

# Institutional Long-Term Care Use in France (2008-2015): The Role of Family Resources

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**Abstract** – The substantial increase in the proportion of very old people in the population has not given rise to a large increase in institutional long-term care (LTC) in France. In this article, we aim to analyse the contribution of individual factors to this trend: age, level of education, gender, type of disability and the family environment. Based on data from the *Handicap-Santé 2008-2009* survey and *Capacités et Aides et REssources des seniors (CARE) 2015-2016* survey, we estimate the change in the probability that an individual aged 75 or over will be living in an institution based on these various factors. A decomposition shows that the increase in the proportion of very old people and those with severe limitations brings about an increase in overall use, but that the increase is offset by a concomitant increase in family resources to be helped at home. The level of use associated with the various factors did not change significantly. The limited increase in LTC use is explained by a composition effect, linked to an increase in family resources to provide in-home care, but not to a reduced level of LTC use.

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The increase in life expectancy and the ageing of Baby Boomers are reflected in an increase in the number and proportion of old people within the population. In 2021, France counted 18 million people aged 60 and over (6.4 million aged at least 75), representing 27% of the total population. By 2050, this proportion is expected to rise to 33%, amounting to 23 million people, with an even greater share of very old people (Algava & Blanpain, 2021). As advancing age increases the risk of dependency (defined as the need of assistance for elementary activities), these demographic dynamics suggest that the number and proportion of dependent old people will also increase (Larbi & Roy, 2019; Ben Jelloul *et al.*, not yet published). Larbi & Roy (2019) estimate that almost 4 million old people in France will be dependent by 2050 (16% of persons aged 60 or over), compared with 2.5 million in 2015 (15% of persons aged 60 or over).

These demographic changes are accompanied by an increase in the number of people living in institutions for old people (EHPA, *Établissement d'hébergement pour personnes âgées*): between 2007 and 2015, this number increased from 657,000 people, with 495,000 of them living in institutions dedicated to dependent old people (EHPAD) (Prévot, 2009), to 728,000 in EHPA (+11%), of which 590,000 living in EHPAD (+18%) (Abdouni *et al.*, 2019; Muller, 2017a). These figures reflect increased need in terms of the number of dependent persons to be accommodated (+91,000); however, the proportion of the population aged over 60 living in EHPAD (3.6%) has remained stable (Carrère & Dubost, 2018). In their projections, Miron de l'Espinay & Roy (2020) estimate the expected population of EHPAD residents to 719,000 people in 2030, then 930,000 in 2050 (intermediate demographic scenario), an increase of around 50% compared with the 610,000 residents in 2019. These projections are based on the assumption that the rate of use of EHPAD will remain stable with regard to age, gender and level of dependency, implying a significant increase in the number of people to be accommodated. The authors also explore scenarios involving more moderate growth in available accommodation. Given the current dynamics with regard to the creation of beds and the targets set by the public decision-maker,<sup>1</sup> it is indeed likely that the coming decades will bring the rationing of EHPAD beds.

Although age and disability are key factors in the use of care facilities (Wolinsky *et al.*, 1993; Hajek *et al.*, 2015), they are not the only factors at play: the availability of potential caregivers

and socio-economic characteristics also appear to be decisive (Billaud & Gramain, 2006; Gaugler *et al.*, 2007a; Luppa *et al.*, 2010). Potential changes in these factors must therefore be taken into account when forecasting care needs. In addition, the impact of these determining factors on the use of institutional care may change over time as a result of changes in individuals' behaviour linked to evolving individual preferences or external constraints (public policies, care provision). However, the laws of 20 July 2001 and 28 December 2015<sup>2</sup> encouraged people to remain in their own home, even when needing assistance (Trabut & Gaymu, 2016; Tomassini *et al.*, 2004). This "shift to in-home care" desired by the public decision-maker responds, on the one hand, to the demands of individuals – who express a preference for remaining at home should they need assistance (Eurobarometer, 2007) – and, on the other hand, to manage the costs associated with assisting people with severe disabilities. Indeed, such costs, whether borne by individuals or public funding, would be higher in an institution than at home (Fizzala, 2016; France Alzheimer, 2011; Ratte & Imbaud, 2011).<sup>3</sup> In 2019, according to figures from the Directorate of Social Security, the average cost of being cared for in an institution varies from EUR 28,700 per year for people with a low need for assistance (GIR 4) to EUR 40,000 per year for with the most intense need for assistance (GIR 1); the figures for being cared for at home are EUR 7,500 and EUR 32,900, respectively.<sup>4</sup> This encouragement to be cared for at home resulted in few beds being implemented within institutions (Muller, 2017a), but was not accompanied by a significant shift towards in-home care (Carrère *et al.*, 2021). This resulted in an increase in EHPA bed occupancy rates (Muller, 2017b) and the emergence of waiting lists. This lack of available beds within institutions brought about a change in the behaviour of individuals when it comes to care.<sup>5</sup> The projection assumption based on the stability of the use of EHPA therefore needs to be tested.

In this article, we propose an evaluation of the role of factors other than age and disability in the

1. In the Social Security Financing Bill (Projet de loi de financement de la sécurité sociale – PLFSS) for 2022 the creation of EHPAD beds is limited to 2,000 per year from 2024.

2. Law on the handling of the loss of autonomy of elderly persons and the personal autonomy allowance (2001) and Law on the adaptation of society to ageing (2015).

3. It should be noted, however, that this does not take account of intra-family transfers taking the form of a service, the monetary valuation of which significantly increases the cost of homecare.

4. See the evaluation report on social security policies ("independence" branch), annexed to the Social Security Financing Bill for 2022 (PLFSS 2022).

5. This study uses data from before the COVID-19 crisis. According to Miron de l'Espinay & Ricoch (2021), the average EHPAD occupancy rate fell by 6% between January 2020 and January 2021.

use of EHPA. We analyse the mechanisms linked to the effect of changing population characteristics (composition effect) and those linked to the effect of this change on the relationship between those characteristics and the use of institutional care. In order to do so, we use an analytical framework (de Meijer *et al.*, 2015), which we apply to France using data covering the years 2008 and 2015. In this context, the change in the use of EHPA is considered as the result of a change in the nature of prevalent disabilities and the demographic, family and social characteristics of individuals. We decompose that change to analyse the respective contribution of changes in the composition of the population in view of these factors and that of changes in the way these factors are linked to the use of EHPA. This decomposition allows analysing whether such links changed over the period and whether they tended to accentuate or moderate the impact of the change in composition. In addition to identifying the above mechanisms, this study also points to additional data that would be useful inputs for projection exercises. The article provides a literature review in Section 1. In Section 2, we describe the data and analysis strategy allowing for the identification of the dynamics underlying the change in the probability of living in an EHPA. The results are presented in Section 3, discussed in Section 4, and followed by a conclusion.

