

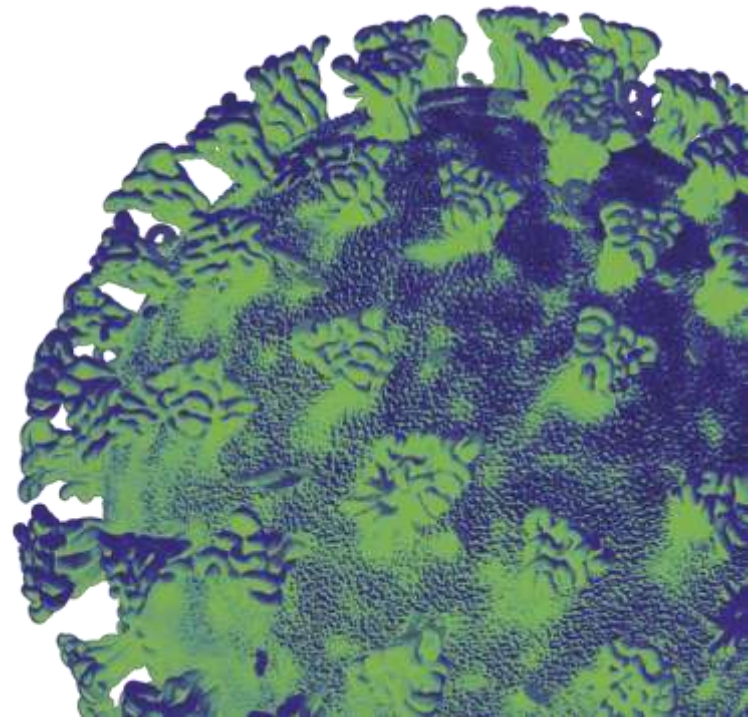
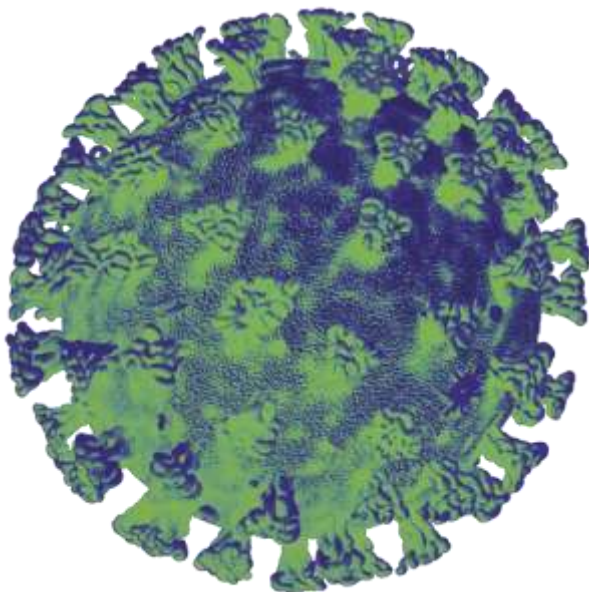
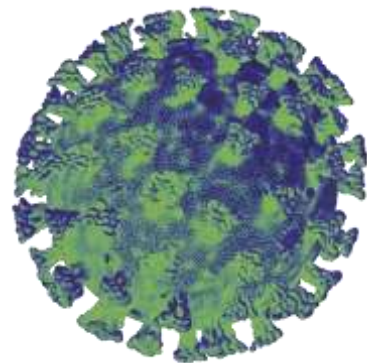


