The experience of delayed health care access during the COVID-19 pandemic in Australian women: A mixed methods exploration

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Abstract
Delayed health care access is a potential collateral effect of pandemic conditions, health rationing strategies and social distancing responses. We investigated experiences of delayed health care access in Australian women during COVID-19. A mixed methods study used quantitative and free-text data from the Australian Longitudinal Study on Women’s Health COVID-19 survey 4 (health care access or delay). Logistic regression models were used to estimate factors associated with delaying access to general practitioners (GPs), specialists and allied health services. Free-text comments were analysed thematically, employing a process of constant comparison. COVID-19 survey 4 was completed by 8,200 women and 2,727 provided free-text comments. Of the women who needed the health service, 25% (1,268/5,071) delayed seeing their GP, 23.6% (570/1,695) delayed seeing a specialist and 45% (791/1,757) delayed use of an allied health service. Younger age was most significantly associated with delaying attendance. Women born 1989–95 were significantly more likely to delay compared to women born 1946–51 (OR (95% CI): GP = 0.28 (0.22, 0.35)); Specialist = 0.65 (0.45, 0.92); Allied Health = 0.59 (0.42, 0.82)). Women born 1973–78 were also likely to delay GP visits (0.69, (0.58, 0.83)). Four qualitative themes emerged including: (1) Challenges negotiating care during a pandemic; (2) Ongoing uncertainty towards accessing health care when a specialist delays an appointment; (3) Accessing health care (or not) using Telehealth and (4) Managing complex care needs. COVID-19 has had a significant effect on access to health care. Women delayed seeking help for cancer screening, mental health, and other health conditions involving chronic and complex needs for health and social care. While there is a need to rationalise and optimise health access during a pandemic, our outcomes suggest a need for public health campaigns that clarify how to access care, engage with telehealth and respond to missed appointments.

Keywords
Australia, COVID-19, health care access, mental health, qualitative, screening, surveys
1 | INTRODUCTION

The widespread outbreak of the Coronavirus Disease (COVID-19) remains a challenge for public health and medical care service provision worldwide. The presence of COVID-19 was first confirmed in Australia in late January 2020. Consistent internationally, the Australian government enforced restrictions on people's movement and participation in society (Desborough et al., 2020). Such restrictions, whilst curtailing COVID-19 transmission, are anticipated to impact people's access to health care including assessment and diagnosis, follow-up and prescription refills (Czeisler, 2020). This is further compounded by restructuring of hospital and community services whereby access to health facilities has been restricted or denied (Søreide et al., 2020). In order to ameliorate the impact of reduced health care access it is important to understand the extent to which Australians have been affected.

Evidence from previous pandemics has demonstrated that neglect of 'usual care' can be an unintended consequence of prioritising health care, leading to morbidity and mortality related to other causes (Cohen & Anderson, 1986; Runkle et al., 2012; Scott et al., 2016). Learnings can be had from the experience of severe acute respiratory syndrome (SARS), which first emerged in Asia in November 2002, spread throughout several parts of the world and was finally contained by July 2003 (Gardner & Moallef, 2015). For example, Chang et al. (Chang et al., 2004) conducted a time-series analysis of the Taiwanese National Health Insurance data (between 2000 and 2003) assessing the impacts of SARS on medical service utilisation. Results identified significant reductions in ambulatory care (23.9%), inpatient care (35.2%) and dental care (16.7%) (Chang et al., 2004). Schull et al. (Schull et al., 2007) conducted a retrospective population-based study of the Greater Toronto Area, Canada. In that study medical admissions decreased by 10%-12% and the rate of elective surgery fell by 22%, whilst the rates for urgent surgery, medication prescribing, and primary care visits were unchanged.

Living through a pandemic has been shown to increase rates of depression and anxiety due to the threat of infection and the experience of quarantine directives (Maunder et al., 2003; Pfefferbaum & North, 2020; Tsang et al., 2004). A rapid review of 24 articles on the psychological impact of quarantine due to COVID-19 (Brooks et al., 2020) identified common negative emotions including: stress due to length of confinement, infection fears, frustration, boredom, limited access to food and other supplies, inadequate information and loss of employment or finances. The authors posited that the long-term impacts on mental health occurred in the general population as well health-care workers, politicians and the public health officials who mandated it (Brooks et al., 2020). Similarly, a review of literature exploring mental health in health care workers during COVID-19 suggested a lack of preparedness to provide timely and effective support for patients and frontline health care workers alike (Spoorthy et al., 2020).

As with all Australians, there has been potential for acute and long-term health consequences in Australian women due to the COVID-19 lockdown and reduced health care access. Clinical concern stems from the potential for greater risk in vulnerable groups such as those with pre-existing physical and mental health issues, recovered individuals (at risk of relapse) and those who became unwell during the pandemic. The ability to access high-quality data using data from the Australian Longitudinal Study on Women’s Health (ALSWH) provides an opportunity to understand the impact of COVID-19 on the health and experience of access to primary and tertiary health care services in Australian women. The aim of this mixed methods study was to understand and characterise the experience of health service access in Australian women in cohorts born 1946–51, 1973–78 and 1989–95 who responded to surveys distributed during COVID-19.

