

Mitigating the impacts of poor quality housing on health in Greater Manchester

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Agenda

- The research question
- Introducing Greater Manchester
- Health and Housing Model
- Rapid Evidence Synthesis
- Next steps

Housing and health

“How much does poor quality housing cost the NHS in Greater Manchester?”



**1.2 million
households**

**3 million
residents**

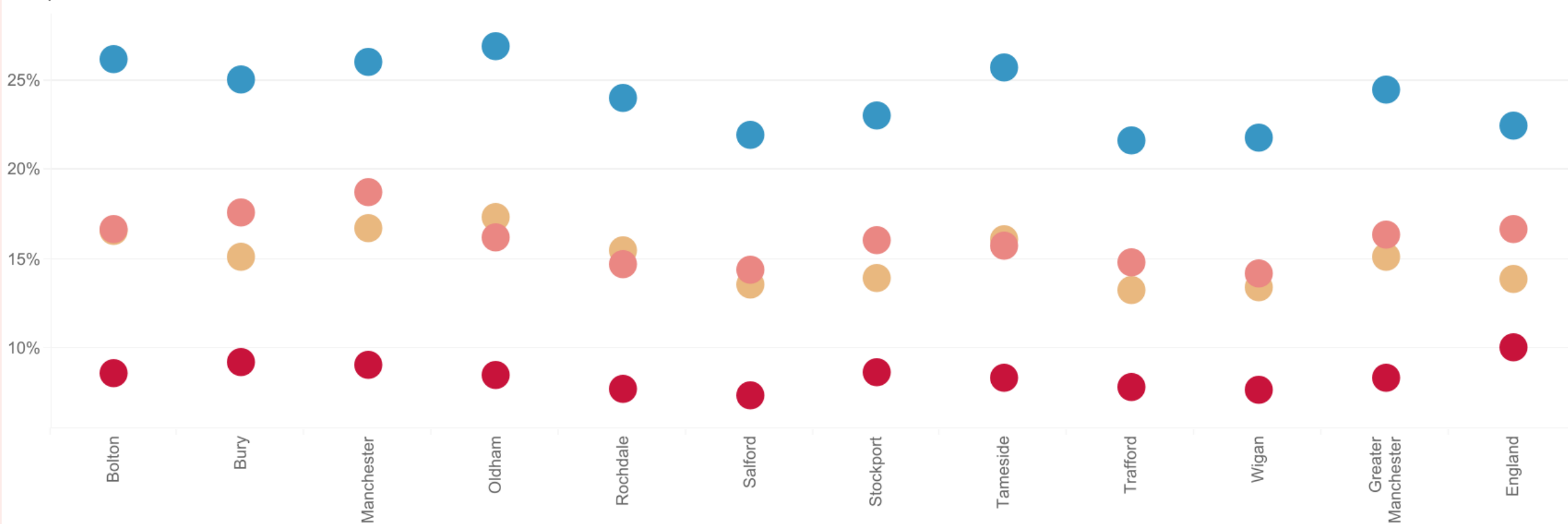


**15% of
homes are
non-decent**

**7% homes
have damp
and mould**

Estimates of housing
condition, MHCLG, 2023

Proportion of Non-Decent Homes 2023-24



Tenure Type

All rented

Owner occupied

Private rented

Social rented

Source: Gov.uk, Official Statistics: Estimates of housing stock condition - Last update: July 2025

GMCA
GREATER
MANCHESTER
COMBINED
AUTHORITY

Estimates of costs to the NHS in Greater Manchester

Desk top assessment using BRE national models in 2023. The estimated that the cost to GM could be:

- **annual NHS costs of Greater Manchester housing hazards: £62m**
- **total annual societal costs of Greater Manchester housing hazards - £943m**

An excellent starting point, but more granular data is needed.

The Marmot Review....