Llywodraeth Cymru  
Welsh Government

# Technical Advisory Cell

## Summary of advice

19 June 2020



## Technical Advisory Cell: Summary Brief

19 June 2020

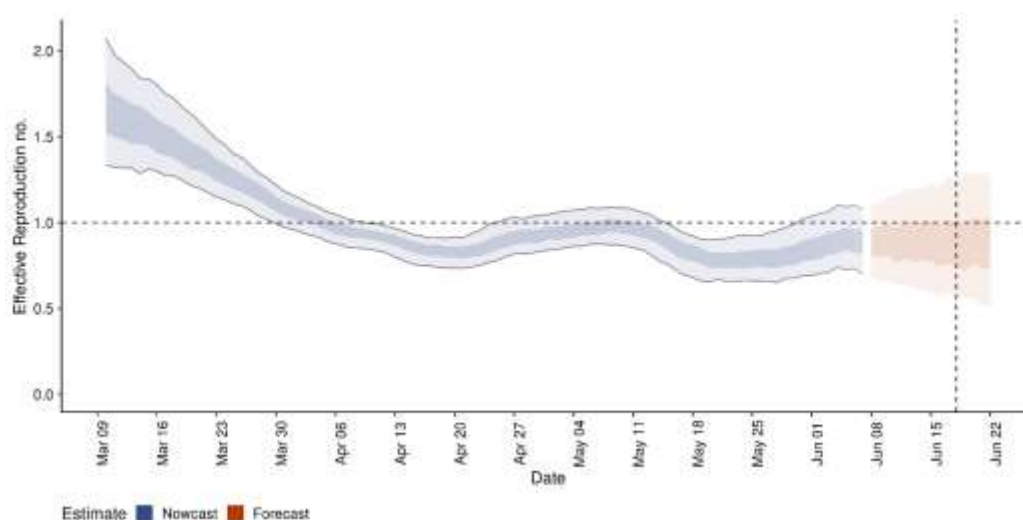
### Top-line Summary

- $R_t$  has been below 1 for at least six weeks which has led to a reduction in cases and hospitalisations. If  $R_t$  remains below 1 then cases will continue to fall.
- Overall the prevalence rate for COVID-19 in the community in Wales continues to fall, and there is significant capacity available in hospitals across Wales. There is recent evidence of two local outbreaks in north Wales.

### Reproduction Number

- The most recent estimate of the Reproduction number  $R_t$  for Wales from SPI-M is predicted to be between 0.7 and 1.0 with a central estimate of 0.8.
- This estimate and the estimate produced for 09/06/20 are based on different sets of models, so the two cannot be compared directly.
- As the number of new cases drops to low levels,  $R_t$  becomes very sensitive to daily changes in cases found through testing and tracing, causing  $R_t$  to fluctuate weekly and tend towards  $R_t = 1$ .
- If the incidence of infections continues to decline, other measures such as number of new cases and GP reports will become more important than using  $R_t$  as the primary indicator
- Figure 1 below shows the time-varying estimate of the effective reproduction number in all regions. Estimates from existing data are shown up to the 8 June 2020 from when forecasts are shown. These should be considered indicative only. The horizontal dotted line indicates the target value of 1 for the effective reproduction number required for control. The vertical dashed line indicates the date of report generation.

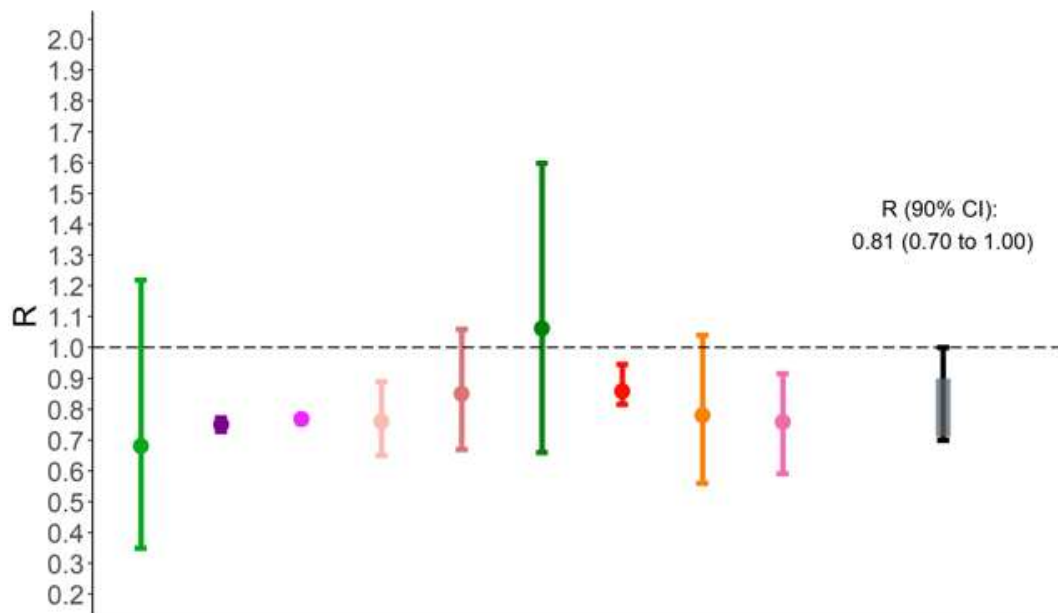
**Figure 1: Reproduction Number over time in Wales**



