

This PDF is a selection from a published volume from the National Bureau of Economic Research

Volume Title: Long-Term Care around the World

Volume Authors/Editors: Jonathan Gruber and Kathleen McGarry, editors

Volume Publisher: University of Chicago Press

Volume ISBNs: 9780226838434 (cloth), 9780226840390 (electronic)

Volume URL: <https://www.nber.org/books-and-chapters/long-term-care-around-world>

Conference Date:

Publication Date: April 2025

Chapter Title: Long-Term Care in Italy

Chapter Author(s): Agar Brugiavini, Ludovico Carrino, Giacomo Pasini

Chapter URL: <https://www.nber.org/books-and-chapters/long-term-care-around-world/long-term-care-italy>

Chapter pages in book: p. 177–211

Long-Term Care in Italy

Agar Brugiavini, Ludovico Carrino, and Giacomo Pasini

5.1 Introduction

The provision of long-term care (LTC) for the Italian older population is at the center of the recent policy debate. Italy has witnessed a spectacular increase in the share of people aged 65 and over, and in particular, of people aged 80 and over, especially women, which could translate into large increases in the number of people in need of care. At the same time, the

Agar Brugiavini is a professor of economics at Ca' Foscari University of Venice.

Ludovico Carrino is an associate professor of public economics at the University of Trieste and a visiting professor at King's College London.

Giacomo Pasini is a professor of econometrics and head of the economics department at Ca' Foscari University of Venice, and a research fellow at NETSPAR.

The authors are grateful to Rinaldo Naci (Ca' Foscari University of Venezia) for the support in data analysis and text revision. This paper uses data from SHARE Waves 1, 2, 3, 4, 5, 6, 7, 8 and 9 (DOIs: 10.6103/SHARE.w1.800, 10.6103/SHARE.w2.800, 10.6103/SHARE.w3.800, 10.6103/SHARE.w4.800, 10.6103/SHARE.w5.800, 10.6103/SHARE.w6.800, 10.6103/SHARE.w7.800, 10.6103/SHARE.w8.800, 10.6103/SHARE.w8ca.800, 10.6103/SHARE.w9ca800). See Börsch-Supan et al. (2013) for methodological details. The SHARE data collection has been funded by the European Commission, DG RTD through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), FP7 (SHARE-PREP: GA N°211909, SHARE-LEAP: GA N°227822, SHARE M4: GA N°261982, DASISH: GA N°283646) and Horizon 2020 (SHARE-DEV3: GA N°676536, SHARE-COHESION: GA N°870628, SERISS: GA N°654221, SSHOC: GA N°823782, SHARE-COVID19: GA N°101015924) and by DG Employment, Social Affairs & Inclusion through VS 2015/0195, VS 2016/0135, VS 2018/0285, VS 2019/0332, and VS 2020/0313. Additional funding from the German Ministry of Education and Research, the Max Planck Society for the Advancement of Science, the US National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGHA_04-064, HHSN271201300071C, RAG052527A) and from various national funding sources is gratefully acknowledged (see www.share-project.org). For acknowledgments, sources of research support, and disclosure of the authors' material financial relationships, if any, please see <https://www.nber.org/books-and-chapters/long-term-care-around-world/long-term-care-italy>.

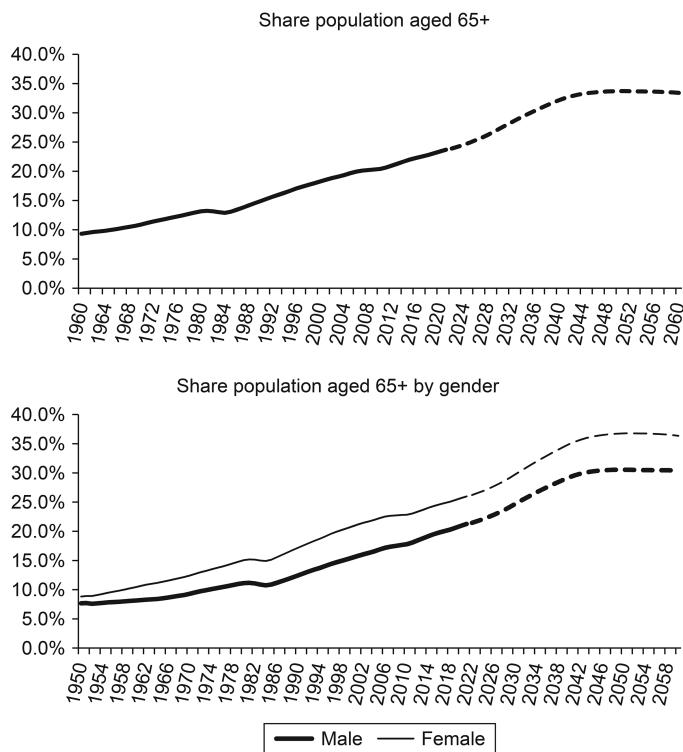


Fig. 5.1 Percentage of population aged 65 or older, Italy, 1950–2060

Source: OECD Stat, <https://stats.oecd.org/Index.aspx?DataSetCode=POP PROJ>. Graphs based on the historical population data and population projections of the OECD.

Italian long-term care framework is highly relying on the informal support of families, and especially women, and characterized by a substantial underground economy of unskilled carers. The public formal care system is mostly decentralized at regional level, so that both funding and eligibility rules to access care vary greatly across regions, while the private market for LTC insurance is still very limited (European Commission 2021).

The demographic transition is exemplified by figure 5.1: the trends for the prevalence (percentage) of individuals aged 65 and over as a whole or by sex (estimated by the OECD 2022 Population Prospects) increase from less than 10 percent in the 1950s to more than 20 percent in 2019, with an expectation of reaching at least 30 percent (for men) and 36 percent (for women) in 2060. Such transition will also see a large increase in the population of oldest old (85+): figure 5.2 shows that the prevalence of people aged 85 and over (as a percentage of the population 65+) will grow from the current value of 13 percent to 24 percent in 2060 for men, and from 19 percent to 32 percent for women.

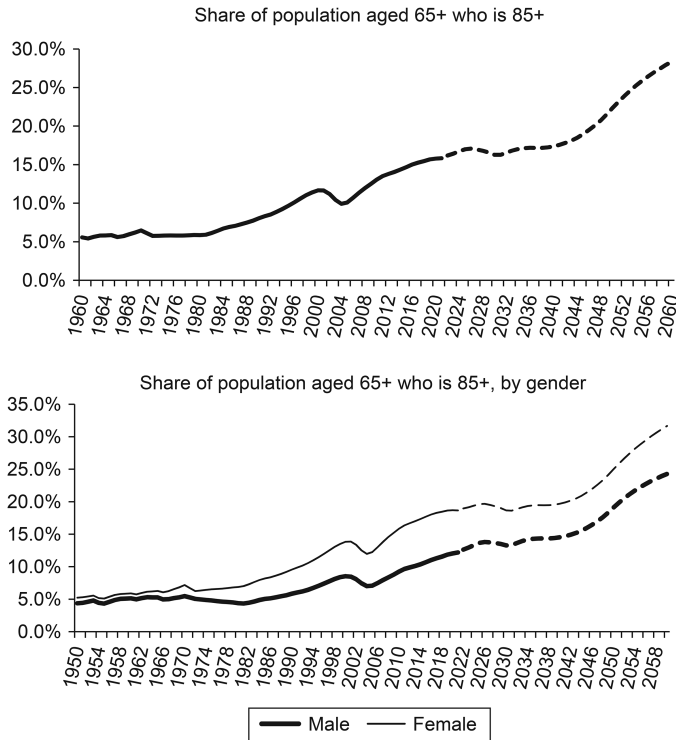


Fig. 5.2 Percentage of 65+ population aged 85 or older, Italy, 1950–2060

Source: OECD Stat, <https://stats.oecd.org/Index.aspx?DataSetCode=POP PROJ>. Graphs based on the historical population data and population projections of the OECD.

Several studies attempted to estimate how many years for the “gained” lifetime translate into time spent in good health, rather than into years of increased loss of autonomy and diseases. Among advanced economies, time spent in disability and with loss of autonomy is narrowing with population aging, while years with chronic diseases are increasing (Chatterji et al. 2015). Crucially for this paper, the picture for Italy is more worrisome, as recent studies have shown evidence of expansion of morbidity both in terms of loss of autonomy (among the main determinants of LTC use) and of chronic diseases supporting the expansion of morbidity hypothesis (Atella et al. 2018; Chatterji et al. 2015). Nonetheless, the aforementioned predictions offer only a partial perspective, as the future paths of morbidity will also depend on the success of promoting and implementing active aging policies (Barbabella et al. 2020; Kaeberlein et al. 2015; Rechel et al. 2013).

Such aging dynamics suggest that actual and potential demand for long-term care services in Italy will increase due to increasing prevalence of ill health and functional limitations with activities of daily living (ADL) and

instrumental ADL (IADL) (European Commission 2021). However, documenting whether the supply of LTC can keep up with the increase in demand is more challenging. As we already stated, the public provision of LTC is highly decentralized, as the governance of the health care system is run on a regional basis. The services range from in-kind provisions to cash transfers following patterns that may vary even at the municipality level. Older individuals who need care often rely on professional caregivers who offer home services or even reside with the beneficiary paid out of pocket, but there is also a large “informal” long-term care component. It is often the case that older people make use of a mixture of public and private provision, plus informal care offered by relatives in order to meet their care needs (Gori and Fernandez 2015; Hashiguchi and Llana-Nozal 2020). The debate over the effectiveness and the sustainability of the Italian LTC is exemplified by a legislative discussion which has led to a new Enabling Law (Legge Delega n.33/23rd March 2023), that will potentially lead to a full restructuring of the public LTC setting.

In this chapter we present a novel description of the long-term care system in Italy. We rely on data from the Italian sample of the Survey of Health, Ageing and Retirement in Europe (SHARE), and, to a minor extent, on aggregate statistics from the United Nations, Eurostat, and the Italian Office for National Statistics (ISTAT).

Three major findings emerge from our study. First, frail older people have little financial means to pay out of pocket for their care, which is concerning given the prospects of an increase in demand for care in the future. Second, we document how publicly provided care is highly fragmented with stark differences in terms of coverage and generosity across Italian regions. Third, the largest fraction of long-term care is supplied informally, both in terms of quantity of services provided and in terms of (imputed) costs. Our findings highlight important lessons that can be drawn from the Italian case study, which are particularly relevant for policymakers and public health experts in both mature and developing economies.

