

# Barriers to performing onsite COVID-19 testing during the second wave in Victoria

## *Experiences of general practices*

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### Background and objective

The approach to performing COVID-19 testing in general practice has been going through an evolution and is variable. The aim of this study was to determine what underlying factors, if any, impeded onsite COVID-19 testing in general practices for patients during the second wave of the pandemic in Victoria.

### Methods

This study was conducted during August 2020 and October 2020. Fourteen semi-structured interviews with general practitioners, practice nurses and practice managers were conducted.

### Results

Barriers to performing onsite testing for COVID-19 were identified as: 1) individual, 2) practitioner perception of fear, 3) lack of personal protective equipment, 4) inappropriate clinic design/location, 5) risk of patient avoidance, 6) financial risk, 7) a lack of knowledge and 8) lack of guidelines.

### Discussion

This study's findings relate to a unique period in Victoria, which at the time accounted for 70% of the nation's total cases and 90% of deaths. Therefore, the barriers identified in this study may help inform policymakers in regard to planning for future responses to similar situations.

**EARLY DIAGNOSIS** of COVID-19 (the manifestation of SARS-CoV-2)<sup>1</sup> enables cases to be isolated and helps identify unknown sources of community transmission, particularly because COVID-19 can be asymptomatic in the early phase of infection.<sup>2,3</sup> Ensuring that the public can easily access COVID-19 testing has therefore been an important public health response to the COVID-19 pandemic.<sup>4</sup>

During the first year of the COVID-19 pandemic, while most countries, including Australia, set up dedicated COVID-19 testing clinics as a response,<sup>5</sup> general practices were well suited to this task as they played a major part in dealing with seasonal influenza and therefore were experienced in managing respiratory conditions. For example, early in the pandemic, the Victorian State Government identified general practices as an integral part of the: 1) initial assessment and triage, 2) specimen collection and diagnosis, and 3) management and clinical care of the COVID-19 outbreak.<sup>6,7</sup> In Australia, some general practices were able to integrate COVID-19 testing into their routine services, while others were allocated government funding to develop dedicated COVID-19 testing facilities, such as respiratory testing clinics.<sup>8</sup> In certain geographic areas, general practices are also better suited to manage the cultural and linguistic diversity among their patients or those from vulnerable cohorts, compared with pop-up testing sites.

It is known that if sufficient personal protective equipment (PPE) can be obtained during a pandemic, general practitioners (GPs) are more motivated to assess, test and manage unwell patients.<sup>9</sup> However, many primary care clinics reduced face-to-face consultations during the onset of the pandemic for a variety of reasons, including the availability of PPE. Primary care clinics are dependent on government supplies of PPE because they lack the resources and space to stockpile. Anecdotally, it appeared that general practice clinics across Australia, including the state of Victoria, were largely not offering COVID-19 testing of patients during the first year of the COVID-19 pandemic, and it was not clear if this was due to lack of PPE or if there were other contributing factors.

Consequently, further research was warranted to help inform policymakers and medical practitioners about the barriers to performing COVID-19 testing in primary care clinics, particularly given some of the unique and authentic perspectives in Victoria during the first year of the COVID-19 pandemic. For instance, during the second wave of the first year of the COVID-19 pandemic in Victoria there were 20,549 cases and 820 deaths.<sup>10</sup> Victoria accounted for 70% of the nation's total cases and 90% of total deaths,<sup>10</sup> and the state was subject to a four-month hard lockdown. This created very distinctive circumstances and lived experiences for healthcare professionals as well as the general public during that

time. By way of greater context, this also occurred before the vaccines or specific treatments for COVID-19 had been developed.

This study was therefore conducted with the aim to empirically determine what barriers, if any, were impeding onsite COVID-19 testing in general practices during the four-month hard lockdown in Victoria during the first year of the COVID-19 pandemic.

