

Covid-19 Infection Survey



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What we will cover in this presentation

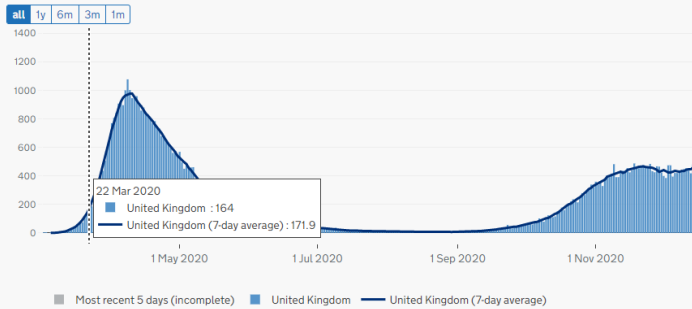
- Background
- Introduction to the survey
- Survey design, methods and analysis
- How our data is used
- Lessons learnt

Background

Deaths within 28 days of positive test by date of death

Number of deaths of people who had had a positive test result for COVID-19 and died within 28 days of the first positive test. Data from the four nations are not directly comparable as methodologies and inclusion criteria vary. Data for the period ending 5 days before the date when the website was last updated with data for the selected area, highlighted in grey, is incomplete.

Daily Cumulative Data About



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Coronavirus: Strict new curbs on life in UK announced by PM

© 24 March 2020 | Comments

Coronavirus pandemic



Pillar 1
Medically
commissioned
swabs (cases)

Pillar 2
Population –
symptom driven –
swabs (cases)

Pillar 3
Community
antibody testing

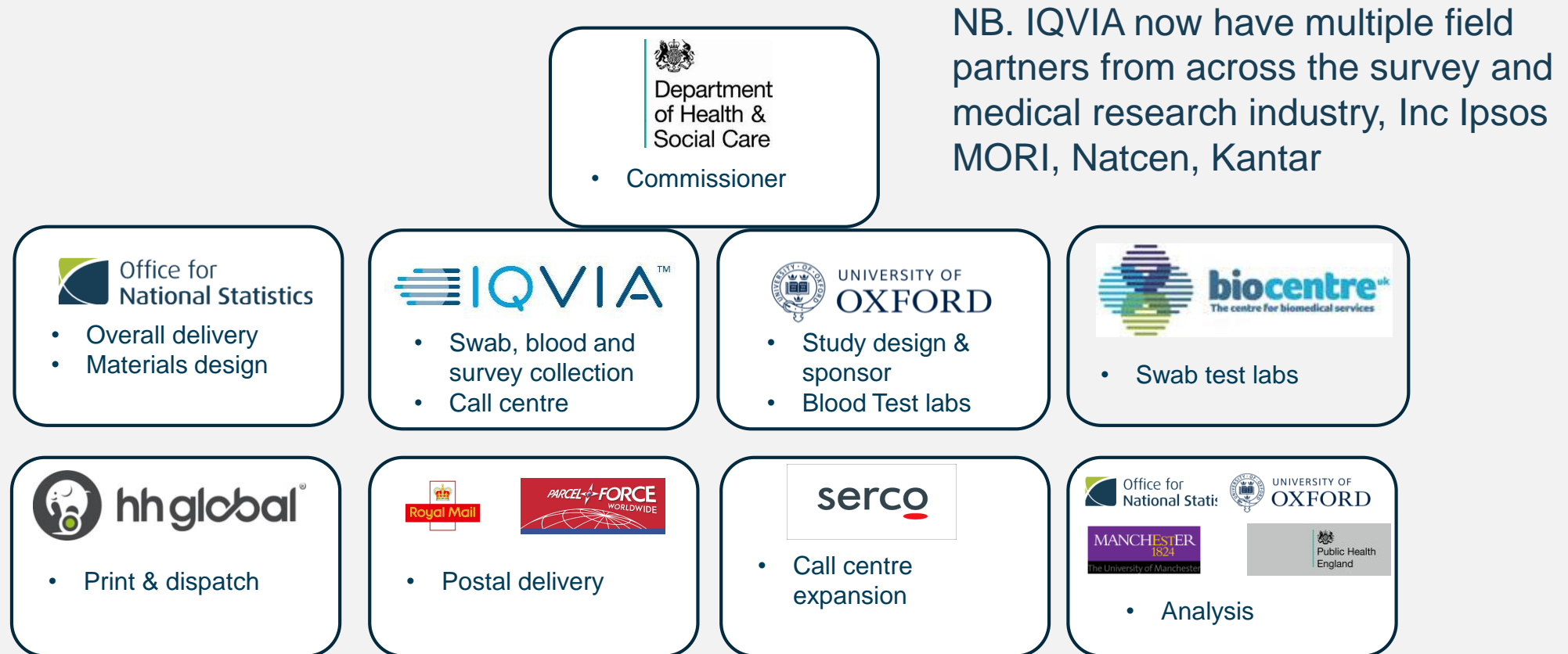
Pillar 4
Community
antibody & swab
testing – variety of
studies

