







The Irish Longitudinal Study on Ageing

The Older Population of Ireland on the Eve of the COVID-19 Pandemic

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Editors:

Rose Anne Kenny, Siobhan Scarlett and Paul O'Mahoney

Contributors:

Sharwari Apte¹, Paul Doody¹, Belinda Hernández¹, Ann Hever¹, Rose Anne Kenny¹³, Peter May¹², Christine McGarrigle¹, Aisling O'Halloran¹, Paul O'Mahoney¹, Lorna Roe¹², Roman Romero-Ortuno¹³⁴, Siobhán Scarlett¹, Minjuan Wang¹, Mark Ward¹

The Irish Longitudinal Study on Ageing, Trinity College Dublin;
 Centre for Health Policy & Management, Trinity College Dublin;
 Mercer's Institute for Successful Ageing, St James's Hospital, Dublin;
 Global Brain Health Institute, Trinity College Dublin

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The Irish Longitudinal Study on Ageing Trinity Central 152-160 Pearse Street Dublin 2 Republic of Ireland D02 R590

Tel: +353 1 896 2509 Email: tilda@tcd.ie Website: www.tilda.ie

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Key Findings

Chapter 2: Methodology

- A response rate of 81% with 5,101 completed self-interviews was achieved in the 10th year of TILDA.
- A response rate of 57% was achieved for proxy interviews (n=124), i.e. where a close relative or friend completes the interview on behalf of a participant unable to do so due to a physical or cognitive impairment. A further 172 End-of-Life interviews were completed for participants who had died.
- A total of 4,410 self-completion questionnaires were returned, a response rate of 86%.

Chapter 3: Living with Frailty in Ireland 2018

- Frailty is not a diagnosis and can be driven by different factors in different individuals. The two most common operationalisations of frailty are the physical frailty phenotype (FP) and the frailty index (FI) or accumulation of health deficits.
- The information presented in this chapter utilises frailty as measured by the FI and is based on cross-sectional analyses of TILDA participants from Wave 5 (2018).
- Frailty is common, affecting 18% of adults aged 58 years and over, 22% aged 65 years and over and 33.3% aged 75 years and over in Ireland.
- The prevalence of frailty among women is almost twice that of men (22% versus 13%) and increases with age in both sexes.
- Frailty is three times more prevalent at lower levels of educational attainment: 29% for primary level versus 10% for third level.
- Among those aged 58 years and over, 10% are living alone, of whom 23% live alone with frailty. Among those aged 75 years and over who live alone, 44% have frailty.
- Half of adults aged 58 years and over living with frailty also have a disability in either basic or instrumental activities of daily living.
- People living with frailty are more likely to experience lower levels of cognitive function at all age groups.

- Among adults aged 75 years and over living with frailty:
 - 47% do not receive any form of informal care or formal community support
 - o 36% receive informal care from a family member or friend
 - 38% receive formal community support services
 - o 16% receive both informal care and formal community support services
 - o 12% pay for private home help or a personal care attendant
 - 17% receive public home help
 - o 10% receive public personal care attendant
 - 4% receive public meals-on-wheels
 - o 4% are in receipt of a home care package
- 55% of adults aged 75 years and older who live with frailty self-rate their health as excellent, very good or good.
- Frailty is not inevitable and can be avoided, delayed and reversed with timely and appropriate interventions, both at the individual and population levels.

Chapter 4: Multimorbidity and Medication Usage

- 64% of adults aged 75 years and older report the presence of three or more chronic conditions compared to 34% of adults aged 58-64 years. A higher proportion of adults reporting low physical activity also report three or more chronic conditions (59%) compared to adults reporting high physical activity (37%).
- Hypertension and high cholesterol are the most commonly reported cardiovascular diseases in adults. Angina and heart attack became increasingly prevalent in older ages for both men and women. Diabetes also increases in prevalence with age, but only in men.
- Experience of a stroke is over twice that in adults aged 75 years and older (4%) compared to adults aged 58-64 years (1%). The proportion of mini-stroke or a transient iscahemic incident is twice that in adults reporting low physical activity (6%) compared to adults reporting high physical activity (3%).
- The prevalence of cancer increases with age in men, increasing from 6% in adults aged 58-64 to 17% in adults aged 75 years and older.
- The proportion of adults reporting asthma or lung disease is 13% and 9% respectively. A higher proportion of women report asthma compared to men between ages 58-74 years. Twice as many current smokers (14%) report lung disease compared to never or past smokers (8%), and a lower proportion of those reporting high physical activity (10%) report asthma compared to low physical activity (15%).

- Almost half of adults (46%) report arthritis, increasing to 60% in adults aged 75 years and older.
- Just one-fifth (20%) of adults report no medication use, with 92% of adults aged 75 years and older reporting use of at least one medication. The proportion of adults aged 75 years and older (48%) using five or more medication is over twice that of those aged 58-64 years (18%).
- Almost half of adults use anti-hypertensive medication (49%), increasing from 33% to 69% in adults aged 58-64 years and 75 years and older respectively.

Chapter 5: Patterns in Health Service Utilisation and Healthcare Entitlements

- 36% had a medical card only, 28% had a medical card and private health insurance ('dual cover'), 27% had private health insurance only, 2% had a GP visit card only, and 8% had 'no cover'.
- In the previous 12 months, 93% reported visiting their GP, 46% visited a hospital outpatient clinic, 1 in 5 visited the ED, 16% had an overnight hospital admission and 8% had a day case procedure. The most frequently utilised medical service was the GP (average 3.88 visits in the previous 12 months). Advancing age was associated with an increase in the frequency of use of all medical services, but the effect was particularly prominent in the number of nights an older adult spent in hospital in the previous 12 months (1.23 nights aged 58-64 years, to 3.57 nights aged 75 years or older). However, much of this effect is likely driven by biological age (e.g. frailty), rather than their chronological age.
- The most commonly used allied health service in the previous 12 months was the optician (15%). Approximately 1 in 10 visited the dentist and 6% utilised community-based physiotherapy. Community-based dietetics, hearing services, psychological or counselling services, and social work were used by fewer than 5% of the population aged 58 years and older.
- It was uncommon for the over-58s population in Ireland to use services which are delivered in the home, or are available to support independent living in the home. Informal carers are the most commonly used 'service' (8%), followed by community nursing (5%) and the home help or personal care service (4%).
- 8% reported having ever undertaken home modifications at an average cost of €3,878.
 62% of those who made home modifications, did not receive help from the State to cover the cost of these modifications.

Chapter 6: The Contributions of the Older Population

- Overall, 41% of adults aged 58 years and older provide some kind of regular help and/or care for their spouses, relatives (not including grandchildren), neighbours and friends.
- Overall, 5% of men and 7% of women aged 58 years and over report that they provided informal care for a family member or friend in the last month.
- 8% of the population aged 58 years and over had living parents; 12% of men and 21% of women aged 58-64 years and 12% of men and 31% of women aged 65-74 years provided help with dressing, feeding and bathing to their parents.
- 42% of men and 50% of women who have living parents report they regularly helped them with household chores and tasks.
- 16% of men and 19% of women aged 58-64 report helping their children with household tasks, this increases to 24% of men aged 65-74 but remained at 17% for women in this age group and decreased to 7% and 5% respectively for men and women aged 75 years and over.
- The older population also help their friends and neighbours with household tasks; 14% of men and 12% of women aged 58-64 and 15% of men and 12% of women aged 65-74 report helping their friends and neighbours with household tasks. A lower but still substantial number (8%) aged 75 years and over also report providing friends and neighbours with this help.
- Grandchild care is very common in the older population, and 42% of older adults report that they looked after their grandchild in the last month. This increased from 40% of men aged 58-64 to 54% of men aged 65-74 years while for women the proportion remained similar at half of all aged 58-64 year (50%) and 65-74 years (54%) and remained high in both men (30%) and women (21%) aged 75 years and older.

Chapter 7: Internet Access and Usage among Ireland's Older Population

- 80% of adults aged 58 years and older have access to the internet in their homes.
- Internet access decreases with age. Only 58% of those aged 75 years and older have home internet access, compared to 94% aged 58-64 years, and 83% aged 65-74 years.
- 83% aged 58 years and older in urban areas have home internet access; 75% in rural.

- 66% of adults aged 58 years and older have access to a smartphone/tablet (and therefore to apps).
- Access to smartphones/tablets similarly decreases with age. Only 42% aged 75 years and older have access to a smartphone/tablet, compared to 84% aged 58-64 years, and 69% aged 65-74 years.
- Common internet uses among those aged 58 years and older include:
 - Searching for information: 81%
 - Sending and receiving emails: 73%
 - Financial transactions: 59%
 - News: 58%
 - Audio/video calls: 44%
 - o Social media: 40%
 - Gaming/apps: 17%
- Internet use for any purpose declines with increased age, with social media use experiencing the largest of these age-associated declines, from 49% in those aged 58-64 years, 40% aged 65-74 years, to only 26% aged 75 years and older.
- Women use social media more than men, with 47% of women aged 58 years and older using the internet for this purpose, compared to 33% of men.
- 70% of adults aged 58 years and older use the internet daily; 87% weekly.
- 3% of adults aged 58 years and older use the internet but are solely reliant on internet access external to their homes e.g. friends'/relatives' home, library, community centre and public Wi-Fi networks.
- Of adults aged 58 years and older living alone, 36% do not have internet access in their homes.

Introduction Rose Anne Kenny and Paul O'Mahoney

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The Irish Longitudinal Study on Ageing

Introduction

TILDA completed collection of its fifth wave of data in 2018. There is now 10 years of follow-up information collected since the inception of the study, which offers great opportunities for a deeper understanding of the process of ageing and for enhanced global collaboration by harmonisation with other international datasets which have been collecting data for over 10 years. In February 2020, the world was stunned by the global spread of the coronavirus pandemic. In consequence, we urgently repurposed our analysis of data from Wave 5 to better inform policy and the public understanding of risk factors and implications of COVID-19. During the pandemic, we also undertook a separate COVID-19 study with participants to determine the prevalence of infection and the impact of COVID-19 restrictions on people's lives. The results of that study will be the subject of a forthcoming report. The present report will provide context and set the scene regarding the experience of older adults and their families prior to the pandemic.

The chapters in the report cover key issues such as risk factors for COVID-19 infection, including frailty, multimorbidity and medication usage; the utilisation of healthcare and home care and the types of health coverage; the contributions of older people to Ireland's society and economy; access to and use of the internet among the older population; and data on TILDA participants in nursing homes.

1.1 TILDA data collection

Collection of participant data involved two components: a computer-assisted personal interview (CAPI) and a self-completion questionnaire (SCQ). The CAPI is administered by a trained social interviewer in the participant's own home. The participant answers questions on their health, economic, social and family circumstances. The vast majority (98%) of CAPI interviews are conducted as self-interviews, where a participant is capable of answering some or most questions.

Of the 6,813 eligible participants before Wave 5, 5,397 completed a form of interview at Wave 5. The vast majority of CAPI participants complete an interview on their own (n=5,101), with lower numbers completing proxy (n=124) and EOL (n=172) interviews. The response rate of Wave 5 is calculated as the number of completed self-interviews in

Wave 5, relative to the total number of potential interviews. The total CAPI response rate achieved in the 10th year of TILDA is 81%

The overall SCQ response rate is 86% (n=4,410, mean age = 69 years). The highest response rate (90%) is among the 65-74 years age group.

In some cases, a participant may be unable to take part in the interview due to a physical or cognitive impairment; in these cases, a proxy respondent, such as a close relative or friend, is sought to complete the interview on behalf of the original participant. A total of 124 proxy interviews were completed by a close relative or friend on behalf of the original participant, achieving a response rate of 57%.

Although TILDA is nationally representative of the older community-dwelling population in Ireland, patterns of response to each component of the study (CAPI, SCQ) vary across certain subgroups of the sample. Participation in later waves of the study is also influenced by levels of participation at earlier waves and by sample attrition. To account for these systematic differences in responses and to ensure that the estimates derived from the sample remain representative of the target population, a number of weights were calculated and applied to different analyses. Weighting ensures that, for the estimates calculated, subgroups within the sample are proportionate to the number of that subgroup in the population of Ireland.

1.2 Frailty is a dynamic process that changes over time and can be viewed on a continuum

Frailty was identified early in the pandemic as a major risk factor for severity of response to infection. Frailty affects 18% of adults aged 58 years and over, 22% aged 65 years and over and 33.3% aged 75 years and over in Ireland. There are a number of ways to define frailty and this is still an area of important ongoing research. We use one of the most common instruments to measure frailty – the frailty phenotype. Frailty is almost twice as prevalent among women as it is among men (22% versus 13%), and three times more prevalent at lower levels of educational attainment (29% for highest educational level at primary level versus 10% for third level).

Among those aged 58 years and over, 10% are living alone, of whom 23% live alone with frailty. Among those aged 75 years and over who live alone, 44% have frailty. Half of adults aged 58 years and over living with frailty also have a disability in either basic or instrumental activities of daily living. People living with frailty are more likely to experience lower levels of cognitive function at all age groups.

Frailty can be avoided, delayed and reversed with timely and appropriate interventions, both at the individual and population levels, with early disease detection and treatment and physical activity and other lifestyle modifications.

1.3 Understanding the prevalence of multimorbidity, medications and behavioural health factors at a population level facilitates the planning and delivery of services in critical periods

Chronic conditions and the use of certain medications have been identified as risk factors for severity of COVID-19 infection, as have lifestyle factors such as smoking and the amount of physical exercise done. Understanding the prevalence in the older population of these conditions, and of prescription of the relevant medications and the commonness of relevant lifestyle factors at different age groups, is crucial for planning and delivery of healthcare during critical periods such as the COVID-19 pandemic. It is also essential for projection of future healthcare needs at the population level, which, put together with lessons from the current pandemic, will inform strategy for response to future shocks.

Multimorbidity is defined as the co-existence of two or more chronic conditions, and evidence suggests this is the norm rather than the exception in older adults in Ireland. Multimorbidity is associated with age. Less than ten percent of adults aged 58 years and older report no conditions, with almost three quarters reporting the presence of two or more conditions. Hypertension (52%), high cholesterol (59%) and arthritis (46%) were the most commonly reported conditions. The percentage reporting arthritis almost doubles from 32% in adults aged 58-64 years, to 60% in those aged 75 years and over.

Regular use of medications also becomes increasingly common in older adults, with close to half of adults aged 75 years and older reporting use of five or more medications regularly. Use of anti-hypertensive medication was reported by almost half of participants, and became increasingly prevalent in older age groups, with similar reported use in both male and women. Use of anti-depressant and sleep medication however was more commonly reported by women, with little difference in use across age groups.

TILDA also collects information on behavioural health. Participants are asked about smoking and physical exercise, two major determinants of health. The impact in particular of high levels of exercise is shown on multimorbidity and medication usage. Use of anti-depressant, anti-hypertensive and sleep medication were all lowest in those reporting high physical activity compared to low physical activity. 57% of adults reporting low physical activity reported use of anti-hypertensive medication, compared to 42% of those reporting

high physical activity. The prevalence of use of anti-depressant medication was almost twice that in those reporting low physical activity (15%) compared to high physical activity (8%), while 14% reporting low physical activity reported use of sleep medication compared to 5% of those reporting high physical activity.

These data show that modifiable behaviours can play a significant role in healthy ageing. Public health initiatives with a preventative focus will contribute significantly to the readiness of the health system to meet any future crises.

1.4 Home-bases supports, including home modification, are less commonly accessed than other health services

In 2018, the General Practitioner was the most commonly used service, by 93% of participants in the previous year. 46% attended a hospital outpatient clinic, with 20% using the emergency department and 16% having an overnight stay in hospital. Only 4% of the population report receiving home help or personal care services, and 5% using community nursing, while 8% report receiving informal care from family or friends. Similarly, only 8% of the population had ever had home modifications for health reasons, with a majority not receiving state help in financing them.

The most commonly used allied health service in the previous 12 months was the optician (15%). Approximately 1 in 10 visited the dentist and 6% utilised community-based physiotherapy. Community-based dietetics, hearing services, psychological or counselling services, and social work were used by fewer than 5% of the population aged 58 years and older.

Patterns of health service utilisation remain heavily oriented to the provision of medical services, with older adults comparatively rarely utilising community-based allied healthcare, or those community-based services which support ageing in place. These trends indicate potential challenges for older adults in accessing services which focus on pre/rehabilitation in the community (e.g. physiotherapy), which address risk factors for frailty (e.g. dietetics), which provide support for loss of functional capacity (e.g. home help) or those services which offer a social outlet for an older adult or respite for an informal carer (e.g. day centre care). These challenges for access may be considerably exacerbated by the COVID-19 pandemic, which has seen elective treatments deferred, older people putting off GP visits and reduced availability of home care workers.

1.5 The older population continues to make vital social and economic contributions to Irish society

TILDA data clearly show the enormous contribution made by older people to the social and economic life of the country. Overall, 41% of adults aged 58 years and older provide some kind of regular help and/or care for their spouses, relatives (not including grandchildren), neighbours and friends. 42% of men and 50% of women who have living parents report they regularly helped them with household chores and tasks. The older population also help their friends and neighbours with household tasks; 14% of men and 12% of women aged 58-64 and 15% of men and 12% of women aged 65-74 report helping their friends and neighbours with household tasks. A lower but still substantial number (8%) aged 75 years and over also report providing friends and neighbours with this help. Grandchild care is very common in the older population, and 42% of older adults report that they looked after their grandchild in the last month. This increased from 40% of men aged 58-64 to 54% of men aged 65-74 years (54%) and remained high in both men (30%) and women (21%) aged 75 years and older.

