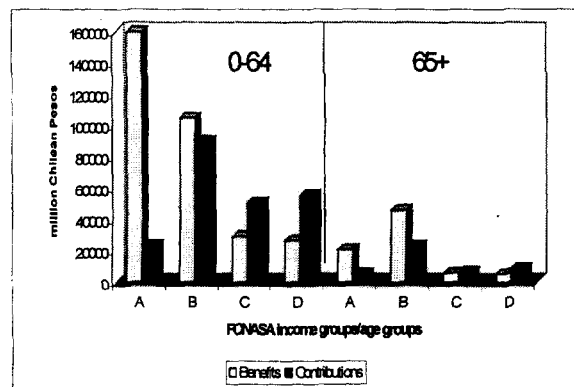


Figure 3.3b Total benefits and contributions by age and FONASA income group (1995)



3.7 The fact remains, however, that the elderly as a group consume more per capita than they contribute to FONASA. The perception that ISAPREs have been encouraging the elderly to migrate to FONASA is therefore one that merits examination.

¹⁰ See Table 5.7 of the technical document

Migrations between insurance groups

3.8 Data from household surveys conducted in 1994, 1996 and 1998 were used to examine the age-profiles of the ISAPRE and FONASA populations over time. The results are summarized in Figures 3.4a and 3.4b below. The data have not been collected to measure mobility, per se, but can be used to analyze the net effect of migration on the risk pool of FONASA.

3.9 Three findings emerge from this analysis. First, the age-distribution of the beneficiary populations of both FONASA and the ISAPREs have changed only marginally over the time period considered. Second, FONASA increased its coverage for all age groups *except* for those 65 years of age and above. As a matter of fact, the relative share of working-age population increased in FONASA and decreased in ISAPREs. Finally, the net effect of migrations on the proportion of elderly in both FONASA and ISAPREs has been negligible during the time period considered. Though the data do not measure migration patterns directly, it can be inferred that there have been no significant migrations from ISAPREs to FONASA in the period 1994 to 1998, and that the migration that has occurred has not changed the age-profile of the FONASA population.

3.10 Data on migration between insurance groups could also be obtained from a survey that was carried out in the city of Santiago in 1998. Extrapolating the results from this survey to the rest of the country may not be possible: the majority of ISAPRE's population lives in Santiago, where 58 percent of the population belongs to FONASA and 42 percent to ISAPREs, and affiliation patterns change according to geographical region; Valparaiso has 8 percent of the ISAPRE's population, Concepción 9.8 percent and Santiago 55.1 percent. However, one of the results to emerge from this survey is that 17 percent of FONASA affiliates formerly were enrolled with an ISAPRE, and that 36 percent of ISAPRE beneficiaries formerly were enrolled with FONASA. Migration from FONASA to the ISAPREs therefore seems more likely than the converse. The survey also indicates the three main reasons why people leave FONASA: dissatisfaction with the benefits, the creation of collective agreements, and changing jobs. The three main reasons why affiliates leave ISAPREs are: a change in job, dissatisfaction with the benefits offered and high prices. These reasons, except for high prices, apply primarily to the working population. The survey suggests that in recent years working-age beneficiaries rather than the elderly have been prone to migrate between insurance carriers.

3.11 Concern about movement to FONASA may not be entirely unfounded, however. It is possible that the migration of the elderly from ISAPREs to FONASA has already taken place – after all FONASA already covers 80 percent of the population 65 years of age and above, while the ISAPREs cover only 7 percent of that population. Data on the age composition of beneficiary populations (from "*Boletín Estadístico*", Superintendencia ISAPRES; 1998) indicate that substantial out-migrations of the elderly from the ISAPREs took place in the late 1980s. In other words, the fear that the elderly might

migrate to FONASA and add to the fiscal burden has, to a large extent, probably already materialized.

Figure 3.4a FONASA coverage by age group (1994, 1996 and 1998)

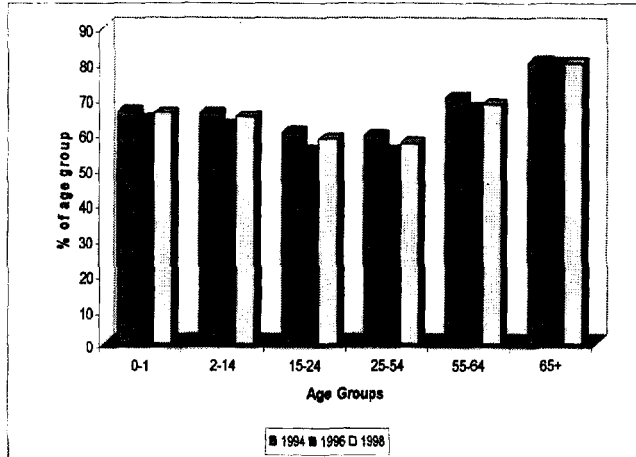
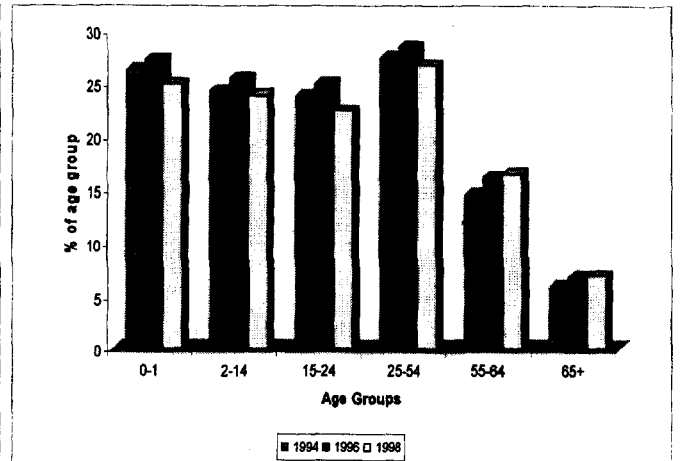


Figure 3.4b ISAPRE coverage by age group (1994, 1996 and 1998)

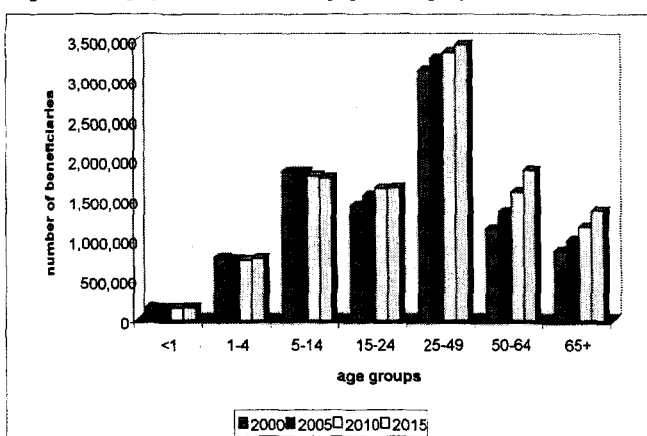


WHAT ARE THE FINANCIAL IMPLICATIONS OF THE AGING OF THE POPULATION FOR FONASA?

3.12 FONASA shoulders the responsibility for delivering health care to 80 percent of Chileans 65 years of age and above and incurs an operating deficit that is financed from general revenues. Chilean policymakers are concerned that with the aging of the population, the net fiscal impact of FONASA will only worsen. They are additionally concerned that further migration of the elderly from the ISAPREs to FONASA will compound the fiscal problem. We first examine the net fiscal impact of aging on FONASA with no mobility between insurance groups (Scenario 1) and subsequently relax the immobility assumption (Scenarios 2 and 3).

The financial effect of aging (Scenario 1)

Figure 3.5 Age profile of FONASA population projected to 2015



3.13 In this scenario, we examine the fiscal impact of aging on FONASA, holding all else constant. In particular, affiliation to FONASA and the ISAPREs stays in the same proportion as in 1998; the populations of FONASA and ISAPREs grow at the same rate as the Chilean population overall. Under this assumption, the age-profile of the FONASA is expected to change as shown in Figure 3.5.

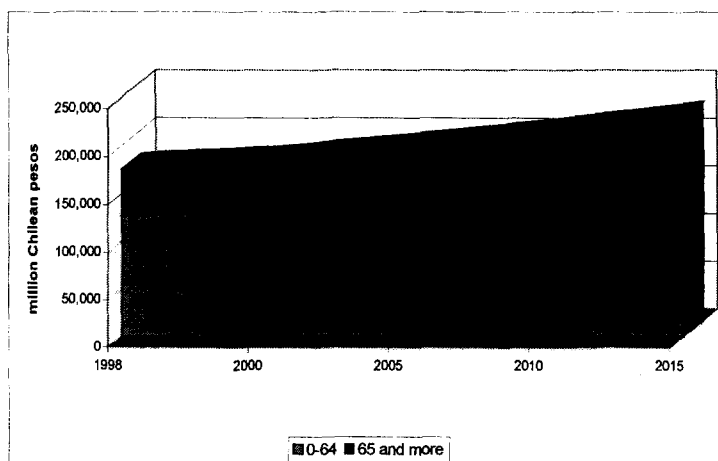
3.14 Under Scenario 1, the absolute number of beneficiaries aged 0-14 years stays more or less the same, the number of beneficiaries 15-49 years increases slightly, and the number of beneficiaries aged 50 and above increases by 60 percent between 2000 and 2015.

3.15 The scenario represents the *minimum* impact of aging on costs because it ignores other elements that can drive up costs such as medical technology and the volume of care. Data available does not allow to estimate the level of dissatisfied demand in the public sector; therefore, observed utilization has to be taken as indicative of health needs in the corresponding age group. Figure 3.6 indicates that, under these conditions, the real net fiscal cost of providing health care to FONASA affiliates – i.e., the share that has to be picked up by public funds increases from Ch\$175 billion (or US\$ 350 million) in 1998 to Ch\$229 billion (1998 pesos) in 2015 (or US\$ 459 million), corresponding to a real increase on the order of 31 percent. This represents a minimum real increase of around 2 percent per year which does not seem like much; however, it is important to understand the assumptions behind this estimate when judging the importance of such a real increase. In any case, this result only indicates that aging by itself is not a major factor in FONASA's financing over the next fifteen years, considering the financial

burden that those less than 65 will continue to generate for FONASA in the same period. Another issue is if an annual real increase of at least 2 percent for the Treasury is sustainable without any further financial arrangements or provisions. This issue will be discussed again in a section below.

