

# Empty waiting rooms: the New Zealand general practice experience with telehealth during the COVID-19 pandemic

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## ABSTRACT

**AIM:** The primary care response to the coronavirus disease 2019 (COVID-19) pandemic in early 2020 required significant changes to the delivery of healthcare by general practices. This study explores the experiences of New Zealand general practice teams in their use of telehealth during the early stages of the COVID-19 pandemic in New Zealand.

**METHOD:** We qualitatively analysed a subtheme on telehealth of the General Practice Pandemic Experience New Zealand (GPPENZ) study, where general practice team members across the country were invited to participate in five surveys between 8 May 2020 to 27 August 2020.

**RESULTS:** 164 participants enrolled in the study during survey one, with 78 (48%) completing all surveys. Five telehealth themes were identified: benefits, limitations, paying for consults, changes over time and plans for future use. Benefits included rapid triage, convenience and efficiency, and limitations included financial and technical barriers for practices and patients and concerns about clinical risk. Respondents rapidly returned to in-person consultations and wanted clarification of conditions suited to telehealth, better infrastructure and funding.

**CONCLUSION:** To equitably sustain telehealth use, the following are required: adequate funding, training, processes communicated to patients, improved patient access to technology and technological literacy, virtual physical examination methods and integration with existing primary health care services.

The primary care response to the coronavirus disease 2019 (COVID-19) pandemic in early 2020 required significant changes by general practices throughout New Zealand. A major part of this change was the swift move to telehealth consultations, replacing a large proportion of in-person consultations.

A switch to virtual consulting was recommended by the Royal New Zealand College of General Practitioners (RNZCGP)<sup>1</sup> just days before the government announcement of the country moving to Alert Level 4 (lockdown) on 25 March 2020 due to increasing community transmission of COVID-19.<sup>2</sup> Telehealth has been described as the provision

of remote healthcare through use of telecommunication devices, such as phones and smart-phones, sometimes containing video.<sup>3</sup> Over 48 hours, many practices rapidly adopted telehealth consultations, managing people virtually at home where possible, to reduce the transmission of COVID-19 within healthcare centres.<sup>1,4</sup> A single-practice retrospective audit from Dunedin, New Zealand, during the first two weeks of Alert Level 4 lockdown found an increase in virtual consultations, to 79% from 30% in the same two-week period the year prior, with a five-fold increase in phone consultations.<sup>5</sup>

Current literature on telehealth use in COVID-19 consists largely of opinion pieces

or single-institution findings.<sup>6,7</sup> However, qualitative interview findings from a large group of Finnish general practitioners explored the telehealth experience under person-centred care.<sup>8</sup> Importantly, a New Zealand study exploring patient experiences during COVID-19, including their experience of telehealth through an online survey and focus groups, provides a complementary insight into telehealth during this time.<sup>9</sup> No published New Zealand data have as yet qualitatively explored the impact of this swift change to telemedicine on primary care practice teams. This is the first qualitative analysis of the experience of telehealth from a large group of primary healthcare professionals throughout a country's health system.

## Methods

General practitioners (GP), nurse practitioners (NP), practice nurses (N) and practice managers (P) were invited to participate in the General Practice Pandemic Experience New Zealand (GPPENZ) study, which followed the same group of participants through a series of five online surveys from 8 May 2020 to 27 August 2020 (Figure 1). The invitation was distributed widely through the RNZCGP, New Zealand Nurses Organisation (NZNO), primary health organisations (PHOs), peer groups and medical and social media. Recruitment was also targeted through Māori, Pasifika and rural medical organi-

sations to encourage representation from these groups.

The surveys were designed using Qualtrics<sup>SM</sup> software.<sup>10</sup> The surveys consisted of open-ended questions allowing for free-text responses about participants' experiences during the COVID-19 pandemic in New Zealand. Questions requiring numerical answers were also included to explore the extent to which telehealth was used. The surveys explored participants' personal and professional experiences of the pandemic and included prompts about changes to the delivery of patient care, use of telehealth, challenges, innovations, personal and professional supports, health and safety preparedness for staff and patients, staff wellbeing and business and financial aspects.

