

# Behavioural surveillance survey

## October 2022 Report

**Prepared for:**

Evaluation and Behavioural Science  
Intelligence, Surveillance and Knowledge  
Public Health Agency  
Manatū Hauora - Ministry of Health

**By Horizon Research Limited**



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## 1. INTRODUCTION

This report examines the past experiences and behaviour of adult New Zealanders (18 years of age or over) regarding COVID-19 and what they intend to do in the future.

It is the first survey conducted by Horizon Research for Manatū Hauora, the Ministry of Health, a few days after the announcement removing the COVID 19 Protection Framework (the CPF) and provides a baseline for the 'no CPF' environment.

The sample is weighted by age, gender, ethnicity, education, employment status and region to match the adult population aged 18 or more.

## 2. KEY FINDINGS

### 2.1 In the transition to 'no CPF' environment, substantial numbers of respondents are not following the Ministry of Health's current recommendations

The following table illustrates this finding:

Table 1: Following the Ministry of Health's current recommendations	
The Ministry of Health's current recommendations	Level of following these recommendations in the past 2 weeks
If you develop COVID-19 symptoms get tested immediately	73% of respondents with COVID-19 symptoms took at least one RAT but 27% with symptoms <u>did not</u> .
There are places and situations where wearing a mask is strongly recommended. These include situations where there is a higher risk of you getting or spreading COVID-19 or another illness, such as public transport.  <i>Masks are required when visiting healthcare facilities like hospitals, GPs, pharmacies and aged residential care facilities however this survey did not gather data relating to this recommendation.</i>	Users of public transport had <u>low levels</u> of "Always" wearing a mask: <ul style="list-style-type: none"> <li>• On buses 37%</li> <li>• On planes 34%</li> <li>• On taxi/Uber rides 34%</li> <li>• On trains 28%</li> <li>• On ferries 20%</li> </ul> <p><i>* Answers provided for this question were given on the scale: "Always", "Often", "Sometimes", "Rarely" and "Never". The above percentages are only for "Always".</i></p>
If you test positive for COVID-19, you need to isolate from the community to help stop the spread of the virus.	55% of those who tested positive for COVID-19 self-isolated, but 45% <u>did not</u> .

### 2.2 A majority intend to engage in protective behaviours in the future

All respondents were asked how likely they would be to engage in six behaviours to protect themselves and others from COVID-19 in the future. A majority (an average of 52% across all six protective behaviours) said that they were "very likely" to engage in these protective behaviours, with a further average of 21% saying they were "likely" to do them. In contrast, an average of 20% said they were unlikely to engage in these protective behaviours (an average of 7% "unlikely" and 13% "very unlikely").

The protective behaviour with the highest "very likely" potential engagement was self-isolation for the recommended period.

Table 2: Likelihood to engage in future protective behaviours					
Intended future behaviours	Very likely %	Likely %	Neither likely nor unlikely %	Unlikely %	Very unlikely %
Taking a RAT if you have COVID-19 symptoms in the future	55%	22%	8%	5%	10%
Reporting test results in the future if you test positive using a Rapid Antigen Test	52%	19%	9%	8%	12%
Self-isolating for the recommended period (currently 7 days) if you have test positive for COVID-19 using a Rapid Antigen Test	61%	22%	7%	5%	6%
<u>Not</u> leaving home and going to work if you have symptoms of COVID-19 in the future *	50%	20%	14%	9%	8%
<u>Not</u> attending events with many people if you have symptoms of COVID-19 *	60%	22%	10%	4%	4%
Wearing a mask the next time you are on public transport	34%	19%	15%	10%	23%
<i>Note that future mask wearing on public transport is a result for all respondents. The result for public transport users in the past 2 weeks is similar, as shown in italics to the right.</i>	<i>33%</i>	<i>20%</i>	<i>12%</i>	<i>10%</i>	<i>26%</i>

N=1,505

\* For purposes of comparison, the statement wording and scale have been 'flipped' for: "Leaving home and going to work if you have COVID-19 symptoms in the future" and "Attending events with many people if you have COVID-19 symptoms".

### 2.3 As in previous surveys, marked differences were observed between younger and older respondents

Younger respondents aged under 35 exhibit many different results compared with those aged 55 or more; in particular, their results for past behaviours and future behaviours were statistically different from those of most other age groups.<sup>1</sup>

Respondents aged under 35 were more likely as those aged 55 or more to have ever tested positive for COVID-19 (65% cf. 30%). And, in the past 2 weeks, the younger age group was almost 5 times more likely to have had COVID-19 symptoms (29% cf. 6%); 4 times more likely to have tested positive for COVID-19 (16% cf. 4%); and 4 times more likely to have self-isolated (17% cf. 4%).

Recent mask wearing behaviour on public transport by both these age groups was not significantly different from the total, but the older age group was more likely to "always" wear masks at large indoor events (15% cf. 27%).

<sup>1</sup> See "Appendix – Statistical Analysis"

Intentions regarding COVID-19 prevention and protection by those aged under 35 were much less cautious than the 55-and-over age group. For example, under-35 respondents were less likely than those aged 55 or more to test themselves with a RAT if they have symptoms (41% cf. 65% very likely), and more likely to leave home and go to work if they have symptoms (13% cf. 4% very likely).

The table below shows key results for these two age groups:

<b>Table 3: Survey measures: Comparison of “Under 35 years” and “55 and over” sub-groups</b>			
<b>Survey measures</b>	<b>Total (n=1,505)</b>	<b>Aged under 35 (n=435)</b>	<b>Aged 55 or more (n=575)</b>
<b>COVID-19 exposure and infection</b>			
Ever tested positive for COVID-19	48%	65%▲	30%▼
Experienced any COVID-19 symptoms in past 2 weeks	17%	29%▲	6%▼
Tested positive for COVID-19 in past 2 weeks	8%	16%▲	4%▼
<b>Behaviour in the past 2 weeks</b>			
Self-isolated	9%	17%▲	4%▼
Always wore a mask at large indoor events*	20%	15%	27%▲
<b>Future behaviour intentions</b>			
<u>Very likely</u> to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	55%	41%▼	65%▲
<u>Very likely</u> to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	52%	43%▼	59%▲
<u>Very likely</u> to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	61%	51%▼	69%▲
<u>Very likely</u> to leave home and go to work if you have symptoms of COVID-19 in the future	8%	13%▲	4%▼
<u>Very likely</u> to attend events with many people if you have symptoms of COVID-19	4%	9%▲	1%▼
<u>Very likely</u> to wear a mask the next time you are on public transport	34%	25%▼	41%▲

\* N=1,505 except for the question about mask wearing at large indoor events where the base is n=595 (attended a large indoor event in the past 2 weeks)

Key: ▲▼ significantly higher and lower results than the total. Areas that are not significantly different from the total are shaded grey

NB: Answers provided for the future behaviour questions were given on the scale: “Very unlikely”, “Unlikely”, “Neither likely nor unlikely”, “Likely”, “Very likely”.

## 2.4 Significant differences for those who identify as disabled or have long-term health issues or impairments

As with the 55-plus age group, those who identify as disabled and those with long-term health issues or impairments intend to embrace protective and preventative behaviour in the future slightly more than the rest of the adult population<sup>2</sup>.

The table below shows 7 key areas where those who identify as disabled recorded significantly different results from the total and 9 key areas where those with long-term health issues or impairments exhibited significant differences from the total.

Results for both groups were similar, with a maximum difference of 5 percentage points, except for seeking medical advice or attention in the past 2 weeks where those who identify as disabled have a higher incidence (42% cf. 35%, a 7-point difference).

<b>Table 4: Survey measures: Comparison of those who identify as disabled and those who have long-term health issues or impairments</b>			
<b>Survey measures</b>	<b>Total (n=1,505)</b>	<b>Identify as disabled (n=335)</b>	<b>Have long-term health issues or impairments (n=575)</b>
<b>COVID-19 exposure, vaccination and infection</b>			
Experienced any COVID-19 symptoms in past 2 weeks	17%	23%▲	18%
Ever tested positive for COVID-19	48%	45%	43%▼
Took a RAT in the past 2 weeks	32%	38%▲	35%
Received 4 or 5 vaccine doses	20%	25%▲	28%▲
<b>Behaviour in the past 2 weeks</b>			
Self-isolated	9%	15%▲	12%▲
Sought medical attention or advice	25%	42%▲	35%▲
<b>Future behaviour intentions</b>			
Very likely to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	55%	59%	63%▲
Very likely to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	52%	62%▲	61%▲
Very likely to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	61%	68%▲	70%▲
Very likely to leave home and go to work if you have symptoms of COVID-19 in the future in the future	8%	9%	7%
Very unlikely to attend events with many people if you have symptoms of COVID-19	60%	66%	69%▲
Very likely to wear a mask the next time you are on public transport	34%	38%	42%▲

N=1,505

Key: ▲▼ significantly higher and lower results than the total. Areas that are not significantly different from the total are shaded grey.

NB: Answers provided for the future behaviour intention questions were given on the scale: “Very unlikely”, “Unlikely”, “Neither likely nor unlikely”, “Likely”, “Very likely”.

<sup>2</sup> This is a statistically significant difference for most future behaviours: see “Appendix – Statistical Testing”.

## 2.5 People from large households are relatively more likely to have tested positive and less likely to engage in future protective behaviour

The following table shows some key results for respondents living in households with 7 or more people that were significantly different from the total.

These respondents were more likely than the total to have tested positive for COVID-19 in the past 2 weeks and ever. They were less likely than the total to engage in future protective and preventative behaviours such as taking a RAT test if they have COVID-19 symptoms (39% very likely cf. 55% overall).

Table 5: Survey measures: Comparison of those who live in a large household		
Survey measures	Total (n=1,505)	Live in a large household (7 or more people) (n=73)
COVID-19 exposure and infection		
Tested positive for COVID-19 in the past 2 weeks	8%	19%▲
Ever tested positive for COVID-19	48%	68%▲
Self-isolated in the past 2 weeks	9%	24%▲
Future behaviour intentions		
<u>Very likely</u> to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	55%	39%▼
<u>Very likely</u> to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	52%	39%▼
<u>Very likely</u> to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	61%	47%▼
<u>Very unlikely</u> to attend events with many people if you have symptoms of COVID-19	60%	42%▼

N=1,505

Key: ▲▼ significantly higher and lower results than the total.

NB: Answers provided for the future behaviour intention questions were given on the scale: “Very unlikely”, “Unlikely”, “Neither likely nor unlikely”, “Likely”, “Very likely”.

## 2.6 Peoples’ vaccination status has a ‘linear’ relationship with the recent past and future intended behaviour

There are increasing trends of adherence, to protective and preventative behaviours for both current and intended future behaviour, associated with the number of COVID-19 vaccine doses received.

For example, only 12% of those who have never been vaccinated say they would be very likely to test themselves with a Rapid Antigen Test if they have COVID-19 symptoms in the future compared with 77% of those with 4 or more doses.

All the results shown below have a statistically significant trend except for “*Very likely to leave home and go to work if you have symptoms of COVID-19 in the future*” and “*Very likely to attend events with many people if you have symptoms of COVID-19*” (see page 56 for details). The trend for “*Very unlikely to attend events with many people if you have symptoms of COVID-19*” is statistically significant.



**Table 6: Survey measures: Comparison of those with different numbers of COVID-19 vaccinations**

Survey measures	Total (n=1,505)	Never been vaccinated (n=137)	1 – 2 doses (n=412)	3 doses (n=635)	4+ vaccine doses (n=321)
<b>Behaviour in the past 2 weeks</b>					
Always wore a mask on bus trips *	37%	14%▼	22%▼	44%	64%▲
Always wore a mask on train trips*	28%	**	23%	34%	43%▲
Always wore a mask on planes *	34%	**	26%	44%	46%
Always wore a mask on taxi/Uber trips *	34%	**	28%	38%	52%▲
Always wore a mask at large indoor events *	20%	8%▼	12%▼	21%	39%▲
<b>Future behaviour intentions</b>					
<u>Very likely</u> to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	55%	12%▼	41%▼	64%▲	77%▲
<u>Very likely</u> to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	52%	14%▼	37%▼	62%▲	74%▲
<u>Very likely</u> to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	61%	25%▼	47%▼	70%▲	82%▲
<u>Very likely</u> to leave home and go to work if you have symptoms of COVID-19 in the future	8%	15%▲	8%	6%	5%
<u>Very likely</u> to attend events with many people if you have symptoms of COVID-19	4%	11%▲	5%	3%	3%
<u>Very likely</u> to wear a mask the next time you are on public transport	34%	13%▼	24%▼	37%	52%▲

\* Results for the questions about mask wearing in the past 2 weeks are a percentage of users of each public transport mode or attendees at large events,

- Bus users n=572
- Train users n=385
- Plane users n=399
- Taxi/Uber users n=466
- Attendees at large events n=595

Results for future behaviour intentions are a percentage of the whole sample, n= 1,505

Key: ▲▼ significantly higher and lower results than the total. Areas that are not significantly different from the total are shaded grey.

\*\* Some results for the “Never been vaccinated” sub-sample are not shown due to small sub-sample sizes for use of public transport. Indications are, however, that mask wearing by this sub-sample is likely to be much lower than the overall average for mask wearing on public transport.

NB: Answers provided for the future behaviour intention questions were given on the scale: “Very unlikely”, “Unlikely”, “Neither likely nor unlikely”, “Likely”, “Very likely”.

## 2.7 Key differences by priority ethnicity

Māori respondents were more likely to have experienced COVID-19 symptoms in the past 2 weeks, to have sought medical advice or attention and to have self-administered a RAT. Pasifika respondents appear to be more likely than average to engage in Protective behaviours in the future.

Note that no significant differences were found by priority ethnicity in “very likely” intentions to leave home and go to work “if you have symptoms of COVID-19 in the future”, nor in the “very likely” intentions to self-isolate “if you test positive for COVID-19”.