## 1. Literature Review

### 1.1. Factors Affecting the Provision of Care in Institutions rather than at Home

There has been a great deal of research into the use of institutional long-term care in recent decades. Health status appears to be the main factor due to its impact on the risk of needing assistance on a daily basis (Arnault, 2015; Carrère, 2021). The presence of functional limitations increases the probability of living in institutions (Wolinsky *et al.*, 1993; Hoerger *et al.*, 1996; Nihtilä *et al.*, 2008; Hajek *et al.*, 2015; Carrère & Jusot, 2020; Carrère, 2021), but with variations depending on their severity and nature. Cognitive limitations (Hoerger *et al.*, 1996; Nihtilä *et al.*, 2008; Luppá *et al.*, 2010), their combination with activity limitations (Gaugler *et al.*, 2007b) or their sudden occurrence (Laferrère *et al.*, 2013) increase the probability of living in institutions. Gramain (1997) shows that the probability of living in institutions is higher where cognitive functional limitations occur prior to physical or sensory functional limitations. This means that the

degree to which they need assistance is greater for those living in an institution than those living in their own home (see Fuller-Thomson *et al.* (2009) for the United States; Calvet & Pradines (2016) for France). Health status also has an indirect impact on the use of institutional care: its deterioration can accentuate feelings of insecurity, isolation or even the feeling of being a burden on the family group (Böckerman *et al.*, 2012), and causes old people to rethink their individual preferences with regard to the types of care available to them.

Looking beyond the care needs associated with severe and complex levels of disability, the probability of living in institutions increases with age for men, or where there is little opportunity to benefit from informal care (Bonsang, 2009; Freedman, 1996). All else being equal, there is a positive correlation between age and the risk of living in an institution. Alterations in certain functions, the occurrence of certain diseases, feelings of insecurity at home or actual or perceived isolation are all factors associated with advancing age that contribute to people moving into an institution. People may also simply be resigned to living in an institution as they get older. Age therefore captures care needs, as well as potentially certain factors associated with individual preferences. The change in the proportion of very old people among the old population, due to the ageing of successive generations, is expected to lead to a change in the proportion of the population living in institutions.

There are more women living in institutions than men. Due to their greater longevity, they are more likely to reach ages where the risk of severe disability is high and where they have a greater risk of being widowed and therefore finding themselves alone when they need assistance. However, empirical results reveal that, all else being equal, women are less likely to be living in an institution than men. Moreover, an increase in the probability of living with a partner has been observed due to a decrease in mortality among men, which undoubtedly has an impact on the proportion of the population turning to institutional care (Bonnet *et al.*, 2021). Therefore, whether a person grows old with a partner or alone and whether or not they have children, brings about significant changes in the probability of remaining in their own home in the event of the deterioration of their functional state (Van Houtven & Norton, 2004). In this regard, family caregivers now appear to act as a key factor in whether or not old people with severe disabilities can remain in their own home

(Fontaine & Juin, 2020). Finally, gender can also capture particular preferences or resources influencing the type of care chosen. For example, Low & Altman (1992) developed the concept of place attachment and the literature shows that women tend to be more attached to their place of residence (Shen *et al.*, 2004). They are also more likely to be involved in domestic chores within their home and are therefore more able to remain at home, even if they live alone.

The impact of income on the use of institutional care is not clearly established in the literature and, to our knowledge, there are no recent studies based on French data that explore the link between income and the probability of living in institutions. The significant impact of social category highlighted by Désesquelles & Brouard (2003), who show that blue-collar and white-collar workers have a higher probability of living in institutions than executives or craftspeople, traders and company managers, partially captures an income effect and very likely also social differences concerning the level of education, health status and behaviour when it comes to accessing care or assistance that are not otherwise controlled for. The inherent impact of income is *a priori* ambiguous: although a higher income makes it easier to shoulder the cost burden associated with living in an institution, which is generally higher than that associated with remaining at home (Quentin *et al.*, 2010; Fizzala, 2016),<sup>6</sup> it also allows for the provision of more comprehensive care in their own home – for example greater use of professional personal assistants, the provision of services that allow living at home when functional difficulties occur (meals on wheels, remote alarm) or housing arrangements<sup>7</sup> that allow people to grow old in ordinary housing (Laferrère *et al.*, 2013). According to Garber & MaCurdy (1990) income has a smaller impact on whether or not a person moves into an institution than personal wealth and in particular the fact of owning one's own home. This conclusion could very definitely apply to France: added together, the social and fiscal benefits that partly finance facility expenses (personal autonomy allowance, housing benefit, tax credits, but not including social housing benefits) appear to be only very slightly influenced by income and their amount is limited, covering only 18% of accommodation costs on average (Boneschi & Miron de L'Espinay, 2022). Many residents therefore finance some of their accommodation costs from their own wealth. Studies also show the existence of a degree of reluctance among family members to finance the homecare needed to face

increased dependency, in an effort to preserve that wealth. This may lead relatives to prioritise in-home care to avoid losing a share of their inheritance to the expenses. Lockwood (2018) demonstrates that people aiming to hand down their wealth increase their savings and decrease their expenditure on LTC (including insurance). The links between income, wealth and behaviour when it comes to the use of institutional care therefore appear to be relatively complex and largely unexplored, particularly in the context of French institutional care.

## 1.2. Predicting Levels of Use of Institutional Care

In order to anticipate future care needs, several methods have been developed with a view to taking as many determining factors as possible into consideration: weighting methods (Kemper & Murtaugh, 1991; Murtaugh *et al.*, 1990) and microsimulation (Miron de l'Espinay & Roy, 2020; Dick *et al.*, 1994; Kemper *et al.*, 2005). The latter use the relationships observed between these determining factors (on a given date based on surveys that are representative of the population) and the use of institutional care to forecast the number of people needing care in the future. The exercise requires to model future changes in the determining factors under consideration. While it is quite easy to project the age and sex structure of the old population by socio-economic, family and disability characteristics are more difficult to predict. These models often also estimate the change in LTC needs in the event that behaviour remains stable. However, changes in behaviour pose a significant challenge when adjusting the political response to meet demand: if the number of beds in institutions are to be limited in the future, the offer must be accompanied by a change in behaviour and preferences towards being cared for in one's own home. In France, according to the DREES barometer, two-thirds of French people have no plans to live in an institution (BVA, 2018). Among people aged 65 and over, the proportion of people reluctant to be cared for in an institution increased from 25% in 2002 to 42% in 2019.<sup>8</sup>

The reasons behind these changes are yet to be identified, but they point to a lower propensity for use. As regards the political response to

6. This difference is down to a number of factors, including in particular the fact that the assessment does not take account of informal care and that institutional care costs include accommodation.