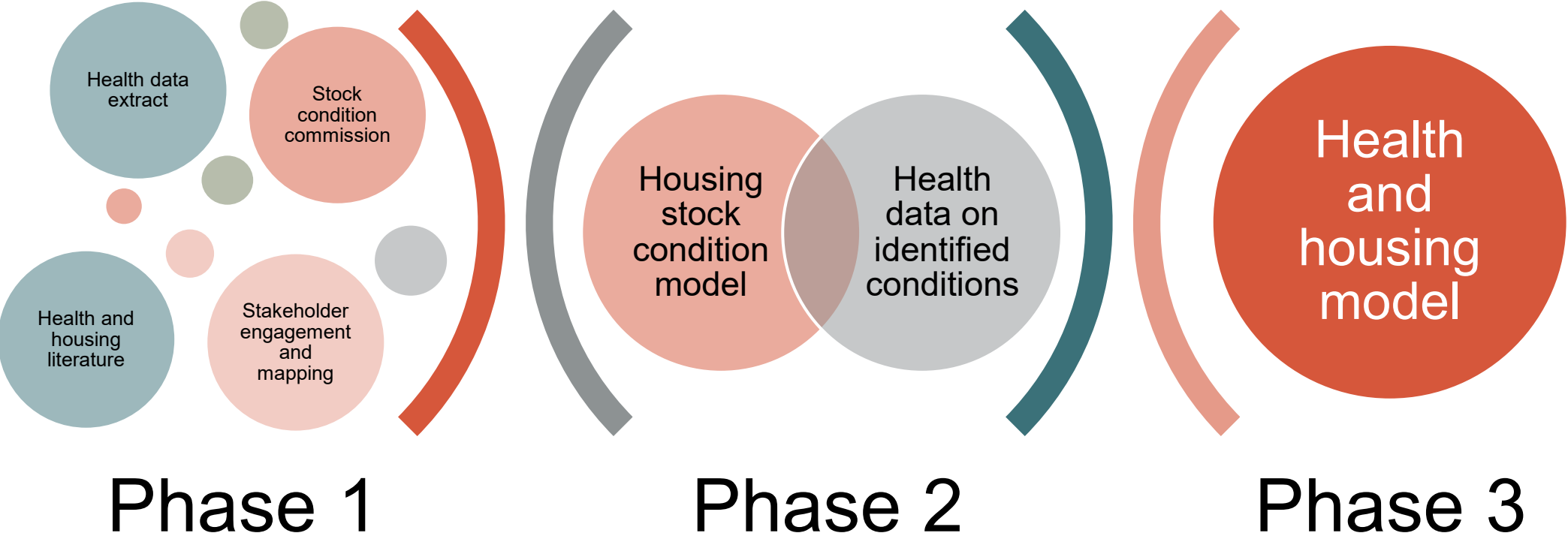
*“Poor-quality housing harms health and evidence shows that exposure to poor housing conditions (including damp, cold, mould, noise) is strongly associated with poor health, both physical and mental. The longer the exposure to poor conditions, including cold, the greater the impact on mental and physical health. **Specific physical effects are morbidity including respiratory conditions, cardiovascular disease and communicable disease transmission, and increased mortality.** In terms of mental health impacts, living in non-decent, cold or overcrowded housing and in unaffordable housing has been associated with increased stress and a reduction in a sense of empowerment and control over one’s life and with **depression and anxiety.** Children living in overcrowded homes are more likely to be stressed, anxious and depressed, have poorer physical health, attain less well at school and have a greater risk of behavioural problems than those in uncrowded homes.”*

Marmot M, Allen J, Boyce T, Goldblatt P, Morrison J. Health Equity in England: The Marmot Review 10 Years On. Institute of Health Equity; 2020 (health.org.uk/publications/reports/the-marmot-review-10-years-on). p108

Scope and objectives

1. Review of evidence on health and housing linkages relevant to Greater Manchester
2. Deliver a Greater Manchester Housing Stock Condition Survey to provide an overview of housing stock as a foundation for further modelling at local (ideally household) level.
3. Link housing stock condition level information to Greater Manchester health data and analysis to identify where housing condition has an impact on health. Creating a housing and health stock model.
4. Develop a series of use cases for the housing and health stock model to develop policy interventions.

