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# Housing Overcrowding and Ethnicity: A Literature Review

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Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government

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## **Glossary**

### **Acronym**

### **Definition**

ONS	Office for National Statistics
PHE	Public Health England
PHW	Public Health Wales
PRS	Private Rented Sector
SPI-B & EMG	Scientific Pandemic Influenza Group on Behaviours and the Environmental and Modelling Group
WHO	World Health Organisation

## Summary

This literature review outlines the evidence base on the complex and inter-related links between Black, Asian and Minority Ethnic people and groups and housing overcrowding. It is difficult to unpick the causal relationships between socio-economic disadvantage, ethnicity and overcrowding. While there is clear variation in the extent that overcrowding affects different ethnic minority groups, evidence suggests that ethnic minority groups in the UK are disproportionately affected by housing overcrowding, across all housing tenures, and are also disproportionately more likely to be affected by socio-economic disadvantage.

The evidence suggests that housing overcrowding may be underestimated in some circumstances, with hidden homelessness<sup>1</sup> masking the true numbers of overcrowded households. Definitions are key for research in this area: there are two legislative definitions of overcrowding, and choice of definition may also influence how overcrowding is counted.

Housing overcrowding is associated with certain poor health outcomes, and also appears to be independently associated with increased coronavirus (COVID-19) mortality risk.

Overall, there is a lack of high quality evidence on housing overcrowding and ethnicity and there is very little Wales-specific evidence. This gap is particularly pronounced for Gypsy, Roma and Traveller communities.

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<sup>1</sup> Hidden homelessness refers to situations where people do not have a permanent home, but are not included in official statistics and therefore, are not receiving homelessness support. Individuals experiencing homelessness may be sofa surfing, squatting or living in temporary accommodation or shelters.

## 1. Introduction

- 1.1 Literature searches were carried out by Welsh Government Library Services with the intention of identifying what evidence is available about how overcrowding impacts different ethnicities, the drivers of housing overcrowding, and how overcrowding may differ by housing tenure. This review of the results was prepared by the Sustainable Futures Research Team in the Welsh Government's Knowledge and Analytical Services Branch using the identified evidence from the literature searches.
- 1.2 There are two statutory measures for overcrowding in England and Wales, laid out in the [Housing Act 1985](#). How overcrowding is counted may be affected by which is used. The measures are:
- The room standard, which defines overcrowding as there being a number of inhabitants in a dwelling such that two people of opposite sexes, aged ten or over, and not living together as a married couple or civil partners, have to sleep in the same room. As such, this definition disregards any inhabitants under the age of ten and also disregards any number of people of the same sex sharing a bedroom.
  - The space standard, which calculates a permitted number of persons sleeping in a dwelling based on the number of bedrooms and/or the square footage of the bedrooms. Note that when using this definition, infants under one are disregarded and children between one and ten years are counted as half a person.
- 1.3 Overcrowding may occur for a number of reasons, but available evidence suggests that it is often related to poverty,<sup>2</sup> and that Black, Asian and Minority Ethnic communities are disproportionately impacted by both. For example, a 2020 Statistics for Wales analysis of UK government figures from 2014/15 – 2018/19 found that people in households in Wales where the head of household was from a non-white ethnic group were more likely to be living in relative income poverty than those with a head of household from a white ethnic group. The analysis did not provide a breakdown by ethnic group. The report also analysed 2011 Census data<sup>3</sup> to provide

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<sup>2</sup> [The Health Foundation \(2020\) Overcrowding is highest for those with low incomes. HF, London](#)

<sup>3</sup> Much of the evidence identified in the literature searches analysed or discussed 2011 UK Census data. No analyses of 2021 Census data was available at the time of the searches. Preliminary releases of the 2021 Census data should begin to be published in 2022.

a breakdown of overcrowding, reporting that at the time of the 2011 Census households in Wales there was considerable variation between ethnic groups but that households from all ethnic minority groups were disproportionately more likely to be living in overcrowded housing than White British and Irish households.<sup>4</sup>

- 1.4 Although there is statutory provision to tackle overcrowding,<sup>5</sup> it is clear that overcrowding still occurs in England and Wales.<sup>6</sup> There is also evidence to show that overcrowding and death rates from COVID-19 are correlated.<sup>7</sup> Therefore, in light of the COVID-19 pandemic and its disproportionate impact on ethnic minority groups, this literature review was requested to identify evidence to better understand the relationship between overcrowding which disproportionately affects some ethnic minority groups, and vulnerability to COVID-19.

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<sup>4</sup> [Welsh Government \(2020a\) Coronavirus \(COVID-19\) and the Black, Asian and Minority Ethnic Population in Wales. Cardiff: Welsh Government](#)

<sup>5</sup> [Housing Act 1985 part 10](#)

<sup>6</sup> [Office for National Statistics \(2021a\) Admin-based levels of overcrowding \(using the bedroom standard and Valuation Office Agency number of bedrooms\), feasibility research: England and Wales: January 2021. ONS, Newport](#)

<sup>7</sup> See for instance [Barker, N. \(2020\) "The housing pandemic: four graphs showing the link between COVID-19 deaths and the housing crisis." Inside Housing, 29.5.2020](#)

## **2. Aims**

2.1 The aims of this literature review were to investigate what evidence is available regarding:

- how overcrowding impacts ethnic minority groups, primarily in Wales, and elsewhere; and
- the impacts of overcrowding and ethnicity on COVID-19 outcomes.



### **3. Methodology**

- 3.1 This report was prepared by Welsh Government's Knowledge and Analytical Services based on a set of literature searches carried out by Welsh Government Library Services. The searches were carried out online between 12/08/2021 and 03/09/2021, using a number of academic databases and relevant selected websites. Keywords with a focus on overcrowding, ethnicities, housing and Covid-19 were utilised and a detailed table of the search strategies including the sources and keywords used is presented in Annex B. The strategy adopted, a literature review rather than a systematic review, was chosen as appropriate to a non-specific question intended to identify context, current thinking and explore the quality of evidence on the topic.<sup>8</sup>
- 3.2 Results were limited to research reports / papers, Government research papers and journal articles. While documents published in the last five years were preferred, documents published up to ten years ago were included in the results if considered highly relevant. The information presented in this document should be considered in the context of the search criteria used.
- 3.3 Eighty-six documents were identified by the literature search. While a formal weighting system for the identified evidence has not been used in this review, in the discussion of evidence below, increased weight has generally been given to documents with a Welsh or UK focus and where the main focus is specifically overcrowded housing and ethnicity. Much of the evidence was secondary rather than primary research and evidence reviews tended to be descriptive rather than systematic. Because of this, the review is limited in its ability to isolate the causalities of overcrowding in the context of ethnicity.
- 3.4 Because this review is thematic in nature, not all documents that were identified in the searches are discussed. In particular, documents with a very wide brief, or that have a focus on geographical areas other than the UK may be discussed briefly or not at all. However, all documents identified in the searches can be viewed in the table of results at Annex A.

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<sup>8</sup> [Robinson, P. and Lowe, J. \(2015\) 'Literature reviews vs systematic reviews'. \*Australian and New Zealand Journal of Public Health\* 39\(2\), p.103.](#)

## 4. Findings: Summary of the literature

4.1 Of the 86 documents identified in the literature searches, the majority (54) explore overcrowding in the context of the COVID-19 pandemic. Thirty-two documents were identified where evidence relating to overcrowding in Wales or the UK was explored without reference to COVID-19. These documents were all secondary sources, comprising of briefings and government reports. The themes raised in these 32 documents are discussed below from paragraph 4.2. The section titled *Overcrowding, ethnicity and the coronavirus (COVID-19) pandemic*, from paragraph 4.30, discusses a selection of the 54 documents which are specific to overcrowding and COVID-19.

### **Overcrowding rates in the UK Administrations**

4.2 Bob Smith and Peter Mackie, writing for the UK Collaborative Centre for Housing Evidence produced a briefing document, *Housing in Wales: evidence for Welsh Government 2021-26*, which set out evidence based housing priorities for Wales for the then incoming 2021 Senedd administration. The document is wide ranging, identifying and exploring six major various housing challenges for Wales.<sup>9</sup> Overcrowding and ethnicity are not specifically discussed, but the paper notes that ethnic minority households may experience greater exclusion from affordable, secure and suitable housing. Smith and Mackie (2021) note systemic issues in the housing system can exacerbate exclusion from such housing; for instance the scarcity of social housing can push up costs in the private rented sector (PRS). It can be inferred that this kind of systemic issue is likely to impact more on groups who experience higher levels of poverty. The relationship between health and housing is explored by quoting research that found the cost of non-decent homes in England to the NHS is an estimated £1.4 billion per annum, highlighting the economic context in which overcrowding sits. It should be noted that housing systems in Wales are run separately to English housing systems, and that NHS Wales is a separate organisation to NHS England, so the costs are likely to differ between the two countries. However, these findings are still likely to be highly relevant to Wales.

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<sup>9</sup> The six major challenges identified are: affordable housing supply; homelessness; the private rented sector, tenant engagement, creating sustainable places, and health and housing.

