

# Money and Pension Service: Physical Health and Financial Wellbeing

## Rapid Evidence Review

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**CPFW**  
Centre for Personal  
Financial Wellbeing

**Money and Pension Service:  
Physical Health and Financial Wellbeing Rapid Evidence  
Review**

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## **Executive Summary**

This report outlines findings of a rapid evidence review of studies relating to the relationship between physical health and financial wellbeing, primarily focussed on the UK. The aim of the report was to understand the body of existing evidence, and particularly, what this tells us about the potential for interventions, such as money guidance or other forms of financial wellbeing support, to improve physical health or prevent declining health.

### **What do we know about the relationship between physical health and financial wellbeing?**

The evidence demonstrates three major dynamics of the relationship between physical health and financial wellbeing:

#### **(1) The socio-economic context of health inequalities**

- Echoing established findings, health is shaped by the socio-economic context, as those with lower socio-economic status are more likely to experience poor health and to have shorter lifespans, due to poverty and deprivation at the household and local area level.

#### **(2) How physical health affects financial wellbeing**

- Physical health affects financial wellbeing primarily by the burden of direct and indirect costs associated with experiencing poor health. There are also impacts on labour market outcomes and access to financial services and support, which may arise from period(s) of poor health.

#### **(3) How financial wellbeing affects physical health**

- Financial challenges affect by physical health through increased stress or experiences of precarity (such as insecurity of employment, income or housing), limiting opportunities for health-supporting behaviours like eating well and exercising, and encouraging health-limiting and costly behaviours like smoking and drinking.

These dynamics are interconnected in the sense that they interact and inform each other. For example, people from certain socio-economic groups may be more likely to experience precarity, which leads to behaviours which have a knock-on impact on physical health, which may then in turn affect financial wellbeing.

## **What do we know about interventions that can help?**

Many of the studies lack detail in the definition and measurement of financial wellbeing, for example, using basic self-reported feelings about financial circumstances or (proxies for) income and wealth. Consequently, there is limited evidence regarding the impact of interventions and where interventions have been tested, they tend to be small-scale and sometimes lack rigour, for example, not using a control group. There are nonetheless some key points arising from the available evidence about interventions:

- Much evidence points to the need for societal-level investment to alleviate health inequalities, such as improving housing and working conditions, increasing access to green spaces and reducing pollution.
- In terms of supporting people experiencing chronic illness, successful interventions have included support from trained financial advisors on benefit advice and income maximisation within healthcare journeys. Some evidence suggests that interventions may reduce anxiety about finance, even if income cannot be increased to a significant degree. However, existing interventions are small scale and lack rigour (e.g., no control groups) (Coughlin, 2023).
- In terms of supporting people experiencing challenges to financial wellbeing, evidence suggests removing the financial, social and cultural barriers to receiving healthcare. For example, Asthma UK (2023b, c) argue for the removal of prescription charges for asthma medication. However, evidence on the use of financial incentives to encourage health-supporting behaviours is mixed and effectiveness may be limited to specific cases, e.g., reducing smoking during pregnancy (Mantzari et al., 2015).

## **How can we improve our understanding?**

A quick win to develop a more nuanced understanding of the relationships between physical health and financial wellbeing to fully answer the research questions posed in this review would be to encourage studies of health and health experiences to incorporate MaPS' financial wellbeing questions into their data collection. To fully explore the relationship between physical health and financial wellbeing, studies would ideally involve:

- Longitudinal data collection incorporating different groups, e.g., health and ability status, socio-economic status and age.
- The use of measures covering various aspects of health and health-behaviours and financial wellbeing, including objective and subjective factors.
- Rigorous testing of financial wellbeing interventions across multiple socio-demographic groups as above, including control groups and an extended follow-up period after intervention finished.

# 1. Project Aims and Background

## 1.1. Project Aims

The link between financial resources and physical health has long been established. A large body of research demonstrates how health outcomes over the life course are shaped by income and/or socio-economic status (Arber et al., 2014), where socio-economic status is primarily based on occupation as a proxy for income levels (for examples, see Carr et al 2018; Nazroo, 2017). This life course research was primarily (but not exclusively) based on experiences in the post-war period, where working class adults are found to experience more physical limitations, life-limiting illnesses and reduced longevity compared to middle- and upper-class counterparts (Nazroo, 2017).

However, in the last 15-20 years the landscape has changed in ways which are likely to have affected the relationship between socio-economic status and health outcomes over the life course. First, changes in the employment landscape have result in higher percentages of office (or other sedentary) workers in the work force, as well as more variation in types of occupation throughout the working life. This means that the impact of employment on health over the life course will not be the same, and may indeed be less predictable, than it was in the post-war period (Arber et al. 2014). At the same time, changing life course patterns as people are living longer, for example such as living for a greater proportion of their life after formal 'retirement' (partial or full), mean that the connection between socio-economic status (as represented by occupational status) and health outcomes become more complex to track and explore.

Second, there is increasing recognition that income (and occupation as a proxy for it) is not the only driver of financial resources, with increasing attention on the accumulation of financial wealth (Piketty, 2014; Adkins et al., 2020) as well as broader dynamics such as local area or community resources (Kempson and Poppe, 2018). In this new context, the concept of financial wellbeing has emerged,

bringing in the dynamics around wealth through objective measures alongside more subjective dimensions, such as behaviours and attitudes about personal financial experiences (Arber et al., 2014; Kempson and Poppe, 2018; Riitsalu et al 2023).

While it is reasonable to assume that the broad pattern of disadvantage, i.e., that lower financial resources lead to poorer health outcomes, still applies even in this new context, there are potential nuances within this relationship that are underexplored, for example, how financial wellbeing relates to positive health outcomes.

The purpose of this work is therefore to conduct a rapid (but comprehensive) evidence review of recent, relevant evidence to establish is known about the link between financial wellbeing and physical health, primarily focussed on the UK. The aim of this work is therefore, first, to understand the extent to which there is evidence available and second to understand the potential for interventions (excluding debt advice) which either prevent negative physical health outcomes or encourage positive ones.

The UK Strategy for Financial Wellbeing led by the Money and Pensions Service (MaPS) sets out five Agendas for Change, with a commitment to supporting those most in need. MaPS works with all four health and care systems in the UK to identify where financial wellbeing support can be integrated into services where it can best support service user needs. This is in keeping with the range of 'personalised' or 'whole-person' care agendas being developed and rolled out. To help inform this activity, MaPS wants to understand more about the relationships between financial wellbeing and physical health.

In this review, we focus on physical health, widely understood as the normal functioning of the body, with poor health as experiencing challenges to this. This includes states, conditions, impairments or diseases which affect physical functioning in the short, medium or long-term. We did not specifically incorporate experiences of disability, since the definition of disability under the Equality Act



2010 defines disability as a physical or mental impairment that affects normal daily activities for 12 months or more. This means that disability is defined in terms of one's ability to navigate one's environment, rather than functioning of one's body. This definition reflects a social model of disability arising from critique of medicalised understandings of disability, which reflect an inherent ableism. So, people living with disability will experience physical health (understood as normal functioning) as a distinct phenomenon from their experience of disability, which may or may not affect functioning. There is existing research on how experiences of disability shape financial wellbeing, particularly highlighting the challenges and barriers that are faced by people living with disability, which will be incorporated into the review where relevant (Evans et al., 2023).

We set the relationship between physical health and financial wellbeing in the context of the life course, which refers to the different stages of life, from birth to death. Generally, physical health is held to decline as people get older, yet how financial wellbeing patterns with age varies between different groups. Therefore, our intersectional life course approach will aim to understand how dynamics of health and financial wellbeing play out at different stages and how these experiences compound over time.