Developing the health and housing model



Stakeholders



Housing

Housing strategy
Housing quality
GMHP



Health

NHS GM
Directors of public health
Data and intelligence



Environment

Low carbon adaptation
teams



Academia

University of Manchester
Health Inequalities
SIPHER
Housing studies
association

Rapid Evidence Synthesis: What is the health impact of poor housing?

UoM and GMCA



RES Questions

Housing is widely recognised as a key social determinant of health.

We were interested in answering the following **questions**:

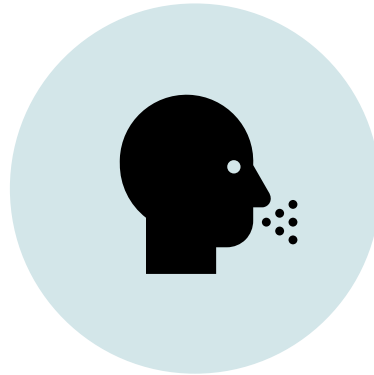
1. What is the evidence that **housing quality and condition** affects the **physical and mental health** of residents?
2. What is the evidence that **different ways of improving housing** quality and condition affects the **physical and mental health** of residents?

Results - Q1. How does housing quality and condition affect health?



Housing condition and design:

- Cold indoor temperatures
- Built environment
- Housing age
- Home hazards
- Inadequate light



Indoor air quality:

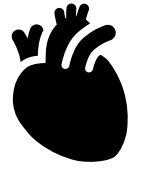
- Damp and mould
- Indoor allergens



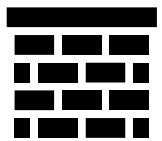
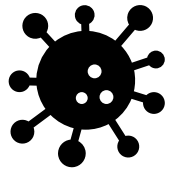
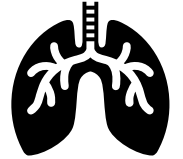
Other (indirectly) relevant evidence:

- Housing tenure and precarity
- Crowding
- Indoor pollutants/allergens
- External/outdoor environmental factors

Housing condition and design



NICE guidance highlighted the link between **cold homes** and excess winter deaths from **cardiovascular** and **respiratory** conditions. Cold indoor temperatures are associated with increased **blood pressure** and reduced **physical functioning**. There was inconclusive evidence of a relationship with **viral infections**, **sleep outcomes**, and **COPD symptoms**.



Aspects of the **built housing environment** (e.g. building type and materials) may be associated with increased **asthma** and poorer **mental health**, including **depression**.



Older houses may be associated with increased **asthma** symptoms in children.



Housing condition and design



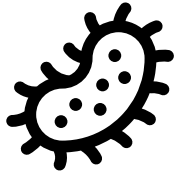
Hazards within the home are associated with increased **falls** in older adults.



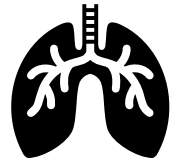
Inadequate light is associated with poorer **physical health**, **mental health**, and **sleep quality**.



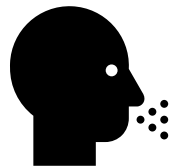
Indoor air quality



Dampness and mould in the home are associated with **new cases of asthma, exacerbation of existing asthma**, increased **wheeze**, and poorer **respiratory health**. The impacts appear to be strongest in infants and children compared with adults. NICE guidance was identified and supports these conclusions.



The relationship between various indoor allergens (e.g. house dust mites) and **asthma** and **wheeze** in children is inconclusive.



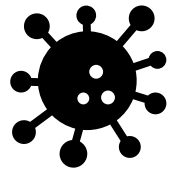
Other evidence



Housing tenure and precarity are associated with increased **anxiety** and **depression**, but there was no evidence of a relationship with **asthma**.



Household crowding is associated with various close contact **infectious diseases** (gastroenteritis, upper and lower respiratory tract infections, hepatitis A, tuberculosis, meningococcal disease, bacterial stomach infection, and trachoma) and **depression**, but there was no evidence of a relationship with **asthma**.