5.2 Aging, Disability, and Well-Being

5.2.1 Data and Definitions

The primary source of data for our analysis is the Survey of Health, Ageing and Retirement in Europe (SHARE). This is a research infrastructure for studying the effects of health and socio-economic policies over the life course of European citizens, designed to be comparable with the US sister survey Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA). The SHARE survey, which is still ongoing, provides information on demographics and family structure, activities, income and wealth, health and long-term care needs. Since its first wave (2004), and

up to wave 8 (2020), 616,000 in-depth interviews were performed with 160,000 people aged 50 or older from 28 European countries plus Israel, including Italy. In this chapter, we use data from SHARE wave 6 (which ran in Italy in 2015) and wave 7 (run in 2017). When focusing on “LTC beneficiaries,” we refer to a subsample of respondents aged 65 or older in 2015.

Our baseline data sample includes 3,102 individuals, and we use the SHARE cross-sectional survey weights to compute our calculations and estimate the population correctly. However, those weights are designed to make the SHARE sample representative of the Italian population aged 50 and over, without taking into account the subgroup of older individuals who are living permanently in a nursing home. Although individuals who were previous respondents in SHARE are still interviewed even if they start to be residents of nursing homes, the survey under-represents this particular group.¹ This is a common issue in the HRS-family surveys. In the appendix, we provide details on the adjusted cross-sectional weights to reduce this problem. The procedure we follow is conceptually the same as it is done for England in chapter 3.

The key measures of health used in our analysis are based on self-reported limitations in ADL and IADL. ADL includes tasks such as walking across room, dressing, bathing, eating, going to bed, and using the toilet. IADL includes using a map to move around in an unknown place, preparing hot meals, shopping for groceries, making telephone calls, taking medications, doing work around the house or garden, managing money, doing personal laundry, and other unspecified difficulties. The respondent can select any of these 15 items if they report difficulties due to a physical, mental, emotional, or memory problem that they expect to last for more than three months. Although SHARE does not ask the precise extent to which a respondent is limited with the selected task, we consider the respondents to be significantly impaired for the activities that they reported to have difficulty with.

Table 5.1 presents the distribution of the number of limitations by age groups: overall, 18.7 percent of sample has at least one limitation in ADL, but important differences in the prevalence of limitations emerge when looking at the different age groups. Most individuals aged 65 and over have no limitations, while 10.6 percent report no ADL limitations but at least one IADL limitation. Among individuals aged 85 and over, 36.2 percent report no limitations, 14.1 percent report difficulties in IADLs but not in ADLs, and as many as 49.7 percent have at least one ADL deficit.

Table 5.2 reports the distribution of the specific types of ADL or IADL limitations for the age groups 65 and over, and 85 and over. We also report the distribution of ADL and IADL limitations, conditional on reporting

1. The probability of being in a nursing home conditional on age 65+ computed SHARE wave 6 data using cross-sectional weights is 0.0125, while if we take the same statistic computed on the Italian population by ISTAT, the percentage rises to 0.0218.

Table 5.1 **Percentage of 65+ and 85 population with difficulties in ADLs and IADL, Italy, 2015**

# of ADLs	65+, percent	85+, percent
0 ADLs & 0 IADLs	0.707	0.362
0 ADLs & 1+ IADLs	0.106	0.141
1 ADL	0.069	0.147
2 ADLs	0.037	0.071
3 ADLs	0.018	0.050
4 ADLs	0.017	0.056
5 ADLs	0.023	0.085
6 ADLs	0.025	0.089
Any ADLs	0.187	0.497
Any IADLs	0.260	0.603
Obs	3,102	265

Source: Data are from the SHARE Wave 6 (2015). ADLs include walking across room, dressing, bathing, eating, going to bed, and using the toilet. IADLs include using a map in a strange place, preparing a hot meal, shopping for groceries, telephone calls, taking medications, doing work around the house or garden, managing money, doing personal laundry, and unspecified difficulties. Weights used are adjusted to match national aggregates of the nursing home residents (see appendix).

Table 5.2 **Percentage of 65+ and 85+ population with difficulties in ADLs and IADLs, Italy, 2015**

	65+ All	65+ Conditional	85+ All	85+ Conditional
<i>Panel 1: IADLs</i>				
Preparing hot meal	0.089	0.342	0.313	0.520
Shopping for groceries	0.134	0.516	0.378	0.627
Telephone calls	0.065	0.249	0.237	0.393
Taking medications	0.072	0.275	0.252	0.417
Managing money	0.093	0.357	0.316	0.524
<i>Obs</i>	3092	667	265	150
<i>Panel 2: ADLs</i>				
Dressing	0.131	0.699	0.338	0.680
Walking across room	0.061	0.327	0.171	0.344
Bathing	0.138	0.737	0.452	0.909
Eating	0.051	0.271	0.175	0.351
Getting in/out of bed	0.083	0.442	0.270	0.543
Using the toilet	0.061	0.327	0.215	0.433
<i>Obs</i>	3,092	467	265	126

Source: Data are from the SHARE Wave 6 (2015). Column 1 shows the share of the sample that report having difficulty with each activity, while Column 2 shows the share of people with at least 1 IADL (panel 1) or at least 1 ADL (panel 2) who report having difficulty with each activity. Weights used are adjusted to match national aggregates of nursing home residents (see appendix).

Table 5.3 Well-being for those 65+ and 85+ by ADL limitations (percentage), Italy, 2015

	65+	65+ with 3+ Lims	85+	85+ with 3+ Lims
Income below poverty line	0.170	0.205	0.239	0.258
Self-report of health—good or better	0.451	0.060	0.221	0.066
Depressed during the last month	0.380	0.777	0.549	0.750
Observations	3,102	301	265	94

Source: Data are from the SHARE Wave 6 (2015). Our Limitations Index runs from 0–12 and is the number of ADLs/IADLs that are either difficult or not done for eating, bathing, dressing, using the toilet, walking across a room, and getting in/out of bed (ADLs) + using a telephone, managing money, taking medications as prescribed, shopping for groceries, and cooking a hot meal (IADLs). Poverty line is fixed at 50 percent of the median income. The depression variable used is the generated EURO-D by SHARE, which is based on a set of 16 variables that collect information on mental health in the last month before the interview; for this we identify as “Depressed” an individual with EURO-D>3. Weights used are adjusted to match national aggregates of nursing home residents (see appendix).

at least one limitation. The most frequent ADL limitations relate to ability to bathe and dress for both age groups. Respondents aged 65 or older are most likely to report problems with shopping for groceries. When we restrict the analysis to the group 85 or older, respondents are most likely to report difficulties with preparing hot meals and managing their money.

5.2.2 Well-Being

In order to understand the patterns of provision and utilization of long-term care for older people in Italy, it is important to provide a contextual analysis of the economic well-being of the population that might be in need of care. The relationship between health and economic well-being is an important research area *per se*, but it is of particular relevance when looking at older people, as it can determine major differences across groups, including inequalities in access to care (Floridi et al. 2021).

Hence, to properly describe these mechanisms, we first present a general overview of the socioeconomic situation of older people and their households in Italy by the number and type of limitations. Table 5.3 presents the association between the presence of three or more limitations in ADL (or IADL) and economic well-being. The first row of the table compares the poverty rate in the full sample and among respondents with at least three functional limitations (ADL or IADL): overall 17 percent of the older people have incomes below the poverty line, while 20.5 percent of individuals who report at least three difficulties are “poor.” In the second and third rows of table 5.3 we report the association between physical and emotional/cognitive health status of the respondent by age group and degree of limitations. There is a clear negative gradient of health by age, as the percentage of individuals who report a “good or better physical health status” drops from

Table 5.4 **Income and wealth distribution, Italy 2015**

	Income 65+	Income 85+	Wealth 65+	Wealth 85+
5th Percentile	263	263	0	0
10th Percentile	3,383	1,664	2,058	0
25th Percentile	7,656	6,174	56,235	12,942
50th Percentile	11,936	10,290	112,504	174,930
75th Percentile	16,226	14,200	205,800	316,932
90th Percentile	22,912	18,385	324,478	411,600
95th Percentile	28,126	22,226	445,214	411,600
Observations	3,102	265	3,102	265

Source: Data are from the SHARE Wave 6 (2015). Both income and wealth are at household level and post-tax. Mean income for 65+ (85+) €13,164 (€10,686) and Mean Wealth €152,230 (€13,3417). Weights used are adjusted to match national aggregates of the nursing home residents (see appendix). All values are adjusted to 2019 euros.

45.1 percent in the full sample to 22.1 percent among the older group (85+). The same pattern emerges with respect to the prevalence of depression, which is substantially higher among people 85+ than in the overall sample.

A more focused analysis is presented in table 5.4 and table 5.5, where we look at income distribution and wealth distribution. The income measure and wealth measure are obtained as “generated variables” in SHARE, i.e. these are, for each respondent, the result of the aggregation of the different income (wealth) items, and, at the household level, the sum of all incomes (wealth) of all household members. In particular, total household income is obtained by aggregating all individuals’ net income components, while household net worth is generated by aggregating household real assets and household net financial assets. We normalize each measure using the OECD equivalence scale.²

Table 5.4 shows the unconditional distribution of income and wealth, by age groups, for older individuals: these are slightly skewed distributions, quite similar to what was observed for the Italian population at large. For example, for the age group 65+, the mean value of income is €13,164, which is slightly higher than the median value of €11,936. When we turn to table 5.5, we observe large disparities in the income and wealth distribution by number of limitations. Each column of the table sums to 100 and shows the distribution of income (wealth) in each limitation category. Both income and wealth of individuals with no limitations appear as “evenly” distributed. The percentage of individuals falling in the two poorest categories (i.e., less than 50 percent of median income/wealth; and between 50 percent and 100 percent of the median income/wealth) is slightly higher than 45 percent in both distributions. However, when focusing on individuals affected by

2. We use the “OECD-modified equivalence scale.” This scale assigns a value of 1 to the household head, 0.5 to each additional adult member, and 0.3 to each child.