- 4.3 A research article from Hannah Johnson for Senedd Research, *'Wide scale, systemic changes' needed to address racism and race inequality in Wales*, published in 2021, considers race inequality through the lens of COVID-19, but notes that the unequal impacts of the pandemic are "often the result of long-term, entrenched inequalities". While not focusing specifically on housing or overcrowding, the article does note that "Gypsy [and] Irish Travellers, people of Bangladeshi, Black and Arab backgrounds are much more likely to live in overcrowded housing" (Senedd Research, 2021). This is echoed by *Improving Race Equality in Housing and Accommodation*, a report by Jack Price, issued by the Wales Centre for Public Policy (2021), which uses an analysis of data from the 2011 Census. *Ethnicity Facts and figures: Overcrowded Households* by the Ministry of Housing, Communities and Local Government (2020), which analyses data from the English Housing Survey between April 2016 and March 2019 to provide figures on overcrowding in England only, has similar findings. Price found that overcrowding rates are higher in Wales than England for all ethnicities. There are similar disparities between ethnic groups in Wales and England, with 4.9% of White British people living in overcrowded households in Wales, compared to 28.7% of Gypsy or Irish Travellers, 27% of Bangladeshi people and 19.4% of Black people (Price, 2021).
- 4.4 The Ministry of Housing, Communities and Local Government (2020) was unable to provide figures for Gypsy and Irish Traveller households in England due to lack of data for these communities, but found that overall, around 3% of households in England were overcrowded (compared to 5.5% for Wales in 2015<sup>10</sup>). ethnic minority households<sup>11</sup> were more likely to be overcrowded than White British households in most regions of England, all socio-economic groups, all age groups and by all housing tenures. Bangladeshi (24%), Pakistani (18%), Black African (16%), Arab (15%) and Mixed White and Black African (14%) were the ethnicities of households with the highest rates of overcrowding in England. The House of Commons research briefing *Overcrowded housing (England)* by Barton and Wilson (2021) notes that according to 2019/20 data from the English Housing Survey around 3.5% of

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<sup>10</sup> [Welsh Government \(2014\) Indicator data by Local Authority - Overcrowded Households. Welsh Government](#)

<sup>11</sup> Ethnicities from the English Housing Survey data differ slightly from those used in the 2011 census and are divided into: **Asian:** Bangladeshi; Chinese; Indian; Pakistani; Asian other; **Black:** Black African; Black Caribbean; Black other; **Mixed:** Mixed White/Asian; Mixed White/Black African; Mixed White/Black Caribbean; Mixed other; **White:** White British; White Irish; White Gypsy/Traveller; White other; **Other:** Arab; Any other. All ethnicities had higher percentages of overcrowded households than White British, with the exception of White Gypsy/Traveller, for whom data was withheld due to small sample size.

households in England are overcrowded. They echo Smith and Mackie (2021) in noting the impact of overcrowding on physical and mental health and also note the increased likelihood of ethnic minority communities in England to experience overcrowded housing.

- 4.5 A report from Scottish Government, *Housing needs of minority ethnic groups: Evidence review* (2021), found a similar picture in Scotland. This analysis used data from the Scottish 2011 Census, and found that in Scotland, 'White Polish' was the ethnicity with the highest rate of overcrowding at 30% of households, followed by 'Bangladeshi' and 'African' households, both of which had rates of overcrowding at 28% of households. This compares to 9% of all Scottish households being overcrowded and 8% of White Scottish households.
- 4.6 An analysis of the 2011 Census in Northern Ireland<sup>12</sup> similarly found higher rates of overcrowding in ethnic minority households than White households. Unlike the 2011 England and Wales Census, which used 18 categories<sup>13</sup>, this Census used five categories for ethnicity: Asian, Black, Other, Mixed and White. These categories are likely to include a diversity of groups within them, and this should be borne in mind when considering the following breakdown. The data found that 10% of the population lived in overcrowded households, with overcrowding rates of 30% among 'Black' households, 24% among 'Asian' households, with 19% 'Other' and 13% 'Mixed' households being overcrowded compared to 9.3% for 'White' households. The analysis also found that overcrowding rates were highest in the social rented sector and lowest in owner occupied households across all the main ethnic groupings. Tenure and overcrowding is discussed from paragraph 4.10 below.
- 4.7 Across the four countries in the UK there is a clear picture that housing overcrowding rates are higher in ethnic minority communities than in White British communities.

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<sup>12</sup> [Northern Ireland Statistics & Research Agency \(NISRA\) \(2013\). \*Census 2011: Detailed Characteristics for Northern Ireland on Ethnicity, Country of Birth and Language\*. NISRA, Belfast](#)

<sup>13</sup> Ethnicities in the 2011 England and Wales Census were: **White:** *British; Irish; Gypsy or Irish Traveller; Other White;* **Mixed/Multiple ethnic group:** *White and Black Caribbean; White and Black African, White and Asian; Other Mixed;* **Asian/Asian British:** *Indian; Pakistani; Bangladeshi; Chinese; Other Asian;* **Black/African/Caribbean/Black British:** *African; Caribbean; Other Black; Other Ethnic Group: Arab; Any other ethnic group.*

## **Drivers of overcrowding in Black Asian and Minority Ethnic communities**

- 4.8 Issues such as poverty, family size and ethnic minority inequalities interact with housing options, including location, tenure and size of property. As discussed above, ethnic minority households tend to live in more overcrowded conditions, and, at the 2011 Census, overcrowding was found to be most severe among Pakistani, Bangladeshi and Black African households in the UK. These three groups were also found to have the highest numbers of children on average (Ministry of Housing, Communities and Local Government (2020). Overcrowding may also be related to multi-generational living arrangements, the shortage of large properties in the social sector, clustering in geographical areas where overcrowding is particularly severe and low incomes.<sup>14</sup>
- 4.9 In *Housing Briefing Paper* for the Race Equality Foundation by Nigel de Noronha (2021), the policies and market forces that have shaped housing disadvantages faced by migrants and ethnic minority people in the UK are explored. The briefing argues that racial discrimination has been present in the housing market for more than a century, limiting the choices to those who migrated into the UK. A policy focus on slum clearance after the Second World War excluded post war migrant communities from social housing by prioritising new housing for displaced slum populations, leading to many in migrant groups being forced into overcrowded housing in the PRS. Since then, a widening range of ethnic groups have migrated to the UK and this has been accompanied by increasingly hostile conversations and attitudes around immigration which has led to national (UK) legislation and local authority practices which have explicitly and systemically restricted the housing and welfare rights of migrants (de Noronha, 2021).

### **Overcrowding and tenure**

- 4.10 Households from ethnic minority communities in the UK are more likely to be overcrowded in all tenure groups (Barton and Wilson, 2021). In addition, overcrowding rates are higher in rented accommodation than owner-occupied accommodation across all UK administrations.<sup>15</sup> Also, ethnic minority households are

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<sup>14</sup> [Barnes, M., Cullinane, C., Scott, S. and Silvester, H. \(2013\) People living in bad housing – numbers and health impacts. Shelter, London](#)

<sup>15</sup> [Ministry of Housing, Communities and Local Government \(2021\) English Housing Survey: Private Rented Sector, 2019-20. UK Government, London.](#)

more likely to be in private rented and social rented tenures<sup>16</sup> than White British households, and less likely to be in owner-occupied tenures than White British households (Ministry of Housing, Communities and Local Government, 2020). In the Welsh Government statistical article *Coronavirus (COVID-19) and the Black, Asian and Minority Ethnic Population in Wales* (2020) found that in Wales, half of ethnic minority households live in rented properties compared to just under a third of White households, and the ethnic minority households who rent were more likely to live in the PRS than in social rented properties (Welsh Government, 2020a).

- 4.11 Three sources were identified which specifically explored aspects of tenure. None were primary research and none had a specific focus on Wales. Two are briefings, from Shelter: *The social housing overcrowding crisis* (2021) and from the Race Equality Foundation: *Understanding ethnic inequalities in housing: Analysis of the 2011 census* (2013) by Nissa Finney and Bethan Harries, and the other is a report from the Centre for Housing Policy, *Vulnerability amongst Low-Income Households in the Private Rented Sector in England* (2018) by David Rhodes and Julie Rugg.
- 4.12 *Understanding ethnic inequalities in housing: Analysis of the 2011 census* (Finney and Harries, 2013) explores trends in tenures using data from the 1991, 2001 and 2011 censuses. It argues that housing policies such as 'right to buy' and 'shared ownership' have helped to cement a preference in England and Wales for home ownership rather than renting, but notes that in spite of this preference, home ownership rates decreased between 1991 and 2011, likely due to rising house prices and lack of supply of suitable properties in some areas.<sup>17</sup> While home ownership decreased for all ethnic groups, the decrease was proportionately greatest for Chinese (-17.4%) and Pakistani (-18%) households and proportionately smallest for White (-3%) and Bangladeshi (-3%) households.
- 4.13 Levels of social renting are also in decline, and this may be explained by a long term decrease in social rented stock; in 2004 social housing represented 18.5% of total stock in England and Wales compared with 31% in 1979 (Finney and Harries, 2013). There are persistent differences between ethnic groups in levels of social housing: all

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<sup>16</sup> Social rented housing is defined as housing rented from local authorities, housing associations and other social housing providers (Finney and Harries, 2013)

<sup>17</sup> See [Welsh Government Statistical Bulletin \(2020\) Dwelling Stock Estimates for Wales. Welsh Government, Cardiff](#), for Welsh latest stock estimates at time of writing.

ethnic groups experienced a reduction in social housing between 1991 and 2011, but Black African, Gypsy and Irish Traveller and Black Caribbean groups still demonstrated the highest rates of households in social rented accommodation with over 40% of their populations in social rented housing in 2011, with Indian and Chinese households demonstrating the lowest rates (7% and 11%, respectively). While low uptake of social housing in particular groups may reflect relative affluence, Finney and Harries suggest that low uptake may rather reflect difficulties for certain groups with accessing social housing, rather than demand (Finney and Harries, 2013).