## **1.2. Definition of key terms:**

**Financial wellbeing** – following the Money and Pensions Service (2022) definition, financial wellbeing is about feeling secure and in control of your personal and household financial circumstances, making the most of your money from day to day, dealing with the unexpected, and being on track for a healthy financial future.

**Physical health** - the normal functioning of the body, with poor physical health as experiencing difficulties or challenges to functioning.

**Life course** (also written lifecourse) – refers to the different stages of life, from birth to death. Physical health and financial wellbeing are both found to change over the life course and between different stages.

**Health inequalities / disparities** - inequalities as health outcomes and disparities as the result of systematic obstacles to health, but appear to be fairly interchangeable<sup>1</sup>

**Morbidity / multimorbidity** – morbidity is the state of having an illness or medical condition, while multimorbidity is defined as the presence of two or more long-term health conditions.

**Financial toxicity** - the financial burdens and distress associated with medical care (direct and indirect costs).

**Social drift** - the impact of mental health conditions on personal financial wellbeing.

**Social causation** - the impact of personal financial wellbeing, particularly financial stress or hardship, on mental health conditions.

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<sup>1</sup> See Government guidance for more information:  
<https://www.gov.uk/government/publications/health-disparities-and-health-inequalities-applying-all-our-health/health-disparities-and-health-inequalities-applying-all-our-health>

## **2. Methods**

### **2.1. Research questions**

The proposed questions set out for the review are as follows:

- Is there any evidence on the impact of financial wellbeing interventions, including money guidance (but not debt advice), on physical health outcomes?
- What types of money guidance or financial wellbeing interventions are most successful in terms of their effect on physical health outcomes?
- What are the key strengths and weaknesses in the evidence base about how money guidance or financial wellbeing interventions improve physical health?
- What are the main sources of evidence about how money guidance or financial wellbeing interventions improve physical health?
- What evidence exists as to how the relationship between physical health and financial wellbeing evolves over the life course, and how does this impact potential interventions?

### **2.2. Methodology**

The work was undertaken across three phases. The first phase involved scoping, where evidence addressing topics related to the relationship between physical health and financial wellbeing were identified. This was primarily through keyword searches on Google Scholar, Google and the MaPS Evidence Hub for studies carried out in the last 10 years and primarily focussed on the UK.<sup>2</sup> We did not use specialist health databases, such as PubMed due to the

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<sup>2</sup> Evidence from other countries is used where it added insight into the topic and is clearly flagged as concerning another country in the findings section. Unless another country is mentioned, the analysis relates to the UK.

rapid nature of this evidence review. The search terms included the stem 'financ\*' along with the terms physical health, illness, disease, impairment, weathering and longevity. The initial scoping activity identified 32 pieces of evidence related to the relationship between financial wellbeing and health.

Subsequently, key researchers and institutes working on topics related to health inequalities were also contacted for latest relevant work. A further 15 pieces were added, resulting in 47 outputs in total. A full list of included studies is listed in a table in the Appendix to this report.

In the second phase, the evidence was analysed according to the research questions. A rapid evidence review template (a customised excel sheet) was created to facilitate the consistent recording of insights about the studies reviewed.

Finally, the insights from the analysis were condensed into key themes, related to the major elements of the relationship between physical health and financial wellbeing. These themes were developed into the findings presented in this report.

### **2.3. The evidence landscape**

The table below details the types of evidence identified for the review.

<b>Evidence type</b>	<b>Description</b>
Polls and surveys	Polls or surveys conducted on topics related to mental health and money, sometimes on a representative basis.
Analysis of large representative datasets	Analysis of large datasets which consider issues around mental health and money, often nationally representative (quantitative research).

Qualitative research	Targeted research conducted on topics of mental health and money, usually with specific groups using qualitative research method approaches (interviews, focus groups etc).
Multi-method evidence	Using a combination of source types above to provide a view through more than one research method approach 'lens' on the specific topic or topics of the research.
Summary, review or insight	Pieces of analysis which summarise, review or highlight insights in the evidence landscape.

*Table 1: the types of evidence used in this review.*

Most of the evidence included in this review comes from studies of health, primarily in health sciences or related disciplines. This means that a lot of the evidence around health is robust, including longitudinal studies and meta-evaluations which confirm long-term patterns of causality. However, the evidence considers a mixture of general experiences of health and specific health conditions at different points of the life course, which sometimes makes generalisability unclear.

When it comes to financial wellbeing, the studies tend to lack sophistication around definition and measurement, with most relying either on self-reported, general feelings about finances, measure of (or proxies for) income, or societal classifications such as socio-economic status and local area deprivation, with little discussion of the different implications of these measures (Arber et al., 2014). A small number of studies use tools designed to measure financial wellbeing more broadly, for example, including the subjective assessment of financial circumstances. Also, the studies involve little consideration of wealth as a resource for financial wellbeing, aside from the assumptions built into proxies such as socio-economic status and local deprivation.

The insights gleaned about the relationship between physical health and financial wellbeing are, to an extent, limited by this underlying lack of detail in measuring financial wellbeing. The use of more sophisticated measures of financial wellbeing, which include more depth on the objective and subjective aspects of the phenomenon, would enable deeper interrogation of the interactions in the relationship between health and financial wellbeing. It could also bring a more nuanced understanding of how these relationships play out amongst different groups, aiding an intersectional analysis. For example, a physical health condition may not impact financial wellbeing in the same way if someone has accessible wealth to rely on.

The next sections will consider how physical health and money challenges were defined and measured by research in the landscape in more detail.

### **2.3.1. Defining and measuring physical health**

In terms of measuring physical health, most of the studies used self-reported assessments of physical health and/or health behaviours amongst general populations, so regardless of health status. Self-reported measures of health have been found to replicate objective measures of health and are therefore widely used (Arber et al., 2014). For example, Hardy and Lane (2017) analyse data from a representative poll run by Citizens Advice which included assessments of physical health and Sport England's Active Lives survey (2018 and 2023) collects self-reported activity levels. Self-reported assessments of health were particularly predominant in large surveys. For example, Piumatti (2017) analysed data from EU-SILC, a large representative survey, which assessed health through two survey questions: "How would you rate your health status?" (rated on a scale of 1 – 5, where 1 = very good and 5 = very bad), and whether respondents suffered from any chronic illness or condition (answered on a yes/no basis). Similarly, Thomas et al. (2023) use reports of falling ill from the UK Household Longitudinal Study and Steel et al. (2014) use self-reported assessments of physical health (i.e., not having an actual diagnosis) in the English Longitudinal Study of Ageing (ELSA) to assess the prevalence of five health conditions: angina, diabetes, depression,

osteoarthritis and cataracts.

Other studies focussed on groups with specific health experiences or conditions. This was mostly through analysis of survey data, for example, Kivimaki et al. (2020) analysed data from two representative cohort studies, one in Finland and one in the UK which examined experiences of hospitalisation for 54 common diseases. Asthma UK surveys (2022; 2023a, 2023c) focussed on people with experience of asthma and chronic obstructive pulmonary disease (COPD) in the UK, while Banerjee et al. (2024) and Delgado-Guay et al. (2015) focussed on patients in the US undergoing treatment for multiple myeloma and advanced cancer respectively.

Some studies focussing on particular health conditions or experiences used mixed methods approaches, combining survey or health data and interviews (Finney et al., 2013; Hay, 2018; Lewis et al., 2024).

Finally, some considered health-related behaviours such as smoking during pregnancy (Tappin et al., 2015), compliance with non-pharmaceutical interventions such as washing hands and maintaining social distancing, immediately after the outbreak of COVID-19 (Atchinson et al., 2021) as well as maintaining diet and exercise in mid-life (Kelly et al., 2016).

