

## PPI Briefing Note Number 125

### Introduction

On average, longevity is increasing within the UK and is projected to continue increasing despite a recent slowdown in the rate of mortality improvements.<sup>1</sup> However, the increases in life expectancy are not shared equally among the population. Healthy life expectancy has been steadily increasing on average for men and steadily decreasing for women since 2010. These shifts in healthy life expectancy are also distributed unevenly among the population.

With unevenly distributed life expectancy and healthy life expectancy improvements, individuals may face retirement under very different circumstances. Government policy is to increase State Pension age to ensure that individuals, on average, spend approximately a third of their adult life in receipt of their State Pension.<sup>2</sup> The Government's next 6-year review of State Pension age is to be conducted by July 2023.<sup>3</sup> Longevity and health inequalities are important to ensure that the effects of any changes are distributed fairly among the population and taken into account in policy discussions.

This Briefing Note provides background explanation of State Pension age rises, life expectancy and healthy life expectancy and how they vary across the population. It delves into specific segmentation, the impact of deprivation and ill health and the interaction with the State Pension age. It briefly covers the possible longer-term impact of COVID-19 before considering policy options which could potentially mitigate some of these issues.

The life expectancy figures used within this Briefing Note<sup>4</sup> were recorded before the impact of the COVID-19 pandemic, and the short-term effects of the pandemic are not considered in this Briefing Note.

### Key findings

- ⇒ **The average probability of reaching State Pension age has improved by 2% over the last 70 years for those approaching State Pension age.**
- ⇒ **The difference in the gap for life expectancy has grown by 8% between the most deprived and least deprived individuals between 2012 and 2017.**
- ⇒ **The gap for healthy life expectancy between the most deprived and least deprived is growing by 22 days a year for men but shortening for women by 6 days a year on average.**
- ⇒ **Healthy life expectancy for women is projected to decrease. For women in the most deprived areas it is projected to decrease from 52.4 years in 2012 to 50.9 years in 2030. These trends are occurring whilst the State Pension age continues to rise.**
- ⇒ **Individuals with the 20% lowest incomes approaching State Pension age are less likely to recover from physical difficulties.**
- ⇒ **Currently half of pensioners derive nearly two-thirds (64%) of their income from the state (from the State Pension and other benefits).**

### Background

Recent State Pension age (SPa) rises are predicated on the notion that at retirement people can expect to spend a third of their adult life in receipt of the State Pension (SP).<sup>5</sup> After reaching SPa, pensioners are entitled to claim the flat rate new State Pension (nSP) and may be entitled to pen-

sion age benefits, such as Pension Credit, rather than working age benefits. Pension Credit is a means-tested benefit designed to raise pensioners' income to a minimum floor. Eligibility is currently tied to SPa as the current welfare system was designed to provide a hard-edge transition from working age to pension age.<sup>6</sup>

The amount received from the nSP depends on the number of qualifying years accrued during your working life. A minimum of 10 qualifying years is needed to receive any SP and 35 qualifying years is needed to receive the full amount.

The actual proportion of adult life pensioners can expect to be in receipt of

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the SP fluctuates depending on where in the cycle of raising SPa they fall. Around 50% of those reaching SPa are expected to live for a further third of their adult life in retirement, in line with the Government's aims.<sup>7</sup> While the population average is a third, some segments of the population can expect significantly less of their adult life in receipt of the SP, while others can expect significantly more.

**The average probability of reaching SPa has improved by 2% over the last 70 years, for those approaching SPa.** Those aged 55 to 89 years in the UK have on average seen lowering mortality rates between 1981 and 2016, even if the rate of these improvements has slowed down since 2011.<sup>8</sup> This has increased the chance of an individual living to receive a SP, as well as pension-age benefits such as Pension Credit.

Mortality rates are projected to improve in future and individuals are expected to be increasingly likely to survive later working ages. An individual born in 1970 is 5% less likely to die in the 10 years before SPa (age 67) compared to an individual born ten years earlier in 1960 [Figure 1]. This improvement means that there are 3,000 more 57 year old individuals born in 1970 who are expected to reach SPa than if they had the survival probabilities associated with being born 10 years earlier.<sup>9</sup>

### There are different measures and projections of life expectancy to take into account

**Life expectancy** is a measure of the mortality risk in a population.

**Healthy life expectancy** represents the expected average amount of time to be in "good health" within a life expectancy. This may be made up of a number of separate periods of good health. This is calculated on a period

**Figure 1: The average probability of reaching State Pension age has improved for those approaching State Pension age**

The probability of surviving the last 10 years of working life before reaching State Pension age, for individuals born in different years



basis and therefore does not allow for the future development of mortality and morbidity rates across the lifetime of an individual.<sup>10</sup>

A **period life expectancy** considers the **current** risk within a population at a particular point in time and does not allow for expected future developments in mortality.

A **cohort life expectancy** looks at the **expectation** of how long a person will live. This includes projections of expected mortality improvements over their lifetime and therefore reflects how long individuals are expected to live.