4.14 Shelter's briefing, *The social housing overcrowding crisis (2021)* notes that in England, more social homes are lost to sales and demolitions every year than are built to replace them. Shelter (2021) identify that the lack of supply of suitable socially rented accommodation exacerbates overcrowding, arguing that the lack of big enough properties to accommodate households currently living in overcrowded socially rented accommodation is a reflection of the lack of social homes in general. They state that 1.5 million people in England are living in overcrowded social homes and that this is an increase of 44% in the last five years, and call for significant increase in investment in social housebuilding in England (Shelter, 2021). Addressing a similar issue in Wales, the current Welsh Minister for Climate Change has committed to building 20,000 new social homes in Wales over the current Welsh Government term.<sup>18</sup>

4.15 Households in the UK-wide PRS increased across all ethnicities from 1991 to 2011. While Chinese and African ethnic groups were the largest represented groups in the UK PRS, the increase was largest for Indian, Pakistani and Black Caribbean households (Finney and Harries, 2013). Finney and Harries' article is now nearly ten years old, but more recent UK government figures show that most ethnic minority groups in England are more likely than White British groups to rent their homes privately, and that the ethnicities most represented in the PRS remain Chinese, Black African, Black other and Mixed White/Black Caribbean (Ministry of Housing, Communities and Local Government (2020b). In *Vulnerability amongst Low-Income Households in the Private Rented Sector in England* (2018), Rhodes and Rugg

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<sup>18</sup> [Julie James MS, Minister for Climate Change \(2021\) Written Statement: Social Housing in Wales. Welsh Government, Cardiff](#)

analyse English Housing Survey data from 2012/13 to explore characteristics of groups vulnerable to harm in the PRS; while they do not focus on ethnicity, they note that while the social rented sector is the largest 'low income' sector, 38% of PRS households are in the bottom third of incomes in England; financial precarity was more marked for vulnerable categories including households where the household reference person was a recent migrant (Rhodes and Rugg, 2018). A more recent Office for National Statistics (ONS) analysis looking at data from 2018 found that 36% of Welsh PRS households and 22% of English PRS households had an income of less than £15,000 a year.<sup>19</sup>

4.16 The report identifies six categories of household type which are designated as 'vulnerable'. The categories are non-exclusive and as follows: the household reference person or their partner being disabled or suffering from long term sickness; households with one or more dependent child; households where the household reference person is in receipt of means tested benefits or tax credits; households where the household reference person is aged 65 or older; households where the household reference person was born overseas and came to live in the UK since the year 2000; and households where the household reference person is on a low income but not in receipt of means tested benefits or tax credits (Rhodes and Rugg, 2018).

4.17 Overcrowding was found to be one of the three problems<sup>20</sup> associated with being in the 38% of PRS households in the bottom third of incomes in England. Around 10% of 'vulnerable' (as defined in paragraph 4.15 above) PRS households were found to be overcrowded, compared to 11% of vulnerable households in the social rented sector and 4% of vulnerable owner-occupied households. The report notes that of the three problems, overcrowding was the least encountered by the PRS households in the vulnerable categories; the report suggests that this may be because tenants on lower incomes may be "better able to make a case for social housing where gross overcrowding takes place" (Rhodes and Rugg, 2018).

4.18 While disparities in ethnic groups are not explored in Rhodes and Rugg's report, with the high proportion of certain ethnic minority groups in social housing and the PRS

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<sup>19</sup> [Office for National Statistics \(2019\) UK private rented sector: 2018. ONS, Newport.](#)

<sup>20</sup> The other two being: after housing costs (AHC) poverty, and the property not meeting the Decent Homes Standard.



identified in *Understanding ethnic inequalities in housing: Analysis of the 2011 census* (Finney and Harries, 2013) and the proportionately higher rates of deprivation identified in ethnic minority communities (Statistics for Wales, 2020), the harms and risks of the PRS identified in the report can be inferred to impact disproportionately on ethnic minority households. As Finney and Harries argue, ethnic inequalities in overcrowding and tenure “exist and persist” in England and Wales, noting that this persistence suggests that this is an area historically neglected by government policy (2013), suggesting that there may be systemic issues at play in housing inequalities.

### **Gypsy, Roma and Traveller communities and overcrowding**

- 4.19 In *Ethnic disadvantage in the housing market: Evidence from the 2011 census* (2015) a briefing paper by Nigel de Noronha for the Race Equality Foundation, de Noronha reports that Gypsy, Roma and Traveller communities were seven and a half times more likely to experience housing deprivation than White British households, and that overcrowding was the main reason for this. Around a third of Gypsy, Roma and Traveller respondents to the census in Wales reported living in overcrowded households, but the report found that evidence around Traveller communities and housing was severely lacking and this is likely to mask even more stark inequalities.
- 4.20 *Overcrowded Housing (England)* does not quote a percentage for overcrowded Gypsy, Roma and Traveller households, stating that “the data has been withheld because a small sample size makes it unreliable” (Barton and Wilson, 2020). de Noronha (2015) notes that the 2011 census was the first to recognise White Gypsy and Irish Travellers as a distinct ethnic category; the Roma category was not included until the 2021 Census, for which data is not yet available. It found that there are 20,000 Gypsy, Roma and Traveller households composed of 58,000 individuals. However, in *Tackling inequalities faced by Gypsy, Roma and Traveller communities*, the House of Commons Women and Equalities Committee report that the Census population figures do not accurately reflect the size of the population, being much lower than widely accepted estimates which suggest that there are between 100,000 and 300,000 Gypsy and Traveller people and up to 200,000 Roma people living in Britain (House of Commons Women and Equalities Committee, 2019). It is thought that the low levels of census completion, and general lack of engagement with research and other data collection exercises, may be a result of marginalisation and

discrimination faced by these groups leading to a lack of trust in official processes (de Noronha, 2015, House of Commons Women and Equalities Committee, 2019). This is supported by the *Inclusive Data Taskforce Recommendations Report* (ONS, 2021c) which notes that Gypsy, Roma and Traveller groups are often deemed 'harder to reach', and that distrust, particularly in the [UK] government as well as government statistics, was commonly seen as being an issue affecting Gypsy, Roma and Traveller communities. The report also notes that housing surveys tend to use households as the standard sampling frame, and that Gypsy, Roma and Traveller communities can include non-household populations, and may also be excluded by exclusively online methods of data collection and the lack of acknowledgement in data collection tools of differences in language or literacy (ONS, 2021c).

4.21 Three documents will be discussed here which specifically explored issues within Gypsy, Roma and Traveller communities, including housing issues. These were the report from House of Commons Women and Equalities Commission, *Tackling inequalities faced by Gypsy, Roma and Traveller communities* (2019), an evidence review from Scottish Government, *Accommodation Needs of Gypsy/Travellers* (2019), and an independent report by The Traveller Movement hosted on the UK Government Department of Health and Social Care website, *Gypsy and Traveller health: accommodation and living environment* (2016), which explores accommodation issues for Gypsy, Roma and Traveller communities in England, and includes some primary qualitative research in the form of qualitative interviews, as well as a literature and policy review.

4.22 The Welsh Government publishes biannual Gypsy and Traveller Caravan counts.<sup>21</sup> The most recent of these at time of writing, giving figures for July 2021, reports that there were 1095 caravans in Wales on 143 sites. The report does not address overcrowding or quality of accommodation. The House of Commons Women and Equalities Committee (2019) specifically looked at housing and the Roma community in England and Wales; they found that many Roma families live in extremely poor housing conditions, mostly in the PRS, with overcrowding common in this community (House of Commons Women and Equalities Committee, 2019).

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<sup>21</sup> [Welsh Government \(2021\) Gypsy and Traveller caravan count: July 2021. Welsh Government, Cardiff](#)

4.23 For the quarter of Gypsy and Traveller population in England and Wales who live on sites rather than in housing, site quality was raised as a significant issue which affected the health of these populations, with many existing sites reported to the committee by a witness as overcrowded and unsafe (House of Commons Women and Equalities Committee, 2019). The Traveller Movement (2016) also found that overcrowding was commonly reported by their research participants on both camp sites (both internal and external) and in housing. They found that individuals with the highest rates of self-reported poor physical and mental health predominately lived in poor and inappropriate accommodation, including overcrowded accommodation.

4.24 The House of Commons Women and Equalities Committee (2019) found that while Gypsies and Travellers have historically lived nomadic lives in England and Wales, 74% of Gypsies and Travellers were living in housing in 2011. The Scottish Government (2020) notes a lack of culturally appropriate accommodation, defined as ‘accommodation such as sites and stopping places which allow Gypsies [and] Travellers to maintain their travelling lifestyle and fulfil their cultural needs’ (Scottish Government, 2020) often forms a key part of the discrimination that Gypsy, Roma and Traveller communities face in Scotland. Neither document discuss overcrowding in detail, but Scottish Government (2020) notes that a lack of understanding of the culture of these communities persists across statutory and voluntary housing services which can create barriers to access, and failing to meet Gypsy, Roma and Traveller accommodation needs is a key factor in the discrimination that they face. Poor quality sites supplied by local authorities or Registered Social Landlords (RSLs) in Scotland are often a major issue for these communities in Scotland. In their report, the Scottish Government(2020) recommends engagement with Gypsy, Roma and Traveller communities when planning and designing interventions to provide suitable accommodation, whether conventional housing or temporary sites. The recommendation for culturally aware, consistent engagement by public services is referenced in the report by The Traveller Movement (2016) who found that community engagement and empowerment are an effective route to addressing accommodation and health needs for these communities (The Traveller Movement, 2016), and echoed by the House of Commons Women and Equalities Committee (2019), who also note that:

While pockets of good practice exist [within public services], these tend to be driven by committed individuals developing creative solutions to overcome barriers. When individuals move on, the trust that has been built up dissipates, along with any progress that has been made. (House of Commons Women and Equalities Committee, 2019).

## **Overcrowding and Health**

- 4.25 Sources exploring links between overcrowding and health in general are discussed in this section. Six relevant documents were identified. Sources focusing on the pandemic will be discussed in the next section.
- 4.26 *Ethnicity and Health in Wales*, a report by James Allen et al. from Public Health Wales (PHW) (2015), was the only source to specifically look at ethnicity and health in Wales. The report analysed 2011 Census data and specifically focused on health outcomes of ethnic minority populations in Wales, and found that the percentage of overcrowded households were between three and five times higher amongst groups who define themselves as an ethnicity other than White British or Irish. It also analysed the limited Census data on general health, and found that there was a steep increase in bad or very bad general health as age increased in all ethnic categories, but that White British or Irish had a lower all age ill health percentage (7.9%) than all other ethnic groups except for Asian/Asian British, which had an all age percentage of bad or very bad general health of 7.2%. However, the differences in health outcomes between groups were not stark, and a clear link between ethnicity, overcrowding and health outcomes was not made in this analysis.
- 4.27 The article, *2011 Census analysis: General Health in Overcrowded and Under-occupied Households in England and Wales* (ONS, 2015) did not look explicitly at ethnicity, but found a clear link between 'not good' health and living in overcrowded conditions. The analysis found that young people (aged 0-15) living in overcrowded households in Wales were more than twice as likely to report 'not good' health (4.4%) compared with those living in under-occupied households (1.8%), and the health gap between overcrowded and under-occupied households increased with age, with a 17.2 percentage point difference between those over 65 in overcrowded households reporting 'not good' health (63.6%) compared to those over 65 in under-occupied households (46.4%). This is a similar pattern to that which the analysis found in

England, with the health gap between overcrowded and under-occupied households of 2.4 percentage points for the youngest age group analysed (0-15) rising to 22.6 percentage points for those in the oldest age group (65+).