One study, based in the US, combined self-reported assessments of health from the Wellbeing survey with more objective health outcomes, by merging with health insurance data (Bialowolski et al., 2021).

A few studies used qualitative assessments of health, normally embedded in a qualitative methodology (Garthwaite et al. 2014; May et al., 2023). For example, Garthwaite (2014) conducted interviews with people receiving incapacity benefit, including experiences of arthritis, rheumatism, fibromyalgia, cardiovascular disease, multiple sclerosis and mental health problems including depression and bipolar disorder.

The final group of studies were review or summary articles, which tended to consider evidence regarding a specific health experience (Coughlin, 2023; McNamara et al., 2023; Ridley et al., 2020). For example, Bell et al. (2022) conducted a meta-ethnography of women's experiences of food insecurity in the UK and Mantzari et al. (2015) conducted a systematic review of studies using financial incentives to promote health-related behaviours. Patel et al. (2020) and Bambra et al. (2020) review what is known about COVID-19. Carter et al. (2016) review the prevalence of systemic lupus erythematosus (SLE), a multisystem autoimmune disease that can potentially lead to serious organ complications and even death.

### **2.3.2. Defining and measuring financial wellbeing**

On the financial wellbeing side, the majority of studies rely on an assessment of either reported income or proxies for income. For example, Steel et al. (2014) use income and wealth reported in the English Longitudinal Survey of Ageing, and Coughlin et al. (2021) use level of income reported in the US Behavioral Risk Factor Surveillance System (BRFSS) survey. Hardy and Lane (2017) use reported changes in income through a representative poll run by Citizens Advice.

In terms of proxies for income, the most common was socio-economic status, sometimes used in conjunction with local area deprivation (Asthma UK 2023a; Atchinson et al., 2021; Bambra et al., 2020; Kelly et al., 2016; Kivimaki, et al., 2020; Patel et al. 2020; Sport England, 2018,2023). Other proxies included employment status (McNamara et al. 2023; Thomas et al, 2023) or experiences of financial adversity, poverty and/or food insecurity (Bell et al. 2022; Garthwaite et al. 2014; May et al., 2023).

Another group of studies used self-reported assessments of finances generally, however, in contrast to health it is not clear whether subjective assessments of financial wellbeing do reflect objective measures and generally studies did not always acknowledge the subjectivity of their measures. For example, Piumatti



(2017), using data from EU-SILC, analysed answers? to the question: “Thinking of your household’s total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?” (rated on a scale of 1 to 6 where 1 = with great difficulty, and 6 = very easily). Other studies assessed financial distress (Delgado-Guay et al., 2015) and financial responsibility (Lewis et al., 2024). One study which did recognise the subjective nature of the assessments was Bialowolski et al. (2021), which used self-reported measures related to financial safety, financial capability, financial distress and financial security.

Self-reported assessments were also used to assess more specific financial experiences. Asthma UK (2023c) analysed reported ability to afford prescriptions and Finney et al. (2013) analysed reported costs incurred amongst people undergoing treatment for cancer.

A few studies considered the role of financial Incentives in promoting health behaviours (Giles et al., 2014; Mantzari et al., 2015; Tappin et al., 2015).

There were a minority of studies that used formal or established measures to assess financial wellbeing. Hay (2018) used a financial capability assessment in an evaluation of a financial capability intervention for patients with renal failure and inherited metabolic disorders in the UK. Arber et al. (2014) use data from the UK’s General Household Survey to analyse income in conjunction with subjective financial wellbeing (SWB), with two measures examining perceptions of relative material deprivation and financial strain as distinct facets of SWB. In a US study, Brown Weida et al., 2020 use a measure of financial health developed by the Center for Financial Services Innovation (CFSI) including indicators such as paying bills on time and in full, having sufficient long-term savings, having a prime credit score and planning ahead for expenses. In another US study, Panisch et al (2019) use a combination of three established scales, the Financial Self-Efficacy Scale, the Financial Health Scale and the Financial Anxiety Scale. Finally, in a US survey of patients with multiple myeloma, Banerjee et al. (2024) used COST-FACIT, a specific tool designed to measure financial toxicity.<sup>3</sup>

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<sup>3</sup> -see <https://www.facit.org/measures/facit-cost>

### 3. Findings

The findings section will be structured by the three dynamics to the relationship between physical health and financial wellbeing that were identified through the review, and which are depicted in Fig 1, below, namely: (1) the socio-economic context of health inequalities, (2) how physical health affects financial wellbeing, and (3) how financial wellbeing affects physical health.

The first, how socio-economic inequalities shape health and financial wellbeing, is represented by the outer circle in Fig 1. This a long-term dynamic, which sets the context for experiences of physical health and financial wellbeing.

Within this context, there is a bi-directional relationship between physical health and financial wellbeing (Arber et al., 2014), where on one hand, physical health shapes financial wellbeing and on the other hand, financial wellbeing shapes physical health. These intertwining dynamics are similar to the processes of social drift and social causation relating to the relationship between mental health and financial wellbeing (as discussed in James and Lymer 2023), yet it is notable the evidence reviewed on the relationship between physical health and financial wellbeing emphasised the longer term socio-economic context, a dynamic which was less overt in the evidence reviewed on mental health. This may suggest a difference in how financial wellbeing relates to mental health and physical health independently, yet this is complicated by evidence which implicates a relationship between mental and physical health. While this evidence is indicated in this report where relevant, a full examination of these interconnecting relationships is outside the scope of this report and more specific research would be needed to compare and contrast the connections between financial wellbeing and physical and mental health.

These dynamics are shown in Fig 1. below.

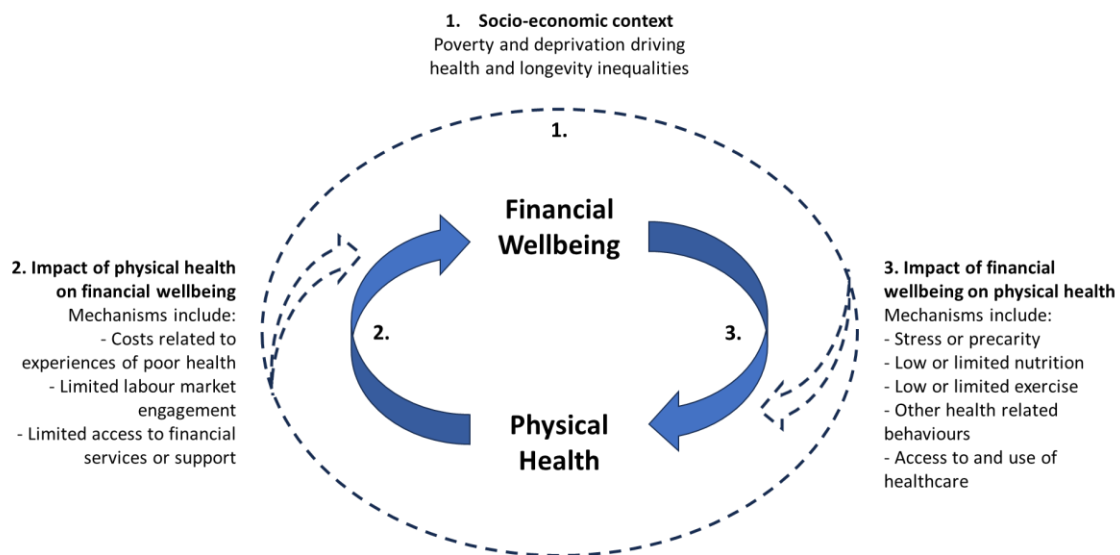


Fig 1: The dynamics within the relationship between financial wellbeing and physical health.