## Methods

A qualitative investigation, underpinned by an interpretivist view, was conducted. This involved semi-structured interviews<sup>11</sup> with practice managers (PMs), GPs and practice nurses (PNs) working in a range of general practices across Victoria. Interviews occurred between August and October 2020. As outlined earlier, this was the period when Victoria was experiencing unique circumstances during the second wave of the first year of the COVID-19 pandemic.

### Setting and ethical approval

This study received approval from the Deakin University Human Ethics Advisory Group Health (reference: HEAG-H 149\_2020).

### Participants, sampling and recruitment

Given the exploratory nature of this study, which was conducted during a unique time, exponential non-discriminative snowball sampling was used to recruit participants. Participants were selected on the basis of their occupation – GP, PN or PM – and place of work as a general representation of the standard (mainstream) general practice settings in Victoria, Australia. Fourteen interviews were conducted with practitioners from Melbourne and regional Victoria until data saturation was achieved: eight GPs (offering standard primary healthcare services), four PNs and two PMs. There were five male and nine female participants, and the age range was 28–70 years. Of the 14 participants, three had performed COVID-19 tests, but they had ceased by the time of data collection for the present study because

of personal risk, lack of PPE and financial risk, which are further unpacked in the study's findings.

### Researcher reflexivity and relationship with participants

The primary researcher was a GP and academic who worked in two general practices in Geelong and Melbourne. Mindful of the influence his experience would have on perspectives and assumptions, the researcher excluded himself from the participant interviews and analysis. The balance of the multidisciplinary team consisted of two infectious disease experts from Barwon Health, an academic from the service/business field and three student researchers from medical/health science backgrounds. The students and remaining academic researchers in the team conducted the interviews, each member bringing with them the qualitative research experience they had gained over the course of their degree and career, maintaining reflexivity throughout data collection and the thematic analysis phase of the project. Transcribed notes from participant interviews were discussed at regular intervals; established assumptions were challenged, and researchers kept a centralised reflexive diary, recorded in an Excel document.

### Data collection, generation and analysis

Exploratory individual interviews were conducted with participants between August and October 2020. Most of these interviews lasted between 20 and 30 minutes, with the exception of a few short interviews (ie between five and 15 minutes). The interview script was crafted at the outset of the project by the research team and designed in two stages to accommodate for participants who indicated they were carrying out COVID-19 testing and those who indicated they were not. As part of this study's interview guide, participants were asked questions such as:

- 'What barriers, if any, have you identified for not carrying out COVID-19 testing during your daily practice?'

- 'Any possible reasons (for and against) performing COVID-19 testing during daily practice?'
- 'Do you know of any other general practices that have faced similar barriers when conducting tests in general practice clinics?'
- 'Any further suggestions or comments that you would like to make?'

The research team reworded parts of the script to suit their interview style and the engagement level of their participant; additional probes were included to improve flow. The inclusion criteria of this study did not account for whether participants/clinics were or were not carrying out COVID-19 testing and only included standard (mainstream) GP clinical services.

Interviews were conducted via desktop video (eg using the Zoom platform). Interviews were audio recorded (where permission was granted by the participant) and transcribed verbatim. Braun and Clarke's thematic coding approach was used to manually identify emergent themes that aligned with this study's research aim.<sup>12</sup> A priori codes were used, although there was an openness toward finding emergent themes in the data.<sup>11</sup> As outlined earlier, the investigating research team determined when data saturation was achieved. With respect to checking data quality, three investigators independently identified the emergent themes for cross-validation, and findings were later reviewed by all investigators.

## Results

At the time of data collection, none of the participants nor their respective clinics were performing COVID-19 tests. From the analysis of the data, the following overarching barriers emerged.