- 4.28 *WHO housing and health guidelines* (2018) include discussion of a literature review on the effects of overcrowding on health, and concludes that [over]crowding is associated with negative health outcomes of various types, but the study designs included in the review (mostly observational) and the close association between deprivation and housing, caution against the attribution of causation. They suggest that reductions in [over]crowding “will be most effective if combined with policies that support employment and improve household incomes to increase the affordability of homes with sufficient space. A supportive social welfare system further ensures that loss of job or other income shock does not entail moving into a dwelling with inadequate space in order to reduce costs.” They further note that policy makers should consider the cultural context of overcrowding, which may have relevance to overcrowding in the context of ethnicity (WHO, 2018).
- 4.29 *Health Equity in England, The Marmot Review 10 years on* (Marmot et al 2020), which revisits *Fair Society Healthy Lives, the Marmot Review* (2010), notes that there are health risks associated with overcrowding – including increased rates of intestinal and respiratory infection and risks to mental health, and concludes that “in England, health is getting worse for people living in more deprived districts and regions, health inequalities are increasing and, for the population as a whole, health is declining.” The report notes that overcrowding is linked to mental health impacts such as increased stress, depression and anxiety [in adults], and that children 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.”
- 4.30 A later report from PHW, *Making a Difference. Housing and Health: A Case for Investment* (Watson et al., 2019), does not specifically explore overcrowding in the context of ethnicity but considers overcrowding as one facet of poor housing, arguing that inequalities in health arise from inequalities in society, and that “housing conditions, [housing] suitability and homelessness vary across different population groups”. The example is given of overcrowded households with dependent children

being over 10 percentage points more likely to be social rented households (26.3%) compared to the Welsh national average (15.6%). The report discusses health risks of poor housing and particularly notes that overcrowding specifically carries mental health risks. It also notes that ‘sofa surfing’<sup>22</sup> (a contributor to overcrowding, found to typically affect single adults but also experienced by significant numbers of families with children) accounted for 60.7% of households experiencing homelessness in Wales in 2016 (3100 of 5100 households) according to estimates from the charity Crisis<sup>23</sup> and that this hidden homelessness carries health risks which the report argues carry economic costs far higher than that for the general population (Watson et al., 2019).

4.31 *Housing Disadvantage and Poor Mental Health: A Systematic Review* (2019) by Singh et al., reviewed twelve qualifying studies exploring the longitudinal impact of housing disadvantage on mental health. Housing disadvantage was measured using a number of characteristics including overcrowding. All qualifying studies indicated a positive association between housing disadvantage and various aspects of mental illness. The review confirmed that prior exposure to housing disadvantage may impact mental health later in life.

### **Overcrowding, ethnicity and the coronavirus (COVID-19) pandemic**

4.32 It is well recognised that people from almost all ethnic minority groups have poorer outcomes from COVID-19 and higher death rates than White British groups across the UK.<sup>24</sup> This section will explore the evidence for how the prevalence of overcrowding in ethnic minority Ethnic groups interacts and impacts on COVID-19 outcomes. There were 54 relevant sources identified by the literature search, including several primary research articles published in peer reviewed journals. This reflects the urgency of the pandemic and the amount of research which has taken place in response to it. Not all sources were specifically about overcrowding; the most relevant are discussed in this section along with the most relevant of the secondary sources.

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<sup>22</sup> Sofa surfing is defined as “people staying temporarily with households other than their immediate family in overcrowded conditions”.

<sup>23</sup> [Crisis \(2017\) Homelessness Projections: Core Homelessness in Great Britain. Summary Report. Crisis, London](#)

<sup>24</sup> See, for instance: [Office for National Statistics \(2021\) Updating ethnic contrasts in deaths involving the coronavirus \(COVID-19\), England: 24 January 2020 to 31 March 2021. ONS, Newport](#)

4.33 While there is wide variation between ethnic minority groups in rates of overcrowding, analysis of 2019 data found that ethnic minority people are more likely to live in overcrowded housing than White British people in England (Ministry of Housing, Communities and Local Government, 2020a). The statistical article *Coronavirus (COVID-19) and the Black, Asian and Minority Ethnic population in Wales* (Welsh Government, 2020a) similarly found that “people from a number of ethnic minority groups are more likely to live in overcrowded housing than White British people”, according to the 2011 Census. Using data from the 2019 Welsh Index of Multiple Deprivation<sup>25</sup>, the article also found that while 5.9% of the Welsh population identify as being from an ethnic minority group, almost 11% of the people living in the most deprived 10% of small areas were from an ethnic minority group. The Equality, Local Government and Communities Committee of the Fifth Senedd in their report *Into sharp relief: inequality and the pandemic* (2020), note that poverty has been a key determinant in the COVID-19 pandemic and that certain groups, including people from ethnic minority groups are more likely to experience poverty and more likely to experience disproportionately high mortality rates. They note that reasons for disproportionate mortality rates are multifactorial, and are likely to include living in overcrowded conditions as well as working in higher risk jobs, having a pre-existing condition, certain kinds of behaviours which affect health, and discrimination (Equality, Local Government and Communities Committee, 2020). The House of Lords Library Report by Phillip Lewis, *Gypsy, Roma and Traveller communities: impact of Brexit and COVID-19* (2021) found that Gypsies, Roma and Travellers were likely to be disproportionately affected, and the frequent housing or site overcrowding conditions they experience (also see paragraphs 4.19 to 4.24 above) would be likely to make social distancing difficult or impossible (Lewis, 2021).

4.34 In *Beyond the Data: Understanding the impact of COVID-19 on Black Asian and Minority Ethnic groups* (2020), Public Health England (PHE) descriptively analyses stakeholder insights and published literature. With regard to housing, they find the risks associated with COVID-19 transmission, morbidity, and mortality can be exacerbated by the housing challenges faced by ethnic minority communities in England. In particular, overcrowding can lead to increased COVID-19 transmission

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<sup>25</sup> The Welsh Index of Multiple Deprivation is the official measure of deprivation for small areas in Wales. The latest Index can be accessed here: [Welsh Government \(2020b\) Welsh Index of Multiple Deprivation \(full Index update with ranks\): 2019. Welsh Government, Cardiff](#)

as individuals in the household are unable to effectively self-isolate. ethnic minority households are also more likely to be intergenerational, leading to risk of transmission between young children and older adults (PHE, 2020). This finding is echoed by The Independent Scientific Advisory Group for Emergencies (SAGE) in their report *Disparities in the impact of COVID-19 in Black and Minority Ethnic populations: review of the evidence and recommendations for action* (2020), which states that certain ethnic groups are disproportionately likely to reside in overcrowded households, which

...are more likely to be multigenerational, increasing the difficulty of self-isolation, social distancing, or shielding therefore increasing the opportunity for within-household transmission (SAGE, 2020).

4.35 A preponderance of evidence suggests that age is a risk factor for poor outcomes of COVID-19 infection,<sup>26</sup> making the intersection of age and ethnicity in the context of overcrowding an important consideration. Housing and ethnicity in the context of age is discussed by de Noronha (2019) in *Housing and the older ethnic minority population in England*, a briefing document from the Race Equality Foundation. de Noronha (2019) explores housing and the older ethnic minority population in England, noting that “[o]lder Indian, Pakistani, Bangladeshi and black African people continue to live in other<sup>27</sup> households for longer than other ethnic groups. This is likely to contribute to the higher levels of housing deprivation, particularly overcrowding, that they experience” (de Noronha, 2019). The briefing argues that the extent to which this reflects choice or necessity for different ethnic groups is an area that requires exploration. de Noronha concludes that the higher levels of housing deprivation some older ethnic minority groups experience is contributed to by factors throughout the life course:

Cumulative disadvantage is evident through lower values of property assets, occupational social class and employment and tenure patterns, particularly for those aged 50-64. The living arrangements of people from the Indian sub-continent and black Africans contribute to higher levels of housing deprivation. (de Noronha, 2019)

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<sup>26</sup> See, for instance Pijls et al., (2021) “[Demographic risk factors for COVID-19 infection, severity, ICU admission and death: a meta-analysis of 59 studies.](#)” *BMJ Open* 2021;11.

<sup>27</sup> ‘Other’ households is a category defined as not couple, single or lone parent households.



4.36 While a detailed breakdown of the differences between ethnic minority groups was not identified in the literature searches, according to a combined analysis of Annual Population Survey data from 2016-18 and Welsh Index of Multiple Deprivation data from 2019, ethnic minority people are more than twice as likely to live in the most deprived 10% of small areas compared to people from a White background, with 35% of people from a Black background living in the most deprived 10% of small areas (Welsh Government, 2020d). In the statistical article *Coronavirus (COVID-19) and the Black, Asian and Minority Ethnic (BAME) Population in Wales* (Welsh Government, 2020a) it is reported that an ONS analysis<sup>28</sup> found that the most deprived areas of Wales had a COVID-19 mortality rate in March and April 2020 that was almost twice as high as the mortality rate of the least deprived areas of Wales (Welsh Government, 2020a). It further notes that while controlling for socioeconomic factors and household composition provides part of the explanation for the disparity in mortality rates, there is still a part of the difference which remains unexplained. However, further statistical analysis of mortality data carried out in 2021 by the ONS found that adjusting for such factors substantially reduced excess COVID-19 mortality risk for most ethnic groups, with the exception of Black African men and women, for whom the mortality risk is reduced but not eliminated.<sup>29</sup> This suggests that socioeconomic factors explain the disparity in mortality rate for most ethnic groups, although for those of Black African descent, while much of the mortality risk for this group will also be explained by socioeconomic factors, there may also be unidentified factors accounting for some of the COVID-19 mortality risk (ONS, 2021b).