For further information of period and cohort life expectancy, please see Briefing Note 90.<sup>11</sup>

There are advantages and disadvantages to calculating life expectancy on either a period or cohort basis. Cohort life expectancy is needed to project populations and understand how long individuals may live. It is however dependent upon the assumptions made about future mortality develop-

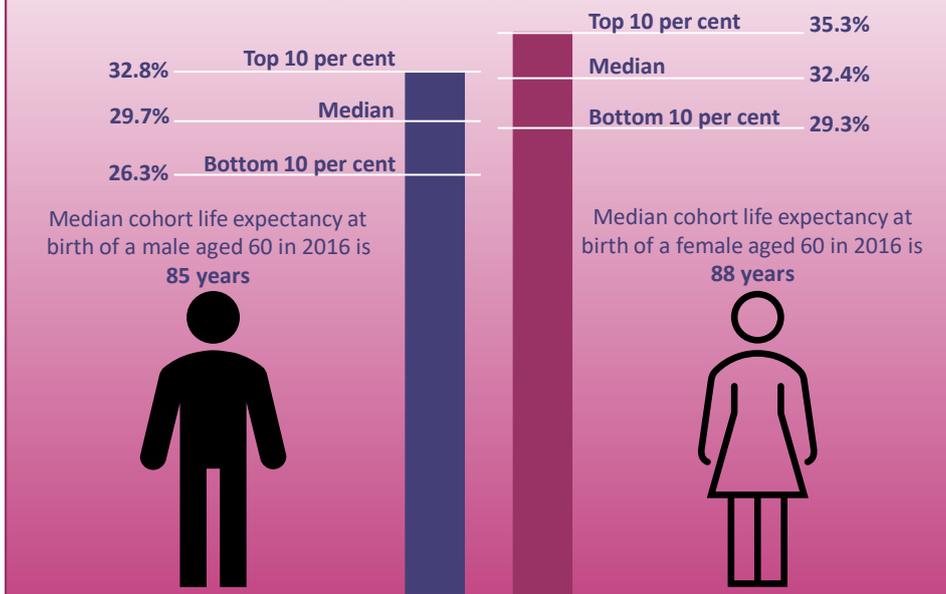
ments. Where this is a significant disruption to mortality patterns, such as caused by the COVID-19 pandemic, the use of cohort based mortality experience can significantly affect the calculation of life expectancies. Applying the experience of the pandemic in 2020 to future years may lead to under or overestimate of future life expectancy as assumptions of mortality trends are harder to project.

### Life expectancy varies across the population when segmented, especially by income

Individuals in groups with a lower life expectancy are expected to spend less time in receipt of SP. Looking at segments of the population based upon income (using cohort life expectancies) [Figure 2]:

- A man in the bottom 10% of incomes, aged 60 in 2016, is expected to spend around 16 years in receipt of SP over his future lifetime. This works out at 26% of his adult life. For the same woman, it would be 19 years and 29%.

**Figure 2: The proportion of adult life spent above State Pension age split by percentiles of income**



men [Figure 2].

This Briefing Note now considers more detailed segmentation, looking at a combination of characteristics alongside the impact of deprivation, ill-health and the interaction of these factors with SPa. It briefly covers the possible longer-term impact of COVID-19 before considering policy options which could potentially mitigate some of these issues.

### Life expectancy and healthy life expectancy are correlated with income by area

Areas with higher incomes have higher life and healthy life expectancies (on a period basis) than the national average.<sup>14</sup> The Marmot Curve<sup>15</sup> shows that the health of people living in an area is, on average, better where income deprivation is lower.<sup>16</sup>

Individuals in the South East have the highest average annual disposable income in England of £32,500 and one of the highest life expectancies and healthy life expectancies in the UK. Residents in the North East, who

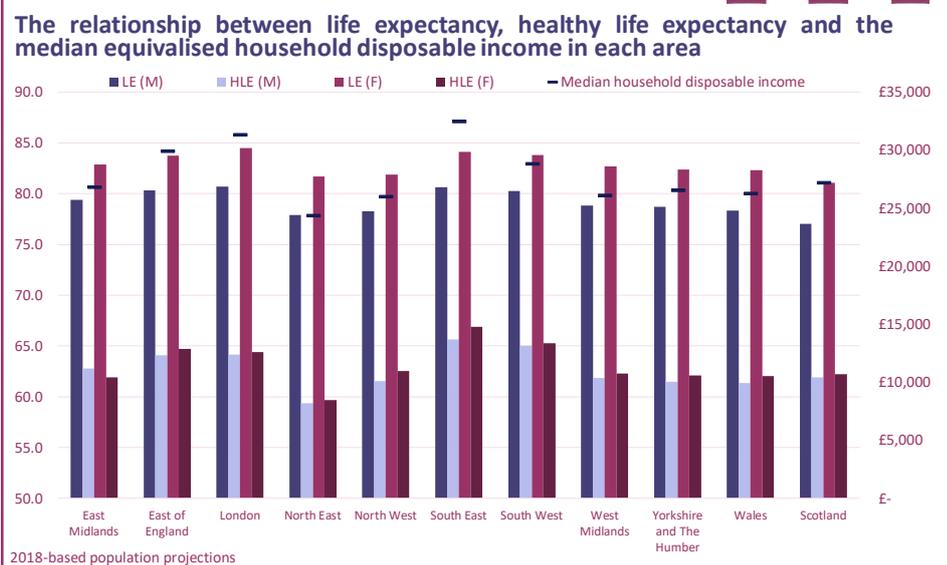
- A man with a median income can expect to spend about 30% of his adult life in receipt of SP, three more years than those men on the lowest incomes. For the same woman, it would be 32%.
- Men with the highest 10% of incomes, can expect a further 3 years (compared to a median earning man) and are expected to spend about a third of their adult lives in receipt of SP. For the same woman it would be 35%.

receipt of SP for longer.<sup>12</sup>

Women who take more time away from the labour market than men,<sup>13</sup> will on average receive a lower nSP. However, the introduction of the nSP is expected to reduce this gap. Women have higher life expectancies than men and are expected to receive SP for longer than

The variation within these groups means that individuals may expect to spend higher or lower proportions of their adult life in receipt of SP. By the time these groups reach SPa, life expectancy across the retiring population is 21 years (to age 87), approximately 32% of adult life. Those who have had lower incomes at working ages will tend to have a shorter life expectancy than those who have had higher incomes, who are therefore expected to be in re-