7. Diepstraten *et al.* (2020) show that people who have adapted their homes to make them more accessible have a lower risk of living in an institution.

8. See <https://drees.shinyapps.io/Barometre-DREES/>.

the LTC needs, this may question the impacts of encouraging people to remain in their own homes while not making any significant changes to the number of beds available, as mentioned in the introduction.

In the absence of precise data on these factors and the changes thereto, models aiming to predict the use of institutional care often take account of only a small number of factors – as was the case for the first exercises, such as the one performed by Dick *et al.* (1994) using age, gender and ethno-racial characteristics. Kemper & Murtaugh (1991), for the United States, took their forecast a step further by using more information on the people concerned. However, their model was based on data from a cohort of people aged 65, limiting the scope of the results. In France, the *Lieux de vie et autonomie* [Accommodation and autonomy (LIVIA)] model by Miron de l’Espinay & Roy (2020), uses age, gender and disability. Outside of these three factors, the model therefore assumes that the dynamics of the rate of people living in institutions are solely dependent on changes in the number of people to be accommodated.

## 2. Data and Methods

In order to explore the factors behind the recent change in the rate of people living in institutions, we make use of data from two major surveys conducted seven years apart in France. We present these data here, together with the study variables, and then the analysis framework and our approach.

### 2.1. Data and Variables

#### 2.1.1. The *Handicap-Santé* (2008-2009) and *CARE* (2015-2016) surveys

The use of EHPA is studied here on the basis of data from the *Handicap-Santé* and *Capacités et Aides et Ressources des seniors* (CARE) surveys conducted by the Directorate of Research, Studies, Evaluation and Statistics (DREES) of the French Ministry of Health and Social Affairs. These two surveys are based on similar survey design, and provide comparable information on the main individual and family factors for using institutional care (Box 1). Their similarity makes it possible to observe the dynamic change in the use of institutional care over a span of seven

#### Box 1 – The *Handicap-Santé* (2008-2009) and *Capacités, Aides et Ressources des seniors* (CARE) (2015-2016) surveys

The *Handicap-Santé* [Health and Disability] (2008-2009) and CARE (2015-2016) surveys were conducted by DREES with the primary objective of estimating the prevalence of activity limitations in France, the various dimensions of people’s living conditions, as well as the nature, quantity and origin of care received. Each of the two surveys covers the population living in ordinary housing (households) and in institutions.

The samples for the household components (*Handicap-Santé Ménages* – HSM, 2008; *CARE-Ménages* – CARE-M, 2015) are made up of respondents to the *Vie Quotidienne et Santé* [Everyday Life and Health] survey (conducted in 2007 and 2014, respectively). This makes it possible to identify persons with disabilities and to over-represent them in the household components. The samples for the “institutional care” components (*Handicap Santé Institutions* – HSI, 2009; *CARE-Institutions* – CARE-I, 2016) are drawn in two stages: first care facilities and then residents. The selected institutions are EHPAD, non-EHPAD nursing homes and long-term care units (USLD). *Handicap-Santé Institutions* also includes care facilities for disabled adults, psychiatric units and accommodation and social rehabilitation centres (CHRS). We have kept these care facilities within the analysis, even though they are not specifically intended to accommodate old people with disabilities, since they only represent a very small proportion of persons aged 75 and over. The response rates are shown below.

#### Response rate of persons aged 60 and over within the sources used

	Pre-survey (%)	Survey (%)
HSM 2008	58 (VQS 2007)	73
HSI 2009	97 (care facilities)	93 on EHPAD, EHPA and USLD
CARE-M 2015	57 (VQS 2014)	71
CARE-I 2016	89 (care facilities)	85

The two surveys include a large number of questions that are identical in both the ordinary housing and institutional care components. These surveys are conducted face-to-face. The persons having difficulty in responding to surveys may have received help from a family member or health professional. The response bias associated with this use of a proxy does not appear to affect the declared needs of the individual (Davin *et al.*, 2009). Some of the missing values linked to partial non-response were imputed using the hot-deck method (Andridge & Little, 2010).

Our final base includes 15,944 individuals aged 75 and over living in metropolitan France, 7,073 for 2008 (2,918 living in institutions) and 8,871 for 2015 (2,930 living in institutions).

years. These are the only representative data of the old population living in ordinary housing and in institutions combining health and socio-demographic variables.

The adequate size of the samples make it possible to perform multivariate analyses on the oldest people (those aged 75 and over), since the use of institutional care is rare before this age. We conduct our analysis on samples of 7,073 individuals aged 75 and over residing in France (except overseas territories) in 2008 and 8,871 in 2015. The data are pooled to analyse in-home care and institutional care on both dates (2008 and 2015).

### 2.1.2 Variables

The use of EHPA, which is our variable of interest, is measured via the probability of living in an institution rather than in ordinary housing in the pooled sample. A person is considered to be living in an EHPA if they are included in the HSI or CARE-I sample, and they are considered to be living in their own home if they are included in the HSM or CARE-M sample. The rate of people living in institutions is the proportion of people living in EHPA. We use the survey weightings to calculate this.

Based on the literature, we retain the following key explanatory variables:

- Age is broken down into three classes: 75-79, 80-89 and 90+. The change in the structure of the age groups is linked to the dynamics associated with smaller or larger generations reaching the various ages. A large number of people reaching the old age group would temporarily lower the average age of the old population, subsequently increasing it if the next generation is smaller.

- Functional health is measured based on the functional limitation (FL) and activity restriction (AR) indicators. FL include both physical and cognitive limitations. They are captured by questions concerning the degree of difficulty people have in walking, climbing stairs, raising their arms, using their fingers, kneeling or carrying loads, remembering the time of day, concentrating, solving everyday problems, and whether they have memory gaps. The AR indicator concentrates on basic daily activities (difficulties with personal hygiene, dressing, eating, cutting up food, using the toilet, lying down, and sitting); resulting in need for care; difficulties in such activities are used in the majority of studies to reflect situations involving dependency on someone's help. We only take account of severe activity limitations (major difficulty or impossibility of completing activities alone).

We establish a disability level variable reflecting how advanced in the disablement process a person is (Verbrugge & Jette, 1994) with three modalities: Autonomy (no severe FL or AR); FL only (at least one FL but no severe AR); FL and AR (at least one severe AR).

- The socio-economic status is approached by the highest level of education attained, broken down into three modalities: low (no certificate or diploma of primary education and leaving certificate); intermediate (certificate of professional competence, diploma of occupational studies or baccalaureate); high (higher education qualification). Additional analyses, not presented here, include the former socio-professional category, but the estimates lose in significance due to the strong correlation with the level of education.