4.37 A comparative study, *Greater risk of severe COVID-19 in Black, Asian and Minority Ethnic populations is not explained by cardiometabolic, socioeconomic or behavioural factors, or by 25(OH)-vitamin D status: study of 1326 cases from the UK Biobank* (2020), by Raisi-Esbabragh et al., also presents evidence that deprivation associated factors including overcrowding were independently associated with greater risk of COVID-19 in the UK. The disparities of COVID-19 seen in different ethnic groups was not adequately explained by socioeconomic factors, but was also

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<sup>28</sup> [Office for National Statistics \(2020\) Coronavirus \(COVID-19\) related deaths by ethnic group, England and Wales: 2 March 2020 to 10 April 2020. ONS, Newport](#)

<sup>29</sup> [Office for National Statistics \(2021\) Updating ethnic contrasts in deaths involving the coronavirus \(COVID-19\), England: 24 January 2020 to 31 March 2021. ONS, Newport](#)

not adequately explained by cardiometabolic factors or vitamin D deficiency. The authors suggest that further investigation into drivers for the discrepancies should be prioritised.

4.38 In the data analysis paper, *COVID-19 and Ethnic Inequalities in England and Wales* (2020), published in *Fiscal Studies*, Lucinda Platt and Ross Warwick analysed mortality and case data alongside pre-pandemic labour force data to investigate relative vulnerability of different ethnic groups; the authors found that differences in underlying health conditions and differences in occupational exposure may play a role in differences in mortality rates between groups; overcrowding is noted to make self-isolation much more difficult and to increase opportunities for in-household transmission. However, the authors question the importance of overcrowding, noting that those of Black Caribbean descent have lower rates of overcrowding but very high mortality rates, while those of Bangladeshi descent are the most overcrowded ethnic group but have much lower mortality rates (Platt and Warwick, 2020).

4.39 In the research report *Ethnic Inequalities in COVID-19 mortality: a consequence of persistent racism* (2021), James Nazroo and Laia Bécares also explore ethnic inequalities in deaths from COVID-19. They look at ONS data showing that local authority risk of COVID-19 mortality is strongly positively correlated to the proportion of the population who are from an ethnic minority group. They argue that the increased risk faced by ethnic minority groups is a result of the underlying socioeconomic inequalities faced by ethnic minority groups, including overcrowded and poor quality housing, and that these inequalities are shaped by structural and institutional racism. They argue that the common explanation that ethnic inequalities in COVID-19 outcomes might be due to either biological (in particular Vitamin D deficiency) or cultural differences rather than socioeconomic and environmental circumstances is unevidenced and uncritical:

More likely than having a shared genetic or biological predisposition is that some ethnic minority groups live in disinvested neighbourhoods with high levels of pollution and concentrated poverty, with insecure and underpaid employment, and in overcrowded conditions with substandard levels of housing; that these socioeconomic, housing and environmental factors are shaped by institutional and structural racism; and that

discrimination is deeply embedded in the daily lives of people from these groups. (Nazroo and Bécarea, 2021)

4.40 Nazroo and Bécarea (2021) are supported in their arguments by much of the evidence identified in this literature review. For instance, Ali Cheshmehzangi's study *Vulnerability of the UK's Black Asian and Minority Ethnic communities during COVID-19: The review of public health and socio-economic inequalities* (2021) published in the *Journal of Human Behavior in the Social Environment*, provides a detailed analysis of the main reasons why ethnic minority communities are impacted more by the COVID-19 pandemic. The study focuses on public health inequalities, socioeconomic inequalities, and disproportionate poverty in the UK, analysing the up-to-date conditions of COVID-19 in the UK against the available governmental data from 2018, 2019 and 2020 on ethnic minority communities, based on three key areas of occupational risks, household conditions, and poverty rates. The study provides more evidence that supports existing literature on ethnic minority communities affected by COVID-19 (Cheshmehzangi, 2021).

4.41 The research paper *How does vulnerability to COVID-19 vary between communities in England? Developing a Small Area Vulnerability Index (SAVI)* published by Daras et al. in the *Journal of Epidemiology and Community Health* (2021) identified four population level factors independently associated with age-adjusted COVID-19 mortality rates in small areas of England; these were the proportion of the population: living in overcrowded housing; admitted to hospital in the last five years with a long-term health condition; from an ethnic minority background; and living in care homes. An association identified in the study between income deprivation and COVID-19 mortality can be explained by the prevalence of long-term conditions and overcrowded housing, both of which are strongly correlated with income deprivation (Daras et al., 2021). Another research paper published in *Nature Communications* by Davies et al., *Community factors and excess mortality in first wave of the COVID-19 pandemic in England* (2021) used statistical modelling to characterise community vulnerability to COVID-19 related mortality. The results of the analysis are very similar to those reported by Daras et al. (2021). Community factors which increase vulnerability were found to be: high density of care homes; high proportion of residents on income support; high proportion of residents living in overcrowded households, and high proportion of residents with non-white ethnicity (Davies et al.,

2021). Again, these original research articles add to the evidence that socioeconomic factors are the main explanation for the discrepancies in COVID-19 impacts between ethnic minority groups and White British groups.

4.42 The Scientific Pandemic Influenza Group on Behaviours and the Environmental and Modelling Group (SPI-B & EMG) in *Evidence Review for Ministry of Housing, Communities and Local Government Housing Impacts Paper* (2020), a review of the literature surrounding how transmission of COVID-19 is happening in households, found that the evidence suggests that overcrowding within homes is a driver for infection. Overcrowded housing leads to increased risk of droplet and air transmission, and additionally shared spaces have high potential for contact transmission and this is exacerbated in overcrowded conditions (SPI-B & EMG, 2020). Both SPI-B & EMG (2020) and an analysis of ONS data from Nathaniel Barker in the online magazine Inside Housing, *The housing pandemic: four graphs showing the link between COVID-19 deaths and the housing crisis* (2020) demonstrate a clear correlation between Covid 19 death rates and housing overcrowding in England, showing a strong indication that areas with higher rates of housing overcrowding have the highest death rates, with Newham in London having both the highest rates of housing overcrowding (25.2%) in England and the highest death rates per 100,000 (144.3) (SPI-B & EMG, 2020, Barker, 2020).

4.43 Barker (2020) speculates that there are plausible reasons why overcrowding could contribute to transmission and outcomes: it is harder to self-isolate in overcrowded households; overcrowding is also more likely in lower income households and multi-generational households (which are more likely to have persons residing who are over 75, another risk factor for poor COVID-19 outcomes (SPI-B & EMG, 2020)) and posits that overcrowding may contribute to the over-representation of people from ethnic minority backgrounds among victims of COVID-19. In the Welsh Government's *First Minister's BAME COVID-19 Advisory Group: Report of the Socioeconomic Subgroup* (2020c), the report notes that COVID-19 deaths are linked to overcrowded housing, as well as houses of multiple occupation. It further suggests that overcrowding in ethnic minority households may be related to families in these groups often being larger than average families (Welsh Government, 2020b).

- 4.44 In *Accounting for the Variation in the Confirmed COVID-19 Caseload across England: An analysis of the role of multi-generation households, London and time* (2020), a statistical analysis for the New Policy Institute, Peter Kenway and Josh Holden find that the proportion of households in a local authority area where a person over 70 shares with adults of working age is a significant factor in accounting for the variation in numbers of COVID-19 cases across England (Kenway and Holden, 2020). Discussing this association further in another report to the New Policy Institute, *People and places in London most vulnerable to COVID-19 and its social and economic consequences* (2020), Kenway et al. argue that although multigenerational households can reflect resident choice and support provision of care between generations, high rates of such households in a specific area may indicate that access to appropriate housing is limited by high demand and/or high cost, and that even if a multigenerational arrangement is wanted, people of all ages living in overcrowded conditions should be viewed as vulnerable to COVID-19 (Kenway et al., 2020).
- 4.45 *Placing health equity at the heart of the COVID-19 sustainable response and recovery: Building prosperous lives for all in Wales* (2021) a report by Dyakova et al. and published by the World Health Organisation Collaborating Centre at Public Health Wales, focuses on the effects on of the pandemic on a range of socioeconomic issues, and frames Wales as a country committed to tackling health inequality. The report notes that COVID-19 measures such as lockdown has had harmful impacts on living conditions for many groups, including increased exposure to housing overcrowding. Dyakova (2021) particularly notes that Gypsy, Roma and Traveller communities in Wales have experienced specific risks and vulnerabilities to COVID-19 due to poor living conditions including overcrowding, which make adherence to social distancing, isolation and hygiene containment measures more difficult (Dyakova, 2021).
- 4.46 In *First Minister's BAME COVID-19 Advisory Group: Report of the Socioeconomic Subgroup*, the report (Welsh Government, 2020c) notes that asylum seeker accommodation has serious quality issues and people are often forced to share rooms; the report recommends investigations into infection rates for asylum seekers, as evidence for this population is scarce, as well as working to develop more move-on accommodation options for refugees leaving Home Office accommodation.

Dyakova (2021) echoes the *Report of the Socioeconomic Subgroup* in recognising an increased risk of exposure to COVID-19 for these groups due in part to overcrowding.

4.47 The Report of the Socioeconomic Subgroup also notes that young ethnic minority people who live in overcrowded households are additionally impacted by school closures, with less space to work and play than non-overcrowded students (Welsh Government, 2020b). In an analysis of Natural England survey data the ONS shows that ethnic minority people are less likely to have access to a garden compared to White people in England and this remains true across all ethnic minority groups and for all regions of England (ONS, 2020b). While the ONS analysis does not discuss overcrowding or COVID-19, a lack of access to outside space in the context of overcrowded households during lockdown may also be a factor in higher rates of mortality and morbidity amongst certain groups (House of Commons Women and Equalities Committee, 2020).

