Improving productivity, addressing unmet needs and prevention

How the NHS can optimise health outcomes in a time of financial constraint

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Context and aims

Context

The NHS needs to consider how it can increase healthcare value—i.e., deliver better outcomes and greater output from the amount of input. Delivering more from existing resource means increasing productivity. At the same time, it needs to understand the opportunity prevention and better managing illness can deliver. Together these things need to be possible for the NHS to be sustainable.

There is widespread concern about the current state of the National Health Service (NHS). The recent Darzi Report characterised it as "in serious trouble," highlighting the significant pressures it faces[1]. The NHS is experiencing declining—or at best, stagnating—performance even though it now absorbs approximately 29% of total public service spending[2].

The government has also made clear its commitment to a triple shift towards prevention, community and digital. Darzi points out that the commitment to prevention is two decades old and yet funding for acute hospital care has increased from 49% to 58% between 2002 and 2021 as a proportion of total health service spend, whilst proportional spend in other care settings has been flat or has fallen. The inverse of the strategic intent has happened.

A consequence of this is that the NHS perceives there is no new money—whilst the government view is that it has constrained or reduced spending elsewhere to invest in health. In recent speeches Prime Minister, Keir Starmer, and Health Secretary, Wes Streeting, have both asserted that any additional funding must sit alongside comprehensive reforms, underscoring the urgent need for systemic change.

Aims

This report seeks to understand at the highest level:

1) What is the **size of the productivity** opportunity in the NHS overall and what is driving it?
2) What is the **size of unmet needs** in chronic conditions, and what is the potential impact of closing these gaps through improved care and treatment?
3) What is the opportunity **for improved return on investment of prevention?**
4) What are the **critical enablers** to permit this to happen?

This report primarily focuses on secondary care due to comprehensiveness of the secondary care dataset and the high accuracy of the clinical coding aligned with therapeutic areas within secondary care.

Given the concentration of funding in the acute sector we have focused explicitly on acute sector impact in these three areas.

Source:

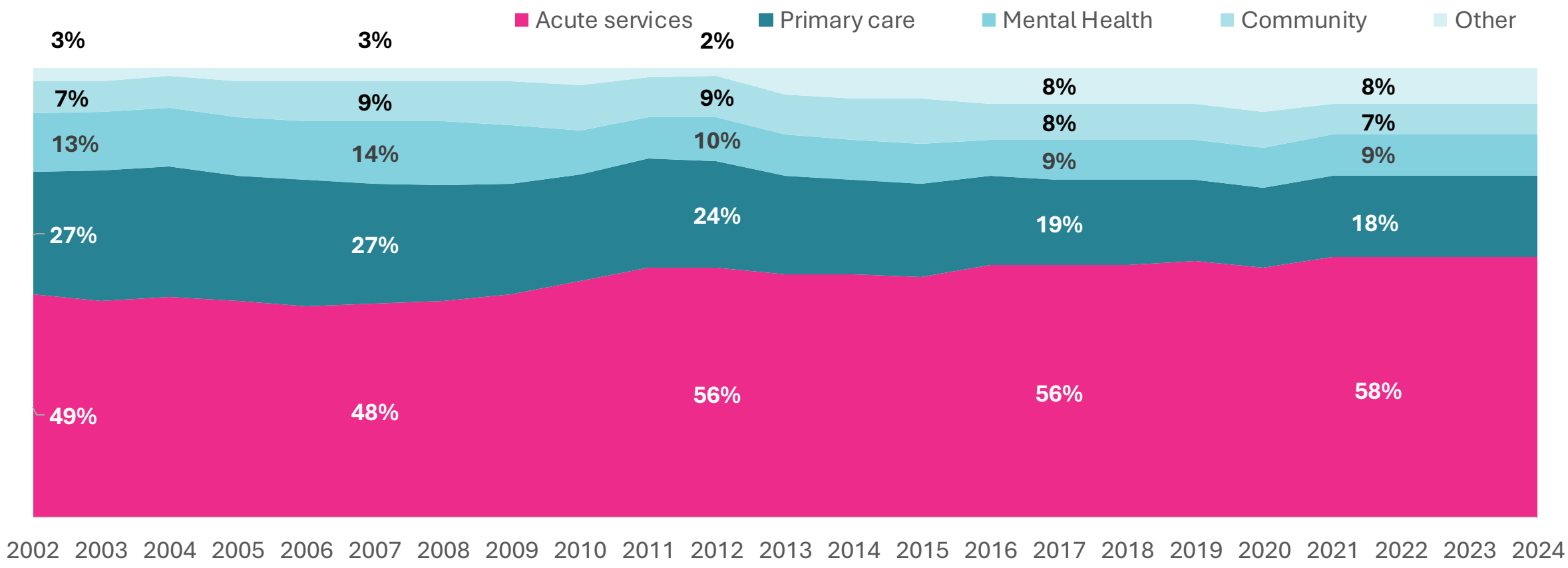
[1] Lord Ara Darzi's Independent investigation of the NHS in England (2024)

[2] Past and Future UK Health Spending, Institute of Fiscal Studies (2024)

Context: The Darzi report revealed that despite strategic intention to “shift left”, acute spend has continued to grow from 49% to 58%