**Figure 3: Period life expectancy and period healthy life expectancy of an individual is correlated by the area they live in**



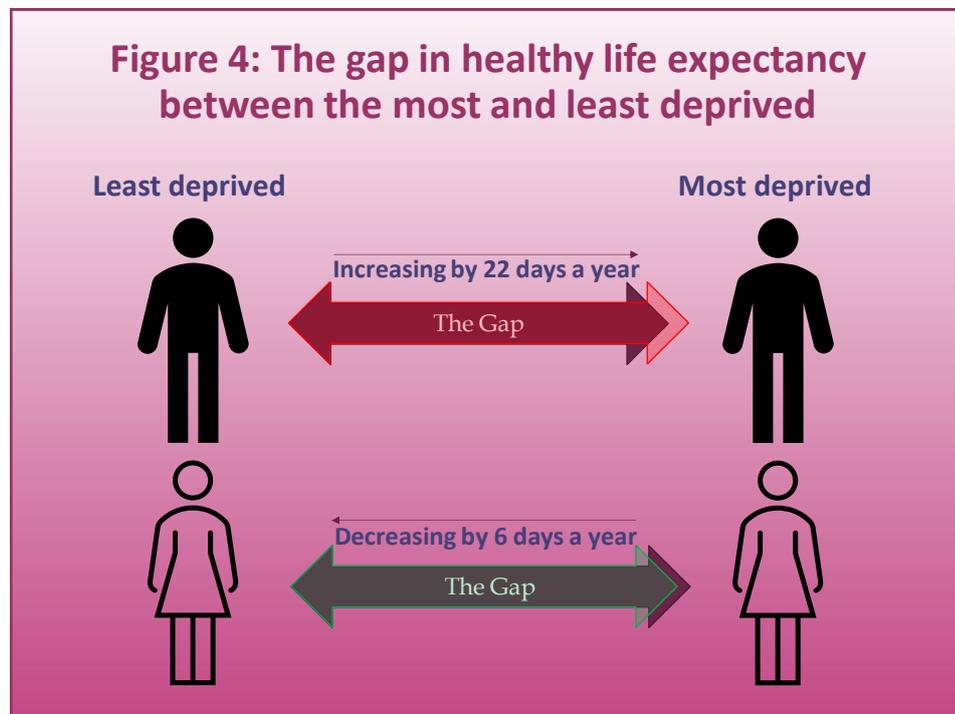
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have the lowest average disposable annual income of £24,400 have one of the lowest life and healthy life expectancies in the UK [Figure 3].<sup>17</sup>

A single SPa means that it is likely for individuals living in areas with a lower average healthy life expectancy to have periods of ill health and so are less likely to have been able to accrue 35 qualifying years to receive a full SP through work and may be reliant on state benefits.

The number of men and women at SPa who had enough qualifying years to receive the full SP in 2013 is 4.6 million and 3.3 million, respectively. This could decrease by 80,000 and 300,000 men and women if they lost 2 years of qualifying, for whatever reason.<sup>18</sup> People unable to work may gain qualifying years towards the SP through benefits such as Universal Credit or, Employment and Support Allowance. However, not all people eligible for these benefits will claim for a variety of reasons.

Income Support and Income-related Employment and Support Allowance had a take-up rate of 90% in 2018/19, meaning that around 220,000 eligible individuals did not claim these benefits and will not have accrued the corresponding qualifying year towards the SP.<sup>19</sup> There are further individuals who may be excluded from these means-tested benefits through circumstances such as their partner's financial situation, yet will need to meet certain criteria to obtain a qualifying year. For instance, people may still need to claim Child Benefit to gain credits even if, as a household, they re-



ceive no monetary benefit due to the 'High Income Child Benefit Charge'.<sup>20</sup>

### Deprivation plays a role in determining how an individual approaches retirement

The Index of Multiple Deprivation combines information from seven domains<sup>21</sup> to produce a relative measure of deprivation applicable to small areas of around 1,500 residents. This measure can be used to rank the level of this area to the population. At this level of granularity, life expectancies can only be assessed on a period basis as there are not the necessary assumptions on future mortality developments to calculate cohort life expectancies.

While period life expectancy has steadily increased for men and women, healthy life expectancy has remained the same for men (64.5 years) and women (65.2 years) since 2012 for those in the middle fifth of the deprivation index.

Healthy life expectancy for the most deprived individuals has not improved in the period 2012-17. While it has re-

mained stable for men, healthy life expectancy for women has decreased by around six months.

For the least deprived men, their healthy life expectancy has improved over the same period. For the least deprived women the pattern is more complex with improvements seen between 2012 and 2014 but there has been a marked decline since 2014, going below healthy life expectancy figures seen in 2012.<sup>22</sup>

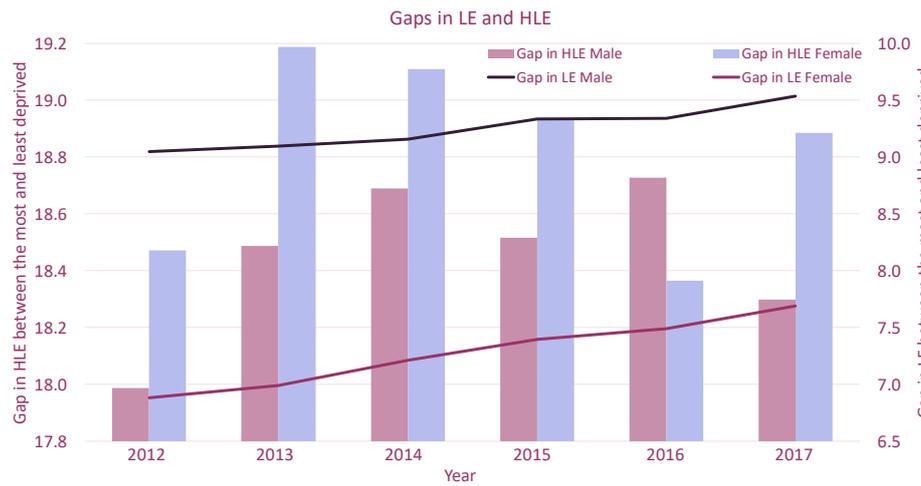
If current trends persist, the healthy life expectancy gap linked to deprivation is expected to increase on average about 22 days per year for men while for women, the gap is reducing by 6 days per year. As a population, the gap is growing over time [Figure 4].