- The family configuration is used here with a view to reflecting the informal care resources that could potentially be called upon to enable in-home care provision by informal caregivers. This is a measure of potential care and not actual care. We consider the fact of a living partner, child or sibling.

Table 1 describes the samples in 2008 and 2015 (weighted data) according to these various characteristics.

The use of EHPA by persons aged 75 and over increased from 8.4% to 9.2% between 2008 and 2015, which is a significant increase of 0.8 percentage points (pp), relatively close to the figure obtained using other data sources.<sup>9</sup>

The proportion of men has increased due to the increase in their life expectancy; this contributes to the increasing probability of living with a partner (+4.6 pp). People were also more likely to have children in 2015 (+3 pp). The educational level of persons aged 75 and over continues to improve following its trend from the 20<sup>th</sup> century. In terms of functional status, an increase is observed in the proportion of people without disabilities, but also in that of persons reporting severe activity limitations, undoubtedly driven by the increase in persons aged over 90.

9. Using the DREES surveys on institutions for the old population, the number of EHPA residents (France, excluding Mayotte) in the population aged 75, we estimate the rate of people living in institutions at 8.6% in 2007 and 9.2% in 2015. Based on the broader scope of the census data (number of people living in collective residences), we estimate the rate of people living in institutions at 9.3% in 2008 and 9.7% in 2015.

Table 1 – Distribution of individual and family characteristics in 2008 and 2015

		2008 (%)	2015 (%)	Change (pp)
		(1)	(2)	(2)-(1)
% of people living in institutional care		8.4	9.2	+0.8**
Age	75-79 years	40.9	36.0	-4.9***
	80-89 years	51.1	49.8	-1.4*
	90 years or over	7.9	14.3	+6.3***
Gender	Women	63.1	61.4	-1.7**
	Men	36.9	38.6	+1.7**
Level of disability	Autonomy	22.7	23.4	+0.6(ns)
	FL only	59.4	57.4	-2.0**
	FL and AR	17.8	19.2	+1.4**
Level of education	Low	77.7	67.2	-10.4***
	Intermediate	15.7	24.4	+8.7***
	Higher	6.6	8.4	+1.7***
Marital status	Single	54.9	50.3	-4.6***
	Living with a partner	45.1	49.7	+4.6***
Children	None	15.3	12.3	-3.0***
	At least one	84.7	87.7	+3.0***
Siblings	None	39.4	35.6	-3.8***
	At least one	60.6	64.4	+3.8***

Notes: FL: functional limitations; AR: activity restrictions; pp: percentage point.

Reading note: In 2008, 8.4% of people aged 75 or over living in metropolitan France live in an institution, compared with 9.2% in 2015.

Sources and coverage: DREES surveys: HSM 2008, HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016. Individuals aged 75 and over living in metropolitan France in 2008 and 2015 (at home and in institutions).

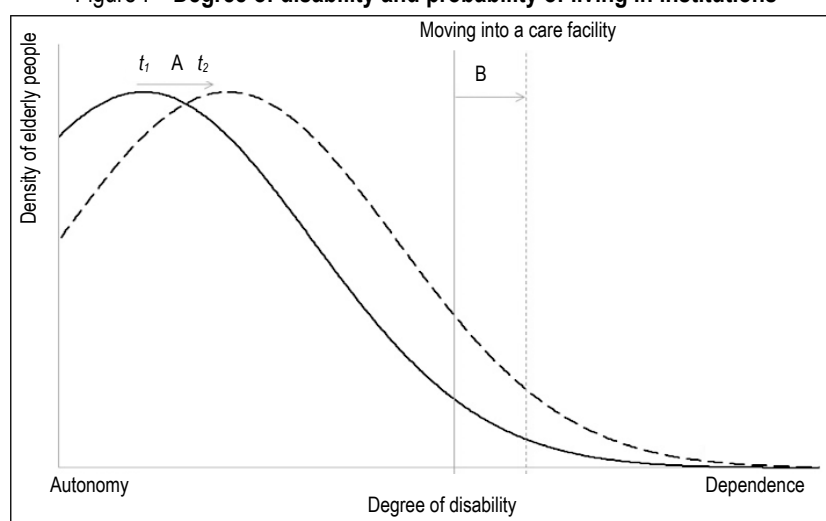
## 2.2. Analysis Strategy

In this research, we analyse pooled data from both surveys with a view to using logistic models to estimate changes in the use of institutional care and the associated dynamics. We draw upon the framework proposed by Meijer *et al.* (2015), according to which the demand for care changes in line with the number of old people, disability and the behaviour of individuals.

This can be illustrated by Figure I, which represents the proportion of people aged 75

and over classified according to their degree of disability on dates  $t_1$  and  $t_2$ . The area under each of the curves is an approximation of the demand for care. As the population ages, the number of old people is expected to increase, as is the average level of disability. This assumption causes the density function to shift to the right (Arrow A). Assuming the existence of a degree of disability after which people are taken into care within an institution (vertical line), it is possible to divide the elderly population into two sub-populations: those living at home (to

Figure I – Degree of disability and probability of living in institutions



Notes: The solid curve represents the distribution of persons aged 75 and over according to the degree of disability at date  $t_1$ . The dotted curve represents that distribution at date  $t_2$ .

Sources: Adapted from de Meijer *et al.* (2015).

the left of the vertical line) and those living in an institution (to the right of the vertical line). A change in the behaviour of individuals, linked to a change in their preferences or in the beds available, can affect the threshold at which people move into institutional care (Arrow B). The increase in limitations and the fact that the threshold for moving into an institution is also increasing may eventually cancel one another out, leading to a stable proportion of old people living in institutions.

We start by modelling the probability of living in institutions based on the considered factors in order to deduce their level of association and then the change in use between 2008 and 2015, all else being equal. We then decompose the difference in the rate of people living in institutions between 2008 and 2015 in order to identify which elements of the difference can be attributed to a change in the frequency of factors within the population – for example, a change in the proportion of persons with the highest level of education or the presence of relatives (composition effect) – or to a change in the link between these factors and the use of institutional care – for example, a change in the link between the level of disability and the use of institutional care (behaviour/preference effect).

### 3. Analyses and Results

#### 3.1. The Impact of Characteristics on the Use of Institutional Care

The impacts of characteristics (marginal effects) are estimated by estimating a simple Logit model for the sample containing the observations from 2008 and 2015. The change in the rate of people living in institutions during this period is measured by a *year* indicator, which is the only variable factor in Model 0, and then by integrating the individual and family characteristics in Model 1. Model 1 assumes that the impact of these characteristics on the probability of living in an institution remained unchanged between 2008 and 2015, an assumption that will subsequently be tested with a decomposition. The results are presented in Table 2.