Introduction to CIS

Introduction

- As the largest independent producer of statistics in the UK, our main responsibilities are collecting, analysing and disseminating statistics about the UK's economy, society and population.
- Following the UK outbreak of COVID-19, information to support policy makers and frontline delivery was extremely limited. The Department for Health and Social Care - the UK government department responsible for government policy on health - tasked ONS to initiate a large-scale survey to respond to this need.

Partnership at pace – established in 7 days



COVID-19 surveillance in the UK

Pillar 1 Medically commissioned swabs (cases)	Pillar 2 Population – symptom driven – swabs (cases)
Pillar 3 Community antibody testing	Pillar 4 Community antibody & swab testing – variety of studies

NHS Test & Trace

- Official record of positive COVID-19 cases.
- Provides daily new COVID-19 infections.
- Compare with ONS COVID-19 Infection Survey to identify trends.

Real-time Assessment of Community Transmission

- Imperial College London randomly selected 150,000 participants per month

ZOE COVID-19 Symptom Study

- Aim to better understand symptoms of COVID-19.
- Provides data on common symptoms.
- Estimates the number of new COVID-19 infections.

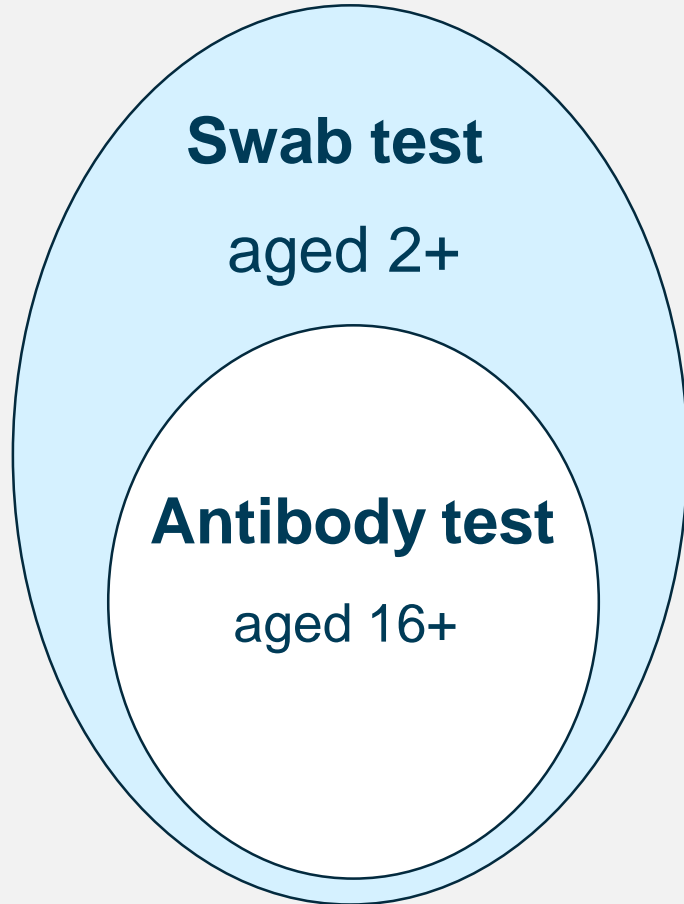
Survey design and analysis

Sampling

- At the start of the pilot stage of the study, we invited about 20,000 private households in England to take part.
- The sample for the survey was initially drawn mainly from respondents of previous surveys who had consented to future contact regarding research.
- Since the end of July 2020, we have further expanded the survey:
 - England to 150,000 people tested per fortnight
 - 15,000 in each of Wales and Scotland
 - Up to 15,000 in Northern Ireland