The aggregate healthy life expectancy gap between people living in the most deprived and least deprived areas is growing, giving a wider spread among the population.

**Figure 5: The gap for period Healthy Life Expectancy (HLE) and period Life Expectancy (LE) is growing between the most deprived and least deprived**



The gap in period life expectancy at birth, and period healthy life expectancy between the most deprived and least deprived based on IMD 2015 and 2019



The period life expectancy gap has increased by 8% between the most deprived and least deprived individuals between 2012 and 2017 [Figure 5].<sup>23</sup> With an increasing gap illustrating a growing heterogeneity in the population, a single SPa would now have more diverse outcomes than before.

**The challenges of later working life spent in poor health**

In 2019, contributions increased with age for employees who are members of a Defined Contribution pension scheme. Between ages 22 and 29 years old, 18% contribute more than 5 per cent of their salary into their pension. The proportion increased to 26% for individuals aged between 40 and 49 years old, and to 30% for those aged between 55 and 59.<sup>24</sup> Not working at these ages and missing out on this period of greater saving through ill-health, can have significant consequences for finances in retirement.

Recovery from ill-health is influenced

by the presence of a partner. The support of a partner tends to lead to better health for both individuals. Healthy individuals aged between 50 and 65, who have partners without any difficulties with Activities of Daily Living (ADLs),<sup>25</sup> are less likely to experience a decline with one or more ADLs themselves. For those who do

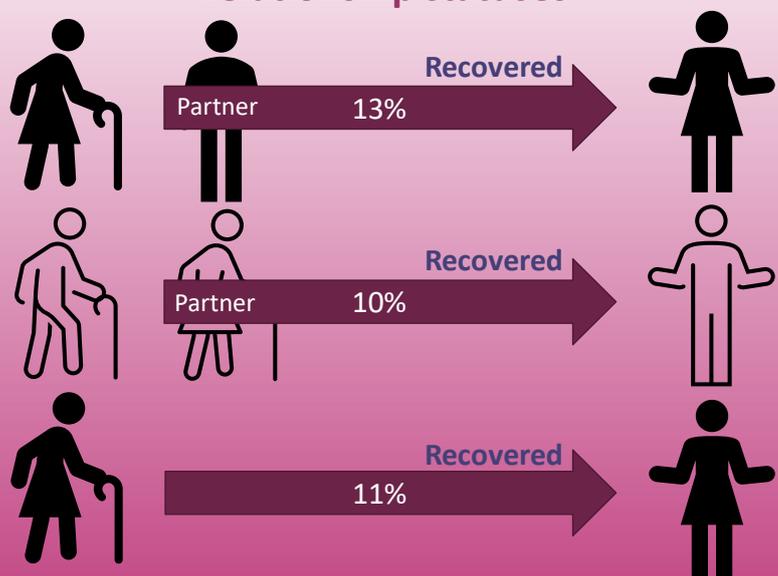
have difficulty with an ADL, their chances of recovery is higher if they have a partner. Analysis of health decline and recovery showed:

- The chance of an individual who does not have a partner recovering from a decline with one or more ADLs is 11% (see Table A1 in the Appendix).<sup>26</sup>
- If the individual does have a partner who experiences declines with ADLs themselves, the chance of recovering decreases by 11%.
- If the partner did not experience any declines with ADLs, the individual is 12% more likely to recover.

The chance of recovery improved in the presence of a partner who does not have difficulty with ADLs since it is likely that they would be able to support their partner with their decline in ADLs to a potentially greater extent [Figure 6].

The recovery rates are lower for individuals in the lower income quintiles

**Figure 6: Chances of recovery between different relationship statuses**



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compared to the overall population. For example, compared to all individuals approaching SPa, an individual in the bottom 20 per cent of income is 36% less likely<sup>27</sup> to recover from difficulties with ADLs if their partner does not experience difficulties with ADLs [Figures 6 and 7, Tables A1 and A2 in the Appendix].