2 | STUDY DESIGN

The ALSWH is a population-based observational study of >57,000 women in four age cohorts. Details of the study including design, recruitment methods and national representativeness are described elsewhere (Dobson et al., 2015; Loxton et al., 2018). Commencing in April 2020, the ALSWH distributed fortnightly online surveys (n = 14) exploring a range of topics sentinel to a pandemic to women in the 1989–95, 1973–78 and 1946–51 birth cohorts who had a current email address. Specifically, COVID-19 survey 4, deployed in June 2020, addressed delay in access to health care. Email invitations were sent to 29,263 women and surveys were returned by 8,200:2,403/14,143 (17%) from the 1989 to 95 cohort, 2,879/8,618 (33%) from the 1973 to 78 cohort, and 2,918/6,502 (45%) from the 1946 to 51 cohort. Research incorporating the ALSWH surveys and the COVID-19 surveys are approved by the University of Newcastle and the University of Queensland’s Human Research Ethics Committees (Approval Numbers H-076-0795 + H-2012-0256, and 2,004,000,224 + 2,012,000,950, respectively).
that were asked in their most recent ALSWH main survey (2019 for matched to socio-demographic and health behaviour questions delayed accessing during the pandemic. Participant responses were matched to socio-demographic and health behaviour questions that were asked in their most recent ALSWH main survey (2019 for women born 1946–51, 2018 for women born 1973–78, 2017 for women born 1989–95). These variables were SF36 physical functioning and mental health scores (Ware Jr & Sherbourne, 1992), self-reported body mass index (BMI), weekly physical activity levels defined by metabolic minutes (Brown et al., 2013), number of self-reported chronic conditions, self-rated general health, the accessibility/remoteness index (ARIA+) (Glover & Tennant, 2003) based on geocoded residential data, partnered status, country of birth, highest qualification, self-rated ability to manage their income, smoking and alcohol consumption patterns (Jonas et al., 2000). Women were eligible for quantitative analysis if they had completed their most recent ALSWH survey, had a need for one (or more) health services during COVID-19 and were living in Australia. Service need was defined by indicating either accessing or delaying access of the health service.

3.2 | Qualitative

At the end of the COVID-19 Survey 4 a single open-ended question asked, 'Is there anything you would like to add? You may wish to note down the main impacts that COVID-19 has had on you, please include positive as well as negative impacts'.

4 | DATA ANALYSIS

4.1 | Quantitative

Percentages and frequencies of women who delayed accessing their GP, specialist and allied health services, based on the number of people who had a need for the service were calculated. There were insufficient numbers to analyse delayed access to psychologists/counsellors/social workers. The ALSWH main survey demographic and health behaviour variables were tabulated by whether they did/did not delay health service use. Logistic regression was used to model the effects of demographic, health characteristics and health behaviours on the odds of delaying service use. All variables were entered as main effects, with an additional interaction term between SF36 physical functioning score and birth cohort entered to test for differing effects of physical functioning across the age ranges (Peeters et al., 2019). Continuous variables were mean centred. Complete case analysis was used, with statistical significance set at $p < 0.05$ and all quantitative analysis being conducted in SAS 9.4 (SAS Institute, Inc.).

4.2 | Qualitative

The single free-text comments were analysed employing an inductive thematic approach whereby coding and theme development were driven by the content of the comments (Braun & Clarke, 2006; Glaser & Strauss, 1968). We analysed comments made by 882 respondents who indicated they had delayed accessing to either their GP, specialist or allied health practitioner. In order to handle the large amounts of data, we used a structured approach (Namey et al., 2008). All data was imported into a Microsoft excel spreadsheet (transcribed verbatim with identifying data removed) and subsequently separated into three Microsoft Word files according to each of the cohorts: 1989–95 cohort, 1973–78 cohort and 1946–51 cohort. These data sets were initially analysed separately, before being considered as a whole in, order to create themes. Two researchers (JW, JB) familiarised themselves with the data by reading all the comments and making notes of potential codes by identifying recurring words or units of meaning. Following discussion, JW established and applied second order codes to all comments in each data set. Following constant comparison (Fram, 2013), codes were amalgamated or new codes were created as differences in meaning were identified. Codes which shared similar meaning were amalgamated into subthemes. For example, codes related to delaying health care due to fear of exposure, closures and feelings of being a burden were amalgamated into the subtheme 'Delayed Access'. Any differences in researcher-perspective were resolved by negotiation in multiple meetings. In addition, we cross-referenced codes with a random sample ($n = 78/391$) of respondents who made comments about health care access during COVID-19 and no additional codes were identified. The research team (JW, JB, DC) discussed and refined the final themes in the context of the research question. To increase the credibility of our data strategies such as peer debriefing and reflexive analysis were used (Krefting, 1991).

5 | RESULTS

5.1 | Quantitative

Of women who completed COVID-19 survey 4, 7,534 (92%) were living in Australia and had completed their most recent ALSWH survey. Of these women, 5,071 (67%) indicated a need to attend a GP, 1,695 (22%) needed specialist attendance, and 1,757 (23%) needed to access an allied health service during COVID. Of the people women who needed the service, 25% delayed attending their GP, 34% delayed specialist access and 45% delayed an allied health service (see Tables 1 and 2).

Women born 1946–51 were much less likely to delay GP use ($\text{AOR} = 0.27 \ (0.22, 0.35)$), specialist use ($\text{AOR} = 0.66 \ (0.46, 0.95)$)
## Table 1: Proportion of categorical demographic and health behaviour factors across service use delay status

