

Welsh Government
Consultation – Summary of responses

Proposed indicators for the Welsh Index of Multiple Deprivation 2019

Date of issue: 10 April 2019

Number: WG37273

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

OGL © Crown Copyright Digital ISBN 978-1-78964-885-0

Contact details**For further information:****Social Justice Statistics Team****Welsh Government****Cathays Park****Cardiff****CF10 3NQ****stats.inclusion@gov.wales**

Contents

1. Introduction	4
2. Summary.....	4
2.1 Development of indicator proposals	4
2.2. Consultation engagement	5
2.3. Review of consultation feedback	5
2.4. Current indicator proposals for WIMD 2019 (post-consultation).....	6
3. Overview	8
4. Income	10
5. Employment	14
6. Health.....	16
7. Education.....	22
8. Access to Services	26
9. Housing.....	32
10. Physical Environment.....	39
11. Community Safety	43
12. Weighting.....	45
13. Next Steps	46
Annex 1 - Organisations responding to WIMD consultation.....	48

1. Introduction

The Welsh Index of Multiple Deprivation (WIMD) is the Welsh Government's official measure of relative deprivation for small areas in Wales. It is designed to identify those small areas where there are the highest concentrations of several different types of deprivation. It is a National Statistic and is produced by statisticians at the Welsh Government.

The latest index was published in 2014. Information on WIMD 2014 is available on the [Welsh Government website](#). An updated index will be published in November 2019, where possible using more up-to-date data and new indicators following a review of the available data.

A [consultation](#) on proposed indicators for WIMD 2019 was held between 22 October 2018 and 17 December 2018. The purpose of this consultation was to expose our proposals for indicators to feed into WIMD 2019 to critical review. We consulted at this stage to allow time for consultation responses to be acted upon, where possible, prior to finalising the details for WIMD 2019.

This document provides a summary of the responses to the consultation and outlines recent developments made, including those made in light of consultation responses. It does not repeat the full detail included in the original [consultation](#) document, so readers of this report may find it useful to have that document to hand for reference.

2. Summary

2.1 Development of indicator proposals

In order to develop the indicator proposals, statisticians at the Welsh Government worked with seven separate domain working groups. These groups reviewed indicators that have been included in previous indices and considered potential new indicators which meet the criteria for inclusion in the index. There were also three over-arching groups (a project board, a mainly external advisory group and a steering group) to shape plans more generally for WIMD 2019. Information on the role of the groups and the indicator criteria list can be found in section 4 in our [consultation document](#).

As described in the consultation document, since 2014 there have been many changes to the data sources that could potentially yield indicators for WIMD. In all but one domain we are either being driven to change indicators through strategic developments (such as Universal Credit, and Key Stage 4 school attainment measures) or are planning to exploit new datasets offering measurement of relevant concepts (such as childhood weight, and access to green spaces).

The individual indicators underlying WIMD are the building blocks for the whole index. The significant indicator development work mentioned above led us to propose several improvements to WIMD for 2019, more so than in the last few Index updates.

As some of our proposals aim to take advantage of newly available data, we were unable to provide a fully-formed indicator description in our consultation document. This document provides more detail on some of the newly proposed indicators.

2.2. Consultation engagement

Welsh Government wishes to thank everyone who engaged in the consultation. In total, forty one written responses were received and forty three people took part in our webinars and drop-in session. These sessions included a presentation on the proposals and provided users with an opportunity to ask questions. Our proposals were also shared at various statistics user panel meetings including the Third Sector Statistics User Panel, the Housing Information Group and the Welsh Statistical Liaison Committee. Written responses as well as comments made during our webinars and drop-in session are taken into account in this document.

Responses were received from a range of different organisations including local authorities, health boards, third sector organisations and a number of other public sector organisations. A full list of responding organisations can be found at Annex 1. Individual responses can be viewed on our [consultation page](#). Respondents were not required to answer all questions.

2.3. Review of consultation feedback

All consultation responses have been reviewed and summarised with the views of the domain, advisory and steering groups taken into account. Section 2.4 summarises our current proposed list of indicators in light of consultation feedback and other recent developments.

Sections 3 through to 13 provide an overview of feedback received in response to the consultation questions posed in our consultation document. The eight domain-specific chapters (4 through to 11) follow a similar format covering the topics below within each domain:

- Responses to specific consultation questions
- Summary of indicators for WIMD 2019
- Outstanding issues
- Other indicators to consider for future
- Changes to proposals after consultation or recent work

2.4. Current indicator proposals for WIMD 2019 (post-consultation)

Table 1. Summary of Changes between WIMD 2014 and WIMD 2019

Domain / Indicator	WIMD 2014	WIMD 2019	WIMD 2019: Outstanding development work
Income			
Percentage of population in receipt of income-related benefits and tax credits	Yes	Yes	-
Households with a low income (ONS admin-based income data)	No	No	No longer considering including as self-assessment data is not able to be incorporated by 2019
Employment			
Percentage of working age population in receipt of Employment-Related benefits	Yes	Yes	-
Health			
Low birth weight	Yes	Yes	-
Children who are obese (Reception Class)	No	Yes	-
Cancer incidence	Yes	Yes	-
Diagnosed mental health conditions	No	Yes	GP data access & definition under development
Diagnosed chronic conditions	No	Yes	GP data access & definition under development
Limiting long term illness	Yes	Yes	-
Premature death rate	No	Yes	-
All-cause death rate	Yes	No	-
Education			
On-Entry Assessments of Pupils in Reception Class	No	Yes	Quality assurance ongoing
Foundation Phase Average Point Score	No	Yes	-
Key Stage 2 average point score	Yes	Yes	
Key Stage 4 average point score	No	Yes	Definition under development
Key Stage 4 Level 2 inclusive	Yes	No	-
Key Stage 4 capped point score	Yes	No	-
Repeat Absenteeism rate	Yes	Yes	-
Proportion of people not entering Higher Education aged 18-19	Yes	Yes	Finalising data source
Number of Adults aged 25-64 with No Qualifications	Yes	Yes	-

(Table 1 continued) Domain / Indicator	WIMD 2014	WIMD 2019	WIMD 2019: Outstanding development work
Access To services			
Average travel time by public and private transport to a food shop	Yes	Yes	-
As above, to a GP surgery	Yes	Yes	-
As above, to a leisure centre	Yes	Yes	-
As above, to a secondary school	Yes	Yes	-
As above, to a pharmacy	Yes	Yes	-
As above, to a post office	Yes	Yes	-
As above, to a primary school	Yes	Yes	-
As above, to a public library	Yes	Yes	-
Average travel time by private transport to a petrol station	Yes	Yes	-
Access to digital services (Superfast)	No	Yes	Quality assurance of final data
Housing			
Poor quality housing indicator as measured through hazards and those in a state of disrepair	No	Yes	Quality assurance of commissioned (modelled) data
Overcrowding (2011 Census-based bedroom measure)	Yes	Yes	-
Lack of central heating (2011 Census)	Yes	No	-
Physical Environment			
Households at risk of flooding score	Yes	Yes	-
Air Quality Score	No	Yes	Finalising methods
Air Quality – Air Emissions	Yes	No	-
Air Quality – Air Concentrations	Yes	No	-
Lack of proximity to accessible natural green space score	No	Yes	Finalising methods & quality assurance
Proximity to waste disposal and industrial sites	Yes	No	-
Community Safety			
Police recorded burglary	Yes	Yes	-
Police recorded criminal damage	Yes	Yes	-
Police recorded theft	Yes	Yes	-
Police recorded violent crime	Yes	Yes	-
Anti-Social Behaviour	Yes	Yes	-
Fire incidences	Yes	Yes	-

3. Overview

➤ Question 1: Do you have any views on prioritisation for exploring the new data sources below for WIMD 2019?

- Low household income
- Unhealthy weight in children
- GP-registered chronic and mental health conditions
- Education and skills in the early years
- Progression to higher education
- Access to natural green spaces
- Access to superfast broadband

Many respondents welcomed exploration of these new data sources and felt that each could provide helpful insight into deprivation. One respondent stated that every source is important and should be explored with most respondents expressing the need to prioritise more than one area.

Most respondents said that exploring data on households with a low income was the top priority. Twelve respondents expressed that low household income is an area that should be prioritised, with some mentioning the impact that having a low income can have on other areas of life. Several respondents also commented on the need to understand the impact of Universal Credit.

We acknowledge the support for including this indicator, and have now explored its feasibility further. Unfortunately due to coverage issues with this data source (an Office for National Statistics linked data source) which are highly unlikely to be resolved in time, it will not be possible to include the proposed second indicator in WIMD 2019 – see section 4.4 for further details

Exploring data on GP-registered chronic and mental health conditions was the next most popular priority with ten respondents advocating for this.

We will continue to explore primary care data in the coming months, aiming to derive indicators on diagnosed mental health and chronic conditions. This is subject to approval from the relevant data governance group, and our assessment of the data quality once received. Please see section 6.3 for more details.

