The problems of a ‘bad test’ for **COVID-19** antibodies

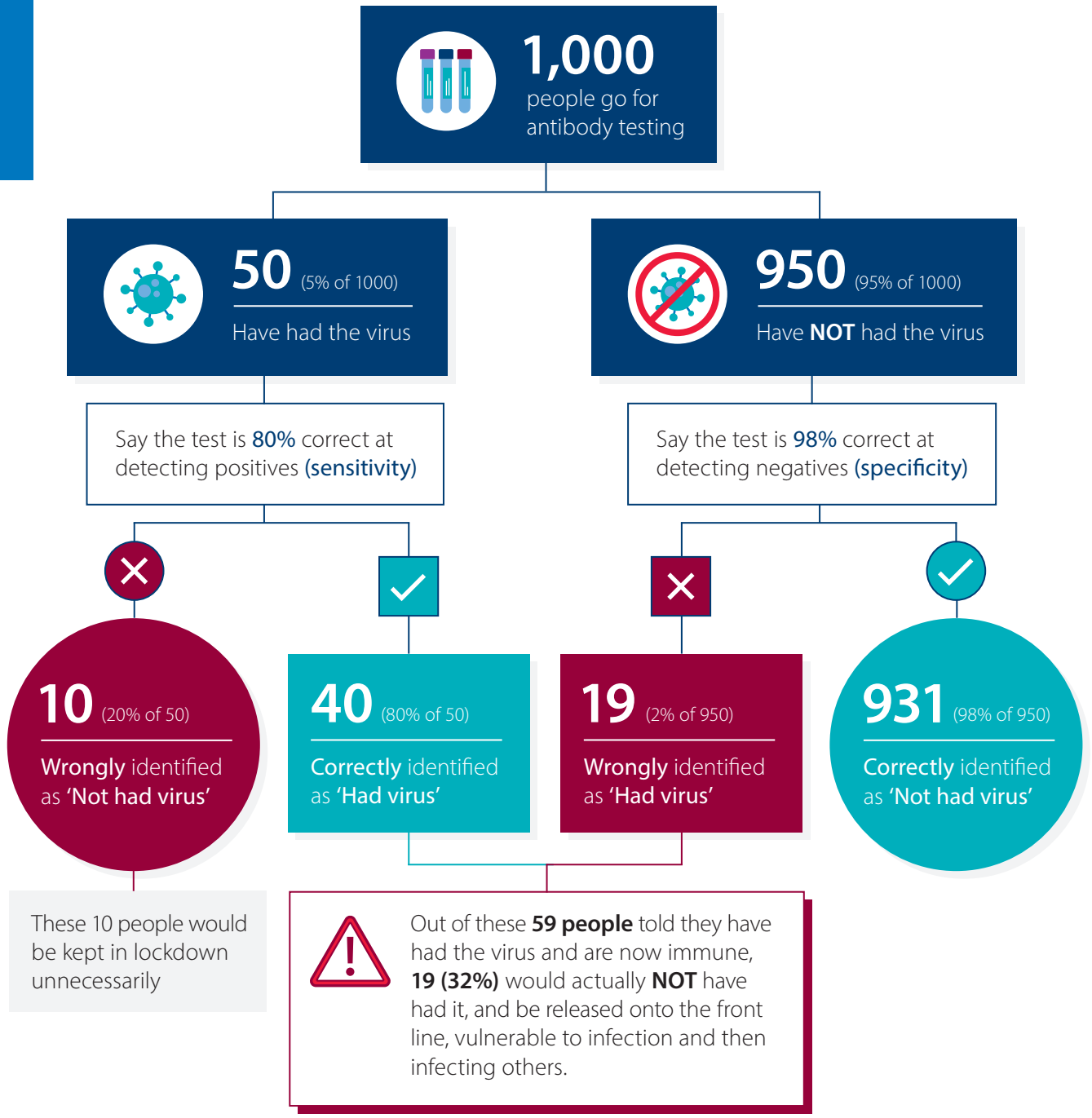
Everyone wants a COVID-19 antibody test that can allow those who have immunity (have antibodies to the virus) to get back to work. But there is a good reason why ‘a bad test is worse than no test’.

There are two ways a test can be wrong: it can miss people who have antibodies or it can tell people they have antibodies when they don’t. Tests need to state their error rates in both groups.

Real world scenario

Imagine we test **1,000** people and that **5%** of them have had the virus. Unfortunately, even a small error rate **(2%)** in a large number of people (those who don’t have the virus, on the right-hand side of the diagram) would mean that a high proportion of people who are not immune will be incorrectly told that they are (nearly a third in this example).

Even tests with these error rates would be useful for understanding the pandemic, but this diagram shows the problems with using the results to guide individual behaviour.



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