## 5. Conclusions

- 5.1 This literature review aimed to identify evidence around overcrowded housing in relation to Black, Asian and Minority Ethnic communities. Findings should not be considered exhaustive. The review identified evidence of varying quality, and there was a lack of primary, high quality, recent evidence related to Wales. Due to the thematic, non-exhaustive nature of this review, policy recommendations are not given here. Recommendations regarding avenues of future research are noted below.
- 5.2 While it is difficult to unpick the causal relationships between socio-economic and systemic disadvantage, ethnicity and overcrowding, the evidence suggests some ethnic minority groups are disproportionately affected by overcrowding, across all age groups and in both rural and urban settings, and are also disproportionately affected by COVID-19. Gypsy, Roma and Traveller communities appear to be particularly severely affected by overcrowding and its associated impacts. Evidence pointed to socioeconomic, systemic and structural factors playing a part in overcrowding disproportionately affecting ethnic minority households.
- 5.3 There is a need for high quality evidence around the impacts of overcrowding on ethnic minority groups in Wales. This particularly applies to Gypsy, Roma and Traveller communities. A Race Disparity Unit is currently being established in Welsh Government, and part of the remit of the Unit is to improve data collection and work with communities to restore trust in government data collection and reporting. This may help address data gaps for this particular group.
- 5.4 While some evidence was identified regarding drivers of overcrowding, this was sparse. Further research into the drivers of overcrowding in ethnic minority communities in Wales would be needed to better understand the impact of overcrowding on ethnic minority communities..
- 5.5 Although this review has at times touched on evidence of how ethnicity intersects with age in the context of overcrowding, particularly in regard to impacts of the COVID-19 pandemic, further work should explore in greater depth how overcrowding and ethnicity intersect with other protected characteristics.

- 5.6 Much of the evidence identified in the literature searches was based on 2011 Census data. Preliminary releases of the 2021 Census data will begin to be published in 2022, and these data will provide more up-to-date evidence around housing and overcrowding. The release of these data should be utilised to address gaps in the evidence around how overcrowding affects specific ethnic minority groups to differing degrees in Wales.
- 5.7 The evidence appears clear that COVID-19 disproportionately impacts ethnic minorities. More generally, evidence was identified suggesting that there is a more general link between overcrowding and poor health outcomes.
- 5.8 While the correlation between overcrowding and the impact of COVID-19 appears established, research is still needed to explore the experiences of ethnic minority groups during the COVID-19 pandemic. There is also scope for more research into the drivers of discrepancies in COVID-19 impacts on ethnic minority groups as the evidence appears to show that they may not yet be fully explained.



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Singh, A. Daniel, L. Baker, E. and Bentley, R. (2019) "Housing Disadvantage and Poor Mental Health: A Systematic Review" *American Journal of Preventive Medicine* 57:2, 262.

Smith, B. and Mackie, P, (2021) *Housing in Wales: evidence for Welsh Government 2021-26*. UK Collaborative Centre for Housing Evidence (CaCHE), Glasgow.

The Traveller Movement (2016) *Gypsy and Traveller health: accommodation and living environment*. UK Government Department of Health and Social Care, London.

Watson, I. MacKenzie, F. Woodfine, L. and Azam, S. (2019) *Making a Difference. Housing and Health: A Case for Investment*. Public Health Wales, Cardiff.

Welsh Government (2014) *Indicator data by Local Authority - Overcrowded Households*. Welsh Government, Cardiff.

Welsh Government Statistical Bulletin (2020) *Dwelling Stock Estimates for Wales*. Welsh Government, Cardiff.

Welsh Government (2020a) *Coronavirus (COVID-19) and the Black, Asian and Minority Ethnic (BAME) Population in Wales*. Welsh Government, Cardiff.

Welsh Government (2020b) *Welsh Index of Multiple Deprivation (full Index update with ranks): 2019*. Welsh Government, Cardiff.

Welsh Government (2020c) *First Minister's BAME COVID-19 Advisory Group: Report of the Socioeconomic Subgroup Chair*. Welsh Government, Cardiff.

Welsh Government (2020d) *Analysis of protected characteristics by area deprivation: 2017 to 2019*. Welsh Government, Cardiff.

World Health Organization (2018) *WHO housing and health guidelines*. World Health Organization, Geneva.

## Annex A: Matrix of All Search Results

Author	Title	Publication	Year of Publ.	Publ. type
Ahmad, K, Erqou, S and Wu, W.C et al	Association of poor housing conditions with COVID-19 incidence and mortality across US counties	PLoS One 2020 Nov 2;15(11)	2020	Journal
Ahmed, R and Jamal, O et al	Racial equity in the fight against COVID-19: a qualitative study examining the importance of collecting race-based data in the Canadian context	Tropical Diseases Travel Medicine and Vaccines, June 2021 Volume:7, Issue: 1 Article Number: 15	2021	Journal
Allen, J, Davies, R, Gibbon, R, and Jones, M. A.	Ethnicity and Health in Wales	Public Health Wales, May 2015	2015	Report
Barker, N	The housing pandemic: four graphs showing the link between COVID-19 deaths and the housing crisis	Insight, Inside Housing, 29/5/20	2020	Article
Barton, C & Wilson, W	Overcrowded housing (England)	House of Commons Library Service, 14/6/21	2021	Briefing
Centre for Ageing Better & The King's Fund	Homes, health and COVID-19	Centre for Ageing Better, 2020	2020	Report
Cerami, C, Popkin-Hall, Z.R and Rapp, T et al	Household transmission of SARS-CoV-2 in the United States: living density, viral load, and disproportionate impact on communities of color	Clin Infect Dis . 2021 Aug 12 Online ahead of print	2021	Journal

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Chen, D.T.H and Wang, Y. J	Inequality-Related Health and Social Factors and Their Impact on Well-Being during the COVID-19 Pandemic: Findings from a National Survey in the UK	Int J Environ Res Public Health. 2021 Feb; 18(3): 1014.	2021	Journal
Chen, J.T and Krieger, N	Revealing the Unequal Burden of COVID-19 by Income, Race/Ethnicity, and Household Crowding: US County Versus Zip Code Analyses	Journal of Public Health Management and Practice, Jan-Feb 2021; 27 Page: S43-S56	2021	Journal
Cheshmehzangi, A	Vulnerability of the UK's BAME communities during COVID-19: The review of public health and socio-economic inequalities	Journal of Human Behavior in the Social Environment, Feb 2021 [Early Access]	2021	Journal
Commission on Race and Ethnic Disparities	Commission on Race and Ethnic Disparities: The Report	Commission on Race and Ethnic Disparities, March 2021	2021	Report
Cromer, S.J, Lakhani, C.M and Wexler, D.J et al	Geospatial Analysis of Individual and Community-Level Socioeconomic Factors Impacting SARS-CoV-2 Prevalence and Outcomes	medRxiv, 2020 Sep 30;. Preprint	2020	Journal
Daras, K, et al	How does vulnerability to COVID-19 vary between communities in England? Developing a Small Area Vulnerability Index (SAVI)	Journal of Epidemiology and Community Health, early cite 4 February 2021, Online only	2021	Journal
Davies, B, Parkes, B and Brandon L, et al	Community factors and excess mortality in first wave of the COVID-19 pandemic in England	Nature Communications, June 2021 Volume: 12, Issue: 1 Article Number: 3755	2021	Journal
de Noronha, N	Ethnic disadvantage in the housing market: Evidence from the 2011 census	Race Equality Foundation, April 2015	2015	Briefing

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
de Noronha, N	Housing and the older ethnic minority population in England	Race Equality Foundation, February 2019	2019	Report
de Noronha, N	Housing Briefing Paper	Race Equality Foundation, April 2021	2021	Briefing
Dickerson, J and Kelly, B et al	Experiences of lockdown during the COVID-19 pandemic: descriptive findings from a survey of families in the Born in Bradford study	Wellcome open research Vol. 5, (2020): 228		
Dyakova, M et al. Couzens, L and Allen, J et al	Placing health equity at the heart of the COVID-19 sustainable response and recovery: Building prosperous lives for all in Wales	Public Health Wales, World Health Organization (WHO) Collaborating Centre on Investment for Health & Wellbeing, 2021	2021	Report
Elahi, F and Khan, O	Ethnic Inequalities in London	Runnymede Trust, 2016	2016	Report
Equality & Human Rights Commission	Healing a divided Britain: the need for a comprehensive race equality strategy	Equality & Human Rights Commission, August 2016	2016	Report
Equality, Local Government and Communities Committee	Into sharp relief: inequality and the pandemic Report	Equality, Local Government and Communities Committee, August 2020	2020	Report
Federgruen, A and Naha, S	Crowding Effects Dominate Demographic Attributes in COVID-19 Cases	International Journal of Infectious Diseases Jan 2021 Volume: 102 pgs: 509-516	2021	Journal
Finney, N and Harries, B	Understanding ethnic inequalities in housing: Analysis of the 2011 census	Race Equality Foundation, December 2013	2013	Briefing



<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Gaglioti, A.H, Li, C,H and Douglas, M.D et al	Population-Level Disparities in COVID-19: Measuring the Independent Association of the Proportion of Black Population on COVID-19 Cases and Deaths in US Counties	J Public Health Manag Pract , 2021 May-Jun 01;27(3):268-277.	2021	Journal
Gaskell, K.M; Johnson, M, and Gould V et al	SARS-CoV-2 seroprevalence in a strictly-Orthodox Jewish community in the UK: A retrospective cohort study	Lancet Regional Health-Europe, July 2021 Volume: 6 Article Number: 100127	2021	Journal
Ghosh, A. K, Venkatraman, S. and Soroka, O. et al	Association between overcrowded households, multigenerational households, and COVID-19: a cohort study	medRxiv .2021 Jun 22;2021.	2021	Journal
Greenfields, M and Brindley, M	Impact of insecure accommodation and the living environment on Gypsies' and Travellers' health	Inclusion Health, January 2016	2016	Report
Hall, S and McIntosh, K	Intersecting inequalities. The impact of austerity on black and minority ethnic women in the UK	Women's Budget Group and Runnymede Trust & Coventry Women's Voices	2017	Report
Haque, Z, Becares, L, and Treloar, N	Over-Exposed and Under-Protected. The Devastating Impact of COVID-19 on Black and Minority Ethnic Communities in Great Britain	Runnymede Trust, June 2020	2020	Report
Harris, R	Exploring the neighbourhood-level correlates of COVID-19 deaths in London using a difference across spatial boundaries method	Health & Place, November 2020 Volume: 66 Article Number: 102446	2020	Journal