Estimate of NHS spend by healthcare service

Percentage, 2002 - 2021



A substantial opportunity exists to improve productivity, increase congruence with guidelines in treating chronic conditions and better select investments in prevention

A substantial opportunity exists to improve productivity, address unmet patient needs in line with guidelines and improve investments in prevention:

- NHS productivity has declined in acute hospitals but not in the rest of the NHS; if addressed it could release **£12 - 17b** in resources in pure productivity gain from the acute sector. Productivity increased for first half of last decade and then started to fall in 2018/19, a year before Covid, as annual growth rate in clinical staff increased 2.3-3.7x. Note that inpatient care has managed to see rising numbers of patients with shrinking numbers of beds, but in comparison outpatients' volume has steadily risen 4x population growth.
- Significant unmet health needs exist in the management of chronic conditions relative to guidelines which contribute to the nation's ill health and increasing burden on the health system; closing these gaps could improve quality of life, improve life expectancy and lower acute sector resource utilisation costs on chronic diseases , estimated as **£6.1 - £9.2b** in total just from the cost of activity in the acute sector.
- Prevention spending is hard to identify and rarely evaluated but there is a wide range in impact from 0 to 35x; Improving the targeting of spending on prevention could double the impact it has from a median of 2x to an upper quartile of 4x, taking account of where the benefits fall suggests that the acute sector would receive **£5.1 – £10.5b** of the posited £11bn-22bn opportunity from improved investing in prevention.

Note: the NHS released its own productivity in February 2025 update whilst this report was under embargo:
https://www.england.nhs.uk/long-read/nhs-productivity-update-feb-25/
https://www.england.nhs.uk/long-read/nhs-productivity/

Realising the productivity opportunity requires an alignment of workforce and patient needs and a focus on major unmet health needs

Achieving this would require:

- Focusing on acute productivity to align workforce with patient needs (maximising activity per unit of input) within each provider and across providers on the one hand, and pursuing the transformation of outpatients through digitalisation to create new ways to address underlying demand
- Establishing an explicit focus on the major unmet health needs that driver ill health to close gaps in diagnosis and treatment with a greater emphasis on case finding and population health management; this will require using the disinvestment in acute and re-investment in primary and community care, diagnostics and medicine and data/digital to support this
- Taking a healthcare value approach, maximising impact and minimising costs to invest more in high impact prevention interventions, develop the commissioning approaches for high impact interventions and systematically evaluate these
- A common set of enablers including a much stronger focus on allocating resources where impact is maximised, ensuring the money follows the patient, linked patient level data, routine use of evaluation and data-driven evaluation

If the opportunity of £12 - 17b in acute productivity or £5.1-£10.5b from reducing variation in chronic disease or £6.1 - £9.2b from closing care gaps would amount to **£15 to £27b** in opportunity to improve the resource use purely of the acute sector. Realising this benefit would allow the NHS to invest in spending more on the priorities of government including the additional activity that is needed to deliver elective waiting times, treat patients according to guidelines and invest in the triple shift (prevention, community and digital) that has been the stated priority of this government and previous ones.

Addressing these issues could release £10-16b in resources, cut chronic disease costs by 11% and boost prevention impact by £11b a year

Productivity

Looking back over the last decade, NHS spending has increased faster than output and hence productivity has fallen, in the acute sector in particular. If reversed, this would release £12-17b in resources.

Whilst spend in primary care and community care has fallen over the last 10 years, overall productivity in these areas has kept in level or increased as activity appears to have increased in line with spend.

Real spend per capita has increased by 23% across the NHS with spend in the acute sector growing 1.4 times faster than the whole NHS. However, whilst real spend has grown 41% and weighted activity output grew 21%, acute productivity has fallen 10-14%. The principal driver of this is workforce rising faster than output with doctors increasing 37% and nurses 34% since 2013/14.

The loss in acute productivity between 2019/20 and 2023/24 is estimated to have cost approximately 12-18% of the acute budget and is equivalent to £12-17b per year.

It is important to consider reasons why productivity may have decreased over the last 10 years including a clear change in policy toward “safer staffing” in 2018/19 and the suspension of payment by results (PbR).

This report has not examined the level of productivity 10 years ago and opportunities may exist to improve from this baseline level in any of these sectors.

Unmet health needs

Unmet health needs contribute to the ill health of the nation and place an increasing burden on the health system. Addressing these gaps could lower acute sector resource utilisation costs on chronic diseases (CVD, CKD and dementia), which can be conservatively estimated as £6.1-£9.2b

These conditions represent these represent a growing spectrum of CRM conditions. CRM accounts for £26 billion or 50% of the chronic disease burden and 26% of acute healthcare cost, with dementia contributing an additional £8 billion, for a total of £34bn.

Approximately 18% to 40% of patients remain undiagnosed and 32% to 94% of patients are not receiving optimal treatment across these conditions.

Optimising treatment could cut HCRU costs and mortality across five health conditions, with potential gross savings of £870 million to £4.8 billion—excluding long-term impacts like heart attacks and strokes.