|                                      | Delayed: GP No (n = 3,803) | Delayed: GP Yes (n = 1,268) | Delayed: Specialist doctor No (n = 1,125) | Delayed: Specialist doctor Yes (n = 570) | Delayed: Allied health No (n = 966) | Delayed: Allied health Yes (n = 791) |
|--------------------------------------|-----------------------------|-----------------------------|------------------------------------------|------------------------------------------|-----------------------------------|-----------------------------------|
|                                      | %                           | %                           | %                                        | %                                        | %                                 | %                                 |
| **Cohort**                           |                             |                             |                                          |                                          |                                   |                                   |
| 1989–95 Cohort                       | 25.0                        | 42.2                        | 23.1                                     | 30.5                                     | 28.8                              | 39.4                              |
| 1973–78 Cohort                       | 29.4                        | 36.9                        | 29.2                                     | 32.3                                     | 33.3                              | 33.8                              |
| 1946–51 Cohort                       | 45.6                        | 20.9                        | 47.7                                     | 37.2                                     | 37.9                              | 26.8                              |
| **General health**                   |                             |                             |                                          |                                          |                                   |                                   |
| Excellent/Good                       | 87.9                        | 84.5                        | 83.6                                     | 82.8                                     | 88.9                              | 83.2                              |
| Poor/fair                            | 12.1                        | 15.1                        | 16.2                                     | 17.0                                     | 11.1                              | 16.7                              |
| **Area of residence (ARIA+)**        |                             |                             |                                          |                                          |                                   |                                   |
| Major metro                          | 57.9                        | 65.0                        | 58.8                                     | 61.1                                     | 61.3                              | 67.0                              |
| Inner regional                       | 29.5                        | 23.0                        | 30.1                                     | 26.0                                     | 28.7                              | 24.0                              |
| Outer regional/rural/remote          | 12.5                        | 11.9                        | 11.0                                     | 12.6                                     | 10.0                              | 9.0                               |
| **State of residence (at COVID 4)**  |                             |                             |                                          |                                          |                                   |                                   |
| NSW/ACT                              | 28.3                        | 30.7                        | 29.4                                     | 32.1                                     | 24.6                              | 26.9                              |
| VIC                                  | 25.6                        | 28.6                        | 26.3                                     | 27.7                                     | 29.9                              | 31.9                              |
| QLD                                  | 24.0                        | 19.7                        | 23.1                                     | 21.6                                     | 22.5                              | 19.5                              |
| SA/WA/NT                             | 18.3                        | 18.1                        | 17.2                                     | 15.4                                     | 20.1                              | 19.0                              |
| TAS                                  | 3.8                         | 2.9                         | 3.9                                      | 3.2                                      | 2.9                               | 2.8                               |
| **Partnered status**                 |                             |                             |                                          |                                          |                                   |                                   |
| Partnered                            | 66.3                        | 59.9                        | 68.5                                     | 62.5                                     | 63.8                              | 62.8                              |
| Non-partnered                        | 32.7                        | 38.8                        | 30.1                                     | 36.1                                     | 35.2                              | 36.0                              |
| **Country of birth**                 |                             |                             |                                          |                                          |                                   |                                   |
| Australia                            | 86.3                        | 89.4                        | 86.5                                     | 85.6                                     | 87.2                              | 87.7                              |
| English speaking                     | 10.3                        | 6.9                         | 10.1                                     | 10.0                                     | 8.8                               | 8.5                               |
| Non-English speaking                 | 3.4                         | 3.6                         | 3.4                                      | 4.4                                      | 4.0                               | 3.8                               |
| **Education status**                 |                             |                             |                                          |                                          |                                   |                                   |
| School based qualification or below  | 28.5                        | 18.1                        | 26.8                                     | 23.3                                     | 18.9                              | 17.6                              |
| Certificate/Diploma                  | 23.8                        | 25.8                        | 23.3                                     | 25.4                                     | 26.5                              | 21.0                              |
| University qualification             | 46.8                        | 55.1                        | 48.9                                     | 49.7                                     | 53.5                              | 60.6                              |
| **Ability to manage on available income** |                             |                             |                                          |                                          |                                   |                                   |
| Difficult/Impossible                 | 32.0                        | 42.0                        | 30.2                                     | 38.6                                     | 33.8                              | 35.9                              |
| Easy/Not too bad                     | 67.0                        | 56.6                        | 68.4                                     | 59.8                                     | 65.1                              | 63.1                              |
| **Smoking status**                   |                             |                             |                                          |                                          |                                   |                                   |
| Never-smoker                         | 66.4                        | 66.3                        | 66.5                                     | 66.0                                     | 71.3                              | 69.5                              |
| Ex-smoker                            | 26.0                        | 22.3                        | 25.4                                     | 24.9                                     | 22.8                              | 21.5                              |
| Current smoker                       | 7.1                         | 10.4                        | 7.2                                      | 8.4                                      | 5.8                               | 8.2                               |
| **Pattern of alcohol consumption**   |                             |                             |                                          |                                          |                                   |                                   |
| Low long-term risk, drinks at short-term less than weekly | 78.5 | 77.8 | 78.8 | 77.2 | 80.5 | 79.1 |
| Non-drinker                          | 11.5                        | 9.5                         | 11.9                                     | 12.1                                     | 11.2                              | 8.3                               |
| Low long-term risk, drinks at short-term risk weekly or more | 3.4 | 5.9 | 3.1 | 4.7 | 3.3 | 6.2 |
| Risky/high risk drinker              | 5.8                         | 6.1                         | 5.1                                      | 5.1                                      | 4.9                               | 5.4                               |

*Note: Column percentages may not add to 100 due to missing data.*
and allied health use (AOR = 0.59 (0.42, 0.82)) compared to women born 1989–95. Women born 1973–78 were less likely to attend a GP (AOR = 0.69 (0.58, 0.83)) but were no less likely to attend a specialist or allied health service compared to those born 1989–95. Higher SF36 mental health scores were associated with lower odds of delaying all three services. Women with higher levels of physical functioning were less likely to delay GP (AOR = 0.99 (0.98, 1.00)) and specialist use (AOR = 0.98 (0.97, 0.99)), with that effect being attenuated in the older cohorts evidenced by positive interaction effect estimates. Higher BMI (AOR = 1.02 (1.00, 1.03)) difficulty managing on income (AOR = 1.22 (1.05, 1.42)) were associated with delaying GP use but not the two other services. No consistent significant associations were found for delaying any service use and self-rated general health, area of residence, state of residence, education level, partnered status and smoking behaviour (see Table 3).