<b>Table 7: Survey measures: Comparison by ethnic priority</b>					
<b>Survey measures</b>	<b>Total (n=1,505)</b>	<b>Māori (n=271)</b>	<b>Pasifika (n=88)</b>	<b>Asian (n=107)</b>	<b>European (n=1,032)</b>
<b>COVID-19 exposure and infection</b>					
Experienced any COVID-19 symptoms in the past 2 weeks	17%	22%▲	19%	25%	14%
Tested positive for COVID-19 in the past 2 weeks	8%	10%	8%	21%▲	7%
Ever tested positive for COVID-19	48%	53%	58%	69%▲	45%
<b>Behaviour in the past 2 weeks</b>					
Self-administered a RAT	32%	45%▲	35%	41%	27%▼
Sought medical advice or attention aside from scheduled hospital visits	25%	31%▲	25%	30%	23%
<b>Future behaviour intentions</b>					
<u>Very likely</u> to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	55%	58%	68%▲	53%	53%
<u>Very likely</u> to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	52%	56%	67%▲	47%	50%
<u>Very likely</u> to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	61%	62%	68%	66%	60%
<u>Very likely</u> to leave home and go to work if you have symptoms of COVID-19 in the future in the future	8%	11%	5%	12%	6%
<u>Very unlikely</u> to attend events with many people if you have symptoms of COVID-19	60%	57%	68%	51%▼	62%
<u>Very likely</u> to wear a mask the next time you are on public transport *	34%	38%	55%▲	38%	31%

N=1,505

Key: ▲▼ significantly higher and lower results than the total. Areas that are not significantly different from the total are shaded grey.

NB: Answers provided for the future behaviour intention questions were given on the scale: “Very unlikely”, “Unlikely”, “Neither likely nor unlikely”, “Likely”, “Very likely”.

\* Note that Māori, Pasifika and Asian respondents were significantly less likely to say that they are “Very unlikely” to wear a mask in the future on public transport.

## 2.8 Key differences by Te Whatu Ora regions

Some key differences were identified between the 4 Te Whatu Ora regions.

For instance, respondents from the Northern region were significantly more likely than other regions to have self-administered a RAT and reported on the RAT result.

Respondents from the Central region have statistically significant differences from those in other regions on some future behaviours; as shown in the table below, they would be more likely to report positive test results and to self-isolate if testing positive for COVID-19.<sup>3</sup>

Results below show significant differences from the total for all 4 Te Whatu Ora regions.

<b>Table 8: Survey measures: Comparison by Te Whatu Ora regions</b>					
Survey measures	Total (n=1,505)	Northern (n=536)	Te Manawa Taki (Midland) (n=258)	Central (n=350)	Southern (n=361)
<b>COVID-19 exposure and infection</b>					
Experienced any COVID-19 symptoms in the past 2 weeks	17%	17%	12%▼	16%	20%
Tested positive for COVID-19 in the past 2 weeks	8%	9%	5%	9%	9%
Ever tested positive for COVID-19	48%	48%	45%	44%	56%▲
Self-isolated in the past 2 weeks	9%	10%	4%▼	7%	11%
<b>Behaviour in the past 2 weeks</b>					
Self-administered a RAT	32%	36%▲	30%	28%	28%
Reported a RAT result <i>Base: self-administered a RAT</i>	37%	47%▲	15%▼	33%**	40%
Always wore a mask on a bus *	37%	39%	24%▼	44%	32%
Always wore a mask on a train *	28%	33%	Result not shown due to small sample	35%	18%▼
Always wore a mask at a large indoor event *	20%	17%	19%	28%▲	17%
<b>Future behaviour intentions</b>					
Very likely to report positive RAT results in the future	52%	50%	49%	58%▲	54%
Very likely to self-isolate if you test positive for COVID-19 in the future	61%	59%	57%	67%▲	63%

N=1,505; but see note \* below

Key: ▲▼ significantly higher and lower results than the total. Areas that are not significantly different from the total are shaded grey.

NB: Answers provided for the future behaviour intention questions were given on the scale: "Very unlikely", "Unlikely", "Neither likely nor unlikely", "Likely", "Very likely".

\* Results for the questions about mask wearing in the past 2 weeks are a percentage of users of each public transport mode or attendees at large events,

- Bus users n=572
- Train users n=385
- Attendees at large events n=595

\*\* 32.5%; rounds to 33%.

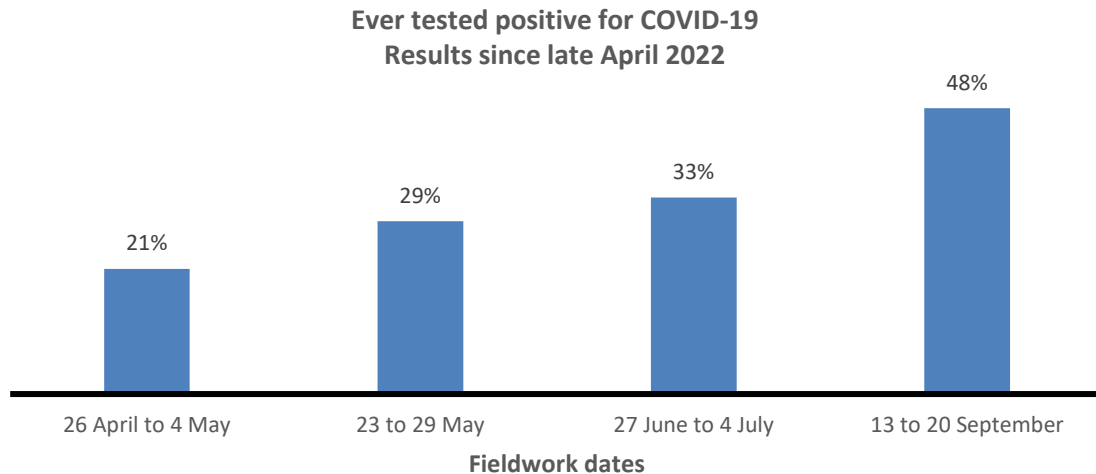
<sup>3</sup> See "Appendix – Statistical Testing"

## DETAILED REPORT

### 3. EVER TESTED POSITIVE FOR COVID-19

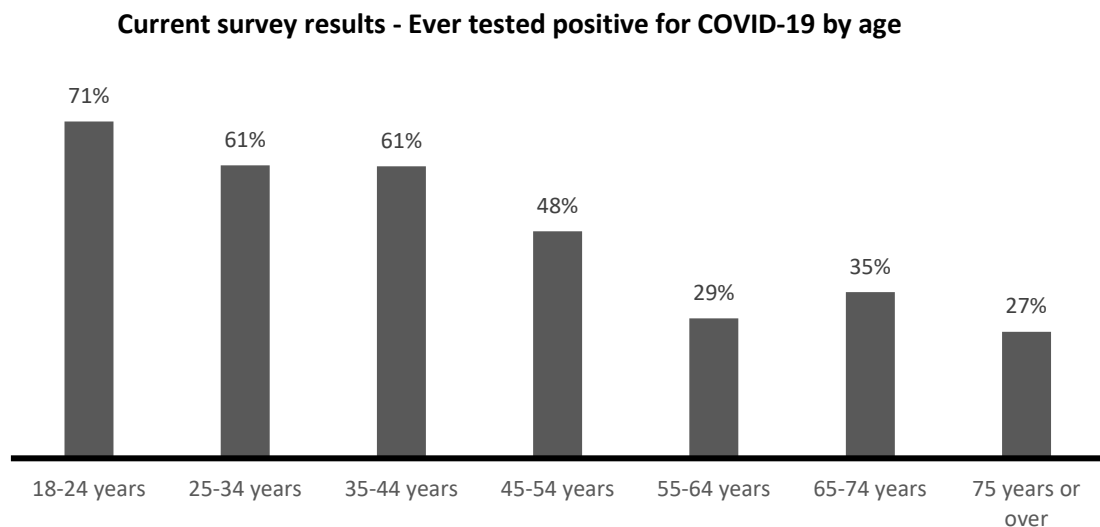
**48% of respondents said they had tested positive for COVID-19 at some point.**

The chart below shows the incidence of having tested positive for COVID-19, with results shown from surveys conducted since late April 2022, in which this question was asked.



The next chart shows results from the current survey for ever having tested positive for COVID-19 by age.

**In percentage terms, the pandemic had greater impact on younger respondents (up to the age of 44), who were more likely than average to have ever tested positive, whereas older respondents aged 55 and over were less likely than average to have ever tested positive.**



As the following table indicates, the highest incidence of ever testing positive for COVID-19 was among ethnic priority Asian respondents (69%), those who **experienced COVID-19 symptoms in the past 2 weeks** and those **from households with 5 or more people (both 68%)**.

*This table excludes results by age-group, which are shown in the previous chart.*

<b>Table 9: Total who had <u>ever</u> tested positive for COVID-19: 48%</b>			
<b>Sub-groups significantly <u>less</u> likely to have ever tested positive for COVID-19 ▼</b>		<b>Sub-groups significantly <u>more</u> likely to have ever tested positive for COVID-19 ▲</b>	
Have <u>not</u> experienced covid-19 symptoms in the past 2 weeks	45%	Ethnic priority Asian respondents	68%
Have an impairment or long-term health condition	43%	Experienced COVID-19 symptoms in the past 2 weeks	68%
No formal education qualification	38%	5 or more people in the household	68%
From a 2-person household	37%	From a 4-person household	66%
From a single person household	35%	Healthcare workers	57%
		From the South Island	56%
		From Southern Te Whatu Ora Region	56%

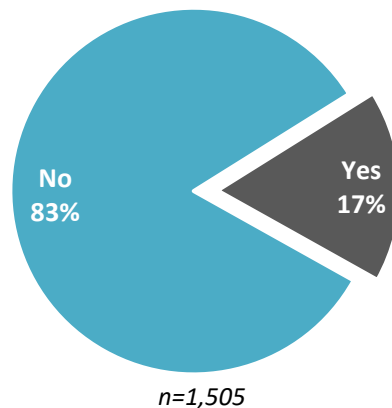
## 4. INFECTION TO SELF-ISOLATION

The following section follows respondents' COVID-19 journey from observing COVID-19 symptoms to self-administering a RAT, to testing positive, and seeking medical attention and advice, to self-isolating. NB. Not all respondents followed this sequence, eg just under half who tested positive had had no symptoms of COVID-19.

### 4.1 Experienced COVID-19 symptoms in the past 2 weeks

All survey participants were asked if they had experienced any COVID-19 symptoms in the past two weeks. **17% said they had experienced these symptoms.**

Experienced COVID-19 symptoms in the past two weeks



55% of those who tested positive for COVID-19 in the past 2 weeks experienced COVID-19 symptoms in this period, while **45% who tested positive did not experience any of these symptoms<sup>4</sup>.**

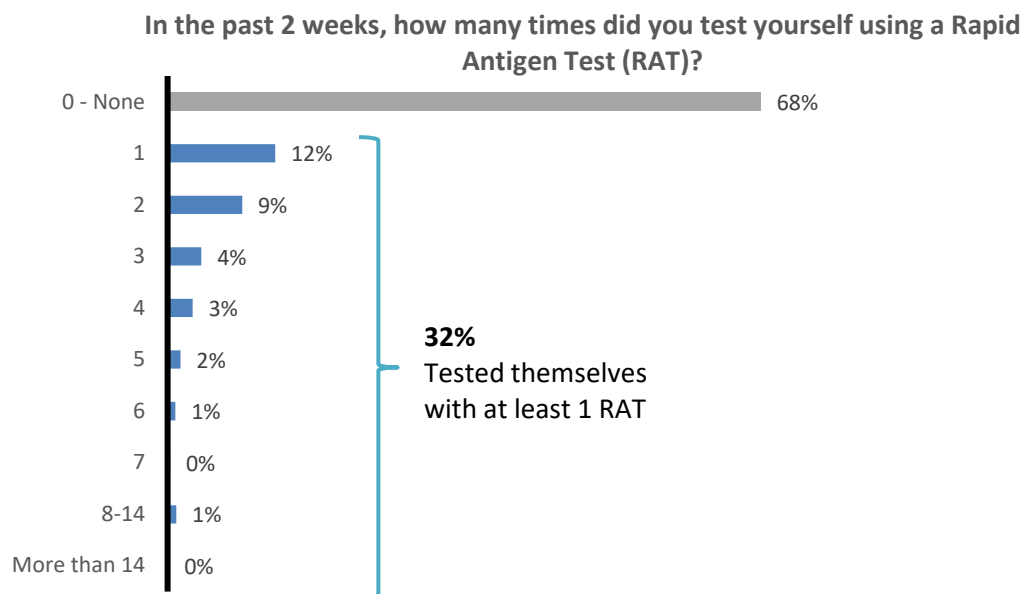
Sub-groups of the adult population who were most likely to have experienced COVID-19 symptoms in the past two weeks include **young respondents aged 18 to 24 (35%)** and **healthcare workers (32%)**.

Table 10: Total who experienced COVID-19 symptoms in the past two weeks: 17%			
Sub-groups significantly less likely to have experienced COVID-19 symptoms ▼		Sub-groups significantly more likely to have experienced COVID-19 symptoms ▲	
From Te Manawa Taki (Midland) Te Whatu Ora Region	12%	Aged 18-24 years	35%
From a 2-person household	12%	Healthcare workers	32%
From Upper North Island (excl. Auckland)	11%	From a 3-person household	25%
Had <u>never</u> tested positive for COVID-19	10%	Aged 25-34 years	25%
Aged 55-64 years	10%	Identify as disabled	23%
From a single person household	7%	Had 1-2 COVID-19 vaccine doses	22%
Aged 65-74 years	5%	Ethnic priority Māori	22%
Aged 75 or more	2%	From a 4-person household	22%

<sup>4</sup> n=119, margin of error for this result ±8.9% at 95% significance level.

## 4.2 Number of rapid antigen tests (RATs) in the past 2 weeks

Around a third (32%) of the adult population tested themselves with one or more RATs in the past 2 weeks.



73% of those with COVID-19 symptoms in the past 2 weeks tested themselves with a RAT, but note that **27% of those with symptoms did not test themselves with a RAT, nor did 25% of those who said they had tested positive for COVID-19 in the past 2 weeks**. The possible reason for this is that someone assisted them, either with a RAT test or a nasopharyngeal swab for a PCR test, but there is insufficient information in the survey to confirm that.

**Healthcare workers (53%)** and **ethnic priority Māori (45%)** were also highly likely to test themselves with a RAT.

Table 11: Total who self-administered a RAT in the past 2 weeks 3: 2%			
Sub-groups significantly less likely to have tested themselves with a RAT ▼		Sub-groups significantly more likely to have tested themselves with a RAT ▲	
Ethnic priority European	27%	Healthcare workers	53%
Aged 75 or more	19%	Ethnic priority Māori	45%
		Aged 18 to 24	42%
		Aged 25 to 34	41%*
		Identify as disabled	38%
		From the Auckland Region	37%
		From Northern Te Whatu Ora Region	36%

\* 40.5%; rounded to 41%

Respondents who tested themselves with a RAT did so an average of 2.5 times.