Outlined below are the number of respondents who provided support for prioritising each of the other new data sources:

- Six respondents for access to superfast broadband

- Five respondents for children of an unhealthy weight
- Five respondents for access to green spaces
- Two respondents for education and skills in the early years
- One respondent for progression to higher education, and another expressed disappointment that we are unable to include data on young people not entering employment or training.

In the following domain-specific chapters we expand on developments for each of these areas and outline the indicators that we will be continuing to pursue in the lead up to the publication of the index.

4. Income

The income domain focuses on the proportion of people with income below a defined level.

4.1. Responses to specific consultation questions

- Question 2: Do you have any comments on the key proposal for an income deprivation indicator in line with previous indices, based on 2016-17 data, for WIMD 2019?

Fourteen respondents expressed support for the proposal, agreeing that in the circumstances using data immediately prior to full roll-out of Universal Credit (UC) is the best approach.

One of these respondents expressed concern over the inclusion of Housing Benefit in UC, a benefit not previously covered by WIMD. To clarify, since the only UC claimants likely to be captured in WIMD 2019 are early, straightforward cases such as new Jobseeker applicants, this issue is highly unlikely to affect the validity of comparisons across areas.

Whilst no respondents objected to the proposal, some suggested other aspects of income deprivation to capture, which are mentioned under Question 5 below (general comments).

- Question 3: Would you find it useful to have a similar income deprivation indicator made available separately to allow comparison with small areas in England (2015-16 data)?

Twenty respondents expressed some degree of support for making such data available. This would be useful for enabling comparisons with England on non-devolved topics, wider benchmarking, and for organisations with wider geographical coverage. However users expressed a preference for including the most recent data possible in WIMD 2019, rather than prioritising comparisons with England.

- Question 4: Do you have any comments on the addition of a second indicator on households in low income (based on ONS research outputs), subject to quality considerations?

Of those sixteen respondents who answered this question, all welcomed the potential inclusion of this second indicator. Respondents endorsed a measurement that would capture data on non-benefit claiming low earners, self-employed income, and household rather than individual income. However around half mentioned explicitly that any potential indicator should only be included subject to the quality considerations mentioned being

adequately addressed. One suggested a lower weighting be put on any new indicator until data developments progress.

Unfortunately due to coverage issues with this data source which are highly unlikely to be resolved in time, it will not be possible to include the proposed second indicator in WIMD 2019 – see section 4.4 for further details.

- Question 5: Do you have any other comments on proposals for the Income domain?

Under this (and other) questions, the most relevant general issues raised were:

- The relevance of this domain in particular, whose indicators are of interest to many users separately from the overall combined deprivation index.
- The usefulness of annual indicators to some users.
- A few users mentioned that we should ideally adjust estimates of income for cost of living, for example subtracting housing costs. This is not methodologically possible at such a small area level at present, but we will continue to review the scope for this in future Indices.
- Some users expressed concern that indicators in WIMD 2019 would not capture the effect of roll-out of UC beyond April 2017. The consultation document highlights the reason why we cannot currently do this, and we note the user support for us to continue working with DWP on data to allow some valid comparison of claimants of legacy-benefits and UC (after full roll-out) in future.

4.2. Summary of indicators for WIMD 2019

We propose that the income domain will consist of a composite indicator calculated from the below four elements. We propose to use data at a point in time before the start of rollout of Universal Credit full service in Wales (therefore the 2016-17 financial year)¹.

- a) Income related benefit claimants; this includes Income Support claimants, Jobseeker's Allowance claimants, Pension Credit claimants, and Income Based Employment and Support Allowance claimants; and their dependent children. Sourced from DWP.

¹ Although rollout of Universal Credit full service did not begin in Wales until April 2017, there had previously been rollout of Universal Credit to (mainly) single, new claimants of Job-Seekers Allowance. For our 2016 and 2017 indicator updates, we worked with DWP to add in relevant claimants to our published indicators, which was possible as these were relatively straightforward to map to the old/legacy system indicators. We published information on this in our [guide to analysing indicator data](#).

- b) The number of children and adults within families that are in receipt of Working Tax Credits and Child Tax Credits with an income which is less than 60 per cent of the median income for Wales (Before Housing Costs). Sourced from HMRC.
- c) Supported Asylum Seekers i.e. those who were supported under Section 95 of the Immigration and Asylum Act, and their dependent children. Sourced from the Home Office.
- d) People on Universal Credit and their dependent children. We exclude those who are "working with no requirements" according to the dataset's "conditionality" marker. Sourced from DWP.

Within DWP datasets the above are counts of unique individuals (i.e. those who claim multiple benefits are only counted once). The different elements will be summed and expressed as a percentage of the total population for the LSOA, using the ONS' Small Area Population Estimates for the most appropriate reference point.

4.3. Outstanding issues

We will continue to work with the Ministry of Housing, Communities and Local Government (MHCLG) to publish a consistent set of income deprivation data for LSOAs across England and Wales during 2019. However we do not plan to include this data in WIMD 2019, as it would be older (2015-16) than the alternative described in this chapter (2016-17).

4.4. Other indicators to consider for future

See earlier comments about working with DWP on data to allow some valid comparison of claimants of legacy-benefits and UC (after full roll-out) in future.

As mentioned in the consultation document and covered under Question 4, we have been exploring new [experimental statistics \(formerly research outputs\) on income](#) from the Office for National Statistics (ONS), which are based on linked administrative data. We had hoped this would provide us with an indicator on households with low income for inclusion alongside the existing indicator, subject to quality and coverage considerations. One of our criteria for including this is that data from the self-assessment tax process, for example income from self-employment, is captured within the linked dataset. The latest update from ONS statisticians is that this is highly unlikely to be achieved in time for us to include an indicator in WIMD 2019. We will consider the potential for this to be included in future indices. As part of development towards this, we will review the data source's quality and coverage ahead of autumn 2020, for the possible publication of contextual information alongside our first set of WIMD 2019 indicator updates.

Also, we will continue to monitor other [small area model-based income estimates](#) produced by the ONS, if modelled down to LSOA level (currently MSOA).

4.5. Changes to proposals after consultation or recent work

Due to coverage issues with the data source, it will not be possible to include the proposed second indicator in WIMD 2019 – see section above for further details.

5. Employment

The purpose of the employment domain is to capture lack of employment. This covers involuntary exclusion of the working age population from work, including those people who cannot work due to ill-health or who are unemployed but actively seeking work.

5.1. Responses to specific consultation questions

- Question 6: Do you have any comments on the key proposal for an employment deprivation indicator in line with previous indices, based on 2016-17 data, for WIMD 2019?

The eleven respondents to this question all supported the proposal, given the constraints we are facing around data availability. Some emphasised the importance of employment deprivation within the Index, and the advantage of retaining comparability with the previous Index.

- Question 7: Would you find it useful to have a similar employment deprivation indicator made available separately to allow comparison with small areas in England (2015-16 data)?

Fourteen respondents supported this development, for example to improve scope for benchmarking at local authority level, and none were explicitly against this proposed development.

- Question 8: Do you have any other comments on proposals for the Employment domain?

Respondents made several suggestions for other areas of interest. The most common of these related to job quality/security (zero hours and temporary contracts), low wages, fair work, or underemployment. Whilst there was general agreement that such indicators are increasingly becoming very relevant to this domain, a few respondents acknowledged the lack of data currently available at a small area level.

One respondent commented that age splits would be useful. Age splits for this indicator are published on [StatsWales](#), and we will seek to continue producing age splits for future iterations of the employment deprivation domain.

5.2. Summary of indicators for WIMD 2019

The employment domain will consist of a count of individuals (i.e. those who claim multiple benefits are only counted once) entitled to:

- Jobseeker's Allowance (JSA)
- Employment and Support Allowance (ESA)
- Incapacity benefit (and Severe Disablement Allowance)
- Universal Credit (UC) and [not in employment](#)²

The indicator is expressed as a percentage of the working-age population for the LSOA, and the source is DWP.

5.3. Outstanding issues

We will continue to work with the Ministry of Housing, Communities and Local Government (MHCLG) to publish a consistent set of employment deprivation data for LSOAs across England and Wales during 2019. However we do not plan to include this data in WIMD 2019, as it would be older (2015-16) than the alternative described in this chapter (2016-17).

5.4. Other indicators to consider for future

We will continue to work with the Department for Work and Pensions (DWP) on options for a suitable indicator using data on Universal Credit claimants (after full roll-out) in future indices.

We will monitor ONS work on new [labour market research outputs](#) ahead of future iterations of the Index, as well as any developments in measuring job quality or related factors (see responses to question 8) at a small area level.

5.5. Changes to proposals after consultation or recent work

We note the support for this domain's proposals; therefore no changes were made as a result of the consultation and the proposals put forward in the consultation will be implemented.

² An individual on Universal Credit at the count date will be recorded as in employment if they have employment earnings recorded within their completed Universal Credit assessment period closest to the count date (second Thursday in the month). They may not be in employment precisely on the count date.

6. Health

The purpose of this domain is to measure lack of good health. This domain does not contain any sub-domains. Some indicators in this domain are age-sex standardised to account for population differences across small areas.

6.1. Responses to specific consultation questions

- Question 9: Do you have any comments on the proposed new indicator on reception class children who are of unhealthy weight?

