

Coronavirus and quarantine after arriving in England from an amber list country: methodology

Quality and methodology information on data from the International Arrivals Insights Survey looking at adherence to quarantine requirements by adults arriving in England from an amber list country. Experimental Statistics.

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1 . Survey information

The International Arrivals Insights Survey was compiled in response to policy questions on the behaviour of individuals who have arrived in England from an [amber list country or territory](#). The survey measures:

- the level of understanding and adherence to quarantine requirements
- adherence to testing requirements
- attitudes to quarantine and coronavirus (COVID-19) risk
- prevalence of behaviour that poses a risk of transmitting COVID-19

The survey is produced, run and analysed in a collaboration between the Department for Health and Social Care (DHSC) and the Office for National Statistics (ONS).

This survey was specifically designed to obtain information on people who have arrived from an amber list country or territory, are not exempt from quarantine requirements, and report that they are isolating at an address in England.

Respondents (adults aged 18 years and over) are randomly sampled using information from the [passenger locator form \(PLF\)](#), provided to the ONS by the DHSC. A PLF must be completed by everyone arriving in the UK from international travel, up to 48 hours beforehand. The sample is stratified to be representative of the age, sex and regional distribution of the population arriving in England from amber list countries or territories. Both UK and non-UK residents are included.

The survey is conducted via telephone, and all responses are self-reported. To minimise recall bias, respondents are interviewed between 10 and 14 days after arriving in England. Unless they tested positive for COVID-19, the majority of respondents have reached the end of their quarantine period at the time of interview.

ONS experts were consulted on questionnaire design. The questions asked in this survey can be found in the [Coronavirus COVID-19 Question Bank \(XLS, 226KB\)](#).

Estimates and margins for error

Percentages in these releases are weighted to account for age, sex and regional bias in response rates.

As with all surveys, the estimates have an associated margin of error. Significance testing and confidence intervals have been used to test for differences. Where a difference is [statistically significant](#), we can be more confident that it really exists.

The statistics contained in this release are [Experimental Statistics](#).

Pilot survey

A pilot survey was conducted between 24 and 29 May 2021 with respondents who arrived in England on 14 May and 17 May 2021. [The policy allowing international travel to restart](#), governed by a new traffic light system, was implemented on 17 May 2021.

The pilot survey included repeated questions about the behaviour of respondents at different time points during quarantine, routed according to whether they took the required day two and day eight COVID-19 tests. The survey achieved 747 responses and the median interview time was 20.1 minutes.

In the second survey (14 to 19 June 2021), repeated questions were removed and respondents were asked instead about their behaviours across the whole quarantine period. This helped to simplify the questionnaire and shortened the median interview time to 17.6 minutes. This survey achieved 944 responses.

During the pilot survey, there were some difficulties in connecting to international telephone numbers, which had been sourced from the PLF. For the surveys that followed, the numbers were cleaned where possible using international telephone number convention information.

2 . Definitions and terms

Adherence to quarantine requirements

Respondents are deemed to be fully adherent to quarantine requirements if they report that they:

- did not leave their accommodation for the full quarantine period, except to get or return a coronavirus (COVID-19) test, or to go for emergency medical treatment or hospital attendance
- did not receive any visitors, except for visitors supporting their personal care

Prior to the third International Arrivals Insights Survey (12 to 17 July 2021), respondents were not able to state "emergency medical treatment or hospital attendance" as a reason for leaving their accommodation and may have been miscategorised as non-adherent if leaving only for this reason, despite this reason being permitted. In the first two surveys (conducted 24 to 29 May 2021 and 14 to 19 June 2021), the only permitted reason respondents could report for leaving their accommodation was "to get or return a test for coronavirus (COVID-19)".

The addition of the "emergency medical treatment or hospital attendance" response option had no [statistically significant](#) impact on estimates of adherence to quarantine requirements in the third survey (12 to 17 July 2021).

Individuals who left their accommodation or had visitors for other reasons may have been adherent with the guidance if they did so because of exceptional circumstances. While we have made improvements to reduce misclassification of non-adherence, some may still occur. This means a small number of individuals may be miscategorised as non-adherent.

Amber list countries and territories

Countries are rated as [red, amber or green for coronavirus \(COVID-19\)](#) and this determines the rules that must be followed when entering England. The risk posed by individual countries and territories is continuously monitored, and the red, amber and green lists are reviewed every three weeks. Countries and territories can be moved between lists if conditions change.

This survey focuses only on people arriving in England from amber list countries and territories. The current [list of amber countries and territories and associated rules](#) for those arriving from them can be found on the GOV.UK website.