Table 5.5 Income and wealth distribution by limitations for 65+ (percentage), Italy, 2015

	0 ADLs & 0 IADLs	0 ADLs & 1+ IADLs	1 ADL	2 ADLs	3+ ADLs	Total
<i>Panel 1: Income</i>						
<50% median income	0.147	0.201	0.282	0.199	0.227	0.170
50%–100% median income	0.308	0.449	0.407	0.306	0.304	0.329
100–150% median income	0.311	0.242	0.193	0.356	0.300	0.296
150–200% median income	0.128	0.060	0.081	0.090	0.116	0.115
200%+ median income	0.106	0.049	0.037	0.049	0.053	0.089
Total	0.707	0.106	0.069	0.037	0.083	
Obs	2,327	305	184	95	191	
<i>Panel 2: Wealth</i>						
<50% median wealth	0.206	0.3107	0.391	0.407	0.473	0.259
50%–100% median wealth	0.246	0.2796	0.233	0.192	0.223	0.245
100–150% median wealth	0.182	0.2267	0.131	0.176	0.117	0.178
150–200% median wealth	0.147	0.0602	0.074	0.095	0.055	0.123
200%+ median wealth	0.219	0.1228	0.171	0.131	0.131	0.195
Total	0.707	0.106	0.069	0.037	0.083	
Obs	2,327	305	184	95	191	

Source: Data are from the SHARE Wave 6 (2015). Each cell reports the share of respondents in the respective ADL/IADLs category who are in that row's income group. The median household income, based on the sample distribution, is €11,936, while median household wealth is €112,504. Weights used are adjusted to match national aggregates of nursing home residents (see appendix). All values are adjusted to 2019 euros.

any number of limitations, income and wealth distributions are more concentrated in the poorest groups. For example, in the group reporting more than three limitations in ADL, around 53 percent are in the poorest income groups, and 69.6 percent are in the poorest wealth groups.

5.3 Long-Term Care System in Italy

As shown in section 5.2, Italy faces a significant challenge in supplying adequate long-term care to an increasing fraction of older individuals. In this section we provide an overview of the main pillars of social protection for vulnerable older people in Italy, ranging from public interventions to substantial family provisions, and to limited private markets.

By using the SHARE data we can investigate the use of formal versus informal help or care. In particular, formal help/care includes personal care services (e.g., getting in and out of bed, dressing, bathing and showering), help with domestic tasks (e.g., cleaning, ironing, cooking), meals-on-wheels (i.e., ready-made meals provided by a municipality or a private provider), and help with other activities (e.g., filling a drug dispenser). Informal help/

Table 5.6 **Distribution of hours of help received per week, Italy, 2015**

	65+	85+
5th Percentile	<1	<1
10th Percentile	<1	<1
25th Percentile	2	6
50th Percentile	8	24
75th Percentile	40	40
90th Percentile	40	46
95th Percentile	46	64
Mean	19	28
1 Hour per Day or Less	0.173	0.105
5 Hour per Day or More	0.631	0.757
Observations	725	134

Source: SHARE wave 6. Respondent weights are used for all population estimate calculations. Nursing home residents are excluded. Formal help hours are imputed using data from W1 and 2 to an individual who reported to have used formal help in wave 6. Received informal help inside the household is imputed with ISTAT information and informal help outside the household is converted from the frequency: daily help as 40 hours per week, weekly help as 8 hours per week, monthly help as 2 hours per week and less often as half an hour per week.

care similarly includes personal care or services for domestic tasks; this can be further differentiated into: informal help or care received from individuals living outside the household, or personal care provided by people living in the same household (for the latter only personal care).

Table 5.6 shows the distribution of weekly hours of care received for both formal and informal care, conditional on receiving any type of care. The median number of hours of care per week received in the full sample is 8, but the mean is 19 hours and 25 percent of the population receives at least 40 hours of help per week. The data suggest that the care needs are higher for the oldest old: the median number of weekly hours of care for this group is 24, the mean is 28, and the top 5 percent of the distribution receives 64 or more hours of care per week.

In this section we focus on the public expenditure on long-term care (LTC): the overall amounts are in line with the European average, but differ from other countries in that formal cash-support comes in most cases, and for a large share of the overall benefits, from a national cash benefit (*Indennità di Accompagnamento*). The coverage of publicly subsidized home care and residential care is limited, with large differences across regions and municipalities in formal care availability and access criteria. The Italian LTC system is strongly based on informal family support and migrant care workers, often with irregular contracts (European Commission 2021; Jes-soula et al. 2018).

In figure 5.3, we report the share of GDP spent on long-term care in Italy as computed by the national accounting office (*Ragioneria Generale dello*

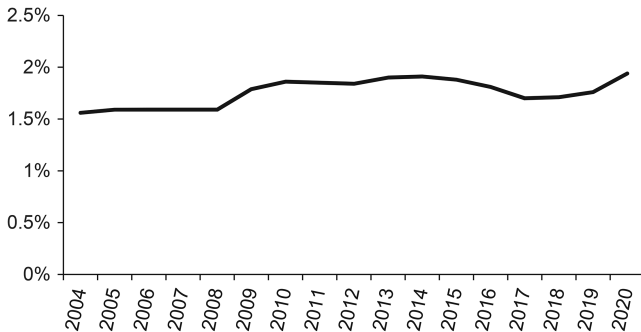


Fig. 5.3a Share of GDP spent on long-term care, Italy

Source: MEF (Ministry of Economy and Finance), https://www.rgs.mef.gov.it/VERSIONE-I/attivita_istituzionali/monitoraggio/spesa_pensionistica/, state general accounting department: mid/long-term trends for the pension, health and long-term care systems reports

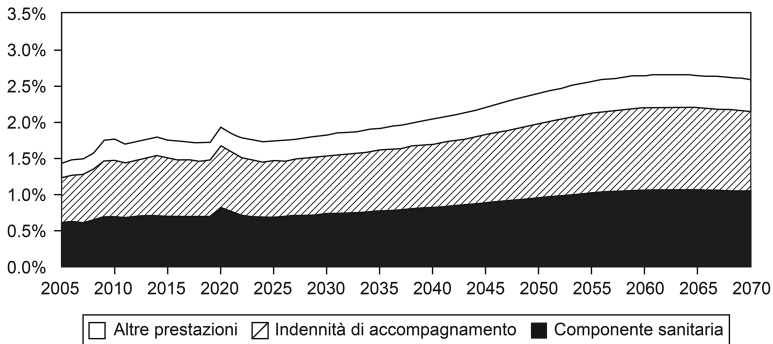


Fig. 5.3b Share of GDP spent on long-term care, Italy national baseline prospect

Source: MEF (Ministry of Economy and Finance), https://www.rgs.mef.gov.it/VERSIONE-I/attivita_istituzionali/monitoraggio/spesa_pensionistica/, state general accounting department: mid/long-term trends for the pension, health and long-term care systems reports

Stato) of the Ministry of Economics and Finance, available from 2004 to 2020. The overall aggregate includes expenditure on the health care component of long-term care, the national attendance allowance, a cash-benefit program called *Indennità di Accompagnamento*, and expenditure for other LTC provisions.³

Overall, the public expenditure on LTC lies between 1.5 percent of GDP in 2004 and 2 percent in 2020, with a notable increase in the years of the financial and economic crisis following the Great Recession at the end of

3. In particular, the *Indennità di Accompagnamento* is a non-means-tested cash benefit paid to dependent people. “Other LTC provisions” include heterogeneous benefits, largely in kind, provided at local level by municipalities. These are generally means-tested.

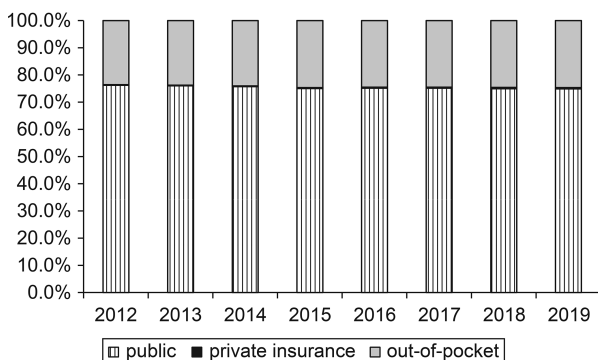


Fig. 5.4 Composition of LTC financing by source (in percentages)

Source: ISTAT—System of Health Accounts, <http://dati.istat.it/index.aspx?lang=en&SubSessionId=796c45f4-7f70-43be-a3b3-eb77fef0cd9a>. It provides statistics on health care expenditure and financing on the country's health system.

the 2010s. It is worth noting that this expenditure figures are higher than the those reported by the widely used OECD reports (OECD 2019), as the OECD figures only include health care–related long-term care costs. Figure 5.3a further shows how the LTC expenditure is split between its three components (health; cash benefit; other), and how it is predicted to increase in the following decades, based on simulations by the Ministry of Economics and Finance (MEF).

Long-term care is a form of insurance covering costs, which can be potentially very high, particularly in relation to the resources available to older households. In Italy, very few individuals hold private long-term care insurance, as people mostly rely on the public provisions or on out-of-pocket financing. Figure 5.4 shows the relevance of the various financing sources from 2012 to 2019. The share of expenditure covered by private insurance is basically negligible: more than 70 percent of the expenditure is financed by the government, while the remaining share is paid out of pocket by the user.⁴

Figure 5.5 shows how long-term care spending can be disentangled by type of expenditure. Long-term care expenditure in Italy is classified both according to the type of health care received and to the facilities that provide such care. The central statistical office, ISTAT, in particular the system of health accounts, provides a split of LTC expenditure into four groups: inpatient long-term care, day long-term care, outpatient long-term care, and home-based long-term care.

To back up these figures we look at the facilities that provide such long-

4. The reported statistics by the System of Health Accounts includes the final consumption expenditure of resident units on health care goods and services, including the health care goods and services provided directly to individual persons as well as collective health care services.

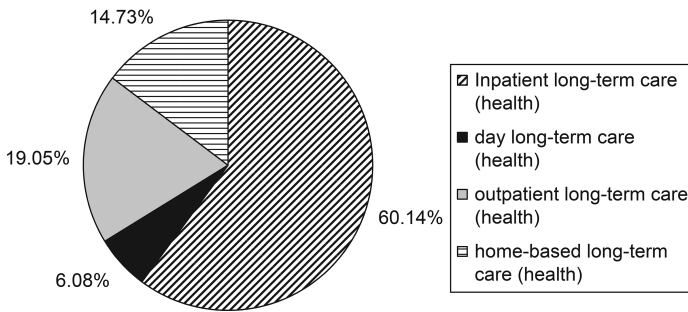


Fig. 5.5 Composition of LTC by type of long-term patient (in percentages)

Source: ISTAT—System of Health Accounts, <http://dati.istat.it/index.aspx?lang=en&SubSessionId=4b1103ef-e51b-4a24-83a2-b1e7dc786251>. It provides statistics on health care expenditure and financing on the country's health system.