Out of the twenty three respondents who answered this question, nineteen welcomed the proposed new indicator on reception class children who are of unhealthy weight. Several respondents stated that this is an important and relevant measure given that being an unhealthy weight at an early age can have an impact on health in later life. Two respondents also commented on evidence that shows that children who are obese are more likely to live in an area of high deprivation.

Five respondents agreed that a measure of obesity on its own would be desirable over a measure of children who are overweight and obese given that this is more strongly associated with being of an unhealthy weight by Year 4. One respondent expressed that a measure that was specific to obesity would be more helpful to target areas where this is an issue. Four respondents felt that a measure that includes children who are under weight was desirable. Although we recognise that being underweight can be associated with malnutrition or neglect, numbers of underweight children are too small to be robust at the small area level, even with several years of data rolled together.

Although no one objected to the proposal, some had questions on the measure to be included. Two respondents queried why our proposal is specific to children in reception class rather than older or younger children. The explanation for this is largely to do with data availability. The Child Measurement programme specifically collects data on children of this age (aged 4 and 5). Also, this data has been collected in a standardised way since the 2011/12 academic year and so provides reliable and robust estimates at a small area level. This makes this data suitable for inclusion in WIMD.

One respondent queried how we will be matching data that is collected in schools to LSOAs. Three respondents were interested in whether factors such as a child's height would be considered.

The methods we are proposing are clarified below:

- Pupil's home addresses, as obtained from the Pupil Level Annual School Census ([PLASC](#)), will be used to identify the LSOA in which children live rather than the LSOA of their school.
- Prevalence rates will be calculated using the age and sex-specific body mass index (BMI) centiles (which includes height information) calculated using the British 1990 growth reference (UK90) (from a method proposed by Cole et al (1995)). Those children who fall in the 95th centile or above are considered to be obese.

Several respondents made comments on other child related measures in their response to this question, such as physical activity (also see Question 14). Two respondents supported our proposal to continue to include low birth weight whilst also advocating further exploration of a healthy birth weight indicator.

- Question 10: Do you have any comments on a proposed new indicator on chronic conditions?

Seventeen out of nineteen respondents welcomed our proposed new indicator on chronic conditions. Most stated that the inclusion of a broader range of health conditions (in addition to cancer incidence) would improve the health domain. One respondent highlighted how prevalence of chronic disease is an important indicator of deprivation in its own right but also is related to greater living costs, more limited opportunities and a greater reliance on public services.

Three respondents expressed that having LSOA level data on chronic conditions would be useful, with one advocating the inclusion of this data in the index even if it cannot be published at LSOA level. Despite this positive response, several respondents also recognised the importance of exploring whether GPs accurately and consistently record chronic conditions across areas, to ensure data are robust.

Some respondents mentioned health conditions that they would like to be included in this measure. Suggestions included heart and circulatory conditions, respiratory disorders and diabetes. One respondent suggested prioritising chronic conditions that are known to be linked to deprivation. These views as well as the advice of clinicians will be taken into account when considering conditions that should be included as part of this indicator.

- Question 11: Do you have any comments on a proposed new indicator on mental health?

Of the 22 respondents to this question, all gave support for a new indicator on mental health subject to data quality. Two respondents endorsed this measure making reference to the other UK nations who include mental health as part of their indices of deprivation.

Several respondents were interested in an indicator on mental health being disaggregated by age and advocated the need to measure this in children and young people. We will be exploring the possibility of providing age breakdowns for this indicator if the data are considered robust.

Despite the widespread support for including an indicator on mental health, several respondents recognised the challenges with both prescriptions and GP recorded data. In particular, some respondents suggested that Quality and Outcomes Framework (QOF) data from GP registers on mental health conditions could be problematic if the propensity to diagnose varies across areas. Others highlighted the need to capture both social prescribing as well as medication-based prescribing. An advantage of using GP registers may be that those people with specific diagnosed mental health condition would be captured regardless of intervention, unlike prescriptions data. With this in mind, respondents agreed with our preference to use QOF data over prescriptions data.

- Question 12: Do you have any comments on the proposed refined mortality indicator on premature mortality?

Out of the thirteen respondents who answered this question eleven supported our proposed refined mortality indicator on premature mortality. Several respondents agreed that premature mortality is a more suitable indicator than overall mortality for capturing health deprivation and health inequalities. One respondent also agreed that a measure on premature mortality is easier to understand conceptually compared to avoidable mortality.

A couple of respondents felt that there would be merit in including the existing all-cause death rate as well as the refined indicator. Although we do not propose to retain the existing indicator as part of WIMD, note that small area [mortality data](#) published by the Office for National Statistics are still available, at Middle Layer Super Output Area.

- Question 13: What priority order would you place on developing a measure of unhealthy weight in children, chronic conditions, or mental health for WIMD 2019?

Most respondents felt that developing a measure of mental health was the top priority (fourteen respondents), followed by the development of a measure on chronic conditions (ten respondents). Five respondents stated that developing a measure of unhealthy weight in children should be the top priority. Despite the greater preference for prioritising mental health and chronic conditions, a few respondents recognised the access and possible data quality issues associated with the relevant data sources. Two respondents highlighted that the current accessibility and readiness of the child measurement programme suggests we prioritise this for inclusion.

- Question 14: Do you have any other comments on proposals for the Health domain?

Several respondents made suggestions for indicators to explore for inclusion in the health domain in the future, including:

- Unpaid Carers
- Substance misuse
- Healthy life expectancy and life expectancy
- Physical activity
- Obesity in adults
- Suicide
- Risky behaviours e.g. Teenage pregnancies
- Adverse childhood experiences

Several of these suggestions did not meet our indicator criteria as small area data are not available, or numbers are too small to provide a robust indicator at this level. Others are discussed below.

Unpaid Carers

Three respondents felt disappointed that we have decided not to include a measure on unpaid carers in the health domain. They alluded to the impact unpaid care can have on a carer's mental and physical health, their ability to work and the effect on a young carer's education. As mentioned in our consultation document, such impact would be captured more directly through other proposed indicators for WIMD 2019, in the health, employment, income and education domains.

At present, small area data on numbers of unpaid carers would rely on self-reported data from the 2011 census. The introduction of a new indicator with that reference point for the 2019 Index is not desirable.

We acknowledge respondents' comments about the importance of assessing the needs of carers, and recent legislation on this topic. Available data on carers can be analysed alongside contextual information from WIMD, without it necessarily being included as an indicator. As well as the census data, in 2016-17 questions on unpaid care were included in the [National Survey for Wales](#) for the first time.

For the reasons set out in our consultation document and above, we will not be including a measure of unpaid carers as a WIMD indicator for 2019.

Substance misuse

The WIMD Health Domain Group discussed the possibility of using data on hospital stays for alcohol and drug misuse in the Index. However numbers at small area level are low. The creation of a more robust indicator on substance misuse, looking at broader data sources, would require significant development work.

Some of the impact of substance misuse would be captured more directly through other proposed indicators for WIMD 2019, for example those on premature mortality, chronic and mental health conditions.

6.2. Summary of Indicators for WIMD 2019

Outlined below is our proposals for indicators to include in the health domain.

Indicators that are related to children

- Low Birth Weight: The percentage of live single births less than 2.5kg (5.5lbs)

This indicator has not changed from the measure included in WIMD 2011 and WIMD 2014. Although we recognise the interest in a healthy birth weight measure, given the other resource-intensive proposals made for this domain, this area will not be pursued for now but will be considered again for future indices.

- Children who are obese: The proportion of reception class children who are obese according to the child measurement programme.

Analysis of the data suggests that a measure of child obesity is more relevant to health deprivation than one which also covers those children who are overweight. Underweight children will not be used as a WIMD indicator due to the small numbers of children who fall into this category.

Indicators that capture specific diagnosed conditions

- Cancer Incidence: The number of people diagnosed with cancer (all malignancies excluding non-melanoma skin cancer) per 100,000 people in Wales.

This measure will be indirectly standardised for the age and sex profile of the population. The data source for this indicator is the Welsh Cancer Intelligence & Surveillance Unit (WCISU). Cancer incidence was included in WIMD 2011 and 2014. Full technical information on this indicator is available in the [WIMD 2014 Technical Report](#).

- Diagnosed mental health conditions, as captured on GP registers – subject to data access and quality, exact conditions included to be determined
- Diagnosed chronic conditions, as captured on GP registers – subject to data access and quality, exact conditions included to be determined

Indicators that capture the status of the population's health more broadly

- Limiting Long Term Illness: The number of people per 100,000 with a limiting long-term illness.

This was included in WIMD 2014 and is sourced from the 2011 Census, Office for National Statistics (ONS). Full technical information on this indicator is available in the [WIMD 2014 Technical Report](#).

- Mortality Measure: The number of premature deaths per 100,000 people.

This indicator will measure the all-cause rate of deaths for those that are under the age of 75. This will be standardised to the age and sex profile of the population. The data source is the Office for National Statistics (ONS).

6.3. Outstanding issues

We are currently in discussions with NWIS to access data from GP registers (QOF data) and explore whether this can be used to form a measure on mental health and/ or chronic conditions. A great deal of support was shown for this work in the consultation feedback, whilst acknowledging possible barriers, and we will continue to pursue this data as far as possible for WIMD 2019.