Every month we collect:



Demographics

Occupation and Sector

Contact with others

Behaviour



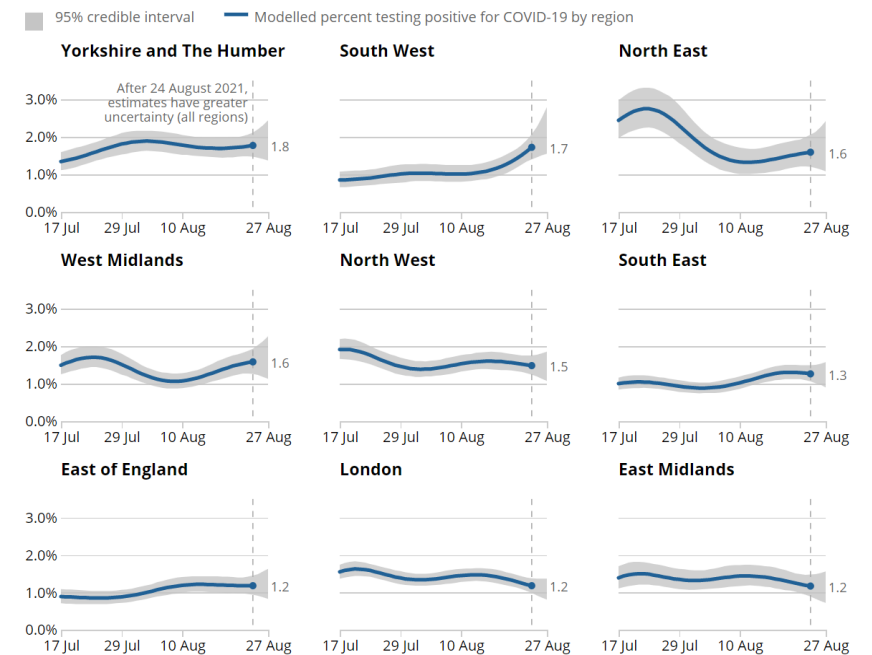
CIS analysis and dissemination

Analysis we produce

- Daily positivity rates
- Weekly incidence rates
- Fortnightly antibody and vaccine rates
- Other ad hoc analysis on:
 - Symptoms
 - Occupation
 - Number of social and physical contacts
 - Patient facing

Figure 2: The percentage of people testing positive increased in the South West and the West Midlands in the week ending 27 August 2021

Estimated daily percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs by region, England, 17 July to 27 August 2021



Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

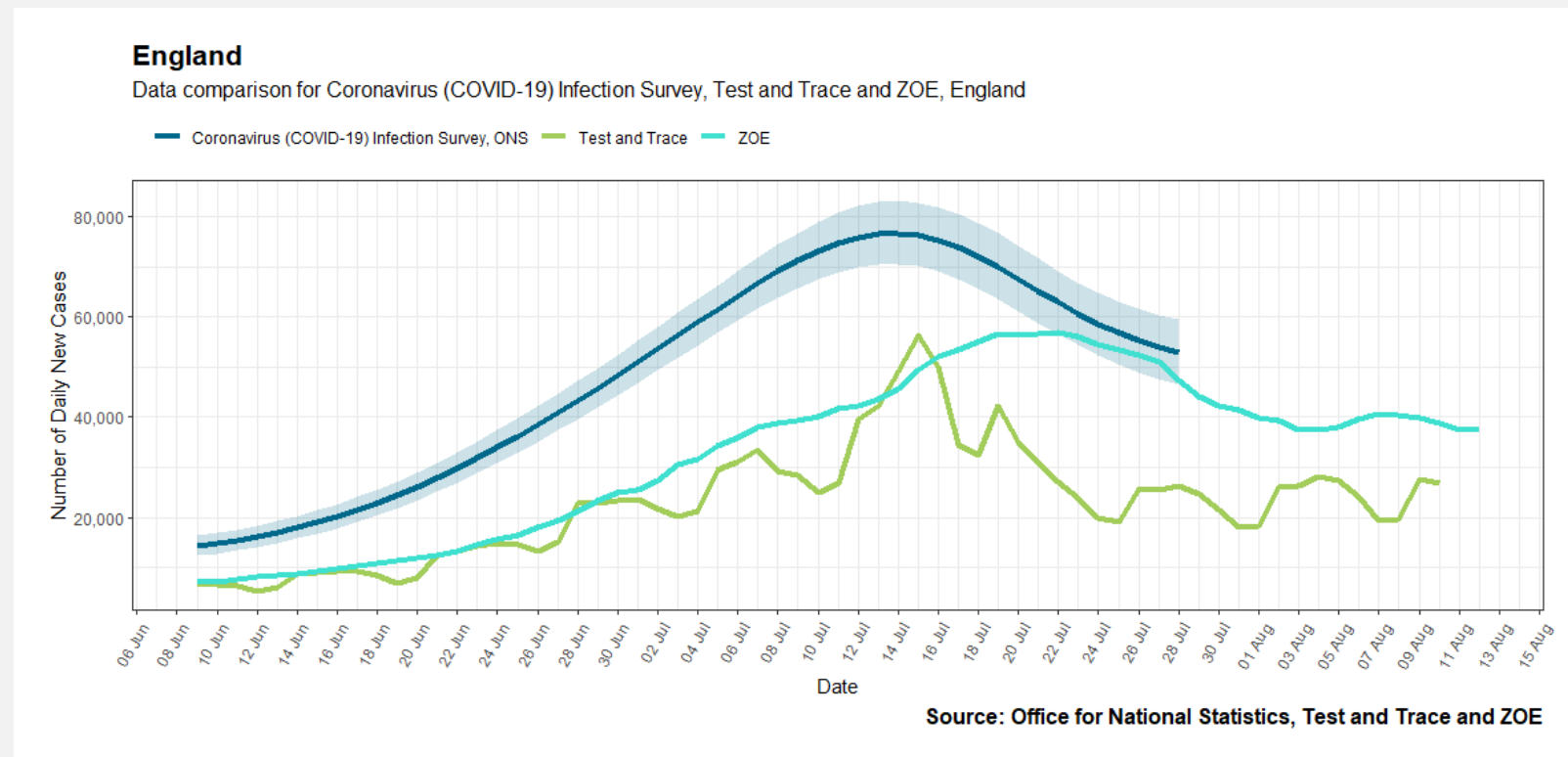
Dissemination

- Weekly management information
- Weekly swab positivity rates bulletin
- Fortnightly antibody and vaccines bulletin
- Characteristics articles
- Technical articles
- Academic publications

Comparing Test & Trace, ZOE and the COVID-19 Infection Survey

Comparing the findings from multiple studies within the UK allows for:

- Easy identification of data disparities.
- A more informed and contextual idea of the trends and direction of the pandemic.



How CIS data has been used

What have our findings shown?

- Data from the CIS has directly supported key decision making:
 - Regional lockdown
 - November 5th lockdown
 - Regional tier regulations
 - New variant restrictions
 - Roadmap evidence