Reproduced with permission from Fu, R., Noguchi, H. "Moral hazard under zero price policy: evidence from Japanese long-term care claims data." *Eur J Health Econ*, Volume 20, 785–99 (2019), Springer Nature.

term care services: the expenditure for inpatient long-term care (health) refers to hospitals⁵ and residential long-term care facilities,⁶ while for the other three types of care it refers to providers of ambulatory health care.⁷ Figure 5.6 shows again the composition by type of expenditure, split between formal home care versus nursing home care, where the two categories are derived from the facilities that provide the service. The costs for care provided in nursing homes are financed by the government for 63.28 percent, while it is paid out-of-pocket for the remaining 36.39 percent. However, in the case of home-based care (nursing-care), the contribution of public funds to the total costs increases up to 92.77 percent.

5.3.1 Eligibility for Public LTC Programs

The Italian LTC in-kind or in-cash programs are mostly regulated at the regional level; the system exhibits high variability across regions in terms of

5. Hospitals (HP1): means licensed establishments that are primarily engaged in providing medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialized accommodation services required by inpatients and which may also provide daycare, outpatient, and home health care services.

6. Residential long-term care facilities (HP2): means establishments that are primarily engaged in providing residential long-term care that combines nursing, supervisory, or other types of care as required by the residents, where a significant part of the production process and the care provided is a mix of health and social services with the health services being largely at the level of nursing care in combination with personal care services.

7. Providers of ambulatory health care (HP3): means establishments that are primarily engaged in providing health care services directly to outpatients who do not require inpatient services, including both offices of general medical practitioners and medical specialists and establishments specializing in the treatment of day cases and in the delivery of home care services.

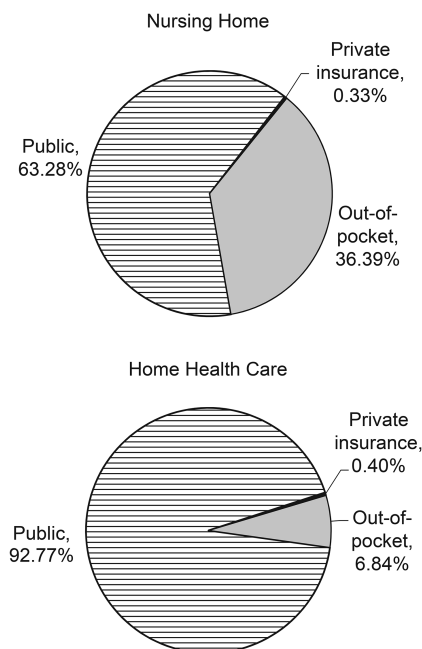


Fig. 5.6 Composition of home health care expenditure and nursing care facilities expenditure, by source of funds, Italy, 2015

Sources: ISTAT System of Health Accounts, <http://dati.istat.it/index.aspx?lang=en&SubSessionId=4b1103ef-e51b-4a24-83a2-b1e7dc786251>. It provides statistics on health care expenditure and financing on the country's health system. Given the categories defined by ISTAT, we include in nursing home the aggregation of HP1 and HP2, while we aggregate the other categories in home health care.

both the services provided and target population (i.e., the eligibility rules). A thorough review can be found in Brugiavini et al. (2017).

5.3.1.1 National Cash Benefit

A national cash benefit, called *Indennità di Accompagnamento* (IA), is available to individuals who are assessed as *invalid*. The definition of invalidity itself is somewhat fuzzy, as it refers to individuals who are (i) blind, (ii) physically/mentally disabled, (iii) unable to walk without continuous help, or (iv) need permanent assistance with ADL (Brugiavini et al. 2017). The assessment is performed by a health district level commission of the National Social Insurance Agency (INPS) and is initiated by the patient's general practitioner. In 2021, the IA amounted to a monthly cash benefit of €522.10 (see <https://www.inps.it/prestazioni-servizi/indennita-di-accompagnamento-agli-invalidi-civili>). The cash allowance is not subject to a stringent ex post monitoring, as recipients are free to choose how to spend it. This is part of a larger concern over the general lack of an estab-

lished and homogeneous regulation of quality checks in the LTC governance in Italy (European Commission 2021).

5.3.1.2 Regional Programs

Most Italian regions offer specific programs of care to guarantee the minimum level of support for basic needs (*livelli essenziali di assistenza*), either in-kind or in-cash, targeting both domiciliary care and, to a lower extent, residential care. Regions obtain national funding to implement such policies, through the National Fund for the Loss of Autonomy (FNNA, *Fondo Nazionale Non Autosufficienza*) established in 2006 (Law 296/2006), complemented with region-specific funding from the Regional Funding for the Loss of Autonomy (FRNA, *Fondo Regionale per la Non Autosufficienza*) (Brugiavini et al. 2017).

The programs financed by FNNA or FRNA have two target populations: individuals with (i) extreme disabilities (*disabilità gravissima*) or (ii) with severe disabilities (*disabilità grave*). The former group includes individuals who are eligible for the IA benefit, and further have at least one additional severe condition, e.g., being minimally conscious or in intensive care, being heavily affected by dementia, living with extreme physical impairment (Brugiavini et al. 2017).

The definition of *severe* disability, which represents the minimum conditions for accessing public LTC support, is defined at regional level. Brugiavini et al. (2017) document a large variation across regions in the definition of the eligibility rules for LTC support, partially due to the absence of a unique definition of disability in the clinical literature, and to the different budget allocations which local authorities have at their disposal to fund LTC. Indeed, regions differ on the health items included in the eligibility evaluation, in the definition of an entry-level need-of-care condition, and in the unit of measurement of the need-of-care index. An example of such variation comes from the eleven regions which had set up a clear-cut definition of eligibility (Bolzano, Campania, Emilia-Romagna, Friuli–Venezia Giulia, Liguria, Lombardia, Piemonte, Sicilia, Toscana, Veneto), which are summarized in table 5.7. The table reports the main features of the assessment procedures, such as whether ADL and IADL difficulties are accounted for; whether availability of informal support is included in the evaluation; the definition of the minimum eligibility threshold; and what functional limitations carry the largest weight in the assessment. The table emphasizes that while all regions include ADL in their assessment, the role of IADL limitations, as well as of informal support, changes significantly across areas. Similarly, the working definition of eligibility is so different across regions that a comparison at face value is almost impossible.

Why should these differences matter for older people? The answer lies in the emerging literature in health economics showing that being eligible for public LTC can significantly increase the likelihood of receiving care, above

Table 5.7 Summary of Italian LTC legislations: definition of “severe need,” 2017

Region	Program	ADL	IADL	Others	Informal support	Eligibility threshold
Bolzano	Assegno di cura (VITA)	✓	✓	C		2h die
Campania	Assegno di cura (SVaMA)	✓		C,	p	Barthel score 55
Em. Rom.	Assegno di Cura (BINA)	✓		C, M	✓	230 points
Friuli V.G.	CAF/APA (KATZ)	✓		C, M		2 ADL / cognition
Liguria	ADC (AGED PLUS)	✓	p	C		Invalidity & 3 ADL / Cognition / Behavior
Lombardia	Misura B2 (Triage + ADL + iADL)	✓	✓		✓	Invalidity + triage score 3 + 3 ADL + 4 iADL
Piemonte	Assegno di cura, bonus famiglia (cartella geriatrica)	p	✓	C, B		5 points
Sicilia	Buono sociosanit. (SVaMA)	✓	p	M	✓	Invalidity & Living with family
Toscana	PAC (MDS-HC)	✓*		C, B		2 ADL + cognition + behaviour
Veneto	ICD (SVaMA)	✓		C, M, B	✓	—

C = cognitive limitations; M=means tested; p = included partially i = Incontinence not included

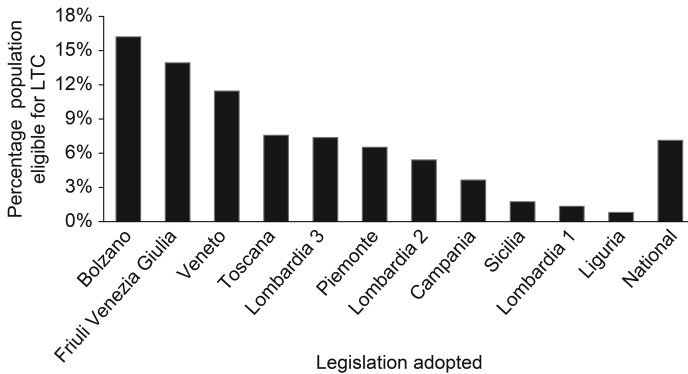


Fig. 5.7 Share of 65+ Italian population potentially eligible for LTC benefits under different rules

Source: SHARE wave 6 (2015), age 65+. Respondent weights are used for all population estimate calculations. Nursing home residents are excluded.

and beyond the role played by health limitations in determining the demand for care (Bakx et al. 2014; Carrino et al. 2018). In other words, eligibility rules are a major driver of care utilization rates, because they define the target population that has potential access to (and is *potentially covered by*) LTC support. Brugiavini et al. (2017) define the “potential coverage” rate of LTC rules as the ratio of the population aged 65+ that fulfills the requirements defined by a specific country-rule for LTC benefits. They show, by virtue of “direct-adjustment” standardization, that the proportion of older Europeans that would be covered by LTC changes substantially depending on the definition of need-of-care used. In figure 5.7, we adopt the same methodology and compute the proportion of older Italians who would be considered eligible to receive public LTC benefits, depending on the eligibility rule used. This is tantamount to asking, If we applied the eligibility rules of each region to the whole older population in Italy, what proportion of that population would be potentially covered by LTC services? A higher percentage tells us that a system is more comprehensive in its coverage than a lower percentage by virtue of its eligibility rules, as we keep health constant by focusing on the sample underlying population. Coverage is expressed as a percentage of the sample aged 65+ in Italy from the SHARE survey. We also report the predicted share of population that would be eligible to the national LTC program (*Indennità di Accompagnamento*). The results show striking differences in the potential coverage for LTC, depending on the adopted definition of needs. Some rules evidently focus only on a population of highly disabled older people (e.g., Liguria, Sicilia, and some of the health districts in Lombardia), while other areas (the northern regions of Bolzano, Friuli Venezia Giulia and Veneto) aim at covering a broader population which includes pre-frail individuals and lower degrees of loss of autonomy.

