

## **Freedom of Information Act 2000 (FOIA)**

### **Decision notice**

**Date:** 22 September 2022

**Public Authority:** Department of Health Northern Ireland

**Address:** Castle Buildings

Stormont

Belfast

BT43SQ

### **Decision (including any steps ordered)**

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1. The complainant requested information from the Department of Health Northern Ireland (the 'DoH') about the algorithm used to determine the Reproduction or R Number for coronavirus ('COVID-19') in Northern Ireland. The DoH stated that it did not hold the requested information.
2. The Commissioner's decision is that, on the balance of probabilities, the DoH does not hold the requested information.
3. The Commissioner is also satisfied that the requested information was not held on behalf of the DoH by the Northern Ireland COVID-19 Modelling Group ('Modelling Group') under section 3(2) of FOIA.
4. However, the DoH failed to inform the complainant, within 20 working days, that it did not hold the requested information and therefore failed to comply with section 10(1) of FOIA.
5. The Commissioner requires no steps to be taken.

### **Background**

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6. The complainant's request in this case related to the R Number for COVID-19 in Northern Ireland. The DoH published the following explanation in June 2020:

"R is the number of individuals who, on average, will be infected by a single person with the infection. R does not have a fixed value but varies with time, and is likely to be different every day."<sup>1</sup>

## Request and response

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7. On 23 June 2020, the complainant contacted the DoH and requested information of the following description:

"My FOI request was to have sight of the algorithm which generates the effective 'r' number which determines public policy on the Corona virus."

8. The DoH responded on 6 and 21 October 2020 stating that the decisions taken by the DoH were derived from several different groups who submitted estimates of the R Number. DoH provided relevant web links to the complainant for the Scientific Advisory Group for Emergencies (SAGE), the Northern Ireland Statistics and Research Agency (NISRA) and the Public Health Agency (PHA), as well as links to the DoH's website with specific COVID-19 data for Northern Ireland<sup>2</sup> and links to the production of the R Number in England.<sup>3</sup>

9. On 28 October 2020, the DOH clarified to the complainant that in Northern Ireland, the R Number was produced by the Modelling Group. It explained:

"...there is no single algorithm that is used to derive R. Rather a number of standard methodologies and variables are explored by the Regional Modelling Group and a discussion and consensus is then agreed weekly at the NI Regional Modelling Group meetings."

10. The complainant requested an internal review on 22 January 2021 stating:

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<sup>1</sup> <https://www.health-ni.gov.uk/sites/default/files/publications/health/r-number-230620.pdf>

<sup>2</sup> <https://www.health-ni.gov.uk/R-Number>

<sup>3</sup> <https://www.gov.uk/government/publications/reproduction-number-r-and-growth-rate-methodology/reproduction-number-r-and-growth-rate-methodology>

"I wish to request a review of the refusal of the DoH NI to furnish me with a copy of the algorithm used to calculate the R number for Covid. ... My interest in this matter is as a retired statistician. I consider that the algorithm should be in the public domain, in the interests of transparency and public safety".

11. The DoH did not provide a formal internal review response although it continued corresponding with the complainant.
12. On 12 March 2021, the DoH reiterated to the complainant that the R Number is not calculated in house by the DoH's officials but by members of the Modelling Group who have access to the estimates of the R Number produced by several independent groups.
13. On 23 April 2021, the DoH explained that members of the Modelling Group are independent and not DoH employees, and that members of the Modelling Group have developed their own models for estimation of the R Number.
14. On 5 May 2021, the DoH further clarified that two of the Modelling Group members produce estimates of the R Number which are then presented and discussed at a weekly Modelling Group meeting. Therefore, the DoH said to the complainant that the algorithms are not held by the DoH as it is the estimates of the R Number that the DoH are presented with.
15. In April and May 2021, the complainant requested that the DoH ask the Modelling Group to provide access to the algorithm(s) or for the DoH to put the complainant in touch with them directly.
16. On 11 May 2021, the DoH advised the complainant that the Modelling Group is made up of members from the PHA, the Strategic Investment Board (SIB), the Southern Health and Social Care Trust (SHSCT), Queen's University Belfast and Ulster University. Web links were provided to the complainant for each organisation.

### **Scope of the case**

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17. The complainant contacted the Commissioner on 19 October 2021 to complain about the way his request for information had been handled.
18. The complainant remained of the view that the DoH was likely to hold the information falling within the scope of his request. His grounds of complaint were as follows:'

"Despite stating that they did not "hold" this information, they were later forced to declare that they had an in-house Covid Modelling Group, some of whose members developed algorithms for estimating R. This group was even chaired by Professor Ian Young of the DoH [Chief Scientific Adviser for Northern Ireland]. So the DoH effectively did possess the required information each time it was up-dated. The use of this word "hold" was a technicality to frustrate the requirements of the FoI act. The in-house Modelling Group were the people who decided on the value of r according to [named DoH official]. Their deliberations could have been communicated to me."

