

QCovid® Online Risk Calculator R1 V3.0.0 - Instructions for Use

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Introduction

The QCovid® Online Risk Calculator R1 provides a web user interface around the QCovid® Calculation Engine R2 software library. This library is a research use only risk prediction algorithm to estimate hospitalisation and mortality outcomes from COVID-19 in adults. The website enables an academic researcher to enter a simple medical history for a scenario and then uses the library to determine the risk of the aforementioned outcomes. The results are presented as absolute risks, risks relative to an individual with no risk factors, and also as a centile ranking within the general population.

Product Details

	QCovid® Online Risk Calculator
	R1 (v3.0.0)

Intended Use

	<p>QCovid Online Risk Calculator R1 is a research tool intended for academic research and peer review only. It is not intended for the diagnosis, prevention, monitoring, treatment or alleviation of disease.</p> <p>Please read this instruction manual thoroughly before using the QCovid® Online Risk Calculator. Please keep these instructions for future reference.</p> <p>The website is not intended to support automated processes, but only manual use via a web browser application.</p>
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Pre-Use Requirements and Dependencies

Use of the QCovid® Online Risk Calculator requires use of a web browser. The website has been verified on the following web browsers:

- Google Chrome 114.0

Software Installation, Upgrade and Configuration

There is no installation necessary to use the QCovid® Online Risk Calculator.

Step by Step Instructions

In the instructions below, please interpret the word “click” to denote either the act of using a mouse to click on an item, tapping on the item using a touch screen, or similar activation using a keyboard.

1. Upon visiting [Q CQovid™ risk calculator](#) , the user is presented with the home page.
 - a. If they have not previously visited the site in the chosen web browser, a cookie information side panel, will be displayed. The user should then click on either the “I Accept” or “I Do Not Accept” buttons to register their acceptance, or otherwise, of non-essential cookies. The side information panel will then close.
 - b. The cookie panel can be reactivated using the “C” button in the bottom right on the browser window.
 - c. Further information regarding cookies can be obtained using the Cookies link in the page footer.
2. The home page presents background information about the QCovid® Online Risk Calculator with a navigation bar at the top of the page. These include Frequently Asked Questions (FAQ), related Publications, the Licence and details of the Algorithm.
3. In the page footer, the user can find:
 - a. The version of the QCovid® Calculation Engine, which is provided for reference.
 - b. A link to the privacy notice.
4. Clicking on the Calculator link in the top navigation bar begins the process of a risk calculation.
5. If the user has not previously accepted the Licence, then they will be taken to the Licence page where they must first read and accept to the licence terms. Clicking on Accept Licence will then take them to the calculation. The licence acceptance is remembered for one day by their web browser, after which time the user must accept the licence again.
6. The user is then presented with a web form via which they enter the personal and clinical information of the subject.
 - a. Age, height and weight are entered using text boxes, must be entered. Age is entered as a whole number of years. Only centimetres and kilograms are supported for height and weight respectively. The ranges are as follows, and are included in the validation messages which will display if an out-of-range value is entered.
 - i. Age: 18-100
 - ii. Height: 140-210cm
 - iii. Weight: 40-180kg
 - b. UK postcode is also entered using a text box but can be left blank. The postcode is only used to determine the appropriate Townsend deprivation score to use. Use of a blank postcode yields the UK-wide average score. If the entered postcode is unknown, then the UK-wide average score will be used and a warning will be displayed.
 - c. Biological sex is entered via radio buttons, restricted to male or female. There are insufficient data to model alternatives or related hormone treatments.
 - d. Ethnicity is selected from a list of options, which includes “Ethnicity not stated”.
 - e. Housing category is entered via a radio button list.
 - f. The clinical information is entered, mostly via check boxes, though some items are presented as radio button or drop-down lists.
 - i. Note that chemotherapy is specified via group options of Group A, Group B, or Group C. As noted on the FAQs page, these are detailed in the supplementary materials of the published QCovid® research article ([Risk prediction of covid-19 related death and hospital admission in adults after covid-19 vaccination: national prospective cohort study](#)) or the table of Chemotherapy groups linked below the question.
7. The user clicks Calculate. If there are no validation issues with the form, then the user will be taken to the results page. Otherwise, they should review the validation messages and click Calculate again.
8. The risk assessment results are presented on the results page. The text on the results page explains the meaning of them as pertaining to a 90-day period similar to the first wave of COVID-19 in the UK.
9. The page also has a table laying out the various results. The rows of the table contain:
 - a. The risk of being admitted to hospital in the case that a person has a result on a PCR test indicating that they have Covid-19.
 - b. The risk of dying in the case that a person has a result on a PCR test indicating that they have Covid-19.
10. The columns of the table contain:
 - a. Absolute risk (a), which is the percentage chance of a person either dying or being admitted to hospital. It is also indicated as a “1 in ...” format, e.g. 0.1% corresponds to “1 in 1000”.

- b. Absolute risk (b), which is the equivalent percentage for a person of the same age and sex, but without any risk factors. It is also indicated in the "1 in ..." format.
 - c. Relative risk (a/b), which is the ratio of the two and denotes how much more likely the subject is to suffer death or hospitalisation than a person with no factors.
11. The value absolute risk of death is presented also in terms of the centile ranking, e.g. 68 of 100, where 100 is most at risk.
 12. The BMI (body mass index) calculated from the supplied height and weight is shown. Note that if this value is too high or too low, then the closest in-range value will have been used and a warning will be displayed regarding this. The valid range is 15-47 kg/m².
 13. Other warnings relating to the inputs are shown on the results page and should be noted.
 14. To start another calculation, the user should click on Calculator again in the top navigation bar.

Troubleshooting

The FAQ link, available on the navigation bar at the top of each web page, provides answers to frequently asked questions.