The evidence will be presented according to these three dynamics to develop the understanding of the overall relationship between physical health and financial wellbeing.

### 3.1. The socio-economic context of health inequalities

This section considers mechanisms related to the socio-economic context of health inequalities in which financial wellbeing and physical health operate. The evidence here supports wider evidence on health inequalities as those with lower socio-economic status are more likely to experience poor health and to have shorter lifespans, due to poverty and deprivation at the household and local area level.

#### *Poverty and deprivation as causes of health inequalities*

The evidence in this review demonstrates that experiences of poverty and deprivation lead to poorer physical health in the long-term (Arber et al., 2014; Carter et al., 2016; Ridley et al., 2020). For example, Kivimaki (2020) analyse

data from Whitehall II, a representative cohort study in the UK, and a similar study in Finland. They find that low socioeconomic status was associated with increased risk for 18 of 56 common health conditions and 16 of these conditions formed an interconnected “cascade”. This cascade suggested that there was a follow-on effect where poor health started with mental and behavioural disorders, including psychiatric disorders, self-harm, and substance abuse, followed by pancreatitis, liver disease, anaemias, renal and heart failure, ischaemic heart disease, cerebral infarction, heart failure, arteriosclerosis, chronic obstructive bronchitis, lung cancer, and dementia. Relatedly, in an analysis of US survey data, Coughlin et al. (2021) find that multimorbidity (the presence of 2 or more long-term health conditions) was more common amongst low-income households and as income went up, the percentage of adults with multiple health issues went down in a steady way.

Asthma UK (2023a) suggest that asthma is connected to socio-economic status and is more prevalent in deprived areas in the UK, with 36% higher prevalence in the most deprived areas. The pattern in the geographic incidence of asthma is because of exposure to asthma triggers, such as air pollution from vehicle emissions, lack of green spaces and mould exposure in poor quality housing, which are all more prevalent in more deprived areas. There are also household-specific triggers, such as exposure to smoke and diet, which are linked to socio-economic status.

The report also highlights that, while incidence of asthma is higher amongst minoritised groups, such as South Asian and Afro-Caribbean, than white population groups, the prevalence of the disease is lower amongst those who were born outside of the UK than amongst those who were born here. This suggests that second and third generation descendants are particularly exposed to the disease through socio-environmental factors.

In a review of global burden of systemic lupus erythematosus (SLE) - a multisystem autoimmune disease which is more prevalent amongst lower socio-economic and minoritised groups, Carter et al (2016) find that poverty, low

educational attainment, lack of health insurance, poor social support and poor treatment compliance are associated with unfavourable disease outcomes, both independent of, and in combination with, ethnic influences.

Reviewing the COVID-19 pandemic, Patel et al. (2020) and Bambra et al. (2020) highlight the social factors which shape the risk profile of the disease. They highlighted that those with low socio-economic status (SES) are more likely to live in overcrowded accommodation and work in occupations which cannot be done from home, increasing exposure to and spread of COVID-19, and that poverty is also a risk factor for diseases like hypertension and diabetes, which increase risk of death from COVID-19. This is echoed by Atchinson et al. (2021) who find that people from lower socio-economic groups were less likely to comply with the non-pharmaceutical interventions put in place immediately after the outbreak of COVID-19. Bambra et al. (2020) argue that we should consider COVID-19 a 'syndemic', a term which recognises the concurrent impact of the disease alongside existing health inequalities, rather than the pandemic label which implies a stand-alone disease.

Based on a census amongst GPs, The Royal College of Physicians (2024) report that 55% of consultant physicians had seen more patients with ill health caused by social and economic factors (such as living in a damp home or poor air quality) over the last few months. The report considers that this burden of preventable illness is affecting doctor's workloads, at a time when they are under unprecedented strain.

### *Longevity inequalities*

The evidence also suggests that the cumulation of health inequalities over the life course, based on experiences of poverty and deprivation, results in longevity inequalities (Asthma UK, 2023a).

The latest data is reported by the Royal College of Physicians (2024) based on statistics from the Office for Health Improvement and Disparities, (2023) and suggests there is a 17.6 years' difference in life expectancy between those living in the least and most deprived areas. It also highlights worsening life expectancies across the board, although this appears to be a slower decline in the least deprived areas. The longevity data demonstrates persistent gender differences in longevity, as women are likely to live longer than men in the same cohort, even though women are also more likely to experience poverty over the course of the lives (Bell et al., 2023).

### **3.1.1. Interventions**

In terms of interventions related to the socio-economic context, the evidence suggests that societal level investment in improving material conditions is required to prevent poor health and reduce health inequalities. Specifically, Thomas et al. (2023) note that reducing poverty, improving environmental factors, improving access to treatments and support for managing health conditions are interventions known to work for countering health inequalities. In particular, they also highlight the important role that conditions of employment play in supporting health. While it is often held that being in work has a positive influence on health, the authors contend that job quality is an important factor in this. The evidence shows that high quality work (characterised by autonomy, decent pay, and security, amongst other factors), has a reinforcing effect on health and wellbeing, while poor quality work (characterised by low autonomy, low pay, low security) is harmful to health by increasing the likelihood of mental and physical health conditions. In fact, this evidence suggests that poor quality work has little health benefit compared to remaining unemployed, suggesting a health-related poverty trap (Chandola and Zhang, 2018; Patel and Jung 2022).

Ridley et al. (2020) present some evidence to support the positive impact of financial interventions for people experiencing poverty and deprivation but note

that interventions that helped mental health did not result in improved physical health. However, this might be due to the longer-term processes involved in changes to physical health, which the authors did not discuss.

### **3.2. How physical health affects financial wellbeing**

This section considers mechanisms which relate to the way in which physical health affects financial wellbeing. These relate to the direct and indirect costs associated with poor health, as well as impacts on labour market outcomes and access to financial services and support, which may arise from period(s) of poor health.

#### *Paying for medical costs and other costs related to poor health*

The evidence shows that one way health affects financial wellbeing is through the burden of medical costs and other costs related to experiences of poor health (Bruggen et al., 2017; Jones et al., 2020; Tenovus Cancer Care, 2018). In some literature, this is referred to as financial toxicity, defined as the financial burdens and distress associated with medical care, including direct and indirect costs' (Coughlin, 2023).

In the UK, Finney et al. (2013) conducted a survey of cancer patients in the UK covering expenditures related to their illness, including reductions to income, which were not all covered by NHS provision or other types of support. The authors identified an unequal distribution of costs: the median cost of cancer was £103 per month, but the mean was £450 per month. The level of cost also varied by type of cancer, with lymphoma, leukaemia and myeloma having median £181 and mean £500 per month. At the lower end, cervical, ovarian, uterine, prostate, kidney and bladder cancers had medians around £50 a month and means around £300 a month. They found that participants used savings, formal debt or informal debt to help meet the costs associated with their illness.

The authors also found that the financial impact was greater for younger people, especially those with dependent children and mortgages, compared to older groups, who reported a lower cost of experiencing cancer. The authors highlight that this is likely to do with more fixed financial situations in later life as well as broader healthcare provision. There were also gender differences, as men reported experiencing higher costs due to loss of income, which makes sense as men tend to earn more than women. However, men were not more likely to report higher costs overall. Women were more likely to report costs associated with clothing, equipment and modifications to the home and car, and were also more likely than to borrow from family and friends, or go without essential items, than men were. These patterns could be driven by material differences in the experience of disease or could be related to tendencies around managing (and reporting) money, drivers which are not specifically unpacked in this study.