### Individual

Participants cited their age or life stage as a significant barrier; other barriers included having regard for quality of life, including job satisfaction, and mortality. For example, one GP highlighted personal job satisfaction:

*[You need] fulfillment from the job ... the job that you do on a day-to-day basis ...*

*if you're exclusively doing COVID swabs ... you might miss the other input ... the other enjoyable aspects of [being a] GP. [GP6]*

Age and mortality were also key barriers for another participating GP:

*Personally, I, at age 70, would probably let the younger ones do it first. [GP7]*

Participants also referred to personal risk to self and others as further impediments to conducting COVID-19 tests. For instance, one PN said:

*There were a couple of people that decided to not work through because they were immunocompromised. One of our receptionists had breast cancer. [PN4]*

### Practitioner perception of fear

The personal fear participants felt from government marketing campaigns was expressed by the following participant:

*The fear [of] catching COVID ... was probably from the government marketing of the disease; they wanted extra caution ... everything was about that 'you've got to be careful; you've got to wash your hands' ... I think that contributed to heightened anxiety. [GP1]*

Sharing her perceptions of fear, one PN stressed the dangers of exposure to staff and patients:

*It's safer for everyone. Because if we're going to open a claim for the COVID test ... everyone will be exposed even if you're wearing PPE. It's not 100% sure that you won't get COVID. [PN3]*

A second nurse echoed these sentiments, with the unfamiliar territory provoking fear:

*The unknown seemed to be the underlying element of fear. [PN2]*

### Lack of PPE

In the absence of sufficient PPE, swab kits and other necessary equipment, general practice clinics were unable to carry out COVID-19 testing. Participants emphasised that the lack of access to and

availability of PPE resulted in referrals of suspected COVID-19 cases to other locations for testing. One GP highlighted the scarcity of resources:

*We don't have enough or appropriate PPE. We are using the inappropriate PPE, but that's not good enough. [GP5]*

A second GP spoke of a similar experience:

*Initially most people were sent off because we didn't really have enough of the full PPE ... we'd refer people off knowing that there was somewhere else that had adequate PPE and who wouldn't use up their whole stock of PPE in one day. [GP1]*

Reflecting on the dearth of testing equipment and PPE, one participant could not meet growing patient demand:

*We realised we were running out of the testing materials, and we also realised that this was getting a lot bigger than what we initially thought and that we would have probably run out of PPE. [PM2]*

### Inappropriate clinic design/location

Participants expressed concern over structural barriers including lack of designated space to isolate COVID-19 patients from others, and the proximity to other healthcare practices. One GP described their inability to control triage of potentially positive and regular patients as an impediment to testing:

*COVID patients and normal patients all together ... [that] will be difficult to control ... that's why they are not carrying out testing ... there are no separate corridors or separate rooms. [GP2]*

Triaging potentially positive patients alongside other health services was reinforced by one PM:

*There's a physio next door ... and it's always full ... So, if we had people who were coming in for testing, it would be a nightmare. [PM2]*

### Risk of patient avoidance

Participants reported avoidance behaviour from patients, who they suspected would

visit designated clinics to be tested free of charge. A GP suggested:

*Patients won't want to pay for a COVID consult if they know they can get swabbed for free somewhere else. [GP1]*

One GP raised concerns relating to the stigma or fear related to attending a 'COVID clinic':

*It's the human mind, if you see that the GP centre is conducting COVID testing ... and if you go to that clinic, you are feeling 'oh my god there is a COVID patient in there'. [GP2]*

### Financial risk

Participants highlighted financial barriers including a lack of government funding to acquire PPE/swabs, insufficient practice funds to hire extra personnel to conduct tests and the stress over potential loss of income. One GP expressed frustration over the inequitable distribution of funding:

*It needs to be funded ... we did hundreds of tests unfunded. Margins didn't cover having to purchase our own PPE yet testing centres have been funded hundreds of thousands of dollars. [GP8]*

One PM highlighted their concerns over staff shortages:

*We would have had one of our nurses out all day testing and ... we couldn't really afford that. [PM2]*

The implications to business were stressed by one GP:

*If a doctor or staff gets infected, closing the clinic for a few weeks might end up being the final nail in the coffin for the practice. [GP10]*

