

ASSESSMENT OF VULNERABILITY AND COVID-AGE

The best evidence on vulnerability to Covid-19 comes from epidemiological research. From analysis of epidemiological data for the UK, the contributions to vulnerability from sex, ethnicity and some of the most common comorbidities among people of working age have been summarised in terms of their equivalence to added years of age (see Table 1 below). This allows calculation of a person's "Covid-age" – a simple summary measure indicating the age of a healthy white male with equivalent vulnerability. We start with the individual's biological age, then add/subtract the age adjustments from the table. For example:

A healthy white woman, age 40, has a Covid-age of $(40-8) = 32$ years

A white man age 45, BMI 36, severe asthma, has a Covid-age of $(45+5+4) = 54$ years.

An Asian woman age 50, Type 2 diabetes HbA1c>58, has a Covid-age of $(50-8+5+10) = 57$ years.

To give the measure context, we also provide estimates of case fatality rates in healthy white men by age. (see Table 2 below). As relevant new evidence becomes available, evidence-based assessment of vulnerability will be updated and refined, with extension to other categories of comorbidity where that becomes possible.

The background evidence and methods can be found here: [Methods at 200629](#)

and the original paper was placed on the medRxiv pre-print server: [2020.05.21.20108969v1.full](#)