3.16 Figure 3.6 also shows that the share of net cost ascribable to the population 65 and above increases from 27 to 34 percent from 1998 to 2015. In other words, 73 percent of the net fiscal impact of FONASA in 1998 and 66 percent fiscal impact of FONASA in 1998 and 66 percent of it in 2015 is due to the population below 65 years of age. The financial deficit of FONASA, as argued above, is not simply an issue of the elderly.

Figure 3.6 Net impact of aging on FONASA by age-group (1998-2015)



*1998 pesos are used

The financial effect of mobility (Scenarios 2 and 3)

3.17 We end this section with a brief investigation of the additional fiscal effect of migration of the elderly from ISAPREs to FONASA. We saw in the earlier sections that ISAPREs currently cover only 7 percent of the Chilean population 65 and above. Thus, FONASA's financial condition would only marginally be affected if the elderly currently in ISAPREs were to migrate to FONASA, and even if, 15 years from now, the elderly were to move to FONASA.

3.18 We discuss two scenarios with different ISAPRE-to-FONASA migration patterns. Scenario 2 assumes that *all* individuals reaching age 65 move from the ISAPREs to FONASA; that is, care for the elderly becomes the exclusive responsibility of the public sector with the same observed volume of care, quality and cost structure which exists in FONASA at present¹¹. In Scenario 3, only the poorest groups in the ISAPREs move to FONASA upon reaching retirement age; this corresponds to 20 percent of the elderly in the ISAPREs.

¹¹ A future research agenda opens when these assumptions are released. It would be important to estimate the differences in quality and cost structure of health service provision in the public and private sectors, and to estimate if current levels of care in FONASA correspond to health needs of the elderly. Conclusions might change if ISAPREs' migrants to FONASA receive care at current private sector conditions –if those differ significantly from public services.

3.19 The figures compare the financial implications effects of these two scenarios with that of the base (no-mobility) scenario (Scenario 1). Figure 3.7a shows the costs and contributions of the FONASA population 65 and above in 1998 and in 2015, while Figure 3.7b shows the evolution over time of the net costs of the elderly FONASA population for each of the three scenarios.

Figure 3.7a 65+ FONASA population
Costs & Contributions (1998 and 2015)

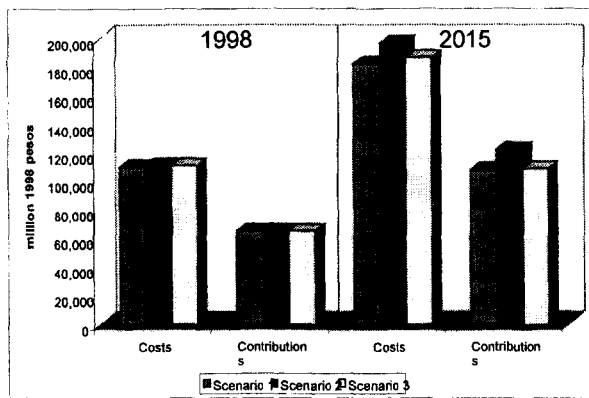
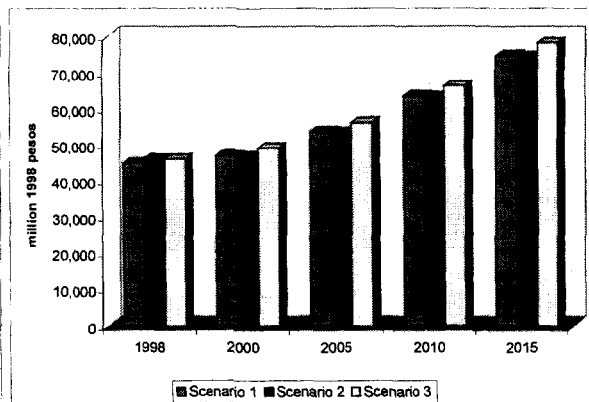


Figure 3.7b 65+ FONASA population
Net deficit (costs-contributions) (1998-2015)



3.20 Scenario 2 connotes higher costs than Scenario 1, but also compensatory movements in contributions; the net impact of these two scenarios are virtually indistinguishable. According to income data, it seems plausible that 80 percent of the ISAPRE elderly that move to FONASA have little or no need for public subsidization because they contribute more than they cost. Scenario 3 is more costly than either Scenario 1 or 2, but the difference is minimal - around Ch\$ 3.5 billion (1998 pesos) or US\$7 million in 2015. The ISAPRE elderly who move to FONASA in this scenario do not contribute as much as they cost and therefore deepen FONASA's financial deficit. However, because they represent a small proportion of overall beneficiaries, their impact on FONASA is small.

3.21 The fiscal effect of aging dominates that of the migration of the elderly ISAPRE affiliates to FONASA in the medium and the long run. This must not be taken to mean that FONASA should endeavor to contain further immigrations of the elderly population from the ISAPRE. Insofar as the remaining elderly in ISAPREs belong to the highest income groups and typically contribute more to their health insurance than they cost, their migrating to FONASA could actually improve FONASA's financial situation, albeit marginally. More generally, FONASA's finances would benefit from an influx of higher income beneficiaries regardless of their age, as long as they receive the same type of health care delivered to those who are now in the public sector.

4. CATASTROPHIC COSTS

4.1 The issue of financing health care for the elderly is often confounded with that of financing catastrophic care. This section investigates whether it is correct to assume that the two issues are linked. The first part of the section explores the possible definitions of catastrophic care in some detail. In the second part, the different definitions are applied to the Chilean context, and some conclusions are derived as to the link between catastrophic and elderly care.

WHAT IS CATASTROPHIC?

4.2 The definition of a "catastrophic" event continues to be a subject of debate. The definitions of catastrophic events that are most commonly encountered are: (i) when an event belongs to a list of diagnoses or interventions defined as catastrophic by the medical community; (ii) when the cost of an event or a sum of events in a period of time is greater than a previously determined expenditure threshold; and/or (iii) when the cost of an event or a sum of events represents a substantial proportion of individual's income.

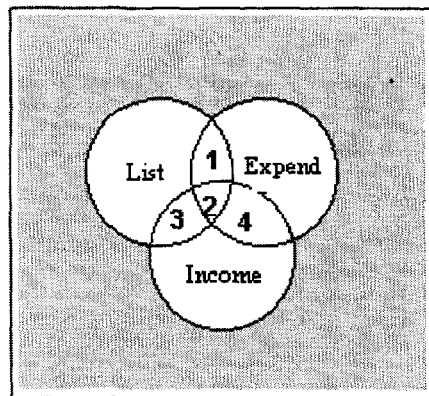
4.3 Each of these definitions highlights different but equally important points. According to the first approach, catastrophic events should be defined with precision and clarity based on a list of specific high-cost illnesses that specifies events that occur rarely, are very expensive and are, in general, not covered sufficiently by insurance plans. There are indeed certain medical conditions that can be easily identified as catastrophic events and directly classified in a list by their disease code (International Classification of Diseases, ICD-9 or 10). When a list is designed on the basis of *diagnoses* or diseases rather than *interventions*, however, problems arise. A single diagnosis can be associated with multiple types of interventions according to severity, case complications, and other factors. This fact constitutes one of the major disadvantages of the list: to avoid mistakenly considering all cases of a given diagnosis as catastrophic, one would have to develop specific clinical protocols for nearly 1,000 categories of diseases. Another important disadvantage of this approach is that any disease not explicitly included in the list is potentially excluded from catastrophic insurance coverage.

4.4 The second definition allows the inclusion of a greater number of catastrophic events because it aggregates them over a specific time period; it therefore reduces the scope for unwanted omissions such as tends to happen when the first definition is used. In this way, events that generate high expenditures for the household due to their repetition—without necessarily being high-cost on an individual basis—are also included¹². This method would be of most use to health insurers.

¹² This definition is frequently complemented by a list of events that are excluded (negative list). For example, to control costs, this second approach does not usually include long-term treatments associated with chronic illnesses.

4.5 The novelty of the third definition is the introduction of individual or household income into the analysis. This is the most appropriate method from a social welfare perspective. For most lower income households, the majority of health expenditures represent a substantial financial burden. Thus, catastrophic health insurance is more than a mechanism to ease financial pressure generated by specific events; it is also a poverty alleviation instrument. However, this method has a major disadvantage: reliable income data are not usually readily accessible to insurers.

Figure 4.1 Overlap among the three criteria



4.6 The three definitions have common elements and are not independent of one another. They are insufficient when used individually, and it is important to clarify that the income and expenditure thresholds used to estimate catastrophic costs under the corresponding definitions, are chosen arbitrarily for analytical purposes. Although independent analysis of each definition is not sufficient, their overlap is important and useful when defining catastrophic events. It is possible to consider and analyze the overlap of the three criteria and to classify an event as catastrophic when all three criteria are met. This, of course, reduces the number of events considered catastrophic. Figure 4.1 depicts the overlap among the three criteria, each of which is represented by a circle¹³. A catastrophic event could then be defined as one that complies with all three criteria (Area 2), only two criteria (Areas 1 and 2 combined; 2 and 4, or 2 and 3) or could be defined as an event that complies with only one criterion (Areas L, E or I).

Choice of Criterion

4.7 The question that arises now is which criterion to retain. If the social welfare, the private insurance and the medical community interests all were to be represented, it would be most sensible to define an event as catastrophic strictly when all three criteria are met (Area 2 in Figure 4.1).