### Table 2

| Service Use Delay Status | SF36 Physical Functioning Score | SF36 Mental Health Score | BMI | Metabolic Minutes | Number of Chronic Conditions (max 9) |
|-------------------------|-------------------------------|--------------------------|-----|------------------|-------------------------------------|
| GP                      | No (n = 3,803)                | 85.0 (18.4)              | 27.2 (6.2) | 1,287.0 (1,510.9) | 2.6 (1.7)                           |
|                         | Yes (n = 1,268)               | 85.7 (18.2)              | 27.6 (7.0) | 1,275.0 (1,571.1) | 2.5 (1.6)                           |
| Specialist Doctor       | No (n = 1,125)                | 82.6 (19.9)              | 27.3 (6.5) | 1,281.9 (1,523.2) | 2.7 (1.7)                           |
|                         | Yes (n = 570)                 | 82.2 (20.8)              | 27.3 (6.3) | 1,291.6 (1,588.9) | 2.9 (1.7)                           |
| Allied Health           | No (n = 966)                  | 84.8 (18.9)              | 27.3 (6.3) | 1,294.7 (1,422.0) | 2.6 (1.7)                           |
|                         | Yes (n = 791)                 | 84.6 (19.4)              | 27.1 (6.7) | 1,210.0 (1,396.8) | 2.6 (1.6)                           |

Abbreviation: SD, standard deviation.

### 5.2 | Qualitative

Four distinct themes were identified across the three cohorts regarding participants experiences of delayed access to health care during COVID-19. These included: (1) Challenges negotiating care during a pandemic; (2) Ongoing uncertainty towards accessing health care when a specialist delays an appointment; (3) Accessing health care (or not) using Telehealth and (4) Difficulties managing complex care needs.

### 6 | Theme 1: Challenges Negotiating Care During a Pandemic

Participants in all cohorts described delays to accessing health care services during the COVID19 pandemic. Allied health services that were reportedly delayed typically included dentists, optometrists, and physiotherapists.

I made appointments after the restrictions were relaxed.  
(Participant (P) 397, 1946-51 Cohort (C))

Delays in making or attending appointments for cancer screening were commonly reported across all cohorts. In particular, participants reported delaying skin checks, pap smears and mammograms.

I should have had my 6 monthly skin examination for skin cancer but have delayed this, due to not wishing or being allowed to leave home due to my age. I feel somewhat nervous going where there are large crowds.  
(P189, 1946-51C)

Many participants reported they postponed routine screening as it was considered 'non urgent.' (P19, 1973–78C). However other participants with a heightened risk and those experiencing symptoms also delayed seeking health care. For example, one participant delayed having a lump investigated that at other times may have been perceived as urgent.

I have a mass lesion which I have delayed having investigated. But I am now booked in to see a specialist in late June [after the first wave].  
(P434, 1973-78C)

Other participants considered at high risk from exposure to the virus, due to their age or compromised immunity, reported delaying screening despite an awareness of the potential downstream effects. The participant below reflects on their change in thinking towards the appropriateness of delaying screening and the potential for doctors to have had input to guide their decision making.