We are still in the process of requesting access to data from the SAIL databank (as described in the consultation document) to quality assure the above work and to explore other health-related indicators, for future indices if not for 2019.

6.4. Other indicators to consider for future

As mentioned in detail in our consultation document, child health and wellbeing, and stage of cancer at diagnosis will be considered for future indices. We will also consider healthy birth weight (appropriate for gestational age, therefore including those large for gestational age as well as small) as an alternative measure to low birth weight.

6.5. Changes to proposals after consultation or recent work

As outlined in section 6.1 (Question 9) and section 6.2, since the original consultation proposals we have decided to narrow the scope of the indicator on reception class children who are of unhealthy weight to those who are obese.

Within the Health domain, factor analysis is used to determine the weightings of the constituent indicators, and we propose to continue with this approach, subject to review of the resultant weights with WIMD advisory groups.

7. Education

The purpose of this domain is to capture the extent of deprivation relating to education, training and skills. It is designed to reflect educational disadvantage within an area in terms of lack of qualifications and skills. The proposed indicators capture low attainment among children and young people and the lack of qualifications in adults.

7.1. Responses to specific consultation questions

- Question 15: Do you have any comments on our proposals to include indicators sourced from the On-Entry Assessment of Pupils in Reception Class and the Foundation Phase outcomes data?

The majority of respondents broadly agreed with our proposals to include indicators sourced from the On-Entry Assessment of Pupils in Reception Class data and the Foundation Phase outcomes data, noting the importance of the Foundation Phase in the development of children.

However, some respondents expressed concern that these indicators would introduce additional assessment requirements. It should be stressed that we are proposing the use of data that is already collected by the Welsh Government and not suggesting that any additional data-requirements are placed on schools.

Concerns were also raised regarding the data quality of the On-Entry Assessment of Pupils in Reception Class data. This data is currently used to report on National Indicator 6 (Measurement of development of young children) and we will undertake further analysis of the data to ensure it is appropriate to use in WIMD 2019.

- Question 16: Do you have any comments on the proposed Key Stage 4 attainment indicator?

Eleven respondents agreed with our proposed approach to the Key Stage 4 attainment indicator as an interim measure for WIMD 2019. Work is ongoing to develop the methodology underpinning this indicator. Once an indicator has been finalised, it was agreed with the domain group and advisory group. It is anticipated that future iterations of WIMD will adopt the capped 9 points score.

- Question 17: Do you have any comments on our proposed approach to produce the Proportion of people aged 18-19 not entering higher education indicator?

There was agreement with our proposed approach to this indicator. Some respondents highlighted the need for a measure that also reflected progression into further education, apprenticeship provision or even employment. It was queried whether non-entry to higher

education is a strong measure of deprivation, given the other opportunities available to young people.

As outlined in the consultation document, we acknowledge that considering progression into other educational and employment routes would be a stronger measure of educational deprivation for young people. However, for the reasons set out in the consultation, we are currently unable to include such an indicator. As stated, we will monitor the ongoing development work relating to KS4/KS5 destinations and prioritise this indicator as an area for improvement in the next release of WIMD.

- Question 18: What priority would you place on developing the following measures: On-Entry Assessments of Pupils in Reception Class, or proportion of people not entering higher education aged 18-19 indicator? Please rank 1 or 2 (1 being high priority; 2 being low priority).

Eleven respondents placed a high priority on developing the On-Entry Assessments of Pupils in Reception Class indicator compared with eight respondents who placed a high priority on the proportion of people not entering higher education aged 18-19 indicator. However, one respondent noted the difficulty in prioritising between two indicators measuring very different issues and life-stages. It was suggested that resources might be more appropriately focussed on whichever indicator is more achievable within the timescale for WIMD 2019.

Based on these response, we will primarily focus resource on the development of the On-Entry Assessments of Pupils in Reception Class indicator.

However, to reflect the relatively split response to this question, we will also dedicate some resource to developing the proportion of people not entering higher education indicator. In September 2018, a [statistical first release on learner destinations](#) for further education institutions and sixth forms was published. We will explore whether the data underpinning this release could be used to produce a measure of people not entering higher education.

- Question 19: Do you have any other comments on proposals for the Education domain?

Further to the points summarised above, some additional comments were made - in particular:

- Further support for an indicator capturing those young people who are not in education, employment or training (NEET) or, alternatively, an indicator that considers progression to apprenticeships or lifelong learning as well as higher education; and

- The potential development of an indicator measuring the number of graduates entering graduate level employment (sourced from the National Student Survey or other sources). However, it is unlikely that survey-based data would provide sufficiently robust estimates at LSOA level. It is also arguable whether such an indicator would sit more appropriately within the Income or Employment domains.

It was also queried whether the numbers of pupils eligible for free school meals (or other potentially vulnerable groups) had been considered as an indicator. Given that eligibility for free school meals is determined from parental eligibility for selected income benefits, we expect that this particular aspect of deprivation will be captured via the Income domain.

7.2. Summary of indicators for WIMD 2019

We propose that the Education domain is comprised of the following indicators:

- On-Entry Assessments of Pupils in Reception Class

This indicator will be based on teacher assessments conducted during the first 6 weeks of school and measure educational disadvantage in pre-school years. It will be sourced from the On-Entry Assessments of Pupils in Reception Class Data collected by Welsh Government.

- Foundation Phase Average Point Score

This indicator will be based upon the results of teacher assessments for pupils aged 7 being taught in National Curriculum Year Group 2 (i.e. end of Foundation Phase). The data source for this indicator is the Pupil Level Annual School Census (PLASC) and National Data Collection (NDC), Welsh Government.

- Key Stage 2 Average Point Score

This indicator will be based upon the results of teacher assessments for pupils aged 11 being taught in National Curriculum Year Group 6 (i.e. end of Key Stage 2). The data source for this indicator is the Pupil Level Annual School Census (PLASC) and National Data Collection (NDC), Welsh Government. This indicator was included in WIMD 2014.

- Key Stage 4 Average Point Score

This indicator will consider the grades achieved by year 11 pupils in GCSE English or GCSE Welsh, GCSE Mathematics and GCSE Science (i.e. the core components of the 'capped 9' points score); and calculate an average point score based on these results. Further work to finalise the definition of this indicator is ongoing. The data source for this indicator is PLASC and the Welsh Examinations Database (WED), Welsh Government.

- Repeat Absenteeism Rate

This indicator will measure the proportion of pupils missing 15% or more of school sessions as a proxy for 'persistent absenteeism'. Data will be based on all pupils of

statutory school age attending a maintained school. The data source for this indicator is PLASC, Attendance collection, Welsh Government. This indicator was included in WIMD 2014.

- Proportion of people not entering Higher Education aged 18-19;

This indicator will measure the proportion of people aged 18-19 not entering Higher Education. Work to evaluate potential data-sources for this indicator is ongoing.

- Number of Adults aged 25-64 with No Qualifications

This indicator will measure educational deprivation amongst the adult population. Due to recent changes to the state pension age, this indicator will look at those aged 25-64. This indicator was included in WIMD 2014.

However, note that the final inclusion of these indicators in WIMD 2019 is subject to the resolution of the outstanding issues outlined in section 7.3 below.

7.3. Outstanding issues

- Additional analysis of the On-Entry Assessment of Pupils in Reception Class data will be undertaken to ensure that it is a robust and appropriate indicator for use in WIMD 2019.
- Further analysis to finalise the definition of the Key Stage 4 attainment indicator will be undertaken.
- Further discussions will be held with Welsh Government colleagues to determine the feasibility of deriving a Proportion of People Not Entering Higher Education Aged 18-19 indicator from alternative data sources. Consideration will then be given as to whether POLAR3 or POLAR4 would be the most appropriate source.
- Preliminary factor analysis will be undertaken on currently available Education data to estimate the impact of the new indicators on the indicator weightings within the domain. As stated in the consultation document, this factor analysis may assign low weights to some indicators and, in such instances, this will support a decision to omit some indicators from the Index. This decision will be taken following a review of the resultant weights by the WIMD advisory groups.

7.4 Other indicators to consider in future

As outlined above, we will give future consideration to an indicator that provides a better proxy measure of young people who are not in education, employment of training.

7.5. Changes to proposals after consultation or recent work

None

8. Access to Services

The purpose of this domain is to capture deprivation as a result of a household's inability to access a range of services considered necessary for day-to-day living. This covers both material³ deprivation (for example not being able to get food) and social⁴ aspects of deprivation (for example not being able to attend afterschool activities).

The current measure of the access to services domain is not, like the other seven domains, a direct measure of deprivation that can be used on its own; rather it is a contributory factor that becomes important as an aspect of multiple deprivation. That is, poor access to services is a factor which can compound other types of deprivation that exist in an area.

8.1. Responses to specific consultation questions

- Question 20: Do you have any comments on the proposed new indicator on access to broadband services?