4.8 From a practical point of view, however, the second definition, using an expenditure criterion, is the superior one (Area E). Information on the cost of an event is readily available and can easily be set against a pre-established spending threshold. Utilizing the third definition involves the additional burden of collecting information on household or individual income. For the first definition to be implemented, the List criteria, it would first have to be determined which particular ones among the multiple clinical protocols that are associated with an event would classify as catastrophic. This exercise is not only cumbersome but controversial within the medical community. In addition, as argued earlier, the first criterion is prone to unwanted omissions: any diagnosis/intervention not explicitly included in the list would not qualify for insurance coverage. Clearly, the List

¹³ The exact area of the circles will crucially depend on income of the beneficiaries, the number of illnesses included in the list, and how the thresholds are defined.

criteria is the least desirable of the three definitions explored in this study since its implementation has clear flaws; it is more accurate and practical to use the expenditure definition when classifying catastrophic events. However, since no consensus has been achieved as to which definition to use, the next section examines the cost implications for Chile of all three criteria, as well as that of the overlap of criteria.

APPLYING THE VARIOUS DEFINITIONS TO THE CASE OF CHILE

Both FONASA and those ISAPREs that offer catastrophic plans use a list of predetermined illnesses (corresponding to the first criterion). These institutions do not employ the same list of events and there is great variability in the number of illnesses covered and the actual services offered. FONASA's *Programa de Prestaciones Complejas* is discussed in a later section and the ISAPREs plans are discussed in the technical paper. Recently, the private sector prepared a proposal that introduces income in the definition of catastrophic (see Box 4.1).

Box 4.1. Catastrophic Care and ISAPRES

In 1999 the Association of ISAPREs prepared a plan of voluntary, collective reinsurance to cover catastrophic costs, where the threshold level of medical expenditures is expressed as a percentage of personal income, thus proposing a definition of catastrophic events much closer to the third approach, and its relationship to the first criterion. Two alternatives are considered in the original proposal: events classified as catastrophic in a list, and events outside the list. According to this plan, an event or a group of events will be defined as catastrophic if it entails an expenditure exceeding 30 "legal contributions" net of the regular premium for the insurance plan. Given that a contribution is equivalent to 7 percent of salary income, the above mentioned amount will equal two months of salary income. This rule will apply to two types of events. The first group consists of predefined areas or areas in which treatment requires specialized providers e.g. cancer, transplants, premature babies, vascular accidents etc. In this case, after the diagnosis, the beneficiary can choose between staying with his/her original insurance plan or joining the *Red Catastrófica y de Urgencias* associated with the reinsurance plan. Given the first choice, the beneficiary accepts all the co-payments on the services that exceed the ones covered by his/her insurance plan. Given the second choice, he/she is responsible to pay in the form of co-payments up to the amount of the 30 legal contributions and from that point onwards the reinsurance plan assumes the financial burden. A similar idea is applied in the second type of events that are not predefined. These events refer to other pathologies that create complications during treatment or a sum of hospital events occurring to a single patient. The beneficiary, after paying an amount equal again to 30 contributions in form of co-payments for cumulative events eligible for the plan, can opt for the reinsurance plan and consequently obtain full coverage for his/her pathology under the *Red*. This proposal has suffered modifications in recent months and has been subject of ample debates; it continues to be subject to modifications during its implementation. This paper presents the ideas as discussed until January, 2000.

The List Criterion

4.9 Constructing a list of catastrophic events or conditions (corresponding to area L in Figure 4.1) is not a simple matter for the reasons already described. From the health system's point of view, it is important to identify those diagnoses and treatments that are both very expensive and relatively frequent because they account for an important share of total expenditure. Once the most expensive and/or most frequent diagnoses are found, a list of all interventions under those diagnostic codes is constructed for all age groups.

The results, using a threshold¹⁴ of Ch\$ 1 million, indicate that 66,543 interventions were catastrophic in the Chilean system in 1993, with a total cost of Ch\$24,303 million, or 11.34 percent of total inpatient expenditures. If original threshold level were set at Ch\$1.5 million, the number of interventions qualifying as catastrophic increases to 68,695, with a slightly lower total cost of Ch\$23,102 million, or 10.78 percent of total inpatient expenditure.

4.10 The analysis carried out indicated that for most age groups, the most frequent interventions were not necessarily the most expensive ones. The exception to this are the very young, who experience not only isolated episodes of expensive care but also frequent very expensive events. The data additionally show that the highest catastrophic costs are among the very young, contradicting the belief that catastrophic care is associated with the elderly. The most costly events for those 0-1 years are also among the most expensive ones for the population as a whole. In the case of the elderly, the problem is not one of occasional expensive interventions but one of high frequency of events that may or may not be individually expensive. While the 20 most expensive interventions represent 3.6 percent of total expenditure for the 0 to 1 age group, they represent only 1.84 percent of the total cost for the elderly population.

Expenditure Criterion: an event is defined as catastrophic if it costs more than a specified expenditure threshold

4.11 An expenditure threshold could be defined arbitrarily; in general it is defined in relationship to the mean cost of all interventions. Two scenarios are presented as a sensitivity analysis.

4.12 Expenditure Criterion 1: *An event is considered catastrophic if its cost equals and/or exceeds the mean total cost¹⁵ (MTC) for all interventions, Ch\$239,852.* Results are summarized in Figures 4.2 and 4.3. Under this definition, 26 percent of annual hospital events and more than half of the total expenditure is catastrophic. It is once again clear from the data that catastrophic costs are concentrated among the very young: fewer events represent a large portion of the expenses in that age group; and the mean cost of catastrophic events for those 0-1 years is 1.3 times higher than the mean cost for the population as a whole. By contrast, as expected, almost half of the events among those 55 and over represent almost all expenses for those age groups, indicating a problem of high frequency rather than individually expensive events.

¹⁴ Thresholds are arbitrary analytical tools.

¹⁵ Again, the expenditure threshold is arbitrary and used only for analytical purposes. Data analysis was also done using the median Ch\$185,528 instead of the mean expenditure. Since the distribution of expenditures is positively skewed, using the median instead of the mean results in classifying even more events as catastrophic. Analysis was also conducted using the mean plus one and/or more times the standard deviation. However, the standard deviation is so large that the expenditure criteria become so strict that very few events are considered catastrophic. Using this definition makes it very difficult to appreciate the effect of the overlap of criteria discussed below.

Figure 4.2 Mean Cost by Age (Expenditure Criterion 1)

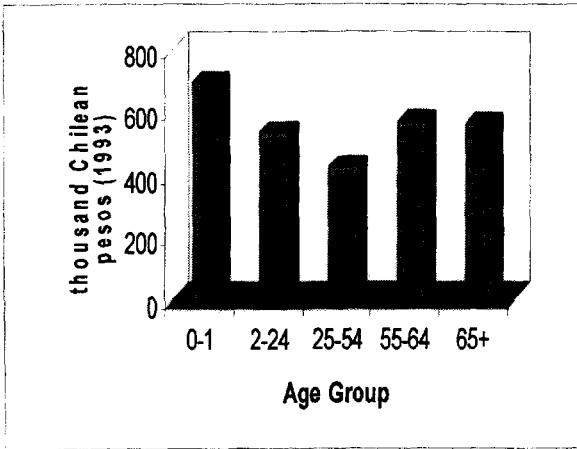
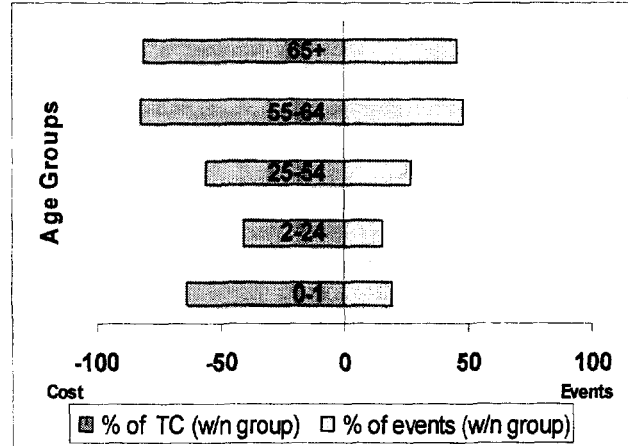


Figure 4.3 Percentage of Total Cost and Percentage of Events by Age (Expenditure Criterion 1)



4.13 Expenditure Criterion 2: An event is considered catastrophic if its cost equals and/or exceeds twice the mean total cost (2xMTC) for all interventions, Ch\$479,704. Under this expenditure criterion, the number of catastrophic events is drastically reduced to 72,908, or 8.2 percent of all interventions, and 35 percent of the total cost. The total cost of catastrophic events under this criterion is Ch\$74.140 million in 1993, compared with Ch\$127.061 million under Expenditure Criterion 1.

Figure 4.4 Mean Cost by Age (Expenditure Criterion 2)

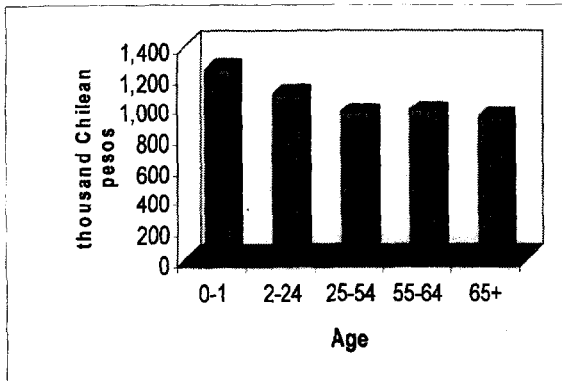
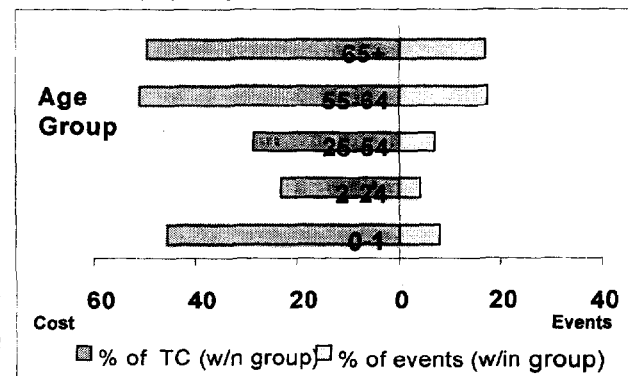


Figure 4.5 Percentage of Total Cost and Percentage of Events by Age (Expenditure Criterion 2)



4.14 It is again evident from the data that catastrophic costs primarily affect the youngest population. Just 8 percent of the interventions for the very young represent 46 percent of the health expenditures for the age group, with a mean cost 1.23 times the average cost of catastrophic events for the population as a whole. By comparison, 17 percent of the interventions for the older adults represent half of the expenses incurred by those groups. Again, there is a clear indication that, at the margin, one catastrophic case in the 0 to 1 age group creates a greater burden on the system than a catastrophic case in any other age group.