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Holden, J and Kenway, P	Accounting for the variation in the confirmed COVID-19 caseload across England: an analysis of the role of multi-generation households, London and time	New Policy Institute, 2020	2020	Report
Health Foundation	Unequal pandemic, fairer recovery: the COVID-19 impact inquiry report	Health Foundation, July 2021	2021	Report
House of Commons Women and Equalities Committee	Tackling inequalities faced by Gypsy, Roma and Traveller communities	House of Commons Women and Equalities Committee, 2019	2019	Official
House of Commons, Women and Equalities Committee	Unequal impact? Coronavirus and BAME people	House of Commons, Women and Equalities Committee, December 2020	2020	Report
Institute of Health Equity	Ethnicity and mortality from COVID 19	Institute of Health Equity, 2021	2021	Briefing
Institute of Race Relations	Inequality, housing and employment statistics	Institute of Race Relations	[2015]	Briefing
Joelsson, T and Ladru, D.E et al	Cracks in the well-plastered facade of the Nordic model: reflections on inequalities in housing and mobility in (post-)coronavirus pandemic Sweden	Children's Geographies, 2021 DOI: 10.1080/14733285.2021.1909706	2021	Journal
Jones, A	Black and minority ethnic communities' experience of overcrowding	Race Equality Foundation, August 2010	2010	Briefing
Kaliani, L	Addressing race inequality in Scotland: the way forward	Scottish Government, December 2017	2017	Government

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Kamis, C and Stolte, A et al	Overcrowding and COVID-19 mortality across U.S. counties: Are disparities growing over time?	SSM - population health Vol. 15, (September 2021)	2021	Journal
Kenway, P and Street, C et al	People and places in London most vulnerable to COVID-19 and its social and economic consequences	New Policy Institute, October 2020	2020	Report
Kulakiewicz, A and Cromarty, H	Household overcrowding and the COVID-19 outbreak	House of Commons Library, March 2021	2021	Briefing
Lee, W, Kim, H and Choi, H.M et al	Urban environments and COVID-19 in three Eastern states of the United States	Science of The Total Environment Volume 779, 20 July 2021, 146334	2021	Journal
Lewis, P	Gypsy, Roma and Traveller communities: impact of Brexit and COVID-19	House of Lords Library Service, July 2021	2021	Briefing
Maguire, R	COVID-19 and wellbeing inequalities: housing	What Works Centre for Wellbeing, 2021	2021	Report
Mamluk, L and Jones, T	The impact of COVID-19 on black, Asian and minority ethnic communities	NIHR Applied Research Collaboration, 2020	2020	Review
Marmot, M Allen, J, and Boyce, T	Health equity in England: the Marmot Review 10 years on	Institute of Health Equity, 2020	2020	Report
Martin, C. A	Socio-demographic heterogeneity in the prevalence of COVID-19 during lockdown is associated with ethnicity and household size: Results from an observational cohort study	EClinicalMedicine, 17/7/20	2020	Journal

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Mehdipanah, R	Housing as a Determinant of COVID-19 Inequities	American Journal of Public Health, Vol. 110, Iss. 9, (Sep 2020): 1369-1370.	2020	Journal
Ministry of Housing, Communities and Local Government	Ethnicity facts and figures: Overcrowded households	Ministry of Housing, Communities and Local Government, 9/9/2020	2020	Government
National Housing Federation	Housing issues during lockdown: health, space and overcrowding	National Housing Federation, July 2020	2020	Briefing
National Housing Federation	People in housing need	National Housing Federation, 15/9/20	2020	Report
Nazroo, J and Bécares, L	Ethnic inequalities in COVID-19 mortality: A consequence of persistent racism	Runnymede Trust, January 2021	2021	Briefing
Office for National Statistics	2011 Census analysis: general health in overcrowded and under-occupied households in England and Wales, 2011	Office for National Statistics, 19/2/2015	2015	Government
Parliamentary Office of Science and Technology	Impact of COVID-19 on different ethnic minority groups	Parliamentary Office of Science and Technology, 19/10/2020	2020	Briefing
Platt, L and Warwick, R	COVID-19 and Ethnic Inequalities in England and Wales	Fiscal Studies Volume 2020 41, Issue 2 p. 259-289	2020	Journal
Price, J	Improving Race Equality in Housing and Accommodation	Wales Centre for Public Policy, March 2021	2021	Report
Public Health England	Local action on health inequalities Understanding and reducing ethnic inequalities in health	Public Health England, 2018	2018	Report
Public Health England	Beyond the data: Understanding the impact of COVID-19 on BAME groups	Public Health England, 16/6/2020	2020	Report

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Raisi-Estabragh, Z, McCracken, C and Bethell, M.S et al	Greater risk of severe COVID-19 in Black, Asian and Minority Ethnic populations is not explained by cardiometabolic, socioeconomic or behavioural factors, or by 25(OH)-vitamin D status: study of 1326 cases from the UK Biobank	Journal of Public Health, Sept 2020 Volume:42 Issue:3 pgs 451-460	2020	Journal
Rhodes, D and Rugg J	Vulnerability amongst Low-Income Households in the Private Rented Sector in England	Centre for Housing Policy, 2018	2018	Report
SAGE: The Independent Scientific Advisory Group for Emergencies (SAGE)	Disparities in the impact of COVID-19 in Black and Minority Ethnic populations: review of the evidence and recommendations for action	The Independent Scientific Advisory Group for Emergencies (SAGE), 3/7/2020	2020	Review
Samuel, L. J, Gaskin, D.J, and Trujillo, A.J	Race, ethnicity, poverty and the social determinants of the coronavirus divide: US county-level disparities and risk factors	BMC Public Health, June 2021 Volume 21; Issue: 1 Article Number: 1250	2021	Journal
Scientific Pandemic Influenza Group on Behaviours (SPI-B) and the Environmental and Modelling group (EMG)	SPI-B Evidence Review for MHCLG Housing Impacts Paper	Scientific Pandemic Influenza Group on Behaviours (SPI-B) and the Environmental and Modelling group (EMG), September 2020	2020	Review
Scottish Government	The impacts of COVID-19 on equality in Scotland	Scottish Government, September 20	2020	Government
Scottish Government	Evidence review: accommodation needs of gypsy/travellers	Scottish Government, October 2020	2020	Government
Scottish Government	Housing needs of minority ethnic groups: Evidence review	Scottish Government, January 2021	2021	Government

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Senedd Research Service	'Wide scale, systemic changes' needed to address racism and race inequality in Wales	Senedd Research Service, 27/5/21	2021	Briefing
Shankley, W. and Finney, N.	Ethnic minorities in the housing market	in: Race and Inequality in the UK: State of the Nation. Bristol: Policy Press.	2020	Book
Shelter Cymru	Putting Good Homes At The Core Of The Post-Covid Recovery Plan: A Discussion Paper By Homes For All Cymru For The Cross Party Housing Group	Shelter Cymru, June 2020	2020	Briefing
Shelter Cymru	Briefing Paper: Life in Lockdown in Wales	Shelter Cymru, November 2020	2020	Briefing
Shelter	Briefing: The social housing overcrowding crisis	Shelter, July 2021	2021	Briefing
Singh, A and Daniel, L et al	Housing Disadvantage and Poor Mental Health: A Systematic Review	American Journal of Preventive Medicine; New York Vol. 57, Iss. 2, (Aug 2019): 262	2019	Review
Soltan, M, Crowley, L.E and Melville, C.R et al	To what extent are social determinants of health, including household overcrowding, air pollution and housing quality deprivation, modulators of presentation, ITU admission and outcomes among patients with SARS-COV-2 infection in an urban catchment area in Birmingham, United Kingdom?	Thorax 2021;76:A237-A238.	2021	Journal

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
Soltan, M. and Varney, J et al	COVID-19 admission risk tools should include multiethnic age structures, multimorbidity and deprivation metrics for air pollution, household overcrowding, housing quality and adult skills	MJ Open Respiratory Research 2021;8 (1)	2021	Journal
Tinson, A and Clair, A	Better housing is crucial for our health and the COVID-19 recovery	The Health Foundation, 28/12/20	2020	Briefing
UCL Institute of Health Equity	Build back fairer : The COVID-19 Marmot review	UCL Institute of Health Equity, December 2020	2020	Report
UK Collaborative Centre for Housing Evidence	Housing in Wales: evidence for Welsh Government 2021-26	UK Collaborative Centre for Housing Evidence, April 2021	2021	Report
Vargas-Silva, C & Fernández-Reino, M	Migrants and Housing in the UK: Experiences and Impacts	The Migrant Observatory, University of Oxford, 24/10/19	2019	Briefing
Villela, D and Antunes, M	Household crowding hampers mitigating the transmission of SARS-CoV-2.	Revista da Sociedade Brasileira de Medicina Tropical Vol. 54, (2021):	2021	Journal
VoPham, T, Weaver, M, Adamkiewicz, G and Hart, J	Social Distancing Associations with COVID-19 Infection and Mortality Are Modified by Crowding and Socioeconomic Status	Int J Environ Res Public Health 2021 Apr 28;18(9):4680.	2021	Journal
Watson, I, and MacKenzie, F, et al	Making a Difference Housing and Health: A Case for Investment	Public Health Wales, 2019	2019	Report
Welsh Government	First Minister's BAME COVID-19 advisory group report of the socioeconomic subgroup	Black, Asian and Minority Ethnic (BAME) Advisory Group, Welsh Government, June 2020	2020a	Government
Welsh Government	Coronavirus (COVID-19) and the Black, Asian and Minority Ethnic (BAME) population in Wales	Welsh Government, June 2020	2020b	Government

<b>Author</b>	<b>Title</b>	<b>Publication</b>	<b>Year of Publ.</b>	<b>Publ. type</b>
World Health Organization	WHO housing and health guidelines	World Health Organization, 2018	2018	Review