Applying a 15–29% gross opportunity rate to the £34b spend on CVRM and Dementia suggests savings of £4.7–9.0b. Extending this to other chronic conditions raises the total to £6.7–12.3b. After accounting for 25–50% reinvestment costs, the net opportunity ranges from £3.4–5.0b (variation) to £6.1–9.2b (guideline implementation).

Prevention

Secondary prevention (managing existing conditions) tends to generate savings mainly within the acute sector. Updating our previous analysis to take account of where the benefits fall suggests that the acute sector would receive £5.1-10.5bn of the posited £11bn-22bn opportunity from improved investing in prevention.

Prevention is a stated priority for the NHS and the government, but what is spent on it is poorly captured and the return on investment is rarely analysed.

Analysis of prevention interventions shows median ±2x ROI and upper quartile ±4x ROI – with some interventions delivering far higher.

NHS and Local Authority (LA) colleagues indicated they do not use ROI routinely, hence there is no reason to think more than median impact.

Whatever the level of savings being targeted, the fact that the median ROI is 2x and upper quartile 4x, suggests it is reasonable to invest 25% to 50% of the expected savings from these initiatives in order to achieve the benefits of prevention.

Achieving this would require commissioning to adopt a healthcare value approach—maximising impact while minimising costs—to reinvest in high-impact prevention interventions. This includes developing effective commissioning strategies for these interventions and systematically evaluating their outcomes.

Prevention

Overview of section

What we've done and why:

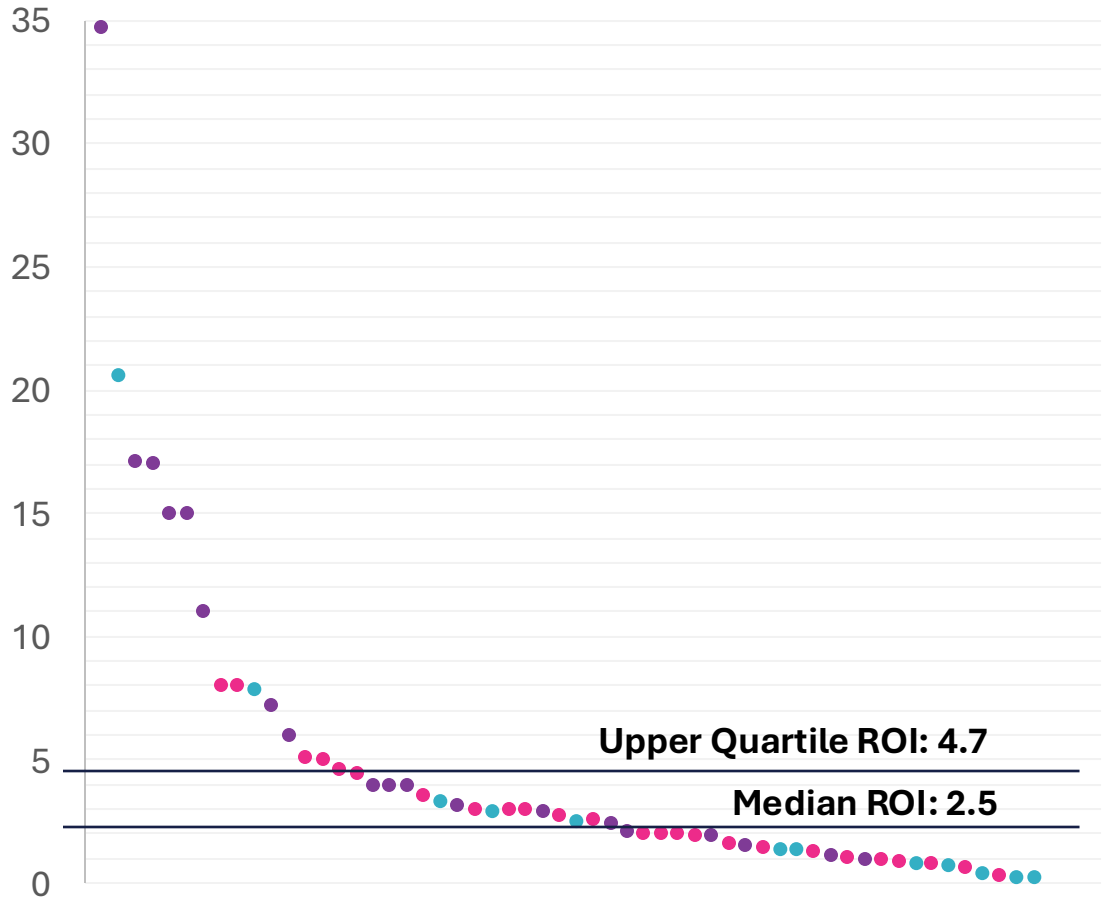
- This section highlights the importance of prevention interventions implemented at both the NHS and local authority levels, emphasising their significant return on investment (ROI). It provides an overview of the ROI across various intervention categories, including housing, education, and those targeting specific conditions such as CVD and diabetes.
- This is closely linked to the work that we've conducted, as many of these prevention interventions have a big potential to prevent the chronic conditions that are the primary focus of this report.
- By prioritising these interventions, we will not only improve health outcomes and prevent or slow the progression of these conditions but also achieve significant savings to the health system through the high return on investment they generate.