Participant textual responses and comments were extracted from Qualtrics<sup>10</sup> and analysed using NVivo as a coding framework.<sup>11</sup> A team of researchers (GW, SB, AD, BS and AH) conducted the analysis of the data using simple descriptive statistics and a thematic analysis within a constant comparative approach.<sup>12</sup> First the responses were read in their entirety to develop a structured framework and identify emerging themes. This was conducted in multiple rounds with independent coding of themes by the researchers and final blinded input by AD until all coders were satisfied with each code definition. A codebook was developed. For this paper, telehealth content was specif-

**Figure 1:** Timeline of General Practice Pandemic Experience New Zealand (GPPENZ) study 2020.



ically coded for by GW and BS (with each peer-reviewing the other's coding). The primary analysis for this paper consisted of questions directly related to telehealth (see *Appendix*), and further secondary analysis was performed where telehealth was coded for in more general survey questions. A framework for analysis was developed by GW, SB and TD, who also conducted a thematic content analysis drawn from the relevant codes. This analysis was reviewed by the authors.

Ethical approval was obtained from The University of Otago Human Ethics Committee (reference number D10/114).

## Results

Participant characteristics and demographics from survey one is shown in Table 1. There was consistent participation from all occupations over the five surveys. Participants from practices in Canterbury were over-represented in the sample, at 37.8% of survey one. Responses were received from throughout New Zealand from participants affiliated with 80% of all PHOs.<sup>13</sup>

We defined five major telehealth themes: benefits, limitations, paying for telehealth consultations, changes over time and perceived future use. Excerpts from survey responses are identified by the discipline of the respondent and an index number (eg, 'GP80' is the eightieth general practitioner).

### Key benefits of telehealth during COVID-19

The aim and key benefit of the swift change to virtual consultations forced by the lockdown was to ensure that practices were able to keep providing healthcare while reducing the spread of illness through avoiding in-person contact, especially in waiting rooms. Some were already well prepared to offer telehealth options; GP80 commented that "we have been using phone, email and text for many years." Others were taken by surprise and scrambled to get appropriate systems and equipment in place.

Although the speed and urgency of the transition was stressful for some, there was early recognition of the benefits for both practices and patients. Triageing all patients became standard practice, further increasing the number that could be

managed virtually and identifying those who needed in-person consultations. Telehealth permitted staff in some practices to take turns working from home to minimise infection risk. Use of patient portals increased, with one practice reporting around 1,000 new patients joining up. People who were well connected electronically and younger populations "embraced the technology" (N19) and were able to benefit most:

*"Most people have no issues. The majority of our patient population fortunately have access to suitable technology." (GP35)*

Convenience, saving time and the lack of transport costs were also advantages for rural people and those with work or family commitments:

*"There is definitely a cohort of patients who love this model due to being rural and the vast distances needed to travel... It most certainly has a place in delivering patient care." (P6)*

Respondents also mentioned specific presenting issues that could be discussed remotely. Sending through photos of skin lesions or injuries was a notable success for some. Another benefit was the increased efficiency for following-up patients who were well known, including being "very useful for mental health issues especially when one can see the patients" (GP65).

Changes to previous health and social welfare processes supported telehealth, enabling a wider reach than would otherwise have been possible. Accident Compensation Corporation (ACC) and Work and Income (WINZ) reviews and nurse practitioner prescribing were all opened to telehealth rather than, as previously, being limited to in-person appointments:

*"[Previously] to Covid, restrictions around my prescribing practice included that I could only prescribe in face-to-face situations. This has been changed over Covid to support e-health options for consultations." (NP10)*

*"Telehealth was used proactively by practices to contact patients they were concerned about. Special efforts were made for 'patients*

**Table 1:** Participants.

	<b>Total (%)</b>
Survey 1	164
Survey 2	136 (82.9%)
Survey 3	118 (72%)
Survey 4	112 (68.3%)
Survey 5	91 (55.5%)
Completed all surveys (1–5)	78 (48%)
<b>Demographics</b>	
Mean age (SD, range)	49.9 (SD 10.65, 25–71)
Female	125 (76.2%)
<b>Ethnicity (total count*)</b>	
European	144 (87.8%)
Māori	9 (5.5%)
Pacific Peoples	5 (3.0%)
Asian	12 (7.3%)
MELAA	2 (1.2%)
<b>Occupation</b>	
General practitioner	93 (56.7%)
Practice nurse	38 (23.2%)
Nurse practitioner	11 (6.7%)
Practice manager	18 (11%)
Practice manager and nurse (dual role)	4 (2.4%)
<b>Type of practice<sup>#</sup></b>	
Urban	115 (70.1%)
Rural	34 (20.7%)
Other (eg, mixed)	14 (8.5%)
<b>Practice size</b>	
Full time equivalent GPs mean (range)	5.1 (0–20)
<b>Employment status</b>	
Employees	72 (43.9%)
Owner or partner	45 (27.4%)
Contractor	28 (17.1%)
Other	9 (5.5%)

\* Total count of ethnicities will be greater than the number of respondents because one person can identify as belonging to multiple ethnicities.