Twenty one respondents answered this question and of these, sixteen respondents were generally in favour of including access to broadband services indicator in the access to services domain. Those in favour of its inclusion provided reasons ranging from the fact that Universal Credit (UC) and some other government (and local authority) services were rapidly becoming 'digital by default' to the benefits broadband affords from an inclusion and deprivation perspective, as well as influencing well-being by helping to combat levels of isolation, especially in rural areas.

A few respondents referred to broadband speed or cabinet capacity in their responses. There is no central source of data for cabinet capacity to allow us to adjust our indicator for this factor. In terms of speed, one respondent (a local authority) felt that 8Mbit/s was adequate for accessing general services whilst another could foresee a time, in the not too distant future, when 30Mbit/s will rapidly become inadequate for many businesses and households. In total, five respondents noted that they didn't think superfast broadband (i.e. the 30Mbit/s threshold) was necessary for this indicator. However, it is worth clarifying that the 30Mbit/s threshold was chosen because 1) it represents the Welsh Government digital policy (via the Superfast Cymru Project) of bringing superfast broadband to the majority of premises in Wales not covered by commercial roll-outs, and 2) according to the latest Ofcom data available for Wales, 30Mbit/s provides sufficient variability in its provision to

³ Material deprivation is having insufficient physical resources - food, shelter, and clothing – necessary to sustain a certain standard of life.

⁴ Social deprivation refers to the ability of an individual to participate in the normal social life of the community.

enable us to reliably rank LSOAs based on its coverage. In other words, a lower threshold (e.g. 10Mbit/s) would probably result in near universal availability of the broadband service across Wales and with it would come the inability to rank LSOAs.

A total of four respondents did not favour inclusion of the access to broadband services indicator in this domain because they felt that 1) it was not an indicator of deprivation per se, especially given that it does not include affordability and 2) the availability of superfast is increasing at such a rate as to have no long term validity in the index compared to, for instance, full fibre. Of these four respondents, two would have preferred the inclusion of access to 5G for mobile data as an indicator instead of access to broadband at 30Mbit/s – see also Question 22.

Take-up and affordability of broadband services was an issue that was highlighted by nine respondents. The essential argument made by these respondents revolved around the fact that the broadband services indicator was only measuring access to infrastructure at 30Mbit/s (availability) rather than affordability (take-up) of the service. They all felt that take-up would be a better measure of deprivation than availability. However at present data on broadband take-up is not available for small areas, which is a requirement for its inclusion in WIMD.

- Question 21: Do you have a view on how the indicators on travel times (to key services), and access to broadband services should be weighted together for the overall domain score?

Thirteen respondents answered this question. For those who addressed the question directly, there was a majority preference (five respondents) for weighting travel times to key services higher than access to broadband services within the overall domain, although there was recognition of the increasing importance of the latter.

Three respondents stated that they didn't think there was a link between the two indicators or that they should be combined together at all. This suggests weighting separately rather than applying factor analysis to broadband together with the travel time indicators.

Only two respondents stated that access to broadband services indicator should be weighted more highly than travel times to key services, with the main reason provided being the increased importance of broadband services in accessing the other key services.

One respondent agreed that the decision on weighting should not be made until coverage of broadband services is known for the areas affected by lack of access, as stated in the consultation document. The exact weighting, they continued, should be agreed on by the Access to Services Domain Group and the WIMD Advisory Group.

- Question 22: Do you have any other comments on proposals for the Access to Services domain?

Eighteen respondents answered this question and the one clear issue emerging from their responses was the subject of rural areas in Wales. However views were mixed, with some respondents supporting the domain as important for enhancing understanding of deprivation in rural communities, whilst others felt the domain does not capture the rural aspects of deprivation very well.

Those respondents with a specific interest in rural areas may be interested in the following outputs published as part of WIMD 2014, which explore some of the issues raised. We intend to update these analyses after WIMD 2019:

- A [statistical article](#) providing guidance on how WIMD and its indicators can and can't be used to analyse deprivation in rural areas.
- An analysis of the [Access to Services Domain by type of settlement](#).

Public transport in rural areas of Wales attracted the most comments of those responding to this question – seven respondents. Comments related to cuts to services or infrequent services, and the impact this has on low income households who may rely on public transport, including at off-peak times for employment or social interaction. To clarify, measurement of travel via public transport is averaged over several departure / arrival times to reflect service frequency, to some extent.

One respondent asserted that car ownership is essential to accessing services in rural areas, suggesting an adjustment to account for the extra costs involved.

To clarify, we published the 2014 indicator data for public and private transport travel times separately, so that users can analyse the outputs for public (or private) transport alone, if relevant. We propose to do the same for 2019.

In terms of measuring travel times to key services, two respondents each would have liked to see banks and childcare services included as a key service. One respondent quoted evidence on links between attending a childcare setting and development in young children. It is worth noting our new plans to include indicators based on On-Entry Assessments of Pupils in Reception Class and the Foundation Phase outcomes data in WIMD 2019. These would more directly measure the development of young children than access to childcare.

The following services were each recommended for inclusion as a key service in the domain by one respondent; cash points, computers for public use, accident and emergency (A&E) hospitals, food banks, and access to parks/play facilities/youth clubs.

On the latter point, it is worth noting that the Physical Environment domain includes proposals for a new indicator on proximity to green spaces.

The consultation document provides rationale for why we are not proposing to include some of the above service points in WIMD 2019, and highlights that we are seeking minimal changes to the list of services for this iteration, so that we can focus resources on other priorities within the Index, including an improved and more transparent method for calculating public transport travel times (see section 8.3).

There was a suggestion to include a measure of access by bicycle in the public transport data used for measuring travel times to the 8 key services alongside bus, train, foot and national coach. Inadequate data availability for cyclable networks prevents us from including this in WIMD at present. There is no authoritative source of cycle data at present that could be relied upon to accurately model cycle routes along the road network and/or designated cycle paths where the two link. Some datasets include parts of the cycle network in isolation – like the designated cycle paths.

In terms of measuring access to broadband services, two respondents suggested that mobile services data should be included, as they are likely to be more financially/physically accessible to income deprived households (see also Question 20). However, as noted in the consultation document, for 4G we only have information to rank 10 per cent of LSOAs on their mobile data coverage, probably less given that we would use a future update to the data. This does not meet the indicator criteria for WIMD in terms of being a major feature of deprivation. We are not aware of any robust small area data on uptake of mobile services that are currently available.

8.2. Summary of Indicators for WIMD 2019

Travel time to key services (physical access)

We will measure travel times to 8 services using public transport and 9 services using private transport. Public transport will include travel by: public bus, public train, foot and national coach. Private transport is transport by private car.

The travel time indicators will be weighted averages of the private and public transport times to each service (with the exception of petrol stations). The weights are calculated for each small area using data from the 2011 Census on car ownership and the number of adults aged 17 and over.

The services to be included will remain the same as for WIMD 2014, full details can be found in the [WIMD 2014 technical report](#), with a summary below. Minor enhancements will be made where possible, and documented in the WIMD 2019 technical report.

Average travel time by public and private transport to a food shop;
Average travel time by public and private transport to a GP surgery;
Average travel time by public and private transport to a leisure centre;
Average travel time by public and private transport to a secondary school;
Average travel time by public and private transport to a pharmacy;
Average travel time by public and private transport to a post office;
Average travel time by public and private transport to a primary school;
Average travel time by public and private transport to a public library; and
Average travel time by private transport to a petrol station.

Access to Digital Services

Whilst acknowledging views put forward on its limitations, we believe the proposed broadband indicator is the best proxy indicator currently available for access to digital services, and on the whole consultation responses supported its inclusion in WIMD 2019.

Therefore we will include an indicator on the proportion of properties (homes and small businesses) unable to receive broadband at a speed of 30Mbps or higher (includes properties with no broadband coverage). This is likely to be based on Ofcom data as at January 2019, expected to be published in late April 2019.

For WIMD 2019, we will amend the domain description as follows: “The purpose of this domain is to capture deprivation as a result of a household's inability to access a range of services considered necessary for day-to-day living, both physically and online.”

Weighting

In light of the consultation responses, we will apply factor analysis to travel time indicators, and then combine with the broadband indicator via a pre-determined weight to be agreed by WIMD advisory groups on review of the data. Broadband is likely to be weighted relatively low due to the low likelihood of the exact same indicator being used beyond 2019.

8.3. Outstanding issues

Travel time calculations

As stated in our consultation document, we are working with the Office for National Statistics' Data Science Campus to explore the feasibility of using their [PropeR tool](#) to carry out the calculations for public transport travel times that form part of this domain. The calculations could potentially be replicated and varied by others with access to the same service point data, some of which are open source. The feasibility of a citizen-friendly front-end application to the same routing algorithms and data is being explored by both the

ONS Data Science Campus and Geography and Technology (Welsh Government), although this will be a longer-term development project following delivery of the statistics to WIMD 2019. Those respondents who referred to this work endorsed it.

For private transport routing, the Geography and Technology team are currently exploring two different algorithms and platforms to find the most suitable for WIMD. One a proprietary software solution and another an open-source routing library. Both would take in to account historical/averaged speed data of the road network. At present their advantages and drawbacks are being assessed and a decision will be made in due course.