I have put off having my annual skin cancer check, believing that I should free the doctor's waiting room for more chronic patients. Many of my friends are doing the same. I now believe that these check-ups should not be delayed (or potentially forgotten) if the doctor
| Factor                                      | Delay of GP use | Delay of Specialist use | Delay of Allied health use |
|---------------------------------------------|-----------------|-------------------------|---------------------------|
|                              | UOR | AOR (95% CI) | UOR | AOR (95% CI) | UOR | AOR (95% CI) |
| Birth cohort                               |     |             |     |              |     |             |
| 1989–95 Cohort                              | ref | ref         | ref | ref          | ref | ref         |
| 1973–78 Cohort                              | 0.72 | 0.69 (0.58, 0.83)** | 0.90 | 0.96 (0.70, 1.31) | 0.74 | 0.79 (0.60, 1.04) |
| 1946–51 Cohort                              | 0.26 | 0.27 (0.22, 0.35)** | 0.62 | 0.66 (0.46, 0.95) | 0.49 | 0.59 (0.42, 0.82)** |
| SF36 physical functioning score             | 1.00 | 0.99 (0.98, 1.00)** | 1.00 | 0.98 (0.97, 0.99)** | 1.00 | 0.99 (0.98, 1.00) |
| SF36 physical functioning score*Birth Cohort|     |             |     |              |     |             |
| 1989–95 Cohort                              | ref | ref         | ref | ref          | ref | ref         |
| 1973–78 Cohort                              | 1.01 (1.00, 1.02)** | 1.03 (1.01, 1.04)** | 1.01 (1.00, 1.02) |
| 1946–51 Cohort                              | 1.01 (1.00, 1.02) | 1.02 (1.01, 1.04)** | 1.01 (1.00, 1.02) |
| SF36 mental health score                    | 0.98 | 1.00 (0.99, 1.00)* | 0.99 | 0.99 (0.99, 1.00)* | 0.99 | 0.99 (0.98, 1.00)** |
| BMI                                         | 1.01 | 1.02 (1.00, 1.03)** | 1.00 | 0.99 (0.98, 1.01) | 1.00 | 1.00 (0.98, 1.01) |
| Weekly metabolic minutes                    | 1.00 | 1.00 (1.00, 1.00) | 1.00 | 1.00 (1.00, 1.00) | 1.00 | 1.00 (1.00, 1.00) |
| Number of chronic diseases                  | 0.95 | 0.99 (0.94, 1.04) | 1.06 | 1.08 (1.00, 1.16)* | 0.99 | 1.00 (0.94, 1.08) |
| Self-rated general health                   |     |             |     |              |     |             |
| Excellent/Good                              | 1.31 | 0.97 (0.77, 1.21) | 0.99 | 0.75 (0.53, 1.05) | 1.50 | 1.21 (0.86, 1.70) |
| Poor/fair                                   |     |             |     |              |     |             |
| Area of residence                           |     |             |     |              |     |             |
| Major metro                                 | ref | ref         | 1.00 | ref          | ref | ref         |
| Inner regional                              | 0.70 | 0.95 (0.80, 1.13) | 0.83 | 0.92 (0.71, 1.20) | 0.72 | 0.88 (0.68, 1.13) |
| Outer regional/rural/remote                 | 0.87 | 1.16 (0.92, 1.45) | 1.10 | 1.28 (0.90, 1.84) | 0.76 | 0.89 (0.62, 1.29) |
| State of residence during COVID             |     |             |     |              |     |             |
| NSW/ACT                                     | ref | ref         | ref | ref          | ref | ref         |
| QLD                                         | 0.75 | 0.76 (0.62, 0.93)** | 0.90 | 0.89 (0.65, 1.20) | 0.75 | 0.77 (0.57, 1.03) |
| SA/WA/NT                                    | 0.91 | 0.88 (0.71, 1.08) | 0.87 | 0.84 (0.60, 1.18) | 0.86 | 0.81 (0.60, 1.10) |
| TAS                                         | 0.76 | 0.80 (0.53, 1.21) | 0.82 | 0.84 (0.45, 1.54) | 0.87 | 0.96 (0.52, 1.79) |
| VIC                                         | 1.04 | 1.01 (0.84, 1.21) | 1.01 | 0.99 (0.75, 1.32) | 0.96 | 0.94 (0.72, 1.24) |
| Partnered Status                            |     |             |     |              |     |             |
| Partnered                                   | ref | ref         | ref | ref          | ref | ref         |
| Non-partnered                               | 1.36 | 1.04 (0.89, 1.21) | 1.33 | 1.18 (0.92, 1.51) | 1.11 | 0.93 (0.74, 1.16) |
| Country of birth                            |     |             |     |              |     |             |
| Australia                                   | ref | ref         | ref | ref          | ref | ref         |
| English speaking                            | 0.65 | 0.97 (0.75, 1.26) | 0.97 | 1.15 (0.79, 1.66) | 0.98 | 1.15 (0.80, 1.65) |
| Non-English speaking                        | 1.02 | 1.48 (1.02, 2.15)* | 1.33 | 1.51 (0.87, 2.61) | 0.85 | 1.03 (0.60, 1.78) |
| Highest educational qualification           |     |             |     |              |     |             |
| School based qualification or below         | ref | ref         | ref | ref          | ref | ref         |
| Certificate/Diploma                         | 1.67 | 1.18 (0.95, 1.46) | 1.19 | 1.02 (0.74, 1.40) | 0.87 | 0.77 (0.56, 1.06) |
| University qualification                    | 1.83 | 1.11 (0.91, 1.36) | 1.16 | 0.96 (0.71, 1.30) | 1.27 | 1.01 (0.74, 1.37) |
| Ability to manage on available income       |     |             |     |              |     |             |

(Continues)
is consulted and is happy to perform the checks. The long-run effect could mean poorer health for seniors like me in coming years.

(P137, 1946-51C)

The most commonly reported reason for delaying any health care appointment was to minimise the risk of exposure to the virus, primarily due to the fear of ‘large crowds’ (P189, 1946-51C), and the need to ‘avoid potentially other sick people’ (P243, 1989-95C) by sitting for ‘prolonged periods in waiting room’ (P341, 1989-95C). Alternatively, participants delayed seeing a health professional when required to ‘self-isolate’ (P84, 1989-95C). Overall, participants experienced a range of health concerns for which they would usually see their GP; however, these were reportedly deferred by varying amounts of time during critical times of pandemic and periods of quarantine.

I’ve been wanting to see my GP to get a mental health plan for a psychologist, as well as a pap smear and to change my birth control. But I didn’t want to go to a GP during the outbreak.

(P157, 1989-95C)

In some cases, participants were encouraged to delay their appointment by family members who were worried about their risk of exposure.

As a follow-up to my craniotomy, I was due to have a scan. However, due to my compromised health conditions, my family pressured me to cancel my appointments - and not travel to [city] from [rural setting].

(P239, 1946-51C)

Other participants reported that it was not possible to access some health care services, such as specialists who travel to remote locations, due to state border closures. The extent to which GPs were aware of the subsequent gaps in service access and provided an interim service was not reported in length.

My specialist dermatologist is FIFO [fly in fly out] and was unable to travel. (P181, 1946-51C)

There was a delay in my comparison ultrasound for thyroid nodules. As this required a trip to [city] some 90 kms away I was unable to go. Plus, it may have required a needle biopsy which was also cancelled .... my GP is aware of the delay.

(P216, 1946-51C)

Many participants delayed appointments in response to not wanting to ‘place a burden on the health system’ (P100, 1989-95C), which was perceived to be under additional pressure during the pandemic. Participants commonly delayed appointments for non-urgent health conditions, such as maintenance therapy for musculoskeletal conditions, or for conditions well known to their treating GP.

The only reason I delayed accessing my GP is because I seem to go see him fairly regularly (due to underlying...
Few participants reported they became severely unwell, such as experiencing pneumonia and infection, in response to delaying health care access. Only two participants said they had presented to the emergency department (ED).

I had an infection (abscess). I was reluctant to go to the GP because they are hyper-vigilant about COVID-19. Anyway, I became very unwell and presented at the ED.

(P51, 1973-78C)

At the very start of the COVID-19 pandemic, I got a kidney stone, which caused some health complications and I was scheduled for surgery. In normal circumstances, I would have patiently waited for this, but due to concerns about surgeries being cancelled and being in pain that I didn’t want to endure with no end date. I visited the ED in hopes of speeding things up, which it did.

(P113, 1989-95C)

It also appeared that some participants lacked knowledge toward how they could access health care during COVID-19 such as the availability of telehealth appointments.