# Consistent with RNZCGP national GP workforce data.<sup>14</sup>

MELAA = Middle Eastern/Latin American/African.

*with complex, chronic conditions to develop tailored plans with them and their whānau and ensure their medical needs were catered for and that there was a plan in place’.*” (GP32)

Telehealth was used in specific healthcare initiatives for Māori, with one practice proactively contacting Māori through their marae clinic:

*“We texted all our marae clinic patients to advise how they could access healthcare. We set up a closed [Facebook] group to communicate with marae clinic patients.”* (P3)

Another advantage of telehealth for Māori was that family groups could participate from home:

*“Māori have used telehealth frequently as enabled whānau participation in their own whare.”* (N10)

### The limitations of telehealth

The financial and technical barriers to telehealth were perceived as a major limitation by many respondents. Many practices reported patients who could not ring for an appointment or access messages. There were reports of patients sharing phones with others, or only being contactable through social media:

*“Many have no data and cannot use virtual care. Many others change phone numbers or have no credit so cannot access texts or messages.”* (GP1)

There were difficulties with slow internet, poor sound or picture quality, incorrect phone numbers and calls that went unanswered at the time the practice had arranged to call:

*“Around 50% have poor quality internet or devices, and/or difficulties using (eg, no sound or picture). Consultations slow and very limited.”* (GP51)

Technical issues were not confined to patients; practices everywhere had technical issues, with cameras and other equipment being in short supply, systems that were not enabled for video calling and systems that would not link-up to work together. Rural areas had generally poor infrastructure for

both internet and cell phone connections and so presented equal difficulties for both practices and patients:

*“Due to being rural and some of our patients not having great internet or cellphone coverage (or none), getting in contact with patients at the time of their scheduled call has proved a challenge. We have sometimes had to make multiple calls to get in contact.”* (P6)

Additionally, certain patient groups were reported as being excluded from using telehealth successfully. Many older people did not have smartphones or internet connections, and it was unsuitable for patients with cognitive impairment, hearing difficulties and those with limited English:

*“...very difficult to understand accents etc over the phone... [a] lack of body language in these patients who often have poor health literacy makes this very difficult...”* (GP5)

Respondents reported that some patients across all age ranges asked for in-person consultations for greater confidentiality, a better feeling of rapport or being able to express themselves more coherently.

There were numerous concerns about the clinical risk of not seeing patients in person. Video calling was described as being “a poor substitute for face-to-face clinical examination” (GP8). There was a “fear of missing something that might have been picked up at in person visit” (GP20) and it was “difficult to assess severity without pulse and temp checks” (GP83). Virtual consultations were also said to have a “lack of rapport... particularly difficult for patients with language barriers” (GP76) and patients who were new or not well known. Others noted that, even though telehealth was promoted for its time saving and convenience, it was “inefficient if patient subsequently needs to be seen” (GP20). Moreover, some issues would always need to be addressed in person:

*“A lot of screening cannot be done over the phone (eg, smears, vaginal examinations, blood pressure, diabetes foot examination, before school check, proper cardiovascular checks, plus various acute assessments, cancer assessments).”* (GP89)

## Paying for telehealth

Patients who benefitted the most from not having to take time off work or travel long distances were reported to pay readily and promptly for the greater convenience and efficient use of their time:

*“We had little objection to paying for telehealth and we are actively trying to promote this method of delivering healthcare as it allows both patient and healthcare worker more flexibility. Last week I had two consults with patients on their long commute to work!” (GP47)*

However, there were also many comments about patient resistance to paying for telehealth consultations. Respondents reported that telehealth appeared to be viewed as an inferior form of appointment and that some patients didn't understand “the time and level of care that a health professional can take to deal with a patient's health” (N7). Telehealth appeared to be viewed as an inferior form of appointment:

*“Patients are complaining and refusing to pay for telephone consults as they feel they should only have to pay if they see the doctor face to face. There seems to be an expectation that telephone consults are the same as Dr triage and should be free even if they are a full consult.” (GP4)*

Practices learned quickly that it was necessary to give a clear explanation about payment before the appointment and make payment easy:

*“We noticed early on patients complaining about paying for telehealth services, and so now the reception team explains every booking that there is the same costs as a face-to-face consult, so there is no confusion or surprise.” (GP80)*

Nonetheless, there were complications in certain situations. The same patients who had no internet access were unable to pay by online banking. Charging for email exchanges with patients was also difficult to standardise:

*“I find it really hard to charge for email questions and that can take up a lot of time—the work required varies so much it is hard to have a*

*standard fee. A simple question can lead down an email trail and it is hard to know when to mention a fee.” (GP7)*

Another issue arose when an in-person visit was needed after a telehealth appointment. There was a perceived level of resistance from patients to pay for both:

*“A problem though if in fact they need to come in after the telephone consult. Do we charge twice?” (GP62)*

## Changes in use of telehealth over time during the pandemic

Respondents reported a decline in the proportion of consultations conducted by telehealth between survey two and survey three, corresponding with the change from COVID-19 Alert Level 2 to 1.<sup>2</sup> There was no subsequent change in proportion during survey four. There was a strong feeling from respondents that they needed to catch-up on concerns that patients had put on hold because they wanted to discuss them in person:

*“...rebound effect—things that could have waited during Level 4 but now have become more urgent for in-person consult.” (GP72)*

Moreover, as respondents pointed out, the ability to undertake telehealth work had initially been aided by having good data on patients:

*“We were able to manage most things remotely precisely because we have high-quality data on our patients—most had up-to-date BP, height, weight and bloods, so it was not hard to make do for three months. Now we are having to update those for patients, so that when there is a recurrence of COVID in the community we will be able to do it again.” (GP63)*

Apart from these purely clinical considerations, some respondents reported that they tended to prefer seeing patients in person and believed many patients felt the same way, as “face-to-face appointments are in demand” (GP54). One GP succinctly remarked:

*“People crave human contact. Don't you? Never underestimate its value.” (GP81)*

Nevertheless, there was a generally positive expectation that telehealth would have a place in the future as a “useful tool in the toolbox” (GP87).

### Perceived future use of telehealth

Most respondents agreed that telehealth had proved its usefulness, and that over time it would become a normal component in the primary care model. Its greater flexibility and convenience were considered a major driving factor:

*“It is going to be a permanent part of our practice moving forward, as the general feedback from patients has been that they like the accessibility of it, and the lesser time it takes, instead of waiting in a GP waiting room.”*  
(N18)

However, comments showed that, to consolidate and enhance the benefits that telehealth demonstrated, further changes would be necessary. Firstly, practices needed to clarify exactly what they offered via telehealth, so that “patients have a better understanding of what can be done” (GP50). These included:

*“...non-acute consultations that do not require physical examination, point-of-care testing, etc... telehealth will eventually become the norm.”* (NP8)

Secondly, better infrastructure, more reliable technology for practices and improved access for patients was needed before telehealth could be implemented equitably:

*“There is a place for this, but better technology is needed and better support for when problems happen—for example, [the telecommunications provider] lost our connection and we had no phones for three days!”* (N27)

Thirdly, the additional costs to practices of implementing telehealth options needed to be adequately recognised by funders:

*“We would need built in funded cameras and video software funded by the DHB/PHO.”* (GP16)

*“Funding grant for improved IT, video consulting and patient portals.”*  
(GP62)

Finally, having telehealth capability available was an important part of being pandemic ready:

*“We are also preparing for the next wave of COVID so needed to keep the expectation that some consults would be via phone.”* (N20)

## Discussion

Based on a nationwide sample, this paper describes the experiences of general practice teams in New Zealand who used telehealth as an emergency response tool during the COVID-19 pandemic to provide healthcare while minimising the potential spread of infection.

Telehealth consultations were reported as being most successful where there was a pre-existing relationship between healthcare provider and patient, which was also found in a New Zealand patient experience study performed at a similar time during early stages of the pandemic.<sup>9</sup> Another finding that parallels that study is the need for healthcare providers to clearly communicate to their patients the process and cost of telehealth.<sup>9</sup> Many similar barriers were highlighted by patients, including technological challenges, communication difficulties for those with hearing impairments, concern regarding the cost and difficulty in making online payments.<sup>9</sup>

The experience described through this study is consistent with other international work showing that telehealth risks increasing inequity.<sup>15,16</sup> Potential healthcare benefits of telehealth can be seen in those who are already well connected to technology; however, it can create extra barriers for those who are already disadvantaged, such as those in rural areas, those with hearing impairment or cognitive decline and refugee and migrant populations who may have language barriers.