Key points covered in this section are:

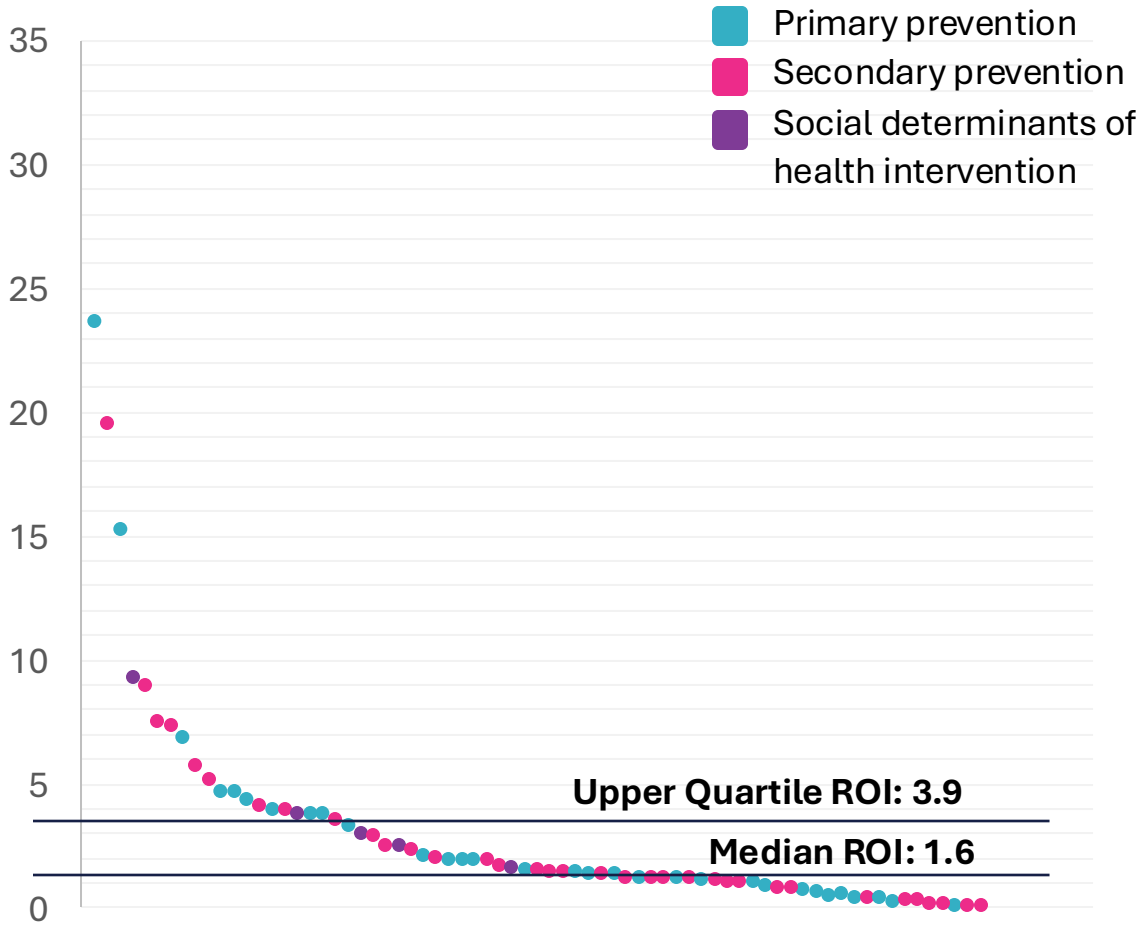
- Analysis of prevention interventions shows median ±2x ROI and upper quartile ±4x ROI – with some interventions delivering far higher
- There is significant variance in ROI between interventions, both between intervention categories and with studies of the same intervention type
- Combined NHS and Local authority could have an impact of £11b if they achieved the upper quartile ROI rather than median value
- Updating our previous analysis to take account of where the benefits fall suggests that the acute sector would receive £5.1-10.5bn of the posited £11bn-22bn opportunity from improved investing in prevention.
- The NHS must develop a 'business-like' approach to systematically identify high-value interventions and limit low-value interventions

Analysis of prevention interventions shows median ±2x ROI and upper quartile ±4x ROI – with some interventions delivering far higher

Return on investment for LA interventions



Return on investment for NHS interventions



Source: CF & NHS Confederation analysis, 2024

This work has classified interventions into three areas and consider the relevant budgets

Social Determinants of Health

Interventions aimed at addressing broader social, economic, and environmental factors that influence population health

- Housing
- Substance abuse
- Education
- Food insecurity
- Reducing worklessness
- Travel

Primary Prevention

Interventions that aim to prevent the onset of illness or injury before the disease process begins

- Smoking cessation
- Weight/ obesity management
- Exercise
- Diet
- Alcohol dependency
- Vaccines

Secondary Prevention

Interventions that focus on early detection and prompt treatment of diseases or health conditions

- CVD
- Diabetes
- Respiratory conditions
- Serious mental illness
- Frailty,
- Sexual health
- Early years

Local authority budget

- **Local authorities** receive the **public health grant** from the Department for Health and Social Care (DHSC) which spans both social determinants and primary prevention interventions
- The grant is used to provide vital preventative services that help to support health, including smoking cessation, drug and alcohol services, children's health services and sexual health services