Income Criterion: *An event is defined as catastrophic if it costs more than a specified proportion of an individual's income*¹⁶.

4.15 Using income data from CASEN 96¹⁷, two scenarios were tested: an event is defined as catastrophic if its cost exceeds one or one and a half times the individual's annual income¹⁸. If the individual's income is used as threshold, there are 93,795 catastrophic cases with a cost of Ch\$80.6 billion. When the threshold is increased to 1.5 times the individual's income, half the number of events qualify as catastrophic and the total cost is reduced to Ch\$58.4 billion.

The Overlap Criterion: *An event is defined as catastrophic if it meets all three criteria*

4.16 The Overlap Criterion. Scenario 1: In this scenario, we consider a list of diagnoses using a Ch\$1 million threshold, an expenditure threshold equal to the average cost (MTC) and the annual income for the income threshold. When these three criteria overlap, the number of catastrophic cases is 15,554 or 1.74 percent of the hospital discharges in 1993. The cost of catastrophic events is Ch\$16.212 billion or 7.57 percent of the total cost of hospital discharges. (See Figure 4.6)

4.17 Scenario 2: In this scenario, we consider a list of diagnoses with a Ch\$1.5 million threshold, an expenditure threshold equal to twice the average cost and one and a half times annual income for the income threshold. When these three criteria overlap, the number of catastrophic cases is reduced to Ch\$9,636 or 1.07 percent of the hospital discharges in 1993. The cost of catastrophic events is Ch\$13.567 billion or 6.33 percent of the total cost of hospital discharges. (See Figure 4.7)

Figure 4.6 Catastrophic Costs as a Proportion of Total Costs by Criteria (Scenario 1)

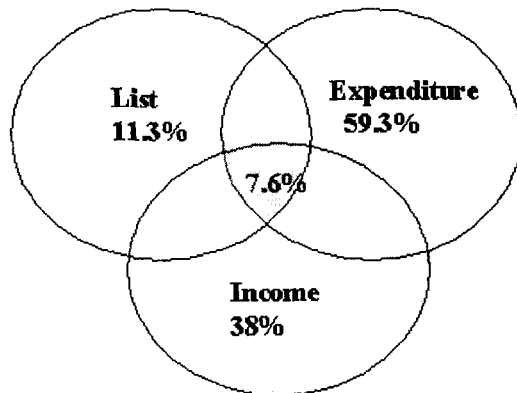
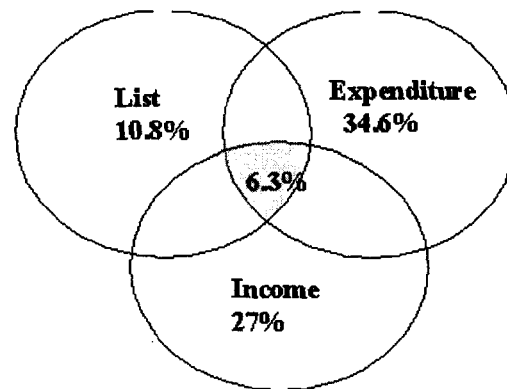


Figure 4.7 Catastrophic Costs as a Proportion of Total Costs by Criteria (Scenario 2)



¹⁶ This study uses individual income as reported in CASEN 1996 (household income divided by household size).

¹⁷ Sensitivity analysis was primarily done using the FONASA income group data for 1993 (FONASA income groups A, B, C, and D). However, the income levels used were so low that all expenses would be defined as catastrophic. Moreover, the income levels used by FONASA are quite low when compared with the income levels revealed by individuals in the CASEN survey. 1996 data were expressed in 1993 Chilean pesos for the analysis.

4.18 Under both scenarios, the most vulnerable group from the point of view of its likelihood to generate a catastrophic event is the youngest. Catastrophic events for the 0-1 age group represent 25.4 percent of the total catastrophic cases and account for 31.5 percent of the catastrophic cost under Scenario 1, and 27 percent of catastrophic costs in Scenario 2 (see Table 4.1). In Scenario 2, catastrophic events represent 22.5 percent of the cases and 27 percent of the costs associated with the 0-1 age group. All other age groups are considered borderline or not at risk because the proportion of catastrophic cases within the age group is usually greater than or equal to the catastrophic expenditure share. The 65 and older group is borderline in terms of generating significant catastrophic costs; 23 percent of the catastrophic cases account for 23.1 percent of the catastrophic cost.

Table 4.1. Overlap criterion, scenarios 1 and 2

AGE GROUP	Scenario 1*		Scenario 2**	
	Percentage of Cases	Percentage of Catastrophic Cost	Percentage of Cases	Percentage of Catastrophic Cost
0-1	25.38	31.46	22.49	26.87
2-24	16.73	15.89	17.41	18.13
25-54	21.90	16.66	26.57	24.61
55-64	12.67	12.85	12.08	11.28
65+	23.13	23.14	21.44	19.12
TOTAL	100.00	100.00	100.00	100.00

Type of Insurance and Health Establishment

4.19 According to anecdotal evidence, when ISAPRES face an expensive case, they tend to advise their beneficiaries to resort to FONASA, since the high co-payments that they have to pay render the treatment non-affordable. Analysis carried out with the Hospital Discharge data 1996 suggests that the claim that FONASA receives most of the patients with catastrophic diseases applies to older beneficiaries rather than younger ones. Although figures for the 20 the most expensive interventions for the age groups of 0-1 and 65 and over show that more than 80 percent of the beneficiaries belong to FONASA, one should bear in mind that the cost of different interventions for the same diagnosis varies enormously and in lots of cases starts from a very low minimum price. Looking more carefully at cases with high minimum values one can observe that in the case of infants up to 60 percent is affiliated to an ISAPRE, while in the case of the older beneficiaries, the corresponding percentage does not exceed 5 percent.

4.20 Finally, in terms of type of establishment used in the case of the list of the 20 most expensive diagnoses/interventions for the age group of 0-1 results show that the majority of FONASA beneficiaries choose public clinics (91.5 percent). In the case of ISAPRES

¹⁸ It has been suggested that the study should use monthly income. The analysis with monthly income shows that almost all events can be considered as catastrophic since monthly income figures are very low.

beneficiaries, preferences are rather equally shared with 45.8 percent opting for public establishment and 54.2 percent for private one. Given that the majority of catastrophic cases for the age group 0-1 are of a congenital nature, there might be no actual choice between the public and the private sector, since such surgeries require infrastructure that only public hospitals have. As far as the older age group is concerned, we observe a similar pattern to that of the younger group for FONASA beneficiaries, with 91.5 percent using public facilities (see Table 4.2). However, the picture changes rather drastically in the case of ISAPRES affiliates where only 16.7 percent used public facilities. This may be due to the fact that the older population in ISAPRES is richer than families with children of age 0-1.

Table 4.2 Percentage of Catastrophic Events by Age Group, Type of Facility and Insurance

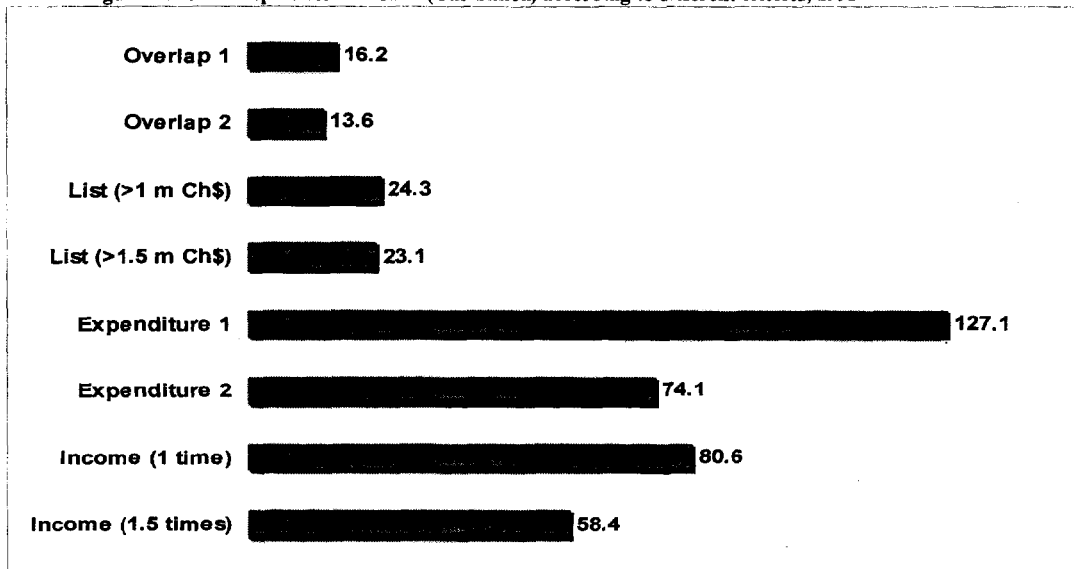
	Age Group			
	0-1		65 and up	
	PUBLIC	PRIVATE	PUBLIC	PRIVATE
FONASA	91.5	8.5	91.5	8.5
ISAPRE	45.8	54.2	16.7	83.3

Source: Hospital Discharge Data 1993 and 1996
Author's calculations

CONCLUDING OBSERVATIONS

4.21 Because there is no consensus about the definition of a catastrophic event or the appropriate thresholds to apply, the data for Chile were examined against a variety of plausible definitions and thresholds chosen for analytical purposes only. The first conclusion that can be drawn is that the cost implications are quite sensitive to the criterion used (see Figure 4.8). All three criteria are insufficient when used individually, but their overlap is important and useful. The List Criterion is found to be the least practical and the one that presents more flaws in its implementation. If the expenditure criterion - arguably the most practical one - is retained, then catastrophic costs in Chile amounted to between Ch\$74 and Ch\$127 billion in 1993. Using the overlap criterion - which accommodates the interests of various actors in the health system - puts the catastrophic care bill at between Ch\$13.5 and Ch\$16.2 billion pesos in 1993. Programs that purport to address catastrophic care would benefit from analogous analyses so as to dimension themselves appropriately.