I didn’t realise they were offering telephone appointments until today - I haven’t noticed any general advertising of [how to] telephone doctors’ appointments anywhere.

(P243, 1989-95C)

In many scenarios’ participants reported that their specialist had initiated the cancellation of an appointment, especially those requiring elective surgery. Alternatively, specialists were not taking new referrals during the pandemic. As a result, many participants reported an exacerbation in their symptoms while waiting for an appointment to be rescheduled. Ongoing symptoms were reported due to the need for a prolapse repair, endometriosis, gall stones and carpal tunnel syndrome.

Just before the pandemic, I was diagnosed with a gallstone and was scheduled for surgery. That was delayed due to COVID-19. Have had some gallstone ‘attacks’ during lockdown, biliary colic.

(P402, 1973-78C)

My surgery for carpel tunnel syndrome was cancelled and I am enduring severe pain in my hands during most nights, which hinders my sleep.

(P531,1946-51C)

Participants responses suggested a lack of empowerment to seek follow-up or alternative support. Indeed, common concerns reported pertained to communication towards why an appointment had been cancelled and when the appointment would be rescheduled.

My specialist appointment with a gynaecology clinic was cancelled and I have not been rescheduled. I waited a year for that appointment and no idea when I will get another one. Unclear if this was due to COVID-19 or other factors.

(P145, 1989-95C)

One participant expressed concern regarding the ability of her GP to manage her symptoms while waiting for an operation due to advanced endometriosis.

Elective surgery for stage 4 endometriosis delayed. I’ve increasing gastrointestinal and leg pain symptoms. However, my GP does not have a good understanding of endometriosis - so very little support.

(P90, 1989-95C)

Moreover, concern regarding having an appointment rescheduled was highlighted when participants felt their health was at risk by ongoing delays, such a vision loss and tumour growth.

I’ve had to wait an extra two months to have my retinas checked, as my ophthalmologist is in the high-risk category and is not seeing patients. This situation isn’t ideal, as my retinas can detach easily and I could go blind, so I need them checked every 6 months.

(P140, 1989-95C)

The use of telehealth was varied among participants and was experienced on a spectrum from greater use, with reports of satisfaction and convenience, to lesser use and a reluctance or difficulty engaging in non-face to face health care.

Although I was not able to visit my GP for my scheduled visit, she very gladly made herself available for a phone consultation. She constantly reminded me that she was only a phone call away if I needed her.

(324, 1946-51C)
While phone contact with the GP was helpful, I delayed further discussion due to the difficulty in responding with questions. They didn't seem to occur when not face to face until I put the phone down of course! Perhaps it is also that Doctors are good at reading people's faces and seeing whether they understand that this is a minor or major issue.

Some participants reported that access to the internet and bandwidth was a barrier to accessing telehealth. In addition, accessing scripts by having to travel to a clinic or wait for ‘clogged’ [backlog] in the Australia Postage system (P1, 1989-95C) was reportedly frustrating.

I went to a couple of psychologist appointments, but I found the zoom sessions unhelpful. I’ve done the Telephone doctor appointments, but where I work has bad reception [internet]. Since I was getting a script, I had to go into the surgery anyway. So, I find the Tele-consults are more hassle than they’re worth.

(P230, 1989-95C)

Others expressed feeling less confident when they were not examined face to face, especially when they felt their health was deteriorating.

The surgeon seems happy. But, I don’t feel completely confident about the results and where I am in my recovery, because he wasn’t able to see/manipulate my feet in person.

(P291, 1989-95C)

It’s very frustrating and I’m seriously concerned that it’s just getting slowly worse. Over the phone, I have been told three times that I sound ‘fine’ (despite coughing and wheezing) and am merely advised to increase my asthma treatment dosage.

(P45, 1973-78C)

Participants in all cohorts reported they preferred not to access counselling for mental health issues over telehealth and preferred to wait for a face to face appointment, even though this was difficult. This was particularly the case when commencing with a new therapist.

I really need to see a psychologist or counsellor and had just got my mental health plan organised when COVID hit. I don’t want to meet a new counsellor over the phone. It has been hard waiting for face to face appointments to become available.

(P287, 1989-95C)

9 | THEME 4: DIFFICULTIES MANAGING COMPLEX CARE NEEDS

Participant responses highlighted challenges toward managing needs due to complex care with health and social aspects such as chronic disease, long-term disability and pregnancy. Some participants with chronic disease reportedly delayed their routine health check.

I have delayed a check-up cardiogram -it didn’t seem urgent.

(P42, 1973-78C)

Other participants who received support services through the National Disability Insurance Scheme (a support scheme of the Australian Government that funds costs associated with disability) reported difficulty accessing services such as home care (shopping, cleaning, transport and assistance with activities of daily living), therapy and equipment such as, ‘getting supplies of gloves as these are essential for support workers coming to the home to work with my partner who has quadriplegia’ (P49, 1946–51C). In such cases, extra pressure exacerbated mental health concerns and placed burden on carers to provide additional support during this time to fill the gap.

With no access to [vision loss service], I am really struggling. I am not able to attend to get the equipment I need. This has increased my anxiety and I find it hard to get up and face the day. My world has closed in around me and I am unable to find a purpose.

(P176, 1946-51C)

I have not been able to organise to have disability workers in to our home. All cleaning and most other household duties have had to been completed by myself or my husband, even though he works full time. I am unable to complete most tasks. It has been hard getting assistance while everything is locked down. My husband must now take time off from work to take me to appointments as support workers are unavailable.

(P68, 1973-78C)

Access to overseas based In Vitro Fertilisation was also compromised for some women, which created stress due to not knowing when travel would be allowed so that could access services or due to the narrowing time frames for conception.