19. Therefore the scope of the case is to determine whether the requested information is held, either by the DoH in its own right, or by the Modelling Group on behalf of the DoH.

## **Reasons for decision**

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### **Section 1 FOIA - determining whether information is held**

20. Section 1 of FOIA says that a public authority is required to confirm or deny that it holds the requested information, and disclose relevant information that it holds, unless an exemption or exclusion applies. If a public authority does not hold recorded information that falls within the scope of the request, the Commissioner cannot require the authority to take any further action.
21. In cases where there is a dispute as to the information held by a public authority, the Commissioner will use the civil standard of proof, i.e. the balance of probabilities. In order to determine such complaints the Commissioner must decide whether, on the balance of probabilities, a public authority holds any information which falls within the scope of the request.
22. Accordingly the investigation will consider the scope, quality, thoroughness and results of the searches, and/or other explanations offered by the DoH as to why the information is not held.
23. The Commissioner will also consider any arguments put forward by the complainant as to why the information is likely to be held (as opposed to why it ought to be held). Finally, the Commissioner will consider whether there are any further steps the public authority could be required to take if the complaint were upheld.

### **The complainant's position**

24. The complainant provided the Commissioner with a large volume of information in support of the complaint. This included information requests to NISRA, the Department of Finance, the Minister of Health, the Permanent Secretary of the DoH, the Chief Scientific Adviser and lengthy correspondence with the DoH relating to his request for the algorithm.
25. The Commissioner examined all the information provided by the complainant in support of his position that the DoH was likely to hold information falling within the scope of his request. It is noted that the complainant's primary request throughout is for sight of the precise mathematical formula of the algorithm used to calculate the R Number in Northern Ireland. The complainant considers that it was done on a weekly basis and 'written down somewhere'.
26. The complainant also explained why he expected the information in question to be held. The complainant said that some of the Modelling Group members developed algorithms for estimating the R Number so the DoH did possess the requested information.
27. The complainant also argued that the Modelling Group is an agent providing a service to the DoH, whose Chief Scientific Adviser has access to the algorithm requested.

### **The DoH's position**

28. The Commissioner asked the DoH to provide a full explanation of the searches conducted for the requested information, and how it had concluded that it did not hold it.
29. In its response to the Commissioner the DoH explained that in early 2020 the DoH had established a Modelling Group chaired by the Chief Scientific Adviser. The DoH provided the Commissioner with information published by the DoH in May 2020 which set out the terms of reference for the Modelling Group and its membership.<sup>4</sup> The group included DoH staff, and a number of external experts from the PHA, health boards, and local universities. The DoH explained that this group had access to a number of different estimates of the R Number including those derived from locally developed models and several different models developed

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<sup>4</sup> <https://www.health-ni.gov.uk/news/modelling-data-shows-social-distancing-works>

by leading academic groups elsewhere in the UK. In addition, they liaised closely with the Modelling Group in the Republic of Ireland (ROI).

30. The DoH explained to the Commissioner that the complainant's information request is based on a misunderstanding about how the R Number was determined. This is because no single algorithm was used to derive the R Number. The DoH explained that the requested information is not held and has never been held by the DoH, so no specific searches for the requested information were carried out. The DoH said that this was because the estimate of the R Number was based on the consensus of the Modelling Group based on their access to a range of models/algorithms from different groups throughout the UK. The DoH noted that most of the methodology of the algorithms used by different groups is in the public domain.

### **The Commissioner's view**

31. The Commissioner has carefully considered the points made by the complainant and the DoH.
32. The Commissioner appreciates that the complainant has raised a number of specific grounds of complaint both as part of the internal review process and in submissions to support his complaint which set out why, in his view, the DoH would hold relevant information. However, the Commissioner considers that the DoH's submissions to him have adequately addressed these points.
33. The Commissioner notes that on 6 October 2020 the DoH website said:<sup>5</sup>

"Determining the value of R:

The most common approach to determining R during an epidemic is to use mathematical modelling, in particular a compartmental model using a SIR (susceptible-infectious-recovered) approach or a variation of it. Dozens of such models have been published and are in use throughout the world; there is no single standard model which everyone uses.

In addition to the impact of the mathematical model used, the calculated value of R is also influenced by the choice of input variable.

