Estimates of housing need in Wales at a national and regional level (2018-based)

Background

This statistical article presents 2018-based estimates of overall additional housing need in Wales from 2018/19 to 2037/38. Estimates of housing need are key to future planning at a national and regional level and will be used to inform the National Development Framework (NDF) and housing policy development. Estimates of housing demand in terms of tenure will follow in spring 2019.

The previous estimates of housing need and demand were produced by the late Alan Holmans and published by the Public Policy Institute for Wales in October 2015 and were based on our 2011-based household projections. Since then, we have published 2014-based household projections, so the previous estimates are out of date.

Figures in this article relate to the need for additional housing units and are based on:

- estimates of existing unmet need
- newly arising need (2014-based household projections). Household projections are not forecasts, they are based purely on past trends and assume these trends continue into the future. In particular, such projections do not attempt to account for the effect of future policies (for example, policies which might seek to influence population movements) and events

To illustrate the uncertainty associated with these figures, a range of estimates are presented in this article. The estimates will be reviewed at regular intervals, as and when more up-to-date information becomes available. The main requirements of these estimates are to inform planning and housing policy development. There are a number of limitations to the estimates – a summary is provided below with additional detail in Section 1.

<table>
<thead>
<tr>
<th>Do's ✔</th>
<th>Don’ts ✗</th>
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<tr>
<td>These estimates:</td>
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<tr>
<td>• provide a range of need for additional housing units based on past trends and best available data</td>
<td>• cannot forecast exactly what is going to happen in the future</td>
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<td>• form a basis of discussion for policy decisions.</td>
<td>• should not be used as a housing target in Wales</td>
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<td></td>
<td>• do not attempt to estimate the number of households in unsuitable accommodation.</td>
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¹Notes on the use of statistical articles can be found at the end of this document.
Key results

Chart 1: Average annual estimates of additional housing need (Wales)

- The range of estimates naturally become wider the further into the future they go, reflecting the uncertainty of these estimates.

- It is estimated that on average, between 6,700 and 9,700 additional housing units will be required annually during the first 5 years with a central estimate of 8,300 (central estimates of housing need are calculated from 2014-based principal household projections). These figures include an annual average of 1,100 additional housing units to clear those in existing unmet need (see Section 2.2).

- The estimates of additional housing need gradually decrease over the following 15 years, reflecting a slow down in the projected household growth from the 2014-based household projections. Household projections are largely driven by population projections. This is based on newly arising need only. For the purpose of this work, it is assumed that the backlog of existing unmet need will be cleared by 2023/24.

- By the mid 2030s, it is estimated that up to 6,500 additional housing units will be required annually (with a central estimate of below 4,000).

This first publication presents estimates of housing need at both a national and regional level. In spring 2019, a further publication will present the results for the initial five years, split by tenure (home ownership, private rent, intermediate rent and social rent). This statistical article is supported by a quality report and all data can be found on StatsWales.

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2. Results
3. Next steps
4. Note on statistical articles
1. Definitions, methodology and limitations

1.1 Definitions
The terms housing need and demand are widely used and often used interchangeably. For the context of this work, Box 1 defines these terms.

<table>
<thead>
<tr>
<th>Box 1: Definition of terms</th>
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<tbody>
<tr>
<td><strong>Overall Housing Need</strong>: The existing unmet need for additional housing units and newly arising need for additional housing units</td>
</tr>
<tr>
<td><strong>Existing Unmet Need</strong>: The number of households that do not have access to adequate housing and would require an additional housing unit. Those who may be in need of a more appropriate housing that would not require an additional unit are excluded from this analysis</td>
</tr>
<tr>
<td><strong>Newly Arising Need</strong>: The projected number of newly forming households that will require additional housing units for a period in the future</td>
</tr>
<tr>
<td><strong>Housing Demand</strong>: A market driven concept that relates to the type of house that a household will choose to occupy based on preference and ability to pay. Housing demand in terms of the most appropriate tenure for those households requiring an additional housing unit will be published in spring 2019</td>
</tr>
</tbody>
</table>

**Newly arising need** is calculated as the difference in household projections from one year to the next. For the purpose of this work, it is taken from the 2014-based household projections. When the projections show a decline in the number of households from one year to the next (therefore having a negative figure of newly arising need) this has been capped at zero throughout the analysis.

