

# The experience of older people with multimorbidity during the COVID-19 pandemic

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## EXECUTIVE SUMMARY

The risk of severe COVID-19 disease is known to be higher in older individuals with multiple long-term health conditions (multimorbidity). In this briefing, we report the latest findings from the English Longitudinal Study of Ageing COVID-19 Substudy on the experiences of older people with multimorbidity during the pandemic. Not all people with multimorbidity would be classified as clinically vulnerable. We found that 35% of older individuals with multimorbidity were instructed by the NHS or their GP to shield (staying at home at all times and avoiding any face-to-face contact) on account of their vulnerability, and the majority were largely compliant with this advice. Relative to study members without multimorbidity, respondents with multimorbidity were more likely to report poor sleep quality, eating less, and being worried about not having enough food and other essentials. Unhealthy behaviours (sitting time, physical inactivity etc), poor mental health, and loneliness deteriorated considerably during the lockdown and in the two months following the lockdown. Access to medications among people with multimorbidity was not a problem, however, a fifth of individuals with multimorbidity did not have access to community health, social care services and support from other health professionals (e.g., dentist, podiatrist). When considering policies which advise people to shield or self-isolate because of their COVID-19 risk, it is important for policymakers to acknowledge that older people with multiple long-term health conditions are at higher risk of experiencing greater mental distress and worry, of engaging in unhealthy behaviours and are less likely to access health services when needed; all these factors together could potentially influence disease progression.

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## Key findings

- The prevalence of multimorbidity was 30% among ELSA participants.
- High blood pressure, diabetes and respiratory illness were the most prevalent conditions reported by people with multimorbidity.
- A large proportion of people with multimorbidity reported either isolating or staying at home in April 2020 (94%) as well as in June/July 2020 (82%).
- 28% of people with multimorbidity, reported experiencing one or more COVID-19 symptoms compared to 21% of those without.
- There were no differences in changes in smoking between people with and without multimorbidity, but people with multimorbidity were more likely to report detrimental changes in health-related behaviours during the pandemic (with the exception of alcohol consumption).
- Participants with multimorbidity were more likely to be worried about finances, obtaining food and other essentials.
- There were markedly higher levels of depression and loneliness among people with multimorbidity compared with the remainder.
- 20% of individuals with multimorbidity did not have access to community health and social care services and support needed (such as dentist, podiatrist, nurse, counselling or personal care).

## Introduction

Multimorbidity, defined as two or more long-term medical conditions presenting simultaneously, is common among older people<sup>1</sup> although more than half of all people with multimorbidity are younger than 65 years.<sup>2</sup> Multimorbidity has been linked with many adverse health outcomes including disability, mortality, and poor quality of life; it is also associated with greater healthcare utilisation.<sup>3</sup>

Within a short time of the COVID-19 epidemic's beginning, studies suggested that underlying long-term conditions independently predicted severity of illness and mortality.<sup>4,5</sup> Stress, unhealthy lifestyles and issues with accessing healthcare can exacerbate some long-term conditions and contribute to worse outcomes. To date, little is known about these issues among people with two or more long-term conditions.

The ELSA COVID-19 Substudy, which was conducted in June/July 2020, provided an opportunity to describe the experiences of people with multimorbidity during the pandemic. Here, we describe effects on health behaviours, mental health, loneliness, access to services, and worries about food and other essentials.