As expected, the age and level of disability are positively correlated with the probability of living in an institution. ALs increase the probability of living in an institution by 0.21 percentage points (pp), all else being equal. As regards the impact of gender, women were on average, in both 2008 and 2015, more likely to move into an institution than men. However, this difference is not significant in the adjusted model. The level of education is also positively correlated

Table 2 – Marginal effects from the logistic regression of the probability of living in a care facility

	Model 0		Model 1	
	Marginal effect	SE.	Marginal effect	SE.
Year (Ref. 2008)				
2015	0.008**	0.004	-0.001(ns)	0.001
Age (Ref. 75-79 years)				
80-89 years			0.017***	0.002
90 years or over			0.040***	0.004
Gender (Ref. Men)				
Women			-0.002(ns)	0.002
Level of education (Ref. Intermediate)				
Low			-0.001(ns)	0.002
Higher			0.005(ns)	0.004
Marital status (Ref. Not living with a partner)				
Living with a partner			-0.039***	0.002
Level of disability (Ref. Autonomy)				
FL only			0.014***	0.001
FL and AR			0.211***	0.008
Children (Ref. None)				
Yes			-0.027***	0.003
Siblings (Ref. None)				
Yes			-0.002(ns)	0.002

Notes: FL: functional limitations; AR: activity restrictions; SE.: standard error.

Reading note: Being aged between 80 and 89 years increases the probability of living in an institution by 0.02 percentage points relative to being aged between 75 and 79 years, all else being equal.

Sources and coverage: DREES surveys: HSM 2008, HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016. Individuals aged 75 and over living in metropolitan France in 2008 and 2015 (at home and in an institution).



with the probability of living in an institution, albeit not significant. There is a significant link with marital and family situations: living with a partner or having children reduces the probability of living in an institution. No significant link is observed with having siblings.

With the characteristics introduced in Model 1, there is no significant difference in the probability of living in institutions in 2008 or 2015. This result suggests that the increase in the rate of EHPA use observed during the period (+0.8 pp) can be largely explained by the change in the characteristics of the elderly population (see Table 1). According to this first result, the change in the use of institutional care does not reflect an overall change in behaviour with regard to the use of institutional care. A decomposition of the change will allow us to look further into this point.

### 3.2. Decomposition of the Change in Use of Institutional Care

Decomposition methods generally aim to distinguish between the part of a difference observed between two groups of individuals (for example, in their income) that can be explained by differences in characteristics (composition effect) and the part that remains unexplained by such differences in characteristics (interpreted as the difference in the association between income and the characteristics under consideration). We rely here on the decomposition methods developed by Fairlie (2005) and Yun (2004) for dichotomous dependent variables (see Appendix 1).

Our methodological approach has three objectives. The first is to estimate how much of the change in the use of institutional care between 2008 and 2015 can be explained by changes in the spread of socio-demographic factors (aggregate composition effect). More specifically, this amounts to estimating a counterfactual corresponding to the rate of institutional care use that would have been observed in 2015 had the composition been the same as in 2008: the parameters linking the characteristics to care facility use, estimated in 2015 with a logistic model, are applied to the 2008 population to obtain the predicted counterfactual probability for 2015. We then obtain a counterfactual change between 2008 and 2015, which is compared with the observed change: the difference is the part of the change that can be explained by changes in composition.

Based on this analysis, we deduce the part that cannot be explained by the composition effect, which is in part attributable to changes in the parameters linking the factors to the use of institutional care. This can also be evaluated by

means of a counterfactual: this time, the predicted probability of using institutional care in 2015 is calculated by applying the 2008 parameters to the 2015 composition. The difference between the counterfactual and the observed changes corresponds to the part associated with changes in the links between the characteristics (age, gender, level of disability, family configuration, level of education) and the propensity to live in institutions. The part of the change that cannot be explained is therefore interpreted as the impact of a change in the behaviour of old people (or that of their potential caregivers), a change in preference for care or a change in context (change in the number of beds available in medical and social services, a change in prices or a change in public policy). Although it is not possible, based on the data being used, to explore the precise drivers of changes in the link between the observable characteristics and the behaviours associated with living in an institution, an estimation of this unexplained part of the change provides new information. It allows assessing the assumption generally made in the projection of rates of people living in institutions, namely the stability of the use of institutional care for the given socio-demographic characteristics.

The explained and unexplained components can then be decomposed to estimate the contributions of each factor: it is assumed, for example, that in the explained component, the increase in the proportion of persons aged over 90 and those reporting activity restrictions or even those with the highest levels of education, which are all factors that are positively correlated with the use of institutional care, has tended to increase the probability of living in an institution; conversely, changes in family structure should tend to reduce it. This step should allow identifying whether the existing projections of the number of old people living in institutions, based on the projections of the number of old people by age and level of disability, would benefit from the consideration of changes in other characteristics.

### 3.3. Composition Effects and Change in Practices?

The aggregate decomposition makes it possible to estimate firstly the rate of use that would have been observed in 2015 had the composition of the population in terms of age, gender, level of education, degree of disability and family structure remained the same as in 2008. The increase in the use of EHPA would, in this case, have been more pronounced (+1.1 pp estimated compared with +0.8 pp observed) than what is actually observed (Table 3). The decomposition performed

**Table 3 – Aggregate decomposition of the change in the rate of use of institutional care (reference 2008)**

	Total (N=15,944)	Women (N=11,138)	Men (N=4,806)
Rate of EHPA use in 2008 (%)	8.4	10.3	5.3
Rate of EHPA use in 2015 (%)	9.2	11.6	5.4
Increase observed (pp)	+0.8**	+1.3***	+0.1(ns)
Variation explained by the change in composition (ref. 2008) (pp)	+1.1***	+1.9***	-0.1(ns)
Variation not explained by the composition (pp)	-0.3(ns)	-0.6(ns)	+0.2(ns)

Notes: Significance thresholds \*\* at 5%, \*\*\* at 1%.

Reading note: The rate of use of EHPA increased by 0.8 pp between 2008 and 2015 with composition changes increasing that rate of use by 1.1 pp.

Sources and coverage: DREES surveys: HSM 2008, HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016. Individuals aged 75 and over living in metropolitan France in 2008 and 2015 (at home and in institutions).

separately for women and men reveals that the composition effect affects women in particular.

These results therefore confirm the composition effect, which was hinted at by the simple logistic analyses; an unexplained component may also have contributed to limiting the change, but not significantly.