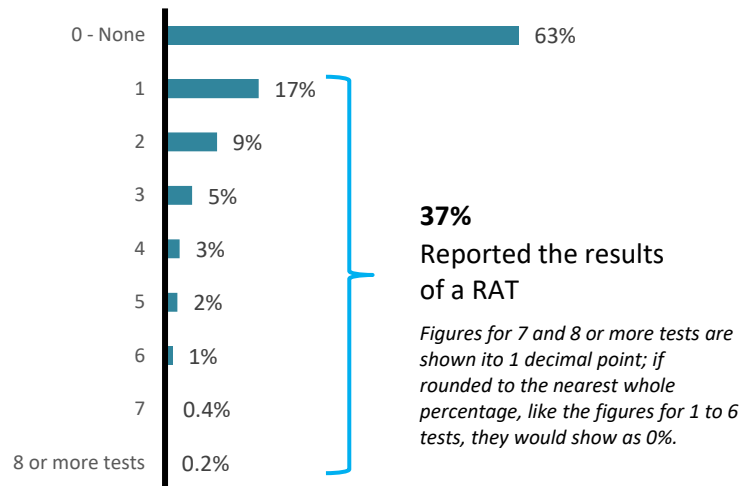


### 4.3 Reporting RAT results on My Covid Record

All respondents were asked 'In the past 2 weeks, how many times did you report your RAT results (positive and negative) on My Covid Record?' The results below are for the 483 respondents who took a RAT in the past 2 weeks.

**37% reported the results of at least one RAT test in the past 2 weeks.**

How many times did you report your RAT results (positive and negative) on My Covid Record?



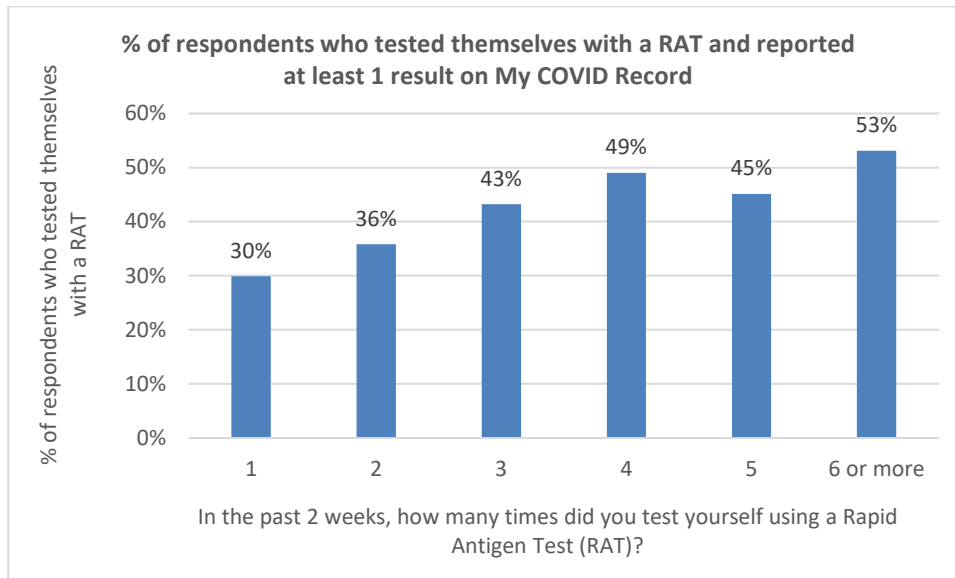
*n=483 who took at least one RAT in the past 2 weeks*

**Note that 23% of those who had tested positive for COVID-19 in the past 2 weeks and had tested themselves using a RAT did not report any of their RAT results.**

The following table summarises reporting of RAT test results **for those who took at least one RAT test in the past 2 weeks.**

Table 12: Took at least one RAT test and reported the results of a RAT on My Covid Record in the past 2 weeks: 37%			
Sub-groups significantly less likely to have reported these results ▼		Sub-groups significantly more likely to have reported these results ▲	
Aged 35 to 44	24%	Aged 18 to 24	57%
Aged 45 to 54	23%	Healthcare workers	52%
From Upper North Island (excl. Auckland)	21%	Aged 25 to 34	51%
From Te Manawa Taki (Midland) Te Whatu Ora Region	15%	Identify as disabled	49%
		From the Auckland Region	49%
		From Northern Te Whatu Ora Region	47%

The incidence of reporting at least one RAT test result generally increased as the number of tests taken increased.

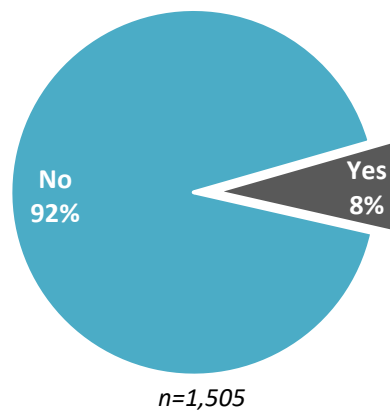


*NB: This chart consolidates respondents who had taken 6 tests or more, because of the small number of respondents who had taken 6, 7, or 8 or more tests shown in the previous chart.*

#### 4.4 Tested positive for COVID-19 in the past two weeks

All respondents were asked if they had tested positive for COVID-19 in the past 2 weeks. **8% said yes.**

**Tested positive for COVID-19 in the past two weeks**



Sub-groups of the respondents with the highest incidence of testing positive for COVID-19 in the past two weeks were:

- **Ethnic priority Asian (21%)**
- **Healthcare workers (20%)**
- **Respondents living in large households with 7 or more people (19%).**

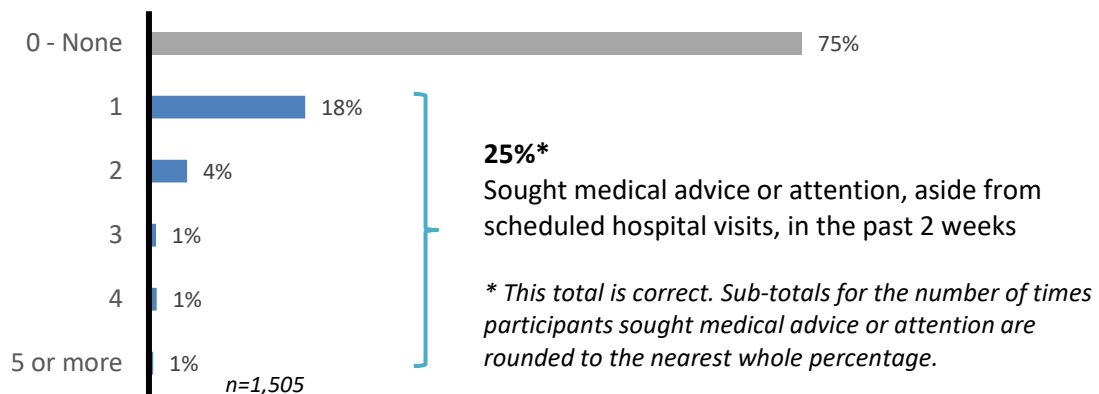
Table 13 Total who tested positive for COVID-19 in the past 2 weeks: 8%			
Sub-groups significantly less likely to have tested positive for COVID-19 in the past 2 weeks ▼		Sub-groups significantly more likely to have tested positive for COVID-19 in the past 2 weeks ▲	
From a 2-person household	5%	Ethnic priority Asian	21%
Aged 55-64 years	5%	Healthcare workers	20%
From Upper North Island (excl. Auckland)	4%	7 or more people in household	19%
Have a vocational qualification	4%	NCEA Level 3 or 7th form	18%
Aged 65-74 years	4%	Aged 25-34 years	17%
Aged 75 or more	4%	Aged 18-24 years	15%
Aged 45-54 years	3%	Had 1-2 COVID-19 vaccine doses	12%

#### 4.5 Sought medical advice or attention in the past 2 weeks

All respondents were asked 'Excluding scheduled hospital appointments, in the past 2 weeks, how many times have you sought medical advice or attention.'

**A quarter of respondents (25%) said they had sought medical advice or attention in the past 2 weeks (18% once, 7% twice or more).**

Excluding scheduled hospital appointments, in the past 2 weeks, how many times have you sought medical advice or attention?



**47% of those who tested positive for COVID-19 in the past 2 weeks and 43% who experienced COVID-19 symptoms in the past 2 weeks sought medical attention or advice, aside from scheduled hospital visits.**

Note that of the ethnic priority groups, only Māori (31%) were significantly more likely to have sought medical advice or attention in the past 2 weeks.

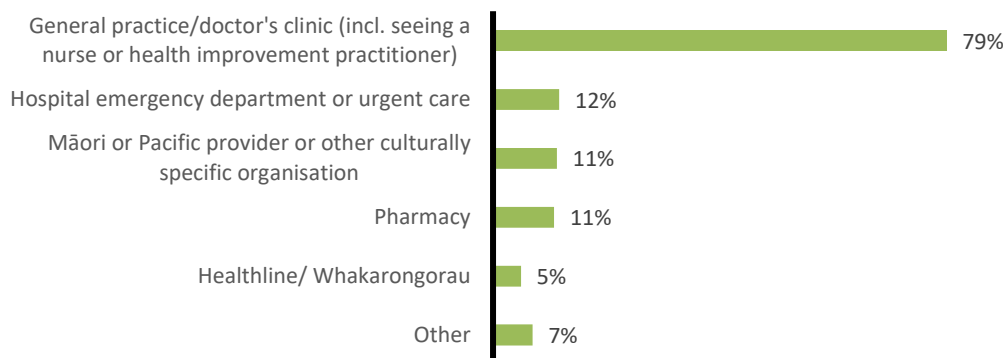
Table 14: Total who sought medical advice or attention aside from scheduled hospital visits in the past 2 weeks: 25%			
Sub-groups significantly less likely to have sought this medical advice or attention ▼		Sub-groups significantly more likely to have sought this medical advice or attention ▲	
Aged 55-64 years	18%	Tested positive for COVID-19 in past 2 weeks	47%
Not vaccinated at all for COVID-19	17%	Experienced COVID-19 symptoms in past 2 weeks	43%
		Identify as disabled	42%
		Have an impairment or long-term health condition	35%
		Ethnic priority Māori	31%

#### 4.6 Where medical advice or attention was sought

The 366 respondents who sought medical advice or attention in the past 2 weeks (not counting scheduled hospital appointments) were asked where they had sought this advice or attention.

**Almost 8 out of 10 respondents (79%) sought this advice or attention from a general practice or doctor's clinic.**

Where did you seek medical advice or attention (not counting scheduled hospital appointments)?



*n=366 who sought medical advice or attention in the past 2 weeks  
 - multiple responses were allowed*

Those who **tested positive for COVID-19 in the past 2 weeks** were significantly more likely than others who sought medical advice or attention to use:

- Hospital emergency departments or urgent care (25%),
- Māori or Pacific providers or other culturally specific organisations (36%)
- Healthline/ Whakarongorau (19%).

Sub-groups who were significantly more and less likely to seek medical advice or attention from each area are shown in the table below. *NB. To provide reliable results, only sub-groups with sample sizes of 50 or more are shown in this table*

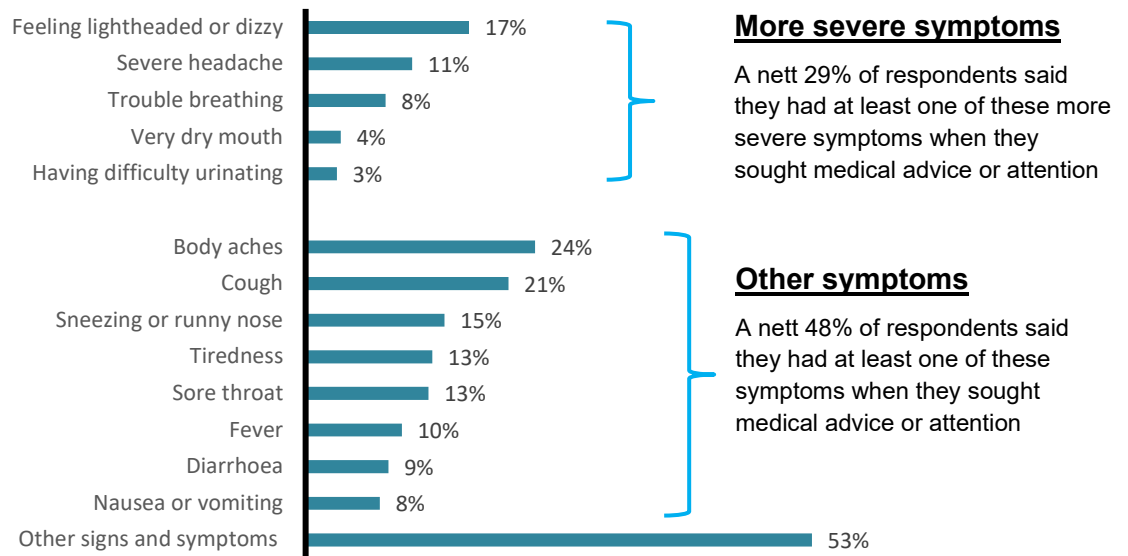
Table 15: Significantly more or less likely to seek medical advice or attention					
Area	Total %	Sub-groups significantly <b>less</b> likely to use this area ▼		Sub-groups significantly <b>more</b> likely to use this area ▲	
General practice / doctor's clinic (including seeing a nurse or health improvement practitioner)	79%	Healthcare workers	62%	<i>No sub-groups identified</i>	
Hospital emergency department or urgent care	12%	From Upper North Island (excl. Auckland)	5%	Tested positive for COVID-19 in past 2 weeks	25%
		Single person household	4%		
Māori or Pacific provider or other culturally specific organisation	11%	Females	4%	Healthcare workers	40%
		Priority ethnicity European	4%	Tested positive for COVID-19 in past 2 weeks	36%
		Aged 55 or over	0%	Priority ethnicity Māori	29%
				Experienced COVID-19 symptoms in past 2 weeks	27%
				Aged under 35	24%
				Males	19%
Pharmacy	11%	<i>No sub-groups identified</i>		<i>No sub-groups identified</i>	
Healthline/ Whakarongorau	5%	<i>No sub-groups identified</i>		Tested positive for COVID-19 in past 2 weeks	19%

#### 4.7 Symptoms respondents had when they sought medical advice

The 366 respondents who sought medical advice or attention in the past 2 weeks (excluding scheduled hospital appointments) were asked to indicate what symptoms they had when they sought this advice from a list of symptoms associated with COVID-19.