## Current Estimate of $R_t$

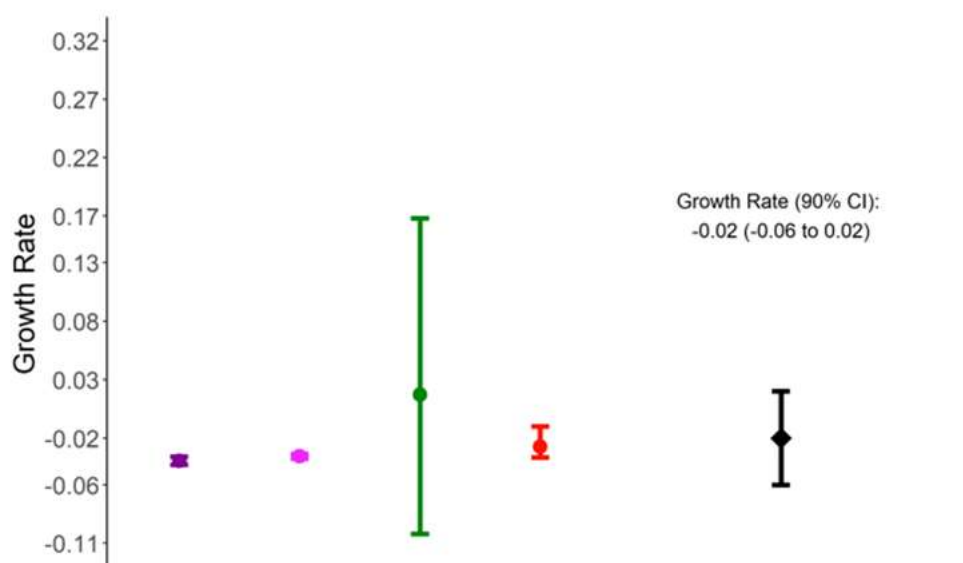
- There is no evidence of  $R_t$  being significantly different in the different nations of the UK. There is, however, greater uncertainty in the estimates for Scotland, Wales, and Northern Ireland partly due to the smaller numbers of cases and deaths compared to England.
- Any changes in transmission that may have occurred in the past two to three weeks will not yet be reflected in clinical data, nor therefore in current estimates of  $R_t$ .
- We use  $R_t$  to estimate the rate of reproduction in the community. There are other settings that are particularly relevant to the current situation that we consider to be separate epidemics, such as hospitals and care homes. These are not independent; infection can be spread between hospitals and care homes, from these settings back into the community, and vice versa. These trends or transmissions cannot be captured though estimating  $R_t$  separately for care homes and hospitals.
- It is recommended that the situation in smaller settings is monitored using number of cases and deaths and, where possible, epidemiological investigation of how the multiple settings interact.
- The latest estimates from the different models we use for  $R_t$  in Wales are shown in the Figures below. Results are anonymised to avoid giving precedence to one particular model over another. Results using the combine model using equal weights are also shown in black along with 90% confidence intervals.

**Figure 2. Current estimates of  $R_t$  in Wales –with 90% confidence intervals, along with the combined model based on equal weights**



- The *growth rate* of a disease is a way to capture how quickly the number of infections are changing day by day<sup>1</sup>. There are currently 4 models that estimate growth rates for Wales. The results from these models are also combined using equal weights to provide an overall central estimate of growth rate. Figure 3 shows the latest growth rate estimates for Wales, including the combined model.
- The current growth rate is -0.02 (90% confidence intervals from 0.06 to 0.02) which means that infections are currently estimated to be declining by around 2% per day.