Figure 4.8 Catastrophic costs in Chile (Ch\$ billion) according to different criteria, 1993



4.22 The second conclusion that emerges from the analysis is that, *regardless of the criterion chosen*, infants rather than the elderly are particularly at risk of needing catastrophically expensive interventions. This fact can be clearly seen in the summary of results in Table 4.1. The data show that the elderly suffer from frequent episodes of care that are not necessarily among the most expensive; as such the elderly are best characterized as consumers of chronic rather than catastrophic health care.

4.23 The third conclusion is that apparently FONASA does not assume a relative disproportionate burden of catastrophic events. However, FONASA is responsible for an important absolute number of catastrophic events among the elderly, since most of the 65 plus population is insured by FONASA. When analyzing the very young and the elderly, Table 4.3 shows that there is a relatively lower number of catastrophic events among ISAPRE beneficiaries than in FONASA, but not disproportionately lower. With the available information it is not possible to conclude if this phenomena is the result of better clinical management of ISAPRE patients, of healthier population, and/or the result of transfers from ISAPRE to FONASA when catastrophic events are present (moral hazard).

Table 4.3 Catastrophic Events by Age Group and Insurance. Ratios per 100 beneficiaries

	Age Group	
	0-1	65 and more
FONASA	21.96	10.11
ISAPRE	17.39	6.99

Source: Hospital Discharge Data 1993 and 1996
Author's calculations

4.24 The fourth and last conclusion indicates that the use of public facilities by ISAPRE beneficiaries in the presence of catastrophic illness is of importance among the very young. Meanwhile, ISAPRE's elderly use private services most of the time for catastrophic care. (See Figures 4.9 and 4.10)

Figure 4.9 0-1 Catastrophic Events - ISAPRE

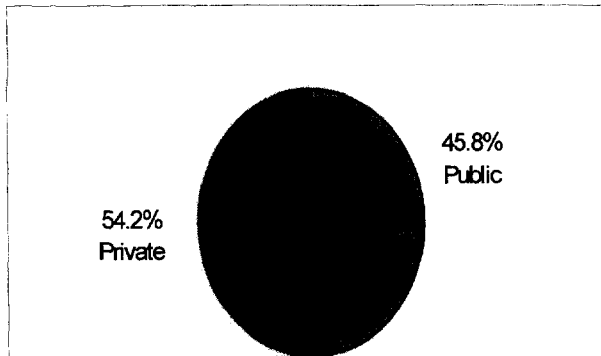
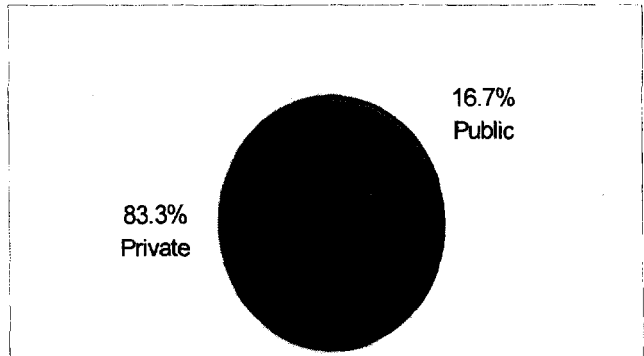


Figure 4.10 65+ Catastrophic Events - ISAPRE



5. FINANCING ELDERLY AND CATASTROPHIC HEALTH CARE

5.1 Having done the analysis of the Chilean situation regarding elderly and catastrophic care, the purpose of this section is to describe and analyze public programs already in place to deal with elderly and/or catastrophic care, and two proposals not yet implemented. Thereafter, other potential solutions to address the problem will be discussed, taking into account present arrangements in the Chilean health sector and the role of private insurers.

RECENT PUBLIC PROGRAMS

5.2 The Ministry of Health reports that the FONASA beneficiary population is generally satisfied with the quality and outcome of publicly-financed (and usually publicly-provided) medical care.¹⁹ However, the MOH also acknowledges that beneficiaries have been unsure of their coverage for specific diseases and procedures; and they have expressed anxiety about long waiting lists for certain non-emergency procedures (typically elective surgeries, catastrophically costly events and care for the elderly). The Government has sought to address these concerns and, indirectly, their financial implications. Several programs have been implemented to (i) improve confidence in the quality of the public system; (ii) make more transparent the assignment of resources from FONASA to the health services and public providers for particular interventions; and (iii) allocate resources consistently with the 16 priority categories of health problems identified by the “burden of disease” study undertaken by the MOH²⁰. Two of these programs—the *Programa de Prestaciones Complejas* and the *Programa del Adulto Mayor*—are described below.

Programa de Prestaciones Complejas

5.3 With the *Programa de Prestaciones Complejas* (Program of Complex Interventions), FONASA has sought to foster guided (rather than explosive) expansion of high-technology services for its beneficiaries of all ages, and particularly for the low-income beneficiaries who opt for the MAI modality. On the one hand, the program does ensure access by up to 16 areas of costly medical intervention²¹; on the other, it seeks to limit FONASA’s expenditures by establishing reimbursement ceilings for these procedures.

¹⁹ MOH (1998), *Estrategias Innovadoras en Salud: La Reforma Programática y Financiera Chilena*.

²⁰ The final selection of 16 major categories, 80 sub-groupings and 400 detailed items did not follow solely the estimates of burden of disease—which in any case was not comparably detailed—but also from competition among the disease-specific programs within the Ministry. The process has even been described as an attempt to ensure “equity among programs” [presentation at the January 1998 seminar at FONASA, Santiago].

²¹ The program consists of 16 areas of intervention, for cardiac surgery with extra-corporeal circulation (use of a heart-lung machine), neurosurgery, kidney transplants, liver transplants, non-surgical cancer treatment (radiotherapy and pediatric chemotherapy), scoliosis, severe burn, palatine care and immunosuppressive drugs.

5.4 FONASA establishes maximum tariffs for the procedures to be financed, and based on those prices and an estimate of the need to be satisfied (utilization), the Ministry and FONASA determine the maximum allowed expenditure. Providers are then invited to bid to deliver the interventions, at prices less than or equal to those set by FONASA. The budget is allocated in ascending order of unit costs, with each provider contracting for the number of services it can deliver. These agreements become part of the management or performance contract with the provider, and include provisions for geographic equity and for compensating in the subsequent contract period.

5.5 Since FONASA is responsible for financing all medical care to its beneficiaries and assuming the corresponding risk, it might be asked what is gained by setting up a separate program for catastrophically costly interventions. Certainly the situation is very different from that of the ISAPREs, for which some kind of risk-sharing or reinsurance, and therefore a separate way of handling these interventions, makes sense. The *Programa de Prestaciones Complejas* seems designed not for that purpose, but rather to reach a balance among the objectives of assuring coverage for all the patients needing the procedures covered (and avoiding deaths among patients on waiting lists); controlling the overall expenditure on those procedures; providing an incentive to hold down unit costs; and protecting quality by limiting price competition to previously-accredited providers. The objective of controlling total expenditure did not mean holding down service production to historic rates; on the contrary, the program was instituted to guide the expansion of these services without runaway costs or declines in quality.

5.6 FONASA's expenditure in this program represents a very small proportion of all expenditures in the institutional modality (MAI), for which the program is intended. Since 1996 expenditures in this program have represented less than 1.5 percent of all FONASA expenditures in health care delivery. In 1998, program expenditures represented 1.2 percent of FONASA's total expenditures in health care.

Programa del Adulto Mayor

5.7 The *Programa del Adulto Mayor* (Program for Aged Adults) constitutes the health care part of a larger government program for dealing with the problems of the elderly, who now account for 7.2 percent of the population and 14 percent of the hospital discharges in the country.²² Under this program, FONASA has three groups of interventions: (i) so called "traditional interventions" for individuals 65 and over (prosthesis and orthosis); (ii) catastrophic care for some events and, independently of those interventions already covered in the *Programa de Enfermedades Complejas*; and (iii) interventions grouped in a program for opportune care, *Programa de Oportunidad de la Atención* (POA).

5.8 The traditional part of the program for the elderly emphasizes some relatively low-cost interventions such as providing eyeglasses, hearing aids, canes, wheelchairs, as well as pace-makers broken limbs, and a few other conditions. All these are intended

²² CASEN 1996 – Hospital Discharge Data 1996.

primarily to reduce disability rather than to extend life. In contrast to the *Programa de Prestaciones Complejas*, this program operates through the public health services in the normal way, with specific resources allocated in proportion to the elderly population and without price competition among providers. This approach allows for control of total expenditure on the program, but does not include any incentives for controlling unit costs, since these are generally low. To motivate delivery of these services, the tariff for geriatric consultations was raised above that for other consultations, and co-payments for the elderly were either reduced or eliminated. Use of these services has increased from 39,500 cases in 1995 to about 208,000 cases projected for 1999. Correspondingly, the total cost of traditional interventions has increased from Ch\$0.96 billion in 1996 to Ch\$1.90 billion in 1998. This constitutes about 24 percent of program spending.

5.9 The aspect of the program that covers complex illnesses is intended to finance costly treatment of ailments that specifically affect the elderly, such as cataract surgery and hip replacement. This aspect of the program, too, has shown rapid growth: from 3,200 cases in 1995 to 26,400 cases in 1999; and from spending of Ch\$1.2 billion in 1996 to Ch\$2.6 billion in 1998—or about 33 percent of total spending under the *Programa del Adulto Mayor*.

