



HM Prison &  
Probation Service

# Local Management of Covid-19 Risk in Prisons & YOIs

Surveillance Information to Prison & Prison Group Directors' Leadership Teams

## Purpose & Overview

This information is provided to help you find and use authoritative information to support understanding and management of Covid-19 risk in your prison(s), as regimes progress and more decision making is devolved from the national to local level.

This information is unrestricted – please share with the people in your leadership teams who are best placed to lead on surveillance and are able to keep others informed.

To control Covid-19, we aim to prevent transmission.

You will find information on:

- Key Terms
- Interpreting data
- Data from your prison
- Gov.uk data
- Other data sources

## Key Terms: 'R'

'R' is the Reproduction Number. It describes how an outbreak is spreading.

'R' is a measure of how many people an infected person goes on to infect, on average.

'R' changes by time and place, and can be used for specific settings.

- An R value between 0.8 and 1.0 means that, on average, every 10 people infected will infect between 8 and 10 other people.
- An R value between 1.1 and 1.3 means that, on average, every 10 people infected will infect between 11 and 13 other people.
- If the value of R is below 1, the outbreak is shrinking, so the number of new cases will fall.
- If the value of R is above 1, the outbreak is growing exponentially, so the number of new cases will rise.
- Exponential growth means **the growth speeds up as the outbreak gets bigger.**

## Key Terms: Covid-19, Coronavirus & Testing

Being infected with the Coronavirus named SARS-CoV-2 means that a person may get ill with Covid-19.

Covid-19 is the disease, but is often used to mean the infection or the virus.

At present we think about 1 in 3 people who are infected never show any symptoms, but we know these people can still pass the virus on. This may change as people who have had vaccine may be less likely to show symptoms but may still transmit the virus.

How many cases are 'found' or 'confirmed' varies depending on the test used, how the test is done, and the timing of the test relative to when the people were infected.

Tests also return a small number of 'false' results so it important to continually monitor possible cases and contacts of cases in your prison, as well as confirmed cases.

## Key Terms: Case Rates

In a population being tested, there will be an absolute number of cases found, but most reporting is of case rates. These are commonly reported as a number per 100,000 population,

For example, testing of the Isle of Wight might find 100 cases in a week, that is 100 people who are known to have tested positive that week.

The population of the Isle of Wight is about 140,000 people. So the weekly case rate would be  $100/140,000$  or  $71.4 / 100,000$  (also written as 71.4 per 100k).

But how many people are really infected? The truth is we don't know. Confirmed cases are a good guide if testing rates are high and testing is well targeted, but that is not always the situation.

The number of confirmed cases can depend on:

- Which people are offered tests and how readily accessible they are
- Which people actually perform tests
- Which tests are used and when, and how the tests are done
- Whether the results are accurately recorded and reported

Case rates can change as there are changes to the way we use tests, and changes to which tests are used, as well as differences in the number of people infected.

## Interpreting Case Data – Time Matters #1

When interpreting data on cases and case rates, it is important to pay attention to what period of time the data references.

Case rates from samples taken 4 weeks ago won't tell you much about what might be happening now, or what it may be good to do to control transmission

Infection with Coronavirus follows a familiar sequence:

1. Transmission leading to infection
2. Becoming infectious to others, and able to test positive
3. Showing symptoms (or remaining asymptomatic)
4. For some, becoming unwell and needing to go to hospital / for many - recovery
5. For a very few, death / for most – discharge for aftercare and recovery

## Interpreting Case Data – Time Matters #2

Data is available on confirmed cases, case rates, numbers being admitted to hospital, numbers in hospital, and numbers dying.

It is important to understand how this sequence affects our interpretation of data.

- Most **case data** is reported when it is a few days to a week old. So the transmission which led to those cases being reported almost certainly happened 1-2 weeks ago.
- Data on **hospitalisation** probably relates to transmission which occurred 3-4 weeks ago
- Data on **deaths** relates to transmission which happened even longer ago.

So for most data we look at, we are seeing a picture of the past, not the present. That is true for official estimates of 'R' as well as cases.

Always check the dates on reports, and try to understand what that might mean is happening now.

## Information Sources: Your Prison

The information you are asked to collect and report to headquarters is useful to understand what is happening in your prison. It is important for **national surveillance** and **decision-making** for the whole estate, including transfers and outbreak response.

**You should focus on whether the virus is being transmitted in your prison, by whom, how and where.**

Monitor:

- Cases reported **today** and the number in the **previous 14 days**.
- Possible, probable or suspected cases: Your wing staff, healthcare team and Outbreak Control Team will know about possible cases for whom a test result has not yet been returned.
- Contacts: How many contacts are you finding for each case? What does that tell you about cases you may not know about? What does that tell you about where transmission may be happening? Your Contact Tracing Lead(s) should help with understanding this.

Note: The virus does not differentiate between staff and prison residents.



## Information Sources: Gov.uk

It is the people who move in and out of a prison who drive the risk of outbreaks happening.

Once the virus is in a prison it can spread in many ways: through contact with surfaces, droplets and aerosols.

It is helpful to have a good understanding of the areas where your staff live and travel from.

Understanding case rates where your staff live may drive your prison's risk, even if case rates are low in the area where your prison is located.

The interactive map published by the government shows case rates and numbers, compared with the national average, for upper-tier and lower-tier local authorities.

<https://coronavirus.data.gov.uk/details/interactive-map>

This is part of the wider collection of government information at this link:

<https://www.gov.uk/guidance/coronavirus-covid-19-statistics-and-analysis>

## Information Sources: Modelled Forecast

Most data published by the government is about the past. To control the risk in your prison, it would be helpful to know what is happening now, and what might happen in the near future.

Imperial College London have created a useful tool which uses official data and mathematical models to forecast what may happen.

On the 'Map' tab you can set the time period you want to look at, including in the future. The map will show the probability that a hotspot may arise with a weekly averaged case rate of 50/100k, 100/100k, or more.

<https://imperialcollegelondon.github.io/covid19local/#map>

The 'Table' tab shows the rates by local areas, and the probability that case rates will be above a certain level in the next period. The default setting is to show the areas with the highest rates at the top of the table.

<https://imperialcollegelondon.github.io/covid19local/#table>

The 'Area Search' tab lets you enter a local area or region name and shows you charts of how 'R' and case rates are changing. 'Observed' means the actual number of test-positive cases reported from that area.

<https://imperialcollegelondon.github.io/covid19local/#area-search>

## Other Information - ONS

The Office for National Statistics (ONS) publishes a weekly report at this link:

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest>

The ONS collects, analyses and reports on a wide range of data sources, including large scale survey information which can be very reliable at times when other information sources may be changing.

ONS publications are rigorous and are quality assured.

The ONS data has a delay which means the data may be later than some other sources.

## Suggested Next Steps

You should:

- Work out who in your team(s) is best placed to monitor and report on the situation in your prison (s) and **share this with them.**
- Monitor cases and contacts for your prison(s) daily
- Open the links in this slide deck in your browser, familiarise yourself with the websites and save them in your browser's favourites
- Keep case data for your prison accurate
- Know the areas where your staff are travelling from
- Each week, keep an eye on the case rates in your locality and the areas which feed your prison with staff and residents.
- Collaborate with others, especially your Contact tracing Lead(s), healthcare team and public health partners. Share your insights, and ask others for theirs

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