A number of researchers have attempted to establish definitions and estimates of existing unmet need and there are a variety of different concepts. What the research has in common is reference to the difficulty of accessing appropriate data for Wales on which to derive estimates. For the purpose of this work, existing unmet need is estimated from two components (which are further discussed in section 2.2):

- Homeless households in temporary accommodation taken as a snapshot at the end of June 2018
- The number of households that were both overcrowded and concealed (2011 Census)

These two components (newly arising need and existing unmet need) together produce estimates for overall housing need in Wales as demonstrated in Box 2 below. The full definition of the two components of existing unmet need can be found in Annex A.
1.2 Methodology

Estimating housing need is complex and can cover a number of broad concepts. In order to ensure that the estimates and output from this work are robust, transparent and of the highest standard, a technical group was established at the outset which includes analytical and policy experts from both Welsh Government and Local Government. The role of this group was to advise on methodology and technical issues.

During early 2018, Welsh Government analysts together with the technical group explored and reviewed approaches to calculating housing need taken elsewhere across the UK. The group concluded that an Excel based Housing Need and Demand tool developed by the Scottish Government could be adapted for the Welsh context.

The Scottish Government approach and methodology was the basis for calculating the overall estimate of housing need in this publication. The Excel based tool will be also used to calculate the tenure breakdown of the overall estimates (first five years) in the next publication.

The results are presented at an all Wales level as well as a regional level (3 regions: North Wales, Mid and South West Wales and South East Wales). The regions are displayed in the Map below as well as in Annex B. Aggregates of local authority boundaries are consistent with those used in the Economic Action Plan.
1.3 Policy context- regional planning approach
The National Development Framework (NDF) will include national and regional policies. The regional estimates of housing need (presented in this article) as well as demand (to be published in spring 2019) will set strategic direction and form part of the evidence base to inform the development of policies in Strategic Development Plans (SDPs) and NDF which will support regional planning across Wales based on three regions:

- North Wales;
- Mid and South West Wales;
- South East Wales

This builds upon the regional approach promoted through Prosperity for All: the national strategy with the three regions shared with the Welsh Government’s Economic Action Plan.

1.4 Limitations
There are a number of limitations to the results presented in this article:

- These estimates are based on 2014-based household projections. Household projections provide estimates of the future numbers of households and are based on population projections and a range of assumptions about household composition and characteristics. The assumptions are based on past trends and assume these trends continue into the future. The further into the future the estimates go, the less certain they become. The estimates do not attempt to reflect the impact of future policies or events such as the UK withdrawal from the European Union.
- Population and household projections use trends over the latest 5 years prior to the base year to project forward. Projections based on a 10 year migration average are also provided.
- The overall estimates are not a housing target. They are a measure of households that are in need of an additional housing unit, over a specific period and based on a range of assumptions.
- The methodology only considers households that are in need of an additional housing unit. It therefore does not take into account those households that are living in unsuitable accommodation and are in need of a different type of housing unit, nor aspirations of households to live in different accommodation.
- Existing unmet need is estimated from the best available data. We recognise that this, together with the above limitation, provides an incomplete picture of existing unmet need in Wales and is likely to be an undercount.
- The household projections used within these figures are an estimate of newly arising need, based on past trends. These trends may, to some extent, be influenced by the availability of homes i.e. if more homes are built, the increased availability of homes may result in more households forming. The opposite is also true – if fewer homes are built then fewer households are able to form.
- While we are presenting estimates at a regional level, there is wide variation in patterns of newly arising housing need (from household projections) and existing need within each region. Where possible, variation within the regions will be shown using maps (at local authority level). There will also be variation within each local authority.
2. Results

This chapter presents the estimates of overall housing need at both a national and regional level. It first shows the results from the two components of overall need (newly arising and existing unmet) and how they combine together to produce the final estimates.

2.1 Newly arising need

Newly arising need is the main component of future estimates of additional housing need. The estimates are driven by changes to newly arising need, which are based on 2014-based household projections. Newly arising need is calculated as the difference in household projections from one year to the next. Household projections are based on past trends and assume these trends continue into the future. They are not forecasts. To illustrate the uncertainty associated with the projections, all variants of household projections are included.