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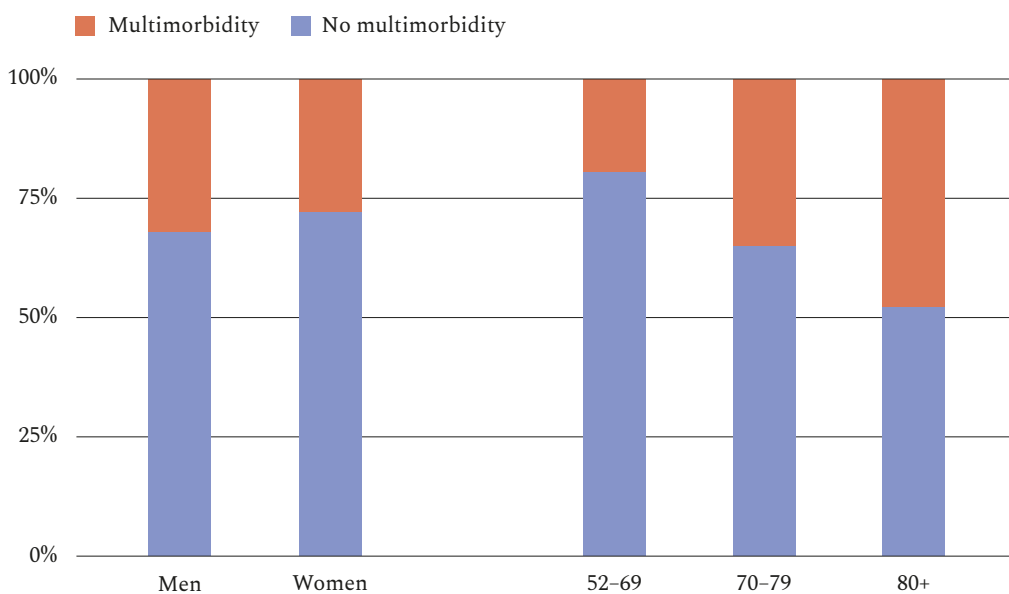
## Definition

Multimorbidity was defined as reporting two or more of the following conditions: high blood pressure, coronary heart disease (angina and/or heart attack) (CHD), congestive heart failure, stroke, diabetes, respiratory disease (asthma, chronic lung disease such as chronic bronchitis or emphysema), dementia, multiple sclerosis and cancer. These conditions were either newly reported in 2020, or reported at previous ELSA waves.

## Results

The analyses reported in this briefing were carried out on 5,755 core ELSA members and partners with valid data on the measures of interest. Of the core sample, 31% of men and 28% of women reported multimorbidity (Figure 1). As expected, the prevalence of multimorbidity increased with age, from 19% in those aged 52–69, to 35% in those aged 70–79 and 48% in those aged 80+. High blood pressure, diabetes and respiratory illness were the most prevalent conditions reported by people with multimorbidity (Figure 2).

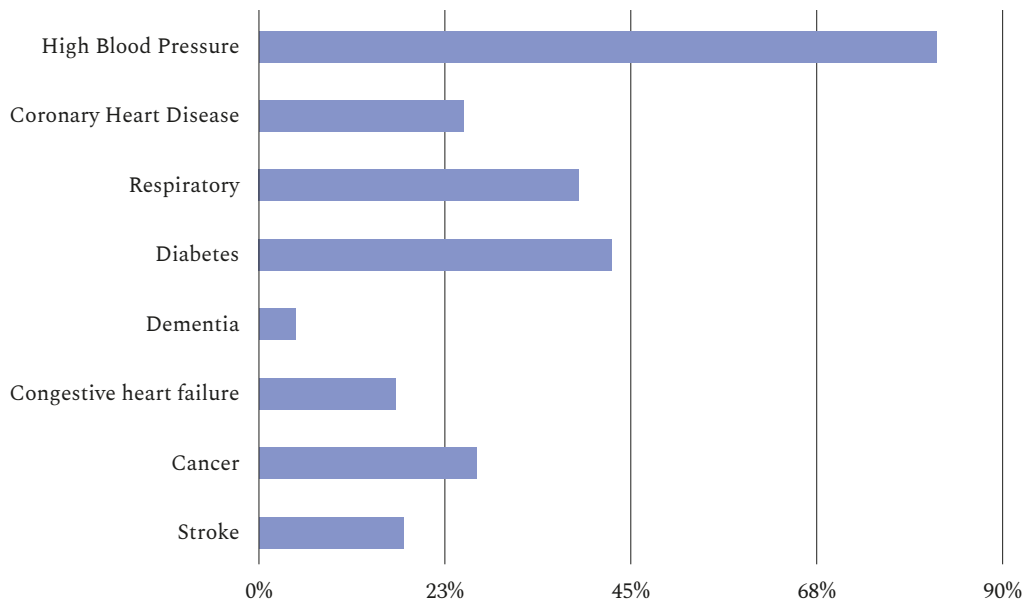
**Figure 1. Percent distribution of multimorbidity by gender and age-groups**



Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data N=5,755

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**Figure 2. Percent prevalence of conditions reported by respondents with multimorbidity**



Source: ELSA Covid19 sub-study (June/July 2020). Weighted data. Note: CHD = Coronary Heart Disease. Multiple sclerosis <1%

### **Isolation and staying at home experiences**

In Table 1 we report the experiences of isolation and staying at home during and after the lockdown, comparing them in study members with and without multimorbidity. These differences were adjusted statistically for age, sex, the number of people in the respondent's household, and whether or not the respondent has a marital or equivalent partner. People with multimorbidity (35%) were around three time more likely to be contacted by the NHS or their GP with advice to stay at home at all times and avoid any face-to-face contact relative to those without multimorbidity (12%). People with multimorbidity were more likely to have socially isolated in April 2020 (42%) and June/July 2020 (30%) compared to those without multimorbidity (19% and 12%, respectively).

**Table 1. Percentage of respondents isolating and staying at home according to multimorbidity status**

	No multimorbidity	Multimorbidity	Significance <sup>1</sup>
Advised to stay at home at all times and avoid any face-to-face contact	11.0%	34.6%	<0.001
Socially isolated – April	19.1%	41.9%	<0.001
Stayed at home – April	70.6%	61.3%	0.002
Either isolated or stayed at home – April	85.5%	93.6%	<0.001
Socially isolated – June/July	11.6%	29.7%	<0.001
Stayed at home – June/July	64.0%	59.8%	0.011
Either isolated or stayed at home – June/July	72.6%	81.6%	<0.001

<sup>1</sup> Significance of differences between groups after adjustment for age, sex, number of people in the household, and marital/partnership status. Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

## Experiences during the COVID-19 outbreak

Participants were asked about whether they had experienced the symptoms of COVID-19, had been hospitalised, tested for the virus, and whether any family members or close friends had died. 28% of people with multimorbidity reported experiencing one or more COVID-19 symptoms, compared to 21% of people without multimorbidity. A slightly higher prevalence of people with multimorbidity reported experiencing the death with coronavirus of a family member or friend (Table 2).

Respondents with multimorbidity were more likely to report being worried about finances than people without multimorbidity during the COVID-19 outbreak. Over 10% of people with multimorbidity stated that they were worried about not having enough food and 16% about other essentials compared to 6% and 10% among people without multimorbidity.

**Table 2. Experiences of COVID-19**

	No multimorbidity	Multimorbidity	Significance <sup>1</sup>
One or more symptoms	21.3%	27.9%	<0.001
Death of family member or friend	7.1%	9.3%	0.033
Worried about finances	26.5%	28.0%	<0.001
Worried about not having enough food	5.9%	10.4%	<0.001
Worried about having other essentials	9.8%	16.1%	<0.001

<sup>1</sup> Significance of differences between groups after adjustment for age, sex, number of people in the household, and marital/partnership status. Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

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## Health-related behaviours

People with multimorbidity, compared to those without, reported detrimental changes in health-related behaviours during the pandemic. For example, 40% of people with multimorbidity reported they exercised less than before the outbreak, and 36% watched TV and 44% sat more than usual. Respondents with multimorbidity were also more likely to report less sleep than usual and to describe the quality of their sleep as fair or poor. A greater percentage of people with multimorbidity, compared to those without, reported eating less than usual (14% vs 8%) and not always being able to access food (20% vs 14%). There were no differences in changes in smoking between people with and without multimorbidity, however, people with multimorbidity were less likely to report drinking more alcohol than usual than people without multimorbidity (12% vs 22%).