Table 5.8 **Population with LTC insurance, Italy, 2015**

	65+
Population with LTC Insurance	553,879
Share of Population	0.0419
Observations	3,092

Source: SHARE wave 6. Weights used are adjusted to match national aggregates of the nursing home residents (see appendix).

Table 5.9 **Characteristics of the population by LTC insurance, Italy, 2015**

	65+ Insured	65+ Uninsured
Total Household Wealth—Mean	236,360	148,199
Total Household Wealth—Median	164,640	109,847
Total Household Income—Mean	18,534	12,966
Total Household Income—Median	13,859	11,747
In Nursing Home (%)	0.051	0.025
Live with Spouse or Partner (%)	0.537	0.581
Formal Home Help (%)	0.170	0.132
Informal Home Help (%)	0.312	0.258
Observations	126	2,963

Source: SHARE wave 6. Weights used are adjusted to match national aggregates of nursing home residents (see appendix). Nursing home residents include both those who are living in a nursing home or stayed at one during the last year. All variables (income, wealth, types of help) are defined as they were in previous tables. All values are normalized, and they are in 2019 euros.

5.3.2 Private Insurance

The market for private LTC insurance in Italy is extremely thin. Moreover, most of the contracts are bundled with supplementary health insurance. As shown in table 5.8, in the Italian sample of SHARE the prevalence of respondents aged 65+ holding private LTC insurance is estimated to be 4.19 percent. The characteristics of private insurance holders are shown in table 5.9, and compared to the characteristics of non-holders. Within the group aged 65+, insured individuals seem to have a higher probability of living in a nursing home, are more likely to receive formal home help, and have higher wealth and income compared to the uninsured sample.

5.3.3 Long-Term Care Utilization

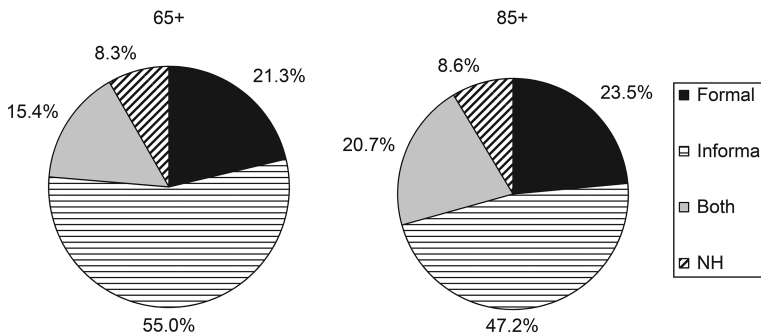
In table 5.10 we illustrate the joint percentage distribution of people receiving care by age and by different degrees of loss of autonomy.⁸ Among

8. In order to increase the sample of individual over 85 years old we combined SHARE waves 6 and 7. We adjust the calibrated weights of waves 6 and 7 to take into account the under-representation of the nursing home population as explained in the appendix.

Table 5.10 Individuals receiving care by age and number of ADL, Italy, 2015

# of ADLs	65+, percent	85+, percent
Full Sample	0.265	0.578
0 ADLs & 1+ IADLs	0.441	0.598
1 ADL	0.534	0.690
2 ADLs	0.693	0.777
3+ ADLs	0.757	0.792
Observations	6,033	563

Source: The data are from the combining of SHARE waves 6 and 7. The care variable is defined as either formal or informal care received or both. Formal help includes help with personal care, domestic tasks, meals-on-wheels, other activities and nursing home, while informal help includes help received both from outside and inside the household, with personal care, practical household help, and help with paperwork. We adjusted the longitudinal calibrated weights, provided by SHARE for the combining data set of waves 6 and 7, so that individuals in nursing homes match national aggregates.

**Fig. 5.8** Type of care received by age, Italy, 2015

Source: Data are from SHARE waves 6 and 7. The variables are defined as they were in previous tables. The individuals in nursing homes are those who have reported to have stayed in one of them permanently in the last 12 months. We adjusted the calibrated weights, provided by SHARE, so that individuals in nursing homes match national aggregates.

the full sample (which includes people with no ADL/IADL limitations), 26.5 percent are receiving some kind of help between formal and informal, domiciliary (i.e., home-based) and institutional (i.e., nursing home or residential care). A stark difference by age emerges: 57.8 percent of the individuals aged 85+ receive some form of help. However, once we condition on the presence and number of limitations, as a measure of need-of-care, the difference across number of limitations and between age groups decreases: 53.4 percent of people 65+ with one ADL limitations receives help, as opposed to 69 percent of those 85+. For people with three or more limitations, comparable figures are more similar—75.7 percent and 79.2 percent.

Figure 5.8 considers the types of care received among the sub-population of care users. We consider four types of care: formal home-based care only,

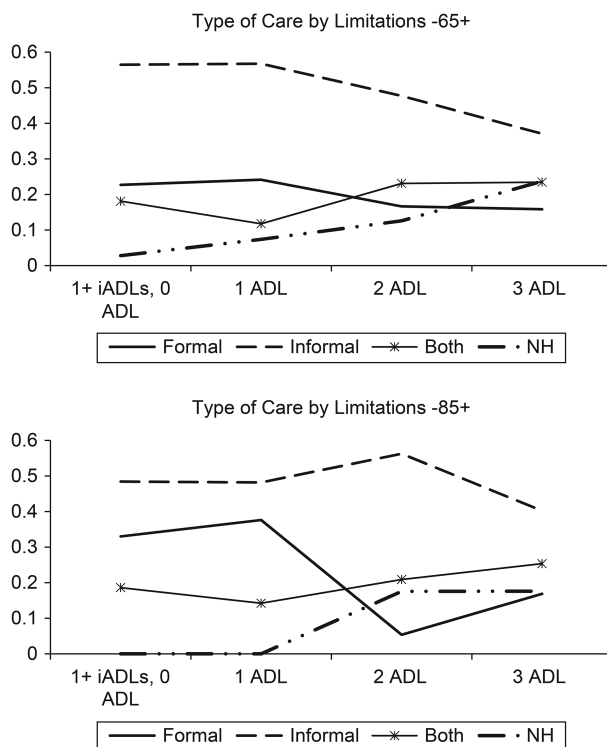


Fig. 5.9 Type of care received by age and limitations, Italy, 2015

Source: Data are from SHARE waves 6 and 7. The variables are defined as they were in previous tables. The individuals in nursing homes are those who have reported to have stayed in one of them permanently in the last 12 months. We adjusted the calibrated weights, provided by SHARE, so that individuals in nursing homes match national aggregates.

informal home-based care only, both formal and informal home-based care (mixed care), and institutional care. The majority of care recipients, 55 percent (47.2 percent among the 85+), receive only informal home-based care, while only 21.3 percent (23.5 percent) receive only formal home-based care. The share of respondents receiving mixed care is at 15.4 percent in the 65+ sample, and 20.7 percent for the 85+ sample. Finally, the share of people receiving institutional care is slightly more than 8 percent for both age groups.

Figure 5.9 presents the pattern of the types of care received with respect to the ADL/IADLs groups (as usual distinguishing also two age groups in the top panel and bottom panel). The X-axis reports the number of limitations, while the Y-axis shows the percentage of individuals receiving care: as the number of limitations increases, the percentage of individuals receiving only informal help decreases. As predicted by theoretical and empirical

Table 5.11 **Distribution of weekly hours of care received by type, for the sample of care recipients, Italy, 2015**

Percentiles	Informal Help		Formal Help	
	65+	85+	65+	85+
5th Percentile	<1	<1	1	2
10th Percentile	<1	<1	1	2
25th Percentile	2	8	2	2
50th Percentile	8	40	4	5
75th Percentile	40	40	11	16
90th Percentile	40	46	28	50
95th Percentile	46	46	56	80
Mean	17	25	13	18
Observations	556	107	282	60

Source: SHARE wave 6, subsample of Italian respondents receiving care. Respondent weights are used for all population estimate calculations. Nursing home residents are excluded. Formal help hours are imputed using data from W1 and W2 to the individuals who reported to have used formal help in wave 6. Received informal help inside the household is imputed with ISTAT information and informal help outside the household is converted from the frequency: daily help as 40 hours per week, weekly help as 8 hours per week, monthly help as 2 hours per week, and less often as half an hour per week.

evidence (Floridi et al. 2021), the percentage of people receiving mixed care increases with the number of ADL limitations, and this pattern is similar across age groups.

Table 5.11 shows the distribution of formal and informal hours of care per week, by respondent's age, among care recipients. As already noted, the distribution of hours of care for both formal and informal care is right skewed: the median number of weekly hours of formal care is 4 (that is, 50 percent of the care recipients receive less than 4 hours of care per week), while the mean is 13 hours per week. If we look at informal care, median and average care hours per week are 8 and 17, respectively. Individuals aged 85 years or older receive more informal care than younger respondents: median hours of help is 40, while 10 percent of oldest old receive at least 46 hours of help per week (to give a sense of the relevance of the care intensity for the oldest old, the comparable percentage of people receiving 46 or more hours of care per week in the full sample amounts to 5 percent). An even larger difference by age emerges when looking at the utilization of formal home-based care: people in the top 10 percent of the distribution of care hours among the oldest old receive 35 hours of weekly formal home-based care more with respect to the top 10 percent of care users among the population aged 65+.

5.3.4 Formal Long-Term Care Supply

There are over 12,000 nursing homes in Italy, endowed with almost 300 thousand beds (table 5.12). With more than 13 million individuals aged

Table 5.12 **Absolute number of nursing homes, beds, and occupancy rate, Italy, 2018**

	Italy 2018
Nursing homes	12,857
Nursing home residents aged 65+	282,385
Long-term care beds in nursing and residential care facilities	297,970
Occupancy rate	94.8%
Pop 65+	13,391,566
Beds per pop. 65+	0.022
Pop 85+	2,009,441
Beds per pop. 85+	0.148
Workers in nursing homes	413,706

Source: For beds in nursing homes (*posti letto in residenze comunitarie*), number of nursing home residents (*anziani per tipo di residenzialità*), and for number of nursing homes (*presidi residenziali socio-assistenziali e socio-sanitari*) ISTAT, <http://dati.istat.it/Index.aspx?QueryId=21996>. The total number of workers reported here includes paid and voluntary staff; in table 5A.2 we show their details by professional qualification. For population data, OECD Stat, <https://stats.oecd.org/Index.aspx?DataSetCode=POPPROJ>.