The detailed decomposition reveals the contribution of the various factors to the composition effect – illustrating those that had a tendency to

increase the use of institutional care and those that had a tendency to decrease such use – and to the difference that cannot be explained by the change in factors – illustrating the change in their link to the use of institutional care. One constant remains unexplained by composition effects or a change in the link between factors and the use of institutional care. The results are summarised in Figure II, i.e. as a summary of the impacts of the factor modalities (the detailed results are provided in Appendix 2).

**Figure II – Decomposition of the change in the use of institutional care between 2008 and 2015**



Notes: Decomposition with 2015 parameters as reference; representation of the total contributions of the education, family (presence of a partner; at least one child; a sibling), disability, gender and age variables.

Reading note: Disabilities contributed positively to the increase in use of EHPA (total effect) due to the positive contribution to the composition effect (due to the increase in the prevalence of activity limitations between 2008 and 2015) and the negative, but lesser, contribution to the unexplained effect (due to a – non-significant – decrease in the link between disability and the use of institutional care).

Sources and coverage: DREES surveys: HSM 2008, HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016. Individuals aged 75 and over living in metropolitan France in 2008 and 2015 (at home and in institutions).

This detailed decomposition confirms that demographic ageing (change in composition according to age groups) is the primary factor tending to increase the rate of institutional care use over this period with, all else being equal, an increase of +2 pp (with the increase in the share of persons over 90 making the most of the contribution). Changes in the level of disability (and in particular in the prevalence of ARs) and in levels of education reinforce this trend towards a greater use of institutional care (+1.1 pp and +0.5 pp respectively). Conversely, changes in the family structures of old people balance out these trends by introducing a reduction in the rate of people living in institutions between 2008 and 2015 (−2.5 pp). This effect is largely down to an increase in the number of people living with partners (−1.6 pp), followed by an increase in the number of people with at least one child (−0.7 pp). The reduction in the number of old people without siblings also contributes to this (−0.2 pp), but not significantly. This overall change in the structure of families more than offsets the impact of demographic ageing, a sign that the changes in the density of the family entourage are a key factor in anticipating the number of beds that will be required in institutions in the future.

The unexplained part (which reflects changes in the link between the factors and the use of care facilities) is much smaller, not significant, and positive and negative changes offset each other. However, it is interesting to note that the change in degrees of disability tends to go hand in hand with lower use of institutional care, which can be interpreted as a change towards types of disability that can be more easily managed at home: either because they are less complex or because the support systems allow for better care to be provided at home than previously. It is also possible that institutions are more selective.

## 4. Discussion

### 4.1. Synthesising the Results

Our results reveal that the relatively limited increase in the proportion of persons aged 75 and over living in institutions is more related to composition effects than to a greater propensity to remain in their own homes. Indeed, some of the factors positively correlated with moving to institutions (ageing, activity limitations) are more frequently encountered in 2015 than in 2008 and contributed to increasing the overall use of institutional care, while others, which are also more frequent in 2015 (more men, more people living with a partner and more people with children),

which are negatively correlated with the use of institutional care, reduced this. These effects are driven by the female population in particular. Although women are less inclined than men to use care facilities, they are more likely, all else being equal, to do so due to their greater longevity and greater exposure to disabilities. However, during the period in question, women were able to grow old with more people around them, in particular their partner, giving them greater family support to remain in their own homes. We also observe that, although not significant, their dominance in terms of numbers in institutions has reduced slightly, while the proportion of men aged 75 and over has increased. Conversely, although the association is not significant, it can be seen that the link between disability and the use of institutional care is becoming weaker: this could reflect an increase in the eligibility threshold for institutional care as a result of fewer beds being available, or the fact that the nature of any activity limitations has moved towards forms that can be more easily managed at home by relatives and through the adaptation of services. In fact, there are signs of a decrease in the proportion of people experiencing activity limitations related to cognitive disorders in France and elsewhere, which could partly explain this result (Bonnet *et al.*, 2021).

Overall, the part of the change that cannot be explained by the composition effect is small and not significant. This suggests that, all else being equal, behaviours with regard to the use of institutional care have remained stable over the period. Therefore, unlike the results from the Netherlands (de Meijer *et al.*, 2011; Alders *et al.*, 2017), the limited increase in the use of institutional care in France does not appear to be explained by the fact of encouraging people to remain in their own homes and by a change in the in-home vs institutional LTC system, especially since it has not resulted in increased access to care services. In the Netherlands, individual choice appears to be more limited and more dependent on whether or not the general population and the authorities want to keep old people at home for longer.<sup>10</sup> However, a real shift in the direction of remaining at home has occurred: the number of beds in institutions has been reduced, compounding the lack of available space; in-home care has increased, helping people to remain in their own homes. In France, that shift towards in-home care has not really materialised. It is therefore not surprising that

10. In the Netherlands, an independent agency assesses individual requirements and prescribes a care package.

there was no substantial change in the propensity to move into an institution and that the limited increase in the proportion of old people living in institutions can be explained by the fact that they are more likely to be surrounded by family, particularly in the case of women. This result, if confirmed over time, would point to a transfer of care to family caregivers, whether facilitated by a range of available services and less complex functional limitations that would allow families to keep their relatives at home, or made necessary by a lack of available beds within institutions.

#### 4.2. Limits

In this article, we compared the use of institutional care and in-home care in 2008 and 2015, based on the fact of living in institution or at home; however, we did not take account of the possible trade-offs between formal home care and within an institution. This analysis will therefore need to be continued in order to identify whether the low level of use of institutional care by certain segments of the population has been accompanied by increased use of formal home care. Our data do not allow us to take account of the change in care and public policies aimed at people experiencing a disability, nor to identify whether changes in behaviour with regard to the use of institutional care are due to the wishes of old people or whether they are imposed due to a lack of available beds, the cost of these institutions. It appears that the use of institutional care has changed little (Muller, 2017b), as is also the case for in-home care (Carrère *et al.*, 2021). However, the availability of beds appears to be a decisive factor favouring or preventing the use of institutional care (Theisen, 2017; Charles & Sevak, 2005; Jette *et al.*, 1995; Carrère, 2021). In addition, the costs of formal care within an institution have increased: according to Muller (2017b), the daily rate for accommodation increased by EUR 4.30 between 2011 and 2015. The increase is also notable for formal home care: the hourly rates of home-based employees paid by individual employers in receipt of the *Allocation personnalisée d'autonomie* (personal autonomy allowance, APA) increased by 17% between 2008 and 2015, which is more than the reference hourly rate that departments use to calculate the share of the hourly rate financed by the APA.