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<sup>5</sup> [https://www.health-ni.gov.uk/sites/default/files/publications/health/r-number-061020\\_0.pdf](https://www.health-ni.gov.uk/sites/default/files/publications/health/r-number-061020_0.pdf)

R calculated for new COVID-19 cases will not be the same as R calculated for hospital admissions, or ICU occupancy, or deaths. There may be a significant lag (2-3 weeks) before a fall in R is apparent depending on the input variable(s) used.

The Modelling Group determines R each day using a bespoke Northern Ireland SIR model. As its primary input the group uses hospital in-patients with community acquired COVID-19, but also uses a range of other inputs. We therefore have several different values for R each day, each of which has a midpoint value and a lower and upper boundary (95% confidence intervals). In addition a number of academic groups, both in the UK and ROI, model the COVID-19 epidemic and we have access to their estimates of R for Northern Ireland”.

34. The Commissioner also understands<sup>6</sup> that the same process applied to estimates of the R Number in Northern Ireland as it did for Scotland, Wales and England. In other words, several academic groups individually estimated the R Number using different data streams, modelling techniques and assumptions. The individual estimates were then combined into a single estimate and reviewed.
35. Primarily, it is the Commissioner’s view, that the complainant’s arguments as to why information relating to a single algorithm used to calculate the R Number would have been held by the DoH, do appear to be based on a misunderstanding.
36. The Commissioner understands from information provided by the DoH that the R Number is estimated by different academic groups who produce their individual estimates of the R Number, using a mixture of data sources and modelling techniques. There are a number of ways to estimate the R Number, and multiple leading academic groups produce a variety of models that use different approaches and data sources to estimate R. The Commissioner further understands that the Modelling Group then formed a single consensus R range on a regular basis. It is not clear to the Commissioner exactly how the Modelling Group reached its consensus, however, what is clear is that it did not use a single algorithm to do so.

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<sup>6</sup> <https://www.gov.uk/government/publications/reproduction-number-r-and-growth-rate-methodology/reproduction-number-r-and-growth-rate-methodology>

37. In addition, the Commissioner is unable to identify any further action that the DoH could reasonably be expected to take as part of its statutory obligations under FOIA in order to identify or locate the requested information. As has been set out above, if information is not held then it cannot be disclosed in response to a request.
38. In conclusion, the Commissioner finds, on the balance of probabilities, the DoH does not hold any recorded information falling within the scope of the request.

**Section 3(2) – information held by another person on behalf of the authority**

39. The Commissioner has also considered whether the requested information is held by the Modelling Group on behalf of the DoH.
40. Section 3(2) of FOIA states that information is held by a public authority if it is held by the authority, otherwise than on behalf of another person, or it is held by another person on behalf of the authority.
41. The Commissioner's guidance<sup>7</sup> explains the circumstances in which information is considered to be held by a public authority for the purposes of FOIA. There are various factors that will assist in determining whether the public authority holds the information for the purposes of FOIA. The weight attached to each one will vary from case to case. In some circumstances, one factor may outweigh all the others.
42. This guidance also makes it clear that whether information is held by a public authority, or is held on behalf of a public authority, depends on the facts of the case.
43. The question to consider in this case is whether the requested information is held by another person (the Modelling Group) on behalf of the DoH.
44. The information in question is the precise mathematical formula of the algorithm used to calculate the R Number.

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<sup>7</sup> [https://ico.org.uk/media/for-organisations/documents/1148/information\\_held\\_by\\_a\\_public\\_authority\\_for\\_purposes\\_of\\_foia.pdf](https://ico.org.uk/media/for-organisations/documents/1148/information_held_by_a_public_authority_for_purposes_of_foia.pdf)

45. The question of whether information is "held" by another person on behalf of a public authority will be determined by the facts in each case, but the Commissioner's guidance sets out a number of factors to be considered including whether:
- the authority provides clerical and administrative support for the other person, whether legally required to or not;
  - the authority controls access to the information;
  - the authority itself decides what information is retained, altered or deleted;
  - the authority deals with enquiries about the information; or
  - costs arising from holding the information are included in the authority's overall budget.
46. The complainant argues that any algorithm used to calculate the R Number and provided to the Modelling Group by external academics or groups is held by the Modelling Group on behalf of the DoH for the purposes of FOIA. Further, the complainant suggests that the Modelling Group is an agent of the DoH so the DoH is responsible for answering FOIA requests regarding the work of the Modelling Group.
47. In response to specific questions by the Commissioner, the DoH confirmed that the Modelling Group was not an agent of the DoH. Instead, it was an advisory group that had no contractual or statutory relationship with the DoH. The DoH did not control access to the information of the Modelling Group. The Modelling Group was not obliged to share any specific information with DoH; however, minutes of discussions at the Modelling Group were available to DoH, along with copies of presentations circulated with minutes. To the best of DoH's knowledge, there were no costs assigned or allocated to the Modelling Group.
48. The DoH accepted that it did provide a small amount of administrative and clerical support to the Modelling Group. A member of the DoH's staff did record a brief meeting minute of the Modelling Group and invitations for online meetings were sent out by the DoH.
49. Whilst the Commissioner accepts there is a small amount of administrative crossover between the DoH and the Modelling Group, the Commissioner is satisfied that the Modelling Group was not part of DoH, and information that was held by the Modelling Group about the calculation of the R Number would not have been held on behalf of the DoH. Nor was there an agency or partnership arrangement between the DoH and the Modelling Group. The Modelling Group were not carrying

out the functions of the DoH, either through statute or contractual arrangements.