Overall, 55% of men and 51% of women report that they volunteered in the past year. The three most common reasons given for volunteering were because they enjoyed it; so that they could use their skills; and so they could contribute something useful. 90% of adults participate in active and social leisure activities each month, while 72% participate in organised groups such as sports groups, book clubs, or charitable organisations.

Government advice during the COVID-19 pandemic that those over 70 remain at home or 'cocoon' as far as possible meant that older people were disproportionately affected by the pandemic. Opportunities for social activities and engagement were curtailed, as were those for volunteering. Given the extent of these activities among the older adult population and the benefits of them to older adults, their families and the wider community, removal of opportunities for these activities is likely negatively to affect older adults' wellbeing.

The lack of availability of childcare for working families normally provided by grandparents may also exacerbate inequalities in the economic impact of the pandemic, as those most financially dependent on informal or familial support will be disproportionately affected. Similarly, frontline and essential workers who have continued going out to work during the pandemic will not have had these family supports for childcare and household help normally available to them.

1.6 Internet access is common among older people, with use frequent and varied

Data show that internet access is common among the older population, and that it is used often and for a variety of purposes. 80% of adults aged 58 years and older have access to the internet in their homes. Internet access decreases with age. Only 58% of those aged 75 years and older have home internet access, compared to 94% aged 58-64 years, and 83% aged 65-74 years. 70% of adults aged 58 years and older use the internet daily, and at least 87% weekly. There is some disparity between urban and rural access, with 83% of urban dwellers and 75% of rural reporting access.

66% of adults aged 58 years and older have access to a smartphone or tablet, and so to apps. This also decreases with age, with 84% aged 58-64 years, and 69% aged 65-74 years having access, but only 42% of those aged 75 and over.

Searching for information (81%) and sending emails (73%) are the most common reasons for using the internet. Women us the internet for social media significantly more than men (57% vs 40%) and for audio/video calls (47% vs. 41%) and gaming/apps (21% vs. 14%). Men use the internet slightly more often than women to get news (60% vs. 56%) and for financial transactions (60% vs. 58%).

Internet access has become more important in light of the COVID-19 pandemic. As restrictions are placed on travel and movement, older people are advised to 'cocoon' and employees to work from home, use of the internet for work, shopping (including delivery of essentials), communication and social contact has become more a focus of public attention, and in time may become a greater focus of public policy. The urban/rural disparity in access, and the fact that 36% of those over 58 living alone report no access to the internet, have implications for connectedness and ability to navigate systems as more activities and opportunities move online.

1.7 Nursing home residents who can self-report rate their health and quality of life higher than rating by proxies

The COVID-19 pandemic brought renewed focus on to nursing homes in Ireland. Restrictions on visitors and on mixing, and the advice for older people to 'cocoon', meant that nursing home residents could not see family or friends, go out as frequently or gather and interact with other residents in common areas. The estimated 30,000 people living in nursing homes faced disproportionate likelihood of adverse outcomes during the COVID-19 pandemic. Nursing home residents had higher risk of infection due to higher prevalence of frailty and serious illness, and this risk was magnified by residential care environments, where people live together in close quarters and staff supportive care involves a lot of physical contact.

TILDA nursing home participants were chronologically very old, had very high levels of physical and cognitive morbidities, and very high levels of physical disability. Where TILDA nursing home participants were able to self-report, however, a majority reported that their physical and mental health was fair, good, very good or even excellent. Though the sample of self-reporting participants is too small (n = 39) to make inferences about the population of nursing homes, only 5 rated their health as 'poor', with 12 rating it 'fair' and 22 'good, very good or excellent'. Not being able to self-report was mostly associated with the presence of cognitive and communication problems, including dementia.

The personal perspectives of our TILDA nursing home participants provide an important reminder that quality of life is often rated higher by oneself than by proxies, even in the presence of very advanced age and extensive comorbidities and disabilities.

1.8 Conclusion

The findings in our Wave 5 report reinforce some findings from previous waves, for example that frailty is not an inevitable consequence of ageing, and that modifiable health behaviours (stopping or reducing smoking, and increasing physical exercise) are very important drivers of positive health outcomes. Access to home-based supports, including home modification, is shown to be comparatively rare within the range of available allied health services. The findings emphasise the contributions, direct and indirect, made by older adults to the social and economic life of the country. On the whole, older adults have access to the internet and are engaged with a variety of online services and activities. The findings also show that, somewhat against common perception, including the perception of proxies, those in residential care perceive themselves as maintaining good health and a high quality of life.

This snapshot of the older population of Ireland on the eve of the COVID-19 pandemic will give a baseline allowing us to gauge its longer-term impact. It will allow researchers to identify negative impacts on health and wellbeing, and also positive developments, for example greater resilience or the development of new technological skills or participation in new activities.



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The Irish Longitudinal Study on Ageing



Key Findings

- A response rate of 81% with 5,101 completed self-interviews was achieved in the 10th year of TILDA.
- A response rate of 57% was achieved for proxy interviews (n=124), i.e. where a close relative or friend completes the interview on behalf of a participant unable to do so due to a physical or cognitive impairment. A further 172 End-of-Life interviews were completed for participants who had died.
- A total of 4,410 self-completion questionnaires were returned, a response rate of 86%.

2.1 Introduction

At Wave 5, interviews were sought from 6,813 participants. Details of the sampling methods used in Waves 1-4 of TILDA have been reported previously. (1,2,3,4)

Collection of participant data involved two components: a computer-assisted personal interview (CAPI) and a self-completion questionnaire (SCQ). The CAPI is administered by a trained social interviewer in the participant's own home. The participant answers questions on their health, economic, social and family circumstances. The vast majority (98%) of CAPI interviews were conducted as self-interviews, where a participant is capable of answering some or most questions.

In some cases, a participant may be unable to take part in the interview due to a physical or cognitive impairment; in these cases, a proxy respondent, such as a close relative or friend, is sought to complete the interview on behalf of the original participant. Whether a participant needs a proxy interview is evaluated in each wave because individual circumstances might change over the intervening time. Proxy interviews account for 2% of all the CAPI interviews in Wave 5.

Following completion of the CAPI, participants are provided with the SCQ to be completed and a pre-paid envelope in which to return it to TILDA. The SCQ includes more sensitive questions on topics such as quality of life, interpersonal relationships, ageing perceptions and alcohol consumption. Proxy interviewees are invited to complete the CAPI but not the SCQ. Topics covered in the CAPI and SCQ are listed in Table 2.1.

From Wave 2, each wave of data collection has also included End-of-Life (EOL) interviews. EOL interviews are sought with a spouse, relative or friend in cases where a participant has passed away. Questions are asked which cover the health, social and financial circumstances of the participant in the year before they died.

Domain	Measures
Demographics	Marital status; marriage history; education; migration history; childhood.
Social circumstances	Transfers to/from children/parents/others; help with (instrumental) activities of daily living; social connectedness; social networks; volunteering; caring; social participation; religion; relationship quality; driving and travel.
Health and healthcare	Physical (self-rated health; limiting long-standing illness; sensory function; cardiovascular and non-cardiovascular disease; falls; fear of falling; fractures; pain; oral health; health screening); cognitive (self- rated memory; word-list learning; verbal fluency; prospective memory); psychological (depressive symptoms; anxiety; resilience; life satisfaction; loneliness; worry; quality of life; perceived stress); behavioural (smoking; physical activity; sleep; alcohol; dietary intake); medications; healthcare utilisation; health insurance.
Employment, retirement & assets, lifelong learning	Employment situation; job history; planning for retirement; sources of income; home ownership; other assets; expectations; health literacy.

Table 2.1. Questions and measures included in CAPI and SCQ at Wave 5

2.2 Computer-assisted personal interview response rates

Of the 6,813 eligible participants before Wave 5, 5,397 completed a form of interview at Wave 5. There were three new participants identified during fieldwork who did not previously take part but are related to an original participant and live in the same household.

The vast majority of CAPI participants complete an interview on their own (n=5,101), with lower numbers completing proxy (n=124) and EOL (n=172) interviews. The response rate of Wave 5 is calculated as the number of completed self-interviews in Wave 5, relative to the total number of potential interviews. Potential interviews only include the eligible participants before Wave 5, excluding participants who permanently withdrew from the study, needed a proxy interview, died, or moved outside the target area, before Wave 5.

Table 2.2 presents the Wave 5 CAPI response rates (and counts) by age group and gender. The total CAPI response rate achieved in the 10th year of TILDA is 81%. The proxy interview response rate was calculated as the number of proxy interviews completed relative to the total number of participants identified as eligible for proxy interview throughout fieldwork. A total of 124 proxy interviews were completed by a close relative or

friend on behalf of the original participant, achieving a response rate of 57%. The average age of proxy respondents is 84 years.

	Male % (n)	Female % (n)	Total % (n)
<58 years	100 (22)	84 (187)	85 (209)
58-64 years	83 (663)	83 (841)	83 (1504)
65-74 years	81 (873)	82 (1091)	81 (1964)
≥75 years	80 (675)	77 (749)	78 (1424)
Total	81 (2233)	81 (2868)	81 (5101)

Table 2.2.	Wave 5	self-interview	response	rates (′%. n).	. bv age ar	nd sex
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2.3 Reasons for attrition at Wave 5

The reasons for non-participation attrition at Wave 5 are listed in Table 2.3. More than half (56%) of cases of non-participation are refusals (e.g. due to illness or personal reasons, or time constraints during the period of Wave 5 data collection). Nonetheless, participants who decline to participate in a certain wave do not necessarily withdraw from the study permanently. They remain eligible for follow-up at future waves.

Similar to self-interviews, 73% of all cases of non-participation for proxy interviews are refusals. Another 16% of cases of non-participation are due to there being no permission to seek a proxy or a proxy's not being identified; this means the participant did not give consent or contact details for a proxy interview in any of the previous waves.

Person	Potential P	articipants	Potential proxy Respondents		
RedSUI	%	n	%	n	
Refusal	56	669	73	68	
Withdrawn	29	343	-	-	
Unable to contact participant	14	160	11	10	
Moved Outside ROI/NI	1	13	-	-	
No permission to seek proxy, proxy not identified, or other	-	-	16	15	
Total	100	1185	100	93	

	Table	2.3.	Reasons	for	sample	attrition
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2.4 Self-completion questionnaire response rates

Table 2.4 presents SCQ response rates at Wave 5 by age and gender. The overall SCQ response rate is 86% (n=4,410, mean age = 69 years). The highest response rate (90%) is among the 65-74 years age group.

	Male % (n)	Female % (n)	Total % (n)
<58 years	82 (18)	86 (161)	86 (179)
58-64 years	82 (544)	87 (728)	85 (1272)
65-74 years	89 (774)	91 (993)	90 (1767)
≥75 years	84 (569)	83 (623)	84 (1192)
Total	85 (1905)	87 (2505)	86 (4410)

Table 2.4. Wave 5 SCQ response rates (%, n) by age and sex

2.5 Dataset

All of the results throughout this report are generated from the TILDA datasets: CAPI v5.6.1 and AuditTracker_W1-W5 v2019.10.03. The CAPI dataset includes completed interviews from 5,225 participants (5,016 aged 58 years and over) who did a self-interview or proxy interview at Wave 5. The CAPI dataset also contains SCQ results of 4,410 participants (4,231 aged 58 years and over). The AuditTracker is an internal dataset that tracks participation of all participants in each component of the study at each wave, in addition to reasons for non-response and attrition. An anonymised dataset will shortly be archived at the Irish Social Science Data Archive (ISSDA) at University College Dublin (https://www.ucd.ie/issda/data/tilda/).

2.6 Analytical methods employed in this report

Statistical methods used to calculate the estimates presented in this report are described below. These methods aim to correct for potential biases in survey data estimates, in addition to determining correctly the uncertainty surrounding those estimates.

2.6.1 Point estimates and confidence intervals

The majority of estimates in this report are to reflect the percentage of adults in Ireland that fall within specific groups with different analysis criteria. Means or medians of specific continuous quantities are reported where appropriate. The TILDA cohort is representative of adults aged over 50 in Ireland. Each member of the study cohort thus corresponds with a given number of individuals in the Irish population aged 50 and older. The initial cohort in Wave 1 was recruited only from community-dwelling adults; however, participants recruited in Wave 1 who later moved to an institutional setting are followed up at all subsequent waves where possible.

Due to the random nature of the population sampling process, there is some inherent uncertainty in the derived estimates. To account for this, most estimates in this report are presented with 95% confidence intervals (CI). Formally, the 95% CI indicates that with repeated sampling, 95% of the CIs calculated would contain the true population parameter. The 95% CI can therefore be interpreted as the range within which there is a 95% chance that the true population parameter will lie.

2.6.2 Weighting

Although TILDA is nationally representative of the older community-dwelling population in Ireland, patterns of response to each component of the study (CAPI, SCQ) vary across certain subgroups of the sample. Participation in later waves of the study is also influenced by levels of participation at earlier waves and by sample attrition.

To account for these systematic differences in responses and to ensure that the estimates derived from the sample remain representative of the target population, a number of weights are calculated and applied to different analyses. Weighting ensures that, for the estimates calculated, subgroups within the sample are proportionate to the number of that subgroup in the population of Ireland.

In practice, the weights reflect the reciprocal of the probability of a participant being included in the study, based on characteristics such as age, gender, education level, marital status and the participant's membership of the target population. Separate longitudinal CAPI weights were used for different analyses in each Chapter, depending on the participants included within each analysis. Longitudinal weights (for CAPI or SCQ) were calculated by multiplying the base CAPI weight by the reciprocal of the probability that a participant completed Waves 2, 3, 4 and 5 (following participation at Wave 1). The probability was calculated using a multivariate logistic regression model with the following baseline predictors as used in Wave 4: Age, sex, educational attainment, marital status, employment status and factors related to physical, mental and cognitive health. (5) Longitudinal versions of these weights that included attrition between Waves 1 and 5 (i.e., where a participant skipped participation in Wave 2, Wave 3 or Wave 4) were also

calculated. Finally, two sets of these longitudinal weights were also calculated, separated according to self-interviews only (i.e., proxy interviews were treated as attrition), or as self and proxy interviews (i.e., proxy interviews treated as participation). This accommodated the differing inclusion of proxy respondents in analyses throughout the report, depending upon the data analysed.

2.6.3 Software

All analyses in this report were conducted using STATA 12.0, 14.2 or 15.1.

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Living with Frailty in Ireland 2018

Key Findings

- Frailty is not a diagnosis and can be driven by different factors in different individuals. The two most common operationalisations of frailty are the physical frailty phenotype (FP) and the frailty index (FI) or accumulation of health deficits.
- The information presented in this chapter utilises frailty as measured by the FI and is based on cross-sectional analyses of TILDA participants from Wave 5 (2018).
- Frailty is common, affecting 18% of adults aged 58 years and over, 22% aged 65 years and over and 33.3% aged 75 years and over in Ireland.
- The prevalence of frailty among women is almost twice that of men (22% versus 13%) and increases with age in both sexes.
- Frailty is three times more prevalent at lower levels of educational attainment: 29% for primary level versus 10% for third level.
- Among those aged 58 years and over, 10% are living alone, of whom 23% live alone with frailty. Among those aged 75 years and over who live alone, 44% have frailty.
- Half of adults aged 58 years and over living with frailty also have a disability in either basic or instrumental activities of daily living.
- People living with frailty are more likely to experience lower levels of cognitive function at all age groups.
- Among adults aged 75 years and over living with frailty:
 - $_{\odot}$ 47% do not receive any form of informal care or formal community support
 - $_{\odot}$ $\,$ 36% receive informal care from a family member or friend
 - 38% receive formal community support services
 - o 16% receive both informal care and formal community support services
 - o 12% pay for private home help or a personal care attendant
 - 17% receive public home help
 - o 10% receive public personal care attendant
 - o 4% receive public meals-on-wheels
 - 4% are in receipt of a home care package

- 55% of adults aged 75 years and older who live with frailty self-rate their health as excellent, very good or good.
- Frailty is not inevitable and can be avoided, delayed and reversed with timely and appropriate interventions, both at the individual and population levels.