**Table 3. Health-related behaviours**

	No multimorbidity	Multimorbidity	Significance <sup>1</sup>
Less physical activity than usual	34.1%	40.2%	<0.001
Watching more TV	31.8%	36.2%	0.001
More sitting than usual	38.4%	44.1%	<0.001
More smoking (among smokers)	22.7%	22.4%	n.s.
More alcohol (among drinkers)	22.3%	12.3%	0.010
Less sleep than usual	20.6%	22.4%	0.002
Fair/poor sleep quality	40.2%	49.9%	<0.001
Eating less than usual	8.1%	14.0%	<0.001
Not always able to access food	13.6%	20.3%	<0.001

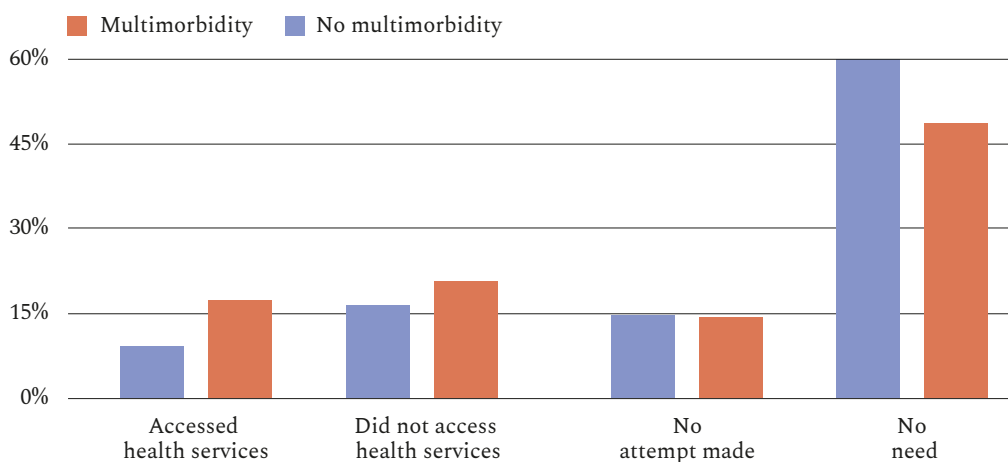
<sup>1</sup> Significance of differences between groups after adjustment for age, sex, number of people in the household, and marital/partnership status. Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

## Access to services

Participants were asked about whether they had access to their regular medications, community health and social care services and support needed (such as dentist, podiatrist, nurse, counselling or personal care). Among people with multimorbidity, only a small proportion did not need medication (2% compared to 32% of those without multimorbidity). Almost all respondents needing medications were able to access them (almost 99%, with no differences between those with and without multimorbidity). As for community health and social care services and support, over 60% of people without multimorbidity did not need to access any of these services during and after the lockdown period, compared to 48% of respondents with multimorbidity (see [Figure 3](#)). Around 14% of respondents who needed these services did not attempt to access them, with no difference between respondents with and without multimorbidity. But one in 5 respondents with multimorbidity did not have access to community health and social care services, even though they wanted them. A slightly higher percentage of people with multimorbidity accessed community health and social care services compared to respondents without multimorbidity.

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**Figure 3. Access to community and social care services**