This section will look at the results of the 2014-based household projections and what impact this has on estimates of future need. Household projections relate to the mid-year point.
Chart 2: 2014 based household projections (Wales)

Chart 2 shows the 2014-based principal household projections and four variant projections: higher variant, lower variant, ten-year migration and zero migration for 25 years up to 2039. The variants are defined as below:

- The principal projection is based on recent past trends in births, deaths, and migration.
- The higher population variant is based on assumptions of higher fertility rates and lower mortality rates.
- The lower population variant is based on assumptions of lower fertility rates and higher mortality rates.
- Zero migration is natural change only (births and deaths). It illustrates the projected population if there were no future inward or outward migration.
- Ten Year migration bases the migration assumption on the average migration over a longer, 10-year period (other variants are based on the most recent 5 year period).

All the household projections show similar household growth initially. In the first 5 years, the annual change across all projections is between 0.39 per cent increase and 0.63 per cent increase (an annual increase of between 5,200 and 8,500 households). After this point, the variant projections begin to diverge.

Under both the higher and ten-year migration variants, the projected number of households appears to increase steadily. Under the principal projections household growth appears to be slowing down and under the lower variant it starts to decline by the end of the projection period. In the final 5 years of the projections, the annual change across all projections range from a 0.05 per cent decrease (decline of...
700 households) to an increase of 0.44 per cent (an extra 6,500 households), with a considerably wider range than at the start of the period.

Regional household projections show a similar story, but in some cases the above trends are even more prominent.

To provide context, in 2014, North Wales accounted for 23 per cent of the total number of households, Mid and South West 29 per cent and South East 48 per cent.

**Chart 3: 2014 based household projection ranges (regional)**

Chart 3 shows the range of projected number of households in each region using the different variant projections.

Household projections in South East Wales are increasing at a steeper rate than the other two regions. The lower bound of the ranges for both Mid and South West Wales and North Wales remain very flat and begin to decline towards the end of the projection period.

Newly arising households are calculated as the difference in household projections from one year to the next. For example, the newly arising need between mid 2020 and mid 2021 (denoted 2020/21 in the charts) is the total number of projected households in mid 2021 minus the number of projected households in mid 2020.
Chart 4 shows newly arising need for housing units across the period of the 2014-based household projections. The decline in newly arising need reflects the slow down in growth in the 2014-based household projections.

Newly arising need (based on principal projections) dips in 2019 before peaking again in 2021 with 7,500 extra households, before declining for the rest of the projection period.

All other variant projections show a very similar pattern to the principal projection; they experience a dip in newly arising need in either 2019 or 2020 before peaking again in 2021 and then declining. This reflects trends in population projections.

Both the lower variant and zero migration household projections decline rapidly and the lower variant reaches zero by 2037. This reflects a decrease in the total number of projected households (lower variant) from 2037. While the difference in household projections from one year to the next is negative at this point, this figure has been capped at zero for the purpose of this analysis.

As stated at the beginning of this section, newly arising need is the main component within the estimates for additional housing need, so the decline shown in chart 4 is reflected in the decline for additional housing units.

Whilst the results presented in this publication are at national and regional level, as discussed at the beginning of this article, there will be variation of both existing and newly arising need within the three regions. To illustrate this, the heat map below shows newly arising need at a Local Authority level based on the 2014-based principal projections over 2018/19 to 2022/23.
Map 2: Average annual growth in household projections (2018/19 – 2022/23)

Source: 2014-based household projections (Welsh Government)
2.2 Existing unmet need

While estimates for future housing need are driven for the most part by newly arising households, another component is existing unmet need. It is difficult to consistently measure the existing unmet need for additional housing units (local authority social housing waiting list information for example is not recorded consistently across the country and the information is not collated centrally).

The technical group considered potential data sources and concluded that the sources described below are robust and suitable for the purpose of this work (although not necessarily up to date).

For the purpose of this work we have captured two aspects of existing unmet need:

- Homeless households in temporary accommodation
- Households that are both overcrowded and concealed

We recognise that these provide an incomplete picture of those in need of an additional housing unit, and are likely to be an undercount. Those that aren’t defined as an overcrowded and concealed household but are in need of an additional housing unit, for example, would not be captured.