3.1 Introduction

3.1.1 Background

Frailty is described as a distinctive health state related to the ageing process in which multiple body systems gradually lose their inbuilt reserves. Frailty is not a medical diagnosis, and it can have different drivers in different individuals. Older adults living with frailty are at an increased risk of unpredictable deterioration in their health following exposure to insults such as COVID-19 infection. (1,2) Frailty is a common condition in older adults, although it is not an inevitable part of the ageing process. (3) Frailty can occur at any age, but it becomes more prevalent with advancing age. (4) This association with increasing age has implications for Ireland in terms of the impact of COVID-19 on medically vulnerable adults aged 70 years and over. On March 28th 2020, the Irish Government implemented new HSE 'Guidance on cocooning to protect people over 70 years and those extremely medically vulnerable from COVID-19'. (5) In the UK, the National Institute for Health in Care Excellence (NICE) has published rapid COVID-19 guidelines for the management of patients in critical care. (6) NICE advises that all patients, irrespective of COVID-19 status, should on admission to hospital be assessed for frailty. Patients classified as having frailty should then be assessed as to their appropriateness for critical care escalation. Even in the absence of a universally accepted operationalisation, the concept of frailty is becoming a key concept in healthcare service planning development and delivery for our ageing population (7,8), particularly during the ongoing COVID-19 pandemic. In a large population of patients admitted to hospital with COVID-19, duration of hospital stay and mortality outcomes were better predicted by frailty than either age or comorbidity. (9) Even though the measurement of frailty may have advantages from the point of view of medical risk stratification and planning of healthcare delivery, the public's perceptions of frailty are generally negative and many older people with multimorbidity and disability do not identify themselves as frail. (10)

Frailty is a dynamic process that changes over time and can be viewed on a continuum. An older person can transition in either direction between the different states of frailty, namely robustness or non-frailty, pre-frailty (an intermediate sub-clinical state) and frailty. (11) Older people who are not frail may have some health problems, but in general these problems are being well managed. Older people with pre-frailty are at an increased risk of adverse outcomes but are living independently. Individuals living with frailty generally require some support for instrumental and/or basic activities of daily living, have increased susceptibility to infection, take longer to recover from infections and are less likely to recover to previous levels of functional independence. For older adults living with frailty, exposure to a stressor such as infection significantly increases the risk of disability, hospital admission, longer in-patient length of stay, transition to long-term care and death. (12) Individuals living with frailty who contract COVID-19 are at greatest risk for admission to hospital, admission to critical and intensive care units and death. (9,13) Identifying people living with frailty provides an opportunity to prevent this at-risk group from contracting COVID-19 in the community and proactively to develop healthcare service planning and delivery for this medically vulnerable population. (14)

Although frailty is a recognisable and common phenomenon in ageing, it is difficult to define accurately. Frailty is not a medical diagnosis because it can have different drivers (and hence different underlying diagnoses) in different people. The gold standard for the assessment and management of frailty is Comprehensive Geriatric Assessment (CGA). CGA is a holistic and interdisciplinary assessment of an individual and has been demonstrated to reduce adverse outcomes including disability, cognitive decline, long-term residential care and death. (15) CGA however is time-consuming and may be unfeasible in emergency care settings where the medical management of high illness acuity is the immediate priority.

Despite a lack of agreement on an internationally accepted and easily administered consensus measure of frailty, several methods of screening are commonly used. (16,17) One method is the Frailty Phenotype (FP) model (also referred to as the physical FP), which views frailty as the presence of three or more of the following characteristics: unintended weight loss, exhaustion, weakness, slow gait speed and low physical activity. A person is considered pre-frail if they have 1-2 characteristics and robust if they have none of these characteristics. (1, 12) A person can be pre-frail at the expense of different components, and this may carry different prognostic implications. (18)

The second method is the Cumulative Deficits or Frailty Index (FI) model, which views frailty as a state of system breakdown due to the accumulation of physical and psychological health symptoms and conditions, described as health deficits. An FI measures the number of health deficits present as a proportion of the total number of potential health deficits tested to determine whether a person is in robust health, living with pre-frailty or living with frailty. (19, 20) FI cut-offs have been employed for the classification into robust, pre-frail and frail, but again each of those categories can be heterogeneous from the point of view of people's individual deficits.

Population-based cohort studies such as TILDA commonly use the FP and the FI to measure frailty in large, population-representative samples and to explore relationships between frailty and potential risk factors and health outcomes. In April 2020, TILDA published a report using data on FP from Wave 5 of the study to inform demographics for over 50s in Ireland during the COVID-19 pandemic. (21) The information presented in this

chapter utilises frailty as measured by the FI and is based on cross-sectional analyses of TILDA participants from Wave 5 (2018). This use of the FI in this chapter is consistent with the Chapter from the TILDA report published in November 2018 that examined the prevalence, incidence and health outcomes of frailty in adults aged 50 years and over, across Waves 1-4 (2009-2016) of the TILDA study. (22)

This report provides an overview of people living in the community in Ireland aged 58 years and over classified by FI status from TILDA Wave 5. To assist with both COVID-specific and wider ongoing non-COVID-19 healthcare policy and service planning, the analyses identify cohorts based on current national and international data for at-risk groups such as those living with frailty and pre-frailty; those who live alone; those who have a disability; and those who may have unmet need when it comes to informal care and accessing community support services.

3.1.2 Sample

Data for this chapter come from Wave 5 (2018) of the TILDA study. These data were collected through the computer-assisted personal interview (CAPI) between 16th January 2018 and 31st December 2018. Of the 8,504 participants aged 50 years and older in TILDA at Wave 1, 3,279 did not participate in Wave 5, leaving a sample of n=5,225. We removed from our analysis any participant aged less than 58 years of age (n=209) and those participants who were not present at Wave 1 (n=108). Thus, the analytical sample included n=4,908 participants aged 58 years and older at Wave 5. The average age was 70.5 years, with an age range of 58–103 years.

3.1.3 Methodology

An earlier chapter (Chapter 2) provides a detailed description of the methodology. Thus, a summary of the methodology used in this chapter is provided here. We use attrition weights as described in Chapter 2, to make estimates relevant to the general population aged 58 years and over in Ireland. There are seven sections in our analysis. Firstly, we examine the prevalence of frailty and distribution by sociodemographic factors (age, gender, educational attainment and living alone). Next, we focus on health outcomes related to frailty, namely disability and global cognitive function. Then, we examine the levels of informal care and formal community support services, which support ageing in place and are received by adults living with frailty. Finally, we explore how older people living with frailty perceive and rate their own physical health. We provide descriptive data for the population aged 58 years and over and disaggregate by age group (58-64 years, 65-74 years and 75 years or over). A detailed description of these topics and the measures used in these analyses is provided at the start of each section.

3.2 The Prevalence of Frailty

A deficit accumulation FI is constructed using 31 self-reported health deficits collected during the TILDA home interview at Wave 5, following the previously published methodology. (17, 18, 23) The 31 deficits are associated with poor health, are distributed across several health domains and are associated with advancing age. Each deficit is coded as present (1) or absent (0). Deficits with more than two categories are coded as a proportion of the number and order of responses e.g. five answer categories for self-rated physical health deficit: Excellent, Very good and Good are coded as 0 (no deficit); Fair is coded as 0.5 (partial deficit) and Poor is 1.0 (full deficit).. The total is then summed and divided by 31. This produces FI scores between 0.0 and 1.0. Scores of <0.10, 0.10-0.24 and ≥0.25 are used to classify participants respectively as robust, pre-frail and frail.

The 31 deficits included in the FI at Wave 5 are listed in appendix 3.1. In previous waves, 32 deficits had been used to calculate the FI, but one of these was not collected at Wave 5. A comparison of the 31 and 32-item FI at Wave 4 shows the FIs are highly correlated, with a coefficient of 0.98, representing a 1% underestimation on the proportion categorised as frail.

The prevalence, or the proportion of the community-dwelling population aged 58 years and over, by FI frailty status at Wave 5, is provided in Figure 3.1. The prevalence of frailty is 18%, while pre-frailty is highly prevalent at 37%. Correspondingly, the prevalence of robustness is 45% at Wave 5. These data indicate that frailty and pre-frailty are common among older adults in Ireland, corresponding to one-in-six and one-in-three adults, respectively. The prevalence of pre-frailty and frailty in those aged 65 years and over is 41% and 22%, while among those aged 75 years and over the prevalence of pre-frailty and frailty is 45% and 33%, respectively.





3.3 Socio-demographics and frailty

The development of frailty at older ages is related to demographic and social factors that are determined much earlier during the life-course. Here we examine the association with frailty of self-reported demographic and social data including age, gender and highest level of educational attainment provided by participants during the home interview.

3.3.1 Age and frailty

Among the 4,908 TILDA participants aged 58 years and over at Wave 5, 31% are in the 58-64 age group, 39% are in the 65-74 age group and 30% are aged 75 years and over. The prevalence of frailty and pre-frailty increases with advancing age in all age groups, as summarised in Figure 3.2. There is a progressive increase in the prevalence of frailty across the three age groups, from 8% to 14% to 33%. A smaller increase in prevalence across the age groups is observed for pre-frailty, from 28% to 38% to 45%. These data support the well-documented relationship between increased frailty and advancing age.



Figure 3.2. Age and frailty at Wave 5 using the FI measure

3.3.2 Gender and frailty

Among the TILDA participants aged 58 years and over at Wave 5, 52% are women. The prevalence of frailty among women is higher, at 22% compared to 13% in men aged 58 years and over. Among women, the prevalence of frailty is approximately twice that of men in the younger (58-64 year) and older (75 years and over) age groups, as summarised in Table 3.1. Correspondingly, the prevlance of robustness is lower among women at all age groups. The prevalence of pre-frailty tends to fluctuate among men and women at different age groups, with a lower prevalence among women in the youngest and oldest age groups. These data support the documented relationship between increasing prevalence of frailty among women compared to men, known as the 'male-female health-survival paradox'.

Ago	58-64 years			65-74 years			75+ years		
Aye	Robust	Pre-frail	Frail	Robust	Pre-frail	Frail	Robust	Pre-frail	Frail
Men (%)	66	29	5	53	35	12	28	48	24
Women (%)	62	27	11	43	42	15	16	43	41

Table 3.1	Gender a	ade and	frailty at	t Wave 5	5 usina	the F	l measure
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3.3.3 Education and frailty

Among the older adult population, 27% attained primary level education, 46% attained secondary education and 27% attained third level education. In the youngest age group, frailty is twice as prevalent among those who attained a primary versus secondary level education. The prevalence of frailty is also three times higher among those educated to primary only compared to third level education, as summarised in Table 3.2. A similar pattern was observed in the 65-74 age group. In general, the prevalence of frailty is higher among adults aged 75 years and over, but once again those who had attained a primary level educated to secondary or third level. The prevalence of pre-frailty is also highest among those with a primary level education, but the difference in prevalence decreases with increasing age.

Table 3.2. Highest level of educational attainment and frailty at Wave 5 using the FImeasure

A.c.o	58-64 years		65-74 years			75+ years			
Aye	Robust	Pre-frail	Frail	Robust	Pre-frail	Frail	Robust	Pre-frail	Frail
Primary (%)	45	40	15	37	40	23	17	44	39
Secondary (%)	66	26	8	50	40	10	22	47	31
Third Level (%)	68	27	5	58	35	7	31	43	26

3.4 Living alone with frailty

The prevalence of living alone among adults aged 58 years and over is 10%, and the prevalence of frailty among those who live alone is 23.2% overall. The prevalence of frailty among adults who live alone by age group is summarised in Figure 3.3.

The prevalence of frailty among adults who live alone increases with advancing age, from 8% to 16% to 44% among the 58-64, 65-74 and 75 years and over age groups respectively. The prevalence of pre-frailty also increased with advancing age, with 41% of adults aged 75 years and over who live alone also categorised as pre-frail. With almost half of older adults aged 75 years and over who live alone also living with frailty, this subgroup of the older population should be marked for urgent clinical review during the COVID pandemic to ensure that they have the necessary community supports during periods of more severe COVID restrictions. This may be done through Public Health Nurse review of a register of older adults aged 75 years and over living alone in their locality, given the high prevalence of frailty in this group.



Figure 3.3. Living alone and frailty at Wave 5 using the FI measure

3.5 Frailty and disability

Frailty is a known risk factor for disability. Self-reported information on whether TILDA participants have any disabilities or difficulties in performing the basic and/or instrumental activities of daily living is provided during the home interview at Wave 5.

Participants are asked if they have any difficulties with activities of daily living (ADLs) or instrumental activities of daily living (IADLs), excluding any difficulties expected to last for fewer than three months. ADLs include tasks such as getting out of bed, bathing, dressing, eating, using the toilet and walking across a room, while IADLs include tasks such as preparing meals, doing household chores, shopping for groceries. managing medications, managing money and making telephone calls, all tasks which help support an independent lifestyle. We also asked if they received any help with these limitations, and who provided that help. The prevalence of disability is measured by the presence of at least one ADL or IADL at Wave 5 is summarised in Figure 3.4. The presence of at least one ADL or IADL disability is significantly higher among adults living with frailty compared to their counterparts living with pre-frailty or in robust health, at 48%, 42% and 54% in the 58-64, 65-74 and 75 years and over age groups respectively. This corresponds to exactly half (50%) of adults aged 58 years and over living with frailty also having a disability. Given the high prevalence of disability among adults aged 58 years and over living with frailty also having with frailty,

this sub-group of the older population (similar to those living alone with frailty) should be marked for urgent clinical review during the COVID pandemic to ensure that they have the necessary community supports during periods of more severe COVID restrictions. They also represent a high-risk group in considering measures to prevent SARS-CoV-2 infection and related adverse outcomes.



Figure 3.4. Disability and frailty by age at Wave 5 using the FI measure

3.6 Frailty and cognitive Health

Frailty has a bi-directional relationship with cognitive health in older adults; thus, frailty may be both a risk factor for and a consequence of decline in cognitive function. Self-reported information regarding global cognitive function is gathered from participants during the home interview at Wave 5.

The Mini-Mental State Examination (MMSE) is a 20-item test that is used to screen for cognitive impairment; a maximum score is 30 on this test, with a cut-off of ≤24 indicating cognitive impairment (23, 25). It is commonly used in clinical practice to screen for dementia. It is also used to estimate the severity of cognitive impairment at a given point in time, and to follow the course of cognitive changes in an individual over time. It assesses orientation, recall, attention, calculation, language abilities and visuospatial ability.

The global cognitive function (MMSE) score by age group and frailty status is summarised in Figure 3.5. The average score on the MMSE is 29.0, 28.6 and 27.3 for the 58-64, 65-74 and 75 years and over age groups, respectively, demonstrating a gradual decline in global cognitive function with age. Individuals living with frailty exhibit the lowest scores on the MMSE, followed by those living with pre-frailty, while robust individuals have the highest MMSE scores indicating better cognitive function in each age group. On average, across the three age groups, adults with frailty and pre-frailty score 0.8-1.4 and 0.1-0.5 points lower on the MMSE respectively compared to robust older adults. This indicates a progressive decline in global cognitive function among those living with pre-frailty and frailty independent of age group. The decline in global cognitive function with age and among older adults living with frailty is important in the context of the COVID-19 pandemic. The co-occurrence of frailty and cognitive decline puts individuals with both conditions at increased risk of infection-related delirium and poor health outcomes if SARS-CoV-2 is contracted.





3.7 Informal care and formal community supports for frailty

The prevalence of people aged 58 years and over living with frailty and in receipt of informal care and formal private and public community support services by frailty status are reported in Figure 3.6 and Table 3.3. Informal care is measured by asking participants

if they received any help with ADLs or IADLs and who provided that help e.g. help with ADL and IADL limitations from a spouse/partner, child, relative or other. Participants are also asked if they are in receipt of formal public community support services e.g. home help, personal care attendant, meals-on-wheels and home care packages. Participants are also asked if they pay for private formal care services, namely a personal care attendant or home help.

Of the adults aged 58 years and over living with frailty, 57% do not receive any informal care or formal community support service, 31% receive informal care from a family member or friend, 26% receive formal private or public community support services and 16% receive both informal care and formal community support services. Of those who receive formal community support services, 11% receive public home help, 7% receive a public personal care attendant, 3% receive public meals-on-wheels and 3% are in receipt of a home care package. Among those aged 58 years and over, 9% pay for private home help or a personal care attendant service. As may be expected, the number of TILDA participants living with frailty who are in receipt of the different informal and formal private and public community support services increases with age (Table 3.3). This reflects the age-related increase in the prevalence of frailty.

The TILDA sampling frame does not include people with dementia at baseline or people living in nursing homes, and as such these data may underestimate numbers in receipt of both informal care and formal community support services for the total population aged 58 years and over in Ireland. In April 2020, TILDA published a short report using data obtained from a small non-representative sample (n=100) of interviews with participants who had transitioned from the community into residential nursing home care during the study. This report showed that the vast majority lived with advanced levels of physical and cognitive morbidity and disability. (26)

As may be expected, informal care and formal community supports are more commonly received and increase with age among older adults with frailty. However, it is significant that among the older group aged 75 years living with frailty, almost half (47%) do not receive any informal care or formal community supports. This subgroup of the older population are not only at increased risk of adverse health outcomes related to COVID-19, but they are also at increased risk of adverse health outcomes related to periods of more severe COVID restrictions. This group should be prioritised for urgent clinical review during the COVID pandemic to ensure that they have the necessary community supports to maintain levels of health and function.





Table 3.3. Percentage of people aged 58 years and over living with frailty and in receipt ofinformal and formal community support services

	≥58 years*	58-64 years	65-74 years	≥75 years
	Frail	Frail	Frail	Frail
No formal or informal care (%)	58	71	73	47
Any informal care (%)	31	28	23	36
Any formal care (%)	26	3	13	38
Both informal and formal care (%)	16	3	9	22
Public home help (%)	11	<1	4	17
Public personal care attendant (%)	7	<1	3	10
Private home help/personal care (%)	9	3	5	12
Public meals-on-wheels	2.8	<1.0	2.8	3.8
Public home care package	2.8	<1.0	1.9	3.9

*The TILDA sampling frame does not include people with dementia or people living in nursing homes at baseline, and as such these data may underestimate numbers in receipt of both informal care and formal community support services for the total population aged 58 years and over in Ireland.