50. The Commissioner is therefore satisfied that whilst the Modelling Group's information might be physically present on the DoH's premises or within its IT systems, it would not "hold" the requested information for the purposes of FOIA. In any event the Commissioner is also mindful of his conclusion that there is no single algorithm, therefore that the requested information does not in fact exist.

### **Section 16 – advice and assistance**

51. Section 16(1) of FOIA states that:

"It shall be the duty of a public authority to provide advice and assistance, so far as it would be reasonable to expect the authority to do so, to persons who propose to make, or have made, requests for information to it."

52. Throughout their correspondence, the Commissioner notes that the DoH provided the complainant with a wide range of information about the R Number and the methodology used to estimate it in Northern Ireland and England.
53. As set out at paragraph 16 above, the Commissioner notes that the DoH provided the complainant with the contact details for the members of the Modelling Group so that the complainant could continue his research. Following the provision of this information to the complainant, the Commissioner is satisfied that the DoH has provided all advice and assistance to the complainant that it could be reasonably expected to do in the circumstances of this request.

### **Section 10 – time for compliance**

54. Section 10 of FOIA states that responses to requests must be provided "promptly and in any event not later than the twentieth working day following the date of receipt."
55. The complainant made his request on 23 June 2020 and did not receive a response until 6 October 2020.
56. The Commissioner notes the DoH included the following apology in its substantive response:

"I can only apologise for the length of time it has taken to respond to your request for information. We have been endeavouring to get a

response to you as soon as possible, but as you can imagine we are receiving numerous requests for information at this time and I have been unable to get a definitive answer to your question from the business area responsible whilst they work on the current crisis.”

57. Notwithstanding the above explanation, the DoH failed to comply with section 1(1)(a) FOIA in not confirming to the complainant, within 20 working days, that it did not hold the requested information. The DoH therefore failed to comply with section 10(1) of FOIA.

## **Other matters**

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58. The Commissioner notes that the DoH did not provide a formal internal review response after the complaint requested one on 22 January 2021, although it continued corresponding with the complainant after this date.
59. FOIA does not contain a time limit within which public authorities have to complete internal reviews. However, the Commissioner's guidance<sup>8</sup> explains that in most cases an internal review should take no longer than 20 working days in most cases, or 40 working days in exceptional circumstances.
60. The Commissioner recognises and appreciates that the resource and staffing pressures caused by the pandemic have meant that some internal reviews have taken longer than usual to be completed and some period of delay would not be unreasonable. The Commissioner also recognises that the DoH continued to engage with the complainant after his request for a review and tried to help him by providing more information. However, not completing a review at all is not acceptable. The Commissioner, albeit with the benefit of hindsight, is of the opinion that the provision of an internal review response to the complainant may have assisted the DoH in bringing this matter to a timelier conclusion.

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<sup>8</sup> <https://ico.org.uk/for-organisations/guide-to-freedom-of-information/refusing-a-request/#20>

## Right of appeal

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61. Either party has the right to appeal against this decision notice to the First-tier Tribunal (Information Rights). Information about the appeals process may be obtained from:

First-tier Tribunal (Information Rights)  
GRC & GRP Tribunals,  
PO Box 9300,  
LEICESTER,  
LE1 8DJ

Tel: 0203 936 8963  
Fax: 0870 739 5836  
Email: [grc@justice.gov.uk](mailto:grc@justice.gov.uk)

Website: [www.justice.gov.uk/tribunals/general-regulatory-chamber](http://www.justice.gov.uk/tribunals/general-regulatory-chamber)

62. If you wish to appeal against a decision notice, you can obtain information on how to appeal along with the relevant forms from the Information Tribunal website.
63. Any Notice of Appeal should be served on the Tribunal within 28 (calendar) days of the date on which this decision notice is sent.

**Signed .....**

**Sarah O’Cathain**  
**Senior Case Officer**  
**Information Commissioner’s Office**  
**Wycliffe House**  
**Water Lane**  
**Wilmslow**  
**Cheshire**  
**SK9 5AF**