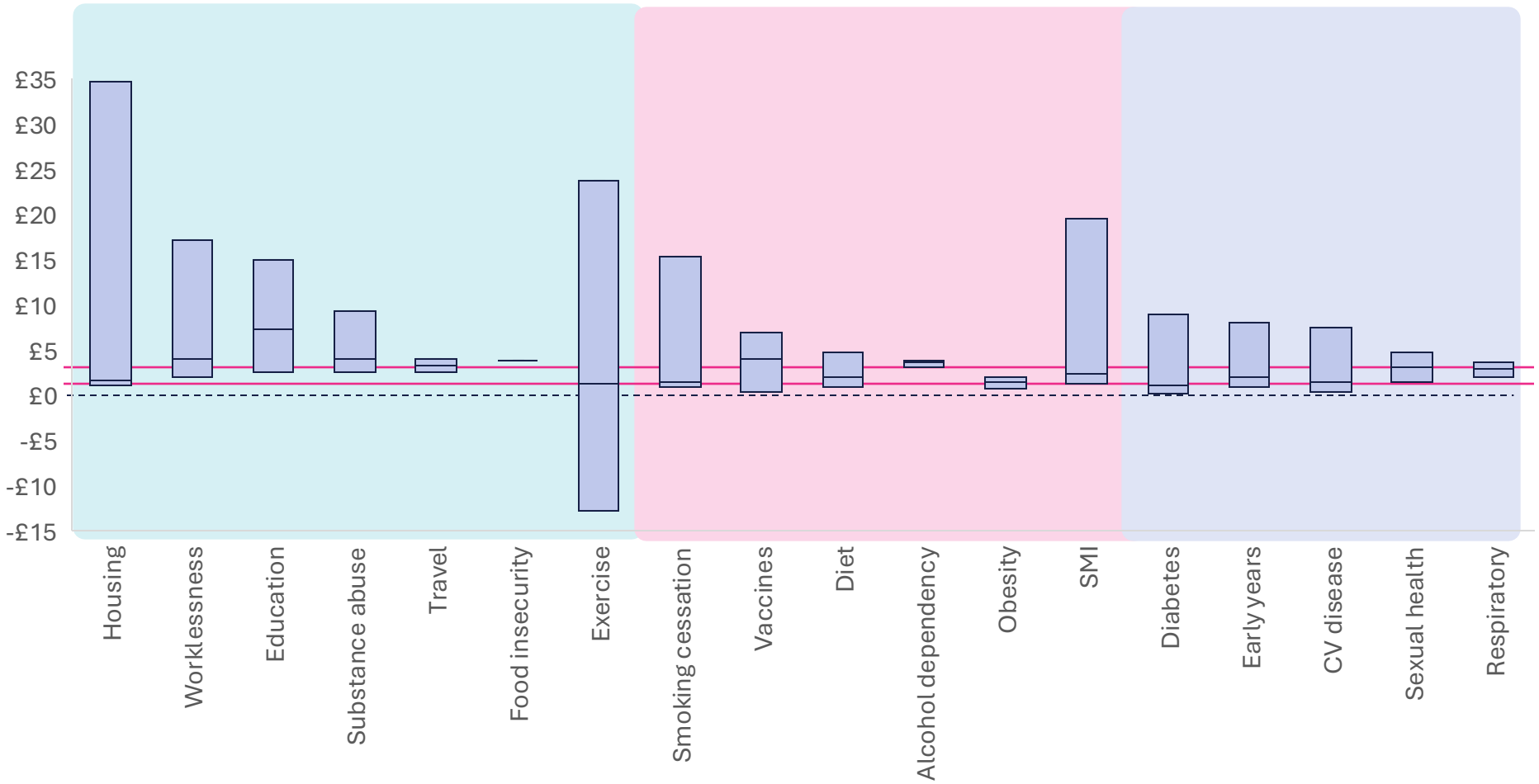
NHS budget

The **NHS budget** for prevention spans 1ry and 2ry prevention:

- **Health inequalities funding** made available specifically for ICSs to tackle health inequalities
- **Section 7A** of the NHS Act 2006 that requires health and justice services to meet national targets and unique indicators
- **Other** funding embedded in NHS budgets

There is significant variance in ROI between interventions, both between intervention categories and with studies of the same intervention type