3.8 Frailty and self-rated health

The public's perceptions of frailty are generally negative and many older people with multimorbidity and disability do not identify themselves as frail (10). Despite the presence of frailty and pre-frailty, it is important to consider how TILDA participants perceive their own health status. To capture this, participants are asked to self-rate their physical health. Participants provide one of five response options which are: Excellent, very good, good, fair or poor.

Among participants aged 58 years and over living with frailty, 48% self-rated their physical health as excellent, very good or good, compared to 80% who are living with pre-frailty and 83% who are classified as robust using the FI measure. Among those living with frailty in the 58-64, 65-74 and 75 years and over age groups, 38%, 37% and 55% respectively, self-rate that their physical health is excellent, very good or good. Conversely, 62%, 63% and 45% of participants living with frailty self-rate their physical health as either fair or poor in the respective age groups. These data support the finding that the public's perceptions of frailty are generally negative and many older people with multimorbidity and disability do not identify themselves as frail. Here we show that over half of adults aged 75 years and over, who are classified as living with frailty using the FI measure, self-rate their health as excellent, very good or good. This is significantly higher than in the younger 58-74 age group, with just over a third of adults living with frailty self-rating their health as excellent, very good or good. This may reflect a more optimistic outlook or a different expectation of what good health means to people at older ages.



Figure 3.7. Self-rated health and frailty by age at Wave 5 using the FI measure

3.9 Conclusion

This report demonstrates that FI frailty is present in almost one in six adults aged 58 years and over living in the community in Ireland. It is striking that one in three adults aged 75 years and over are living with frailty as assessed by the FI. The Irish Government and HSE consider the over-70s age group as 'very high risk/extremely medically vulnerable' to the adverse health impacts of contracting COVID-19. The HSE continues to advise this group to 'cocoon' during the COVID-19 public health pandemic. (27) For those over 70 years and living with frailty, the risks of contracting the infection and subsequent admission to hospital, critical/intensive care and risk of death are even greater. (9,13) The data presented in this report also highlight the prevalence of factors associated with at-risk groups, including adults living alone with frailty, adults living with frailty and a disability and adults living with frailty and cognitive decline. This chapter also suggests that there is significant need to prioritise clinical review for informal and formal care supports in the community among older people living with frailty.

The impacts of frailty on the Irish health and social care system is considerable (8) and are greatly exacerbated by the impact of the COVID-19 pandemic. The significance of frailty as an impediment to healthy ageing was highlighted at a focus meeting on 'Frailty and Intrinsic Capacity' by the World Health Organisation (WHO) Clinical Consortium on Healthy Ageing in December 2016. (28) The significance of frailty to healthy ageing and healthcare planning and delivery in Ireland is recognised by the National Clinical Care Programme for Older People (NCPOP) and the Integrated Care Programme for Older People (ICPOP). A National Frailty Education Programme, in partnership with TILDA, was initiated in 2017 to train health professionals to understand the risk factors for frailty, enabling them to implement programmes for early detection, prevention and management. (29,30) TILDA is actively engaged in the new Irish Frailty Network for Education, Quality Improvement and Research hosted by the Irish Gerontological Society (https://www.irishgerontology.com/ news/blogs/time-right-irish-frailty-network-education-improvement-and-research). TILDA also actively participates in the first-ever postgraduate training module on the Assessment and Management of Frailty in Ageing Adults delivered for the first time by an Irish Medical School (https://www.tcd.ie/medicine/medical-gerontology/postgraduate/standalone-frailtymodule/). In 2016, the WHO Clinical Consortium on Healthy Ageing stated that active case findings of older people with frailty are essential for the reorientation of health services to meet people's needs; proactive identification of people in the community at risk of frailty provides opportunities to intervene and so prevent or delay functional decline and disability. (28)

In the context of COVID-19, the proactive identification of people with frailty in the acute setting will also be imperative when decisions must be made regarding to transfer to resource-limited critical care pathways. (5) Indeed, it appears frail older people may often present differently with symptoms of COVID-19. A recent study demonstrated a higher prevalence of probable delirium as a COVID-19 symptom in older adults with frailty compared to other older adults. The authors emphasised the need for systematic frailty assessment and screening for delirium in acutely ill older patients in hospital and community settings. They suggested that clinicians should suspect COVID-19 in frail adults with delirium. (31)

Frailty is not an inevitable consequence of ageing: two in three people aged 75 years and over and one in two people aged 85 years and over are classified as robust or pre-frail. Frailty is a dynamic process, and people can experience positive transitions, reverting to pre-frailty from frailty and to robustness from pre-frailty. (11) The development of frailty is modifiable; it may be delayed, halted and even reversed with timely and appropriate prevention, detection and intervention strategies. 'Cocooning', though difficult and not without its own adverse impacts on social, mental and physical health, is still advised as a strategy to protect very high-risk adults aged 70 years and over in Ireland, particularly those living alone with frailty or those living with both frailty and disability who are at high risk of mortality due to COVID-19 infection. Older people, whether or not they fall into the higher-risk categories for COVID-19 infection, are the fabric of our society. (32) We must support and protect the mental, physical and social health of this group by facilitating more informal and formal community supports, while also proactively increasing healthcare service planning and delivery during this protracted COVID-19 pandemic.

Despite frailty being identifiable in many older adults, they often rate their health favourably, not self-identifying as being frail or in poor health, particularly at older ages of 75 years and over. This underscores the need for greater awareness and education around proactively identifying drivers of frailty in the community as well as the acute setting and providing pathways to timely assessment and intervention through CGA. From a public health perspective, we must engage the wider population to increase preventative individual- and population-based strategies to delay or impede frailty. This may involve a change in emphasis from the negative connotations of frailty to the more positive language of intrinsic capacity, as suggested by the WHO. Whatever language we use or assessment tools we employ, it is important to reiterate and recognise that the presence of frailty is not a clinical diagnosis and does not define a group or the individual. The development of frailty is dynamic, modifiable and not an inevitable consequence of ageing.

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Appendix 3A. Tables on Living with Frailty in Ireland 2018

Table 3.A1. Components of 31-item FI based on TILDA CAPI variables from Wave 5

TILDA CAPI Variables	Cut-points
Difficulty walking 100m	Yes = 1; No = 0
Difficulty rising from a chair	Yes = 1; No = 0
Difficulty climbing stairs	Yes = 1; No = 0
Difficulty stooping, kneeling or crouching	Yes = 1; No = 0
Difficulty reaching above shoulder height	Yes = 1; No = 0
Difficulty pushing/pulling large objects	Yes = 1; No = 0
Difficulty lifting/carrying weights ≥10lb	Yes = 1; No = 0
Difficulty picking up a coin from a table	Yes = 1; No = 0
Feeling lonely	Rarely or none of the time=0; Some or a little of the time=0.33; Occasionally or a moderate amount of time=0.66; All of the time=1
Poor self-rated physical health	Excellent=0; Very good=0.25; Good=0.5; Fair=0.75; Poor=1
Poor self-rated vision	Excellent=0; Very good=0.25; Good=0.5; Fair=0.75; Poor=1
Poor self-rated hearing	Excellent=0; Very good=0.25; Good=0.5; Fair=0.75; Poor=1
Poor self-rated memory	Excellent=0; Very good=0.25; Good=0.5; Fair=0.75; Poor=1
Difficulty following a conversation	None=0; Some=0.5; Much/Impossible=1
Daytime sleepiness	Would never doze=0; Slight chance of dozing=0.33; Moderate chance of dozing=0.66; High chance of dozing=1
Polypharmacy	Yes = 1; No = 0
Knee pain	Yes = 1; No = 0
Hypertension	Yes = 1; No = 0
Angina	Yes = 1; No = 0
Heart attack	Yes = 1; No = 0
Diabetes	Yes = 1; No = 0
Stroke and transient ischaemic attack	Yes = 1; No = 0
High cholesterol	Yes = 1; No = 0
Irregular heart rhythm	Yes = 1; No = 0
Other CVD	Yes = 1; No = 0
Cataracts	Yes = 1; No = 0
Glaucoma and age-related macular degeneration	Yes = 1; No = 0
Arthritis	Yes = 1; No = 0
Osteoporosis	Yes = 1; No = 0
Cancer	Yes = 1; No = 0
Varicose ulcer	Yes = 1; No = 0
Incontinence*	Yes = 1; No = 0

Adapted from Roe et al, 2017 (23)

*Not included in FI at Wave 5.

Multimorbidity and Medication Usage

Belinda Hernández, Aisling O'Halloran, Christine McGarrigle, Rose Anne Kenny, Sharwari Apte and Siobhán Scarlett

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The Irish Longitudinal Study on Ageing



Key Findings

- 64% of adults aged 75 years and older report the presence of three or more chronic conditions compared to 34% of adults aged 58-64 years. A higher proportion of adults reporting low physical activity also report three or more chronic conditions (59%) compared to adults reporting high physical activity (37%).
- Hypertension and high cholesterol are the most commonly reported cardiovascular diseases in adults. Angina and heart attack became increasingly prevalent in older ages for both men and women. Diabetes also increases in prevalence with age, but only in men.
- Experience of a stroke is over twice that in adults aged 75 years and older (4%) compared to adults aged 58-64 years (1%). The proportion of mini-stroke or a transient iscahemic incident is twice that in adults reporting low physical activity (6%) compared to adults reporting high physical activity (3%).
- The prevalence of cancer increases with age in men, increasing from 6% in adults aged 58-64 to 17% in adults aged 75 years and older.
- The proportion of adults reporting asthma or lung disease is 13% and 9% respectively. A higher proportion of women report asthma compared to men between ages 58-74 years. Twice as many current smokers (14%) report lung disease compared to never or past smokers (8%), and a lower proportion of those reporting high physical activity (10%) report asthma compared to low physical activity (15%).
- Almost half of adults (46%) report arthritis, increasing to 60% in adults aged 75 years and older.
- Just one-fifth (20%) of adults report no medication use, with 92% of adults aged 75 years and older reporting use of at least one medication. The proportion of adults aged 75 years and older (48%) using five or more medication is over twice that of those aged 58-64 years (18%).
- Almost half of adults use anti-hypertensive medication (49%), increasing from 33% to 69% in adults aged 58-64 years and 75 years and older respectively.

4.1 Introduction

The occurrence of medical conditions increases with age. (1, 2) Multimorbidity is defined as the co-existence of two or more chronic conditions, and evidence suggests this is the norm rather than the exception in older adults in Ireland. (1) Multimorbidity has been associated with worse quality of life, functional status, increased healthcare utilisation and risk of mortality. (2, 3) The current and projected rise in prevalence of chronic disease and multimorbidity in older adults in Ireland presents a challenge for the Irish health and social care system and for the older population. Integrated Care Programmes have been established by the Health Service Executive (HSE), two of which focus on care for the older population and for those living with a chronic condition. (4) Adults with chronic disease or multimorbidity are also considered a high-risk category for COVID-19. (5, 6) Describing the distribution of disease prevalence and medication use in community-dwelling older adults may help to inform these programmes and policies targeting health conditions, to improve the health and wellbeing of the older population.

The aim of this chapter is to describe the prevalence of cumulative chronic conditions (multimorbidity), cardiovascular, respiratory and other chronic conditions, many of which are thought to be risk factors for COVID-19, and medication use amongst TILDA participants aged 58 years and older at Wave 5 (n=4,908). Estimates are categorised by three age groups: 58-64 years (n=1,467), 65-74 years (n=1,933) and 75 years and older (n=1,508), and by sex: men (n=2,202) and women (n=2,706). Prevalence of multimorbidity is also described by smoking status and physical activity.

Longitudinal weights are used to account for participant attrition between Wave 1 and Wave 5.

4.2 Measures of Chronic conditions collected in TILDA

The following section describes the individual conditions collected in TILDA that are used to define and describe cumulative multimorbidity in this chapter: chronic conditions, medication use and behavioural health.

4.2.1 Chronic Conditions

During the computer-assisted personal interview conducted at each wave of data collection, TILDA participants are asked if they have ever been diagnosed by a doctor with cardiovascular, cerebrovascular, cancer, respiratory and other chronic conditions. These are detailed in Table 4.1:

Cardiovascular Conditions	Cerebrovascular Conditions	Respiratory Conditions	Other Chronic Conditions
Hypertension	Stroke	Chronic Lung Disease	Cancer
Angina	Mini-Stroke or a	Asthma	Arthritis
Heart Attack	Transient Ischaemic		Osteoporosis
Congestive Heart Failure	Attack		Varicose Ulcer
Diabetes			Thyroid Problems
High Cholesterol			

Table 4.1. List of chronic conditions

The prevalence estimates for chronic conditions include both reporting of the condition at any previous wave of TILDA, and incidence of the condition at Wave 5.

4.2.2 Medication Use

Regular use of medications is common in older adults. TILDA participants are asked to report the medications they take on a regular basis, including prescription medications and over-the-counter medications. Medications are assigned WHO Anatomic Therapeutic Chemical (ATC) classification codes. Anti-depressant medication is classified as Anatomical Therapeutic Chemical (ATC) code N06A. Anti-hypertensive medication is identified as ATC codes C02 (antiadrenergic agents), C03 (diuretics), C07 (beta blockers), C08 (calcium-channel blockers) and C09 (angiotension-converting enzyme inhibitors). Sleep medication is identified as ATC codes N05A (antipsychotic agents), N05B (anxiolytics), N05C (hypnotics and sedatives) and R06A (antihistamines).

4.2.3 Behavioural Health

TILDA collects detailed information on behavioural health. Participants are asked about smoking and physical exercise, two major determinants of health which may exacerbate chronic disease (7). Participants are classified as current smokers (12%), and never or past smokers (88%). Physical activity is measured using the Short-Form International Physical Activity Questionnaire which asks participants to self-report how many days, and for how long, they have engaged in vigorous activity, moderate activity and walking in the past seven days. The time spent is converted to MET-minutes, weighted by the intensity of the activity. Participants are then classified as participating in high (24%), moderate (36%) or low (40%) physical activity by meeting one of the criteria for each classification of physical activity as outlined in Table 4.2.

High	Moderate	Low
 ≥1500 MET-minutes with 3 or more days of vigorous activity ≥3000 met minutes of combined activity for 7 days 	 ≥20 minutes vigorous activity for more than 3 days ≥30 minutes combined walking and moderate activity for at least five days ≥600 metabolic minutes of any combination of exercise for at least five days 	Meeting none of the criteria for either high or moderate activity

Table 4.2. Physical Activity Classificiations

4.3 Multimorbidity

Almost three quarters (74%) of adults aged 58 years and older report the presence of two or more medical conditions. Just 8% report no chronic conditions. The number reporting the presence of three or more chronic conditions in the oldest age group (64%, 75 years and older) is almost twice that in the youngest age group (34%, 58-64 years).

The increase in the proportion of adults with co-existing chronic conditions with age is higher in women compared to men (Figure 4.1). In men, the presence of three or more conditions increases from 29% in the youngest age group to 52% in those aged 75 years and older, while for women this increases from 39% to 73% respectively.



Figure 4.1. Prevalence of chronic conditions by age group and sex

This did not differ by smoker status with the prevalence of the number of conditions similar between older adults who report never smoking or being past smokers compared to those who are current smokers (Figure 4.2).



Figure 4.2. Prevalence of chronic conditions by smoker status

Some differences were however present between physical activity categories in those with three or more chronic conditions where a decreasing trend in prevalence was found as the level of physical activity increased (Figure 4.3). 59% of older adults who report low physical activity also report three or more chronic conditions, compared to 46% of those reporting moderate physical activity and 37% of those reporting high physical activity.



Figure 4.3. Prevalence of chronic conditions by physical activity category

4.4 Cardiovascular Conditions

Cardiovascular disease is a leading cause of mortality in Ireland and contributes to an increased risk of physical limitations, worse self-rated health and poorer quality of life in older adults. (8) Hypertension and high cholesterol are the two most commonly reported cardiovascular conditions in adults in Ireland (Figure 4.4). Overall, 59% of adults report high cholesterol and 52% of adults report hypertension. For high cholesterol, the prevalence is higher in adults aged 65-74 years (62%) compared to those aged 58-64 years (56%) but decreased to 57% in those aged 75 years and older. The prevalence in both men and women was similar in those aged between 58-74 years, but there is a difference in the oldest age group, with 63% of women reporting high cholesterol compared to 50% of men. In hypertension however, prevalence increases with age, with the highest prevalence reported in those aged 75 years and older (62%). A higher prevalence is reported by men (46%) compared to women (35%) in the youngest age group, while women aged 75 years and older have a higher prevalence (68%) compared to men in the same age group. Angina and heart attack become increasingly prevalent in older age groups for both men and women. A similar trend is seen for diabetes in men however there is no age difference in women.





Cardiovascular Condition
Adults who report being current smokers have a higher prevalence of diabetes (17%) compared to those who are never or past smokers (12%), although this difference was not statistically significant. Both never/past smokers and current smokers have similar prevalence of all other cardiovascular conditions.





Adults reporting higher levels of physical activity have the lowest prevalence of hypertension, angina, diabetes and high cholesterol. The largest difference is in the prevalence of hypertension, with 59% of adults who report low physical activity reporting that they have been diagnosed with hypertension compared to 45% of adults reporting moderate physical activity, and 42% who report high physical activity.