The fact that the price of in-home care affects the demand for care has been demonstrated in France (Bourreau-Dubois *et al.*, 2014; Hégé, 2016; Roquebert & Tenand, 2017). Roquebert & Tenand (2017), for example, reveal that an increase of 10% the hourly rate that is still to be

paid for formal care received reduces the number of hours of care received by between 2 and 6%. The results are less clear for institutional care. However, there appears to be some substitution between the various types of care based on differences in cost between in-home care and institutional care (Carrère & Jusot, 2020). These elements suggest that taking account of changes in relative costs, or in availability, could partly account for the unexplained part of the change in the rate of people living in institutions.

Finally, the available data do not allow us to precisely measure the factors taken into account in this study: on the one hand, the family environment, as measured here, does not reflect the availability and willingness of relatives to provide care, but only whether the person in question has relatives or no; on the other hand, the socio-economic status measured by level of education offers a poor reflection of the standard of living and the ability to bear the cost of care. We also do not have any information with regard to wealth.

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Against a backdrop of an increasing old population coupled with few beds being implemented within institutions, it is difficult to unravel the reasons behind the modest increase in the proportion of elderly people living in institutions. Data from the HSM 2008 and HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016 surveys were used to analyse previous changes in the use of institutional care and to understand the dynamics of those changes, whether they be linked to a change in the composition of the population or a change in behaviour with regard to the use of institutional care.

In spite of the limitations outlined above, it seems that the practices of using institutions associated with the different factors changed little over the period studied and that there is no sign of a decrease in the propensity to make use of institutions. If the configuration of the beds available remains unchanged in the coming years, this result would support the assumptions of stability of these parameters made in the projection models used to forecast the number of institutions and in-home care that will need to be implemented in the coming years (Miron de l'Espinay & Roy, 2020).

However, our results do show the significant impact of the presence of family members,

which is not taken into account the majority of models and which reduces the use of institutional care: this is a key factor in controlling the use of institutional care, particularly for women. This result calls into question the shift towards in-home care and its longer-term consequences. Indeed, it appears that the availability of potential caregivers has been the most important factor in offsetting the ageing of the old population and the increase in certain types of disability. The shift towards in-home care therefore appears to be based on informal care, which may give rise to questions concerning the sustainability of this situation.

Furthermore, recommendations could be made that the projection models take greater account of this family factor. However, as we have already highlighted, the presence of relatives does not necessarily mean that they will act as caregivers. The preferences of people needing assistance with regard to reliance on their relatives may change as new generations reach old age, particularly with the greater frequency of family reconfigurations, divorces at older ages and the geographical distances between family members (Bonnet *et al.*, 2021). These trends may change the links between the presence of relatives and remaining at home in the future. More people could decide to seek professional care, even where their family members are more present.

In addition, our results about the impact of gender (and disabilities among women) lead us to question whether women are given the opportunity to manage their disabilities at home. Although they are more likely to grow old with a partner than before, women are still more likely to be widowed and less likely to find a new partner than men if they are separated. They are just as likely, if not more so, to be forced to move into an institution when they grow old. While we consider women to be better able to continue living without assistance for basic housework in their own homes, we should also question the role of constraints, such as a lack of available beds in institutions or difficulties in covering costs that increase their risk of not being able to receive care in EHPA.

Care provision must therefore be developed to respond to the needs of a changing old population. While the role of family has strongly contributed to people remaining in their own homes, questions must be asked with regard to the sustainability of this solution. The aim would be to offer a professional care service at home and in institutions that could be adapted to the needs of people who will not have the option of remaining in their own homes due to their disabilities, by choice or due to an absence of family caregivers. □

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## APPENDIX 1

## DECOMPOSITION METHOD

Decomposition methods were initially developed to highlight gender-based wage discrimination phenomena on the labour market in the United States (Oaxaca, 1973) or those between white and black workers (Blinder, 1973). Fairlie (2005) transposes the Oaxaca-Blinder canonical model to dichotomous dependent variables (whether or not an individual is living in an institution in our case).

Here, we provide a summary of the formal analytical framework of the Fairlie model. We have based this summary on Boutchenik *et al.* (2019), adapting notations to our study.  $E_{2008}$  is the sample of individuals observed in 2008 and  $E_{2015}$  is the sample of individuals observed in 2015.  $\bar{Y}_t$  (for  $t = 2008, 2015$ ) denotes the rate of people living in institutions:

$$\bar{Y}_{2008} = \frac{1}{N_{2008}} \cdot \sum_{i \in E_{2008}} Y_{i,2008} \quad \text{and} \quad \bar{Y}_{2015} = \frac{1}{N_{2015}} \cdot \sum_{i \in E_{2015}} Y_{i,2015}$$

where  $N_t$  is the size of the sample in  $t$  and  $Y_{i,t}$  is a dichotomous variable equal to 1 if individual  $i$  was living in an institution in  $t$ , or 0 if not.

In order to decompose the difference in the rates of people living in institutions between 2008 and 2015, we start by estimating the individual probability of living in an institution at each of the two dates using a simple Logit model:

$$P_{2008}(Y_i = 1|X_i) = F(X_i, \beta_{2008}), \forall i \in E_{2008} \quad \text{and} \quad P_{2015}(Y_i = 1|X_i) = F(X_i, \beta_{2015}), \forall i \in E_{2015}$$

where  $X_i$  represents the characteristics of individual  $i$ ,  $(\beta_{2008}, \beta_{2015})$  are the parameters to be estimated and  $F(\cdot)$  the distribution function.

The results of the estimation are then used to predict the rate of people living in institutions that would have been observed in 2015 had the characteristics of the population remained unchanged from those of 2008. In order to do so, we calculate the probability that each individual from 2008 would be living in an institution under the assumption that their individual characteristics would be linked to the probability of living in an institution in the same way as in 2015:

$$\hat{P}_{2015}(Y_i = 1|X_i) = F(X_i, \hat{\beta}_{2015}), \forall i \in E_{2008}$$

The expected rate of people living in institutions in 2015 if the characteristics of the population remain identical to those in 2008 is then equal to the average of these predicted probabilities:

$$\frac{1}{N_{2008}} \cdot \sum_{i \in E_{2008}} F(X_i, \hat{\beta}_{2015})$$

The difference in the rate of people living in institutions ( $\bar{Y}_{2015} - \bar{Y}_{2008}$ ) can then be rewritten as follows:

$$\bar{Y}_{2015} - \bar{Y}_{2008} = \underbrace{\left( \frac{1}{N_{2015}} \cdot \sum_{i \in E_{2015}} Y_{i,2015} \right) - \left( \frac{1}{N_{2008}} \cdot \sum_{i \in E_{2008}} F(X_i, \hat{\beta}_{2015}) \right)}_{\text{Composition effect (or explained component)}} + \underbrace{\left( \frac{1}{N_{2008}} \cdot \sum_{i \in E_{2008}} F(X_i, \hat{\beta}_{2015}) \right) - \left( \frac{1}{N_{2008}} \cdot \sum_{i \in E_{2008}} Y_{i,2008} \right)}_{\text{Unexplained component}}$$

The composition effect is the difference between the rates of people living in institutions in 2008 and 2015 that can be explained by the differences in the characteristics of the population observed on the two dates. The unexplained component corresponds to the difference in the average probabilities between 2008 and 2015 that cannot be explained by the (observable) difference in the composition of the population. It reflects a different relationship in 2008 and 2015 between the individual characteristics observed and the probability of living in an institution, together with a residual. This component is based on the difference between  $\hat{\beta}_{2008}$  and  $\hat{\beta}_{2015}$ , and is generally referred to as a difference in "valuation" of the characteristics observed. In this case, for example, an improvement in homecare for people with moderate disabilities could bring about a lower propensity for living in an institution in 2015 than in 2008.