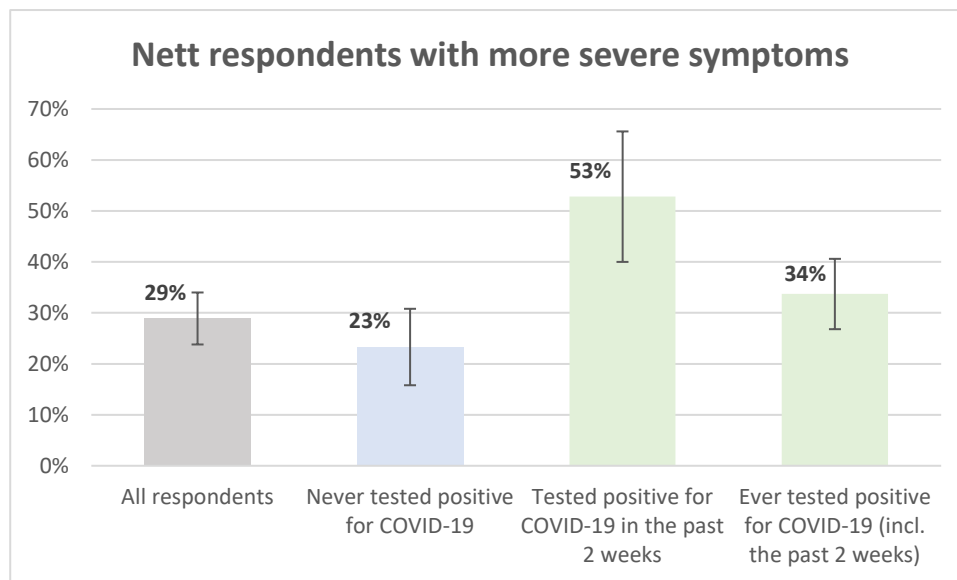
Main symptoms observed were **body aches (24%)**, **cough (21%)** and **feeling lightheaded or dizzy (17%)**.

**Symptoms people had when they sought medical advice or attention**



*n=366 who sought medical advice or attention in the past 2 weeks  
- multiple responses were allowed.*

From a small base (n=58), those who had tested positive for COVID-19 in the past 2 weeks were **significantly more likely to have at least one of the more severe symptoms** than those who had ever tested positive for COVID-19.



From an individual symptom perspective, however, differences between the incidence of each of the five more severe symptoms among those who had tested positive for COVID-19 in the past two weeks and among those who had ever tested positive for COVID-19 are not statistically significant.

<b>Table 16: More severe symptoms by tested positive for COVID-19</b>				
Thinking about the same event when you were sick or needed medical attention, which symptoms did you have when you sought medical advice?  <b>MORE SEVERE SYMPTOMS</b>	<b>ALL</b>	<b>TESTED POSITIVE FOR COVID-19</b>		
		<b>NO</b>	<b>YES - IN PAST 2 WEEKS</b>	<b>YES - EVER TESTED POSITIVE (INCL PAST 2 WEEKS)</b>
Feeling lightheaded or dizzy	17%	13%	30%	21%
Severe headache	11%	8%	23%	14%
Trouble breathing	8%	8%	14%	9%
Very dry mouth	4%	3%	4%	4%
Having difficulty urinating	3%	1%	14%	5%
<b>Nett respondents with more severe symptoms</b>	<b>29%</b>	<b>23%</b>	<b>53%</b>	<b>34%</b>
N (unweighted)	366	168	58	198

#### 4.8 Speed of getting an appointment to see a doctor or nurse

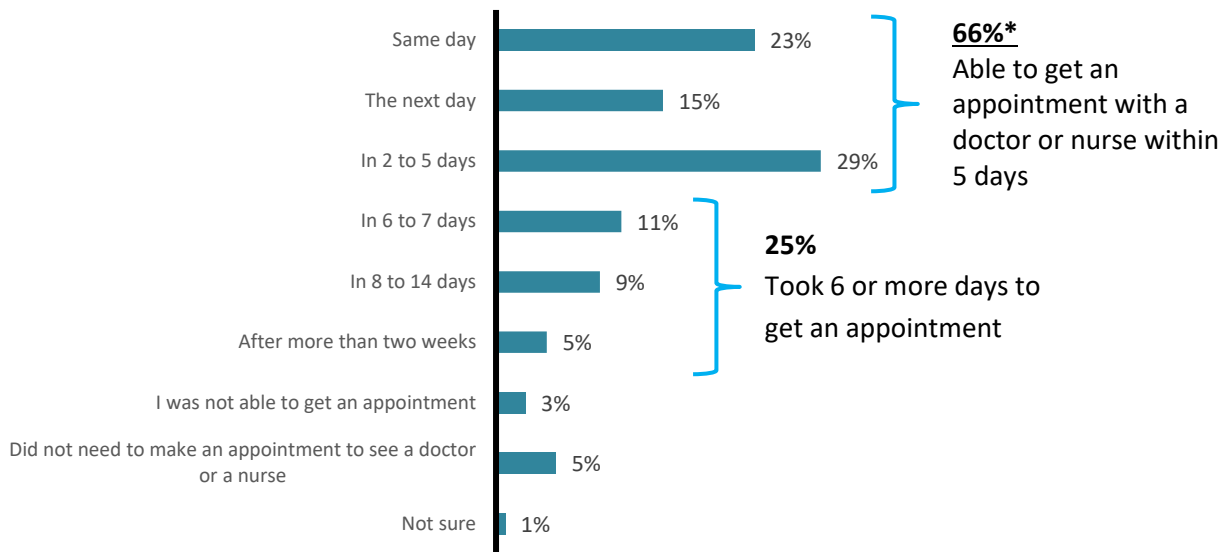
Those who sought medical advice or attention in the past 2 weeks were asked to think about the most recent time when they were sick or needed medical attention and indicate how quickly it took to get an appointment to see a doctor or a nurse.

Overall, two-thirds (66%) made an appointment with a doctor or nurse within 5 days, with 23% making an appointment on the same day. Note that 3% said they could not get an appointment at all.

**Of those who had tested positive for COVID-19 in the past 2 weeks, 69% made an appointment with a doctor or nurse within 5 days, with 28% getting an appointment on the same day and 19% “the next day”. 22% made an appointment in 2 to 5 days. Note that 3% said they could not get an appointment at all.**

62% of the respondents who had never tested positive for COVID-19 but had sought medical advice or attention in the past 2 weeks were able to get an appointment within 5 days: 21% the same day, 12% next day and 30% in 2 to 5 days.

Thinking about the most recent time when you were sick or needed medical attention, how quickly could you get an appointment to see a doctor or a nurse?



*n=366 who sought medical advice or attention in the past 2 weeks*  
\* Less than the individual percentages shown owing to rounding

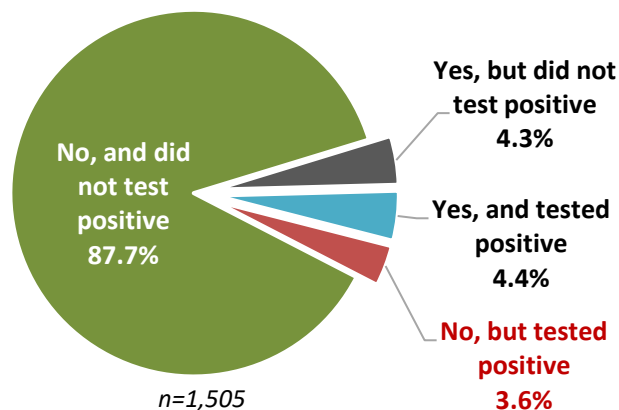
The results show **no significant regional differences, including by Te Whatu Ora regions.**

#### 4.9 Have you self-isolated in the past two weeks?

All respondents were asked if they had self-isolated in the past 2 weeks and **9% overall said yes.**

**45% of those who had tested positive for COVID-19 in the past 2 weeks said that they had not self-isolated in the past 2 weeks** (equivalent to 3.6% of all respondents; *n=119, margin of error for this result ±8.9% at 95% significance level*).

Self-isolated in the past two weeks





Sub-groups of the adult population who were the most likely to have self-isolated in the past two weeks include:

- those who **tested positive for COVID-19 (55%)**
- those who **experienced COVID-19 symptoms in the past 2 weeks (36%)**
- those from **large households** with 7 or more people (24%)
- healthcare workers (21%).

<b>Table 17: Total who were self-isolating in the past two weeks: 9%</b>			
<b>Sub-groups significantly less likely to have self-isolated in the past 2 weeks ▼</b>		<b>Sub-groups significantly more likely to have self-isolated in the past 2 weeks ▲</b>	
From a 2-person household	5%	Tested positive for COVID-19 in the past 2 weeks	55%
From Upper North Island (excl. Auckland)	5%	Experienced COVID-19 symptoms in the past 2 weeks	36%
Aged 65-74 years	5%	7 or more people in household	24%
From Te Manawa Taki (Midland) Te Whatu Ora Region	4%	Healthcare workers	21%
Aged 75 or more	2%	Aged 18-24 years	18%
		Ethnic priority Asian	17%
		Aged 25-34 years	16%
		Ethnic priority Māori	15%
		Identify as disabled	15%
		Have an impairment or long-term health condition	12%

## 5. RECENT PREVENTION AND PROTECTION BEHAVIOUR

### 5.1 Wearing a mask on public transport in the past 2 weeks

All respondents were asked how often they wore a mask on various forms of public transport in the past two weeks. They had the option to say they did not use that form of public transport, and **the following tables summarise mask wearing just for those who used each type of public transport.**<sup>5</sup>

As the table below shows, for public transport users in the past 2 weeks:

- **Always wearing a mask** involved fewer than 4 out of 10 passengers for each type of transport, with the highest result **on a bus (37% always)** and the lowest result **on a ferry (20% always)**.
- For all five types of public transport, **never wearing a mask was ahead of always wearing a mask.**

How often did you wear a mask on a...?	Bus (n=572)	Train (n=385)	Ferry (n=310)	Plane (n=399)	Taxi/ Uber (n=466)
Never	38%	45%	56%	42%	40%
Rarely	8%	10%	8%	8%	8%
Sometimes	8%	8%	7%	9%	9%
Often	10%	10%	9%	7%	9%
Always	37%	28%	20%	34%	34%

Sub-groups who were significantly more and less likely to always wear a mask for each type of public transport are shown in the following tables. To provide reliable results, sub-groups with less than n=50 responses are not included in these tables.

#### Always wore a mask on bus trips

Bus users who had **4 or more COVID-19 vaccine doses** were the most likely sub-group to always wear masks on bus trips. Some **significant differences were identified by geographic location**, with bus users from the combined Wellington urban areas (combination of Kapiti Coast District, Porirua City, Wellington City, Hutt City and Upper Hutt City) being more likely to always wear masks when using buses, trains or taxi/Uber, and bus users from the Te Manawa Taki (Midland) Te Whatu Ora Region being less likely.

In addition, those who had **never been vaccinated** against COVID-19 or only had **1 or 2 vaccine doses** were less likely than average to always wear a mask on bus trips. By contrast, those **with university degrees** were more likely to always wear a mask.

<sup>5</sup> The comparisons are made between only those who use each of the public transport modes and are therefore based on relative behaviours. This accounts for differences in levels of availability and usage of public transport modes across New Zealand and assists in mitigating confounding bias.

Table 19: Always wore a mask on a bus in the past 2 weeks: total 37%			
Sub-groups significantly <u>less</u> likely to always wear a mask ▼		Sub-groups significantly <u>more</u> likely to always wear a mask ▲	
From Te Manawa Taki (Midland) Te Whatu Ora Region	24%	Had 4 or more doses of the COVID-19 vaccine	64%
From Upper North Island (excl. Auckland)	23%	Living in the combined Wellington urban areas	53%
Had 1 or 2 doses of the COVID-19 vaccine	22%	Aged 45 to 54	51%
Never been vaccinated for COVID-19	14%	With a university degree	47%

### Always wore a mask on train trips

As with bus trips, there are **significant differences in always wearing masks on train trips** by **geographic location** and **vaccination status**. Again, those **with a university degree** were more likely to always wear masks on train trips.

Table 20: Always wore a mask on a train in the past 2 weeks: total 28%			
Sub-groups significantly <u>less</u> likely to always wear a mask ▼		Sub-groups significantly <u>more</u> likely to always wear a mask ▲	
From Southern Te Whatu Ora Region	18%	Had 4 or more doses of the COVID-19 vaccine	64%
From Upper North Island (excl. Auckland)	8%	Living in the combined Wellington urban areas	43%
			36%

### Always wore a mask on ferry trips

For ferry trips, those **with university degrees** were more likely to always wear a mask.

Table 21: Always wore a mask on a ferry in the past 2 weeks: total 20%		
Sub-groups significantly <u>less</u> likely to always wear a mask ▼		Sub-groups significantly <u>more</u> likely to always wear a mask ▲
<i>No sub-groups identified</i>		With a university degree
		29%

### Always wore a mask on 'plane trips

For 'plane trips, there were significant differences in always wearing a mask by **age** (with those aged 25 to 34 less likely and aged 35 to 54 more likely), **identifying as disabled** (less likely), **living in a 2-person household** (more likely), and **having a university degree** (more likely). No differences were observed by geographic location.

Table 22: Always wear masks on a plane in the past 2 weeks: total 34%			
Sub-groups significantly <u>less</u> likely to always wear a mask ▼		Sub-groups significantly <u>more</u> likely to always wear a mask ▲	
Aged 25 to 34	25%	Aged 35 to 54	45%
Identify as disabled	22%	From a 2-person household	44%
		Had 3 vaccine doses	44%
		With a university degree	44%

### Always wore a mask in taxi/Uber trips

There are significant differences in always wearing masks on taxi/Uber trips by **geographic location**, **vaccination status**, **living in a 2-person household** (more likely) and **having a postgraduate degree** (more likely).