Ultimately, despite initially high optimism from general practice teams about the ongoing use of telehealth, when COVID-19 Alert Level restrictions eased, we found its use fell rapidly. The rapid move back to in-person care and ‘business as usual’ was felt by the GP teams to be driven by patient choice. So although telehealth may play an increasing role in the future, it is unlikely to fully replace in-person care. The cost of telehealth placed further financial stress on the business model of many of these practices during the COVID-19 pandemic. Additional

technology costs were largely borne by practices.

The strengths of this study include reporting from not only GP respondents, but also nurses, nurse practitioners and practice managers. We followed the same large group of participants through various stages of the initial COVID-19 pandemic in New Zealand and Alert Level changes from the end of lockdown. Limitations include data collection being largely by textual survey only. However, from a logistical viewpoint commencing during a pandemic lockdown with busy healthcare teams, this was deemed the most feasible. Although participant sampling was not stratified, we sought to have a variety of representation and geographical spread from throughout New Zealand.

COVID-19 has thrown into sharp focus the question of how telehealth can be further integrated into general practice models of healthcare. Recent literature has discussed key requirements for long-term sustainability of telehealth post COVID-19, through “(a) developing a skilled workforce; (b) empowering consumers; (c) reforming funding; (d) improving the digital ecosystems; and (e) integrating telehealth into routine care.”<sup>17</sup> Based on the findings of our study, we recommend the following:

- The effective use of telehealth depends on both individual practice and patient capabilities, and we recommend good communication with patients regarding expectations, processes and costs.

- Provision and enablers for telehealth need to be considered when primary healthcare funding is revised following the New Zealand Health and Disability System Review 2020.<sup>18</sup> This could include suitable funding to reduce barriers and innovative ways of improving patients’ access to technology and their technological literacy, especially for older patients and those with disabilities.<sup>19</sup>
- For practices, we suggest a focus on being technology ready and developing protocols and training in telehealth for the GP team to ensure quality. New methods of doing virtual physical examinations could be developed with a new vocabulary for this.
- For telehealth implementation to be most successful, we envisage integration of telehealth with existing primary care health services (aiding continuity of care and whanaungatanga (relationships)), beneficial sharing between networks and a strong emphasis on reducing inequity.

New Zealand general practices showed agility and adaptability in embracing telehealth during the initial stages of the COVID-19 pandemic. It is important to reflect on their experience and then ensure adequate funding and practice processes are in place so telehealth can not only be swiftly used in future pandemics, but also become an integral part of the model of care in everyday general practice.

## Appendix

### Primary qualitative analysis of telehealth survey questions

- What limitations have your patients experienced in the use of technology for telehealth?
- What place do you think telehealth will have in your practice for delivering patient care in the future?
- What is your impression of patients willingness to pay for telehealth services?
- Our recent survey responses have revealed low levels of ongoing use of telehealth since dropping down to Alert Level 1. Why do you think this has occurred?

### General GPPENZ survey questions for secondary analysis

Note: Those with \* not included in secondary analysis for this telehealth paper.

#### Survey 1

*Date: 8 May to 4 June 2020*

These questions relate to the last two months of the Covid-19 Pandemic in New Zealand.

- Can you describe how the Covid-19 pandemic has affected your feelings until now?\*
- What changes have you and your team made to how you practice in response to the Covid-19 pandemic?
- What opportunities have you experienced over this time?  
Including the use of virtual consultations and new technology.
- What challenges have you experienced over this time?
- What do you think has been successful so far?
- If you knew what you know now, what might you have done differently?\*
- Do you have any comments regarding the information you have received about Covid-19 and which sources you have found most reliable and useful?\*
- What has the practice you work in done to protect the health and wellbeing of staff? e.g. personal protective equipment (PPE), stress management, anxiety reduction.\*
- What effect has the Covid-19 pandemic had on staffing levels at your main practice?\*
- Do you have any comments on the overall health system response to the Covid-19 pandemic over the last few months?\*
- Do you have any further thoughts or comments?\*

#### Survey 2

*Date: 28 May to 18 June 2020*

These questions relate to the Covid-19 Pandemic in New Zealand.