Figure 4.6. Prevalence of cardiovascular conditions by exercise category

4.5 Cerebrovascular Conditions

Cerebrovascular conditions may have long lasting impacts on health. Experience of a stroke in older ages can result in mortality or disability and is associated with worse quality of life, mental health, increased care needs and a loss of independence. (9, 10) Many of the risk factors for cerebrovascular conditions are modifiable, including cardiovascular disease, and health behaviours such as smoking. (9) Overall, 2% and 5% of adults report experiencing a stroke, or mini-stroke / transient ischaemic attack (TIA) respectively and prevalence of both increases with age for both men and women (Figure 4.7). Experience of a stroke increases from 1% in adults aged 58-64 years to 4% in those aged 75 years and older, while the prevalence of mini-stroke / TIA is over twice as high in adults aged 75 years and older (8%) compared to those aged 58-64 years (3%).



Figure 4.7. Prevalence of cerebrovascular conditions by age group and sex

The prevalence of stroke or mini-stroke / TIA is similar between both never or past smokers, and current smokers (Figure 4.8).



Figure 4.8. Prevalence of cerebrovascular conditions by smoker status

The prevalence of stroke is similar across all physical activity categories, however those reporting low physical activity are more likely to report a mini-stroke / TIA (6%) compared to those reporting high physical activity (3%) (Figure 4.9).



Figure 4.9. Prevalence of cerebrovascular conditions by exercise category

4.6 Cancer or a malignancy

Mortality rates of cancer have declined in recent years, but remain a significant cause of mortality. (7) 12% of adults report a cancer diagnosis (Figure 4.10). The prevalence increases from 8% in adults aged 58-64 years, to 14% in those aged 75 years and older. An age gradient is apparent in men, increasing from 6% in those aged 58-64 years to 17% in those aged 75 years and older. The prevalence is similar across all age groups in women.





The prevalence a reported cancer or malignancy is similar between both never or past smokers, and current smokers, and all physical activity categories (Figure 4.11 & Figure 4.12).



Figure 4.11. Prevalence of cancer or a malignancy by smoker status

Figure 4.12. Prevalence of cancer or a malignancy by exercise category



4.7 Respiratory conditions

Respiratory disease is another leading cause of mortality in Ireland, with a higher rate compared to the European Union average and expected to increase by between 4-5% per year. (7) The experience of COVID-19 in itself will contribute to worse respiratory health, while those already experiencing a respiratory illness will be at greater risk of worse outcomes in the event of contracting COVID-19. 9% of adults report the presence of chronic lung disease, and 13% of adults report the presence of asthma (Figure 4.13). There is no overall difference between age groups for either asthma or lung disease. Within asthma however, a higher prevalence is reported by women aged 58-64 years (15%) and 65-74 years (17%) compared to men in these respective age groups (9%)



Figure 4.13. Prevalence of respiratory conditions by age group and sex

Almost twice as many adults who are current smokers report lung disease (14%) compared to never or past smokers (8%) (Figure 4.14). This difference is not seen in asthma, with a similar prevalence between both never/past smokers and current smokers.



Figure 4.14. Prevalence of respiratory conditions by smoker status

A lower proportion of adults who report either moderate (6%) or high (7%) physical activity report lung disease compared to adults reporting low physical activity (11%) (Figure 4.15). Those who report high physical activity also have the lowest prevalence of asthma (10%), while those with low physical activity have the highest prevalence (15%).



Figure 4.15. Prevalence of respiratory conditions by exercise category

4.8 Other chronic conditions

In other reported chronic conditions (Arthritis, Osteoporosis, Varicose Ulcer, Thyroid Problems (Table 4.1)), arthritis is the most prevalent for both men and women (Figure 4.16). Overall, 46% of adults report arthritis, almost doubling from 32% in adults aged 58-64 years, to 60% in those aged 75 years and older. An age gradient is also apparent in both women and men, with a higher prevalence for women in each age group. The largest difference is in those aged 75 years and older, with 69% of women reporting arthritis, compared to 48% of men. There are also age differences for both men and women in osteoporosis and varicose ulcers. For thyroid problems, the prevalence is higher in women across all age groups compared to men, with 17% of women reporting a thyroid problem, compared to just 4% of men.



Figure 4.16. Prevalence of other chronic conditions by age group and sex

Other Chronic Condition

The prevalence of these other chronic conditions is similar for both never/past and current smokers (Figure 4.17).



Figure 4.17. Prevalence of other chronic conditions by smoker status

Adults reporting high physical activity have the lowest prevalence of these other chronic conditions compared to those reporting low physical activity (Figure 4.18). Just 38% of adults who report high physical activity also report arthritis, compared to 54% who report low physical activity.



Figure 4.18. Prevalence of other chronic conditions by exercise category

4.9 Medications

Just one in five adults (20%) report no regular medication use (Figure 4.19). The prevalence of medication use and the number of medications regularly taken increases with age. 92% of adults aged 75 years and older report taking at least one medication regularly. Adults who report taking either 3-4 medications or \geq 5 regularly also increases across each age group. The prevalence of use of 3-4 medications increased from 18% in those aged 58-64 years, to 24% in those aged 65-74 years and 27% in those aged 75 years and older. The use of 5 or more medications increases more markedly with age. In the youngest age group, 18% report use of 5 or more medications, which more than doubles to 48% in those aged 75 years and older.



Figure 4.19. Prevalence of medication use by age group and sex

The number of medications taken does not vary by smoking status (Figure 4.20).



Figure 4.20. Prevalence of medication use by smoker status

The number of medications taken differs by level of physical activity, particularly in those reporting taking no medications, and those taking five or more medications (Figure 4.21). Over twice as many adults reporting use of no medications report high physical activity (25%) compared to those reporting low physical activity (11%). Conversely, 47% of those reporting use of five or more medications report low physical activity compared to 23% of those reporting high physical activity.





4.10 Medication Types

Prevalence of type of medication use by age group and sex are presented in figure 4.22. Use of anti-hypertensive medication is most prevalent, with almost half of adults (49%) reporting use. Prevalence is similar between men and women, but an age gradient is apparent, with prevalence increasing from 33% in adults aged 58-64 years to 69% in adults aged 75 years and older.

Prevalence of anti-depressant (11%) and sleep medication use (10%) is similar. Sex differences are present with a higher prevalence reported by women for both anti-depressant medication (15%) and sleep medication (12%) compared to men for both types (8%).





There are no differences in use of anti-hypertensive medication between never or past smokers and current smokers (Figure 4.23). Current smokers are however more likely to report use of either anti-depressant (18% vs 11%) or sleep medication (15% vs 9%) than never or past smokers.





Reporting use of anti-depressant, anti-hypertensive and sleep medication are all lowest in those reporting high physical activity compared to low physical activity (Figure 4.24). 57% of adults reporting low physical activity reported use of anti-hypertensive medication, compared to 42% of those reporting high physical activity. The prevalence of use of antidepressant medication is almost twice that in those reporting low physical activity (15%) compared to high physical activity (8%), while 14% reporting low physical activity report use of sleep medication compared to 5% of those reporting high physical activity.





4.11 Conclusion

Multimorbidity becomes increasingly prevalent in community-dwelling older adults as they age. Less than ten percent of adults aged 58 years and older report no conditions, with almost three quarters reporting the presence of two or more conditions. A similar age gradient is seen in use of medication, with close to half of adults aged 75 years and older reporting use of five or more medications regularly.

Hypertension (52%), high cholesterol (59%) and arthritis (46%) are the most commonly reported conditions, with both hypertension and arthritis becoming increasingly prevalent in older age groups. Differences in prevalence among men and women are notable in some conditions. Thyroid problems and osteoporosis, for example, are more commonly reported by women, while the proportions of heart attacks and diabetes are higher in men.

Adults reporting high levels of physical activity have a lower prevalence of hypertension, angina, diabetes, high cholesterol, asthma, lung disease, arthritis, stroke and mini-stroke / TIA. It cannot be ascertained however whether this results from engaging in physical activity, or if the experience of these conditions has negatively impacted involvement in physical activity. However, results from other international studies have shown similar patterns. (11-13) Evidence from randomised intervention trials supports the association of physical activity and the potential causal mechanism for reversing some chronic conditions such as diabetes, hypertension, high cholesterol and associated cardiovascular conditions. (14)

Use of anti-hypertensive medication was reported by almost half of adults, and became increasingly prevalent in older age groups, with similar reported use in both men and women. Use of anti-depressant and sleep medication was more commonly reported by women, with little difference in use across age groups. As with a number of chronic conditions, adults who engaged in high levels of physical activity were less likely to report use of multiple medications, or use of anti-depressant, sleep or anti-hypertensive medication, while those who reported being current smokers were more likely to report use of either anti-depressant or sleep medication.

Cumulative presence of health conditions and use of medications can pose serious risks for the healthy life years of the ageing population. Increasing prevalence of these conditions may also result in an increased burden on healthcare systems. Mapping the breakdown and projected rise in chronic conditions in older people will help with planning and targeting of healthcare service provision. A better understanding of the modifiable

risk factors for these conditions will improve outcomes through more targeted prevention and intervention strategies. Furthermore, gaining a better understanding of how men and women at different age groups may be impacted will assist in building awareness of the importance of demographics to risk of these conditions. In particular, this report has highlighted the importance of physical exercise as a potential protective measure for protecting against multimorbidity in older ages. This supports the importance for public health campaigns around maintaining physical activity during the COVID-19 pandemic amongst the older population. Multimorbidity and use of certain medications are identified as risk factors for the severity of COVID-19 infection, and so understanding their prevalence in the older population is a crucial aspect of planning for the managing the long-term response to and consequences of the pandemic and protecting the health of the older population.

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Patterns in Health Service Utilisation and Healthcare Entitlements

Lorna Roe, Christine McGarrigle, Belinda Hernández, Aisling O'Halloran, Siobhán Scarlett, Mark Ward and Rose Anne Kenny

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The Irish Longitudinal Study on Ageing

Patterns in Health Service Utilisation and Healthcare Entitlements

Key Findings

Of the over-58's population living in Ireland in 2018:

- 36% had a medical card only, 28% had a medical card and private health insurance ('dual cover'), 27% had private health insurance only, 2% had a GP visit card only, and 8% had 'no cover'.
- In the previous 12 months, 93% reported visiting their GP, 46% visited a hospital outpatient clinic, 1 in 5 visited the ED, 16% had an overnight hospital admission and 8% had a day case procedure. The most frequently utilised medical service was the GP (average 3.88 visits in the previous 12 months). Advancing age was associated with an increase in the frequency of use of all medical services, but the effect was particularly prominent in the number of nights an older adult spent in hospital in the previous 12 months (1.23 nights aged 58-64 years, to 3.57 nights aged 75 years or older). However, much of this effect is likely driven by biological age (e.g. frailty), rather than their chronological age.
- The most commonly used allied health service in the previous 12 months was the optician (15%). Approximately 1 in 10 visited the dentist and 6% utilised community-based physiotherapy. Community-based dietetics, hearing services, psychological or counselling services, and social work were used by fewer than 5% of the population aged 58 years and older.
- It was uncommon for the over-58s population in Ireland to use services which are delivered in the home, or are available to support independent living in the home. Informal carers are the most commonly used 'service' (8%), followed by community nursing (5%) and the home help or personal care service (4%).
- 8% reported having ever undertaken home modifications at an average cost of €3,878.
 62% of those who made home modifications, did not receive help from the State to cover the cost of these modifications.

5.1 Introduction

The aim of this report is to examine healthcare cover and patterns of medical healthcare utilisation, allied healthcare utilisation and the utilisation of services which support ageing in place among older adults in Wave 5 (i.e. 2018) of The Irish Longitudinal Study on Ageing (TILDA). Specifically, we provide descriptive data for the population aged 58 years and older, and disaggregated by age group.

5.1.1 Sample

Data for this chapter come from Wave 5 (2018) of the TILDA study. These data were collected through the computer-assisted personal interview (CAPI) between 16th January 2018 and 31st December 2018.

Of the 8,504 participants aged 50 years and older in TILDA at Wave 1, 3,279 did not participate in Wave 5 leaving a sample of n=5,225. We dropped from our analysis any participant aged less than 58 years of age (n=209) and those participants who were not present at baseline¹ (n=108). Thus, the analytical sample included n=4,908 participants aged 58 years (average 70.52 years; min-max: 58 years-103 years) and older at Wave 5.

5.1.2 Methodology

An earlier chapter (Chapter 2) provides a detailed description of the methodology. Thus, a summary of the methodology used in this chapter will be provided here. We used attrition weights as described in Chapter 2, to make estimates relevant to the general population of over 58s in Ireland. There are four sections in our analysis. Firstly, we examine rates of healthcare cover; secondly, we examine the patterns of medical care utilisation; thirdly, we examine the patterns of community-based allied healthcare utilisation and finally we examine the utilisation of community-based services which support ageing in place. We provide descriptive data for the population aged 58 years and older, and disaggregated by age group (58-64 years, 65-74 years, aged 75 years or older). A detailed description of these topics and the measures used in these analyses will be provided at the start of each section.

5.2 Healthcare cover

Healthcare cover refers to the protection that people have from being exposed to the full cost of healthcare. It is related to the concept of universal health coverage, which is a key principle in the Government's Sláintecare policy. (1) Universal health coverage is defined by the World Health Organization as: 'a situation where all people who need health services (prevention, promotion, treatment, rehabilitation, and palliative) receive them, without undue financial hardship'. (2)

We describe healthcare cover from three different perspectives; (1) the additional financial cover which people have through the public entitlement of the medical card or General Practitioner (GP) visit card; (2) the additional financial cover people have when they purchase private health insurance and (3) the distribution of additional public or private cover.

5.2.1 Medical card or a GP visit card

Basic public entitlements to healthcare include subsidised fees for public hospital services and prescribed medications. (3, 4) However, people with basic entitlements still pay the full cost of GP services. A survey conducted by the Department of Health between September 2018 and September 2019 found 30% of the Irish population pay up to €50 per GP visit, 24% pay between €50-75 and 2% pay over €75². (5) People with basic entitlements can access free of charge the home support service and some community-based public allied healthcare services, such as speech and language therapy. (6, 7) Many publicly-provided allied healthcare services which are delivered in the community, such as physiotherapy, are however only available to those with a medical card. (8)

Medical card entitlements to healthcare include free public hospital care; GP care; dental, optical and aural services; personal and social services such as public health nursing, social work and other community care services. (9) Prescribed medications are provided with an administrative charge of €2.00 per prescription item, up to a maximum of €20 per family per month. Eligibility for a medical card is assessed primarily on the basis of an income means test³. A medical card, commonly referred to as the *'over-70s medical card'*, has a higher means test threshold, which means more people in this age group are entitled to a medical card.

Of the over-58s population, 54% reported having a medical card, and 12% had a GP visit card in 2018 (Table 5.1). 34% of the over-58s population did not have a medical card or GP visit card.

The proportion of older adults with additional public cover increased with age, reflecting the more generous means test thresholds for the over 70s medical cards and the universal GP visit card for adults aged 70 years and older.

GP visit card entitlements to healthcare include free GP care, otherwise they have the same entitlements as those with basic entitlements. Since 2015, all adults aged 70 years and over are entitled automatically to a GP visit card if their income exceeds the limits for an over-70s medical card.

	Nei	ther	Medical Card		GP Vis	it Card	Total	Number in
	%	95% CI	%	I Card GP Visit Card Total Nu s 95% CI % 95%CI 100	sample			
58-64 years	64	[61-68]	33	[30-36]	2	[2-4]	100	1466
65-74 years	36	[33-38]	50	[47-53]	14	[12-16]	100	1931
75+ years	2	[1-3]	79	[76-82]	19	[17-22]	100	1504
All 58+ years	34	[32-36]	54	[52-56]	12	[11-13]	100	4901

Table 5.1. Proportion of people with a medical card or GP visit card, by age group

5.2.2 Private health insurance

All individuals in Ireland may also buy private health insurance (PHI). In 2018, according to the Health Insurance Authority of Ireland, 48% of the overall population had PHI. (10) PHI mainly provides cover for the cost of care in private or semi-private acute hospital services (which may be delivered in public hospitals), but some PHI plans also provide partial reimbursement of certain primary care expenses (e.g. GP visits, routine dental care, physiotherapy, etc.). Full medical card and GP visit cardholders may take out PHI if they wish (termed 'dual' cover), and many older people do so (see also Section 5.2.3).

Of the over-58s population in Ireland, over half (55%) reported having purchased PHI in 2018 (Table 5.2). The rate of purchasing PHI was marginally lower for older adults aged 75 years and older, but this difference is not statistically significant.

	No Private Health Insurance		Private Heal	th Insurance	Total	Number in	
	%	95% CI	%	% 95% CI 54 [51-58] 10		sample	
58-64 years	46	[42-49]	54	[51-58]	100	1467	
65-74 years	43	[40-46]	57	[54-60]	100	1933	
75+ years	48	[44-51]	52	[49-56]	100	1502	
All 58+ years	45	[43-48]	55	[52-57]	100	4902	

Table 5.2. Proportion of people with private health insurance, by age group

Table 5.3 shows the share of the private health insurance (PHI) market for each of the four main providers of PHI in the over-58s population in Ireland. VHI Healthcare remains the dominant provider of PHI to the over-58s, covering 55% of those who had PHI, a figure that is over twice the nearest competitor, Laya Healthcare/BUPA/Quinn Healthcare at 23%. There is a strong age cohort effect, with 66% of those aged 75 years and over holding a policy with VHI Healthcare compared to 48% of those aged 58-64 years.