Table 23: Always wear masks on a taxi/Uber in the past 2 weeks: total 34%			
Sub-groups significantly <u>less</u> likely to always wear a mask ▼		Sub-groups significantly <u>more</u> likely to always wear a mask ▲	
From Te Manawa Taki (Midland) Te Whatu Ora Region	18%	Living in the combined Wellington urban areas	54%
		Had 4 or more doses of the COVID-19 vaccine	52%
		With a postgraduate degree	48%
		From a 2-person household	46%

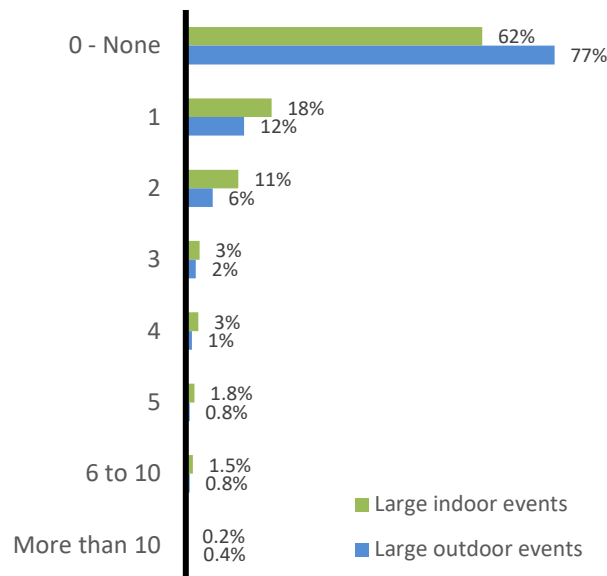
## 5.2 Attendance and mask wearing at large events in the past 2 weeks

All participants were asked, separately for indoor and outdoor events, ‘*In the past 2 weeks, how many large events (more than 50 people) did you attend?*’.

In total, **38% attended a large indoor event** and **23% attended a large outdoor event**.

Most attendees attended relatively few events – 32% of the total population attended 1 to 3 large indoor events, while 20% attended 1 to 3 large outdoor events.

In the past 2 weeks, how many large events (more than 50 people) did you attend?



*n=1,505. Note rounding of the above results*

Those who attended large indoor events were asked how often they wore masks at these events in the past 2 weeks. **44% said they “never” wore a mask at these large indoor events while only 20% “always” wore a mask.**

How often did you wear a mask at these large indoor events?	
Never	44%
Rarely	9%
Sometimes	16%
Often	11%
Always	20%
Base n=	595

### Always wore a mask at large indoor events in the past 2 weeks

Those who had **never been vaccinated** or only had **1 or 2 vaccine doses** were less likely to always wear a mask at recent large indoor events, while those with **4 or more doses** were more likely to always wear a mask.

Other sub-groups who were more likely to always wear masks at these indoor events include those **aged 55 and over** and those from the **Central Te Whatu Ora Region**.

Those **aged 45 to 54** were less likely to always wear masks at large indoor events.

<b>Table 24: Always wear masks at large indoor events in the past 2 weeks: total 20%</b>			
<b>Sub-groups significantly <u>less</u> likely to always wear a mask ▼</b>		<b>Sub-groups significantly <u>more</u> likely to always wear a mask ▲</b>	
Aged 45 to 54 years	12%	Had 4 or more doses of the COVID-19 vaccine	39%
Had 1 or 2 doses of the COVID-19 vaccine	12%	From Central Te Whatu Ora Region	28%
Never been vaccinated for COVID-19	8%	Aged 55 or over	27%

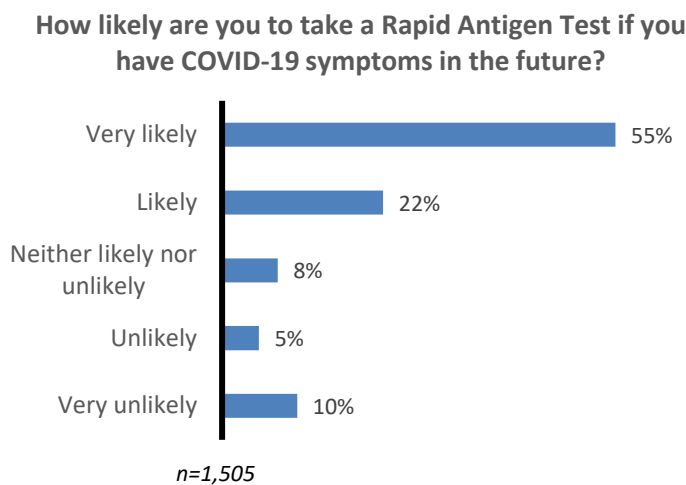
## 6. LIKELY FUTURE PREVENTION AND PROTECTION BEHAVIOUR

In general, there is a statistically significant difference between those aged under 35 and other age groups for future prevention and protection behaviours.<sup>6</sup>

### 6.1 Likelihood to take a RAT if you have COVID-19 symptoms in the future

All those interviewed were asked ‘*If you have COVID-19 symptoms in the future, will you take a Rapid Antigen Test?*’ using a 5-point Likert scale from “Very unlikely” to “Very likely”.

**55% of respondents said they were very likely to take a RAT if they have COVID-19 symptoms in the future.**



Sub-groups with the highest proportion of respondents saying they were very likely to take a RAT if they have COVID-19 symptoms in the future include:

- **Those with 4 or more COVID-19 vaccination doses (77%)**
- **People aged 75 or more (75%)**
- **Ethnic priority Pasifika (68%).**

Sub-groups with the lowest proportion of respondents saying they were very likely to take a RAT if they have COVID-19 symptoms include:

- **Those from large households with 7 or more people (39%)**
- **Respondents who have never been vaccinated for COVID-19 (12%).**

<sup>6</sup> See “Appendix - Statistical Testing”

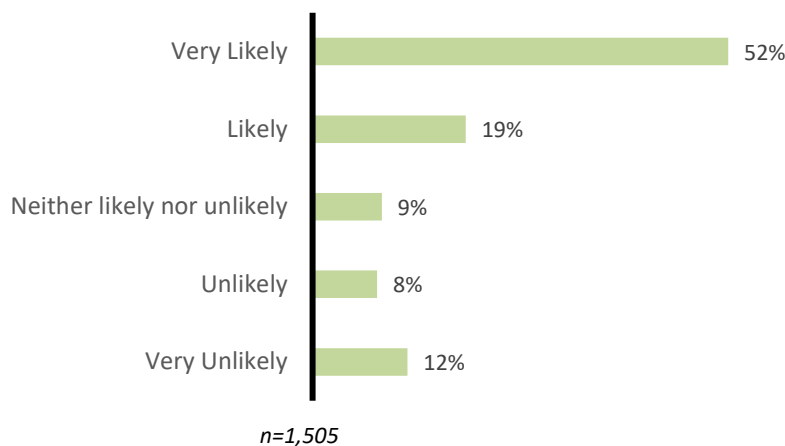
Table 25: Very likely to take a RAT if they have COVID-19 symptoms in the future: total 55%			
Sub-groups with a significantly lower level of being <u>very likely</u> to take a RAT ▼		Sub-groups with a significantly higher level of being <u>very likely</u> to take a RAT ▲	
Ever tested positive for COVID-19	49%	Had 4 or more doses of the COVID-19 vaccine	77%
Experienced COVID-19 symptoms in the past two weeks	46%	Aged 75 or more	75%
5 or 6 people in household	45%	Ethnic priority Pasifika	68%
Had 1 or 2 COVID-19 vaccination doses	41%	Aged 65 to 74	67%
Aged 18 to 24	41%	Had 3 COVID-19 vaccination doses	64%
Aged 25 to 34	40%	Have an impairment or long-term health condition	63%
7 or more people in household	39%	Never tested positive for COVID-19	60%
Never been vaccinated for COVID-19	12%		

## 6.2 Likelihood to report positive RAT results in the future

All respondents were asked ‘If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you report your test result?’

**52% of respondents said they were very likely to report positive RAT results in the future.** This compares with 37% who said they reported their test results (both positive and negative) in the past 2 weeks (see Section 4.3).

How likely are you to report Rapid Antigen Test results if you test positive in the future?



Sub-groups with the highest proportion of respondents saying they were very likely to report a positive RAT result in the future include:

- Those who have had 4 or more COVID-19 vaccination doses (74%)
- Ethnic priority Pasifika (67%)
- Aged 75 or more (66%)

Sub-groups with the lowest proportion of respondents saying they were very likely to report a RAT result in these circumstances include:

- Those from large households with 7 or more people (39%)
- Respondents who have never been vaccinated for COVID-19 (14%).



**Table 26: Very likely to report positive RAT results in the future: total 52%**

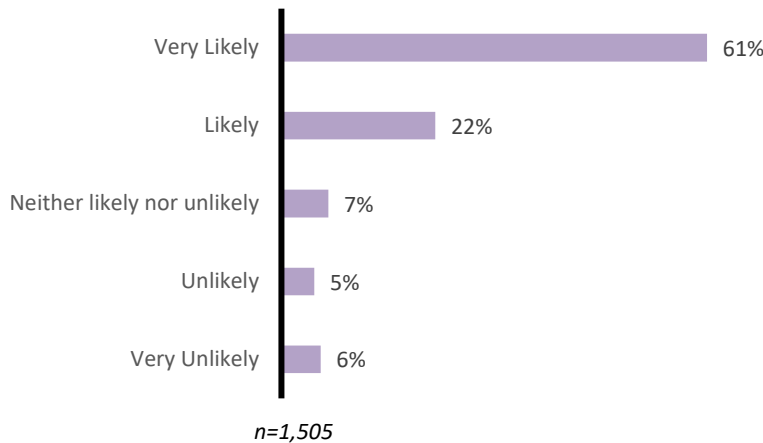
Sub-groups with a significantly lower level of being <u>very likely</u> to report positive RAT results ▼		Sub-groups with a significantly <u>higher</u> level of being <u>very likely</u> to report positive RAT results ▲	
Ever tested positive for COVID-19	47%	Had 4 or more doses of the COVID-19 vaccine	74%
4-person household	44%	Ethnic priority Pasifika	67%
Aged 25 to 34	42%	Aged 75 or more	66%
7 or more people in household	39%	Had 3 COVID-19 vaccination doses	62%
Had 1 or 2 COVID-19 vaccination doses	37%	Identify as disabled	62%
Never been vaccinated for COVID-19	14%	Have an impairment or long-term health condition	61%
		Aged 65 to 74	60%
		1 or 2-person household	59%
		From Central Te Whatu Ora region	58%
		Never tested positive for COVID-19	57%

### 6.3 Likelihood to self-isolate for the recommended period if you have a positive RAT result in the future

All respondents were asked 'If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)?'

**61% of respondents said they were very likely to self-isolate for the recommended period if they have a positive RAT result in the future.**

How likely are you to self-isolate for the recommended period if you have a positive RAT result in the future?



Sub-groups with the highest proportion of respondents saying they were very likely to self-isolate if they test positive include:

- **Older people - aged 75 or more (73%) or aged 65 to 74 (72%)**
- **Those who have an impairment or long-term health condition (70%).**

Sub-groups with the lowest proportion of respondents saying they were very likely to self-isolate if they test positive include:

- **Those from large households - with 7 or more people (47%) or 5 to 6 people (51%)**
- **Younger respondents - aged 25 to 34 (51%) or aged 18 to 24 (52%).**

**Table 27: Very likely to report positive RAT results in the future: total 52%**

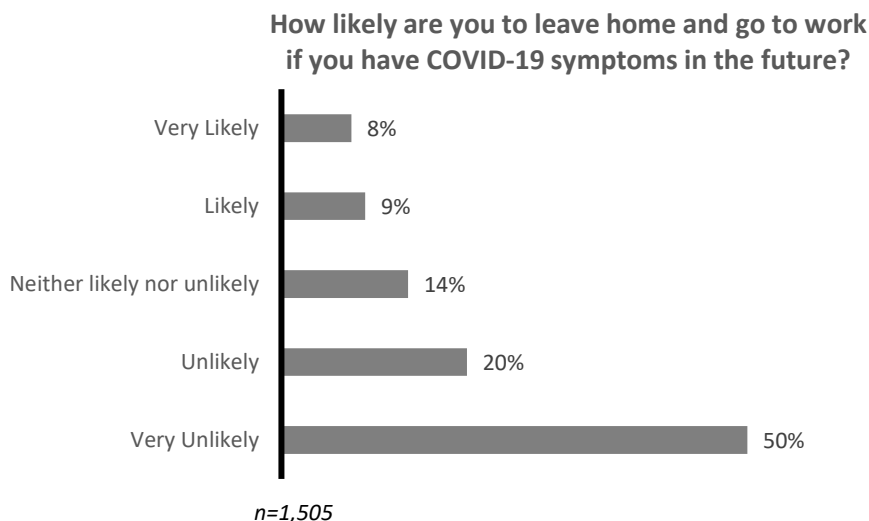
Sub-groups with a significantly lower level of being <u>very likely</u> to report positive RAT results ▼		Sub-groups with a significantly <u>higher</u> level of being <u>very likely</u> to report positive RAT results ▲	
Ever tested positive for COVID-19	56%	Had 4 or more doses of the COVID-19 vaccine	82%
Aged 18 to 24	52%	Aged 75 or more	73%
5 or 6-person household	51%	Aged 65 to 74	72%
Aged 25 to 34	51%	Have an impairment or long-term health condition	70%
7 or more people in household	47%	Single person household	70%
Never been vaccinated for COVID-19	25%	Had 3 COVID-19 vaccination doses	70%
		Identify as disabled	68%
		From Central Te Whatu Ora region	67%
		Never tested positive for COVID-19	65%

## 6.4 Likelihood to leave home and go to work if you have COVID-19 symptoms in the future

All those surveyed were asked 'If you have symptoms of COVID-19 in the future, will you leave home and go to work?'

Half of respondents (50%) were very unlikely to leave home and go to work in the future if they have COVID-19 symptoms.

By contrast, 8% were very likely to leave home and go to work if they have COVID-19 symptoms. These respondents were more likely than average to be aged 25-34 years (15%).