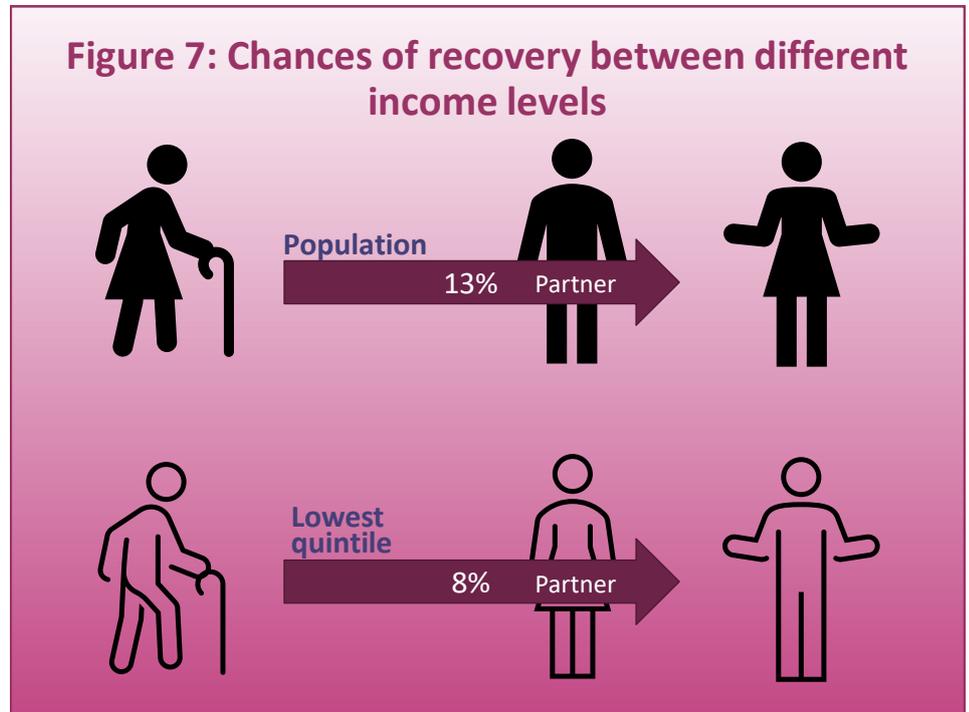
Individuals with the lowest incomes are more likely to also experience a decline in one or more ADLs over a one-year period.

### COVID-19 has increased health challenges

Data from The Centre for Evidence-Based Medicine has suggested that as a result of the COVID-19 pandemic, short-term mortality rates have increased.<sup>28</sup> This would influence short-term projections but has an unknown effect on future long-term projections.

The current picture has been distorted by the COVID-19 pandemic which has increased short-term mortality rates unevenly across the population, with London, North West and North East having the highest mortality rates of over 100 deaths per 100,000 people.<sup>29</sup> The proportion of deaths are largely made up of those above SPa in England and Wales.<sup>30</sup> This will likely have a negative effect on life expectancy and healthy life expectancy estimates, especially at older ages, further complicating retirement outcomes in the short-term.

Prior to the impact of the COVID-19 pandemic, those aged between 50-54 have an employment rate of 85%. This decreases to 57% for those aged 60-64.<sup>31</sup> The COVID-19 pandemic has brought additional health challenges for those who recover from Corona-



virus, who may suffer with longer lasting health impacts. This could hinder them returning to previous levels of employment in a more challenging employment market. This, in turn, may irrevocably impact their last opportunity to plan and save for a more comfortable retirement.

Along with a potential lower recovery rate due to the lasting effects, 9.4 million jobs have been furloughed as of the 5th July.<sup>32</sup> With businesses struggling economically, increased unemployment and lower earnings, the capacity to save into a pension is likely to be reduced for many people.<sup>33</sup>

### How do life expectancy and healthy life expectancy inequalities interact with the SP and SPa?

Currently, SPa increases in line with the projected cohort life expectancy at that age for the UK population. Since cohort life expectancy include future mortality improvements, it will be greater than period life expectancy.

Over the last 10 years, period life ex-

pectancy has been increasing slowly for both men and women. However, healthy life expectancy for both men and women has not grown at the same rate as period life expectancy over the same period [Figure 8].<sup>34</sup>

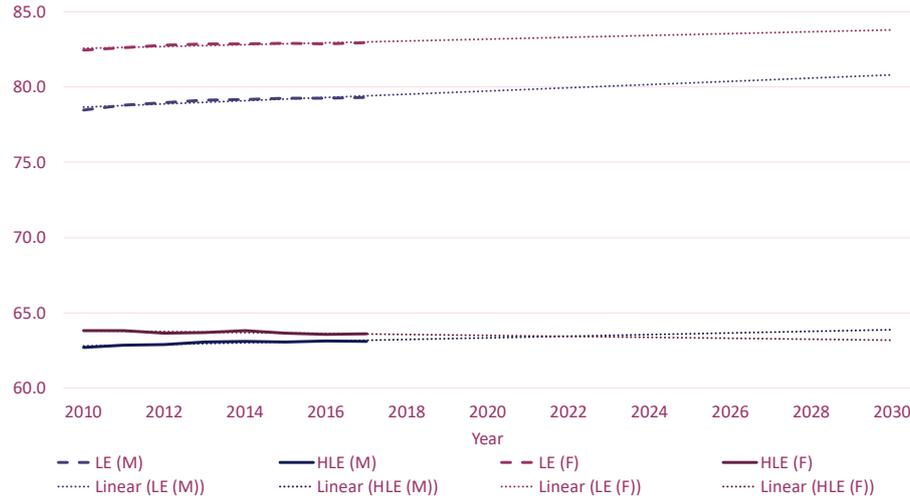
The lack of growth in healthy life expectancy in recent years reflects the fact that individuals have not reduced their chance of being unhealthy. This has led to an increasing gap between life expectancy and healthy life expectancy and a larger amount of time spent in poor health, predominantly at older ages. At the same time, SPa has increased based upon gains in cohort life expectancy.

If these trends of a widening gap between life expectancy and healthy life expectancy continue, future generations of more disadvantaged people could find it increasingly difficult to work for longer before SPa due to poor health. This could lead to difficulties providing for financial adequacy in retirement, especially for

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**Figure 8: Projected increases in period healthy life expectancy is slower than projected increases in period life expectancy**

Projected period Life Expectancy (LE) at birth and period Healthy Life Expectancy (HLE) for men and women.



the most deprived with the lowest healthy life expectancies.