**Figure 3: Current estimates for growth rate in Wales – with 90% confidence intervals, along with the combined model based on equal weights**



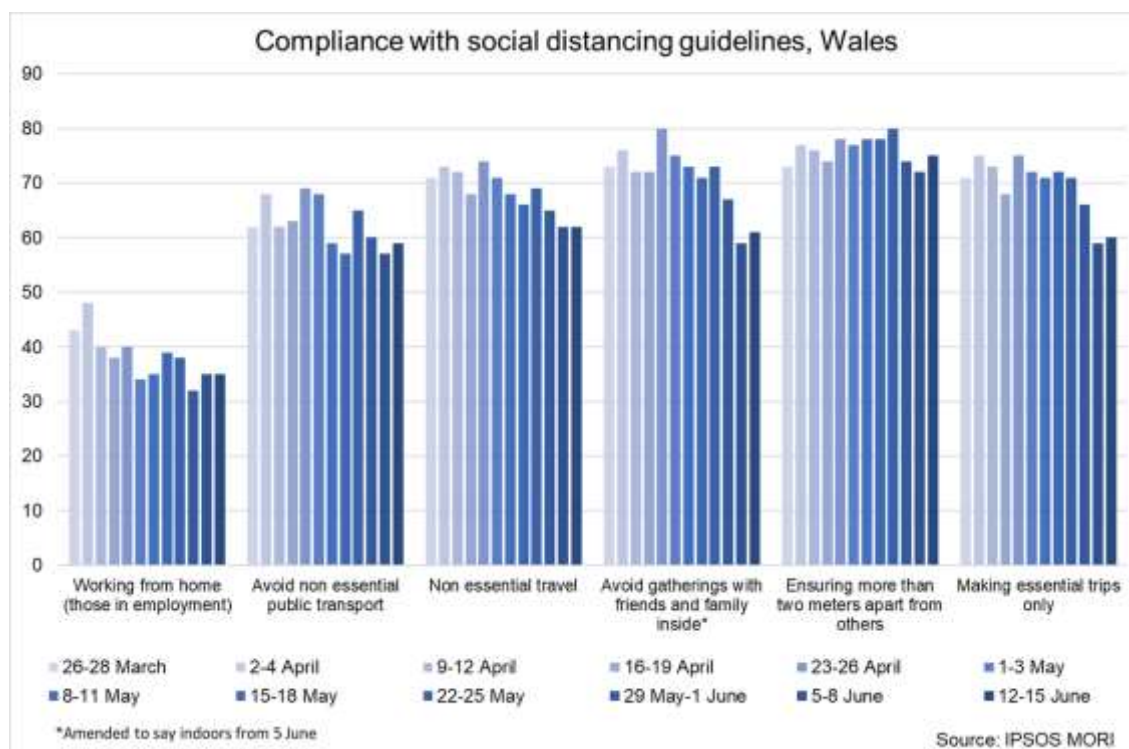
### Adherence to current measures

- Many people in Wales continue to follow the social distancing guidelines. Following a couple of weeks of reductions, the latest week is similar to the previous two weeks. Data at a GB level (from ONS) shows increases in those leaving their home for ‘non-essential’ reasons.
- Other analysis (at a UK level) shows that “complete” compliance continues to decrease amongst all ages, with lowest levels amongst young people, people with higher household incomes, people in England, and people living in urban areas.
- However, “majority” compliance remains high and relatively stable amongst adults over the age of 30, with more than 90% of these adults reporting they are still following the guidelines to a large extent. It is only in adults under the age of 30 that “majority” compliance continues to decline, with figures now around 80%.
- Figure 4 represents data collected online as part of a multi-country survey on the Global Advisor platform. Each of the waves has included approximately 600 respondents in Wales. The sample is broadly representative of the adult population aged 16-74. Data is weighted to reflect the age and gender profile of the Welsh population aged 16-74. All samples have a margin of error around them. For a sample

<sup>1</sup> <https://plus.maths.org/content/epidemic-growth-rate>

of around 500, this is +/- 4.8 percentage points. For further information on public views on COVID-19, please see: <https://gov.wales/surveypublic-views-coronavirus-covid-19>.