### Lack of knowledge

A lack of knowledge was commonly referred to during interviews. This related to not having the requisite knowledge to perform an accurate swab or work effectively, given that practitioners were learning how to manage the situation 'off the cuff'. For example, one PN spoke of the absence of formal swab training:

*A lack of knowledge, a lack of education ... most nurses didn't get an education on actually how to properly do a COVID swab. [PN1]*

Another GP reinforced that knowledge was a key barrier:

*A lack of knowledge ... knowledge is very important to control the situation. [GP4]*

### Lack of clear guidelines

Several participants emphasised the importance of developing clear and discoverable guidelines tailored to primary care to foster greater participation in the frontline response. This was highlighted by one GP:

*We needed clear guidelines from the government which were easy to access ... For example, a website for GP clinics to use. For the past six months we have had to spend at least one or two hours daily to find out what the latest information was. [GP9]*

One PM voiced their frustrations:

*It was just overwhelming because you were spending an hour or two a day just trying to see, 'what do I need to warn staff about today, what do I need to warn the doctors about, have the [Medicare Benefits Schedule] item numbers changed, haven't they changed?' ... It was just constant. [PM2]*

## Discussion

Of the eight barriers to performing COVID-19 testing identified in the present study, the lack of secure, adequate and optimal supplies of PPE is an issue that has been highlighted in previous pandemics in Victoria and was also identified as the biggest challenge during the COVID-19 response in the UK, Europe and USA.<sup>13,14</sup>

With limited access to the necessary equipment required to perform a COVID-19 test safely and accurately, healthcare practitioners were relegated to triaging patients via telehealth services before referring them to more appropriate channels.

The unfamiliar nature of the virus contributed to heightened fear among those concerned about contracting the disease themselves, or transmission to their colleagues and patients. Previous research on the impact of communication during COVID-19 has suggested dissemination of public health information influences people's behaviour and affects the effectiveness of government policies aimed to control the outbreak and decrease infection rates.<sup>15</sup>

The financial risks and ramifications of responding to the pandemic were expressed by study participants as a lack of funding to perform COVID-19 tests, hire additional personnel to meet demand or maintain financial viability in the event of staff contracting the virus and the practice closing. Australia-wide, the economic strain of responding to the COVID-19 pandemic has resulted in a decrease in general practice bookings and income; an increase in practice costs, non-billable time and activity; and moderate-to-high levels of financial stress for GPs.<sup>16</sup>

Insufficient knowledge was a salient theme that emerged from data collection; multidisciplinary teaching and training programs that address the professional needs of primary care practitioners have been identified as integral to responding to future pandemics.<sup>17</sup> Furthermore, the absence of clear directives for general practices from official sources was cause for frustration among participants. Physicians in both Australia and the UK have called for clear and consistent primary care guidelines to reduce the clinical and emotional burden when responding to COVID-19.<sup>17</sup>

### Limitations

A potential limitation of the present study is the generalisability of results, as participants were only from the state of Victoria. However, this study was conducted at a unique time during an ongoing pandemic. In addition, respondents were a representative sample of metropolitan and regional general, group and solo practices, representing the general practice setting in Victoria with the emergence of clear themes. The study identified a range of barriers to

onsite COVID-19 testing of patients. Of these, fear of healthcare staff acquiring COVID-19, insufficient PPE and suboptimal infrastructure were perceived as some of the leading barriers.

## Conclusion

In conclusion, the majority of the general practice clinics whose specialists participated in the present study did not offer COVID-19 testing; those that had offered testing previously had ceased doing so by the time of data collection. This is despite the study coinciding with the peak of Victoria's second COVID-19 wave, occurring over four months after the World Health Organization declared COVID-19 a global pandemic, and six months after Australia recorded its first COVID-19 case.<sup>18,19</sup> The barriers identified in this study may help inform policymakers in regard to planning for future responses to similar situations.

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