The number of Homeless Households in Temporary Accommodation is taken from the April to June 2018 quarterly Statutory Homelessness release published by Welsh Government. There were a total of 2,142\(^2\) homeless households in temporary accommodation at the end of June 2018.

The number of households that are both overcrowded and concealed (full definitions in Annex A) is taken from an ONS commissioned table based on the 2011 census. Whilst the estimate may be somewhat out-of-date, it was regarded by the technical group as the best estimate currently available.

\(^2\) Rounded to the nearest 3
There were a total of 3,503 overcrowded and concealed households in Wales on census day in 2011 as shown in table 1.

The two components combined give a total estimate of current existing unmet need in Wales of 5,645 households.

**Table 1: Existing unmet need**

<table>
<thead>
<tr>
<th>Area</th>
<th>Concealed and Overcrowded Households</th>
<th>Homeless Households in Temporary Accommodation (a)</th>
<th>Total (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid and South West</td>
<td>862</td>
<td>291</td>
<td>1,153</td>
</tr>
<tr>
<td>North</td>
<td>735</td>
<td>507</td>
<td>1,242</td>
</tr>
<tr>
<td>South East</td>
<td>1,906</td>
<td>1,341</td>
<td>3,247</td>
</tr>
<tr>
<td><strong>Wales</strong></td>
<td><strong>3,503</strong></td>
<td><strong>2,142</strong></td>
<td><strong>5,645</strong></td>
</tr>
</tbody>
</table>

Sources: Homeless Households in Temporary Accommodation, 2011 Census

(a) Disclosure control has been applied to the data. All figures are rounded independently to the nearest 3.
As a result, there may be a difference between the sum of the constituent items and the total.
(b) Totals may not match due to rounding

In order to incorporate the overall figure of 5,645 households in existing unmet need into the estimates of overall need for additional housing units, an assumption is required on the number of years it would take to clear the existing need for additional housing units. The technical group concluded that it was reasonable to assume that existing need should be cleared within 5 years.

This means assuming that 1/5th of the total existing unmet need is cleared each year for 5 years. At the end of this period the assumption is that there is no backlog of existing unmet need but it is possible that a new backlog would then have built up. These figures would be reviewed and updated at this point.

Therefore, each of the first 5 years of the estimates (2018/19 – 2022/23) include both newly arising need and 1/5th of total existing unmet need.

The maps below show the rate per 10,000 households of homeless households in temporary accommodation (map 3) and overcrowded and concealed households (map 4) in each local authority.
Map 3: Homeless households in temporary accommodation per 10,000 households

Households per 10,000
5 - 9
10 - 14
15 - 19
20 - 30
31 - 44

Local Authority Boundary
Source: Households in Temporary Accommodation (Welsh Government)

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Cartographics • Welsh Government • MUS2/18.19
December 2018
Map 4: Overcrowded and concealed households per 10,000 households
2.3 Estimates of housing need

Combining both the newly arising households and existing unmet need components produces estimates of overall housing need. [Estimates by year, region and variant](#) of household projections can be found on StatsWales.

This section presents estimates of overall housing need first at an all Wales level and then explores regional estimates.
2.3.1 National results

Chart 5 shows results for the first 5 years of the estimates based on different variants of the household-projections. Over this 5 year period, it is assumed new housing units are required to clear 1/5\textsuperscript{th} of the backlog each year.

Chart 5: Estimates of additional housing units first 5 years (Wales)

![Chart 5: Estimates of additional housing units first 5 years (Wales)](chart5.png)

Chart 5 shows that in 2018/19 between 7,200 and 9,700 additional housing units are needed with a central estimate of 8,300. In 2022/23 the estimates range between 6,300 and 9,700 (central estimate: 8,200).

The central estimate, higher variant estimate and ten-year migration follow the same pattern in chart 5. There is a slight decline from 2018/19 into 2019/20, followed by a gentle increase until 2021/22 when the estimates begin to decline again. The peak in 2021/22 is consistent with the peak in newly arising need discussed throughout this article.

The lower variant and zero migration estimates show a slightly different pattern. There is only one year where there is an increase; from 2020/21 into 2021/22.