**Figure 4: Survey Response Data on Wales Compliance**



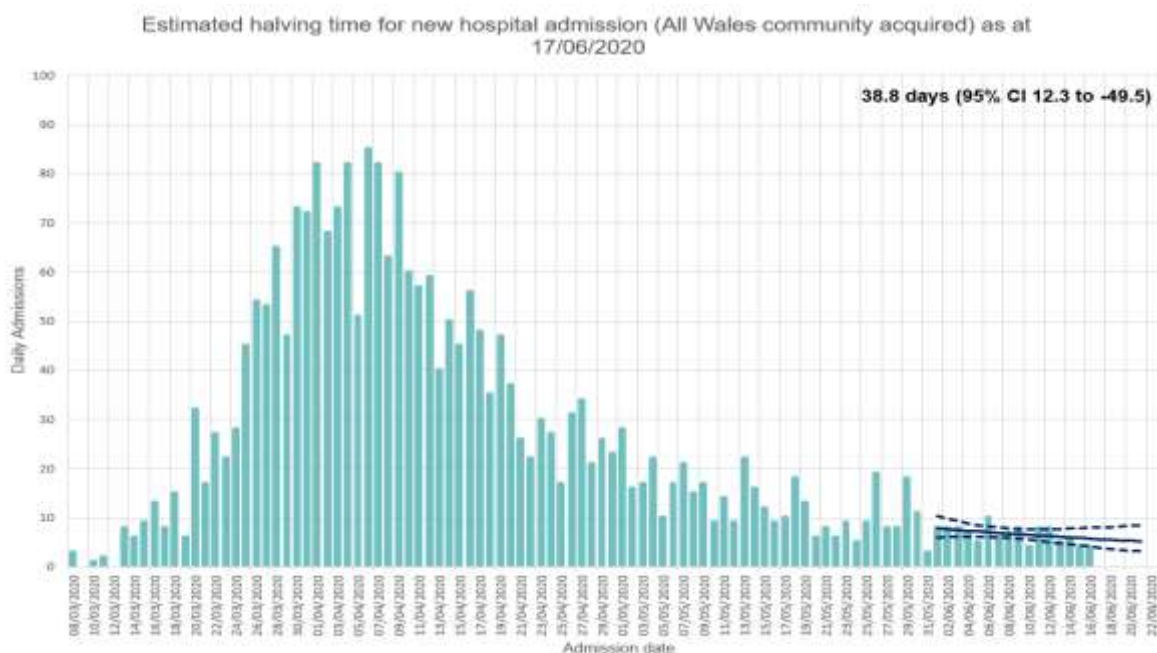
- Since mid-April travel has been increasing steadily, however the last 2 weeks have seen little change overall. In mid-April travel of Facebook users in Wales was 50% lower than the baseline, this had risen to a little over 30% by 2nd of June and has remained around there since. Apple data shows requests for driving directions in Wales have increased slightly in the last week following a fall the previous week. The Google mobility data also shows stability over the last week in most categories, but mobility at transit stations has fallen whilst workplaces continue to increase.
- After lockdown patterns of travel between England and Wales were broadly similar. However between mid-May and early June England saw larger increases in travel. In the last week England has seen slightly larger increases in travel than Wales (the week prior to that England had a slightly larger reduction in travel than Wales).
- The figure below shows the change in travel in Wales using Google mobility data. The figures are based on the average of the local authorities that have data. The baseline is the median value, for the corresponding day of the week, during the 5-week period Jan 3–Feb 6, 2020. This pattern is mostly similar to that of the UK as a whole.

### Halving time

- The number of new hospitalisations for COVID-19 in Wales has passed the first peak and is estimated to be falling. So, instead of talking about 'doubling times', we are now talking about 'having times' – the time it takes for the number of cases to halve.

- From 22 March to 10th April, the estimated doubling times increased from 7.6 to 92.1 days. This was based on community-acquired hospital admissions (it excluded possible hospital-acquired cases).
- Halving time estimates as at 17 June (based on admissions from 1 June to 14 June) suggested the time taken for the number of new cases to halve is approximately 32.8 days, with a 95% confidence interval of 12.3 to -49.5 days.

**Figure 4: Estimated halving time for new hospital admissions for community acquired COVID-19<sup>2</sup>**



## Research

- Results from the 'RECOVERY' trial of hydroxychloroquine and dexamethasone reaffirm the central importance of randomised trials taking place in Wales.
- There are currently 2,856 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 362 in last seven days.