In the US, Delgado-Guay et al. (2015) found that patients with advanced cancer found financial distress more severe than other forms of distress, including distress about their physical functioning, their family, or emotional distress, and they felt that financial distress was affecting their general well-being. This could be interpreted as specific to the US experience where medical bills are significantly greater than in the UK, due to the greater incidence of private healthcare in the US. However, in another US study, Banerjee et al. (2024) found that financial status, rather than disease status, predicted levels of financial toxicity after hospitalisation for multiple myeloma. In other words, financial distress after illness was not connected to how long patients were in hospital for (which would suggest greater costs), but how much money patients had to provide for their illness costs, regardless of how great the costs they were. Together, these studies suggest that there may be a subjective aspect to the burden of medical costs, independent of the objective costs.

#### *Limiting labour market outcomes*

Another strand of evidence finds that poor health can affect an individual's employment and income. Using data from the UK Household Longitudinal Study,



Thomas et al. (2023) found statistically significant evidence for the impact of chronic physical health and mental health conditions on earnings loss, increased likelihood of exit from employment, as well as working longer hours. The loss of earnings is estimated to be £1404 for a physical condition and £1716 for a mental health condition per year (based on data from during the pandemic). There was also an earning loss associated with another member of the household falling chronically ill, estimated to be £1224 per year. The authors found differences by type of condition, experiencing diabetes, cancer, or multimorbidity (2 or more conditions) as having the biggest impact on labour market outcomes. Further, experiencing long-term illness was more likely to result in exit from employment amongst lower income groups (see also Murphy and Thwaites 2023). This could indicate a compounding effect, whereby people from low socio-economic groups are more likely to experience health conditions, which then prevent them from working, with an impact on their financial wellbeing. This compounding effect may also be present for other disadvantaged groups, such as those living with disability (Evans et al., 2023).

#### *Access to financial services or support*

Garthwaite (2014) conducted an ethnographic study with people who were receiving incapacity benefit in the UK, which was for people who could not work because of an illness or disability. Participants were recruited through an employment centre, meaning they were trying to find suitable employment. The author identifies a pervasive fear of benefit reductions and stress related to assessment process, which led to feelings of fatalism and powerlessness, even amongst those who were willing to find work. Many participants suggested they were underclaiming benefits as a result of the stigma and shame associated with it.

### **3.2.1. Interventions**

In terms of interventions related to the impact of physical health on financial wellbeing, these have tended to relate to reducing the burden of medical costs and the loss of income due to experiences of poor health. Hay (2018) conducted an evaluation of a financial capability intervention for patients with renal failure and inherited metabolic disorders in the UK (n=482). The intervention included welfare benefit advice and income maximisation, face to face advice and support to patients on their household income and budgeting, drop-in money management information sessions, provision of fact sheets on financial capability, energy suppliers and various other topics, one to one information sessions on financial capability. The evidence supports that these interventions were successful in increasing income for patients and had a positive effect on financial capability. However, this study did not have a control group and it is unclear whether some aspects of the intervention were more successful than others. Further data was not broken down by available subgroups, which could have permitted further insight (e.g., age, gender, ethnic group). In a similar intervention, Tenovus Cancer Care (2018) delivered a money advice service to people with early-stage cancer, which gave positive results, yet findings are limited due to the small scale of the study.

Coughlin (2023) reviewed literature from the US on interventions to improve financial toxicity after breast cancer. The author reports that interventions are promising although they often use a small sample size and some lack controls. The review suggests that interventions around financial education or counselling may be more effective at reducing anxieties around finance, than reducing the financial burdens themselves. Relatedly, another study from the US (Delgado-Guay et al.,2015) found that patients being treated at a general hospital, rather than a comprehensive cancer centre where broader needs are considered, had greater intensity of financial distress. These studies could indicate that how people feel about their situation is more powerful than the actual financial burden, echoing other research which highlights the subjective nature of understanding financial circumstances (James and Lymer, 2023). However, more research is needed to understand these subjective assessments and the specific forms of intervention which support them.

One intervention that was successful in reducing the financial burden of poor health is highlighted by Coughlin (2023), where training medical staff to deliver financial support was effective in generating financial assistance to the value of \$39 million between 2012 and 2016, covering 11,186 cancer patients (Yezeffski, Steelquist, Watabayashi, Sherman, et al. 2018).

### **3.3. How financial wellbeing affects physical health**

This section considers mechanisms which relate to the way in which financial wellbeing affects physical health. These can be understood as first, relating to stress around financial circumstances, which has a knock-on effect on health, and second through the material and behavioural circumstances which result from financial resources.

#### *Experiences of stress or precarity*

The evidence suggests that stress or precarity in financial circumstances generally, can affect physical health (May et al., 2023). For example, McNamara et al. (2023) conducted a systematic review of 49 studies using survey data to investigate the health impacts of experiencing job loss during COVID-19 from both high- and low-income countries. They conclude that COVID-19 job loss resulted in poorer health outcomes across multiple outcomes measured by the studies, including mental health, well-being/quality of life and other health outcomes, and highlight the mediating impact of social protection measures as health impacts were worst amongst those who lost their jobs, medium amongst those who were furloughed with little or no compensation, and negligible amongst those who were furloughed with pay.

Some evidence suggests that individual's own appraisals of their financial circumstances (not just material or objective circumstances) can also contribute to stress which affects physical health (Brown Weida et al., 2020; Jessop et al.,

2020; Panisch et al., 2019). Arber et al., (2014) highlight that it is important to distinguish between income and subjective financial wellbeing (SFB), and further break SFB down into measures of experiences of financial strain (which may not align with income) and relative material deprivation, which encompasses social comparisons and expectations, as they impact health in different ways. Using data from the UK's General Household Survey in 2006, the authors show that each of these measures of SFB were strongly associated with self-reported health, albeit in different extents amongst mid-life and later-life population groups. While in mid-life both income and SWB were related to health, with poor health decreasing in line with income increases, later life health was more strongly connected to SWB, that is, perceptions of income adequacy, than income (see also Piumatti (2017) on SWB in later life). The authors highlight that this could be because levels of income vary less for individuals and also amongst cohorts in later life, but more longitudinal research is needed to unpack these dynamics.

In a longitudinal study based in the US, Bialowolski et al. (2021) combined survey data on self-reported health and financial wellbeing, with records of health insurance claims over a two-year period. In analysing the data, they controlled for income, so that they could assess the relationship between subjective assessments of financial wellbeing and physical health, and the objective outcomes reported by health insurance claims, independently of objective financial circumstances. They find that all measures of financial wellbeing (which included financial safety, financial capability, financial distress and financial security) were associated with self-reported physical health, with particularly strong associations to the prevalence of mental health conditions. Yet, interestingly, the authors did not find evidence that financial wellbeing was connected to the health outcomes provided by the claims data. The authors suggest that this might indicate that physical health conditions (as proven by claims data) are more strongly related to income, as an objective measure of financial circumstance, than to individual's subjective appraisal of their finances. However, there is a time lag between experiencing a decline in health and the completion of an insurance claim – including the multiple steps of accessing healthcare, being diagnosed and being treated before a claim is filed - that may not be captured in the two years of data analysed. So, the

relationship between self-reported financial wellbeing and health insurance claims may be more strongly evidenced if examined over longer periods.

There is also some evidence which suggests that emerging norms associated with finance and financial wellbeing, which can be summarised as the individualisation of finance (Barros Pena et al, 2021), may increase stress for individuals, ultimately affecting physical health. The strain associated with the individualisation of finance may not be equal across groups (Bruggen et al., 2017). For example, in a study of African American women in the US, Lewis et al. (2024) found that having financial responsibility for one's household was associated with higher blood pressure amongst the sample group, independent of household status (e.g., married/partnered, children) and household income, suggesting that this was not a result of financial strain in itself.