Table 5.13 **Distribution of nursing homes occupancy rate and beds across regions, Italy, 2018**

	Occupancy rate	Beds per pop 65+
5%	0.862	0.008
10%	0.894	0.011
25%	0.929	0.013
50%	0.940	0.020
75%	0.947	0.033
90%	0.961	0.039
95%	0.976	0.042

Source: ISTAT, <http://dati.istat.it/Index.aspx?QueryId=21996>, database on nursing home care facilities (*Presidi residenziali socio-assistenziali e socio-sanitari: Personale*)

65 or older, that amounts to 2 beds per 100 older persons and about 15 beds per 100 persons ages 85 or older. Approximately 95 percent of these beds are occupied at any point in time.

Table 5.13 shows a significant variation in nursing home capacity across the country: the number of beds per 100 older residents varies from 0.8 to 4.2, while the occupancy rate shows a relatively lower heterogeneity, as it ranges from 86.2 percent to 97.6 percent across regions.

Recent estimates report that in 2016 there were around 260,000 regular LTC workers in Italy, mostly females, which amounted to 1.9 per 100 people aged 65 and over, up from a ratio of 1.4 in 2011 (European Commission 2021). These figures, however, do not account for a vast population of irregular LTC workers, sometimes referred to as *badanti* (mostly migrants), whose numbers have been estimated around 800,000 (European Commission 2021).

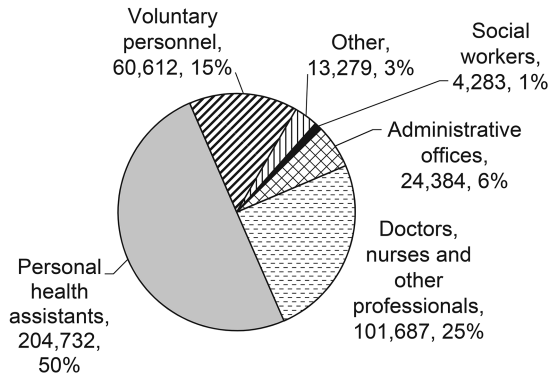


Fig. 5.10 Number and percent distribution of workers at care facilities, Italy, 2018

Source: Data from the ISTAT database on nursing home care facilities (Presidi residenziali socio-assistenziali e socio-sanitari: Personale)

Data on the care workforce is very limited in Italy, especially with respect to home-based care. The National Institute of Statistics (ISTAT) provides figures on the care workforce in care facilities (nursing homes), which we summarize in figure 5.10. Most workers in nursing homes are personal health assistants, followed by doctors, nurses, and other professionals, with a large residual share of voluntary personnel.

There are two main profiles of professional care workers in Italy who can work in both nursing homes and home-care settings: social-assistance operator (*Operatore Socio Assistenziale*, OSA), and medical-assistance operator (*Operatore Socio Sanitario*, OSS). The OSA is an auxiliary health care figure, officially recognized, trained, and prepared to directly assist people in carrying out daily activities, to help maintain and recover autonomy, to offer support for the psychological and physical well-being of the patient, and to reduce and avoid social isolation and social exclusion. The OSS has, unlike the OSA, health-related training and preparation, which also allows them to act as an assistant to nursing staff in the operating theater, besides working in the emergency room, and in nursing homes.

There is no comprehensive framework for quality checks on either residential LTC services or home-based services. Quality is monitored through authorization and accreditation processes, staff/users ratios, legislation on mistreatments, and training requirements for care workers (European Commission 2021).

Table 5.14 summarizes the training requirements for both OSA and OSS care workers. The OSA training lasts approximately 800 hours with compulsory attendance, in addition to the internship at an accredited facility. The OSS training is longer (about 1,000–1,200 hours).

The lower-skilled profile of *badante* requires no mandatory training or requirement to perform the job. However, since 2020, in order to incentivize

Table 5.14 **Training requirements for formal home care workers, Italy**

	Minimum training requirement
Assistant social worker (OSA)	800 hours
Health Social Worker (OSS)	1000 hours
Home Aide (Badanti)	Between 0 and 500 hours

Source: OSA, <https://www.lab.care/operatore-socio-assistenziale-osa/>, OSS <https://www.lab.care/come-diventare-oss/>, and *Badanti*, <https://www.accredia.it/2020/06/24/colf-babysitter-badanti-la-certificazione-accreditata-sostiene-le-famiglie/>. For the latter group, the minimum training requirement is not mandatory, and it is a professional certificate.

the training programs and increase the quality of the supplied care, *badanti* can be awarded a professional certificate if they complete at least 64 hours of no-cost training and pass a final examination, provided they have at least one year of experience providing care. Such a certificate allows workers to receive a higher hourly wage, which can reach a total of 8 to 10 euros per hour.⁹

Table 5.15 shows the earnings of workers in the health and social sector reported by the Italian Statistical Bureau, ISTAT, based on a two-digit NACE-code classification. The average hourly wage for workers in residential care activities is below the average salary for both part-time and full-time workers, with respect to the average hourly wage of workers in the industrial sector. Moreover, this average is also below the hourly wage of workers with less than a high school degree.

Unfortunately, we cannot retrieve information on the specific wages for the subset of jobs related to long-term care activities. On the basis of the distribution of workers presented in the third panel of table 5.15, also classified on a three-digit NACE code, we assume that most residential care and social work activities (without accommodation) are related to long-term care services.

5.4 Who Are the Caregivers?

This section of the study is of particular relevance, as we present, for the first time, robust estimates of the size of “informal help” in Italy, and the results are quite striking. Table 5.16 shows our estimates of the Italian population receiving help, with respect to the type of help and age groups. Informal help is almost *twice as large as* formal help: 34.7 percent of individuals (37.1 percent of the oldest old, 85+) receiving help report formal help, while this percentage is 83.8 percent (88.5 percent) for the reported informal help.

9. Further details available at the Italian National Office for Professional Accreditation website (ACCREDIA, <https://www.accredia.it/2020/06/24/colf-babysitter-badanti-la-certificazione-accreditata-sostiene-le-famiglie/>).

Table 5.15 Pay for care workers at residential facilities and in health care, Italy 2015

	Mean hourly wage			Median hourly wage		
	Full Time	Part Time	Total	Full Time	Part Time	Total
<i>Panel 1: Human health and social work activities</i>						
86: Human Health Activities	14.76	11.66	13.30	12.77	10.26	11.22
87: Residential Care Activities	11.55	10.86	11.17	10.43	9.84	10.15
88: Social Work Activities without Accommod.	11.27	10.63	10.79	10.18	9.65	9.78
<i>Panel 2: All Industry</i>						
All Workers	15.39	12.02	14.97	12.86	10.26	12.54
No High School Degree			13.17			11.99
No College Degree			15.63			13.25
College Degree or More			23.06			17.16
<i>Panel 3: Distribution of employees in human health and social work activities</i>						
86: Human Health Activities						239,028
861: Hospital Activities						37%
862: Medical and Dental Practice Activities						41%
869: Other Human Health Activities						22%
87: Residential Care Activities						152,440
871: Residential Nursing Care Activities						13%
872: Residential Care Activities for Mental Retardation, Mental Health and Substance Abuse						10%
873: Residential Care Activities for the Elderly and Disabled						51%
879: Other Residential Care Activities						26%
88: Social Work Activities Without Accommodation						148,247
881: Social Work Activities Without Accommodation for the Elderly and Disabled						55%
889: Other Social Work Activities Without Accommodation						45%

Source: ISTAT—<http://dati.istat.it/Index.aspx?QueryId=33485&lang=en>. Labor and wages. All euro amounts are in 2019 euros.

In a comparative perspective, the ratio of caregivers for the Italian population is not much higher than for other European countries: what characterizes Italian caregivers is the higher level of intensity of their commitment *vis-à-vis* the European average (European Commission 2021).

Figure 5.11 shows the demographic characteristics of informal and formal caregivers:¹⁰ more than 85 percent of the formal home care workers are women, while women providing informal care amount to 61.8 percent of the total number of caregivers. However, it should be added that, in

10. Data source INPS, <https://www.inps.it/osservatoristatistici/12/o/350>. We are reporting information for the formal home worker (i.e., *Colf/Badanti*) in Italy 2015. *Colf* (Collaboratori Familiari) are helpers who perform a variety of household tasks, while *Badanti* are caregivers who provide personal assistance to older, disabled, or ill individuals.

Table 5.16 **Population receiving help, Italy, 2015**

	Recipient of Help 65+	Recipient of Help 85+
Any Help	4,160,961	1,230,817
Formal	1,444,410	456,938
Informal	3,485,136	1,088,875
Observation	3,102	265

Source: SHARE wave 6. Respondent weights are used for all population estimate calculations. Nursing home residents are excluded. Formal help includes help with personal care, domestic tasks, meals-on-wheels, and other activities, while informal help includes help with personal care, practical household help, and help with paperwork.

line with recent evidence from the Share-Corona Survey, some degree of gender-specialization emerges for informal caregivers, as women tend to provide personal care, which is a more demanding and intense activity, while men provide help with financial issues and shopping (Bassoli and Brugiavini 2023).

Our results are also very interesting when looking at the age and education composition of caregivers. Formal home care workers are of typical working age, but more than 85 percent of informal caregivers are older than 50; the majority of caregivers (55.7 percent) have less than a high school diploma or a high school diploma (32.7 percent); and very few have a college degree or more.

Finally, figure 5.12 provides details on the relationship between informal caregivers and care recipients: spouses and children amount to around 50 percent of the caregiver population. It emerges that daughters are twice as likely to provide care if compared to sons; 20 percent is the share of in-laws, while the remaining share is made up of other relatives (13.8 percent) or friends (15.9 percent).

5.5 The Cost of Long-Term Care

As discussed in previous sections, Italian long-term care expenditure is mostly financed with public funds. Table 5.17 reviews these total costs. In 2015, the total spending in nursing homes amounted to 7 billion euros, for a total of 288 thousand residents in nursing homes, while the reported total spending in the home-based care (home health services) is 4.63 billion euros with an estimated number of users of approximately 1.5 million.¹¹ Spending on nursing home care is 50 percent larger than home health agency, despite there being more than five times as many users in the latter case.