	Laya Healthcare /BUPA /QUINN Healthcare % 95% CI	VHI Healthcare % 95% CI	AVIVA/ Hibernian Healthcare /VIVAS Health % 95% CI	Glo Health % 95% Cl	Other % 95% Cl	Total	Number in sample
58-64 years	25 [21-29]	48 [44-52]	11 [9-13]	1 [0-2]	16 [13-19]	100	907
65-74 years	25 [22-29]	53 [49-56]	9 [7-11]	0 [0-1]	13 [10-15]	100	1214
75+ years	18 [15-21]	66 [62-70]	6 [4-8]	0 []	10 [8-13]	100	868
All 58+ years	23 [21-25]	55 [53-57]	9 [8-10]	0 [0-1]	13 [11-15]	100	2989

Table 5.3. Proportion of people with PHI, by insurance provider, by age group

TILDA asks questions about the type of PHI cover, cost, etc. In 2018 in the over-58s population in Ireland, the typical PHI policy covered two people, at an average annual cost of €2,922 per policy. Of those with PHI, 19% have partial coverage for GP fees and just 2% were covered in full.

5.2.3 Public and private healthcare cover

We report the overlap of public and private healthcare cover across five categories: (1) 'None' indicates no medical card, GP visit card or PHI; (2) 'Medical card' indicates having a medical card only; (3) 'PHI' indicates having private health insurance only; (4) 'GP visit card' indicates having a GP visit card only and (5) 'Dual cover' indicates having either a medical card or GP visit card in addition to having private health insurance.

Table 5.4 details the types of healthcare cover by age group for the population in Ireland aged 58 years and older at Wave 5. Of the over-58s population in Ireland in 2018, 36% of the population had a medical card only, while another 28% had a medical card and PHI ('dual cover'), 27% had PHI only, 2% had a GP visit card only and 8% had 'no cover'. Healthcare entitlement status varies by age, with a higher proportion of those in the older age groups having a medical card or 'dual cover'; for example, while 27% of the 58-64 year old age group have a medical card only, 46% of those aged 75 years and older have a medical card only. While medical card coverage increases with age, PHI cover peaks in the 58-64 age group and then declines with increasing age.

	None		Medical card only		Private Health Insurance only		Dual cover		GP visit card only		Total	Number in sample
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI		
58-64 years	17	[14-19]	27	[24-31]	48	[44-51]	6	[5-8]	2	[1-3]	100	1466
65-74 years	6	[5-7]	35	[32-38]	30	[27-32]	27	[25-30]	2	[1-3]	100	1931
75+ years	0	[0-1]	46	[43-50]	1	[1-2]	51	[47-55]	1	[0-2]	100	1500
All 58+ years	8	[7-9]	36	[34-38]	27	[25-28]	28	[26-30]	2	[1-2]	100	4897

Table 5.4. Proportion of people with public or private healthcare cover, by age group

5.3 Utilisation of medical care

At Wave 5, TILDA participants were asked about the number of times they visited a range of medical services including the GP, a hospital outpatient clinic and the Emergency Department (ED), the number of overnight hospital admissions, the number of day case procedures and the number of nights spent in hospital over the previous 12 months. We examine both the proportion of older adults in Ireland who had at least one visit to these medical services, and the average number of visits to each service. The proportion of the over-58s population in Ireland using medical services at least once in the previous year increased with age (see Tables 5.5-9). Overall, in this population, the most commonly used medical service was the GP service (93%), while just under half of participants reported visiting a hospital outpatient clinic at least once in the previous year (46%). One-in-five adults in the over-58s population in Ireland reported visiting the ED at least once in the previous year, while 16% reported having an overnight hospital admission and 8% reported having a day case procedure.

Table 5.5. Proportion of people visiting the GP at least once in the previous 12 months, byage group

	No GP visits		At least one v	visit to the GP	Total	Number in	
	%	95% CI	%	95% CI	TOtal	sample	
58-64 years	11	[9-13]	89	[87-91]	100	1461	
65-74 years	7	[6-9]	93	[91-94]	100	1926	
75+ years	3	[2-4]	97	[96-98]	100	1487	
All 58+ years	7	[6-8]	93	[92-94]	100	4874	

Table 5.6. Proportion of people visiting an outpatient clinic at least once in the previous 12months, by age group

	No outpatient clin		At least one outpatier	e visit to the nt clinics	Total	Number in
	%	95% CI	%	95% CI Iotal sample [39-45] 100 1466 [44-49] 100 1926	sample	
58-64 years	58	[55-61]	42	[39-45]	100	1466
65-74 years	53	[51-56]	47	[44-49]	100	1926
75+ years	52	[49-56]	48	[44-51]	100	1499
All 58+ years	54	[53-56]	46	[44-47]	100	4891

Table 5.7. Proportion of people visiting the ED at least once in the previous 12 months, byage group

	No ED visits		At least one v	visit to the ED	Total	Number in	
	%	95% CI	%	95% CI Sample 7 [15-20] 100 1466 8 [16-20] 100 1931			
58-64 years	83	[80-85]	17	[15-20]	100	1466	
65-74 years	82	[80-84]	18	[16-20]	100	1931	
75+ years	76	[73-78]	24	[22-27]	100	1503	
All 58+ years	80	[79-82]	20	[18-21]	100	4900	

Table 5.8. Proportion of people having at least one overnight hospital admission in the
previous 12 months, by age group

	No overnight hospita admission		At least one hospital a	e overnight dmission	Total	Number in	
	%	95% CI	%	95% CI		sample	
58-64 years	89	[87-91]	11	[9-13]	100	1466	
65-74 years	86	[84-87]	14	[13-16]	100	1930	
75+ years	76	[73-78]	24	[22-27]	100	1506	
All 58+ years	84	[82-85]	16	[15-18]	100	4902	

Table 5.9. Proportion of people having at least one day case procedure in the previous 12months, by age group

	No day case p		At least on proce	e day case edure	Total	Number in	
	%	95% CI	%	95% CI		sample	
58-64 years	95	[93-96]	5	[4-7]	100	1467	
65-74 years	93	[92-94]	7	[6-8]	100	1933	
75+ years	89	[87-91]	11	[9-13]	100	1504	
All 58+ years	92	[91-93]	8	[7-9]	100	4904	

In terms of the intensity, or frequency of use of medical services (see Table 5.10), the mostly frequently utilised medical service (at any age) was the GP, where an adult aged 58 years and older visited their GP on average 3.88 times in the previous twelve months. Adults aged 75 years and over on average visited the GP and ED more often, and had more overnight hospital admissions, day case procedures and nights in hospital, compared to adults aged 58-64 years. The effect of advanced age was particularly prominent in the number of nights an older adult spent in hospital in the previous 12 months. At age 58-64 years, an older adult on average spent 1.23 nights in hospital, but this rate more than doubled to 3.57 nights for adults aged 75 years or older. We know from previous work, much of this effect is driven by an older adult's biological age (e.g. frailty), rather than their chronological age.

Table 5.10. Average number of times each person visited medical services in the previous12 months, by age group

	GP	Nights spent in hospital	Overnight hospital admission	Outpatient clinic visit	ED	Day case procedure
	95% CI	95% CI	95% CI	95% CI	95% CI	95% CI
58-64 years	3.32	1.23	0.18	1.65	0.23	0.07
	[3.10, 3.54]	[0.50, 1.97]	[0.13, 0.23]	[1.36, 1.95]	[0.19, 0.27]	[0.05, 0.09]
65-74 years	3.74	1.19	0.22	1.65	0.25	0.08
	[3.54, 3.95]	[0.91, 1.45]	[0.18, 0.27]	[1.31, 2.00]	[0.21, 0.28]	[0.07, 0.10]
75+ years	4.62	3.57	0.44	1.70	0.35	0.14
	[4.38, 4.87]	[2.66, 4.48]	[0.34, 0.53]	[1.43, 1.96]	[0.30, 0.40]	[0.11,0.17]
All 58+ years	3.88	1.93	0.27	1.66	0.27	0.10
	[3.75,4.01]	[1.55,2.30]	[0.24,0.32]	[1.49,1.85]	[0.25, 0.30]	[0.08, 0.11]

5.4 Utilisation of community-based allied healthcare

Data are also collected on healthcare services other than those provided by GPs and hospitals. Participants were asked if they had utilised any of the community-based allied healthcare services in the preceding twelve months, excluding any services for which they had paid anything other than a token or nominal amount. This included any state-provided physiotherapy, dietician, hearing, dental, optician, psychological and social work services, speech and language therapy, and chiropody.

Unlike the utilisation of medical care which is quite common in the over-58s population in Ireland, the utilisation of community-based allied health services is much less common (see Table 5.11). The most commonly used community-based allied health service was the optician (15%). Approximately 1 in 10 adults aged 58 years and older reported having a dental visit in the previous 12 months. Only 6% of this population reported using community-based physiotherapy and 5% reported using community-based chiropody in the previous 12 months. Community-based dietetics, hearing services, psychological or counselling services, speech and language therapy and social work were used by less than 5% of the population aged 58 years and older in the previous year. Advanced age was associated with increased rate of use of community-based physiotherapy, hearing, optician and chiropody. A small increase in the rate of use of speech and language therapy among adults aged 75 years and older was detected but this difference is not statistically significant.

			oo-o4 years	6L 17	00-14 years	75	/or years		All 20+ years
Physiotherapy	% 95% CI	5	[4-7]	S	[4-6]	ω	[7-10]	Q	[2-7]
Dietician	% 95% CI	£-	[1-2]	4	[1-2]	-	[0-1]	-	[1-1]
Hearing	% 95% CI	.	[1-2]	2	[1-3]	5	[4-7]	ო	[2-3]
Dental	% 95% CI	11	[9-13]	12	[10-14]	11	[9-13]	11	[10-12]
Optician	% 95% CI	o	[8-11]	15	[13-17]	20	[18-23]	15	[13-16]
Psychoogical	% 95% CI	~	[0-2]	~	[1-2]	-	[0-2]	~	[1-1]
Social work	% 95% CI	0	[0-0]	0	[4]	0	[0-1]	0	[0-0]
Speech and language therapy	% 95% CI	0	[0-1]	0	[0-1]	~	[0-1]	0	[0-1]
Chiropody	% 95% CI	. 	[1-2]	ო	[2-4]	12	[10-14]	5	[4-6]

5.5 Utilisation of community-based services which support ageing in place

This section focuses on services provided by the State which are delivered in the home, or are available to support independent living in the home (including carer support).

Ageing in place is a key goal of the Irish National Positive Ageing Strategy, which explicitly refers to the Government policy of supporting older people to live in dignity and independence in their own homes and communities for as long as possible. (11) Services such as home helps, home care packages, meals on wheels, day centre care and respite care are recognised in the strategy as integral both to supporting this Government's policy and older people's own preferred wishes to remain in their own homes. (11, 12)

In TILDA at Wave 5 participants were asked if they had used any of the following services in the preceding twelve months (excluding any services for which they had paid anything other than a token or nominal amount): the home help or personal care service⁴, community nursing⁵, meals on wheels, day centre care, occupational therapy (OT), home care packages⁶ and respite care.

As informal carers (or family carers) are an important part of the overall care provided to older adults in Ireland, we also examine those who reported having received help from an informal carer with either basic functional activities (such as dressing, eating or bathing, (ADLs)) or instrumental activities of daily living (such as household chores, shopping for groceries, preparing meals or paying bills, (IADLs)).

Overall, it was uncommon for the over-58s population in Ireland to use services which are delivered in the home, or are available to support independent living in the home (including carer support) (see Table 5.12). Informal carers are the most commonly used 'service' (8%), followed by community nursing (5%) and the home help or personal care service (4%).

We found an association between the use of home care services and advancing age. For example, there was a twelvefold increase in the rate of use of home help or personal care between those aged 58-64 years and those aged 75 years and over. A pattern with a similar magnitude was noted for the community nursing service. The rate of adults aged 75 years and over who used the home care package service, respite care, day centre care or meals on wheels service was twice as high as those aged 58-64 years. The rate of those reporting having help from an informal carer was five times higher for those aged 75 years and over, compared to those aged 58-64 years. These patterns are likely to be driven by the increase in health problems (including disability) which comes with advancing age, rather than by the individuals' chronological age.

	Informal Carer % 95% CI	Respite % 95% CI	Day centre % 95% CI	Meals On Wheels % 95% CI	OT % 95% CI	Home help or personal carer % 95% Cl	Community Nursing % 95% CI	Home Care Package % 95% Cl
58-64 years	3	0	0	0	1	0	1	0
	[2-5]	[0-1]	[0-1]	[]	[0-2]	[0-0]	[1-2]	[]
65-74 years	4	0	0	0	1	1	2	0
	[3-5]	[0-1]	[0-1]	[0-1]	[0-1]	[1-2]	[2-3]	[0-1]
75+ years	17	1	2	2	2	12	11	2
	[14-19]	[2-4]	[0-0]	[1-3]	[1-3]	[10-15]	[9-13]	[1-3]
All 58+ years	8	0	1	1	1	4	5	1
	[7-9]	[1-1]	[]	[0-1]	[1-2]	[4-5]	[4-5]	[0-1]

Table 5.12. Proportion of people using community-based, public services which supportageing in place in the previous 12 months, by age group

TILDA participants are also asked if they ever added features to their home to make it easier or safer for them/an older person to live there. This includes changes to the home to make it easier to get around like grab bars, railings or ramps or larger modifications including remodelling existing buildings. Participants are also asked about the cost of those modifications and whether they received any help from the State to pay for the cost of the modifications.
Within the over-58s population in Ireland, 8% reported having ever made these home modifications (see Table 5.13), and the rate increased with advancing age. The average cost of home modifications reported was €3,878 (95% CI: €2736-€5020). Of those participants who reported having ever made a modification to their home, 62% reported not receiving help from the State to cover the cost of these modifications (see Table 5.14). A larger proportion of adults aged 75 years and older reported receiving State supports but this difference is not statistically significant.

Table 5.13. Proportion of people reporting having made a modification to their home, byage group

	No		Y	es	Total	Number in	
	%	95% CI	%	95% CI	Total	sample	
58-64 years	97	[96-98]	3	[2-4]	100	1467	
65-74 years	94	[93-95]	6	[5-7]	100	1926	
75+ years	84	[82-87]	16	[13-18]	100	1462	
All 58+ years	92	[91-93]	8	[7-9]	100	4855	

Table 5.14. Proportion of people reporting if any of the costs of the modifications coveredby the State, by age group

	Yes, all of the costs		Yes, some of the costs		No, none of the costs		Total	Number in
	%	95% CI	%	95% CI	%	95%CI		sample
58-64 years	25	[12-45]	0	[]	75	[55-88]	100	43
65-74 years	22	[14-33]	7	[3-16]	70	[59-80]	100	111
75+ years	33	[25-42]	13	[8-19]	54	[46-63]	100	225
All 58+ years	29	[23-35]	10	[6-14]	62	[55-68]	100	379

5.6 Conclusion

This chapter analysed healthcare cover among the older population aged 58 years and older in Ireland in 2018. Countries differ in the extent to which they provide public coverage for healthcare services, but Ireland is unusual in not providing universal access for primary care services (i.e. access for the full population without user fees). This is reflected in the patterns of healthcare cover observed in the older population aged 58 years and over in 2018; 36% had a medical card only, 28% had a medical card and private health insurance ('dual cover'), 27% had private health insurance only, 2% had a GP visit card only, and 8% had 'no cover'.

This chapter also analysed patterns of health service utilisation among the older population aged 58 years and older in Ireland in 2018. Similar to patterns of health service utilisation reported by TILDA in previous years, visits to the GP remained the most commonly reported service to have been used by adults aged 58 years and older in the year preceding data collection. More generally, patterns of health service utilisation remain heavily oriented to the provision of medical services, with older adults in this population rarely utilising community-based allied healthcare, or those community-based services which support ageing in place. These preliminary trends indicate potential challenges for older adults in accessing services which focus on pre/rehabilitation in the community (e.g. physiotherapy), which address risk factors for frailty (e.g. dietetics), which provide support for loss of functional capacity (e.g. home help) or those services which offer a social outlet for an older adult or respite for an informal carer (e.g. day centre care). These challenges for access may be considerably exacerbated by the COVID-19 pandemic, which has seen elective treatments deferred, older people putting off GP visits and reduced availability of home care workers. More advanced statistical analysis will need to be undertaken to understand which factors (e.g. health needs, levels of healthcare cover etc.) determine the utilisation of services in 2018 which will help us to better understand these patterns.