Alternative approach - floating catchment areas

Our consultation document describes work by the WISERD team at the University of South Wales to refine an approach for assessing service accessibility. We will consider the potential to share inputs and methods with the WISERD team as our work on this domain progresses.

8.4. Other indicators to consider for future

Section 8.2 explains that the broadband indicator is likely to be used for WIMD 2019 only, given the pace of change in coverage of digital services. We will review the situation for indices beyond 2019 as services and coverage of datasets evolve, including a review of the datasets on mobile data services. The aim is that each WIMD is representative of contemporary experiences of deprivation in accessing services.

In terms of services which we calculate travel times to, we will review the following options as discussed in our consultation document:

- Locations that would capture travel times to less frequently required yet important services (e.g. cultural or shopping centres, transport nodes). This would require some change to the definition of the domain which currently represents services which may be needed on a “day to day” basis.
- Childcare services

We will also reconsider the application of the floating catchment area approach (described in our consultation document) to the next edition of WIMD.

8.5. Changes made in light of consultation responses/recent work

See section on weighting under section 8.2.

9. Housing

The purpose of the housing domain is to identify inadequate housing, in terms of physical and living conditions and availability. Here, living condition means the suitability of the housing for its inhabitant(s), for example in terms of health and safety, and necessary adaptations.

9.1. Responses to specific consultation questions

- Question 23: Do you have any comments on our proposals to include a modelled indicator of poor housing quality in the housing domain, if possible?

Of the 15 respondents who answered this question, 13 welcomed the inclusion of a new, modelled indicator of poor housing quality. Respondents generally agreed that the benefits of having new data at a local level outweigh the disadvantages and challenges of modelled data.

One respondent was encouraged by the movement away from a reliance on 2011 census data in this domain. Two respondents felt that measuring poor housing quality was a positive step given the impact that this has on other aspects of life such as health and education. Whilst no respondents objected to the proposal, some expressed concern around the difficulty of creating a robust indicator that is representative across the housing stock. One respondent expressed the need for more clarity around what our modelled indicator will look like and elements that it will include, particularly regarding energy efficiency measures and tenure. This information is outlined in more depth in section 9.2.

- Question 24: In developing the modelled indicator, do you have any comments on our proposed focus on hazards (as defined in the Housing Health and Safety Rating System, HHSRS) and on disrepair to capture poor housing quality?

Most respondents were positive about our proposed focus on hazards (as defined in the Housing Health and Safety Rating System, HHSRS) and disrepair to create a modelled indicator of poor housing quality. There was a general agreement that focussing on the HHSRS, whilst considering key elements of WHQS not covered by the HHSRS framework, seemed a sensible approach to take.

However, some queries and concerns were raised. Several respondents were interested in how dwellings of different tenures would be incorporated into a small area measure in a consistent and comparable way. These concerns arose from the recognition that for some purposes standards of assessment apply differently to different tenures.

To clarify, we do not propose to use data on HHSRS and WHQS submitted to Welsh Government by Local Authorities and Registered Social Landlords, as this cannot be attributed to small areas in the form currently collected, and does not cover all tenures. Section 9.2 describes the proposed approach in more detail, which in summary will use a combination of survey and more comprehensive data to model these features across all types of dwellings.

For those respondents interested in differences between housing tenures at the national and local authority level, there are a range of statistics already available on the housing section of our [Statistics for Wales website](#), including results from the 2017-18 [Welsh Housing Conditions Survey](#) and [National Survey for Wales](#)

- Question 25: Do you have any comments on our proposal NOT to include an indicator based on Energy Performance Certificate data in the housing domain, based on low data quality?

There was a consensus view among respondents that data on energy efficiency such as that derived from Energy Performance Certificates (EPCs) would be desirable if good quality data was available. There was an even split between respondents who agreed or disagreed on our proposal not to include this data due to data quality issues.

Six respondents agreed with our proposal not to include an indicator based on EPC data, based on low quality. On the other hand, six respondents were disappointed with our proposal not to include EPC data. One respondent suggested that even though some records are several years out of date, the information from this source could provide insight into other features of the housing stock such as construction type. Two respondents mentioned targets that are driven by EPC assessments.

Although we do not propose to use an indicator drawn directly from the EPC data alone, elements of EPC data will be used to capture the energy efficiency of properties through our modelled measure of poor housing quality. Information on dwellings such as the age, type, size, tenure, construction and energy variables (e.g. heating and fuel type) will be used to create our modelled data. These will be drawn from a range of sources including EPC data, which will be used to model excess cold in dwellings. Validation of the EPC data will also be carried out to identify any inconsistencies in the raw data. Where inconsistencies are found (i.e. the data is of low quality) these will not be included in the modelling process. More details of this are provided in section 9.2.

It's also worth noting that EPC data are already freely available for analysis alongside WIMD data, for example, when targeting energy efficiency schemes.

In summary, we acknowledge that an energy efficiency measure is important to help identify potential for fuel poverty (also see responses to Question 28). We hope concerns may be partly resolved by the inclusion of excess cold in our modelled indicator for 2019, and we will review data on the energy efficiency of dwellings for future indices.

- Question 26: Do you have any comments on our proposal to continue using overcrowding as an indicator of housing deprivation?

11 out of the 13 respondents who answered this question supported our proposal to continue using overcrowding as an indicator of housing deprivation. One respondent suggested that this data no longer adds any valuable information to the housing domain considering that it is using information from the 2011 census. Two respondents also acknowledged that this data is dated but expressed the benefits of keeping this indicator in terms of continuity, particularly with refreshed census data becoming available after 2021.

- Question 27: Do you have any comments on our proposal to drop the “lack of central heating” indicator as a measure of housing deprivation?

18 respondents provided some feedback on this question, with more in favour of dropping than keeping “lack of central heating” as an indicator.

Several respondents alluded to evidence that it is not lack of central heating in itself that is linked to deprivation but rather the type, efficiency, ability to use and expense of the heating system. These respondents suggested that although they agree the lack of central heating measure does not quite capture what is intended, there needs to be an alternative to measuring energy efficiency or ideally fuel poverty (see also responses to Question 28).

Two respondents recognised that the modelled indicators on poor housing quality that we are proposing might help address the gap in measuring energy efficiency. As described in our summary of responses to Question 25, the modelling of excess cold in households will incorporate some information on the energy efficiency of dwellings.

- Question 28: Do you have any other comments on proposals for the Housing domain?

Several respondents made suggestions for indicators that they would like to see in the housing domain in the future. There was some support for three topic areas mentioned in our consultation as ruled out for WIMD 2019, and these are elaborated on below. Other suggestions, which can be found in the full report of consultation responses, did not meet the indicator criteria for WIMD, most often because data are not available on a consistent basis or not attributable to small areas.

Fuel poverty

Several respondents wrote about the importance of identifying fuel poverty, and this seemed to be at the heart of comments in favour of measuring energy efficiency (through the Energy Performance Certificate data), lack of central heating or type of fuel.

Our consultation document discusses the current lack of small area data on fuel poverty to enable its inclusion in WIMD 2019. Also, fuel poverty is a composite indicator, taking into account income as well as fuel costs linked to housing, which would be difficult to build into the index without creating duplication across domains. Issues that span more than one domain do not fit in with the indicator criteria and methodology for indices of multiple deprivation.

Our proposal for WIMD 2019 is to capture households experiencing excess cold (that is, those with a low Standard Assessment procedure or SAP rating⁵) as part of the modelled poor quality housing indicators described in Section 9.2. Low income is captured separately in the Income domain.

The Welsh Government's Housing Conditions Evidence Programme (HCEP) will lead to updated national fuel poverty estimates. Headline estimates will be available in April 2019, with detailed reporting to follow in the summer, which will include modelled estimates of the likelihood of fuel poverty in local areas. There are several layers of complexity involved in modelling this composite measure, considering characteristics of dwellings as well as their occupants. This new work is currently underway, and as such there is not yet any assessment of the quality of the modelled results for local areas. However we do not expect the estimates to be sufficiently robust to form part of an index designed to rank small areas. Where relevant, the information could be used alongside WIMD deprivation measures as contextual data, and we will signpost the published estimates clearly from WIMD outputs.

Homelessness

Three respondents advocated for an increased focus on homelessness. One respondent expressed the importance of gathering evidence around homelessness but emphasized that they were not suggesting data on this within WIMD. They agreed with our reasoning that the transient nature of homelessness and the difficulty of measuring this consistently at a small area level made it an inappropriate measure for WIMD.

Housing Affordability

⁵ The SAP rating is based on the energy costs associated with space heating, water heating, ventilation and lighting, less cost savings from energy generation technologies. It is adjusted for floor area so that it is essentially independent of dwelling size for a given built form. The SAP rating is expressed on a scale of 1 to 100, the higher the number the lower the running costs.

A few respondents said they would like to see a measure of housing affordability in WIMD. In our consultation document we described several difficulties with applying such a measure to LSOA level, as well as crossover with the income domain. There is also a current lack of robust small area income estimates, which are required to determine affordability. Developments on measuring housing availability will be monitored for future indices.