However, because most of the home care is provided informally, typically by relatives, a proper accounting of the total cost of long-term care in the

11. Based on table 5.16.

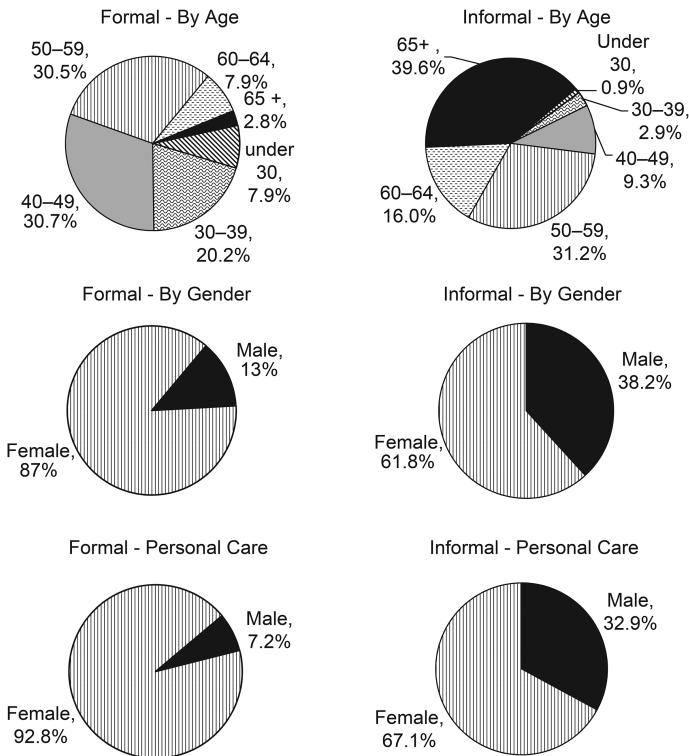


Fig. 5.11 Demographic composition of caregivers, Italy, 2015

Source: Formal caregiver data are from Home Worker data set of INPS. Informal care data come from SHARE w6. For each respondent who reported receiving help from a spouse or child, we were able to link them (spouse/child) to their general information (age, gender, education) provided by the respondent. For the respondents and their partners we classified as less than HS education those individual who have an ISCED 97 value lower than 3, with HS those that have a value between of 3 and 4, while the remaining two categories (college/ college plus) are for those with an ISCED 97 value of 5 or 6. For children the education is obtained from the reported level of education and degree they achieved. Respondent weights are used for all calculations. Nursing home residents are excluded.

economy should include the opportunity cost of their time as well. Valuing the opportunity cost of informal caregivers raises several issues and requires several assumptions. In the simplest model, with perfectly competitive labor markets and market wages equal to the value of leisure, the value of time spent in informal care would be the forgone wage. If high potential wage individuals choose to provide informal care rather than buy it, it is either because they get sufficient utility from the provision of care, or because the care they provide is of sufficiently higher quality to justify the “cost.”

In such a model, even those who are not employed in the labor market would have an opportunity cost of time—that being the wage that they

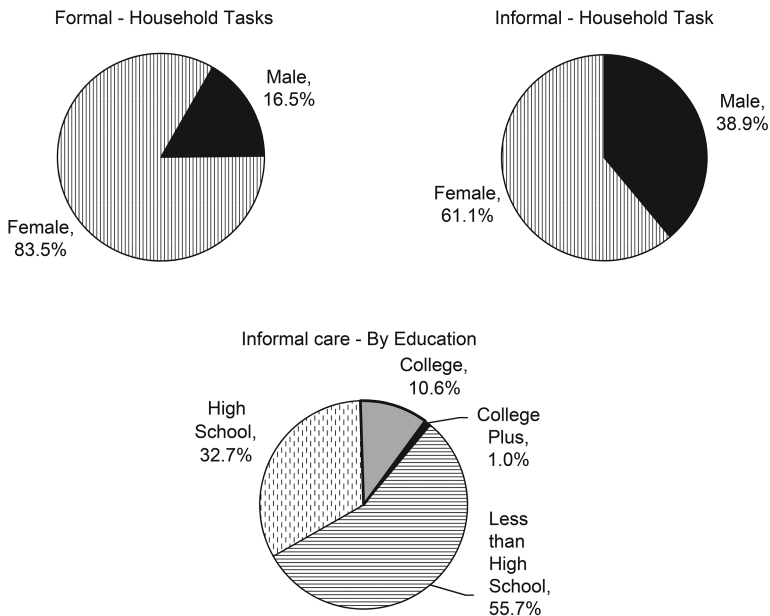


Fig. 5.11 (cont.)

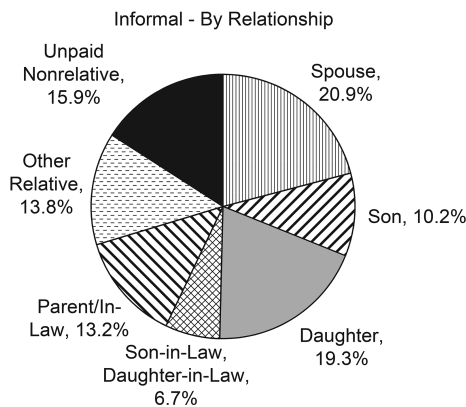


Fig. 5.12 Informal caregivers by relationship to care recipient, Italy, 2015

Source: Data from SHARE w6. Respondent weights are used for all estimate calculations. Nursing home residents are excluded.

would earn if they were to enter the labor market. In practice, however, retired individuals often do not have work opportunities that are equal to their value of leisure. It is also hard to value the potential wage for workers who are very old and/or have been retired for many years.

We therefore consider two options for valuing hours of informal care. In

Table 5.17 Formal care costs, annual, Italy 2015

	Number of users	Total spending (billion €)
Nursing home	288,000	7.00
Home health services (Formal)	1,444,410	4.63

Notes: Total spending data come from ISTAT System of Health Accounts. In particular, we report for nursing home the spending done in hospital and residential long-term care facilities while we aggregate the other categories in home health agency. We multiply the spending by the proportion of the elderly residential care receiver aged 65 and over (75%, <https://www.istat.it/en/archivio/215525>). The number of users for HHS is estimated from SHARE w6, excluding nursing home residents. Respondent weights are used for all population estimate calculations. All euro amounts are in 2019 euros.

both cases, if informal care is delivered by those who are working, the care is valued at their predicated wage. In one case, for those who are not working, we value their time at zero (“low valuation”). In the other case (“high valuation”), we value the time of those who are not working at the replacement cost of home care. It is not easy to obtain reliable information on actual wages for care workers in Italy. For the scope of our analysis, we first focus on the legislative minimum hourly wage for formal care workers, *badanti*: the minimum average wage for *badanti* is €5.43 per hour, which corresponds to the average between the minimum wage for the lowest contractual category and the highest contractual category as reported in the national collective bargaining employment contract for “Badanti & Colf.” Second, we rely on estimates from the Economic Research Institute (www.eri-ri.com), which reports an average actual wage for formal caregivers in Italy of €11 per hour (<https://www.eri-ri.com/salary/job/caregiver/italy>).

Moreover, quantifying the hours of informal home care requires overcoming further challenges related to data limitation. In the SHARE data, respondents can give details only for the informal care they provided to people living outside the household; conversely, when they provide informal help inside the household, no information on intensity is reported. Total hours of informal help are therefore built based on the self-reported help given to recipients outside the household, by a respondent in the SHARE w6 (age50+), which we complement with an imputed measure of informal help intensity given to people living inside the household. The latter value is imputed based on data from the ISTAT-Multipurpose survey on households (Time Use [ISTAT-*Indagine Multiscopo sulle Famiglie: Uso del tempo*]). The ISTAT survey provides an average amount of care hours provided by caregivers differentiated by sex and age class, based on self-reported information provided through a “daily diary,” and including activities such as help with household tasks and help with personal care.

In order to predict the potential wage, we need to account for the fact that in our sample, most respondents are retired, due to the sample selection of SHARE (people over 50 years of age at baseline) and due to the longitudinal nature of the survey. We therefore build an imputed measure of respondents’

Table 5.18 **Valuation of informal home care, Italy, 2015**

	I	II	III
Valuation	11.2	17.31	22.91
Total Hours Informal Help	2.6	2.6	2.6
E(Work)	0.39	0.39	0.39
E(Work) * E(Wage Work) (unconditional expected wage)	4.05		
E(Wage Work)	10.38		
Hours—Helper Working	1.21	1.21	1.21
Hours—Helper Not Working	1.69	1.69	1.69
Home Health Aide Wage		5.43	11

Notes: Column I values predicted working hours at the predicted wage, and non-working hours at zero wage. Column II values the hours of not working informal caregiver at the replacement cost based on the average home health aide wage of €5.43 computed taking the average minimum wage of professional home care between the lowest category and highest one reported in the national collective bargaining employment contract for “Badanti & Colf.” Column 3 uses the average hourly wage for caregiver from ERI, <https://www.erieri.com/salary/job/caregiver/Italy>. Valuations are done at the helper level, with predicted wages and probabilities of work imputed from SHARE w6 using data for education, age and age square, sex, marital status and children in the household. Valuation and hours are reported in billions, and they are in 2019 euros.

hourly wage as well as their employment probability. We use a multiple imputation regression logit model based on the observable characteristics such as age, age-squared, years of education, sex, marital status, and number of children. The predicted average wage for respondents who are working at the time of the interview is €10.38 per hour, while the average probability to be in paid work is 39 percent.

The “low valuation” estimate of the economic value of informal caregiving is computed by multiplying the number of each caregiver’s care hours provided in one year by the caregiver’s predicted wage, by the probability of being in paid work. Conversely, the “high valuation” estimate is computed by adding to the low valuation estimation the product between caregiving hours provided by the home-based health aide wage, by (1-probability of being in paid-work). As previously explained, we use two alternative values for the wage for the home-based formal care substitute: the minimum wage of *badanti*, and the actual average wage of formal care workers in Italy. The resulting estimates of the economic value of informal care are reported in table 5.18: the yearly value of informal care in Italy ranges from 11.2 to 22.91 billion euros. In terms of the composition of total long-term care expenditure, we have shown in the previous section that this has three parts: the actual health care component, the cost for other LTC provisions, and the national attendance cash allowance. It should be stressed that while the first two can vary at regional level or even local level and are earmarked to long-term care services, the latter is a pure cash benefit granted to individuals aged 65 and over who qualify based on citizenship. There are basically very little constraints on the way this allowance is spent by the beneficiary

Table 5.19 Total costs by type of care and source

Care Type	Source	Cost I		Cost II		Cost III	
		€	% GDP	€	% GDP	€	% GDP
Nursing home	Private	2.57	0.15%	2.57	0.15%	2.57	0.15%
	Public	4.43	0.26%	4.43	0.26%	4.43	0.26%
	All	7	0.42%	7	0.42%	7	0.42%
Home health agency	Private	0.34	0.02%	0.34	0.02%	0.34	0.02%
	Public	4.29	0.25%	4.29	0.25%	4.29	0.25%
	All	4.63	0.28%	4.63	0.28%	4.63	0.28%
Informal Care	Private	11.2	0.67%	17.31	1.03%	22.91	1.36%
Total	Private	14.11	0.84%	20.22	1.20%	25.82	1.53%
	Public	8.72	0.52%	8.72	0.52%	8.72	0.52%
	All	22.83	1.36%	28.94	1.72%	34.54	2.05%

Notes: from ISTAT System of Health Accounts (<http://dati.istat.it/index.aspx?lang=en&SubSessionId=4b1103ef-e51b-4a24-83a2-b1e7dc786251>) and SHARE w6. The value of the formal and informal care cost is from tables 5.16–17. Italy's GDP for 2015 was €1683 billion. All euro amounts are in 2019 euros.

and her/his relatives, so that in fact it may not be covering just long-term care services but more general expenditure items as well. The cash benefit accounts for 0.64 percent of GDP: this implies that, for the year 2015, the public expenditure was 10.8 billion euros,¹² less than our lowest estimated cost for informal care.

We can combine this result with the previous data on long-term care spending to estimate the distribution of long-term care costs across public and private sources. We have shown in figure 5.6 that 63.28 percent of the cost of nursing home care and 92.77 percent of the cost of home health care are publicly financed while the remaining part is privately financed, out of pocket or with private insurance. On the other hand, the full cost of informal care is just privately financed.

In table 5.19, we show the expenditure in the nursing home and home health agencies financed by public and private funds. In addition, we include the estimated evaluation of informal care. We find that the majority of long-term care spending is privately financed when informal care is considered. Based on the “lower valuation” estimation of the economic value of informal care, private expenditure is €22.83 billion, which is equivalent to 1.36 percent of Italian GDP; while based on the “higher valuation,” the economic value of informal care can be estimated in the range between €28.94 billion and €34.54 billion, both equivalent to 1.72 percent and 2.05 percent of the Italian GDP.

12. Italy's GDP for 2015 was €1,683 billion (2019 euros).

5.6 Conclusions

In this chapter we summarized the main features of the demand and supply of long-term care in Italy.

As per the demand side, we show that older people in need of care are generally poorer than healthier or younger individuals. Moreover, a large fraction of frail older people receives a substantial amount of care, from informal sources and/or from formal providers. This evidence, coupled with the aging trend of the Italian population, should alert policymakers to a clear rising demand for long-term care in Italy in coming decades.

On the supply side, Italy is characterized by a two-tier system, consisting of a publicly provided LTC, which is very regionally fragmented, and of informal care. Finally, private insurance for LTC services is negligible. The public programs of long-term care include a national cash benefit, complemented by local programs of in-kind and in-cash support in each of the twenty Italian regions. Generosity and eligibility rules vary widely across regions, creating disparities and unequal coverage. Informal long-term care is largely borne by daughters and by daughters-in-law, typically with a low education level. This informal care provision is complemented by a large irregular market for care workers, mainly immigrant women (*badanti*).

Our analysis also aimed at estimating the overall costs of long-term care provision. In this respect, our main finding is that the vast majority of LTC costs in Italy are financed privately, either out of pocket or through forgone working opportunities for family caregivers. This is due to the large role played by informal care in the provision of long-term care, and even when adopting a conservative approach to impute the economic value of informal care. From a prospective point of view, it is important to note that with Italy being a low-fertility country, such figures will hardly be reversed in the coming decades. This finding has important policy implications: policymakers should be aware that the expected increase in demand for care will hardly be met without a larger role of publicly provided LTC or quick development of a private insurance market. In absence of a substantial contribution through public provision, unmet needs in Italy could therefore increase and lead to lower welfare for older people and society as a whole.

Appendix

In this appendix we describe how we adjusted the cross-sectional weights present in SHARE to consider the attrition problems that arise for individuals in nursing homes. We can easily see that the probability of living in a nursing home conditional on age 65+ is 0.0125 based on the wave 6 sample

Table 5A.1

		Whole 65+ Population		
	Share of	All	Male	Female
In Nursing Home	65–79	0.005	0.001	0.004
	80+	0.017	0.004	0.012
Not in Nursing Home	65–79	0.693	0.321	0.373
	80+	0.285	0.103	0.182

Table 5A.2 Staff in residential social and health care facilities, Italy, 2018

Professional qualification	Paid Staff
Directors And Coordinators	10,301
Employee	14,083
General Practitioners	6,753
Specialized Doctors	3,355
Psychologists	6,227
Sociologists	269
Social Workers	4,283
Teachers	339
Professional Youth Workers	25,457
Activity Leaders	4,768
Cultural Mediators	614
Nurses	41,002
Physiotherapists	10,884
Rehabilitation Physiotherapists	1,001
Speech Therapists	1,018
Health And Social Workers	116,308
Other Staff Providing Personal Care	41,836
Staff Involved in the Preparation and Distribution Food	14,691
Other General Service Staff	31,897
Civilian Service	3,982
Parent Figures	747
Other Personnel	13,279
Total	353,094

Source: ISTAT, <http://dati.istat.it/Index.aspx?QueryId=21996>. Residential social and health care facilities (*Presidi residenziali socio-assistenziali e socio-sanitari*). In addition to the paid staff there were 60,612 voluntary staff that helped in the residential facilities, but for them ISTAT does not report the specific qualification.

and using cross-section weights; moreover, this probability falls to 0.0079 when we tried to add wave 7 data and adjust for longitudinal weights. On the other hand, looking at national statistics, such as the ISTAT, this probability is 0.0218.

Since SHARE does not create sample weights for those in a nursing home, we adjust SHARE weights to match the reported percentage in the national

statistics for individuals living in nursing homes and those not. The procedure we adopt is essentially the same as it is done to adjust weights from the English Longitudinal Study of Ageing (ELSA).

National statistics provided by ISTAT allow us to retrieve the population of individuals 65+ in a nursing home, the percentage of females, and the percentage of those 80+. We use this information to compute the proportion of population in eight categories as illustrated in the table and to recalibrate the weights based on gender and age. In the following tables, we show the imputed proportion:

References

- Atella, V., F. Belotti, C. A. Cricelli, D. Dankova, J. Kopinska, A. Palma, and A. Piano Mortari. 2018. "The 'Double Expansion of Morbidity' Hypothesis: Evidence from Italy." CEIS Research Paper, 396/2017.
- Bakx, P., C. Meijer, F. Schut, and E. van Doorslaer. 2014. "Going Formal or Informal, Who Cares? The Influence of Public Long-Term Care Insurance." *Health Economics* 24 (6): 631–43. doi: 10.1002/hec.3050.
- Barbabella, F., P. Checucci, M. L. Aversa, G. Scarpetti, R. Fefè, M. Socci, C. Di Matteo, E. Cela, G. Damiano, M. Villa, D. Amari, S. R. Montagnino, L. D'Agostino, V. Iadevaia, A. Ferrante, G. Lamura, and A. Principi. 2020. "Le politiche per l'invecchiamento attivo in Italia." Rapporto sullo stato dell'arte. Dipartimento per le Politiche della Famiglia-IRCCS INRCA. <http://famiglia.governo.it/media/2132/le-politiche-per-l-invecchiamento-attivo-in-italia.pdf>.
- Bassoli, E., and A. Brugiavini. 2023. "Unequal Care Provision: Evidence from the Share-Corona Survey." Research Paper Series No. 05/WP/2023. University Ca' Foscari of Venice, Dept. of Economics.
- Börsch-Supan, A., M. Brandt, C. Hunkler, T. Kneip, J. Korbmacher, F. Malter, B. Schaan, S. Stuck, and S. Zuber, on behalf of the SHARE Central Coordination Team. 2013. "The Survey of Health, Ageing and Retirement in Europe (SHARE)." *International Journal of Epidemiology* 42(4), 992–1001.
- Brugiavini, A., L. Carrino, C. E. Orso, and G. Pasini. 2017. *Vulnerability and Long-Term Care in Europe: An Economic Perspective*. London: Palgrave MacMillan.
- Carrino, L., C. E. Orso, and G. Pasini. 2018. "Demand of Long-Term Care and Benefit Eligibility across European Countries." *Health Economics* 27 (8): 1175–188. doi:10.1002/hec.3665.
- Chatterji, S., J. Byles, D. Cutler, T. Seeman, and E. Verdes. 2015. "Health, Functioning, and Disability in Older Adults—Present Status and Future Implications." *Lancet*, 385 (9967): 563–75.
- European Commission. 2021. *The 2021 Ageing Report: Economic & Budgetary Projections for the EU Member States (2019–2070)*. Publications Office.
- Floridi, G., L. Carrino, and K. Glaser. 2021. "Socioeconomic Inequalities in Home-Care Use across Regional Long-Term Care Systems in Europe." *Journals of Gerontology: Series B*, 76 (1): 121–32.
- Gori, C., J. Fernandez, and R. Wittenberg. 2015. *Long-Term Care Reforms in OECD Countries: Successes and failures*. Bristol, UK: Policy Press.
- Hashiguchi, T. C. O., and A. Llana-Nozal. 2020. "The Effectiveness of Social Protec-

- tion for Long-Term Care in Old Age: Is Social Protection Reducing the Risk of Poverty Associated with Care Needs?" *OECD Health Working Papers*, No. 117. Paris: OECD Publishing. <https://doi.org/10.1787/2592f06e-en>.
- Jessoula, M., E. Pavolini, M. Raitano, and M. Natili. 2018. ESPN Thematic Report on Challenges in Long-Term Care. Italy, Brussels.
- Kaeberlein, M., P. S. Rabinovitch, and G. M. Martin. 2015. "Healthy Aging: The Ultimate Preventative Medicine." *Science* 350 (6265): 1191–193.
- OECD. 2019. Health at a Glance 2019.
- OECD. 2022. Historical population data and population projections. OECD Statistics, Paris.
- Rechel, B., E. Grundy, J.-M. Robine, J. Cylus, J. P. Mackenbach, C. Knai, and M. McKee. 2013. "Ageing in the European Union." *Lancet* 381 (9874): 1312–1322.