Return on investment range for each intervention category



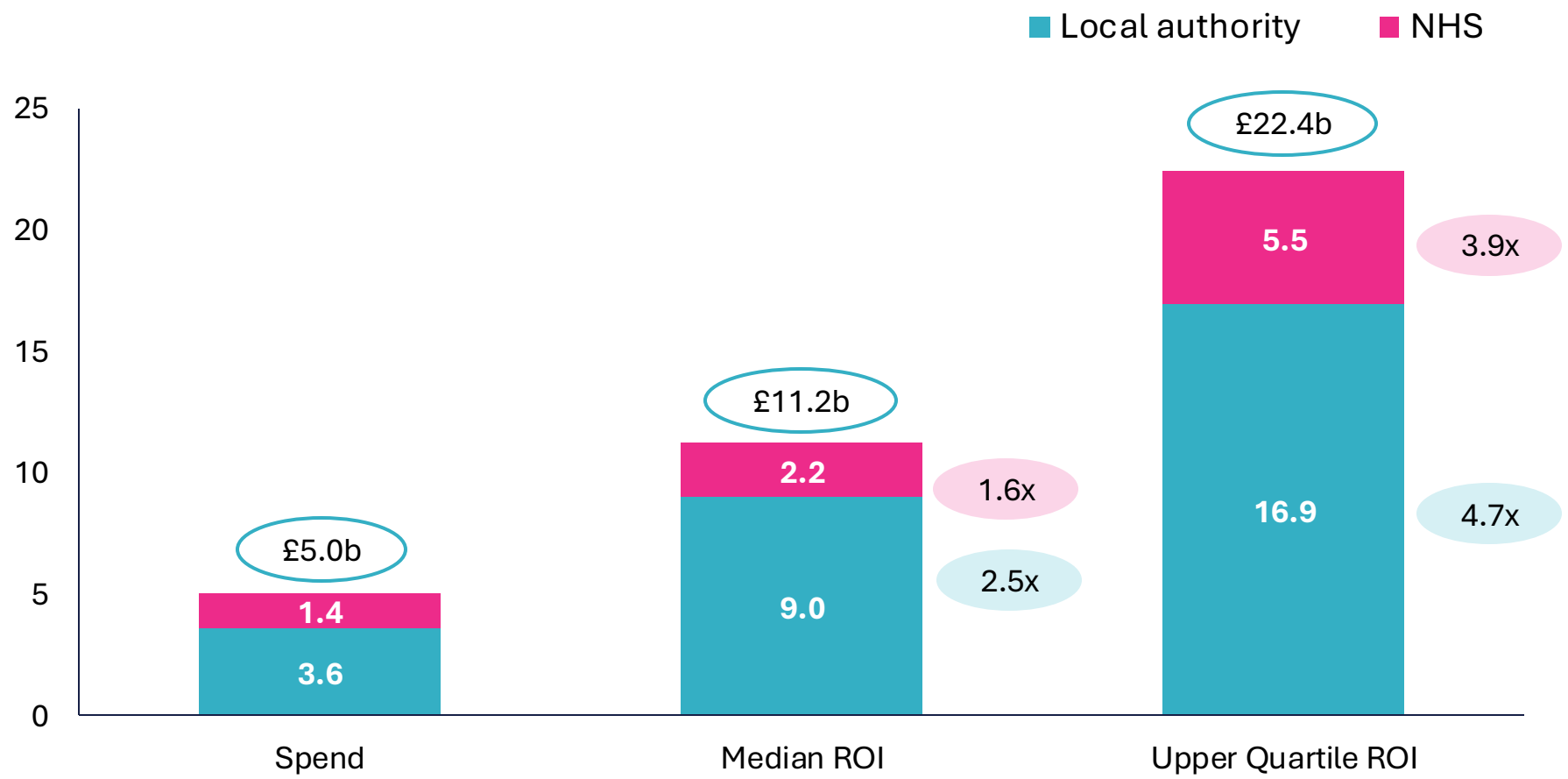
- Large amount of variance across intervention categories maximum ROI
- Even bigger variation within intervention categories
- Selecting not just the right categories but right interventions is critical
- Doing so requires making using ROI a key part of commissioning decisions
- All interventions should have rapid-evaluation using routinely collected data
- Leveraging the unrivalled access to linked data sets within the NHS can support this

Source: CF & NHS Confederation analysis, 2024

Combined NHS and Local authority could have an impact of £11bn if they achieved the upper quartile ROI rather than median value

Impact from investment in prevention, £billion

NHS and Local authority opportunity targeting median and upper quartile return on investment