Sub-groups with the highest proportion of respondents who were very unlikely to leave home and go to work if they test positive for COVID-19 in the future include:

- **Older people - aged 75 or more (79%) or aged 65 to 74 (72%)**
- **Those from single person households (63%).**

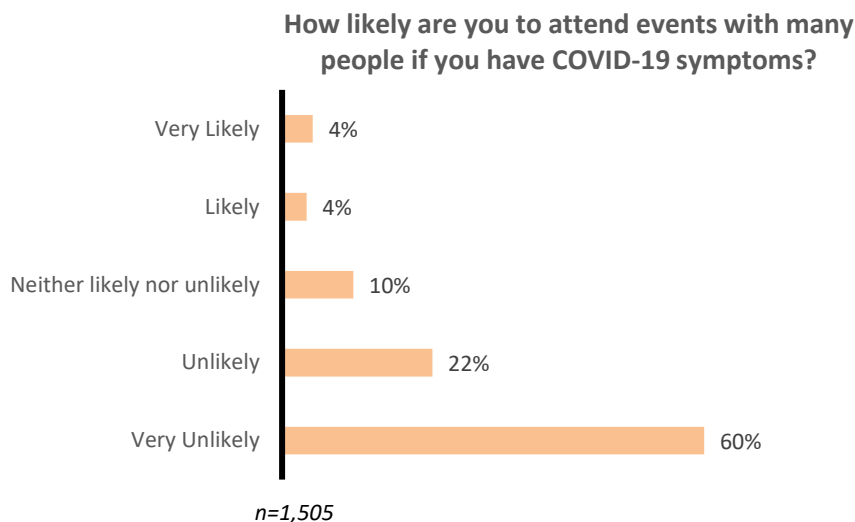
**Table 28: Very unlikely to leave home and go to work if they have a positive RAT result in the future: total 50%**

Sub-groups with a significantly lower incidence of being <u>very unlikely</u> to leave home and go to work ▼		Sub-groups with a significantly <u>higher</u> level of being <u>very likely</u> to report positive RAT results ▲	
Ever tested positive for COVID-19	43%	Aged 75 or more	79%
3-person household	43%	Had 4 or more doses of the COVID-19 vaccine	73%
Healthcare workers	42%	Aged 65 to 74	72%
Self-isolated in the past 2 weeks	41%	Single person household	63%
4-person household	40%	2-person household	60%
Tested positive for COVID-19 in past 2 weeks	34%	Have a postgraduate degree	60%
5 or 6-person household	33%	Have an impairment or long-term health condition	59%
Aged 25 to 34	32%	Aged 55 to 64	59%
Experienced COVID-19 symptoms in the past two weeks	30%	Identify as disabled	57%
Aged 18 to 24	26%	Never tested positive for COVID-19	56%

## 6.5 Likelihood to attend events with many people if you have COVID-19 symptoms

All participants were asked 'If you have symptoms of COVID-19, will you attend events with many people?'

**60% of respondents said they were very unlikely to attend these large events if they have COVID-19 symptoms. By contrast, 4% were very likely to attend these events if they have these symptoms. These respondents were more likely than average to be aged 25-34 years (10%)**



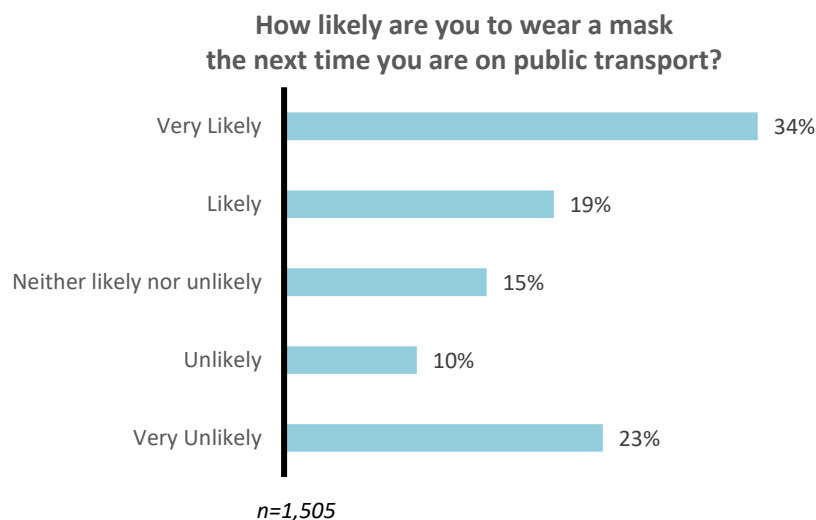
Sub-groups with the highest proportion of respondents who were very unlikely to attend events with many people if they have COVID-19 symptoms include:

- **Older people - aged 75 or more (80%) or aged 65 to 74 (77%)**
- **Those from small households - living alone (74%) or living with one other (69%).**

Table 29: <u>Very unlikely</u> to attend events with many people if you have COVID-19 symptoms: total 60%			
Sub-groups with a significantly <u>lower</u> incidence of being <u>very unlikely</u> to attend these events ▼		Sub-groups with a significantly <u>higher</u> incidence of being <u>very unlikely</u> to attend these events ▲	
4-person household	54%	Aged 75 or more	80%
Ever tested positive for COVID-19	53%	Aged 65 to 74	77%
Healthcare workers	53%	Single person household	74%
Ethnic priority Asian	51%	2-person household	69%
3-person household	51%	Have an impairment or long-term health condition	69%
Self-isolated in the past 2 weeks	48%	Aged 55 to 64	69%
5 or 6-person household	48%	Have a postgraduate degree	67%
Tested positive for COVID-19 in the past 2 weeks	45%	Never tested positive for COVID-19	67%
Aged 25 to 34	45%	From the Lower North Island	66%
Experienced COVID-19 symptoms in the past two weeks	43%		
7+ people in the household	42%		
Aged 18 to 24	35%		

## 6.6 Likelihood of wearing a mask the next time you are on public transport

**34% of respondents said they were very likely to wear a mask the next time they are on public transport, with 23% very unlikely.** Similarly, on average, 31% always wore a mask on five types of public transport (bus, train, ferry, plane and taxi/Uber) in the past 2 weeks (see Section 5.1).



Sub-groups with the highest proportion of respondents who were very likely to wear a mask the next time they were on public transport include **ethnic priority Pasifika (55%)** and those **aged 65 to 74 (45%)**.

By contrast, younger respondents had the lowest proportion of people who were very likely to wear a mask ie those **aged 25 to 34 (26%)** and **aged 18 to 24 (23%)**.

<b>Table 30: <u>Very likely</u> to wear a mask the next time you are on public transport: total 34</b>			
<b>Sub-groups with a significantly <u>lower</u> level of being <u>very likely</u> to wear a mask ▼</b>		<b>Sub-groups with a significantly <u>higher</u> level of being <u>very likely</u> to wear a mask ▲</b>	
Ever tested positive for COVID-19	29%	Ethnic priority Pasifika	55%
5 or 6-person household	26%	Had 4 or more doses of the COVID-19 vaccine	52%
Aged 25 to 34	26%	Self-isolated in the past 2 weeks	47%
Aged 18 to 24	23%	Aged 65 to 74	45%
Never been vaccinated for COVID-19	13%	Have a postgraduate degree	45%
		Have an impairment or long-term health condition	42%
		Single person household	41%
		Healthcare workers	41%
		Never tested positive for COVID-19	39%

## 7. WORK ACTIVITIES CONDUCTED BY DAY OF THE WEEK

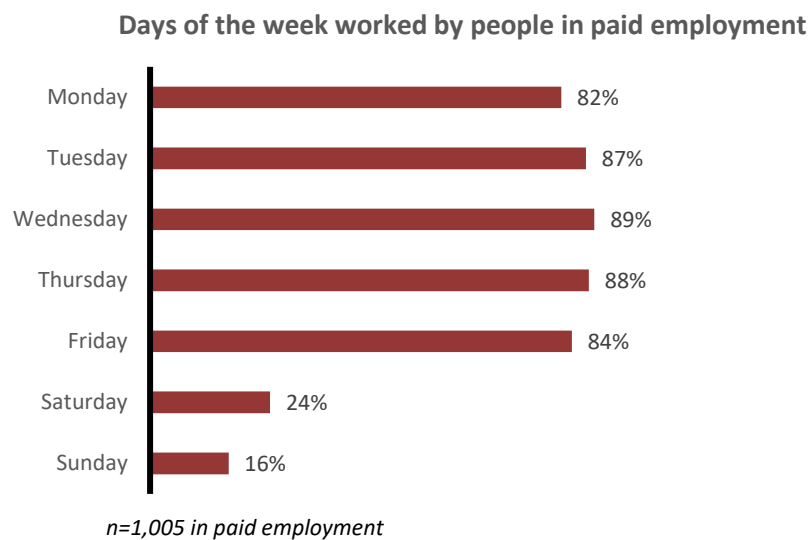
### 7.1 Days of the week worked by people in paid employment

All respondents were asked 'On which days of the week do you normally work?' As one of the responses was 'I am not in paid employment,' it was possible to re-calculate the results just for those in paid employment.

On average, those in paid employment work 4.7 days per week.

Over 80% work on each day of the traditional Monday to Friday work week, with a maximum of 89% working on Wednesdays and a minimum of 82% working on Mondays.

Almost a quarter (24%) work on Saturdays while one in six (16%) work on Sundays.



## 7.2 Days of the week people in paid employment work from home compared with working outside home

A further two questions were asked of those in paid employment:

- *Some people are able to work from home on some or all of the days they work. Which of these days, if any, **are you working from home?***
- Those who responded 'It varies from week to week' to the above question were asked '*Just **thinking about the past 7 days, what days did you work from home?***

Based on their responses to the above questions as well as to the question about which days of the week they normally work, it was possible to construct a normalised table for work activity on each day of the week. The method to construct this table is described in the Methodology Section.

**50% of those in paid employment said that they were not able to work from home on any working day.**

### Normal activities by day of the week for those in paid employment

Days of the week	Work from home	Work outside home	Not working	Total % for day
Monday	25%	57%	18%	100%
Tuesday	25%	62%	13%	100%
Wednesday	26%	63%	11%	100%
Thursday	24%	64%	12%	100%
Friday	26%	59%	16%	100%
Saturday	6%	18%	76%	100%
Sunday	3%	13%	84%	100%

*n=1,005 in paid employment*

### Working from home

As the table shows, around a quarter or those in paid employment normally work from home each day of the Monday to Friday traditional working week. These results have a narrow spread from 24% working from home on Thursdays to 26% working from home on Wednesdays.

During the weekend 6% normally work from home on Saturdays and only 3% normally work from home on Sundays.

### Working outside home

Traditional work week results range from 57% normally working outside home on Mondays to 64% working outside home on Thursdays. In the weekend 18% normally work outside home on Saturdays and 13% on Sundays.

### Not working

Three-quarters (76%) of those in paid employment normally don't work on Saturdays and 84% normally don't work on Sundays.

## 8. METHODOLOGY

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### Research method

An online survey of people living in New Zealand aged 18 and older.

### Sample sources

The nationwide HorizonPoll and Horizon Research Māori research panels and two third-party research panels were used to ensure coverage and diversity.

### Fieldwork dates

15 to 20 September 2022.

### Sample size

A total of n=1,505 respondents.

### Survey reliability

For the total sample the maximum margin of error is  $\pm 2.5\%$  at the 95% confidence level (CI).

### Key sub-samples and their maximum margins of error (at 95% CI)

- Ethnic priority Pasifika: n=88, maximum margin of error  $\pm 10.4\%$
- Never vaccinated for COVID-19: n=137,  $\pm 8.4\%$
- Ethnic priority Māori: n=271,  $\pm 6.0\%$
- 55 years or over: n=575,  $\pm 4.1\%$ .
- Tested positive for COVID-19 in past 2 weeks: n=119,  $\pm 9.0\%$ .
- Ever tested positive for COVID-19: n = 729,  $\pm 3.6\%$ .

### Quotas

Demographic quotas were used to ensure a representative sample. In addition, Māori respondents were oversampled to achieve higher than population average numbers of Māori respondents.

### Priority ethnic groups

Horizon used priority ethnic groups to determine ethnicity.<sup>7</sup>

### Weighting

The total sample is weighted on age, gender, ethnicity, education, employment status and region to match the New Zealand adult (18+) population.

### Age groups

The five-year age groupings asked in the survey have been grouped into 10-year age groups to ensure the results of cross tables are robust.

### Statistical tests of significance

ANOVA analysis and post hoc Tukey-Kramer and t-testing was carried out on the behavioural questions – see “Appendix – Statistical Testing” for details.

Cross analysis of the results only features statistically significant differences from the total at the 95% confidence level. These results are indicated by the following symbols:

▼ significantly **less** than the total    ▲ significantly **more** than the total.

Two-tailed t-testing is used to indicate significant differences between figures in the tabulated survey results. This indicates whether the difference between the two results being compared is significant at the 95% significance level regardless of the “direction” of the difference (ie either above or below the figure to which the result is being compared).

Tests of significance of tabulated results look at whether the result for each option in a table row is significantly different to the others in that row, not at the question as a whole.

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<sup>7</sup> If someone identifies as Māori, they are Māori. If someone does not, but identifies as Pasifika, they are Pasifika. If someone identifies as neither, but Asian (including Indian), they are Asian. If someone does not identify as any of these groups but instead European (either of New Zealand descent, or not) they are European. Otherwise, they are Other.



## Method used to construct the table showing normalised activity by those in paid employment by days of the week in section 7.2

The days of the week table summarises results from 3 questions:

**Q16. Normal workdays** - *On which days of the week do you normally work?*

- This question has a response 'I am not in paid employment' which is used to filter out these people from the paid employment table

**Q17. Normal work from home days** - *Some people are able to work from home on some or all of the days they work. Which of these days, if any, are you working from home?*

- This question has a response 'It varies from week to week.' If this response is selected, Q18 is asked

**Q18. Actual work from home days last week** - *You said that the days you are working from home are variable. Just thinking about the past 7 days, what days did you work from home?*

Calculations were as follows eg **calculating "normalised weekday Monday"**:

- If "Monday" is not selected as a normal working day in Q16, the respondent is NOT WORKING on a Monday.
- If "Monday" is selected as a working day in Q16:
  - If "Monday" is selected in Q17, the respondent is WORKING FROM HOME on a Monday.
  - If "It varies from week to week" is selected in Q17 and "Monday" is selected in Q18, the respondent is WORKING FROM HOME on a Monday.
- Otherwise, the respondent WORKS OUTSIDE HOME on a Monday.