5.10 Finally, the *Programa del Adulto Mayor* finances “opportune care,” including prostate hyperplasia and uterine prolapse. The opportune care utilization increased from about 1,400 cases in 1996 to more than 12,000 in 1999, and from Ch\$465 million in 1996 to Ch\$3.46 billion this year, representing some 43 percent of total spending under the program.

PROPOSALS DEVELOPED BUT NOT YET IMPLEMENTED²³

Ley de FONASA

5.11 The recently approved *Ley de FONASA*, represents an overhaul of provisions of three pieces of legislation (Decree-Law No. 2,763 and Laws No. 18,469 and 18,933) which would change the relation between FONASA and ISAPREs. The principal changes are as follows:

- (i) FONASA would be allowed to contract and pay private providers for services delivered under the *Modalidad de Atención Institucional*, as well as under the *Modalidad de Libre Elección*. The change would be modest. FONASA could use no more than 10 percent of the resources budgeted for MAI for this purpose. However, it would effectively end the monopoly of public providers over those resources and permit a degree of competition between public and private providers. If implemented fully, this provision would practically eliminate the distinction between the MAI and the MLE, and turn FONASA into an all-purpose buyer of services. This, in turn, would make it more closely resemble a public ISAPRE.

²³ As of December 1999

Whether such a change would affect financing and provision of catastrophic care and care for the elderly depends on whether more competition would hold prices down, on whether FONASA beneficiaries would migrate from MLE to MAI, and on how ISAPREs would react to these changes. Significant effects on care for the aged would occur only if elderly beneficiaries became more likely to migrate from ISAPREs to FONASA.

- (ii) Another systemic change intended to improve the functioning of the public system is the creation of decentralized autonomous hospitals. These establishments could have different personnel practices and remuneration than the Health Services, including economic and other incentives for performance, and could be managed and audited according to results. Any additional costs resulting from this move are to come in part from the service budget and in part directly from FONASA. There are no obvious differential consequences for catastrophic or elderly care, beyond the general effect that better public services could induce patients to migrate from ISAPREs.
- (iii) FONASA is authorized to “de-concentrate itself territorially”. This change would seem to have no consequences for catastrophic and elderly care.
- (iv) FONASA will continue to set the tariffs for procedures; in exceptional cases the Ministry can allow higher payments. It could be used for preferential treatment of catastrophic or elderly care, by varying the co-payments, but there is no indication in the law of intent to do so.
- (v) ISAPREs are required to pay directly to both private and public providers the full cost of emergency care provided to their clients; the insurer is free to recover from the patient the amount not covered by the policy. This provision closes a loophole which has allowed ISAPREs to receive a subsidy from the public sector. To the extent that emergencies are likely to be catastrophically costly, this change represents a real shift of responsibility for such care from the public to the private sector, and increases the incentive for the ISAPREs to better cover the costs of such care.
- (vi) The additional contribution of two percent of salary, which employers can now pay to an employee's ISAPRE, tax-free, is withdrawn over a period of seven months. This subsidy has long been attacked as one of the greatest inequities of the Chilean system. This provision also is systemic, and represents the largest movement of the public/private frontier contemplated in the *Ley de FONASA*. If all beneficiaries were to stay with their ISAPREs but not pay more out of pocket, the private insurance industry would lose 12,000 million Pesos (in prices of 1998) which translates to 1.8 percent of their revenues.²⁴

²⁴ Superintendencia de ISAPREs (1998), “Boletín Estadístico, Período Enero-Diciembre 1998.” This observation is based on data from CASEN-1996, which indicate that the private insurance market might lose an equivalent of 28.5% of its revenues.

The actual outcome is likely to be more complicated, with some beneficiaries choosing to pay at least part of the former subsidy, many shifting to less expensive policies which imply lower coverage or higher co-payments, and some migrating to FONASA²⁵. However, nothing in the law suggests that such a net effect would be directed to either catastrophic or elderly care.

*Red Catastrófica y de Urgencias*²⁶

5.12 The *Red Catastrófica y de Urgencias (RCU)*, or network of catastrophic and emergency care, is a proposal presented to the Directorate of the Association of ISAPREs. It is designed to deal with catastrophic costs for the insured. The initiative proposes a scheme to reinsure high co-payments, and to alleviate the financial burden of the required “guarantee check” for the cost of emergency services at the time they are provided. Both problems would be addressed by a fund created through the increase of US\$1 (Ch\$500) in all policies per beneficiary per month²⁷. It is expected that most ISAPREs would participate of the scheme. Care would be delivered by providers organized into the network, in which the participating ISAPREs would hold shares (with other parties possibly allowed to invest), but which would be administered separately from the insurers and their Association.

5.13 A network of providers organized into the RCU would not require such a “guarantee check” and the provider would bill the insurer for the full cost of service; the ISAPRE would recover co-payments by having the client’s employer withhold the necessary amounts from his or her salary, and transfer them along with the monthly premium over a period of several months. Nothing would change in the way that emergency care is ultimately financed, and the RCU would assume no risk and receive no prospective payment. The scheme is therefore described not as “coverage of emergency care, which is already provided by the ISAPRE, but rather as “administration of emergency care”. The only effect would be to remove a liquidity problem for the client and allow payment to be deferred.

5.14 With respect to catastrophic care, the proposal considers two cases²⁸. First, for “designated catastrophic diseases”, a list of 16 categories (a mixture of diagnoses and

²⁵ Whether high-risk ISAPRE clients would be most likely to migrate is unknown, as it depends on whether such high-risk individuals are privately insured only because of the subsidy, whereas low-risk individuals would retain private insurance even without it, accepting some reduction in coverage or increase in co-payments.

²⁶ Recent discussions regarding the original proposal discussed here, have introduced changes and adjustments to it. This paper reflects the situation of the proposal in January of 2000 when research for this study concluded.

²⁷ The initial discussion of the proposal estimated the cost at between Ch\$300 and Ch\$600. The figure of p/518 is implicit in the estimates of annual financial flows, which suppose that by the end of the fifth year of the scheme the covered population will have stabilized at 3.5 million beneficiaries, who will pay in Ch\$21.797 million annually. This is the entire current population of ISAPRE clients, so the Association is assuming that all beneficiaries will buy the catastrophic coverage. Reaching this complete coverage is the principal reason for designing the scheme with such a low marginal cost.

²⁸ Later, a consideration of just one group without differentiation was discussed.

procedures), required co-payments would be paid entirely by the ISAPRE after the beneficiary pays a deductible equal to 30 monthly premiums, applicable over a two-year period²⁹. For a client paying exactly the legal minimum of seven percent of salary, this means that the maximum payment for an episode of catastrophically costly care would be 2.1 times monthly labor income. To facilitate this substantial initial payment, the insured would have it withheld from his or her salary over a period of months. In effect, the ISAPRE assumes the cost of the co-payments required by the client's existing base policy, and lends him or her the cost of the deductible. In return, it collects a relatively large and secure deductible.

5.15 Second, another alternative is proposed for any other health problem not included in the list ("non-designated" catastrophes) but for which the insured pays through co-payments an equivalent to 30 months' premium contributions. In this case, the affiliate can ask to be transferred to the network, and be relieved of further co-payments, but at the cost of paying the deductible, as for a "designated" problem. The result is that for illnesses and treatments not on the list, the client must pay 60 contributions—30 in the form of co-payments before qualifying, and then an equal amount in the form of the deductible, or a total of 4.2 months' income—before the insurance assumes 100 percent of the cost.

5.16 This scheme shifts risk from the insured back to the insurers via the stop-loss provision, and in that respect operates like complementary insurance (somewhat like "Medi-Gap" policies with respect to Medicare coverage in the US³⁰). To the extent that insurers pool risks by prospectively paying capitation to the RCU, it also operates as re-insurance. However, it is intended to adjust these payments according to the actual use of the Network by each ISAPRE, to the extent that the scheme is not simply re-insurance³¹.

5.17 The RCU proposal seems designed for three objectives:

- (i) keeping clients in the ISAPREs by offering them somewhat better protection against catastrophic expenses, and at low marginal cost. (High co-payment levels is one of the reasons for mobility to FONASA.)
- (ii) avoiding the need to revise hundreds or thousands of existing insurance policies to cover this risk, and particularly avoiding intensifying competition among the ISAPREs over how to attract, and risk select, customers; and

²⁹ To define catastrophic, the proposal mainly applies here the overlap of two of the criteria discussed earlier (list of diagnosis, and income of the insured).

³⁰ See the background paper by Rena Eichler, *Financing Health Care for the Elderly in Competitive Health Plan Markets*, in the Technical Document.

³¹ The proposal insists on this distinction, but rather overstates it: unless there is complete *ex post* adjustment according to utilization, risk is shifted from the individual ISAPREs to the RCU. The analysis of financial viability supposes that the scheme will come into profitable equilibrium by the end of the second year, earning net profits of around Ch\$115 million per month, or about six percent of revenues. Medical care would absorb 88 percent of premiums, and administration of the RCU the other six percent.

- (iii) pre-empting further legislation or regulation which would substantially move the boundary between the public and private sectors by demonstrating that the private insurance industry develop a solution to the problem of catastrophic expenses.

5.18 The change from present practice is equity-enhancing, in that the deductible, unlike a co-payment, is related to the insured person's income. The effect is to make the complementary insurance more valuable at low incomes, provided that the client can pay the deductible. The proposal has the potential to make ISAPRE membership more attractive to low-income beneficiaries who now rely on FONASA³².

5.19 It is clear from both this proposal and discussions with ISAPREs that catastrophic care (rather than non-catastrophic care for the aged) is motivating a collective private sector solution. The Association of ISAPREs has no comparable scheme under consideration for care of the elderly, because there is no urgency about sharing the risk among different insurers and each ISAPRE can determine its own policies for those beneficiaries.