#### *Low or limited nutrition*

The evidence suggests that having experiences of inadequate income can lead to low or limited nutrition. Using data from a representative poll, Hardy and Lane (2017) find that people with unpredictable incomes (i.e., where income changes significantly from month to month) are more likely to go without food or other essentials, with 1 in 5 or 21% of those surveyed, compared with 8% of those with stable incomes. They also highlight that 1 in 10 (11%) of those with unpredictable incomes have gone without heating or electricity, compared with 5% among those with a stable income.

In an ethnography of foodbanks, Garthwaite et al. (2014) found a prevalence of health problems (particularly mental health problem such as depression and anxiety, but also addiction and digestive problems) amongst users, who sought to maximise food consumption at the lowest possible cost. Participants described cycles of being able to afford to eat healthier and then having to get by with less nutritious food, depending on their income. This had a detrimental impact on physical health and knock-on effect on mental health.

Similarly, Bell et al. (2022) conducted a meta-ethnography reviewing 23 qualitative studies dealing with women's experiences of food insecurity in UK, as women are more likely to experience poverty. The authors identified two key themes. First, studies highlight practices of accessing sufficient food, including employing strategic food practices, accessing charitable food support, using informal networks and accessing healthy start vouchers, an NHS initiative to help the parents of young children to eat more healthily. The healthy start scheme gives vouchers which can be spent on milk, vegetables, formula milk or vitamins. Second, studies also show the ways in which food insecurity is embodied, such as the inability to meet nutritional needs, and physical/mental health impacts. These experiences affect health through cycles of weight loss/gain, gut health, panic attacks, sleepless nights, not being able to work properly. The review also notes that the presence of maternal sacrifice as mothers prioritised their children's needs, and that experiences of food insecurity often challenged their feelings of being a good mother, compounding the negative experiences.

#### *Low or limited exercise*

Financial wellbeing may affect the levels of exercise you can undertake. Sport England's Active Lives survey (2018, 2023) finds consistently lower levels of activity amongst those in lower socio-economic groups. People in NS-SEC groups 6 to 8 (representing 12 million people in the UK) are most likely to be inactive and have a long-term limiting disability which restricts physical activity (31% vs 21% of the population overall) (Sport England, 2018). The survey reports that more women were in the lower socio-economic groups, and that they were gender and class differences in the type of activity practiced, e.g., tennis and golf for middle class women and men compared to fitness classes and football for working class women and men.

The study also reports patterns of activity amongst minoritised groups do not quite conform to the overall pattern of socio-economic activity levels, distinct from all other groups. For example, amongst people who are Black, there were no

notable differences in activity levels between low and middle socio-economic groupings (NS-SEC 6-8 and NS-SEC 3-5 respectively). Amongst people who are South Asian, activity levels for NS-SEC 6-8 are higher than would be expected. This suggests there may be specific cultural behaviours or patterns that are shaping these activity levels.

In 2023, the Active Lives survey finds that the least affluent groups experienced the biggest drops in activity levels during the pandemic and the lowest recovery (based on NS-SEC data and IMD data). The least affluent groups were also less likely to meet guidelines on muscle strengthening activity, to feel they can be active and to find activity like sports enjoyable. This survey confirms that men are more likely to be active than women (66% or 14.7m compared to 61% or 14.2m) but does not specify whether this is a function of socio-economic tendencies highlighted in the earlier survey. The survey also notes that groups of people who describe their gender in another way (than man or woman) are least likely to be active (59%), but the proportion of people represented in this group is much lower (0.2m). Finally, it notes that gay men, lesbian women and bisexual adults are more likely to be active than adults identifying as heterosexual.

The 2023 Active Lives survey recognises that while levels of activity are increasing amongst White British groups since the pandemic, they have remained stagnant amongst other groups. Black, Asian (excluding Chinese) and Other groups are amongst the least likely to meet muscle strengthening activity guidelines.

### *Other behaviours*

The evidence generally suggests that those with lower incomes are more likely to undertake behaviours which damage health. Asthma UK (2023) reports data from Public Health England (2016) showing that 23% of those earning under £10,000 are smokers, compared with 11% of those earning £40,000+. McNamara et al. (2023) highlight a UK study which shows that people who lost their job were more likely to increase alcohol consumption. Amongst people who lost their job (compared to those who were furloughed), the frequency of heavy

drinking increased for men and women, but the frequency of drinking generally increased for just men (Oldham, Garnett, Brown, Kale, Shahab, and Herbec (2012)). However, Cooper and Stewart (2015) also point out that for some groups, having more money can also lead to an increase in these behaviours, primarily from studies of positive financial shocks such as lottery wins and inheritance receipts. Furthermore, it is not clear how the prevalence of health-related behaviours plays out across other intersections, such as age, ethnicity and ability status.

#### *Access to healthcare, and usage of it*

The evidence suggests that those with low incomes are less likely to access and use healthcare (Asthma UK, 2022). Steel et al. (2014) found that while the odds of having one of the five diseases (angina, diabetes, depression, osteoarthritis and cataracts) were substantially higher amongst lower income participants, the odds for diagnosis and treatment amongst this group were smaller. The authors suggest that the higher burden of illness amongst the least wealthy is not being 'matched appropriately' with higher levels of diagnosis and treatment. This could be because wealthier people are more likely to live in areas where there are more or better healthcare resources, reflecting what has been called 'supply-sensitive care' (Fisher and Wennberg, 2003). However, the authors also highlight that there may be other dynamics at play. For example, it is not clear whether those on lower incomes may avoid visiting doctors, or whether they are visiting and not being diagnosed. Further research would be needed to establish why the gap between the burden of illness and levels of diagnosis and treatment. Additionally, as this study uses data from ELSA which covers people aged over 50, the prevalence of disease is the culmination of health experiences and practices over the life course. Further research would be needed to confirm whether similar differences in access and diagnosis occur in other age cohorts.

Similarly, research from Asthma UK (2023c) find that three in four people living with asthma say they struggle to pay for prescriptions, and more than half of those with asthma who pay for prescriptions have purposefully cut back on medication



due to cost. They find that the impact of prescription charges varies regionally, suggesting it exacerbates health inequalities, and that younger people are more likely to struggle with the cost of prescriptions. They raise a particular concern about Prescription Prepayment Certificates, which allow people to pay for their prescriptions up front, are described as an unfair burden for people on low incomes, as the charge is too high and does not reflect their usage of prescriptions. These findings are echoed by professionals surveyed (Asthma UK, 2023b), with the majority (87%) stating that they feel prescription charges put people with asthma at risk.

### **3.3.1. Interventions**

In terms of interventions to support how financial shapes health, studies suggest protecting people from poverty, for example, Johnson et al. (2023) suggest that health would be improved with a universal basic income. More specific interventions aim at removing financial barriers to health provision. For example, Steel et al. (2014) highlight the need to improve access to diagnosis as well as treatment and Asthma UK (2023b, c) propose reform to the list of medical exemptions to get rid of prescription charges for asthma medications. Bell et al. (2022) highlight healthy start vouchers (NHS scheme offering vouchers which can be spent on milk, vegetables, formula milk or vitamins) as an effective intervention to support food nutrition.

In terms of behavioural interventions, Tappin et al. (2015) present an intervention using financial incentives to prevent smoking during pregnancy. The intervention used a quasi-experimental design (n=712) with half of the group randomised to receive financial incentives for completing a stop smoking programme and the other half were in a control group who went through the same stop smoking programme without financial incentives. The incentives provided were up to £400 of shopping vouchers, spread out over the stop smoking programme, which lasted the duration of the pregnancy. The authors report that 22.5% of those in the incentive group stopped smoking over the course of the pregnancy, compared to

8.6% of the control group, meaning that 7.2 individuals need to undergo treatment for every person who successfully quits smoking.