Australian [borders to Europe] remain closed. This is so heart breaking and disappointing. I am unsure if I will still be able to use my own eggs being put approximately a year behind if borders didn’t open this year.

(P91, 1973-78C)

Many participants reported gaps in services due to the reduced ability to access face to face pre-natal and post-natal support,
especially among first time mothers. As a result, feelings of lack of support were common.

My intake appointment for maternity is likely to be a Tele consult, which is disappointing for a first pregnancy. I would feel better being able to visit the hospital and get familiar with the location.

(P52, 1989-95C)

Midwife appointments were cancelled Mother's Groups were cancelled. We were left isolated without support. All face to face appointments for postnatal follow up were rescheduled to phone appointments, which have been very difficult as a first time Mum.

(P21, 1989-95C)

Women reportedly delayed access to psychology, despite their heightened mental health concerns during the COVID-19, due to the cost involved and comprised financial situations.

With a reduced income I was reluctant to spend $130+ on the service, where I would usually have ensured I could cater to that cost.

(P425, 1989-95C)

10 | DISCUSSION

Australian women delayed health care during COVID-19 due to issues related to living under pandemic conditions such as quarantine impacts and fear of exposure. Other challenges involved managing cancelled specialist appointments and using telehealth. Results also highlight gaps in support for more complex care needs.

Quantitative data identified that a higher proportion of women who needed a service delayed seeing specialists and allied health practitioners compared to those who needed a GP service. Supporting qualitative comments suggest that specialists and allied health often initiated a postponed appointment. All cohorts were least likely to delay seeing their GP. This is an important finding since GPs are often the first point of contact for most Australians seeking medical attention. Furthermore, access to a GP is important during a pandemic due to limited access to hospital or other specialists for reasons of increased caseload, quarantine or travel restrictions (Patel et al., 2008). Older women were the least likely to delay health care access. Whilst pleasing, in that people in most need continued to access health care, we are unable to determine if older people accessed health care using telehealth rather than seeking face to face care, thus reducing their risk of exposure at a critical time.

Key qualitative findings identified that women in this study re-prioritised or neglected routine medical care, often due to perceived 'non-urgency'. Such changes in health seeking behaviour has been anticipated internationally and has prompted concern that the management of chronic diseases, including mental health, would be poorly managed and lead to health deterioration or an acute crisis (Paredes et al., 2020). To date the extent of the impact of delayed health care access in Australia is yet to be seen. However, concern stems from participant's expressions of altered mental health, which were often linked with delayed access to counselling. Similarly, challenges were identified in accessing support among women experiencing disability, financial hardship or with poor proximity to metropolitan health care services. This is consistent with international data exploring equity of health care access, especially for vulnerable populations at greater risk of exposure to COVID-19 including: older adults, people with comorbid conditions and disability, people living in densely populated areas, people with lower socioeconomic status, migrants and minority groups (Shadmi et al., 2020).

Consistent with many countries, Australian physicians postponed or cancelled many services, including elective surgeries, and reorganised trauma and emergency services (Schrag et al., 2020). Indeed, qualitative reports in this study demonstrated that women delayed or were unable to access care towards acute care needs and cancer screening. Internationally, there have been falling rates of cancer diagnosis most likely due to delays in screening, case identification and referral in symptomatic cancer diagnosis (Dimmohamed et al., 2020; Jones et al., 2020). Similarly, admissions for acute coronary syndrome and acute myocardial infarction have decreased (De Filippo et al., 2020; Solomon et al., 2020). While the safety of the patients and the staff is paramount when considering health access during and after the COVID-19 pandemic, our results suggest the need for public health campaigns encouraging health care access for acute needs and providing information on who to contact and what to do if an appointment is cancelled. Overall, women appeared disempowered with regards to how they could take additional steps to source help if it was needed.

Consistent with evidence on the impact of a pandemic on mental health, our qualitative findings showed that women of all ages reported feelings confusion and distress. A systematic review of public perceptions and behavioural responses to the 2009 influenza A pandemic (H1N1) showed that between 25% and 33% of the community experienced high levels of worry and anxiety (Bults et al., 2015). Concerning, younger women and those with worse mental health were more likely to delay health care use in our study. Overall, public health strategies are needed to detect and manage exacerbations in mental health during a pandemic. For example, the US Mental Health Coalition ‘How are you, really?’ (https://howareyou.really.org/) campaign encourage all non-mental health care providers to reach out to their patients.

The prevailing health system response has been to transition the delivery of care to telehealth, including video applications and phone calls (Schrag et al., 2020). This study identified a spectrum of benefits and barriers towards accessing health care using telehealth. While some found it efficient and convenient, others were not as confident in the care they received. This was most noted when participants reported mental health distress and during key health events such as pregnancy. Indeed, a lack of face-to-face care was identified as a reason for increased worry and a lack of reassurance.
during pre-natal and ante-natal care. This is consistent with previous research emerging about maternity care during COVID-19 (Coxon et al., 2020; Renfrew et al., 2020).

The strength of this study lies in a mixed methods exploration of the experience of health care access during COVID-19. However, less than one-third of eligible participants completed our survey and respondents were generally healthier. This limits the generalisability of our findings. Furthermore, we do not know how long the women delayed health care and what the consequences were. Participant’s free-text comments demonstrated a diversity of health care needs and we achieved thematic saturation. We acknowledge study bias due to self-report and that women who did not provide a comment may have differing health care experiences. Similarly, we relied on email to access potential participants, which may have been a limiting factor as many people may not use email or have poor internet access.