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The Contributions of the Older Population

Christine McGarrigle, Mark Ward, Siobhán Scarlett and Rose Anne Kenny

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The Irish Longitudinal Study on Ageing

The Contributions of the Older Population

Key Findings

- Overall, 41% of adults aged 58 years and older provide some kind of regular help and/or care for their spouses, relatives (not including grandchildren), neighbours and friends
- Overall, 5% of men and 7% of women aged 58 years and over report that they provided informal care for a family member or friend in the last month
- 8% of the population aged 58 years and over had living parents; 12% of men and 21% of women aged 58-64 years and 12% of men and 31% of women aged 65-74 years provided help with dressing, feeding and bathing to their parents.
- 42% of men and 50% of women who have living parents report they regularly helped them with household chores and tasks.
- 16% of men and 19% of women aged 58-64 report helping their children with household tasks, this increases to 24% of men aged 65-74 but remained at 17% for women in this age group and decreased to 7% and 5% respectively for men and women aged 75 years and over.
- The older population also help their friends and neighbours with household tasks; 14% of men and 12% of women aged 58-64 and 15% of men and 12% of women aged 65-74 report helping their friends and neighbours with household tasks. A lower but still substantial number (8%) aged 75 years and over also report providing friends and neighbours with this help.
- Grandchild care is very common in the older population, and 42% of older adults report that they looked after their grandchild in the last month. This increased from 40% of men aged 58-64 to 54% of men aged 65-74 years while for women the proportion remained similar at half of all aged 58-64 year (50%) and 65-74 years (54%) and remained high in both men (30%) and women (21%) aged 75 years and older.

- Overall, 55% of men and 51% of women report that they volunteered in the past year.
- The three most common reasons given for volunteering were because they enjoyed it (28% of men and 41% of women, so that they could use their skills (23% men, 23% women) and so they could contribute something useful (15% men, 15% women).
- Overall, 90% of adults participate in active and social leisure activities each month, while 72% participate in organised groups such as sports groups, book clubs, or charitable organisations.
- Overall, one in five (21%) adults aged 58 years and over has four or more regular contacts. These networks are maintained through participation in a wide range of organisations and attendance at religious services.

6.1 Introduction

The older generations in Ireland have been long recognised for the vibrant and important contribution they make to society in Ireland. Research from The Irish Longitudinal Study on Ageing (TILDA) has previously highlighted the range and importance of the contributions that the older population make, in family life, through providing help and resources to both older and younger family members (1-3), and through volunteering and active participation in society. (4)

Currently, with national resources oriented towards responding to the COVID-19 pandemic in Ireland, many discussions are taking place about the effects of the COVID-19 crisis on our older population, with progressively greater restrictions placed on social interactions resulting in greater social isolation among this group. We take this opportunity to underscore once again the contribution that older persons make to society in Ireland and to the country's economic wellbeing, either directly or indirectly by enabling others to take part in the workforce through their volunteering and caring. We also highlight some of the challenges current COVID-19 restrictions may pose for informal family caring and for childcare for working parents who have previously relied on grandparents to provide affordable childcare options enabling mothers, in particular, to remain in the workforce.

This chapter uses data collected in Wave 5 of The Irish Longitudinal Study on Ageing (TILDA) from both the Computer Assisted Personal Interview (CAPI) (n=4,908) and the Self Completion Questionnaire (SCQ) (n= 4,233), which contains more sensitive questions.

The aim of this chapter is to describe and quantify the contribution that the population aged 58 years and older make to society in Ireland. The chapter is organised as follows. The first section provides a background to the topic, describing the context for the research; it describes the questions used and the characteristics of the community-dwelling adults aged 58 years and over resident in Ireland who were eligible for this analysis. The second section describes the types and prevalence of help and care provided to family and friends. The third section describes and quantifies the numbers of older adults who are volunteers. The fourth section describes the prevalence of regular social and leisure activities, while the final section discusses the results and puts them in the context of successful ageing in Ireland.

6.2 Population providing help and care

TILDA asks about a variety of types of care that participants provide to different people including children, parents, relatives etc. In this first section we describe the characteristics of those participants who provide any form of care on a regular basis. In subsequent sections we describe specific types of care provided to named groups.

In TILDA, we ask if participants provided care for someone in the past month, and if so, for how many hours that was in the last week, and what their relationship was to those for whom they provided this care. We also ask about help they may have provided to their parents and other relatives, and whether this is help with household tasks or with basic activities of daily living (ADLS, include help with tasks like bathing, dressing, eating and toileting). Finally, we asked about any other household help provided to neighbours and friends. These are referred to as Instrumental activities of daily living (IADLS) and include help with housework, shopping, filling in forms etc.

Overall, we find that 37% of adults aged 58 years and older (39% of men and 35% of women) provide some kind of regular help and/or care for their spouses, relatives (not including grandchildren), neighbours and friends. This help takes two forms. The majority provide help with household chores for their relatives, friends and neighbours. Others provide care with ADLs.

When numbers providing any help and/or care are combined, Figure 6.1 shows that 50% of men and 49% of women aged 58-64 report that they have provided help or care for family and friends in the last month; this decreased to 44% and 37% respectively in those aged 65-74 years, and to 20% and 19% in those aged 75 years and over.





The proportion who provide any help and/or care varies by level of educational attainment for women, shown in Figure 6.2. A higher proportion of women aged 65-74 who have a tertiary education report providing any help and care (47%) than women with either primary (31%) or secondary education (36%) within that age group.





A higher proportion of both men and women living in Dublin aged between 58 and 74 years report that they have provided help or care to family and friends than those living in either another town or city or a rural area: 58% of men and 55% of women aged 58-64 years in Dublin compared to 48% and 46% respectively in a rural area; and 59% of men and 49% women aged 65-74 years in Dublin compared to 37% and 32% respectively for those in the age group living in a rural area (Figure 6.3). These differences were not seen in those aged over 75 years, where 21% report they provided help or care to family or friends and neighbours (Figure 6.3).







As shown in Figure 6.4, a higher proportion of women aged 65-74 who were never married report providing help and care in the past month (62%) compared to women in the same age group who are married (41%), separated or divorced (39%), or widowed (28%) (Figure 6.4).





6.2.1 Family carers

This section separates out the type of care provided and also describes patterns of informal family caring. We asked participants 'Did you look after anyone in the past week (including your partner or other people in your household)? By "look after" we mean the active provision of care.' We also asked to whom they gave this care. Overall, 5% of men and 7% of women aged 58 years and over report that they provided informal care for a family member or friend in the last month. This proportion was similar for men and women, although Figure 6.5 shows that a higher proportion of women aged 58-74 years report being carers compared to women aged 75 years and over, while there is no difference between age groups for men.





When we identified the main recipients of care for those who provided family care in the past month, 32% of men and 25% of women report the main recipient of care was their spouse; 14% and 13% respectively report it was their child; 20% and 13% report it was their grandchild; and 26% and 37% report it was another relative (Figure 6.6). A further 8% of men and 12% of women report that the main person whom they provided informal care for is a friend or neighbour (Figure 6.6).

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6.2.2 Providing help to parents with basic activities of daily living

Overall, 8% of men and women aged 58 years and over had living parents. We asked these participants if they provide help with activities of daily living (ADLs) to their parents. This decreases by age from 19% of those aged 58-64 years to 5% of those aged 65-74 and less than 1% of those aged 75 years and over. Figure 6.7 shows that, of those who had living parents, 12% of men and 21% of women aged 58-64 years, and 12% of men and 31% of women aged 65-74 years, provided help with ADLs to their parents.





6.2.3 Providing help with Instrumental activities of daily living (household activities)

We also asked participants if they provide help with other household activities (IADLs) to their parents, other relatives, children or friends and neighbours. These included help with household chores, errands, shopping, transportation and filling out forms.

As noted above, 8% of the population aged 58 years and over had living parents; 42% of men and 50% of women who have living parents report they regularly helped them with household chores and tasks. This represents 5% of all women and 4% of all men aged 58 years and over. Figure 6.8 shows that this varied by age and was 10% of men and 12% of women aged 58-64 and decreased to 3% of men and women aged 65-74 years.

Overall, 8% of men and 7% of women report they help their children with household tasks. Figure 6.8 shows that this varied by age group for men and women. While 16% of men and 19% of women aged 58-64 report helping their children with household tasks, this increased to 24% of men aged 65-74 but remained at 17% for women in this age group, and decreased to 7% and 5% respectively for men and women aged 75 years and over.



The older population also help their friends and neighbours with household tasks. Figure 6.8 shows that 14% of men and 12% of women aged 58-64, and 15% of men and 12% of women aged 65-74, report helping their friends and neighbours with household tasks. A lower but still substantial number (8%) aged 75 years and over also report providing friends and neighbours with this help.





6.2.4 Providing help with grandchild care

We asked participants if they had looked after a grandchild in the past month for more than an hour, and if so, for how many hours in the past month.

Grandchild care is very common in the older population, and 42% of older adults report that they looked after their grandchild in the last month. This increased from 40% of men aged 58-64 to 54% of men aged 65-74 years, while for women the proportion remained similar at half of all aged 58-64 year (50%) and 65-74 years (54%). Figure 6.9 shows that the proportion who report looking after their grandchildren, although reduced, still remained high in both men (30%) and women (21%) aged 75 years and older.





The numbers of hours that grandchild care was provided for varied by age of grandparents. The median number of hours in the last month for those who provided care was 20 hours (interquartile range 10-40 hours). Figure 6.10 shows the distribution of hours spent looking after grandchildren among those grandparents that report at least one hour of grandchild care in the past month. Overall, one in three grandparents report looking after their grandchildren for 1-10 hours in the past month, one in four (23% of men and 22% of women) report 11-20 hours and a further one in four (25% of men and 27% of women) report looking after grandchildren for more than 40 hours in the past month. This varied by age group; grandparents aged 58-64 years were more likely to report providing more than 40 hours of grandchild care (36% of men and 38% of women) compared to those aged 75 years and over (12% of men and 10% of women). One in four adults aged 65-74 years (25% of men and 26% of women) also report providing more than 40 hours of grandchild care in the past month. Adults aged 75 years and over were more likely to report providing between 1-10 hours in the past month (52% of men and 51% of women).



Figure 6.10. Distribution of hours spent looking after grandchildren in the last month amongst those who report at least one hour by age and sex



6.3 Engaging in the community

In TILDA, information about three different types of social participation – volunteering; active and social leisure activities; and organised groups – is collected at each wave.

6.3.1 Volunteering

Ireland has one of the highest rates of volunteering in the European Union. (5) The work of volunteers benefits hundreds of thousands of people in all age groups throughout the country. Evidence suggests volunteering also benefits the volunteers, contributing to better physical and mental wellbeing as well as overall quality of life.

As part of the SCQ, TILDA participants are asked whether they volunteered at any time during the last year and, if so, how often they did so: at least once per week; at least once per month; a few times a year or less; and never. TILDA participants are also asked if they did any voluntary work in the last month as part of the CAPI interview and, if so, what are the main reasons they do voluntary work.

Adults aged 58 and over volunteer for a wide range of organisations; examples include the GAA and other sports or social groups or clubs, a church-connected group, a self-help

or charitable body or other community group, or a day care centre. Overall, 55% of men and 51% of women report that they volunteered in the past year. Volunteering decreased with age in women: 57% of women aged 58-64 report volunteering in the past year, and this decreases to 39% of women age 75 years and over (Figure 6.11). In men, rates of volunteering remained similar in all age groups: 57% of those aged 58-64 years and 51% of men aged 75 years and over report volunteering in the past year. Overall, 17% report they volunteer daily or weekly, while a further 13% report monthly and 22% less than monthly. Frequency of daily or weekly volunteering increased in women aged 65-74, from 15% of those aged 58-64 to 20% of 65-74 years; this decreased to 16% of women aged 75 years and over. The proportion of men who report volunteering daily or weekly remained the same regardless of age (17%).





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One in five adults (19%) aged 58 years and over report that they volunteered in the past month. Volunteering in the past month was more common in younger age groups. 22% of men and 18% of women aged 58-64, 23% of men and 21% of women aged 65-74 and 16% of men and 13% of women aged 75 years and over report that they volunteered in the past month (Figure 6.12).



Figure 6.12. Proportion of adults aged 58 years and older who report volunteering in the past month by age group and sex

Volunteering varied according to age and place of residence. A lower proportion of men aged 58-64 years who lived in Dublin report volunteering in the past month (15%) compared to men who lived in a rural area (27%), while the proportions were similar in other age groups (Figure 6.13). A lower proportion of women aged 75 years and over who live in a rural area report volunteering in the past month (11%) compared to those who lived in Dublin (19%), while the proportion was similar in other age groups.





Volunteering also varied by educational attainment. Figure 6.14 shows that a higher proportion of both men (30%) and women (29%) with a third level education report volunteering in the past month compared to those who had either a secondary level education (21% men, 16% women) or a primary level education (12% men, 9% of women).







When we asked why people who volunteered did so, the most common reason given was they enjoyed it (28% of men and 41% of women) (Figure 6.15). The second most common reason was so that they could use their skills (23% men, 23% women) and the third was so they could contribute something useful (15% men, 15% women). Other reasons included: Because I am needed (10% men, 7% women), to keep fit (9% men, 4% women) and because I feel obliged to (9% men, 6%).





6.3.2 Active and social leisure activity

Information about active and social leisure activities is collected as part of the SCQ. Active and social leisure activities include going to films, plays or concerts; attending classes or lectures; playing cards, bingo, games in general; going to the pub; eating out of the house; and taking part in sporting activities or exercise. Participants are asked if they are a member of organisations, clubs or societies. Organisations include political party, trade union or environmental groups; tenants' groups, resident groups, neighbourhood watch; Church or other religious groups; charitable associations; education, arts or music groups or evening classes; social clubs, GAA or gym exercise classes.

People aged 58 years and over continue to lead active and social lives. Overall, 90% of adults participate in active and social leisure activities each month, while 72% participate in organised groups such as sports groups, book clubs, or charitable organisations. Figure 6.16 shows that social participation rates are similar in men and women. There is a decrease in monthly active and social leisure activities among those aged 75 and over. Participation in organised groups is the same for both men and women of all age groups. These activities provide a means for people to maintain friendships and pastimes, and generally to remain engaged. The activities also support the economy. Participation in

social and leisure activities has many benefits including better physical and mental health, and improved cognition.





6.4 Social engagement and integration

TILDA collects information on the size of an individual's social network to measure social isolation. The size of social networks was measured using the Berkman-Syme Social Network Index (SNI). (6) This index is scored on a 0-4 composite scale that captures four types of social connection: (1) marital status; (2) close ties with children, relatives and friends; (3) membership of a church group; and (4) membership of voluntary organisations. A score of 0-1 identifies individuals as 'most isolated', with a score of 4 indicating 'most integrated'.

Many people aged 58 and over maintain large social networks. Overall, one in five (21%) adults aged 58 years and over has four or more regular contacts. These networks are maintained through participation in a wide range of organisations and attendance at religious services (Figure 6.17). A higher proportion of women aged 75 years and over are in the most isolated group (18%) than women aged 58-64 (12%); the proportion in the most integrated group however remains the same (16% in 75 years and over). One in four men are in the most integrated group (23%), and this was maintained in each age group,

where 20% of men aged 58-64 years, 22% of men aged 65-74 years and 26% of men aged 75 years and over are in the most integrated group.





6.5 Conclusion

This report demonstrates that, far from later years being simply a time characterised by decline and increased dependency, older adults aged 58 years and over continue to make valuable contributions to society, with many characterised by active citizenship and participation in the lives of their families and their communities. The vision for positive ageing set out in Ireland's National Positive Ageing Strategy (7), which includes a broad suite of areas targeted for action including, economic, social, cultural, community and family life, and solidarity between generations, provides a useful benchmark against which public policies and decisions, even in times of public health urgency, should be continuously assessed.

Some recent trends in public discourse contribute to formation of a narrative which represents the older population of Ireland as somewhat dependent on others, living closeted lives. Other elements of this narrative suggest that the majority is unwell and therefore require much care, restricted movement and confinement indoors. On the contrary, the findings of this report underscore the vibrant and important contribution that adults aged 58 years and over continue to make to society in Ireland.

The information presented in this report was collected one year before the COVID-19 pandemic began. It is highly likely that many of the activities described here have since been severely curtailed, if not cancelled entirely. Given the extent of these activities among the older adult population and the benefits of them to older adults, their families and the wider community, research into the effects of the COVID-19 pandemic on the usual activities of older adults is important. Previous research has shown that the activities described here benefit the mental and physical wellbeing of older adults. (2-4) The removal of opportunities for these activities is likely to negatively to affect older adults' wellbeing. Moreover, it is probable that some groups of older adults will feel the effects of these changes more than others. It is likely that a reduction in family and social contacts will also result in increased loneliness amongst the older population, particularly those who are living alone. Loneliness has been considered an important issue for public health and has been shown to be associated with poor health and wellbeing even before the pandemic. (8)

The lack of availability of childcare for working families normally provided by grandparents may also exacerbate inequalities in the economic impact of the pandemic, as those most financially dependent on informal or familial support will be disproportionately affected. Similarly, frontline and essential workers who have continued going out to work during

The Irish Longitudinal Study on Ageing

the pandemic will not have had these family supports for childcare and household help normally available to them. With this evidence in view, and because caring for grandchildren and volunteering may not be taking place at the same scale because of recent physical distancing restrictions, support structures and assistance for families and communities who rely on the older generation to provide care will be required. This chapter helps to inform the extent of this current need in Ireland.