## APPENDIX – SAMPLE PROFILE

### A) By demographics *(Note that some percentages may not sum to 100% owing to rounding)*

Gender	n= (unweighted)	% (unweighted)	% (weighted)
Male	616	41%	49%
Female	877	58%	50%
Another gender	12	1%	1%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Age	n= (unweighted)	% (unweighted)	% (weighted)
18-24	159	11%	12%
25-34	276	18%	19%
35-44	224	15%	15%
45-54	271	18%	19%
55-64	256	17%	15%
65-74	178	12%	10%
75 or more	141	9%	11%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Priority ethnicity	n= (unweighted)	% (unweighted)	% (weighted)
Māori	271	18%	17%
Pasifika	88	6%	6%
Asian	107	7%	6%
European	1,032	69%	70%
Other	7	0%	1%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Highest education level	n= (unweighted)	% (unweighted)	% (weighted)
Postgraduate degree (Masters or PhD)	216	14%	10%
Undergraduate (Bachelor) degree	439	29%	20%
Vocational qualification (includes trade certificates, diplomas etc)	376	25%	29%
University Bursary or 7th form	108	7%	8%
Sixth form/UE/NCEA Level 2	133	9%	12%
NCEA Level 1 or School Certificate	113	8%	11%
No formal school qualification	88	6%	8%
Prefer not to say	32	2%	3%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Healthcare worker	n= (unweighted)	% (unweighted)	% (weighted)
Yes	212	14%	13%
No	1,293	86%	87%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Te Whatu Ora - Health New Zealand Regions	n= (unweighted)	% (unweighted)	% (weighted)
Northern	536	36%	39%
Te Manawa Taki (Midland)	258	17%	19%
Central	350	23%	20%
Southern	361	24%	23%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Region	n= (unweighted)	% (unweighted)	% (weighted)
Northland	64	4%	5%
Auckland	472	31%	34%
Waikato	117	8%	9%
Bay of Plenty	97	6%	7%
Taranaki	37	2%	2%
Gisborne/Hawkes' Bay	64	4%	4%
Wairarapa	21	1%	1%
Whanganui/ Manawatu/ Palmerston North	84	6%	5%
Wellington	190	13%	10%
Nelson/ Tasman/ Marlborough	36	2%	2%
Canterbury	205	14%	13%
West Coast	17	1%	1%
Otago	78	5%	5%
Southland	23	2%	2%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

## B) By health and disability status

Identify as disabled	n= (unweighted)	% (unweighted)	% (weighted)
Yes	335	22%	23%
No	1,170	78%	77%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Live with impairments or long-term health conditions	n= (unweighted)	% (unweighted)	% (weighted)
Yes	575	38%	39%
No	930	62%	62%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

## C) By number of people in the household

Respondents in household	n= (unweighted)	% (unweighted)	% (weighted)
1	279	19%	18%
2	777	52%	52%
3 or 4	364	24%	25%
5 or more	85	6%	5%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Children in household	n= (unweighted)	% (unweighted)	% (weighted)
1	220	15%	15%
2	192	13%	13%
3 or 4	89	6%	6%
5 or more	21	1%	2%
None	983	65%	65%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

Total in household	n= (unweighted)	% (unweighted)	% (weighted)
1	242	16%	16%
2	527	35%	34%
3	257	17%	18%
4	242	16%	16%
5 or 6	164	11%	11%
7 or more	73	5%	5%
<b>Total</b>	<b>1,505</b>	<b>100%</b>	<b>100%</b>

## APPENDIX – STATISTICAL TESTING

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### Behavioural questions

Statistical testing has been confined to behavioural questions: past behaviours and future intentions.

One-way ANOVA was performed to compare the effect of age, gender, ethnicity, educational qualifications and number of COVID-19 vaccines on past behaviours and future intentions. t-testing was used where the demographic criteria were binary and, as a result, it was inappropriate to use ANOVA.

Where ANOVA showed a statistically significant difference between at least two groups, Tukey-Kramer post hoc tests for each pair in the analysis were used to identify the group pairs where differences were significant, with t-tests (with Bonferroni correction for p) also used where it was deemed appropriate to confirm Tukey-Kramer results.

Scientific notation is used for p values.

### Age

#### Past behaviours on public transport

One-way ANOVA analysis and post hoc Tukey-Kramer tests indicated that there was a statistically significant difference in at least two age groups for all of the following questions on mask wearing on public transport during the past 2 weeks. This difference is primarily between 18-24 year olds and 25-34 year olds, paired with all other age groups; note that when 18-24 years and 25-34 years are paired, the Tukey-Kramer calculation for that pair shows that they are not statistically different:

- **Q12: In the past 2 weeks, how often did you wear a mask on a bus?** [F(6,1498) = 14.0638, p = 1.25337E-15]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or over.
  - 25-34 years and 35-44 years.
  - 25-34 years and 45-54 years.
  - 25-34 years and 55-64 years.
  - 25-34 years and 65-74 years.
  - 25-34 years and 75 years or over.
- **Q12.1: In the past 2 weeks, how often did you wear a mask on a train?** [F(6,1498) = 14.0976, p = 1.1439E-15]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or over.
  - 25-34 years and 35-44 years.
  - 25-34 years and 45-54 years.
  - 25-34 years and 55-64 years.
  - 25-34 years and 65-74 years.
  - 25-34 years and 75 years or over.

- **Q12.2: In the past 2 weeks, how often did you wear a mask on a ferry?** [F(6,1498) = 15.4114, p = 3.26168E-17]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - 18-24 years and 35-44 years
  - 18-24 years and 45-54 years
  - 18-24 years and 55-64 years
  - 18-24 years and 75 years or over
  - 25-34 years and 35-44 years
  - 25-34 years and 45-54 years
  - 25-34 years and 55-64 years
  - 25-34 years and 65-74 years
  - 25-34 years and 75 years or over
- **Q12.3: In the past 2 weeks, how often did you wear a mask on a 'plane?** [F(6,1498) = 14.058, p = 1.27343E-15]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or over.
  - 25-34 years and 35-44 years.
  - 25-34 years and 45-54 years.
  - 25-34 years and 55-64 years.
  - 25-34 years and 65-74 years.
  - 25-34 years and 75 years or over.
- **Q12.4: In the past 2 weeks, how often did you wear a mask in a Taxi/Uber?** [F(6,1498) = 12.5718, p = 0]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or over.
  - 25-34 years and 35-44 years.
  - 25-34 years and 45-54 years.
  - 25-34 years and 55-64 years.
  - 25-34 years and 65-74 years.
  - 25-34 years and 75 years or over.

### Past behaviours – Attending events and mask wearing at indoor events

One-way ANOVA analysis indicated that there was a statistically significant difference between at least two age groups for the following questions on attendance at large events in the past 2 weeks, but not for mask wearing at large indoor events:

- **Q13: In the past 2 weeks, how many large indoor events (more than 50 people) did you attend?** [F(6,1498) = 9.7739, p = 0]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 25-34 years.
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or over.
- **Q13.1: In the past 2 weeks, how many large outdoor events (more than 50 people) did you attend?** [F(6,1498) = 10.347, p = 0]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 35-44 years.

- 18-24 years and 45-54 years.
- 18-24 years and 55-64 years.
- 18-24 years and 65-74 years.
- 18-24 years and 75 years or over.
- 25-34 years and 45-54 years.
- 25-34 years and 65-74 years.
- 25-34 years and 75 years or over.

## Future behaviours

One-way ANOVA analysis indicated that there was a statistically significant difference in mean intention between at least two age groups for the following questions:

- **Q20: If you have COVID-19 symptoms in the future, will you take a Rapid Antigen Test?** [F(6,1498) = 7.6403, p = 4.24E-08]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 45-54 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or more.
  - 55-64 years and 75 years or more.
- **Q21: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you report your test result?** [F(6,1498) = 3.5780, p = 1.59E-03]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 75 years or more.
  - 55-64 years and 75 years or more.
- **Q22: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)?** [F(6,1498) = 5.51436, p = 1.16119E-05]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or more.
- **Q23: If you have symptoms of COVID-19 in the future, will you leave home and go to work?** [F(6,1498) = 29.4894, p = 1.55144E-33]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or more.
  - 45-54 years and 75 years or more.
  - 55-64 years and 65-74 years.
  - 55-64 years and 75 years or more.
- **Q24: If you have symptoms of COVID-19, will you attend events with many people?** [F(6,1498) = 27.7078, p = 1.68056E-31]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 35-44 years.
  - 18-24 years and 45-54 years.
  - 18-24 years and 55-64 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or more.
  - 45-54 years and 75 years or more.
- **Q25: The next time you are on public transport will you wear a mask?** [F(6,1498) = 5.5550, p = 1.04476E-05]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - 18-24 years and 45-54 years.
  - 18-24 years and 65-74 years.
  - 18-24 years and 75 years or more.

## Gender

### **Past behaviours on public transport**

One-way ANOVA analysis and post hoc Tukey-Kramer tests indicated that there was a statistically significant difference between male and female groups for all of the following questions on mask wearing on public transport during the past 2 weeks:

- **Q12: In the past 2 weeks, how often did you wear a mask on a bus?** [F(2,1502) = 8.1083, p = 0.000314].
- **Q12.1: In the past 2 weeks, how often did you wear a mask on a train?** [F(2,1502) = 5.7589, p = 0.003225].
- **Q12.2: In the past 2 weeks, how often did you wear a mask on a ferry?** [F(2,1502) = 6.0805, p = 0.002344].
- **Q12.3: In the past 2 weeks, how often did you wear a mask on a 'plane?** [F(2,1502) = 6.0335, p = 0.002456].
- **Q12.4: In the past 2 weeks, how often did you wear a mask in a Taxi/Uber?** [F(2,1502) = 5.1613, p = 0.005837].

### **Past behaviours – Attending events and mask wearing at indoor events**

One-way ANOVA analysis indicated that there were no statistically significant differences between the gender groups for the questions on attendance at large events in the past 2 weeks, nor for mask wearing at large indoor events.

### **Future behaviours**

One-way ANOVA analysis indicated that there was a statistically significant difference in mean intention between at least two age groups for the following questions. All other question had no statistically significant differences:

- **Q22: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)?** [F(2,1502) = 9.0791, p = 0.00012]. Tukey-Kramer post hoc test for multiple comparisons found that the following pair was significantly different:
  - Male and Female.
- **Q24: If you have symptoms of COVID-19, will you attend events with many people?** [F(2,1502) = 5.3976, p = 0.004616]. Tukey-Kramer post hoc test for multiple comparisons found that the following pair was significantly different:
  - Male and Female.
- **Q25: The next time you are on public transport will you wear a mask?** ANOVA for this question indicated a statistically significant difference in mean intention between at least two gender groups for this question [F(2,1502) = 4.0084, p = 0.18356], but both the Tukey-Kramer post hoc test for multiple comparisons and the post hoc t-test (with Bonferroni correction for p) showed no significant differences in any of the pairs. The pair that was closest to the critical value was “Male and Gender diverse/non-binary”.

## Ethnic Priority

### **Past behaviours on public transport**

One-way ANOVA analysis indicated that there was a statistically significant difference in mean intention between at least two ethnic priority groups for the following questions on mask wearing on public transport during the past 2 weeks. The question “*In the past two*”



weeks, how often did you wear a mask on a ‘plane’” had no statistically significant differences among ethnic groups:

- **Q12: In the past 2 weeks, how often did you wear a mask on a bus?** [F(4,1500) = 2.4849, p = 0.041908]. The Tukey-Kramer post hoc test for multiple comparisons did not identify any pairs that were significant, but indicated a pair for further investigation with a t-test. The t-test found that the following pair was significantly different:
  - Asian and European.
- **Q12.1: In the past 2 weeks, how often did you wear a mask on a train?** F(4,1500) = 2.4849, p = 0.041908]. The Tukey-Kramer post hoc test for multiple comparisons did not identify any pairs that were significant, but indicated a pair for further investigation with a post hoc t-test. The t-test found that the following pair was significantly different:
  - Asian and European [“Asian” (m = 4.8692, sd = 1.637325), “European” (m = 5.2578, sd = 1.627074), t(1137) = -2.3502, p = 0.018934].
- **Q12.2: In the past 2 weeks, how often did you wear a mask on a ferry?** [F(4,1500) = 3.02813, p = 0.016824]. The Tukey-Kramer post hoc test for multiple comparisons did not identify any pairs that were significant, but indicated two pair for further investigation with a post hoc t-test. The t-test found that both of the pairs were significantly different:
  - Māori and European [“Māori” (m = 5.0812, sd = 1.73014), “European” (m = 5.3527, sd = 1.58485), t(1301) = -2.4616, p = 0.013962].
  - Asian and European [“Asian” (m = 4.9346, sd = 1.706099), “European” (m = 5.3527, sd = 1.58485), t(1137) = -2.5787, p = 0.010041].
- **Q12.4: In the past 2 weeks, how often did you wear a mask in a Taxi/Uber?** [F(4,1500) = 2.60872, p = 0.034121]. Tukey-Kramer post hoc test for multiple comparisons found that the following pair was significantly different:
  - Asian and European.

### Past behaviours – Attending events and mask wearing at indoor events

One-way ANOVA analysis indicated that there was a statistically significant difference between at least two ethnic priority groups for the following questions on attendance at large events in the past 2 weeks, but not for mask wearing at large indoor events:

- **Q13: In the past 2 weeks, how many large indoor events (more than 50 people) did you attend?** [F(4,1500) = 4.52539, p = 0.001231]. Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Pasifika and Other.
  - Asian and Other.
- **Q13.1: In the past 2 weeks, how many large outdoor events (more than 50 people) did you attend?** [F(4,1500) = 9.234798, p = 2.26606E-07]. Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Māori and European
  - Asian and European.

### Future behaviours

One-way ANOVA analysis indicated that there was a statistically significant difference in mean intention between at least two ethnic priority groups for the following questions. All other questions had no statistically significant differences:

- **Q20: If you have COVID-19 symptoms in the future, will you take a Rapid Antigen Test?** [F(4,1500) = 5.9508, p = 9.46447E-05]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Māori and European.
  - Pasifika and European.
  - Asian and Other.

- **Q23: *If you have symptoms of COVID-19 in the future, will you leave home and go to work?*** [F(4,1500) = 5.0744, p = 0.015465]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pair was significantly different:
  - Māori and European.
- **Q24: *If you have symptoms of COVID-19, will you attend events with many people?*** [F(4,1500) = 4.9300, p = 0.00598]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Māori and European.
  - Pasifika and Asian.
  - Asian and European.
- **Q25: *The next time you are on public transport will you wear a mask?*** [F(4,1500) = 5.5144, p = 0.000209]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Pasifika and European.
  - Asian and Other.

### **Identify as disabled**

A two-tailed, two-sample t-test assuming equal variances was used to test for significant differences for the “Identify as disabled”/“Do not identify as disabled” groups.