Covid: England's regional tiers to be set out

🕒 26 November 2020 | 💬 Comments

Covid-19: Christmas rules tightened for England, Scotland and Wales

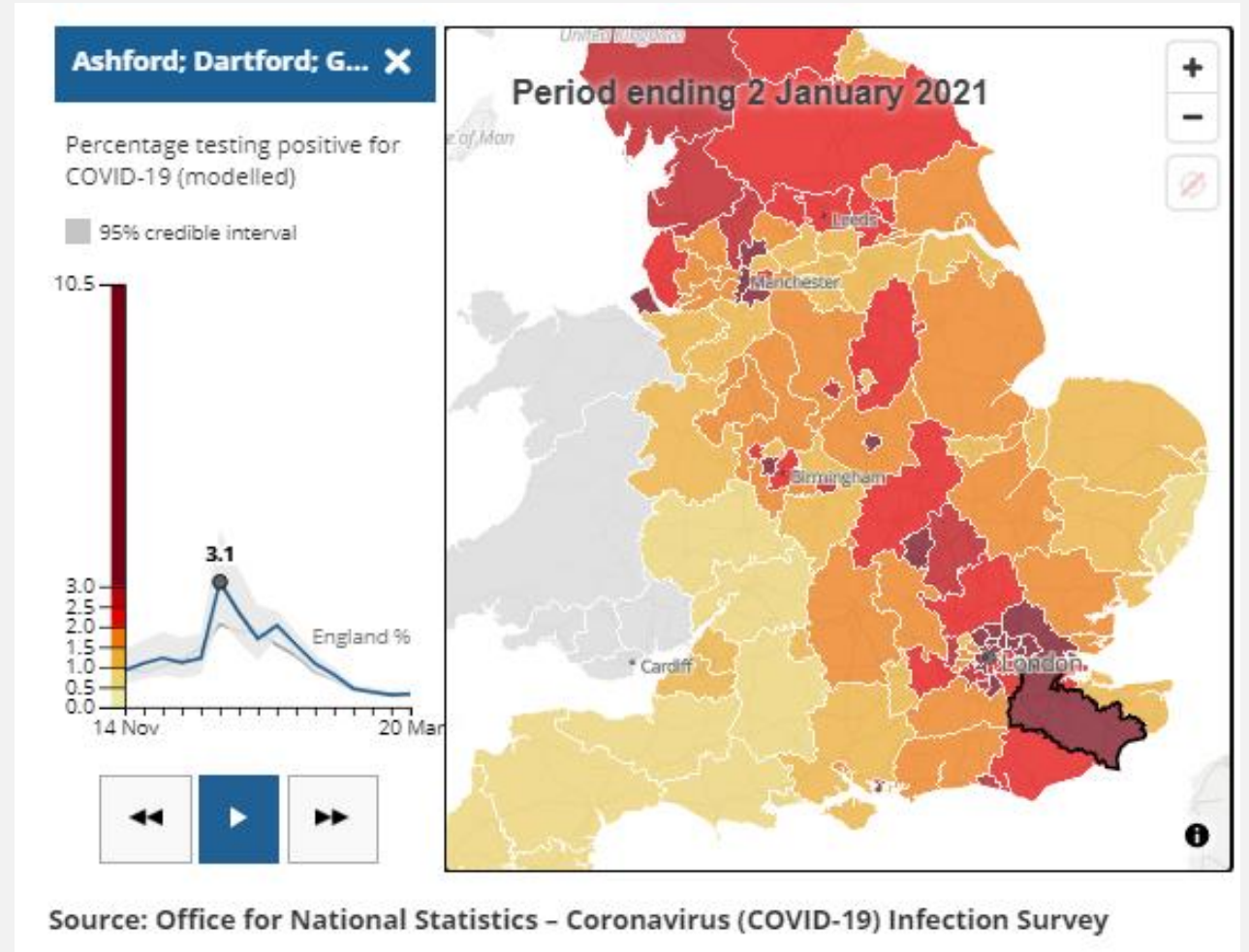
🕒 20 December 2020 | 💬 Comments

Confirmed cases of COVID-19 variants identified in UK

Press release

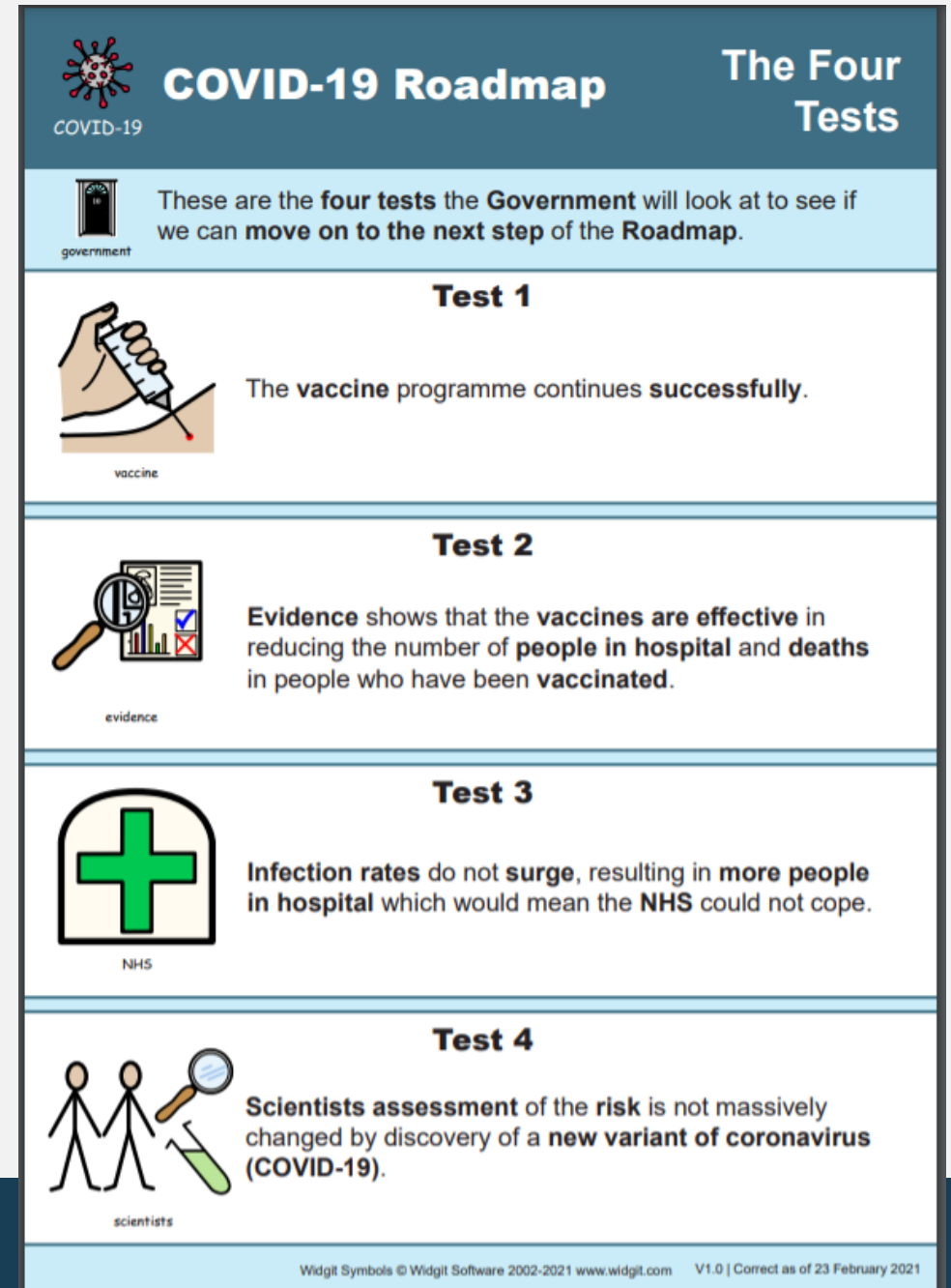
Prime Minister sets out roadmap to cautiously ease lockdown restrictions

Analysis to inform local lockdowns



The four tests

- The government set out a roadmap plan to completely ease the restrictions in England in July.
- The COVID-19 Infection Survey alongside other ONS divisions were tasked to provide data on 4 tests that needed to be satisfied before the restrictions could be eased.




COVID-19 Roadmap The Four Tests

COVID-19

government

These are the **four tests** the **Government** will look at to see if we can **move on to the next step** of the **Roadmap**.


Test 1



vaccine

The **vaccine** programme continues **successfully**.