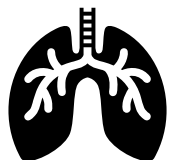
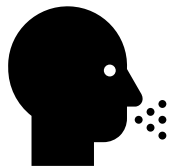
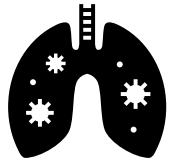
Other evidence

Indoor pollutants and allergens



Indoor air pollutants from **domestic combustion** (e.g. volatile organic compounds) and household cleaning products are associated with various poorer health outcomes, including poorer **respiratory functioning, asthma symptoms, COPD symptoms, and cancer**. NICE guidance noted that certain pollutants and pet dander are sometimes linked to respiratory, cardiovascular, and neurological symptoms.

The relationship between exposure to various **household pets** and childhood **asthma** is inconclusive.

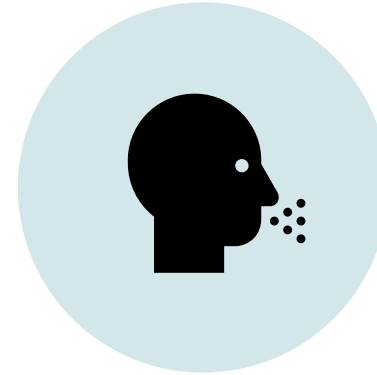


Results - Q2. Does improving housing affect health?



Housing condition and design:

- Warmth and energy efficiency
- Retrofit
- Home hazards
- Lighting



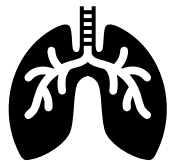
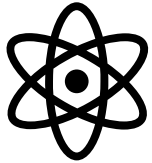
Indoor air quality:

- Damp and mould
- Indoor allergens
- Lead exposure

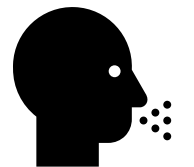
Housing condition and design



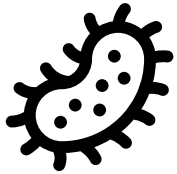
Warmth and energy efficiency interventions improve the **general health, asthma symptoms** and **respiratory health** of adults and children. The impact on the **health outcomes of older adults** was inconclusive, as was the evidence for the impact on **mental health**.



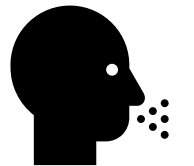
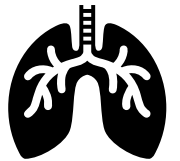
Retrofit interventions may have a positive impact on **general health** but the evidence for effects on **respiratory** and **mental health** was inconclusive. The content of retrofit interventions was poorly described in the literature.



Housing condition and design



Reducing damp and mould in homes improves **asthma symptoms** and **respiratory infections** in adults and reduces the number of **emergency and inpatient hospital visits** in children. The interventions did not improve **asthma symptoms** or **respiratory infections** in children or **asthma symptoms** in older adults.



Housing condition and design



Interventions to **improve home safety and reduce home hazards** reduce the **rate and number of falls** when targeted at older adults who are at risk of falling. Provision of safety equipment appears to reduce **injury rates** in older adults. These interventions appear to have no effect on **health-related quality of life**, **fall-related fractures**, and **falls requiring hospitalisation or medical attention**.

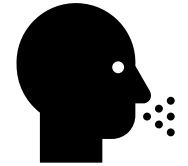
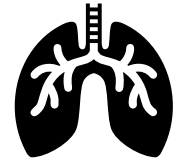


The effects of **improving artificial home lighting** on **physical** and **mental health** was inconclusive.

Indoor air quality



Various interventions to control indoor allergens (mostly house dust mites) had no effect on **asthma**, **lung function** or **eczema** outcomes.



Household environmental interventions (namely dust control measures) had no effect on **blood lead levels** in children.



Next steps

- Commission stock condition survey
- Data extracts from NHSGM on the 4 health conditions
 - Respiratory
 - Cardiovascular
 - Falls
 - Mental Health
- Identify other factors to be considered.
- Build model

Questions and contacts

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