Those on lower incomes can be negatively affected by SPa rises due to the extended time required to remain in the workforce. With the more deprived individuals typically having a period healthy life expectancy lower than SPa, this potentially increases the numbers who will claim working age benefits in the years before reaching SPa.

### Pensioners on lower incomes are more dependent on state income and means-tested benefits

In future, reliance on the SP and benefits may be affected by the decline in Defined Benefit (DB) membership and the subsequent rise in Defined Contribution (DC) membership in the private sector, as DB schemes offer a higher level of fixed income compared to DC schemes.

Currently half of pensioners derive nearly two-thirds (64%) of their income from the state (from the SP and other benefits). For those with

the bottom 10 per cent of incomes nearly four fifths (79%) of their retirement income is attributed to SP income with a further 8% attributed to other state benefits. With a higher dependency on state-related income, benefits such as Pension Credit and Housing Benefit play a more substantial role for

pensioners who have lower incomes [Figure 9].<sup>35</sup>

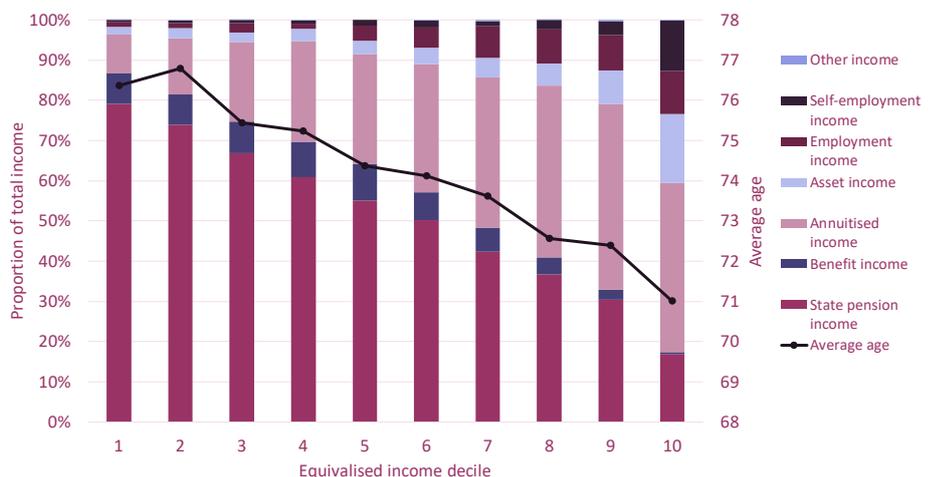
Pension Credit and Housing Benefit, which assist people on lower incomes, have a take-up rate of 63% and 81% in 2018/19 respectively.<sup>36</sup> The total annual amount unclaimed by pensioners is estimated to be approximately £1.6 billion in Pension Credit and £2.8 billion in Housing Benefit. This is on average £32 per week in Pension Credit and £60 per week in Housing Benefit to those who are eligible, but do not claim.<sup>37</sup> If the take-up rate increases, this could mean higher amounts of state-related income for some on the lowest incomes, increasing their state dependency but improving their financial circumstances in retirement.

Higher incomes are associated with younger pensioners. By income, the average age of the top 10 per cent of pensioners is five years younger than the lowest 10 per cent (71 years old and 76 years old respectively).

The group of recently retired pensioners (less than 70 years old) have

**Figure 9: Those in the lower income deciles rely more on State Pension income and means-tested benefits**

The split in pensioner's mean income for each equalised income decile and their average age



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seen increases in private pension in each subsequent cohort:

- £108 per week in 2003
- £124 per week in 2009
- £141 per week in 2017

(all in current earnings terms).<sup>38</sup> To enable this trend to continue, allowing greater independence from the state and greater personal financial security, will require individuals to continue to increase their opportunity for private pension saving throughout working life.

### Women could spend more time in poor health before SPa in the future

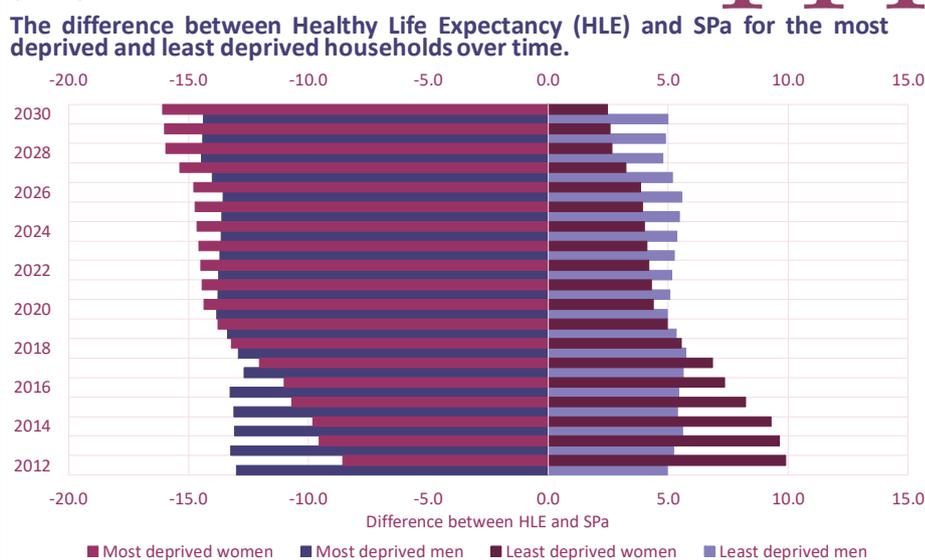
Healthy life expectancy for women is projected to decrease. For women in the most deprived areas it is projected to decrease from 52.4 years in 2012 to 50.9 years in 2030. These trends are occurring whilst the SPa continues to rise.<sup>39</sup> This combination could mean more women spending more time in poor health before SPa. The gap for the most deprived men in comparison is projected to remain stable over the same period [Figure 10].