9.2. Summary of indicators for WIMD 2019

We propose that the housing domain will consist of a modelled indicator on poor quality housing and will continue to include an indicator on overcrowding (2011 Census-based bedroom measure).

More information on each of these proposed indicators is outlined below.

1. Overcrowding (2011 Census-based bedroom measure) to capture availability and to some extent living condition

This indicator was included in WIMD 2014 and the data will not change. It measures the percentage of people that are living in overcrowded households and is based on 2011 Census data.

2. Poor quality housing indicator as measured through hazards and those in a state of disrepair.

This indicator will measure the proportion of dwellings with Category 1 hazards for excess cold, falls or other hazards under the [Housing Health and Safety Rating System \(HHSRS\)](#), or that are in disrepair. This indicator will help to capture both physical and living conditions.

A dwelling is determined to have a category 1 hazard as a result of excess cold if there is a severe threat from sub-optimal indoor temperatures. A dwelling is assessed as having a category 1 hazard in terms of falls if there is determined to be a serious risk of falling on stairs, between levels, level surfaces or falling associated with a bath, shower or similar facility.

A dwelling is said to be in disrepair if at least one of the key building components is old and needs replacing or major repair due to its condition; or more than one of the other building components are old and need replacing or major repair.

We do not propose to use data (for example on HHSRS) submitted to Welsh Government by Local Authorities and Registered Social Landlords, as this cannot be attributed to small areas in the form currently collected, and does not cover all tenures. The below section describes the proposed approach in more detail, which in summary will use a combination of survey and more comprehensive data to model these features across all types of dwellings.

The modelling process

As described in our consultation document, data on homes in poor quality is not available at a small area level. As such we will be inputting data that is available into a model that will then make probabilistic predictions about individual level dwellings in Wales. A full description will be made available in our WIMD 2019 Technical Report, but a summary is provided below.

The approach that will be pursued to create our modelled data will involve:

- Using data from official surveys where experienced surveyors carry out physical inspections of a sample of properties from all tenures (including measurement of disrepair and risks of hazards across all types of dwellings)
- Building a model from such data to predict the likelihood of poor quality housing based on a range of predictors (such as the age, type, size, tenure, construction and energy variables such as heating and fuel type)
- Applying this model to all dwellings in Wales, using data from a range of sources (including Ordnance Survey, Land Registry, EPC data) to provide the required predictors
- Benchmarking the results to national estimates of poor housing quality from the 2017-18 Welsh Housing Conditions Survey

The modelling process above will be carried out separately for the aspects of poor quality housing listed below, at a dwelling level:

- The presence of a Category 1 Hazard for Excess Cold (using SAP ratings as a proxy measure)
- The presence of a Category 1 Rating System Hazard for Falls
- The presence of a Category 1 Rating System Hazard for a Hazard other than Excess Cold or Falls
- Being in disrepair

A dwelling is classed as being of poor quality housing if it is predicted to have any of the above features. Estimated data for individual dwellings will then be aggregated to LSOA level to provide a rate of dwellings which are poor quality housing for each LSOA.

Although this combined indicator will feed into WIMD, we will also publish LSOA indicator data separately for Category 1 Rating System Hazards (as a whole) and for disrepair.

9.3. Outstanding Issues

We have contracted Building Research Establishment to undertake the modelling work to produce the poor housing quality indicators described above for WIMD 2019. We will carefully review the robustness of this new data before including it in the Index.

9.4. Other Indicators to consider for future

We will continue to explore the appropriateness of energy efficiency and homelessness data for inclusion in future indices, as well as any developments on measuring housing availability more broadly.

We expect to have updated Census information ahead of the next iteration of WIMD, and we will also review what indicators might then be drawn from new data in the [Housing Stock Analytical Resource for Wales](#).

9.5. Changes to proposals after consultation or recent work

Our proposals remain the same as outlined in the consultation document. This includes a subsequent review of weighting (both within the domain, and between this and other domains), taking into account the quality of the modelled data on poor housing quality, and the views of the Housing domain group and WIMD advisory groups.

10. Physical Environment

The purpose of this domain is to measure factors in the local area that may impact on the wellbeing or quality of life of those living in an area.

10.1. Responses to specific consultation questions

- Question 29: Do you have any comments on our proposals to simplify the air-quality sub-domain?

Nine respondents expressed support for these proposals, noting that they would produce indicators that were both more understandable and aligned with the National Indicators. Two respondents specifically welcomed the inclusion of indicators showing the levels of particulates < 10 µm and particulates < 2.5 µm.

However, two respondents expressed concerns that simplifying this sub-domain would, due to the complex relationship between air pollutants and public health, make the underlying data less useful for users.

To clarify, we propose three separate indicators focussing on the population weighted average concentration values of nitrogen dioxide (NO₂), particulates < 10 µm (PM₁₀) and particulates < 2.5 µm (PM_{2.5}) respectively. These indicators will then be combined to form an overall air quality sub-domain score as input to both the physical environment domain score and overall WIMD 2019 calculations. Indicator data for each air pollutant will be published separately. In addition to this, more detailed information (including data on the pollutants we are not proposing for inclusion in WIMD 2019) will still be available via DEFRA air concentration grids.

- Question 30: Do you have any comments on our proposals to include an indicator measuring the lack of proximity to accessible green space instead of the proximity to waste disposal and industrial sites indicator?

Thirteen respondents expressed broad support for this proposal. A number of respondents submitted further comments regarding the specific definition of the indicator – these included:

- Expressing concern that the agreed definition of green space will be too broad and will not differentiate between types of green space and their uses (for example, between allotments and parks),

- The need to consider the quality of the green space alongside proximity and accessibility (for example, reflecting such issues as littering, fly-tipping, available facilities), and
- Concern at the potential use of ‘as the crow flies’ measurement in order to calculate proximity.

Two respondents stated that they would welcome an indicator measuring the lack of proximity to green spaces in addition to an indicator measuring the proximity to waste disposal and industrial sites.

We are currently working with the Welsh Government’s Geography and Technology team as well as our colleagues in Natural Resources Wales in order to further develop this indicator. As part of this development work, we will undertake a thorough assessment of data-quality to ensure that the indicator is robust and appropriate for use in WIMD 2019. See section 10.3 below for further details.

- Question 31: Do you have any views on the proposed weighting within this domain?

Three respondents agreed that the three sub-domains should continue to be equally weighted. One respondent queried whether the access to green space sub-domain should be weighted slightly lower to reflect that it is a new sub-domain using emerging data. Unless there are concerns regarding the data-quality of the access to green space indicator, it is anticipated that we will continue to apply equal weightings to the three sub-domains.

- Question 32: Do you have any other comments on proposals for the Physical Environment domain?

Further to the points summarised above, some additional comments were made - in particular:

- it was highlighted that isolated rural areas with limited broadband access, poor access to services and lack of employment options (among other issues) would nevertheless have good access to green space. However, as a measure of multiple deprivation, WIMD will take account of these issues.
- it was queried whether the well-being benefits of green infrastructure had been considered as part of this domain.

10.2. Summary of indicators for WIMD 2019

We propose that the Physical Environment domain is comprised of the following sub-domains:

1) Households at risk of flooding score

A flood risk indicator was included in WIMD 2014 and was sourced from National Flood Risk Assessment (NaFRA) data. For WIMD 2019, we will derive flood risk indicator sourced from the Flood Risk Assessment Wales (FRAW) data held by Natural Resources Wales.

The indicator will measure the proportion of households at risk of flooding from rivers, the sea as well as surface water flooding. This will differ slightly from the WIMD 2014 indicator which did not include surface water flooding.

The risk is based on predicted frequency rather than the level of damage caused by flooding. As in WIMD 2014, the numbers of households at significant risk of flooding will be weighted higher than those at lower risk.

2) Estimated air quality score

We propose the calculation of three indicators based on the population weighted average concentration values of the following pollutants:

- Nitrogen dioxide (NO₂)
- Particulates < 10 µm (PM₁₀)
- Particulates < 2.5 µm (PM_{2.5})

These indicators will be combined to form an overall air-quality score for the sub-domain. Further discussion will be held with the domain group to agree an approach to combining the indicators.

3) Lack of proximity to accessible natural green space score

As noted above, we are currently developing an indicator measuring the lack of proximity to Accessible Natural Green Space. If this indicator is of sufficiently robust quality, we propose it is included in WIMD 2019.

10.3. Outstanding Issues

As mentioned above, we are working closely with colleagues in the Welsh Government's Geography & Technology team to develop a green space indicator.

We note the comments raised by respondents and, where possible, will endeavour to take account of these definitional issues in our methodology. For example, we intend to omit green spaces with chargeable entry and those that are likely to appeal to and be used by a small or narrow subset of the local community (cemeteries, allotments, bowling greens etc).

Due to data-availability, the indicator may capture a broader measure of accessibility to green space than asked for by respondents. However, we will be able to consider further refinements to the indicator for future iterations of WIMD.

Further work is scheduled to develop the methodology underpinning the indicator. Discussions will then be held with both the Physical Environment domain group and WIMD advisory group to agree our approach.

Similarly, discussions will also be held to finalise technical details of the indicators comprising the flooding and air-quality sub-domains.