OTHER POTENTIAL MECHANISMS FOR DEALING WITH CATASTROPHIC AND ELDERLY CARE

5.20 Having seen in previous chapters the analysis of the potential problems that aging of the population and catastrophic care would represent in the future for the Chilean system, and in view of the present distinction between public and private health insurance in Chile, there are two kinds of possible solutions: those that would not require major changes in the present relationship between public and private sectors, and those that would require a significant change in the relationship.

Dealing with catastrophic costs: potential alternatives

This section elaborates on possible alternatives for dealing with catastrophic costs, regardless of the way an event is defined as catastrophic. However, each alternative has to be analyzed in terms of both the private and public response to proposed changes.

5.21 New Kinds of Private Policies. This alternative does not imply any changes in the relationship between the private and public sectors. The private sector will offer policies to cover catastrophically costly care, if that seems profitable. Without sound estimates of the price-elasticity of affiliation, little can be said about how many people would buy such policies at higher prices, or whether any new clients could be attracted by the existence of such policies. In any case, offering new kinds of private voluntary policies requires no reaction from the public sector. The main *financial* effect on the public sector would almost surely be favorable, because there would be some reduction in reliance on public facilities, but no money would be taken away from FONASA.

³² In this respect, the Association proposal is symmetric to the proposed change permitting FONASA to buy services from private as well as public providers, irrespective of whether the beneficiary is in MAI or MLE—a move which in principle allows it to compete better for ISAPRE clients with relatively low incomes.

5.22 Larger Program for Specific Costly Diseases. Public Re-Insurance? The present *Programa de Prestaciones Complejas* could be expanded. The program spends Ch\$10,3 billion, or 63 percent of the total estimated cost of catastrophic care³³. FONASA could move away from the disease- or procedure-specific definition of “catastrophic” to an expenditure-based definition. However, the adoption of a strictly financial definition of catastrophes would shift attention to the overall financial burden on public sector clients and its distribution, which might lead to changes in the MAI/MLE relation and in co-payments for the MLE. A fund to cover catastrophic costs of those in FONASA only would need Ch\$74 billion if defined by the expenditure criteria. Perhaps a more important change to the *Programa de Prestaciones Complejas* than to expand it, would be the introduction of special features for clinical management of catastrophic cases, such as the clear definition of treatment protocols, and the provision of appropriate incentives for quality enhancement and cost containment measures among the network of providers.³⁴ Specific measures for case management has proven successful when dealing with catastrophic costs. Concentrating on specific measures for case management of those interventions that represent a high cost for the insurer would certainly pay-off.

5.23 ISAPREs potential reaction to such Program: Formally, a larger FONASA program would give ISAPREs an incentive to drop this type of coverage and therefore to shift costs to the public sector. The public sector could protect itself from the adverse financial consequences by requiring changes in the present public/private relationship: (i) the ISAPREs would share the cost through some sort of obligatory public re-insurance; or (ii) ISAPREs beneficiaries who want FONASA’s protection would migrate with their contributions. Movement between the private and public insurance schemes should be limited by regulation to prevent moral hazard.

5.24 The effect of these changes would be to shift risk to FONASA, but there could be equilibrium with no expected net fiscal impact. If ISAPREs beneficiaries leave the private sector completely looking for better protection at FONASA, and if most of those who migrate would belong to higher income groups (FONASA C and D), the move would not cause a negative financial impact on FONASA. Requiring ISAPREs to contribute to a fund for public coverage in return for being allowed to drop their own coverage of the corresponding diseases or procedures seems not to have been considered in Chile³⁵. All recent developments in catastrophic coverage, such as the *Red de Catastróficas*, run the other way, toward better private coverage and risk-sharing within the private sector.

³³ Defined by the overlap of the three criteria described in Section 4 to be equal to Ch\$16.2 billion (1998).

³⁴ KAISER Permanente in California has interesting experiences in this area. For more information see Patricia Mintz: “Managing Acute, Chronic and Catastrophic Health Care Costs: Experience and Policy Issues in the US Context of Managed Care and Comparative Analysis of the Chilean Regulatory Framework; June, 1999. See also Randall Bovbjerg, “Covering Catastrophic Health Care and Containing Costs: Preliminary Lessons for Policy from the U.S. Experience”, Nov. 1999.

³⁵ There may simply be no political space for such an option; if the government could require the private sector to contribute to a fund for coverage which the ISAPREs did not provide, it could probably introduce more fundamental changes in the public/private relation, such as controlling co-payments directly.

5.25 Any fully separate public program to deal with catastrophic costs—that is, any program with a separate budget rather than, as now, an annual negotiation and allocation—runs the risk of rigidity, of over- or under-budgeting relative to needs for non-catastrophic expenditure. The situation is very different from that of a country without comprehensive public coverage, where the difficulty of private coverage for very costly needs would create space for a public program devoted *only* to those needs.

We turn now to the consideration of potential alternatives for dealing with elderly care.

Health care for the elderly: potential alternatives

5.26 Aging of the population under present health sector arrangements would imply at least a 31 percent real increase in Treasury funding needs for elderly care. Chapter 3 above elaborates on those findings and on the assumptions used to estimate such increase. It is clear that FONASAs' finances are mostly dependent on health care provision for those younger than 65, not the elderly. This situation would not be reversed before the year 2015 and by then FONASA's finances would still be dominated by the demands of the young. However, a minimum of a 31 percent real increase—an annual 2 percent, in Treasury funding for elderly care, is an important trend deserving of close attention. It is important to consider alternatives before the increasing trend becomes a higher annual burden for the Treasury. This brings us to the discussion of potential alternatives to deal with elderly health care costs.

5.27 The development of complementary policies. This is an option that would only occur in ISAPREs if it makes financial sense³⁶. However, co-payments and policies might need to be regulated to prevent reduced coverage and extremely high co-payments. Offering better coverage for the elderly might attract individuals in their forties and fifties, which represent important contributions for the ISAPREs. These policies could be tied to family group policies and accompanied by clear and innovative features for managing care, particularly chronic conditions before they become catastrophic. Alternative clinical ways to deal with care for the elderly, such as home care with organized professional teams, is worth exploring for both ISAPREs and FONASA.

5.28 Separate public program for the aged. This would represent a radical change in the current arrangements. As with public programs for catastrophically costly care, there is in Chile no obvious incentive for a separately budgeted program for the elderly³⁷; as in the case of a separately budgeted program for catastrophic care, the risk of rigidity is real. Nonetheless, it may be valuable to consider possible reactions to such a public initiative. There are two alternatives to analyze: (i) care for the elderly would be an exclusive responsibility of the public sector program and individuals should migrate from ISAPREs

³⁶ There is evidence that some ISAPREs are moving in this direction.

³⁷ The United States would probably not have a Medicare program if it had developed universal public coverage. Medicare exists not only because the elderly cost more on average to care for, but because private insurance is usually employment-related and because the elderly constitute a powerful political lobby.

to FONASA when reaching retirement age; or (ii) individuals in ISAPREs would remain in the private sector when they retire, allowing them to continue receiving the same type of care they now obtain from the private sector, and the program would provide a mechanism to motivate their stay.

5.29 The first option implies the acceptance of a specific regulation that mandates the move to the public sector after age 65. Given the structure of the system in Chile at present and the potential cost and quality of care differences between FONASA and ISAPREs, this scenario may not be politically acceptable. Individuals moving from ISAPREs to FONASA would like to obtain the same level of care available through ISAPREs, implying for the public sector a burden higher than the average costs of care for the elderly already in FONASA. However, we can examine the case where individuals move to the public sector and care would be given at FONASA quality standards. Measured in 1998 pesos under this option, the fund should raise Ch\$123.7 billion to care for the elderly in the year 2000 and Ch\$196.7 billion in 2015, that is, Ch\$85.8 billion more than what it pays today but only Ch\$14.3 billion more than what FONASA would need in 2015 if there were no movement to or from ISAPREs. Clearly, if politically feasible and if most individuals moving from ISAPRE would bring higher contributions than costs to FONASA given the income distribution structure, it is *advantageous* for FONASA to attract the elderly.

5.30 What if the elderly individuals moving from ISAPREs would demand care at ISAPRE quality standards and cost structure? While information on ISAPRE cost structure was not available for this study, it certainly is the case that the net impact for the ISAPREs elderly is positive; they cost less than their contribution and it is desirable for the public program to attract them even paying for higher cost medical care. If FONASA needs to attract the elderly from ISAPREs, the public program would need to motivate their move by covering the difference in cost of care between the private and the public sectors. If the cost of care differs by less than the net impact of contributions to costs for those who move, it is *advantageous* for FONASA to attract the elderly to the public program by paying the difference.

5.31 Under the second option - if the elderly remain in ISAPREs - FONASA would potentially lose Ch\$14.6 billion (1998) in contributions in the year 2015, but would potentially save at least Ch\$14.3 billion on care for the elderly who stay with the private sector. This assumes they would not seek to join FONASA to escape the ISAPREs reduced benefit plans and high co-payments. Under this option, FONASA is potentially giving up Ch\$0.35 billion. In reality, ISAPREs' beneficiaries do seek care at the public sector because of high co-payments and reduced benefits, which certainly reduces the potential loss for the public sector. The exact impact can not be estimated because there are so many different plans and co-payment structures in ISAPREs and no data are readily available on use of public facilities by ISAPREs' elderly beneficiaries. Having a public program to care for the elderly that allows ISAPRE beneficiaries to remain in the private sector and to receive care under private sector cost and quality standards, would require that ISAPREs be provided with an incentive to prevent the elderly from seeking

care at public facilities while contributing to the private sector. This option, however, would require strict regulation and monitoring of plans and co-payment structures.

5.32 Individual medical saving accounts. Early in the Chilean health sector reform of the 1990s, medical savings accounts generated a flurry of interest in these accounts. They were considered a possible way of resolving the problem of cost of care for the elderly.³⁸ The accounts were conceived of as an instrument for the ISAPREs beneficiaries to stay with their insurer and not become a burden to FONASA. Or, if they did leave an ISAPRE at retirement, the accumulated savings would be transferred to FONASA when the beneficiary shifted to the public sector³⁹. The account was described as a *mochila*, or “knapsack”, which a beneficiary would fill up during his or her working years and carry into retirement.