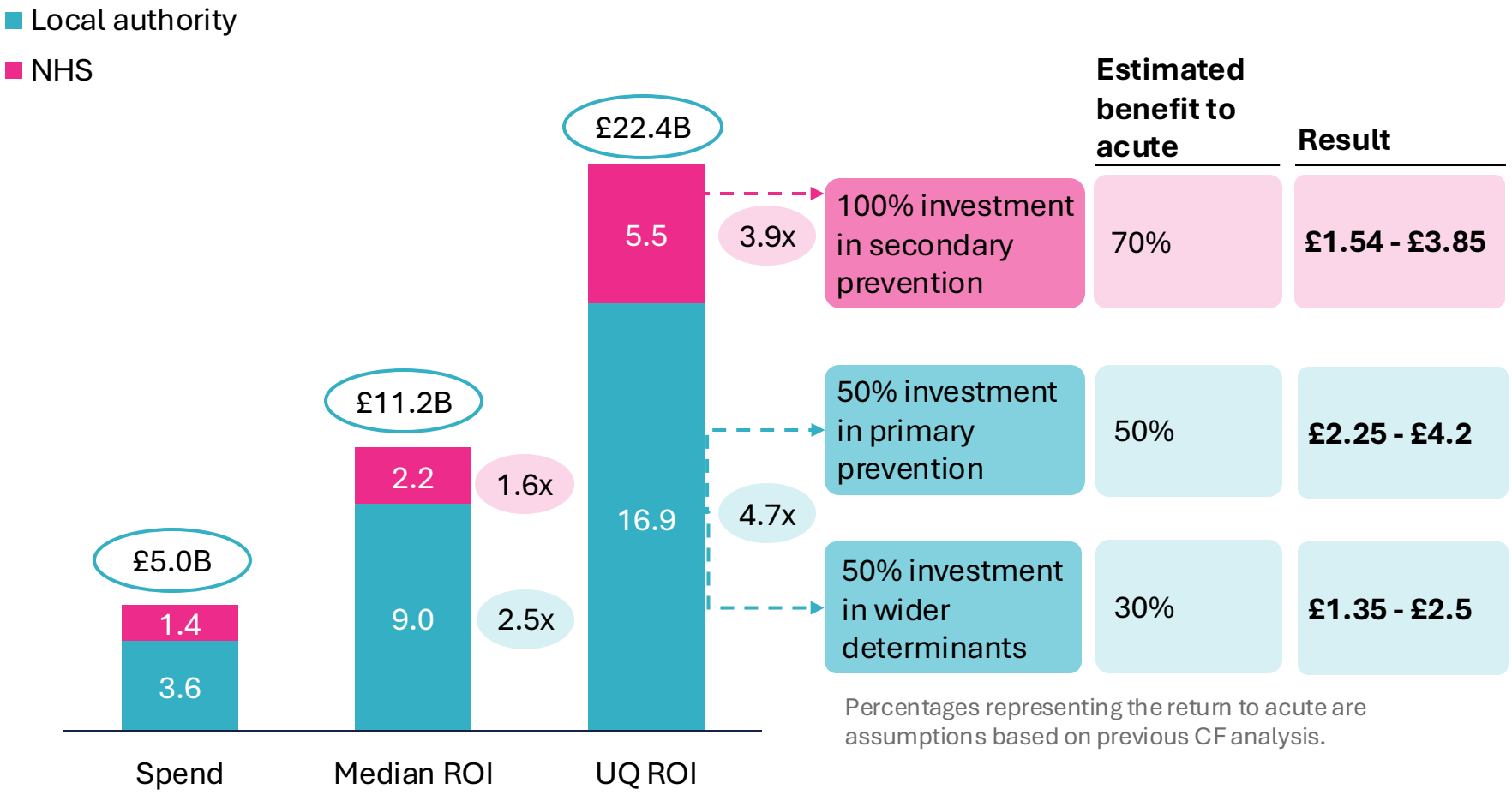
- The local authority public health grant given nationally was **£3.6b** in 2024/25
- A total of **£1.4b** was allocated as the NHS budget, which is made up of the health inequalities funding and the budget for NHS Section 7A
  - **£200m** was allocated as the NHS health inequalities funding for ICSs to specifically address health inequalities in their areas
  - **£1.2b** was allocated under Section 7A of the NHS Act 2006 which requires health and justice services to meet national targets and unique indicators

Source: DHSC; NHS Confederation; King's Fund; CF Analysis

By reinvesting the prevention ROI into the NHS and local authorities, there is potential to generate returns for the acute sector of £5.1-£10.5b.

Impact from investment in prevention, £billion

NHS and Local authority opportunity targeting median and upper quartile return on investment



	Estimated benefit to acute	Result
100% investment in secondary prevention	70%	**£1.54 - £3.85**
50% investment in primary prevention	50%	**£2.25 - £4.2**
50% investment in wider determinants	30%	**£1.35 - £2.5**

Percentages representing the return to acute are assumptions based on previous CF analysis.

- Previous analysis of ROI showed the local authority public health grant given nationally was **£3.6 billion** in 2024/25 and NHS spend was **£200 million** was allocated as the NHS health inequalities and **£1.2 billion** was allocated under the Section 7A of the NHS Act 2006 that requires health and justice services to meet national targets and unique indicators
- Engagement with key leaders indicates that the NHS prioritises secondary prevention while local authorities focus on primary prevention and social determinants of health (SDOH).
- Application of new analysis of yield suggests a benefit to the acute sector of **£5.1-£10.5b.**

Source: DHSC; NHS Confederation; King's Fund; CF Analysis

The NHS must develop a 'business-like' approach to systematically identify high-value interventions and limit low-value interventions

Capture and quantify amount of money being spent on prevention	• The amount of money spent on prevention should be recorded by each ICB and each local authority. • Aggregated information about the amount spent on prevention by area should be reported
Adjust allocation of prevention budgets to optimise ROI	• Spending that delivers low returns should be cut and spending that delivers high returns should be increased • NHSE should provide guidance on how best to decommission low value services and set an expectation that each area should decommission low return services each year in favour of investing more in high return
Commissioning approach for high impact interventions should be shared	• Whilst the decisions about what to commission sit with each ICB and Local Authority, best practice could be shared in what the commissioning of high impact interventions look like including specification, metrics, investment levels, etc
The skills and capabilities to prioritise interventions is crucial	• The habit, skills and capabilities to capture, record and review evidence on new and existing interventions remain underdeveloped across the system. A lack of discretionary spending, compounded by repeated cuts to local authority budgets—especially those reserved for public health—has only intensified this lack of skill and capability.
Effective prevention requires evidence-based investment	• Realising the full potential of prevention does not necessarily require increased spending but rather a reprioritisation of resources. Prevention must become a core focus of commissioning, requires robust frameworks for designing, implementing, and scaling initiatives and accountability. Evidence-based investment should be adopted, using data to measure the ROI of specific interventions. This involves taking a more business-like approach by systematically identifying high-value interventions and scaling back or stopping low-value interventions.
Longitudinal NHS data should be used to evaluate impact	• To achieve this, NHS longitudinal data should be fully harnessed to inform prevention strategies, monitor their effectiveness, and drive continual improvement. This data-driven approach enables the system to allocate resources more effectively.