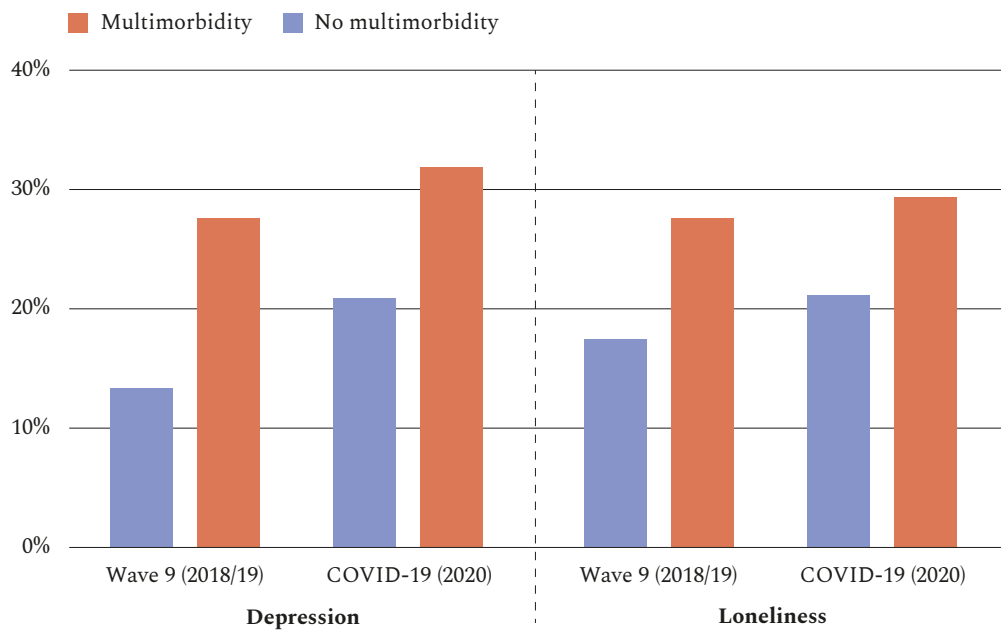
Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

## Mental health

In this section we report the prevalence of depressive symptoms and loneliness in those with and without multimorbidity, during the pandemic and before the pandemic (ELSA wave 9, collected in 2018–2019). Symptoms of depression were measured by an abbreviated seven-item version of the validated Centre for Epidemiologic Studies Depression Scale. Respondents who reported three or more depressive symptoms in the week prior to the interview were classified as being depressed. Loneliness was assessed with the short-form UCLA loneliness scale, in which a score of 6 or more indicates that the person felt lonely some or all of the time.

The proportions of people with depression (>3 symptoms) and loneliness (score >6) are summarised in [Figure 4](#). A greater proportion of people with multimorbidity had depression (31%) and loneliness (29%) compared with participants without multimorbidity (21% for both depression and loneliness). Levels of depression and loneliness were greater during June/July 2020 than in 2018/2019, in participants with multimorbidity and those without.

**Figure 4. Depression and loneliness in 2018/2019 and in 2020**



Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data. Note: Depression is based on a cut-off of 3+ of 7 symptoms, and loneliness is based on a cut-off of 6+ of the UCLA



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## References

- <sup>1</sup> Whitty CJM, MacEwen C, Goddard A, et al. Rising to the challenge of multimorbidity. *BMJ* 2020;368:l6964. doi: 10.1136/bmj.l6964 [published Online First: 2020/01/08].
- <sup>2</sup> Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet*. 2012;380(9836):37–43. doi:10.1016/S0140–6736(12)60240–2.
- <sup>3</sup> Academy of Medical Sciences. Multimorbidity: a priority for global health research, 2018.
- <sup>4</sup> Sanyaolu A, Okorie C, Marinkovic A, et al. Comorbidity and its Impact on Patients with COVID-19 [published online ahead of print, 2020 Jun 25]. *SN Compr Clin Med*. 2020;1–8. doi:10.1007/s42399–020–00363–4.
- <sup>5</sup> Williamson EJ, Walker AJ, Bhaskaran K, et al. Factors associated with COVID-19-related death using OpenSAFELY. *Nature*. 2020 Aug;584(7821):430–436. DOI: 10.1038/s41586–020–2521–4.

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The ELSA COVID-19 Substudy has obtained full ethical and data protection approval and is fully GDPR compliant. For further information, please contact [ELSA@ucl.ac.uk](mailto:ELSA@ucl.ac.uk)

This report and other ELSA publications, including the ELSA COVID-19 Substudy methodological report, are available from [www.elsa-project.ac.uk](http://www.elsa-project.ac.uk)

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