Contact with non-household members

Contact with non-household members is defined as either physical contact for any length of time or being within two meters (six feet) of them for at least a few minutes during a trip out of the accommodation. Having visitors to the accommodation is also counted as contact with non-household members if those visitors are not providing personal care.

Quarantine

Prior to 19 July 2021, government guidance stated that when you arrive in England from an amber-listed country or territory, you must travel directly to the place you are staying and not leave until 10 days have passed. This applied to everyone regardless of vaccination status, unless they had a [job that qualified for travel exemptions](#) or they opted into the voluntary [Test to Release scheme](#). The quarantine period was continuous from the day you arrived in England and lasted for the next 10 full consecutive days after the day you arrived up until 11:59pm on day 10. For the purposes of counting days, the day after arrival was considered "day 1". This period was necessary because it can take up to 10 days for COVID-19 symptoms to appear.

The guidance has since been updated and the [latest information on quarantine and testing for those arriving from amber list countries](#) can be found on the GOV.UK website.

Test to Release

There is an option for individuals to opt into a voluntary [Test to Release scheme](#). Under this, individuals can choose to pay for a private COVID-19 test, which can be taken after they have been in England for at least five full days. If the result is negative, quarantine can be ended (though it is still mandatory to take the day eight test).

Understanding quarantine requirements

Respondents are asked if they believe that specified activities are permitted or not during quarantine (from a list of reasons for leaving accommodation). Respondents are deemed to have fully understood quarantine requirements if they correctly report that the activities are not permitted, apart from going out to get or return a COVID-19 test, or to go for emergency medical treatment or hospital attendance.

To improve the accuracy of these estimates, reasons presented to respondents were updated in the third survey (12 to 17 July 2021) to better reflect common reasons for leaving accommodation that respondents had reported in the previous two surveys. One reason was therefore added ("for other essential household responsibilities, for example, taking children to school, dog walking, or taking someone to hospital") and another was removed ("to help or provide care for a vulnerable person").

In the first two surveys (24 to 29 May 2021 and 14 to 19 June 2021), respondents were also asked how well they understood requirements in place for those arriving in the UK, with response options ranging from very poor to complete understanding. This question has since been removed.

3 . Strengths and limitations of the survey data

The main strengths of the International Arrivals Insights Survey include:

- timely production of data and statistics that can respond quickly to changing needs, as the questions included are reviewed for each survey
- the sample is stratified to be representative of the age, sex and regional distribution of the population of interest and percentages are based on weighted counts, which are representative of that population
- quality assurance procedures are undertaken throughout the analysis stages to minimise the risk of error
- confidence intervals have been used to determine whether differences across time periods and groups are statistically significant

The main limitations of the International Arrivals Insights Survey include:

- because of the limited periods in which fieldwork take place, it is difficult to reach a large number of people and therefore the overall sample size for the survey is limited
- the behaviour during quarantine is self-reported and may be subject to recall bias, which influences how accurately respondents are able to recall past events and experiences; most interviews take place within four days of the end of quarantine to reduce this bias
- respondents may be unwilling to report illegal behaviour, for example, leaving their accommodation during a quarantine period; this is also known as social desirability bias
- the [Experimental Statistics](#) presented contain [uncertainty](#); as with all survey data based on a sample, there is an element of uncertainty as they are susceptible to respondent error and bias

4 . Related links

[Coronavirus and quarantine after arriving in England from an amber list country](#)

Bulletin | Released 2 September 2021

Behaviour of individuals arriving in England from an amber-listed country or territory who were required to quarantine, from the International Arrivals Insights Survey. Includes information on understanding and adherence to quarantine requirements, coronavirus testing, and vaccination status. Experimental Statistics.

[Coronavirus \(COVID-19\) latest data and analysis](#)

Webpage | Updated as and when data become available

Latest data and analysis on coronavirus (COVID-19) in the UK and its effect on the economy and society.

[Coronavirus \(COVID-19\) latest insights](#)

Webpage | Updated as and when data become available

A roundup of the latest data and trends about the coronavirus (COVID-19) pandemic from the ONS and other sources.

[Coronavirus \(COVID-19\) harmonisation guidance](#)

Webpage | Updated frequently

This page provides harmonisation guidance on how to best to collect data about the impact of the coronavirus (COVID-19) pandemic. Users can also find a bank of questions from multiple Office for National Statistics (ONS) surveys related to coronavirus to be used in other surveys to further support harmonisation and questionnaire development. This bank also provides users with an understanding of what data the ONS has in relation to the coronavirus pandemic.