### There are a variety of policy approaches but none are without their challenges

Since mortality improvements are unevenly distributed, the interaction with SPa changes will also be unevenly distributed. The current policy sets SPa at a national level which is easy to implement and govern and is considered practicable. Further consideration may be needed for those who are affected more by SPa increases.

This is a difficult balance to resolve with no single policy suggestion offering a satisfactory, straight forward resolution to the challenge. Suggest-

**Figure 10: Women could spend more time in poor health before State Pension age (SPa) over time as SPa increases**



tions that have been made include:

- A different SPa by area, by occupation, by earning levels.
- Having a flexible SPa within a window of ages, variable pension amounts<sup>40</sup> or a lower Pension Credit age.<sup>41</sup>

Although these options could mitigate the effects of longevity and health inequalities, they would raise problems in the management and fairness of regional SPa changes, or increased cost or funding required.

Early access to pension benefits, such as Pension Credit, which has risen from age 60 alongside women's SPa,<sup>42</sup> can provide additional support for those on lower incomes who may not be able to work until that age and face working-age benefits when they struggle to return to the labour market. Early access to private pension savings is available, though there may be repercussions for longer-term finances for pensioners the earlier they access these savings.

A further alternative is that the imbalance of the SPa can be addressed through managing the impact of inequalities through working ages. Policy options which seek to reduce health inequalities and address the underlying problems associated with a single SPa, are important and should be considered.

These could include policies which target those who have a lower life expectancy and healthy life expectancy to reduce the inequality in the population. Policies which support older and disabled people to find and retain paid work can also reduce the impact of a single SPa by allowing these individuals to bolster their pension savings and therefore improve their living standards in retirement. Other services, such as the tax system or health services, can also reduce the burden of health inequality on the current structure of SPa.

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### Conclusions

With the Government's 6-year review of SPa to be conducted by July 2023,<sup>43</sup> issues of longevity and health inequalities are important to ensure that the effects of any changes are distributed fairly among the population. The policy options available, which could potentially mitigate some of these issues, each have their own downsides meaning that careful consideration is required before being implemented within the UK.

As longevity and health inequalities begin before retirement, policy changes to SPa only represents part of the solution. Policy changes targeted at individuals before retirement, such as a lower Pension Credit age, or policies which can better aid lower earners either through the tax system or health services can be used in tandem with changes with SPa to help reduce inequalities in life and healthy life expectancy.

### References

<sup>1</sup> Office of National Statistics (2018), *Changing trends in mortality: a cross-UK comparison, 1981 to 2016*

<sup>2</sup> G Osborne (2013), *Chancellor George Osborne's Autumn Statement 2013 speech*

<sup>3</sup> Department for Work and Pensions (DWP) (2017), *State Pension age review*

<sup>4</sup> Longevity/mortality rates used from the latest 2018-based Population Projections from ONS.

<sup>5</sup> G Osborne (2013), *Chancellor George Osborne's Autumn Statement 2013 speech*

<sup>6</sup> Department for Work and Pensions (DWP) (2017), *Independent review of the State Pension age: Smoothing the transi-*

*tion*

<sup>7</sup> Pensions Policy Institute (PPI) (2017), *How long will people spend in receipt of the State Pension?*

<sup>8</sup> Office of National Statistics (2018), *Changing trends in mortality: a cross-UK comparison, 1981 to 2016*

<sup>9</sup> PPI analysis based on cohort life expectancies

<sup>10</sup> Pensions Policy Institute (PPI) (2017), *What is the best measure of how long people might live?*

<sup>11</sup> Pensions Policy Institute (PPI) (2017), *What is the best measure of how long people might live?*

<sup>12</sup> Pensions Policy Institute (PPI) (2017), *Contributions into the State Pension system versus receipts for people of different income and employment profiles, Table 3*

<sup>13</sup> Pensions Policy Institute (PPI) (2019), *Understanding the Gender Pensions Gap*

<sup>14</sup> Median income has been equivalised for the household. Equivalisation is the process of adjusting a household's income to consider the size and composition of different households. This allows for better comparisons across households.

<sup>15</sup> The Marmot Curve looks at the relationship between life expectancy and disability-free life expectancy against neighbourhood income deprivation.

<sup>16</sup> The King's Fund, D Buck, D Maguire (2015), *Inequalities in life expectancy*

<sup>17</sup> Office of National Statistics (ONS) (2020), *Median household income by region, financial year ending 2018*

<sup>18</sup> Pensions Policy Institute (PPI) (2016), *How could the effect of rises in State Pension age be mitigated for the most vulnerable?*

<sup>19</sup> Department for Work and Pensions (2020), *Income-Related Benefits: Estimates of Take-up: financial year 2018 to 2019*

<sup>20</sup> The High Income Benefit Charge is a tax charge that's applies to anyone with an income over £50,000 who claims Child

Benefit, or whose partner claims it.

<sup>21</sup> The seven domains are Income, Employment, Education, Skills and Training, Health and Disability, Crime, Barriers to Housing and Services, and Living Environment.

<sup>22</sup> Office of National Statistics (ONS) (2020), *Health state life expectancies by Index of Multiple Deprivation (IMD 2015 and IMD 2019): England, all ages*

<sup>23</sup> Office of National Statistics (ONS) (2020), *Health state life expectancies by Index of Multiple Deprivation (IMD 2015 and IMD 2019): England, all ages*

<sup>24</sup> Office of National Statistics (2020), *Employee contribution bands by age group and pension type: Table P5*

<sup>24</sup> Office of National Statistics (2020), *Employee contribution bands by age group and pension type: Table P5*

<sup>25</sup> Activities of Daily Living (ADLs) outline a method to measure the extent of an individual's physical difficulties. Someone with a difficulty with one or more of these ADLs is likely to need additional support.