Test 2



evidence

Evidence shows that the **vaccines are effective** in reducing the number of **people in hospital** and **deaths** in people who have been **vaccinated**.


Test 3



NHS

Infection rates do not **surge**, resulting in **more people in hospital** which would mean the **NHS** could not cope.

Test 4



scientists

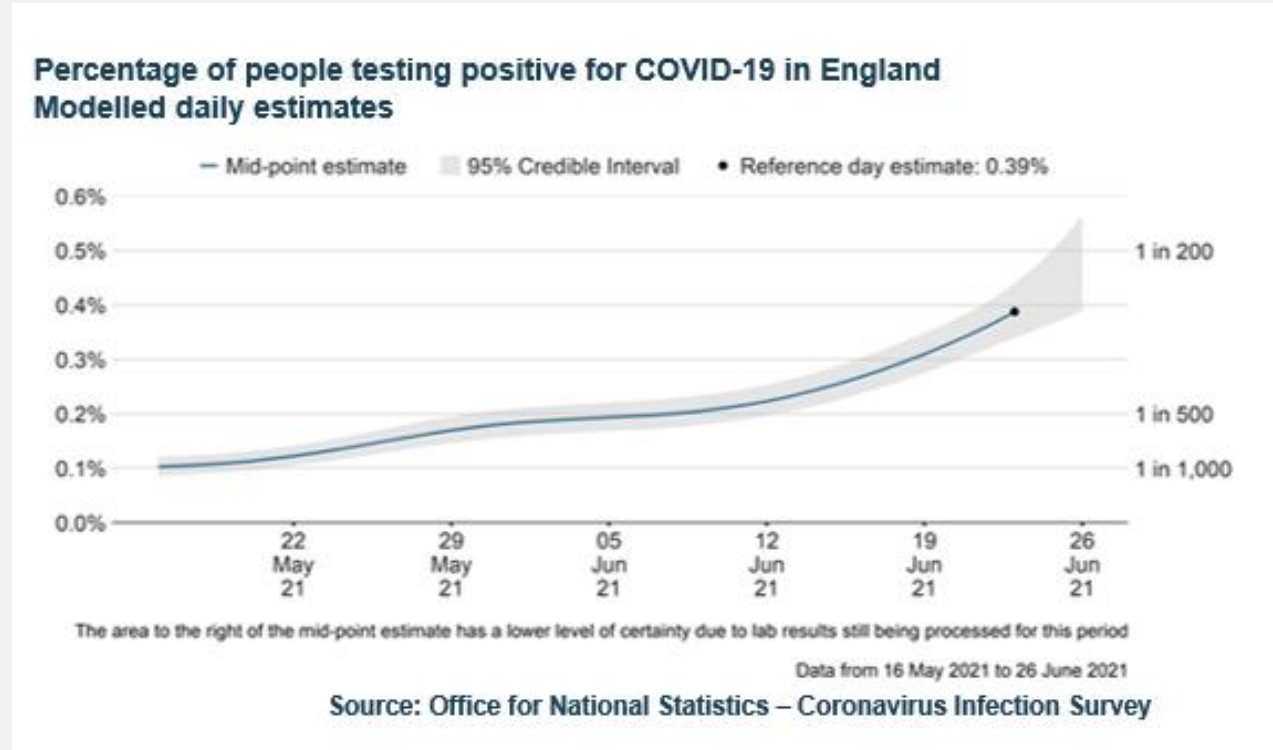
Scientists assessment of the **risk** is not massively changed by discovery of a **new variant of coronavirus (COVID-19)**.