However, Mantzari et al. (2015) conducted a systematic review of studies using financial incentives to promote health-related behaviours generally and found limited evidence that financial incentives work in the long-term (see also Giles et al., 2014). Mantzari et al. (2019) highlight that interventions using financial incentives have focussed on smoking, and particularly, smoking during pregnancy, which might mean that effectiveness of financial incentives has been over-generalised to other behaviours. The authors also note that financial incentives are more effective on target behaviours (e.g., reducing smoking, healthier eating and exercise) where patients have lower incomes. While not recognised in the review, it is also possible that behavioural findings have also been over-generalised to other intersectional groups too (e.g., age, ethnicity, ability status), where the impact of financial incentives has not been examined in detail.

## **4. Conclusion**

This review set out to examine evidence on the relationship between physical health and financial wellbeing, and interventions that have been observed in this realm.

The evidence base found comes primarily from health sciences, so evidence around experiences of health is strong, including some longitudinal evidence and meta-analyses which assess causality. However, the evidence considers a mixture of general experiences of health and specific health conditions at different points of the life course, which makes generalisability unclear.

In terms of financial wellbeing, however, the studies tend to lack detail in definition and measurement, for example, using basic self-reported feelings about financial circumstances or (proxies for) income and wealth. This limits the depth of analysis possible, for example, limited interrogation of differences between

groups. Consequently, there is limited evidence regarding the impact of financial wellbeing interventions on physical health outcomes, and the interventions which have been tested tend to be small-scale and sometimes lack rigour, for example, by not using a control group.

The evidence that is available around interventions is split between very specific, short-term interventions and more general long-term ones. The former includes providing specific support for people experiencing poor health, such as incorporating financial guidance into healthcare journeys, and poor financial wellbeing, such as removing barriers to healthcare and treatment. The latter includes improving societal conditions, such as housing, working and living conditions, as well as healthcare provision.

A quick win to develop a more nuanced understanding to fully answer the research questions posed in this review would be to encourage studies of health and health experiences to incorporate MaPS' financial wellbeing questions into their data collection. To fully explore the relationship between physical health and financial wellbeing, studies would ideally involve:

- Longitudinal data collection incorporating different groups, e.g., health and ability status, socio-economic status and age.
- Measures covering various aspects of health and health-behaviours and financial wellbeing, including objective and subjective factors.
- Financial wellbeing interventions across multiple socio-demographic groups as above, including control groups and an extended follow-up period after intervention finished.

Having examined the evidence that is currently available, it is clear there are three major dynamics at play, in the relationship between physical health and financial wellbeing, and it is useful to consider these dynamics when considering potential interventions and how to evaluate them. The dynamics are:

(1) The socio-economic context of health inequalities - echoing established findings, health is shaped by the socio-economic context, as those with lower

socio-economic status are more likely to experience poor health and to have shorter lifespans, due to poverty and deprivation at the household and local area level.

(2) How physical health affects financial wellbeing - physical health affects financial wellbeing primarily by the burden of direct and indirect costs associated with experiencing poor health. There are also impacts on labour market outcomes and access to financial services and support, which may arise from period(s) of poor health.

(3) How financial wellbeing affects physical health - financial challenges affect physical health through increased stress or precarity (such as insecurity of employment, income or housing), limiting opportunities for health-supporting behaviours like eating well and exercising, and encouraging health-limiting and costly behaviours like smoking and drinking.

These dynamics are interconnected in the sense that they interact and inform each other. For example, people from certain socio-economic groups may be more likely to experience precarity, which leads to behaviours which have a knock-on impact on physical health, which may then in turn affect financial wellbeing. Future research which is longitudinal and cross-sectional in nature may be able to assess the extent or scale of these interactive effects, for example, whether living in a deprived area means that physical health will affect your financial wellbeing more than someone who lives in a less deprived area.

The evidence on interventions suffers from the same limitations pointed out above, but there are some conclusions that can be drawn. First, much evidence points to the need for societal-level investment to alleviate health inequalities, such as improving housing and working conditions, increasing access to green spaces and reducing pollution.

Second, in terms of supporting people experiencing chronic illness, successful interventions have included support from trained financial advisors on benefit

advice and income maximisation within healthcare journeys. Some evidence suggests that interventions may reduce anxiety about finance, even if income cannot be increased to a significant degree. However, existing interventions are small scale and lack rigour (e.g., no control groups) (Coughlin, 2023).

Third, in terms of supporting people experiencing challenges to financial wellbeing, evidence suggests removing the financial, social and cultural barriers to receiving healthcare. For example, Asthma UK (2023b, c) argue for the removal of prescription charges for asthma medication. However, evidence on the use of financial incentives to encourage health-supporting behaviours is mixed and effectiveness may be limited to specific cases, e.g., reducing smoking during pregnancy (Mantzari et al., 2015).

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	Source	Date	Population	Source type
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2	Asthma UK (2023a) On the edge: how inequality affects people with asthma	2023a	UK	Summary, review or insight
3	Asthma UK (2023b) A hidden harm: why healthcare professionals want to stop unfair asthma prescription charges <a href="https://www.asthmaandlung.org.uk/sites/default/files/2023-03/hidden-harm.pdf">https://www.asthmaandlung.org.uk/sites/default/files/2023-03/hidden-harm.pdf</a>	2023b	UK	Summary, review or insight
4	Asthma UK (2023c) Paying to breathe: why unfair asthma prescription charges must be stopped	2023c	UK	Summary, review or insight
5	Arber, S., Fenn, K, and Meadows, R. (2014) Subjective financial well-being, income and health inequalities in mid and later life in Britain, <i>Social Science &amp; Medicine</i> , Vol 100. <a href="https://doi.org/10.1016/j.socscimed.2013.10.016">https://doi.org/10.1016/j.socscimed.2013.10.016</a>	2014	UK	Analysis of large representative datasets
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21	Giles, E. L., Robalino, S., McColl, E., Sniehotta, F. F., & Adams, J. (2014). The effectiveness of financial incentives for health behaviour change: systematic review and meta-analysis. <i>PloS one</i> , 9(3), e90347.	2014	n/a	Summary, review or insight
22	<a href="https://www.citizensadvice.org.uk/Global/CitizensAdvice/Debt%20and%20Money%20Publications/Walking%20on%20thin%20ice%20-%20full%20report.pdf">Hardy, G. and Lane, J. (2017) Walking on thin ice - The cost of financial insecurity. Citizens Advice.</a>	2017	UK	Summary, review or insight
23	Hauschildt, K. E., Seigworth, C., Kamphuis, L. A., Hough, C. L., Moss, M., McPeake, J. M., Iwashyna, T.J. & National Heart, Lung, and Blood Institute. (2020). Financial toxicity after acute respiratory distress syndrome: a national qualitative cohort study. <i>Critical care medicine</i> , 48(8), 1103-1110.	2020	US	Qualitative research
24	Hay (2018) Financial Capability of patients attending NHS units for Renal Services and Inherited Metabolic Disorders - <a href="https://www.fincap.org.uk/en/evaluations/financial-capability-of-patients-attending-nhs-units-for-renal-services-and-inherited-metabolic-disorders-what-works-fund">https://www.fincap.org.uk/en/evaluations/financial-capability-of-patients-attending-nhs-units-for-renal-services-and-inherited-metabolic-disorders-what-works-fund</a>	2018	UK	Multi-method evidence
25	Health and Social Care Committee (2023) Inquiry into Prevention in Health and Social Care <a href="https://committees.parliament.uk/work/7205/prevention-in-health-and-social-care/">https://committees.parliament.uk/work/7205/prevention-in-health-and-social-care/</a>	2023	UK	Summary, review or insight