One of the main interests of the Oaxaca-Blinder model lies in allowing the composition effect to be further decomposed in a relatively simple manner to estimate the respective role of each individual characteristic  $X_k$  in the difference observed. This is less obvious in the case of a dichotomous variable.

In order to illustrate this difficulty, let us suppose that just two variables are behind the change in the rate of people living in institutions: age and level of disability. In this case, the detailed decomposition aims to evaluate the respective weights of the change in the structure of the population by age and the change in the level of disability with regard to the change in the rate of people living in institutions. In order to do so, a sequential procedure may be implemented, for example. We start by predicting the rate of people living in institutions that would have been observed in 2015 had the age structure of the population been the same in 2015 as in 2008. To estimate the age-related composition effect, we then compare this rate with the rate of people living in an institution actually observed in 2015. In order to estimate the composition effect linked to the level of disability, this same rate is compared with that of people living in institutions that would have been observed in 2015 had the structure of the population by both age and level of disability in 2015 been the same as in 2008. We use a non-linear framework to show that the results of a decomposition of this type are influenced by the order in which it is carried out (Yun, 2004): the estimation of the specific contribution of each characteristic will differ depending on whether we estimate the impact of age followed by that of disability or vice versa. Of the strategies suggested in the literature to overcome this difficulty, we adopt that put forward by Yun (2004), which allows avoiding that the decomposition is not influenced by the order in which the variables are introduced. The method is based on the assignment of a weighting  $W_k$  to each variable  $X_k$ , reflecting the relative contribution of the difference in the distribution of that variable between the two groups to the difference observed in the variable of interest:

$$W_k = \frac{(\hat{\beta}_{k,2015} (\bar{X}_{k,2015} - \bar{X}_{k,2008}))}{\left( \sum_k \hat{\beta}_{k,2015} (\bar{X}_{k,2015} - \bar{X}_{k,2008}) \right)}$$

APPENDIX 2

AGGREGATED AND DETAILED DECOMPOSITION OF THE CHANGE IN THE USE OF INSTITUTIONAL CARE  
BETWEEN 2008 AND 2015 (2008 REFERENCE COEFFICIENTS)

		Coefficient	P>z	[95% Conf. Interval]
Aggregate decomposition				
Observed variation (total effect)		0.008	0.025	[0.001;0.015]
Effect of the change in composition (explained)		0.011	0.000	[0.009;0.013]
Effect not explained by the composition (unexplained)		-0.003	0.372	[-0.009;0.004]
Detailed decomposition:				
1 – Contribution of changes in the composition of the population to the change in use by factor				
Age	70-79 (decrease)	+0.010	0.004	[0.003;0.016]
	80-89 (decrease)	+0.000	0.205	[-0.001;0.000]
	90+ (increase)	+0.011	0.003	[0.004;0.018]
Gender	Men (increase)	0.000	0.931	[-0.001;0.001]
	Women (decrease)	0.000	0.931	[-0.001;0.001]
Education	Little or no education (decrease)	+0.005	0.002	[0.002;0.008]
	Secondary level education (increase)	-0.001	0.607	[-0.007;0.004]
	Higher education (increase)	+0.001	0.119	[0.000;0.003]
Family	Not living with a partner (decrease)	-0.008	0.016	[-0.015;-0.002]
	Living with a partner (increase)	-0.008	0.016	[-0.015;-0.002]
	No children (decrease)	-0.003	0.028	[-0.007;0.000]
	Children (increase)	-0.003	0.028	[-0.007;0.000]
	Siblings (increase)	-0.001	0.280	[-0.002;0.001]
	No siblings (decrease)	-0.001	0.280	[-0.002;0.001]
Degree of disability	Autonomy (increase)	-0.003	0.017	[-0.005;-0.001]
	FL without AL (decrease)	0.004	0.015	[0.001;0.008]
	FL and AL (increase)	0.009	0.014	[0.002;0.017]
2 – Part of the change explained by a change in the coefficients of the link between factors and use				
Age	70-79	0.000	0.576	[-0.001;0.002]
	80-89	0.000	0.786	[-0.001;0.001]
	90+	0.000	0.507	[0.000;0.000]
Gender	Men	0.000	0.538	[-0.001;0.001]
	Women	+0.001	0.538	[-0.001;0.002]
Education	Little or no education	-0.002	0.401	[-0.006;0.003]
	Secondary-level education	0.000	0.874	[-0.001;0.001]
	Higher education	0.000	0.455	[0.000;0.001]
Family	Not living with a partner	-0.002	0.387	[-0.007;0.003]
	Living with a partner	+0.002	0.387	[-0.002;0.006]
	No children	0.000	0.800	[0.000;0.000]
	Children	0.000	0.800	[-0.001;0.002]
	Siblings	0.000	0.489	[-0.002;0.001]
	No siblings	0.000	0.489	[-0.001;0.001]
Degree of disability	Autonomy	0.000	0.827	[-0.001;0.001]
	FL without AR	-0.004	0.347	[-0.014;0.005]
	FL and AR	+0.001	0.302	[-0.001;0.004]
Unexplained		+0.002	0.498	[-0.003;0.006]

Notes: Decomposition using Yun's (2004) method. Standardised weightings are used to take account of the composition of the population according to the place of residence. The estimated coefficients multiplied by 100 are interpreted as a change in the rate of people moving into institutions as percentage points.

Reading note: The decrease in the proportion of persons with "little or no education" between 2008 and 2015 helped to reduce the share of people aged 75 and over living in institutions by 0.5 pp.

Sources and coverage: DREES surveys: HSM 2008, HSI 2009, CARE-Ménages 2015 and CARE-Institutions 2016. Individuals aged 75 and over living in metropolitan France in 2008 and 2015 (at home and in institutions).