At the end of the period shown in chart 5, the assumption is there will be no backlog remaining. At this point, the estimates would be reviewed and updated.

Chart 6 shows on average the number of additional housing units that are needed each year over each 5 year period up to 2037/28 assuming there is no backlog of existing unmet need after 2022/23.
Estimates of housing need based on all household projection variants decline throughout the 20 year period. In the first 5 year period (2018/19-2022/23) between 6,700 and 9,700 (central: 8,300) additional housing units are needed and in the mid to late 2030s the estimates range up to 6,500 additional housing units (with a central estimate of below 4,000).

Estimates based on the lower variant household projections decline rapidly. The decline in estimates of additional housing reflects the slow down in household growth in the 2014-based household projections as a result of slow down in population growth.

2.3.2 Regional results

The next three charts show the average annual need for additional housing units by 5 year periods for each of the three regions (North Wales, Mid and South West Wales and South East Wales). As before, only the first period (2018/19 - 2022/23) has the element of existing unmet need incorporated.
Chart 7: Average annual estimates of additional housing need (north Wales)

- In the first 5 year period (2018/19 to 2022/23) an average of between 1,000 and 1,800 additional housing units are needed annually in North Wales (with a central estimate of 1,600).
- By the mid to late 2030s (2033/34 to 2037/38) the estimates range between no additional housing units required (under both the low variant and zero migration) and up to a yearly average of 1,100 (with a central estimate of 400).

Chart 8: Average annual estimates of additional housing need (mid and south west Wales)
In the first 5 year period (2018/19 to 2022/23) an average of between 1,300 and 2,500 additional housing units are needed annually in Mid and South West Wales (with a central estimate of 2,000).

By the mid to late 2030s (2033/34 to 2037/38) the estimates range between no additional housing units required (under both the low variant and zero migration) and up to a yearly average of 1,300 (with a central estimate of 500).

**Chart 9: Average annual estimates of additional housing need (south east Wales)**

- In the first 5 year period (2018/19 to 2022/23) an average of between 4,000 and 5,300 additional housing units are needed annually in South East Wales (with a central estimate of 4,700).

- By the mid to late 2030s (2033/34 to 2037/28) the estimates range between an annual average of 1,100 and 4,000 additional housing units (with a central estimate of 2,700).

The regional estimates follow a broadly similar pattern to the results for all Wales. Key things to note:

- Using both the lower variant and zero migration household-projections, it is estimated that no additional housing units would be required in North Wales and Mid and South West Wales (Chart 7 and chart 8) in the fourth time period (2033/34 - 2037/38).

- As noted throughout this article, the estimates of additional housing need are declining over time for each variant of the household projections and in all three regions (reflecting the slow down in growth in household projections).
2.4 Contextual information – New dwellings

While these estimates are not a housing target, this section discusses historical trends of house building in Wales over the past 20 years. This is to provide context to these estimates.

During the late 1990s and early 2000s, between 8,000 and 9,000 new dwellings were built annually in Wales. A peak of over 9,300 new dwellings were built in 2006-07, before a sharp decrease following the economic downturn as shown in Chart 10.

During the early 2010s, around 5,500 were completed annually. This number gradually increased to reach 6,900 in 2015-16, before decreasing slightly during the past couple of years.

Chart 10: Number of new dwellings completed in Wales (1997-98 to 2017-18)

2.5 Comparison to previous estimates

These estimates replace the previous estimates of housing need in Wales produced by Alan Holmans and published by the Public Policy Institute for Wales (PPIW) in 2015. The estimates published by PPIW used 2011-based household projections.

These previous estimates did not include an estimate of existing unmet need. While it was identified as an important aspect of need for additional housing units it was not included in the final overall calculation.

The presentation of the previous estimates does not enable a direct comparison with the new estimates broken down for the same 5 year periods.

Holmans' principal estimate estimated a need of 8,700 units a year over the complete twenty year period 2011-2031. For the new estimates presented in this article, the annual average of the complete twenty year period (2018-2038) is 5,700 units a year (based on the central estimate).