5.33 However, elderly migration does not seem to be the present problem. The migration of elderly people already occurred almost 10 years ago. Those who remain in ISAPREs do not have an incentive to migrate, and if they do, their contribution seems to exceed costs, which will only benefit FONASA. The following section discusses such accounts as a financial option for the majority of the elderly who are already in FONASA.

Scenario 1: Savings Accounts Outside the Present Contribution

5.34 Such accounts could be established outside the mandatory 7 percent contribution, in which case they would represent a net addition to health care financing. They could be mandatory or voluntary, which would mean the Government would have to offer an incentive such as reduced or deferred taxation of the saved income. In this case the Treasury would experience a corresponding tax loss. From the point of view of the Treasury, a voluntary scheme in equilibrium would mean that the savings ultimately paid back for publicly financed care would also cover the tax loss. A difficult issue would be faced if someone accumulated savings and cost the Treasury a tax loss, but then took his knapsack to an ISAPRE; in this case, there would be a net loss to the public sector. Therefore, a difficult question arises: how much control could the individual have over his or her savings. Similar issues are faced under a mandatory regime.

5.35 It is possible to estimate how many years it will take a FONASA beneficiary younger than 65 to save an amount equivalent to the minimum cost of his or her care when old⁴⁰. Table 5.1 below shows how the mechanism of individual saving accounts disrupts the existing solidarity in FONASA. While income groups A and B have to save

³⁸ See the discussion in Philip Musgrove, *Financial Balance in Chile: the ISAPREs Health Care System and the Public Sector*. Human Resources Division, Latin American Technical Department, the World Bank, *A View from LATHR*, No. 4, January 1991.

³⁹ The problem was seen almost exclusively as that of how to prevent migration to FONASA by people whose medical costs were going up, just as their ability to contribute was going down. There was little discussion of how such accounts might work for lifetime FONASA beneficiaries.

⁴⁰ For estimation purposes, we used the composition of health care costs observed in 1998 without considering the introduction of new technologies and their impact on health care costs. The income distribution is of 1998, a five percent interest rate, a 19 percent inflation rate from 1995 to 1998, and a life expectancy of 80 years.

over nearly a lifetime, groups C and D do not need an individual savings account at all; their contributions exceed the cost of their care. Furthermore, in the case of the lowest income group, the individual savings account is not a viable solution because they have to save for 86 years (before reaching 65) to achieve the required amount⁴¹. That is, the earlier generation has to save for 22 years to make the savings account option viable for their children when they reach 65.

Table 5.1. Individual Saving Accounts by FONASA Income group in 1998

FONASA INCOME GROUPS				
		B	C	D
Costs 65 to 80	1,728,977	2,250,479	1,597,830	1,677,614
7% Contributions Elderly	336,942	784,929	1,786,883	1,989,171
1% Contributions Young	1,071	5,356	7,219	8,850
Net deficit or surplus*	- 1,392,035	-1,465,550	189,054	311,557
Years Needed**	86	55	N/A	N/A

* Net Impact takes into account the 7 percent contributions after 65 years of age. Contributions include the co-payment structure of 1998.

** These are the years of life before 65 needed to accrue savings to pay for the care when old (net deficit).

Sources: CASEN 199, Demographic Statistics MIDEPLAN, The Economist August 1999, Bitran et al. 1996. Author's calculations.

5.36 A mixed scenario of individual savings accounts for those higher income individuals, and Treasury financing for those in income groups "A" and "B", is not very probable since (i) higher income individuals need an incentive to remain in the public sector - in other words, if the higher contribution needed to support individual savings accounts only apply to the public sector there is an incentive to move to ISPAREs; and (ii) present cross subsidies would disappear since at present "C" and "D" elderly individuals contribute more than what they use and help to pay for those less well off - this would create a financial problem for FONASA.

Scenario 2.: Savings Accounts within the Present Seven Percent Contribution

5.37 Theoretically, the situation is somewhat simpler if the savings have to come out of the 7 percent contribution. There is no need for tax or other concessions⁴² if the *mochila* were to be voluntary. Again in this case, if incomes and costs can be adequately foreseen, it would be possible to estimate the number of years an individual should save in order to accumulate enough for paying for health care when old. As in the earlier scenario, this is not a viable alternative for low income individuals and only the well-off would accumulate enough to make any real difference to paying for their care when old. It would take many years for the system to achieve equilibrium, because FONASA will lose financing today and the losses would have to be covered by the Treasury. Obviously, only those who were still young when the scheme went into effect would end up financing a significant share of their old-age medical costs. Equilibrium implies lower

⁴¹ This is the minimum amount needed since estimations do not include the effect on costs of the future introduction of new technologies for caring for the elderly, changes on epidemiological profile, or changes in macroeconomic conditions affecting the distribution of income and probably affecting the elderly and the poor more than others.

⁴² This was the proposal put forward in 1990 by the Superintendency of ISAPREs and discussed then with the Ministry of Health and the World Bank.

net contributions to paying for care when young, in return for higher contributions when old. Given that the largest deficit in FONASA is among those younger than 65, this does not alleviate the Treasury's problem. In addition, the difficult issue of an individual's control over the savings, if he or she moves between the public and private sectors, would also need to be resolved.

Collective "Medical Saving Account" or Savings Fund for the Elderly

5.38 The alternative to an individual savings scheme that breaks solidarity among income groups in FONASA could be a savings fund for the elderly, in which individuals contribute more when young and less than the present 7 percent when old. Thus, a mandatory contribution of one percent outside the 7 percent until 64 years, and 5 percent thereafter, would improve solidarity among income and age groups compared with the scheme discussed above⁴³. This alternative does not change the present relationship between the public and private sectors.

5.39 Under this scheme, in the year 2000 the fund can raise 65 percent of the annual cost of care for the elderly and the Treasury would cover the net deficit of Ch\$39,815 million (1998 pesos). If the Treasury would cover the total deficit – 69 percent of the cost of elderly care, and re-invest the contribution from the young with a 5 percent return, by the end of the year, the fund would raise enough to cover the deficit. One billion pesos would remain to be re-invested or to be used for caring for the young. On the other hand, if resources from the Fund would start to be used to pay for the elderly after 5 years of savings and would immediately reduce completely the burden of the Treasury, funds would not last beyond 2010.

Figure 5.1 First Year Savings Fund. Annual Elderly Costs and Contributions (Ch\$ million, 1998)

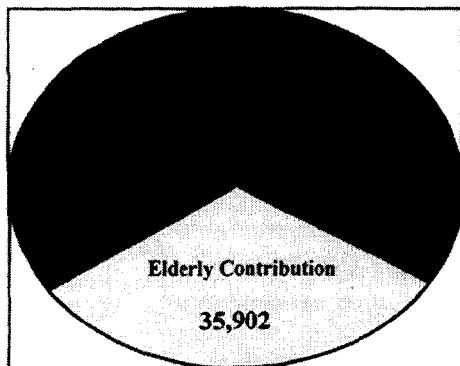
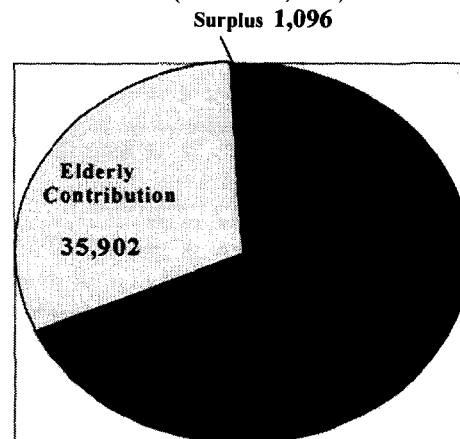


Figure 5.2 Savings Fund by Second Year. Elderly Costs and Contributions (Ch\$ million, 1998)



⁴³ All other assumptions on interest rate, inflation, income distribution, etc., are the same as those used for the estimation of Individual Savings Accounts in an earlier section.

5.40 It is obvious that the alleviation of the Treasury's burden by the use of resources from the Fund must be planned in a progressive manner to avoid depleting the fund very fast. It is possible to estimate different scenarios to slowly and progressively reduce the fiscal burden over time while the Fund increases in size through reinvestment of proceeds.

5.41 Important issues need to be regulated regarding the movement between insurance groups, since this Fund only applies to FONASA affiliates. For example, if an individual would like to migrate from ISAPREs to FONASA at age 65, the move should be followed by the equivalent lifetime one percent contribution to the Savings Fund.

5.42 Several alternatives should be simulated and tested in the search for the most sustainable equilibrium. One option could be that resources from the Fund are generated by the extra one percent contribution over the lifetime of the young, and the elderly would contribute the 5 percent discussed above. Another option is to continue with the 7 percent as they do now, while the young contribute one percent over the present 7 percent. After the fifth year of savings, the deficit would start to be partially covered by the Fund and the Treasury's deficit would decrease over time at a slow pace. An equilibrium point to find the minimum deficit to be covered by the Treasury would depend on the number of people that migrate from ISAPREs with their lifetime and annual contributions, and by all the other factors that affect these scenarios (i.e., macroeconomic conditions, escalation of health care costs above what has been considered, and so forth.)

5.43 Regardless of the alternative chosen, the Savings Fund would only be used to pay health care costs for the elderly and any remaining portion could either be saved, or FONASA could decide to use it for the care of the younger population. This would be decided annually, based on the availability of Treasury financing. Using the remaining resources from the Fund today to cover the deficit created by the young only diminishes the Treasury's responsibility in the present, but does not help to diminish its responsibility for paying the deficit of the elderly in the future. It is an intertemporal decision for the Treasury.

5.44 For any of the alternatives, movements from FONASA to ISAPREs and back could only be permitted if the individual moves with the equivalent lifetime contribution to the Savings Fund (one percent of income over the active working age).

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