10.1 | Conclusion

In the context of COVID-19, women have stayed away from hospital, avoided seeking help for medical conditions such as cancer screening, mental health and other conditions with complex social factors such as pregnancy. In some cases, they have had their healthcare visit cancelled. Whilst there is a need to rationalise and optimise health access during a national crisis, key outcomes from this study suggest the need for public health campaigns such as how to access care and better engage with telehealth.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

AUTHORS’ CONTRIBUTIONS

JW and DC completed data analysis with support from JB. JW drafted the manuscript for publication and DC, JB contributed to the content and revision of the manuscript. JW, DC and JB contributed to working group meetings and revisions. JW managed revisions, literature and checking of the manuscript. All authors read and approved the final version.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author, [JW].

REFERENCES

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. The Lancet, 395(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8
Brown, W. J., Bauman, A. E., Bull, F. & Burton, N. W. (2013). Development of evidence-based physical activity recommendations for adults (18-64 years). Report prepared for the Australian Government Department of Health, August 2012.
Bults, M., Beautean, D. J., Richards, J. H., & Voeten, H. A. (2015). Perceptions and behavioral responses of the general public during the 2009 influenza A (H1N1) pandemic: A systematic review. Disaster Medicine and Public Health Preparedness, 9(2), 207–219. https://doi.org/10.1017/dmp.2014.160
Chang, H. J., Huang, N., Lee, C. H., Hsu, Y. J., Hsieh, C. J., & Chou, Y. J. (2004). The impact of the SARS epidemic on the utilization of medical services: SARS and the fear of SARS. American Journal of Public Health, 94(4), 562–564. https://doi.org/10.2105/ AJPH.94.4.562
Cohen, R. E., & Anderson, D. L. (1986). Botulism: Emotional impact on patient and family. Journal of Psychosomatic Research, 30(3), 321–326. https://doi.org/10.1016/0022-3998(86)90009-7
Coxon, K., Turienzo, C. F., Kweekei, L., Goodarzi, B., Brigante, L., Simon, A., & Lanau, M. M. (2020). The impact of the Coronavirus (COVID-19) pandemic on maternity care in Europe. Midwifery. https://doi.org/10.1016/j.midw.2020.102779
Czeisler, M. E., Marynak, K., Clarke, K. E., Salah, Z., Shakyia, I., Thierry, J. M., Ali, N., McMillan, H., Wiley, J. F., Weaver, M. D., & Czeisler, C. A. (2020). Delay or avoidance of medical care because of COVID-19–related concerns—United States, June 2020. Morbidity and Mortality Weekly Report, 69(36), 1250.
De Filippo, O., D’Ascenzo, F., Angelini, F., Bocchino, P. P., Conrotto, F., Saglietto, A., Secco, G. G., Campo, G., Gallone, G., Verardi, R., Gaido, L., Iannaccone, M., Galvani, M., Ugo, F., Barbero, U., Infantino, V., Olivetti, L., Mennuni, M., Gili, S., ... De Ferrari, G. M. (2020). Reduced rate of hospital admissions for ACS during Covid-19 outbreak in Northern Italy. New England Journal of Medicine, 383(1), 88–89. https://doi.org/10.1056/NEJMoa2009166
Desborough, J., Hall, S. L., de Toca, L., Davis, S., Roberts, L., Kelaher, C., & Kidd, M. (2020). Australia’s national COVID-19 primary care response. Medical Journal of Australia, 1.
Dinnmohamed, A. G., Visser, O., Verhoeven, R. H. A., Louwman, M. W. J., van Nederveen, F. H., Willems, S. M., Merkx, M. A. W., Lemmens, V. E. P. P., Nagtegaal, I. D., & Siesling, S. (2020). Fewer cancer diagnoses during the COVID-19 epidemic in the Netherlands. The Lancet Oncology, 21(6), 750–751. https://doi.org/10.1016/S1470-2045(20)30265-5
Dobson, A. J., Hockey, R., Brown, W. J., Byles, J. E., Loxton, D. J., McLaughlin, D., Tooth, L. R., & Mishra, G. D. (2015). Cohort profile update: Australian longitudinal study on women’s health. International Journal of Epidemiology, 44(5), 1547–1547f. https://doi.org/10.1093/ije/dyv110
Fram, S. M. (2013). The constant comparative method outside of grounded theory. Qualitative Report, 18, 1.
Gardner, P. J., & Moallef, P. (2015). Psychological impact on SARS survivors: Critical review of the English language literature. Canadian Psychology/Psychologie Canadienne, 56(1), 123. https://doi.org/10.1037/a0037973
Glaser, B. G., Strauss, A. L., & Strutzel, E. (1968). The discovery of grounded theory; strategies for qualitative research. Nursing Research, 17(4), 364.
Glover, J. D., & Tennant, S. K. (2003). Remote areas statistical geography in Australia: notes on the Accessibility/Remoteness Index for Australia (ARIA+ version). Public Health Information Development Unit, the University of Adelaide.
Jonas, H. A., Dobson, A. J., & Brown, W. J. (2000). Patterns of alcohol consumption in young Australian women: Socio-demographic factors, health-related behaviours and physical health. *Australian and New Zealand Journal of Public Health*, 24(2), 185–191. https://doi.org/10.1111/j.1467-842X.2000.tb00140.x

Jones, D., Neal, R. D., Duffy, S. R., Scott, S. E., Whitaker, K. L., & Brain, K. (2020). Impact of the COVID-19 pandemic on the symptomatic diagnosis of cancer: The view from primary care. *The Lancet Oncology*, 21(6), 748–750.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, 45(3), 214–222. https://doi.org/10.5014/ajot.45.3.214

Loxton, D., Tooth, L., Harris, M. L., Forder, P. M., Dobson, A., Powers, J., Brown, W., Byles, J., & Mishra, G. (2018). Cohort profile: The Australian longitudinal study on Women's health (ALSWH) 1989–95 cohort. *International Journal of Epidemiology*, 47(2), 391–392e. https://doi.org/10.1093/ije/dyx133

Maunder, R., Hunter, J., Vincent, L., Bennett, J., Peladeau, N., