*“Are we testing enough?”* Who knew, when your phone rang, a private secretary from the Minister’s office would be asking you for your advice on New Zealand’s COVID-19 testing strategy?

The Minister is weighing up the pros and cons of opening our borders. There is conflicting advice in the media.

Radio New Zealand has reported doctors are increasingly exasperated that unwell New Zealanders are saying no to Covid-19 tests.[[1]](#footnote-1) Doctors were fighting complacency from people used to living in places free from the virus.[[2]](#footnote-2)

But New Zealanders ***could be*** lounging on a Rarotongan beach this summer.[[3]](#footnote-3) And the impact on New Zealand communities from losing tourism businesses and jobs is immense, especially in many smaller towns with a large reliance on the visitor economy. Tourism Industry Aotearoa believes New Zealand should respond quickly to any opportunity to facilitate safe international travel.[[4]](#footnote-4) And other experts believe, having had our response system successfully tested twice by community outbreaks, New Zealand shouldn't be so cautious about travel.[[5]](#footnote-5)

You’ve gone off, done your research, and found two international research articles on the COVID-19 incidence risk factors.[[6]](#footnote-6)

You’ve also got access to COVID-19 laboratory testing data[[7]](#footnote-7), by Ethnicity[[8]](#footnote-8), Deprivation[[9]](#footnote-9), at a Statistical Area 2 (SA2) level of geography[[10]](#footnote-10).

You’ve got Census 2018 data on the number of people within the different ethnic groups within each SA2.[[11]](#footnote-11)

***WHAT THE MINISTER WANTS:***

* A picture, from the data you’ve got, that says a thousand words about New Zealand’s COVID-19 testing, but is explained in less than 300, that tells a Minister everything he or she needs to know about New Zealand’s testing.

You are free to make this picture in whatever software you choose (although we very much like R[[12]](#footnote-12)). Send in your programme.

* 1 page of advice to the Minister, based on the evidence you have been given, about what the Minister needs to do or consider in order to open New Zealand’s borders. The advice needs to be short and expressed in plain English.

Use only the information you are given for this exercise.

1. RNZ, “Doctors worried not enough testing for Covid-19 happening”, 31 July 2020 [↑](#footnote-ref-1)
2. RNZ, “Doctors frustrated by patients refusing Covid-19 tests”, 28 July 2020 [↑](#footnote-ref-2)
3. RNZ, “Cook Islands travel bubble step closer but hinges on non-community transmission”, 6 October 2020 [↑](#footnote-ref-3)
4. TIA,”Policy Positions”, <https://www.tianz.org.nz/advocacy/policy-positions/covid-19/> [↑](#footnote-ref-4)
5. RNZ, “Economist warns of Covid-19 fatigue if more lockdowns occur”, 6 October 2020 [↑](#footnote-ref-5)
6. Research – Germany.pdf and Research – India.pdf [↑](#footnote-ref-6)
7. Not real testing data. I’ve made this up. Pretend it’s real. [↑](#footnote-ref-7)
8. Prioritised ethnicity: <https://www.moh.govt.nz/notebook/nbbooks.nsf/0/4b1c9119d4e5ea78cc257488000d9324/$FILE/presenting-ethnicity-2008.pdf> [↑](#footnote-ref-8)
9. <https://www.otago.ac.nz/wellington/departments/publichealth/research/hirp/otago020194.html> specifically, <https://www.otago.ac.nz/wellington/otago730415.txt> [↑](#footnote-ref-9)
10. <https://datafinder.stats.govt.nz/layer/104271-statistical-area-2-2020-generalised/> [↑](#footnote-ref-10)
11. This is real information. I didn’t make it up. Its reconciled with other SNZ population measures, hence the fractions. [↑](#footnote-ref-11)
12. <https://www.r-project.org/> [↑](#footnote-ref-12)