Holmans' figure of 8,700 annual average housing need falls within the range of the updated estimates for the first five years only (2018/19-2022/23) as shown in chart 11. The new estimates are presented in the chart as range bars, with the central estimate marked by a grey line.
3. Next steps

This article has covered the high level results of overall housing need in Wales, both nationally and regionally. The next article will consider housing demand in terms of the most appropriate tenure for those households requiring an additional housing unit. The housing need estimates will therefore be split into the following tenures:

- Home ownership
- Private rent
- Intermediate rent
- Social rent

A number of economic variables and assumptions about the housing market are needed for this phase of the work, and how they will change in the future. They include:

- House prices
- Rental prices
- Distribution of household income
- Assumptions on affordability thresholds at each tenure level

The estimates of additional housing need split by tenure will be published in a statistical article in Spring 2019.
Annex A – Definitions

Concealed family
The 2011 Census defined a concealed family as a couple or single parent family, living in a multifamily household, where the Family Reference Person (FRP) is not the Household Reference Person (HRP). Each family living in a household includes a FRP identified on the basis of economic activity and age characteristics (lone parents are automatically the FRP). In a one-family household the FRP is also the HRP. In households where there is more than one family, the HRP is selected from the FRPs based on economic activity, age and then order on the census form.

Concealed families will include:

- young adults living with a partner and/or child/children in the same household as their parents
- older couples living with an adult child and their family
- unrelated families sharing a household

A single person cannot be a concealed family; therefore one elderly parent living with their adult child and family or an adult child returning to the parental home is not a concealed family.

Overcrowded households (bedroom standard)

The Occupancy rating provides a measure of whether a household's accommodation is overcrowded or under occupied (based on the number of bedrooms). The ages of the household members and their relationships to each other are used to derive the number of bedrooms they require, based on a standard formula. The number of bedrooms required is subtracted from the number of bedrooms in the household's accommodation to obtain the occupancy rating. An occupancy rating of -1 implies that a household has one fewer bedroom than required, whereas +1 implies that they have one more bedroom than the standard requirement.

An occupancy rating of -1 or lower indicates an overcrowded household.
Annex B – Local authorities

North Wales
Isle of Anglesey
Gwynedd
Conwy
Denbighshire
Flintshire
Wrexham

Mid and south west Wales
Powys
Ceredigion
Pembrokeshire
Carmarthenshire
Swansea
Neath Port Talbot

South east Wales
Bridgend
Vale of Glamorgan
Cardiff
Rhondda Cynon Taf
Merthyr Tydfil
Caerphilly
Blaenau Gwent
Torfaen
Monmouthshire
Newport
Notes on the use of statistical articles

Statistical articles generally relate to one-off analyses for which there are no updates planned, at least in the short-term, and serve to make such analyses available to a wider audience than might otherwise be the case. They are mainly used to publish analyses that are exploratory in some way, for example:

- Introducing a new experimental series of data;
- A partial analysis of an issue which provides a useful starting point for further research but that nevertheless is a useful analysis in its own right;
- Drawing attention to research undertaken by other organisations, either commissioned by the Welsh Government or otherwise, where it is useful to highlight the conclusions, or to build further upon the research;
- An analysis where the results may not be of as high quality as those in our routine statistical releases and bulletins, but where meaningful conclusions can still be drawn from the results.

Where quality is an issue, this may arise in one or more of the following ways:

- being unable to accurately specify the timeframe used (as can be the case when using an administrative source);
- the quality of the data source or data used; or
- other specified reasons.

However, the level of quality will be such that it does not significantly impact upon the conclusions. For example, the exact timeframe may not be central to the conclusions that can be drawn, or it is the order of magnitude of the results, rather than the exact results, that are of interest to the audience.

The analysis presented does not constitute a National Statistic, but may be based on National Statistics outputs and will nevertheless have been subject to careful consideration and detailed checking before publication. An assessment of the strengths and weaknesses in the analysis will be included in the article, for example comparisons with other sources, along with guidance on how the analysis might be used, and a description of the methodology applied.

Articles are subject to the release practices as defined by the release practices protocol, and so, for example, are published on a pre-announced date in the same way as other statistical outputs.

Missing value symbols used in the article follow the standards used in other statistical outputs, as outlined below.

.. The data item is not available
. The data item is not applicable
- The data item is not exactly zero, but estimated as zero or less than half the final digit shown
* The data item is disclosive or not sufficiently robust for publication

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