### **Past behaviours on public transport**

The tests indicated a statistically significant difference in past behaviour on public transport between those who identified as disabled and those who did not for the following questions. All other past behaviour questions for mask wearing on public transport did not show a statistically significant difference:

- **Q12: *In the past two weeks, how often did you wear a mask on a bus?*** [“Identify as disabled” ( $m = 4.6925$ ,  $sd = 1.859859$ ), “Do not identify as disabled” ( $m = 4.9821$ ,  $sd = 1.731464$ ),  $t(1503) = -2.6534$ ,  $p = 0.008052$ ].
- **Q12.2: *In the past two weeks, how often did you wear a mask on a ferry?*** [“Identify as disabled” ( $m = 5.0806$ ,  $sd = 1.73449$ ), “Do not identify as disabled” ( $m = 5.3179$ ,  $sd = 1.60029$ ),  $t(1503) = -2.3484$ ,  $p = 0.018984$ ].

### **Past behaviours – Attending events and mask wearing at indoor events**

The tests did not indicate any statistically significant differences between those who identified as disabled and those who did not.

### **Future behaviours**

The tests indicated a statistically significant difference in mean intention between those who identified as disabled and those who did not for the following questions. All other questions did not show a statistically significant difference:

- **Q21: *If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you report your test result?*** [“Identify as disabled” ( $m = 4.2507$ ,  $sd = 1.2271$ ), “Do not identify as disabled” ( $m = 3.9051$ ,  $sd = 1.4040$ ),  $t(1503) = 4.081035$ ,  $p = 4.71909E-05$ ].
- **Q22: *If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)?*** [“Identify as disabled” ( $m = 4.4657$ ,  $sd = 1.0344$ ), “Do not identify as disabled” ( $m = 4.3205$ ,  $sd = 1.0765$ ),  $t(1503) = 2.194813$ ,  $p = 0.02833$ ].

- **Q25: The next time you are on public transport will you wear a mask?** [“Identify as disabled” ( $m = 3.6597$ ,  $sd = 1.4510$ ), “Do not identify as disabled” ( $m = 3.3316$ ,  $sd = 1.5765$ ),  $t(1503) = 3.416942$ ,  $p = 0.00065$ ].

### **Live with impairments or long term health conditions**

A two-tailed, two-sample t-test assuming equal variances was used to test for significant differences for the “Live with impairments or long-term health conditions”/“No impairments or long-term health conditions” groups.

#### **Past behaviours on public transport**

The tests indicated no statistically significant differences in past behaviours for all the questions on mask wearing when using public transport between those who said they were living with impairments or long term health conditions and those who said they were not.

#### **Past behaviours – Attending events and mask wearing at indoor events**

The tests indicated no statistically significant differences between those who said they were living with impairments or long term health conditions and those who said they were not, in attendance at large events in the past 2 weeks.

There was a significant difference between the two groups for mask wearing at large indoor events:

- **Q14: How often did you wear a mask at these large indoor events in the past 2 weeks?** [“Live with impairments or long-term health conditions” ( $m = 2.871$ ,  $sd = 1.630705$ ), “No impairments or long-term health conditions” ( $m = 2.4233$ ,  $sd = 1.584302$ ),  $t(593) = 3.2825$ ,  $p = 0.001089$ ].

#### **Future behaviours**

The tests indicated a statistically significant difference in mean intention between those who said they were living with impairments or long term health conditions and those who said they were not, for the following questions. All other questions did not show a statistically significant difference:

- **Q20: If you have COVID-19 symptoms in the future, will you take a Rapid Antigen Test?** [“Live with impairments or long-term health conditions” ( $m = 4.3183$ ,  $sd = 1.157281$ ), “No impairments or long-term health conditions” ( $m = 4.0194$ ,  $sd = 1.327709$ ),  $t(1503) = 4.4528$ ,  $p = 9.10033E-06$ ].
- **Q21: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you report your test result?** [“Live with impairments or long-term health conditions” ( $m = 4.2209$ ,  $sd = 1.243064$ ), “No impairments or long-term health conditions” ( $m = 3.8344$ ,  $sd = 1.429543$ ),  $t(1503) = 5.3511$ ,  $p = 1.00948E-07$ ].
- **Q22: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)** [“Live with impairments or long-term health conditions” ( $m = 4.5304$ ,  $sd = 0.926965$ ), “No impairments or long-term health conditions” ( $m = 4.243$ ,  $sd = 1.134202$ ),  $t(1503) = 5.1119$ ,  $p = 3.59811E-07$ ].
- **Q23: If you have symptoms of COVID-19 in the future, will you leave home and go to work?** [“Live with impairments or long-term health conditions” ( $m = 1.9026$ ,  $sd = 1.280071$ ), “No impairments or long-term health conditions” ( $m = 2.0882$ ,  $sd = 1.287837$ ),  $t(1503) = -2.7223$ ,  $p = 0.006558$ ].

- **Q25: The next time you are on public transport will you wear a mask?** [“Live with impairments or long-term health conditions” ( $m = 3.7252$ ,  $sd = 1.458236$ ), “No impairments or long-term health conditions” ( $m = 3.2065$ ,  $sd = 1.580411$ ),  $t(1503) = 6.3709$ ,  $p = 0$ ]

There was no statistically significant difference between the two groups for **Q24: If you have symptoms of COVID-19, will you attend events with many people?**

### Healthcare worker

A two-tailed, two-sample t-test assuming equal variances was used to test for significant differences for the “Healthcare worker”/“Not a healthcare worker” groups.

### **Past behaviours on public transport**

The tests indicated statistically significant differences in past behaviours between those who identified as disabled and those who did not for all the questions on mask wearing when using public transport:

- **Q12: In the past two weeks, how often did you wear a mask on a bus?** [“Healthcare worker” ( $m = 4.4717$ ,  $sd = 1.923699$ ), “Not a healthcare worker” ( $m = 4.9907$ ,  $sd = 1.726655$ ),  $t(1503) = -3.9897$ ,  $p = 6.9327E-05$ ].
- **Q12.1: In the past two weeks, how often did you wear a mask on a train?** [“Healthcare worker” ( $m = 4.7594$ ,  $sd = 1.855862$ ), “Not a healthcare worker” ( $m = 5.249$ ,  $sd = 1.611638$ ),  $t(1503) = -4.0092$ ,  $p = 0.000064$ ].
- **Q12.2: In the past two weeks, how often did you wear a mask on a ferry?** [“Healthcare worker” ( $m = 4.9481$ ,  $sd = 1.755734$ ), “Not a healthcare worker” ( $m = 5.3171$ ,  $sd = 1.607354$ ),  $t(1503) = -3.0569$ ,  $p = 0.002276$ ].
- **Q12.3: In the past two weeks, how often did you wear a mask on a plane?** [“Healthcare worker” ( $m = 4.8491$ ,  $sd = 1.780848$ ), “Not a healthcare worker” ( $m = 5.2552$ ,  $sd = 1.586948$ ),  $t(1503) = -3.3929$ ,  $p = 0.000709$ ].
- **Q12.4: In the past two weeks, how often did you wear a mask in a Taxi/Uber?** [“Healthcare worker” ( $m = 4.7358$ ,  $sd = 1.799431$ ), “Not a healthcare worker” ( $m = 5.1245$ ,  $sd = 1.679173$ ),  $t(1503) = -3.0918$ ,  $p = 0.002026$ ].

**It is likely that these differences are related to public transport use rather than mask wearing on the forms of public transport used.**

### **Past behaviours – Attending events and mask wearing at indoor events**

The tests indicated statistically significant differences between healthcare workers and those who were not healthcare workers in attendance at large events in the past 2 weeks, but not in mask wearing at large indoor events:

- **Q13: In the past 2 weeks, how many large indoor events (more than 50 people) did you attend?** [“Healthcare worker” ( $m = 2.184$ ,  $sd = 1.880085$ ), “Not a healthcare worker” ( $m = 1.8043$ ,  $sd = 1.530772$ ),  $t(1503) = 3.2335$ ,  $p = 0.001249$ ].
- **Q13.1: In the past 2 weeks, how many large outdoor events (more than 50 people) did you attend?** [“Healthcare worker” ( $m = 1.8349$ ,  $sd = 1.735088$ ), “Not a healthcare worker” ( $m = 1.4261$ ,  $sd = 1.299022$ ),  $t(1503) = 4.0307$ ,  $p = 0.000058$ ].

### **Future behaviours**

The tests indicated a statistically significant difference in intention between those who said they were healthcare workers and those who said they were not, for the following questions. All other questions did not show a statistically significant difference:

- **Q23: If you have symptoms of COVID-19 in the future, will you leave home and go to work?** ["Healthcare worker" ( $m = 2.3019$ ,  $sd = 1.435302$ ), "Not a healthcare worker" ( $m = 1.9706$ ,  $sd = 1.256218$ ),  $t(1503) = 3.485$ ,  $p = 0.000506$ ].
- **Q24: If you have symptoms of COVID-19, will you attend events with many people?** ["Healthcare worker" ( $m = 2.0283$ ,  $sd = 1.410573$ ), "Not a healthcare worker" ( $m = 1.6125$ ,  $sd = 0.983957$ ),  $t(1503) = 5.3221$ ,  $p = 0$ ].
- **Q25: The next time you are on public transport will you wear a mask?** ["Healthcare worker" ( $m = 3.6509$ ,  $sd = 1.483191$ ), "Not a healthcare worker" ( $m = 3.3643$ ,  $sd = 1.563276$ ),  $t(1503) = 2.4924$ ,  $p = 0.012795$ ].

## Te Whatu Ora Regions

### Past behaviours on public transport

One-way ANOVA analysis indicated that there were no statistically significant differences between the four Te Whatu Ora regions for all of the questions on mask wearing on public transport during the past 2 weeks.

### Past behaviours – Attending events and mask wearing at indoor events

One-way ANOVA analysis indicated that there were no statistically significant difference between the four Te Whatu Ora regions for the questions on attendance at large events in the past 2 weeks, nor for mask wearing at large indoor events.

### Future behaviours

One-way ANOVA analysis indicated that there was a statistically significant difference in mean intention between at least two of the four Te Whatu Ora regions for the following questions. All other questions had no statistically significant differences:

- **Q21: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you report your test result?** [ $F(3,1501) = 3.6444$ ,  $p = 0.012295$ ]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were statistically significantly different:
  - Northern and Central.
  - Te Manawa Taki (Midland) and Central.

Note that the pair Northern and Te Manawa Taki (Midland) was not statistically different.

- **Q22: If you test positive for COVID-19 in the future using a Rapid Antigen Test, will you self-isolate for the recommended period (currently 7 days)?** [ $F(3,1501) = 2.6454$ ,  $p = 0.04774$ ]. The Tukey-Kramer post hoc test for multiple comparisons did not identify any pairs that were significant, but indicated two pairs for further investigation with a post hoc t-test. The t-test found that both of the following pairs were statistically significantly different:
  - Northern and Central ["Northern" ( $m = 4.2892$ ,  $sd = 1.117555$ ), "Central" ( $m = 4.4600$ ,  $sd = 0.97965$ ),  $t(884) = -2.3334$ ,  $p = 0.01985$ ].
  - Te Manawa Taki (Midland) and Central ["Te Manawa Taki (Midland)" ( $m = 4.2674$ ,  $sd = 1.11332$ ), "Central" ( $m = 4.46$ ,  $sd = 0.97965$ ),  $t(606) = -2.2598$ ,  $p = 0.024187$ ].
- **Q24: If you have symptoms of COVID-19, will you attend events with many people?** [ $F(3,1501) = 4.3528$ ,  $p = 0.004623$ ]. A Tukey-Kramer post hoc test for multiple comparisons found that the following pairs were significantly different:
  - Te Manawa Taki (Midland) and Southern.
  - Central and Southern.

## Linear trends – page 8

Values for  $r^2$ ,  $r$  and  $p$  were calculated for each linear trend shown in table 6 on page 8 of this report.  $\alpha=0.05$ .

Note that the relationship between the number of vaccine doses and behaviours is unlikely to be causal, but may be reflective of an underlying attitude (currently unidentified).

<b>Table 6A: Survey measures: Comparison of those with different numbers of COVID-19 vaccinations</b>			
<b>Analysis of linear trend</b>			
<b>Survey measures</b>	<b><math>r^2</math></b>	<b><math>r</math></b>	<b><math>p</math></b>
<b>Behaviour in the past 2 weeks</b>			
Always wore a mask on bus trips	0.9701	0.9849	0.0151
Always wore a mask on train trips	0.9597	0.9796	0.0204
Always wore a mask on planes	0.9240	0.9612	0.0388
Always wore a mask on taxi/Uber trips	0.9918	0.9959	0.0041
Always wore a mask at large indoor events	0.9095	0.9537	0.0463
<b>Future behaviour intentions</b>			
<u>Very likely</u> to take a Rapid Antigen Test if you have COVID-19 symptoms in the future	0.9737	0.9867	0.0133
<u>Very likely</u> to report your test result if you test positive for COVID-19 in the future using a Rapid Antigen Test	0.9837	0.9918	0.0082
<u>Very likely</u> to self-isolate for the recommended period (currently 7 days) if you test positive for COVID-19 in the future using a Rapid Antigen Test	0.9815	0.9907	0.0093
<u>Very likely</u> to leave home and go to work if you have symptoms of COVID-19 in the future *	0.8159	0.9033	0.0967
<u>Very likely</u> to attend events with many people if you have symptoms of COVID-19 *	0.7256	0.8518	0.1482
<u>Very likely</u> to wear a mask the next time you are on public transport	0.9968	0.9984	0.0016

\* These are not statistically significant results for  $\alpha=0.05$ . As shown below:

- Analysis of “Very unlikely to leave home and go to work if you have symptoms of COVID-19 in the future” shows statistical significance for  $\alpha=0.055$ .
- Analysis of “Very unlikely to attend events with many people if you have symptoms of COVID-19” shows a statistically significant result for  $\alpha=0.05$ :

<b>Survey measures</b>	<b><math>r^2</math></b>	<b><math>r</math></b>	<b><math>p</math></b>
<b>Future behaviour intentions</b>			
<u>Very unlikely</u> to leave home and go to work if you have symptoms of COVID-19 in the future	0.9003	0.9488	0.0512
<u>Very unlikely</u> to attend events with many people if you have symptoms of COVID-19	0.9704	0.9851	0.0149