Widgit Symbols © Widgit Software 2002-2021 www.widgit.com V1.0 | Correct as of 23 February 2021

Test 3: Infection rates do not risk a surge in hospitalisations which would put unsustainable pressure on the NHS

At the time of our 4 tests data submission we observed:

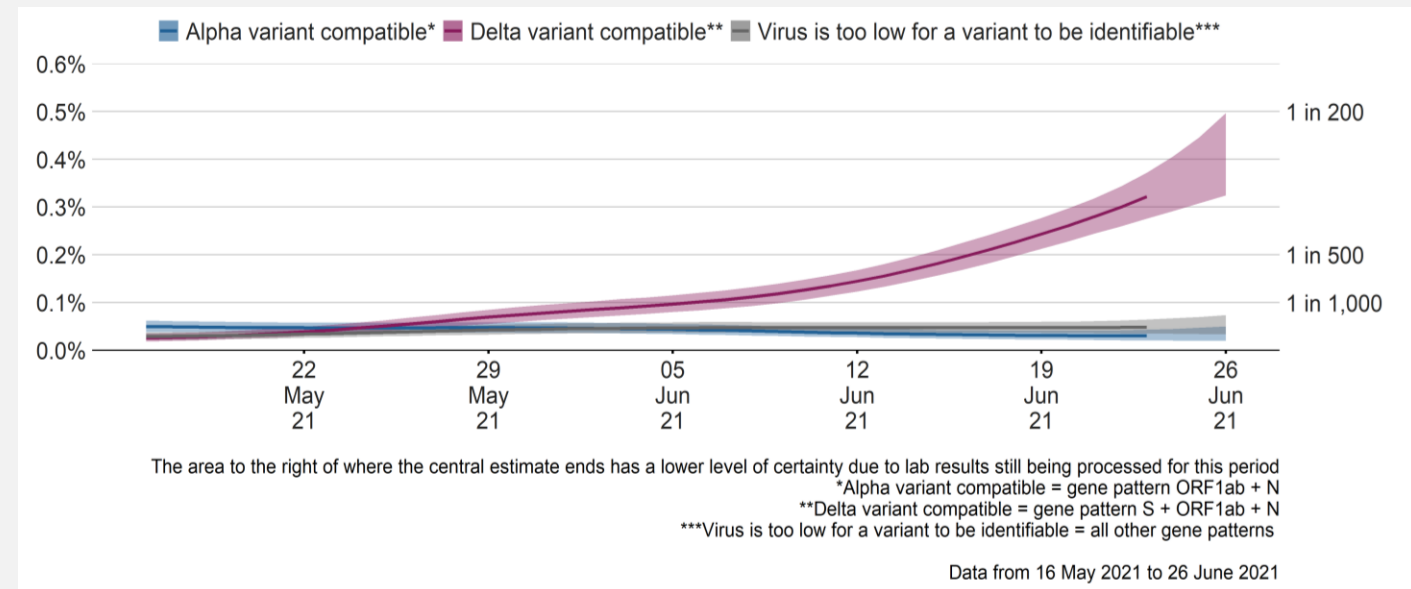
- The percentage of people testing positive in England had continued to increase.
- We estimated that: between 20 June 2021 and 26 June 2021, around 1 in 260 people (95% credible interval: 1 in 290 to 1 in 230) had COVID-19.
- Despite the increase in positivity, our analysis regarding the vaccination roll out and increasing antibody levels remained a strong indication that the rise in infections will not result in a rise in hospitalisations.



Test 4: Our assessment of the risks was not fundamentally changed by new Variants of Concern

- With Delta variant compatible cases, the percentage of people testing positive continued to increase in the last weeks of June.
- Rates remained low for both Alpha variant compatible cases and cases where the virus is too low to be identified.
- Since the end of May, infections compatible with the Delta variant have been the most common in England, our analysis has been integral in monitoring the spread.

Percentage of people testing positive for COVID-19 in England
Modelled daily estimates



Source: Office for National Statistics – Coronavirus Infection Survey

Looking forward and lessons learnt

What lessons have we learned over time?

- Communicating clearly – making the technical accessible
- Strong user needs: Inquiring citizen, Academic/expert user and Government decision makers
- User feedback
- Quality must be upheld
- Indicative insight can be provided if pace is key
- Partnership with academics
- The need to upskill to understand the context

Future plans

Broader questions for the whole of Health and Pandemic Insight division:

- How can we spot and respond to an emerging public health threat?
- How can we better understand the interactions between the climate and health?
- Can we provide evidence on the impact of COVID-19 on children and young people in the context of other challenges they may face?
- How can we contribute to the evidence on how the pandemic has impacted economic policy?

Do you have questions?