10.4. Other indicators to consider in future

None.

10.5. Changes to proposals after consultation or recent work

None.

11. Community Safety

This domain is intended to consider deprivation relating to living in a safe community. It covers actual experience of crime and fire, as well as perceptions of safety whilst out and about in the local area.

11.1. Responses to specific consultation questions

- Question 33: Do you have any comments on proposals for the Community Safety domain?

There was broad agreement among respondents on the proposals for the Community Safety domain.

Four respondents supported the further consideration of a domestic abuse indicator in future iterations of WIMD. The Welsh Government is currently consulting on a range of indicators to underpin its Violence Against Women, Domestic Abuse and Sexual Violence (VAWDASV) strategy. We will review the outcomes of this consultation as well as subsequent indicator development in order to determine the feasibility of including a VAWDASV indicator in future WIMD releases.

Two respondents acknowledged that cyber-crime was an emerging area of crime. However, it is not immediately clear how measuring cyber-crime would fit conceptually into the purpose of the Community Safety domain. But, as outlined in the consultation document, we will continue to monitor developments in the recording of cyber-crimes and consider further for updates of WIMD.

Two respondents queried whether an indicator focussing on perceptions/views of crime and/or whether people felt safe in their communities. Data on perceptions of crime and feelings of safety are collected via the Crime Survey for England & Wales and the National Survey for Wales respectively. Sample sizes would prohibit the use of this data in WIMD. However, we can further explore this suggestion in future iterations of the index.

Other suggestions which did not meet the indicator criteria for WIMD (either because data are not available on a consistent basis or not attributable to small areas or there is potential overlap with other indicators) included:

- Crimes committed as a result of substance abuse
- Road traffic accidents; and
- Self-reported crime.

11.2. Summary of indicators for WIMD 2019

We are proposing that no substantive changes are made to the indicators in this domain.

The Community Safety domain will be comprised of the following indicators sourced from police recorded crime data:

- Police recorded burglary;
- Police recorded criminal damage;
- Police recorded theft; and
- Police recorded violent crime.

These indicators captures actual experience of crime. As in WIMD 2014, the incidents (crimes) are recorded by the four police forces in Wales (North Wales, Dyfed Powys, South Wales and Gwent), assigned to the point at which they occurred and allocated to the appropriate lower super output area (LSOA)

In addition, we will also include the following indicators:

- Anti-Social Behaviour; and
- Fire incidences.

These indicators captures experiences of anti-social behaviour and fire respectively.

11.3. Outstanding Issues

None

11.4. Other indicators to consider in future

We will give further consideration to the following indicators in future:

- Domestic Abuse related incidents/crimes
- Cyber Crime;
- Perceptions of crime and safety.

11.5. Changes to proposals after consultation or recent work

None.

12. Weighting

- Question 34: Do you have any comments on the proposed approach to weighting domains in WIMD 2019?

Fourteen respondents answered this question. Most were generally in agreement with our proposed approach to weighting domains, which was:

- a) To retain the highest relative weightings on Income and Employment as key aspects of deprivation. We propose to do this given that, despite the introduction of a new welfare system in Universal Credit, the indicators are largely unaffected in terms of quality for this iteration at least.
- b) To increase the weight of the Housing domain if we succeed in including modelled data on poor quality housing.
- c) Subject to b), to decrease some other (non-Housing) domains' weight to allow for an increase in Housing weight. We would take into account improvements implemented to other domains in doing so.

Most of the respondents expressed support for our proposal to increase the weighting of the housing domain. However, some also mentioned the need to consider this against the robustness of the modelled data and its representation of housing in an area, particularly if this means the weighting of other domains needs to be decreased. With this in mind, final decisions on domain weightings will be confirmed once we have a better understanding of the reliability and robustness of newly proposed indicators.

Three respondent expressed that health and education were important and that these should retain a relatively high or even higher weighting than in 2014. As such, they also recognised that the weighting of other domains such as income and employment, may need to be reduced.

However around half the respondents agreed that income and employment should retain the highest relative weights (even if they reduce from 2014 levels), and none objected to this. One respondent suggested that the weighting of the employment domain be reduced to accommodate an increase in the housing, education and health domains.

We acknowledge the broad support shown for our proposals and will take into account the specific comments when deciding precise weights. This will be done in discussion with the WIMD advisory and steering group. Decisions will be based on the data quality of each indicator once known (some are currently under development), as well as the conceptual importance of each in relation to deprivation. We will publish information on our rationale for the final WIMD 2019 weights.

13. Next Steps

The “Next Steps” section of our consultation document included a consultation question inviting general comments on proposals for WIMD 2019, and responses are summarised in themes below.

- Question 35: Do you have any other comments on proposals for WIMD 2019 (not already covered) or future updates of WIMD?

Rural and urban deprivation

Several respondents commented that WIMD is not able to identify pockets of deprivation in the most rural areas. WIMD’s purpose is to identify concentrations of deprivation. Deprived people in rural areas of Wales tend to be more geographically dispersed than in urban areas. This means that pockets of deprivation in rural areas of Wales tend to be on a considerably smaller scale than even the small scale geography at which WIMD is produced.

One respondent outlined challenges that relate to aspects of deprivation that are unique to living in urban areas. Some of these challenges are addressed to some extent in our WIMD 2019 proposals. For example, crime rates and air pollution which are often higher in urban areas will be measured in WIMD.

Respondents with a specific interest in rural or urban deprivation may be interested in the following outputs published as part of WIMD 2014, which explore some of the issues raised. We intend to update these analyses after WIMD 2019:

- A [statistical article](#) providing guidance on how WIMD and its indicators can and can’t be used to analyse deprivation in rural areas.
- An analysis of the [Access to Services Domain by type of settlement](#).
- Indicator data aggregated to rural and urban settlement areas.

Administrative Data Research Wales will be taking forward a project which investigates an individual based (as opposed area-based) measure of deprivation. This approach may provide more useful insight into deprivation in future, whether an area is densely or sparsely populated.

Geographies

A few respondents were interested in which geographies we intend to provide indicator data or WIMD profiles for. One respondent each suggested that providing analysis by County borough council ward, Public Service Board community areas, and delivery areas based on Communities First geographies would be helpful. We will take these views into account when reviewing geographies to include as part of our WIMD 2019 dissemination

package. These considerations will be reviewed by the WIMD advisory and steering groups.

Purpose and use of WIMD

Whilst recognising that WIMD is very clearly a measure of deprivation, one respondent referred to the importance of empowering communities, and the negative effect that media reporting on very deprived areas can have on those areas. We will consider the comments on presenting a more rounded description of the most deprived areas when compiling WIMD 2019 outputs.

Another respondent referred to increasing emphasis on strengths rather than deficit-based measurement models, and the need to consider the role of WIMD within this context. We will include references to other key resources for local area-based analyses in WIMD 2019 outputs, whether or not they focus on deprivation.

One respondent alluded to possible misuse of WIMD in resource allocation. Our WIMD 2019 outputs will be accompanied by guidance, including “do’s and don’ts”, and we plan to produce tailored guides for uses such as resource allocation, to help prevent misuse.

Other comments

Several comments raised related to specific domains, and are discussed in the domain-specific chapters of this report and/or the original consultation document. Other suggestions did not meet our indicator criteria as outlined in the consultation document, in particular in terms of being measurable at the small area level used for WIMD.

Loneliness was mentioned by two respondents as a significant issue related to deprivation missing from our consultation document. The measurement of loneliness was discussed by the WIMD 2019 Health domain group during the development of our consultation proposals. There is a National Indicator relating to loneliness, with data sourced from the National Survey for Wales. Part of our indicator criteria is that robust small area data must be available, and at present the sample size for the National Survey does not allow direct small area estimates of loneliness. Part of respondents’ rationale for supporting a measure of loneliness was its negative impact on mental health, and it should be noted that we are exploring the use of GP data to measure diagnosed mental health conditions directly in WIMD 2019 (see section 6.2).

Next steps for WIMD 2019

Our proposed indicators (post-consultation) are outlined in section 2.4, and we will continue development work where required over the next few months. WIMD 2019 will be compiled over summer 2019 and published in November 2019. Any further news in the interim will be published on our WIMD website.

Annex 1 - Organisations responding to WIMD consultation

Bangor University
BHF Cymru
BLF Wales
Caerphilly County Borough Council
Carmarthenshire County Council
Ceredigion County Council
Children in Wales/Plant yng Nghymru
Citizens Advice
Community Housing Cymru - Cartrefi Cymunedol Cymru
Denbighshire County Council
Fields in Trust Cymru
Gwynedd Council
Higher Education Funding Council for Wales
Housing Service – Torfaen Council
Hywel Dda University Health Board
Isle of Anglesey County Council
Monmouthshire County Council
Neath Port Talbot Council
Pembrokeshire County Council
Powys County Council
Public Health Wales
Residential Landlords Assoc.
Royal College of Nursing
Save the Children – Achub y Plant
Sport Wales
Sustrans
Swansea Council
Tenovus Cancer Care
The Wallich
Torfaen County Borough Council
Wales Council of Voluntary Action
Wrexham County Borough Council

and nine Individual Responses