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Internet Access and Usage among Ireland's Older Population

Paul Doody, Minjuan Wang, Siobhán Scarlett, Ann Hever, Paul O'Mahoney and Rose Anne Kenny

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The Irish Longitudinal Study on Ageing

Internet Access and Usage among Ireland's Older Population

Key Findings

- 80% of adults aged 58 years and older have access to the internet in their homes.
- Internet access decreases with age. Only 58% of those aged 75 years and older have home internet access, compared to 94% aged 58-64 years, and 83% aged 65-74 years.
- 83% aged 58 years and older in urban areas have home internet access; 75% in rural.
- 66% of adults aged 58 years and older have access to a smartphone/tablet (and therefore to apps).
- Access to smartphones/tablets similarly decreases with age. Only 42% aged 75 years and older have access to a smartphone/tablet, compared to 84% aged 58-64 years, and 69% aged 65-74 years.
- Common internet uses among those aged 58 years and older include:
 - Searching for information: 81%
 - Sending and receiving emails: 73%
 - Financial transactions: 59%
 - News: 58%
 - Audio/video calls: 44%
 - Social media: 40%
 - Gaming/apps: 17%
- Internet use for any purpose declines with increased age, with social media use experiencing the largest of these age-associated declines, from 49% in those aged 58-64 years, 39% aged 65-74 years, to only 26% aged 75 years and older.

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- Women use social media more than men, with 47% of women aged 58 years and older using the internet for this purpose, compared to 33% of men.
- 70% of adults aged 58 years and older use the internet daily; 87% weekly.
- 3% of adults aged 58 years and older use the internet but are solely reliant on internet access external to their homes e.g. friends'/relatives' home, library, community centre and public Wi-Fi networks.
- Of adults aged 58 years and older living alone, 36% do not have internet access in their homes.

Executive Summary Figure 7. Home internet, smartphone and tablet access, and reliance on external sources of internet access, stratified by age group and residence, among adults aged 58 years and over in Ireland



7.1 Introduction

The aim of this chapter is to outline internet access and use among adults aged 58 years and older in Ireland, using data collected during Wave 5 of The Irish Longitudinal Study on Ageing (TILDA) in 2018. Specifically, information will be provided regarding home access to the internet; access to smartphones/tablets (ergo access to apps); and the frequency and purpose of internet use. This chapter will also provide information regarding those who are solely reliant on internet access external to their own homes, as well as the lack of internet access among those living alone. All prevalence estimates provided within this chapter are weighted to account for age, sex, educational attainment, and urban/ rural residence in the 2016 Census, as well as the probability that participants returned a completed self-completion questionnaire during Wave 5 of TILDA.

7.2 Internet access and usage

7.2.1 Home access to the internet

Among adults aged 58 years and older in Ireland, 80% have access to the internet in their homes. The prevalence of home internet access decreases with age, from 94% of those aged 58-64 years, to 83% aged 65-74 years, and 58% aged 75 years and older.

The overall prevalence of home internet access is relatively evenly distributed when stratified by sex, with approximately 80% of both men and women having access to the internet in their homes. The relative prevalence of home internet access when stratified by sex changes with age however; approximately 4% more women aged 65-74 years, have home access to the internet relative to men, while among those aged 75 years and older this sex difference is reversed, with approximately 10% more men having home access to the internet compared to women (Table 7.1). Additionally, there is a minor urban/rural divide, with 83% aged 58 years and older living in urban areas having home access to the internet, compared to 75% in rural areas.

Table 7.1. Home access to the internet, stratified by age group and sex, among adultsaged 58 years and over in Ireland, 2018

Age group / Sex	Total participants	Home access to the internet	Home Access to the internet		
	(11)	(n)	%	95% CI	
Total (58+ years)	2729	2183	80	[78-82]	
Male	1172	949	81	[78-83]	
Female	1544	1220	79	[76-81]	
58-64 years	1037	975	94	[91-95]	
Male	418	389	93	[89-96]	
Female	620	583	94	[91-96]	
65-74 years	1192	989	83	[80-85]	
Male	483	391	81	[77-84]	
Female	720	612	85	[81-87]	
≥75 years	493	286	58	[54-63]	
Male	250	160	64	[58-69]	
Female	247	133	54	[48-59]	

7.2.2 Access to apps via smartphone/tablet

Among adults aged 58 years and older in Ireland, 66% have access to a smartphone/ tablet, and therefore access to apps. The prevalence of access to these devices decreases with age, from 84% of those aged 58-64 years, to 69% aged 65-74, and falling to 42% aged 75 years and older.

The overall prevalence of smartphone/tablet access is relatively evenly distributed when stratified by sex, with slightly under 66% of men and women aged 58 years and older having access to these devices (Table 7.2).
Table 7.2. Access to digital applications via smartphone / tablet, stratified by age group a	and
sex, among adults aged 58 years and over in Ireland, 2018	

Age group / Sex	Total participants	Access to digital applications	Acces smart	ss to apps via phone / tablet
	(1)	(n)	%	95% CI
Total (58+ years)	4135	2729	66	[64-68]
Male	1831	1172	64	[61-67]
Female	2304	1544	67	[65-70]
58-64 years	1235	1037	84	[81-86]
Male	522	418	80	[76-84]
Female	713	620	87	[83-90]
65-74 years	1727	1192	69	[66-72]
Male	754	483	64	[60-68]
Female	720	720	74 [70-77]	
≥75 years	1173	493	42	[39-46]
Male	555	250	45	[40-50]
Female	618	247	40	[35-45]

7.2.3 Purposes of internet usage

Participants were asked to report the types of activities they use the internet for (Figure 7.1, Supplementary Table 7.1). The list of activities shows among adults aged 58 years and older who have access to the internet in their homes, searching for information (81%) and sending/receiving e-mails (73%) are the most common activities, while just 17% use the internet for gaming/apps. Common internet uses among those aged 58 years and older with home internet access include:

- Searching for information: 81%
- Sending and receiving emails: 73%
- Financial transactions: 59%
- News: 58%
- Audio/video calls: 44%
- Social media: 40%
- Gaming/apps: 17%

Women report higher internet use for sending/receiving emails, participating in audio/video calls, accessing social media, and gaming/apps than men. Men report higher internet use for information searching, conducting financial transactions and accessing news sites. While there are relatively minor differences between sexes in most of these categories, women report much higher use of social media, with 47% of women aged 58 years and older accessing social media compared to 33% of men.

Internet use for all purposes declines with increased age, with the largest of these ageassociated declines observed in the use of social media and online financial transactions, both of which decline by almost half in those aged 58-64 years, compared to those aged 75 years and older, from 49% to 26%, and 66% to 40% respectively.





7.2.4 Frequency of internet use

Among adults aged 58 years and older who have home internet access, 70% use the internet every day or almost every day, while 87% use the internet at least once per week. The frequency of internet use declines with age, with over 77% aged 58-64 years using

the internet daily, compared to 71% aged 64-75 years, and 54% aged 75 years and older. This difference is reduced in figures for weekly use, with 89% aged 58-64 years, 90% aged 65-74 years, and 78% aged 75 years and older, using the internet at least once a week (Figure 7.2, Supplementary table 7.2A).





7.2.5 Reliance on internet access external to home

Over 3% of adults aged 58 years and older in Ireland use the internet but have no access within their own homes. These individuals have indicated a sole reliance on external sources of internet access, e.g. friends'/relatives' home, library, community centre and public Wi-Fi networks (Table 7.3).

Table 7.3. Reliance on external sources of internet access, stratified by age group and sex,among adults aged 58 years and over in Ireland, 2018

Age group / Sex	Total participants (n)	Reliant on external internet access	Reliance on external sources of internet access		
		(n)	%	95% CI	
Total (58+ years)	3843	115	3	[3-4]	
Male	1699	68	4	[3-5]	
Female	2144	64	3	[2-4]	
58-64 years	1199	36	3	[2-4]	
Male	502	15	3	[2-6]	
Female	697	14	2	[1-4]	
65-74 years	1620	65	4	[3-5]	
Male	701	28	4	[2-6]	
Female	919	37	4	[2-5]	
≥75 years	1024	31	3	[2-5]	
Male	496	15	3	[2-6]	
Female	528	16	3	[2-6]	

7.2.6 Lack of internet access in those living alone

Among adults aged 58 years and older living alone in Ireland, over 36% are without home access to the internet. Lack of home internet access among those living alone increases with age, from 19% of those aged 58-64 years, to 31% aged 65-74 years, and 52% of those aged 75 years and older. Among all ages, men living alone are more likely to be without home internet access compared to women, though this decreases with age (Table 7.4).

Table 7.4. Lack of internet access, stratified by age group and sex, among adults aged 58years and over and living alone in Ireland, 2018

			Reliance on external		
Age group / Sex	Total participants (n)	Reliant on external internet access	sources of internet access		
		(n)	%	95% CI	
Total (58+ years)	878	316	36	[32-41]	
Male	303	121	40	[33-47]	
Female	575	196	34	[29-39]	
58-64 years	169	32	19	[12-29]	
Male	66	18	28	[16-43]	
Female	103	11	11	[5-23]	
65-74 years	364	113	31	[25-38]	
Male	116	51	44	[33-55]	
Female	248	52	21	[16-28]	
≥75 years	345	179	52	[45-59]	
Male	121	54	45	[34-57]	
Female	224	123	55	[46-63]	

7.3 Conclusions

Internet access has become more important in light of the COVID-19 pandemic. As restrictions are placed on travel, older people advised to 'cocoon' and employees to work from home, the use of the internet for work, shopping, communication and social contact has become an increased focus of public attention. This chapter shows that among adults aged 58 years and over in Ireland, access to the internet is common, with frequent and varied use. There is also however a relatively large section of the population aged 58 years and older who do not have home internet access. This is particularly the case for older adults. This cohort of adults may be particularly at risk of loneliness as a result of social isolation, and have a reduced capacity to access information, support services and commerce. For these individuals, and in particular those living alone and older age groups, more traditional forms of communication and information distribution, e.g. telephone, radio, television, and the national postal service, in combination with ongoing family and community support, are likely essential.

 Table 7.A1. The purpose of internet use, stratified by age group and sex, among adults aged 58 years and over in Ireland with

 home internet access, 2018

		Email	Aud	io / video calls	Sear	ching for prmation	Fi tran	nancial saction	Soc	ial media		lews	Gam	ing / Apps
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Total (58+ years)	73	[71-75]	44	[42-46]	81	[79-83]	59	[57-62]	40	[38-42]	58	[56-60]	17	[16-19]
Male	71	[68-74]	41	[38-44]	82	[79-84]	60	[57-64]	33	[31-36]	60	[57-63]	14	[12-16]
Female	75	[73-78]	47	[45-50]	80	[78-83]	58	[56-61]	47	[45-50]	56	[54-59]	21	[18-23]
58-64 years	78	[74-81]	48	[45-52]	85	[82-88]	99	[63-69]	49	[45-52]	65	[61-68]	20	[17-23]
Male	74	[69-78]	42	[37-47]	85	[80-89]	65	[26-70]	40	[35-45]	65	[26-20]	16	[12-20]
Female	81	[77-85]	55	[69-29]	86	[82-89]	67	[63-72]	57	[52-62]	65	[02-09]	24	[19-28]
65-74 years	74	[71-77]	45	[41-48]	81	[78-84]	62	[29-62]	40	[37-43]	59	[55-62]	16	[14-19]
Male	72	[67-76]	43	[39-48]	82	[78-86]	62	[58-67]	32	[28-36]	63	[58-67]	14	[11-17]
Female	27	[73-80]	46	[42-50]	81	[77-84]	62	[58-66]	47	[43-51]	55	[51-59]	19	[15-22]
≥75 years	63	[58-67]	35	[30-40]	72	[67-76]	40	[36-45]	26	[22-30]	45	[40-49]	15	[12-19]
Male	65	[58-71]	33	[28-40]	75	[69-80]	49	[42-55]	23	[18-29]	47	[41-54]	10	[7-15]
Female	61	[53-67]	36	[30-43]	68	[61-74]	32	[27-38]	28	[22-35]	42	[36-49]	19	[14-26]

Appendix 7A. Tables on Internet Access and Usage among Ireland's Older Population

7 Internet Access and Usage among Ireland's Older Population

Table 7.A2. The frequency of internet use, stratified by age group and sex, among adultsaged 58 years and over in Ireland with home internet access, 2018

	Eve or eve	ery day, almost ery day	A onc (cui	t least e a week nulative)	At lo a (cu	east once month mulative)	At le eve n (cu	east once ery three nonths mulative)	1	Never
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Total (58+ years)	70	[68-72]	87	[86-89]	93	[92-94]	96	[95-97]	4	[3-5]
Male	69	[66-72]	86	[84-88]	92	[90-94]	96	[94-97]	4	[3-6]
Female	71	[68-74]	88	[86-90]	94	[92-95]	96	[95-97]	4	[3-5]
58-64 years	77	[74-80]	89	[87-92]	94	[92-96]	97	[95-98]	3	[2-5]
Male	74	[69-79]	87	[82-91]	93	[90-96]	97	[94-98]	3	[2-6]
Female	72	[68-76]	91	[87-93]	95	[93-97]	97	[95-99]	3	[1-5]
65-74 years	71	[68-74]	90	[87-92]	94	[92-95]	96	[95-97]	4	[3-5]
Male	70	[65-74]	89	[85-92]	93	[90-95]	95	[93-97]	5	[3-7]
Female	72	[68-76]	91	[87-93]	95	[93-97]	97	[95-99]	3	[1-5]
≥75 years	54	[49-59]	78	[74-82]	88	[85-91]	94	[91-96]	6	[4-9]
Male	56	[50-63]	79	[73-85]	89	[84-93]	94	[90-97]	6	[3-10]
Female	51	[44-58]	77	[70-83]	88	[82-92]	93	[88-96]	7	[4-12]

TILDA Participants in Nursing Homes

Roman Romero-Ortuno, Peter May, Minjuan Wang, Siobhán Scarlett, Ann Hever and Rose Anne Kenny

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The Irish Longitudinal Study on Ageing

TILDA Participants in Nursing Homes

8.1 Background

There are 576 registered nursing homes in Ireland, providing a total of approximately 32,000 beds.

The estimated 30,000 people living in nursing homes faced disproportionate likelihood of adverse outcomes during the COVID-19 pandemic. Nursing home residents had higher risk of infection due to higher prevalence of frailty and serious illness, and this risk was magnified by residential care environments, where people live together in close quarters and staff supportive care involves a lot of physical contact. If infected, nursing home residents had a higher risk of adverse outcomes, including mortality, due to underlying medical conditions.

8.2 TILDA data

8.2.1 Overview

At Wave 1 (2009) the study recruited over 8,500 community-dwelling people aged 50 and over – that is, no participant was living in a nursing home or residential care at baseline. Over the 11 years that the study has been running, some participants have moved permanently to living in a nursing home and conducted their interviews for later waves in this setting. In addition, TILDA has collected information on deceased participants through 718 end-of-life interviews completed by family members and friends. Of these, 97 (14%) participants' reported place of death as a nursing home. In this appendix we describe the characteristics of participants from those two data sources, which are not mutually exclusive.

8.2.2 Participant interviews in a nursing home

Of the 100 participants who were interviewed in a nursing home, the mean (SD) age was 83.7 (7.2) years and 62% were female. Eighty-five had a long-term health problem, illness or disability limiting their day-to-day activities, and 26 had a history of dementia or cognitive problem. When asked to self-rate their physical health, 61 could not self-report

due to a cognitive and/or physical problem; 22 reported that their physical health was 'good, very good or excellent', and 12 reported it as 'fair'. The remaining 5 reported their physical health as 'poor'.





8.2.3 Participants who died in a nursing home

To date, TILDA has collected 718 interviews on the end-of-life experience of deceased participants. Among these, 97 deaths occurred in a nursing home; the mean (SD) age at death was 85.0 (8.5) years and 51 (53%) were female.

Fifty-eight percent had a history of hypertension, 46% of Alzheimer's and related dementias, 31% congestive heart failure, 20% diabetes, 17% heart attack, 17% cancer, 13% anxiety and 11% depression.

Eighty percent had had disability for 4 or more basic activities of daily living (ADLs), and a further 13% had had disability in 1-3 basic ADLs. Seventy-nine percent had had disability for 4 or more instrumental ADLs, and a further 10% had had disability in 1-3 independent ADLs.

Fifty-seven percent had been troubled by pain in the last year of life, and 61% had fallen in the last year of life.

The most common causes of death were cardiovascular/circulatory (32%), respiratory (16%), infection (13%) and cancer (10%).

8.3 Conclusion

TILDA nursing home participants were chronologically very old, had very high levels of physical and cognitive morbidities, and very high levels of physical disability.

Nevertheless, when TILDA nursing home participants were able to self-report, a majority reported that their physical and mental health was fair, good, very good or even excellent. Not being able to self-report was mostly associated with the presence of cognitive and communication problems, including dementia.

The personal perspectives of our TILDA nursing home participants provide an important reminder that quality of life is often rated higher by oneself than by proxies, even in the presence of very advanced age and extensive comorbidities and disabilities.

From these two data sources alone, it is not possible to infer the proportion or incidence of institutionalisation in the Irish population. The small number of participants included in this short report comes from a secondary data analysis and is not necessarily representative of the nursing home population in Ireland.

With the above caveats in mind, we have described the characteristics of TILDA's small sample of nursing home participants. TILDA cares very much about our nursing homes residents. Nursing home residents have been disproportionately affected by the COVID-19 pandemic and we will welcome further research that includes this very vulnerable group.



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath The University of Dublin



An Roinn Sláinte Department of Health



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