<sup>26</sup> Figures from Appendix 1 have been annualised.

<sup>27</sup> Figures from Appendix 2 have been annualised.

<sup>28</sup> The Centre for Evidence-Based Medicine (CEBM) (2020), *England and Wales mortality during the COVID-19 outbreak – Update 21st April*

<sup>29</sup> Office for National Statistics (2020), *Deaths involving COVID-19 by local area and socioeconomic deprivation: deaths occurring between 1 March and 30 June 2020*

<sup>30</sup> Office for National Statistics (2020), *Deaths involving COVID-19, England and Wales: deaths occurring in April 2020*

<sup>31</sup> Office of National Statistics (ONS) (2020), *Employment totals, employment rates and total population of 16 to 64 year olds in England by variables, January to March 2020*

<sup>32</sup> HM Revenue & Customs (HMRC) (2020), *HMRC coronavirus (COVID-19)*

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<sup>33</sup> Pensions Policy Institute (PPI) (2020), *The pensions implications of COVID-19*

<sup>34</sup> PPI analysis of published period life expectancy and period healthy life expectancy figures from ONS

<sup>35</sup> PPI analysis of the English Longitudinal Study of Ageing (ELSA) wave 8—2016/17

<sup>36</sup> Department for Work and Pensions (2020), *Income-Related Benefits: estimates of take-up: financial year 2018 to 2019*

<sup>37</sup> Department for Work and Pensions (2020), *Income-Related Benefits: estimates of take-up: financial year 2018 to 2019*

<sup>38</sup> PPI analysis of the English Longitudinal Study of Ageing (ELSA)

<sup>39</sup> PPI analysis of published period life expectancy and period healthy life expectancy figures from ONS

<sup>40</sup> Institute and Faculty of Actuaries (IFoA) (2015), *Considerations on State Pension age in the UK*

<sup>41</sup> Department for Work and Pensions (DWP) (2017), *Independent review of the State Pension age: Smoothing the transition*

<sup>42</sup> Department for Work and Pensions (DWP) (2017), *Independent review of the State Pension age: Smoothing the transition*

<sup>43</sup> Department for Work and Pensions (DWP) (2017), *State Pension age review*

### Appendix

Appendices 1 and 2 looks at the chances of developing a difficulty with an ADL or recovering from difficulties with an ADL. Examples of ADLs include difficulty eating or difficulties with communication.

For example, an individual approaching State Pension age with a partner has a **64%** chance of both having no difficulties with ADLs after 2 years or a **6%** chance of both developing difficulties with an ADL over the next 2 years. Sickness rates are highlighted in red whilst recovery rates for the individual highlighted in green.

#### A1: Individuals are more likely to recover from physical difficulties if they have a partner who does not experience any physical difficulties themselves to support them

Transitional probabilities of obtaining or recovering from difficulties with ADLs for those aged between 50 and 65 over a two-year period

|      |                     | Individual, Partner | TO     |         |         |          |       |        | Recovery/Morbidity rate for individual |
|------|---------------------|---------------------|--------|---------|---------|----------|-------|--------|--|
|      |                     |                     | No, No | No, Yes | Yes, No | Yes, Yes | No, - | Yes, - |  |
| FROM | Difficulty with ADL | No, No              | 0.64   | 0.12    | 0.11    | 0.06     | 0.07  | 0.01   | 0.18                                   |
|      |                     | No, Yes             | 0.22   | 0.49    | 0.03    | 0.19     | 0.06  | 0.01   | 0.23                                   |
|      |                     | Yes, No             | 0.22   | 0.03    | 0.47    | 0.20     | 0.01  | 0.07   | 0.27                                   |
|      |                     | Yes, Yes            | 0.08   | 0.12    | 0.12    | 0.61     | 0.01  | 0.07   | 0.21                                   |
|      |                     | No, -               | 0.16   | 0.06    | 0.04    | 0.03     | 0.58  | 0.14   | 0.21                                   |
|      |                     | Yes, -              | 0.05   | 0.01    | 0.09    | 0.09     | 0.17  | 0.58   | 0.23                                   |

#### A2: Individuals in the bottom 20 per cent of income are less likely to recover from physical difficulties

Transitional probabilities of obtaining or recovering from difficulties with ADLs for those aged between 50 and 65 in the lowest quintile over a two-year period

|      |                     | Individual, Partner | TO     |         |         |          |       |        | Recovery/Morbidity rate for individual |
|------|---------------------|---------------------|--------|---------|---------|----------|-------|--------|--|
|      |                     |                     | No, No | No, Yes | Yes, No | Yes, Yes | No, - | Yes, - |  |
| FROM | Difficulty with ADL | No, No              | 0.59   | 0.14    | 0.10    | 0.07     | 0.09  | 0.01   | 0.18                                   |
|      |                     | No, Yes             | 0.15   | 0.51    | 0.01    | 0.24     | 0.07  | 0.02   | 0.27                                   |
|      |                     | Yes, No             | 0.15   | 0.01    | 0.50    | 0.23     | 0.00  | 0.09   | 0.17                                   |
|      |                     | Yes, Yes            | 0.04   | 0.12    | 0.11    | 0.65     | 0.01  | 0.07   | 0.17                                   |
|      |                     | No, -               | 0.12   | 0.10    | 0.01    | 0.09     | 0.58  | 0.09   | 0.20                                   |
|      |                     | Yes, -              | 0.01   | 0.02    | 0.06    | 0.15     | 0.06  | 0.69   | 0.10                                   |



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