<sup>2</sup> Community acquired cases are assumed to be those where the time between admission and COVID-19 sample date is less than four days. This subset of data has been used for the purposes of estimating changes in transmission in the community and the number of new COVID-19 diagnoses in patients in hospital will be higher than presented in this chart. Doubling/halving time estimates are sensitive to the time period chosen. For the purpose of this analysis 14 days' worth of data has been used. Halving time estimates as at 17 June 2020 and are based on admissions from 1 June to 14 June. The 95% confidence intervals are indicated by dark blue dashed lines on Figure 4. These data exclude patients where the hospital admission date is more than 14 days after the specimen date. These are assumed to be non-COVID-19 related admissions because it is likely that most people will either recover from COVID-19 or deteriorate and require hospital before 14 days. After 14 days the COVID-19 test result is likely to be incidental to the subsequent hospital admission. Source: All <sup>2</sup>Wales Hospital Case Management System, Public Health Wales – as at 17 June 2020

## NHS Data Dashboard

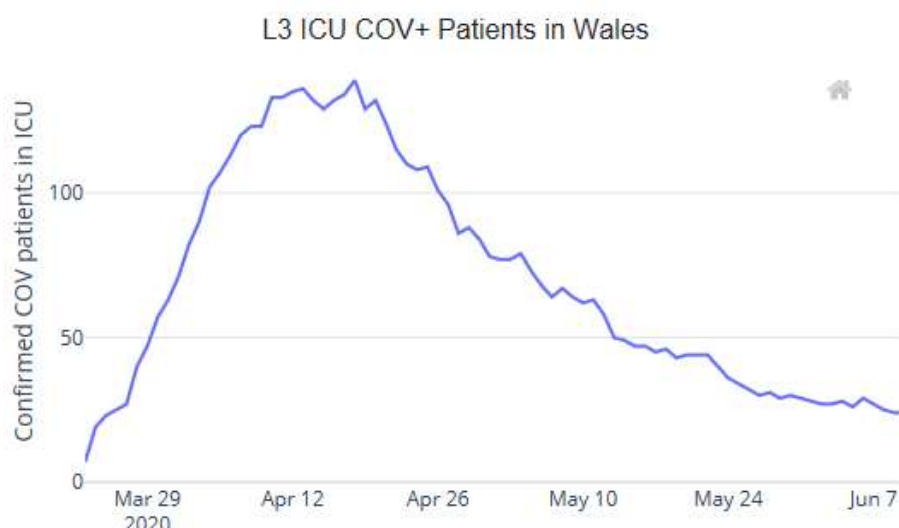
### NHS Status Report

- PHW data updated at 21/06/2020
- Hospital data updated at 22/06/2020

### L3 ICU

- Overall occupancy is at 47% (Up from 41.8% in previous report)
- Of the total of 131 patients in L3 ICU in Wales:
  - 8% are confirmed COVID patients (down from 17% of previous report);
  - 8% are suspected COVID patients (up from 4%); and
  - 79% are non-COVID patients (up from 77%).
- Of the health boards with L3 ICU units:
  - SBUHB is at 63% occupancy
  - HDUHB is at 52% capacity;
  - ABUHB, BCUHB, CTMUHB and CVUHB are at less than 50% capacity.

**Figure 6: Covid-19 positive patients in Level 3 ICU Beds in Wales**



## Public Health Wales (PHW) Surveillance Summary

### Trends

- NHS 111 and NHS direct calls for COVID-related symptoms are low and stable.
- Ambulance calls possibly related to COVID peaked in April but have fallen and are now stable.
- Test Positivity has declined from nearly 50% to below 2%, and has been stable for the last few weeks; positivity is higher in hospital-tested persons.

### Areas of recent activity

- The main recent foci have been in North Wales. BCUHB and CTUHB have the highest median number of cases per area.
- Recent confirmed cases have been mostly in key workers in hospital and care homes, both staff and care home residents.
- There are still between 1 and 5 new incidents per week, mainly in residential care homes.
- Anglesey food processing plant outbreak has 58 cases (at time of reporting), and staff screening is planned. Cases mainly in last 10 days. There has been a separate incident in another North Wales plant, with further transmissions likely outside plant.

### Deaths

- All cause deaths have returned to nearly baseline seasonal levels
- In Covid-19 deaths aged under 50 (and similar in those under 60), asthma, morbid obesity and type II diabetes were the most commonly reported underlying conditions (29-43%)

## Professional Head of Intelligence Assessment (PHIA) probability yardstick

- Where appropriate, TAC advice will express Likelihood or confidence in the advice provided using the PHIA probability yardstick to ensure consistency across the different elements of advice.