## Annex B: Search Strategies

Source	Search Strategies
<p><b><u>Databases</u></b></p>	
<p><a href="#">Social Care Online</a></p>	<p><b><u>Subject Headings</u></b></p> <ol style="list-style-type: none"> <li>1. Housing Conditions AND Black and Minority Ethnic People</li> <li>2. Housing Conditions AND African Caribbean People</li> <li>3. Housing Conditions AND (Asian People OR South Asian People OR Chinese People)</li> <li>4. Housing Conditions AND Jewish People</li> <li>5. Housing Conditions AND (Gypsies OR Travellers)</li> <li>6. Housing Conditions AND COVID-19</li> </ol> <p><b><u>Keywords</u></b> (all fields)</p> <ol style="list-style-type: none"> <li>1. (overcrowding OR overcrowded OR crowded OR over-crowded OR over-crowding OR crowding OR overcrowdedness OR over-crowdedness) AND (housing OR house OR home OR household OR accommodation) AND (race OR ethnic OR ethnicity OR minority OR minorities OR BME OR BAME)</li> <li>2. (overcrowding OR overcrowded OR crowded OR over-crowded OR over-crowding OR crowding OR overcrowdedness OR over-crowdedness ) AND (housing OR house OR home OR household OR accommodation) AND (Black OR Asian OR African OR Caribbean OR Indian OR Pakistani OR Bangladeshi OR Chinese OR Arab OR Sikh OR Jewish OR Somali)</li> <li>3. (overcrowding OR overcrowded OR crowded OR over-crowded OR over-crowding OR crowding OR overcrowdedness OR over-crowdedness) AND (housing OR house OR home OR household OR accommodation) AND (Roma OR gypsies OR travellers)</li> <li>4. (overcrowding OR overcrowded OR crowded OR over-crowded OR over-crowding OR crowding OR overcrowdedness OR over-crowdedness) AND (housing OR house OR home OR household OR accommodation) AND (COVID-19 OR coronavirus)</li> </ol>

<a href="#">NICE Evidence</a>	<u>Keywords</u> - As above <u>Filter:</u> Secondary Evidence; Primary Research
<a href="#">Applied Social Sciences Index &amp; Abstracts (ASSIA)</a>	<u>Subject Headings</u> 1. (Overcrowding OR Crowding) AND Housing AND (Minority Groups OR Minority & Ethnic Groups OR Ethnic Groups OR Ethnicity)  2. (Overcrowding OR Crowding) AND Housing AND (Black People OR Asian People OR Chinese People OR Somali People OR Bangladeshi People OR African People OR Caribbean People OR Indian People OR Pakistani People OR Arab Communities OR Sikhs OR Jewish Communities)  3. (Overcrowding OR Crowding) AND Housing AND (Roma OR Gypsies OR Travellers)  3. (Overcrowding OR Crowding) AND Housing AND COVID-19  <u>Keywords</u> <u>Limits:</u> Peer reviewed; all fields except full-text 1. (overcrowd* OR over-crowd* OR crowded OR crowding) AND (hous* OR home* OR accommodation) AND (race OR ethnic* OR minorit* OR BME OR BAME)  2. (overcrowd* OR over-crowd* OR crowded OR crowding) AND (hous* OR home* OR accommodation) AND (black OR Asian OR African OR Caribbean OR Indian OR Pakistani OR Bangladeshi OR Chinese OR Arab OR Sikh OR Jewish OR Somali)  3. (overcrowd* OR over-crowd* OR crowded OR crowding) AND (hous* OR home* OR accommodation) AND (Roma OR gyps* OR traveller*)  4. (overcrowd* OR over-crowd* OR crowded OR crowding) AND (hous* OR home* OR accommodation) AND (COVID-19 OR coronavirus)
<a href="#">Web of Science</a>	<u>Keywords</u> - As above <u>Limit:</u> Searched TOPIC (i.e Title/Abstract/Keywords)

<a href="#">Health Management Information Consortium (HMIC)</a>	<u>Keywords</u> - As above Searched all fields
<a href="#">Social Science Premium Collection</a>	<u>Keywords</u> - As above <u>Limit</u> : Peer reviewed; all fields except full-text
<a href="#">Medline</a>	<u>Keywords</u> - As above <u>Limit</u> : All fields except full-text
<a href="#">OECD i-Library</a>	<u>Keywords</u> - As above <u>Limit</u> : Title / Abstract
<b>Websites</b>	
<a href="#">Wales Centre for Public Policy</a>	1. Browsed publications <u>Topic filters</u> : Housing; Communities; Coronavirus Pandemic 2. Searched website <u>Keywords</u> : overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness
Welsh Government	1. Browsed research reports. <u>Topic filter</u> : Housing; Equality; COVID-19 2. Searched publications / research & statistics <u>Keywords</u> : overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness
Senedd Cymru	1. Browsed research reports and laid documents <u>Topic filter</u> : Housing; Equality & Human Rights; COVID-19 2. Searched research & laid documents <u>Keywords</u> : overcrowded; overcrowding; crowded; crowding; overcrowdedness
<a href="#">Tai Pawb</a>	1. Browsed resources <u>Topic filter</u> : Race, Ethnicity and Housing; Coronavirus [BAME people & communities] 2. Searched website <u>Keywords</u> : overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness; COVID-19; coronavirus
<a href="#">Bevan Foundation</a>	1. Browsed reports <u>Topic filter</u> : People

	<p>2. Searched website  <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness</p>
<a href="#">Public Health Wales</a>	<p>1. Browsed reports  <u>Topic filter:</u> Housing &amp; Health  2. Searched website  <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowded; over-crowding; crowding; overcrowdedness; over-crowdedness</p>
<a href="#">Scottish Parliament Information Centre (SPICe)</a>	<p>1. Browsed research briefings.  <u>Topic Filter:</u> Housing &amp; Planning; Equalities  2. Searched research briefings and Committee Reports  <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness</p>
Scottish Government	<p>1. Browsed Independent reports and Research &amp; Analysis publications  <u>Topic Filter:</u> Housing  2. Searched Independent reports and Research &amp; Analysis publications  <u>Topic Filters</u> Equality &amp; Rights; Coronavirus in Scotland  <u>Keywords:</u> housing / house(s) / home(s) / accommodation  3. Searched all publications  <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness</p>
<a href="#">House of Commons Library Service</a>	<p>1. Browsed research briefings  <u>Topic filter:</u> Housing; Coronavirus  2. Searched House of Commons Library, Lords Library and POST  <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness</p>
<a href="#">UK government</a>	<p>1. Browsed research reports  <u>Topic Filter:</u> Housing; Society &amp; Culture / Equality  2. Searched all research and statistics  <u>Keywords:</u> overcrowded; overcrowding; crowded; crowding; overcrowdedness</p>

<a href="#">EPPI Centre</a>	Browsed systematic reviews
<a href="#">Campbell Collaboration</a>	1. Browsed reviews, policy briefs <u>Topic filter:</u> Social Welfare 2. Searched all review & policy briefs <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness
<a href="#">Cochrane Library</a>	1. Browsed systematic reviews <u>Topic filter:</u> Public Health 2. Searched all reviews <u>Keywords:</u> overcrowded; overcrowding; crowded; over-crowding; over-crowded; crowding; overcrowdedness; over-crowdedness
<a href="#">Race Equality Foundation</a>	Browsed research reports and briefings <u>Topic filter:</u> Housing
<a href="#">Runnymede Trust</a>	Searched publications <u>Keywords:</u> overcrowded; overcrowding; crowded; crowding; over-crowding; over-crowded; overcrowdedness; over-crowdedness; COVID-19; coronavirus
<a href="#">Race Alliance Wales</a>	1. Browsed research & publications 2. Searched website [PDF documents only] <u>Keywords:</u> As above
<a href="#">Race Council Cymru</a>	1. Browsed resources 2. Searched website [PDF documents only] <u>Keywords:</u> As above
<a href="#">Race Equality First</a>	1. Browsed research & publications 2. Searched website [PDF documents only] <u>Keywords:</u> As above
<a href="#">Institute of Race Relations</a>	Browsed briefing papers & reports (UK)

<a href="#">Joseph Rowntree Foundation</a>	<p>1. Browsed reports <u>Topic filters</u>: Housing; Ethnicity</p> <p>2. Searched all reports</p> <p><u>Keywords</u>: overcrowded; overcrowding; crowded; crowding; over-crowding; over-crowded; overcrowdedness; over-crowdedness</p>
<a href="#">Equality &amp; Human Rights Commission</a>	<p>1. Browsed publications</p> <p><u>Topic filters</u>: Housing</p> <p>2. Searched website. <u>Keywords</u>: As above</p>
<a href="#">UK Collaborative Centre for Housing Evidence</a> (Reports only available back to July 2017)	<p>1. Searched publications</p> <p><u>Keywords</u>: As above</p> <p>2. Browsed Publications</p>
<a href="#">Centre for Housing Policy</a>	<p>1. Searched publications</p> <p><u>Keywords</u>: As above</p> <p>2. Browsed Publications</p>
<a href="#">Chartered Institute of Housing</a> (Some publications could not be accessed)	<p>Searched website</p> <p><u>Keywords</u>: As above</p>
<a href="#">Cambridge Centre for Housing &amp; Planning Research</a>	<p>1. Browsed research reports</p> <p><u>Topic filter</u>: Equality &amp; Improving Outcomes; Housing Policy</p> <p>2. Searched website</p> <p><u>Keywords</u>: As above</p>
<a href="#">National Housing Federation</a>	<p>1. Browsed resources</p> <p><u>Filter</u>: briefings; publications; reports</p> <p>2. Searched website</p> <p><u>Keywords</u>: As above</p>
<a href="#">Shelter</a>	<p>1. Browsed policy &amp; research reports</p> <p>2. Searched website</p> <p><u>Keywords</u>: As above</p>
<a href="#">Institute for Health Equity</a>	<p>1. Browsed reports</p> <p><u>Topic Filter</u>: Standards of Living</p> <p>2. Searched all reports</p>

	<u>Keywords:</u> As above
<a href="#">Nat Cen</a>	1. Browsed research reports <u>Topic Filter:</u> Housing; Equality & Diversity 2. Searched website <u>Keywords:</u> As above