- What are your impressions about non-Covid 19 related health conditions during this pandemic for your patients and your practice?
- What changes have you and your team made to support Māori, Pasifika and high health needs groups since the beginning of the Covid-19 pandemic?
- Have you had any significant events, incidents or near misses that have (or could have) caused harm to a patient, as a result of the Covid-19 pandemic?
- If yes, you can describe the event in the question below.  
Please describe any events:
- Since you completed the last GPPEC or GPPENZ survey, what changes have you and your team made to how you practice?  
Including changes associated with the move to Alert Level 2.
- What do you see are the issues for your practice as you move through the winter months?
- Do you have any further thoughts or comments?

**Survey 3***Date: 18 June to 9 July 2020*

These questions relate to Alert Level 1 during the Covid-19 Pandemic in New Zealand.

- Since the move to Alert Level 1, how have you been feeling about the Covid-19 pandemic?
- Since the move to Covid-19 Alert Level 1, what changes have you and your team made to how you practise?
- Please describe how respiratory and non-respiratory patients are currently streamed in your practice?
- Please include challenges this has posed.

These questions relate to the Covid-19 Pandemic in New Zealand.

- What changes have been made at your practice to the way prescriptions are managed, since the beginning of the Covid-19 pandemic until now?\*
- What experience have you and your patients had with access to and management from secondary care during the Covid-19 pandemic?
- What was the immediate and longer term financial impact of the Covid-19 pandemic on yourself and your practice?
- Do you have any further thoughts or comments?

**Survey 4***Date: 9th July to 30th July 2020*

These questions relate to the Covid-19 Pandemic in New Zealand.

- Do you have any comments about the personal and/or professional support you have received since the beginning of the Covid-19 pandemic? Please include whether it was helpful or not.
- What additional personal or professional support would you have liked to receive during the Covid-19 pandemic so far? \*
- In your patient interactions and consultations, what common issues have you observed about the financial effects of the Covid-19 pandemic on their healthcare?

These questions relate to the time since the move to Alert level 1 in the Covid-19 pandemic (12am 9th June 2020).

- Since Alert Level 1, what has the main practice you work in done to promote stress reduction or maintain psychological wellbeing for staff? \*
- Since the move to Alert level 1, do you have any comments regarding the clarity and consistency of information you have received, and which sources you have found the most useful? \*
- Now that we are in Alert Level 1, have staffing levels at your main practice returned to pre-Covid levels? If not, please comment on how it is different. \*

These questions relate to the change in Ministry of Health case definition for Covid-19 from Wednesday 24th June 2020.

- Since the most recent case definition change, what changes have you made to how you practice and access patient Covid-19 testing.
- Please include any challenges this has posed.
- Since the most recent case definition change, how are you managing patients with low risk respiratory illness, including any PPE you use?
- Do you have any further thoughts or comments?

## Survey 5

*Date: 6th August to 27th August 2020*

These questions relate to the Covid-19 Pandemic in New Zealand.

- From your experience during the Covid-19 pandemic, what learning, changes or innovations would you like to see embedded in future general practice, in your practice and or generally?
- Do you have any thoughts on if and how Māori, Pasifika and high needs health groups have been particularly affected over the last few months of the Covid-19 pandemic?
- In what ways have you and your team adapted to support Māori, Pasifika and high health needs groups since the beginning of the Covid-19 pandemic?
- Have you had any other significant events, incidents or near misses that have (or could have) caused harm to a patient, as a result of the Covid-19 pandemic?
- If yes, you can describe the event in the question below.  
Please describe any events:
- In the last month, have you been aware of any of your patients delaying seeking care, or presenting late due to the ongoing effects of the Covid-19 pandemic? If so, please describe further.
- How do you think the healthcare system should be organising surveillance testing for Covid-19 at this time (with no evidence of community transmission)? \*

These questions relate to a potential second wave of Covid-19 infections.

- In your main practice, do you feel adequately prepared for a potential second wave of Covid-19 community transmitted infections?
- If yes, how have you and your practice prepared?
- If 'maybe' or 'no', what do you feel you and your practice would need to do to be prepared?
- Have you considered and discussed as a practice how much PPE you would require to store for a potential second wave of Covid-19 infections? If so, please estimate this. \*
- What changes to General Practice funding would you like to see to help deal with a potential second wave of the Covid-19 pandemic?
- What do you believe the wider New Zealand healthcare system should be doing now to prepare for a second wave of Covid-19 in New Zealand?
- How concerned are you about a second lockdown as a consequence of uncontrolled community transmission of Covid-19, and the effect that a second lockdown would have on you, your practice and your patients? \*
- Do you have any further thoughts or comments? \*

**Competing interest:**

Nil.

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