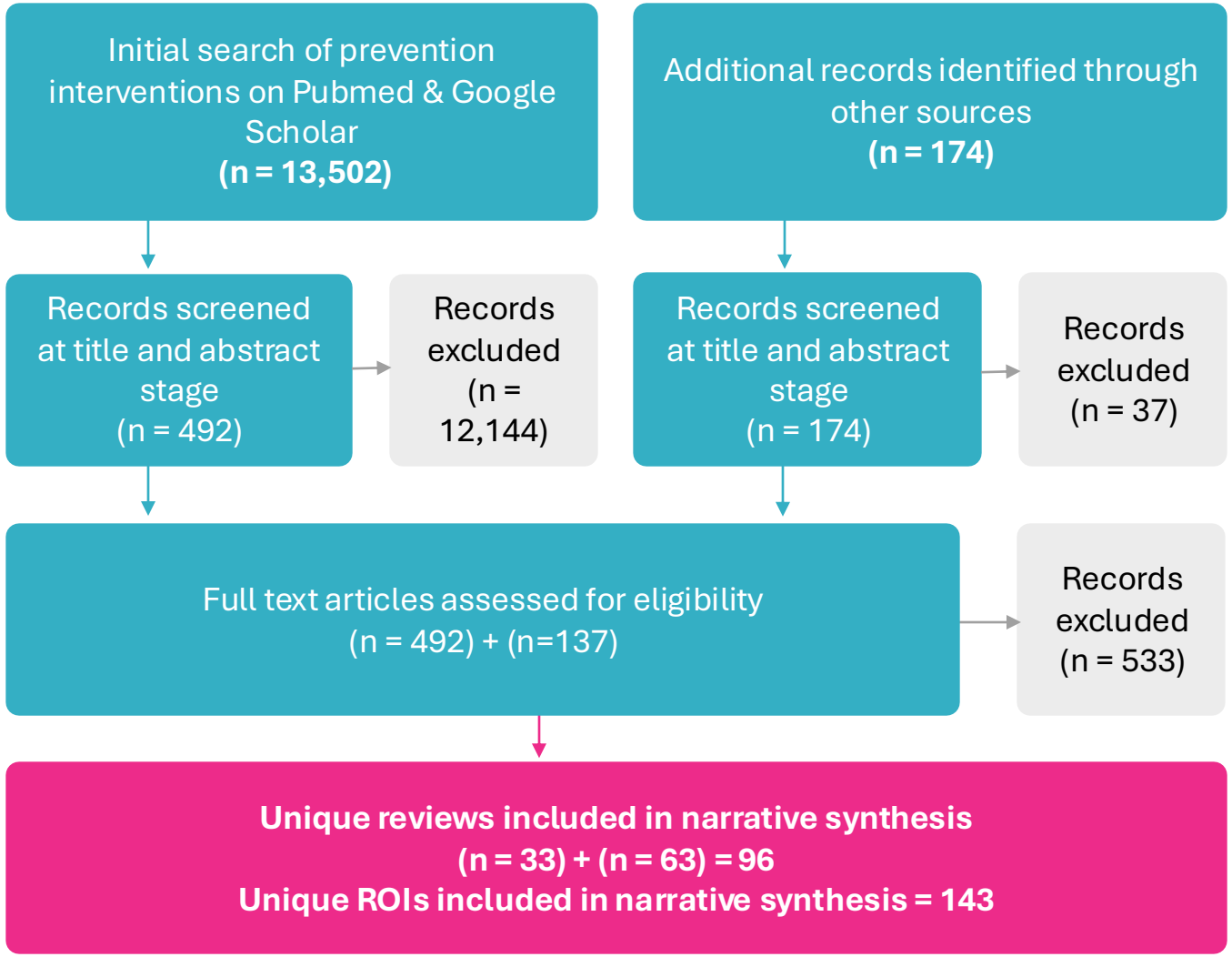
Methodology

A systematic literature review, grey literature review and expansive evidence review were undertaken to identify which generated the highest return on investments

To ensure we had the most holistic view of interventions, **a systematic literature review, grey literature review and expansive evidence review** were undertaken to identify the most **comprehensive database** of prevention initiatives that impact on clinical and social determinants of health to generate the best ROIs through impacts on inequalities

Exclusion Criteria

- Published before 2013
- Focused on specific populations e.g., female-only
- Systematic reviews, dissertations, conference abstracts or study protocols
- Outside of England, USA, Canada, Australia, New Zealand and Nordics
- ROI values were not noted
- Behind a paywall



Source: CF & NHS Confederation analysis, 2024

Experts in health

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