2 6	Jessop, D., Reid, M. & Solomon, L. (2020) Financial concern predicts deteriorations in mental and physical health among university students, <i>Psychology &amp; Health</i> , 35:2, 196-209, DOI:10.1080/08870446.2019.1626393	2020	UK	
2 7	Johnson et al., (2023) <a href="#">The Health Case for Basic Income. UK Data Service</a>	2023	UK	Summary, review or insight
2 8	Jones, S. M., Henrikson, N. B., Panattoni, L., Syrjala, K. L., & Shankaran, V. (2020). A theoretical model of financial burden after cancer diagnosis. <i>Future Oncology</i> , 16(36), 3095-3105.	2020	n/a	Summary, review or insight
2 9	Kelly, S., Martin, S., Kuhn, I., Cowan, A., Brayne, C., & Lafortune, L. (2016). Barriers and facilitators to the uptake and maintenance of healthy behaviours by people at mid-life: a rapid systematic review. <i>PloS one</i> , 11(1),	2016	n/a	Summary, review or insight
3 0	Kivimäki, M., Batty, D., Pentti, J., Shipley, M., Sipilä, N., Suominen, S., Oksanen, T., Stenholm, S., Virtanen, M., Marmot, M., Singh-Manoux, A., Brunner, E., Lindbohm, J., Ferrie, J., Vahtera, J., (2020) Association between socioeconomic status and the development of mental and physical health conditions in adulthood: a multi-cohort study. <i>The Lancet Public Health</i> . March. Volume 5. (Issue 3). Available from: <a href="https://pubmed.ncbi.nlm.nih.gov/32007134/">https://pubmed.ncbi.nlm.nih.gov/32007134/</a>	2020	UK, Finland	Analysis of large representative datasets
3 1	Lewis et al. (2024) Financial responsibility, financial context, and ambulatory blood pressure in early middle-aged African-American women	2024	US	Multi-method evidence
3 2	Mantzari, E., Vogt, F., Shemilt, I., Wei, Y., Higgins, J. P., & Marteau, T. M. (2015). Personal financial incentives for changing habitual health-related behaviors: a systematic review and meta-analysis. <i>Preventive medicine</i> , 75, 75-85.	2015	US	Summary, review or insight
3 3	May, T., Aughterson, H., Fancourt, D., and Burton, A. (2023) Financial adversity and subsequent health and wellbeing during the COVID-19 pandemic in the UK: A qualitative interview study, <i>SSM - Qualitative Research in Health</i> , Vol. 3. <a href="https://doi.org/10.1016/j.ssmqr.2023.100224">https://doi.org/10.1016/j.ssmqr.2023.100224</a> .	2023	UK	Qualitative research
3 4	McNamara CL, Kotzias V, Bambra C, Labonté R, Stuckler D. (2023) Have COVID-19 Stimulus Packages Mitigated the Negative Health Impacts of Pandemic-Related Job	2023	n/a	Summary, review or insight

	Losses? A Systematic Review of Global Evidence from the First Year of the Pandemic. <i>International Journal of Social Determinants of Health and Health Services</i> . 0(0). doi:10.1177/27551938231176374			
3 5	Panisch, L. S., Prost, S. G., & Smith, T. E., (2019) Financial well-being and physical health related quality of life among persons incarcerated in jail, <i>Journal of Crime and Justice</i> , 42:4, 444-461, DOI: 10.1080/0735648X.2018.1559077	2019	US	Polls and surveys
3 6	Patel, J. A., Nielsen, F. B. H., Badiani, A. A., Assi, S., Unadkat, V. A., Patel, B., Ravindrane, R. & Wardle, H. (2020). Poverty, inequality and COVID-19: the forgotten vulnerable. <i>Public health</i> , 183, 110	2020	UK	Summary, review or insight
3 7	Pialowolski, P., Dorota Weziak-Bialowolska, Matthew T. Lee, Ying Chen, Tyler J. VanderWeele, Eileen McNeely (2021) The role of financial conditions for physical and mental health. Evidence from a longitudinal survey and insurance claims data, <i>Social Science &amp; Medicine</i> , Volume 281, 114041, <a href="https://doi.org/10.1016/j.socscimed.2021.114041">https://doi.org/10.1016/j.socscimed.2021.114041</a> .	2021	US	Analysis of large representative datasets
3 8	Piumatti, G. (2017). Relations between longitudinal trajectories of subjective financial wellbeing with self-rated health among elderly. <i>Medicina</i> , 53(5), 323-330. <a href="https://www.mdpi.com/1648-9144/53/5/323">https://www.mdpi.com/1648-9144/53/5/323</a>	2017	Europe	Analysis of large representative datasets
3 9	Ridley, M., Rao, G., Schilbach, F., & Patel, V., (2020). Poverty, depression, and anxiety: Causal evidence and mechanisms. <i>Science</i> , 370(6522), eaay0214.	2020	n/a	Summary, review or insight
4 0	Royal College of Physicians (2024) Census reveals more than half of doctors seeing more patients with illness due to avoidable social harms. <a href="https://www.rcplondon.ac.uk/news/census-reveals-more-half-doctors-seeing-more-patients-illness-due-avoidable-social-harms">https://www.rcplondon.ac.uk/news/census-reveals-more-half-doctors-seeing-more-patients-illness-due-avoidable-social-harms</a>	2024	UK	Summary, review or insight
4 1	Sport England (2018) Active Lives Adult Survey: Spotlight on lower socio-economic groups	2018	UK	Polls and surveys
4 2	Sport England (2023) Active Lives Adult Survey November 2021-22 Report	2023	UK	Polls and surveys
4 3	Steel, N., Hardcastle, A. C., Bachmann, M. O., Richards, S. H., Mounce, L. T. A., Clark, A., Lang, I., Melzer, D. & Campbell, J. (2014).	2014	UK	Analysis of large

	Economic inequalities in burden of illness, diagnosis and treatment of five long-term conditions in England: panel study. <i>BMJ open</i> , 4(10).			representative datasets
4 4	Tappin, D., Bauld, L., Purves, D., Boyd, K., Sinclair, L., MacAskill, S., McKell, J., Friel, B., McConnachie, A., De Caestecker, L., Tannahill, C. & Coleman, T. (2015). Financial incentives for smoking cessation in pregnancy: randomised controlled trial. <i>Bmj</i> , 350.	2015	UK	Multi-method evidence
4 5	Tenovus Cancer Care (2018) Evaluation of the Tenovus Money Advice Service (ETMAS) - <a href="https://www.fincap.org.uk/en/evaluations/evaluation-of-the-tenovus-money-advice-service-etmas">https://www.fincap.org.uk/en/evaluations/evaluation-of-the-tenovus-money-advice-service-etmas</a>	2018	UK	Multi-method evidence
4 6	Thomas C, Jung C, Statham R and Quilter-Pinner H (2023) Healthy people, prosperous lives: The first interim report of the IPPR Commission on Health and Prosperity, IPPR. <a href="http://www.ippr.org/research/publications/healthy-people-prosperous-lives">http://www.ippr.org/research/publications/healthy-people-prosperous-lives</a>	2023	UK	Summary, review or insight
4 7	Weida EB, Phojanakong P, Patel F, Chilton M (2020) Financial health as a measurable social determinant of health. PLOS ONE 15(5): e0233359. <a href="https://doi.org/10.1371/journal.pone.0233359">https://doi.org/10.1371/journal.pone.0233359</a>	2020	US	Polls and surveys



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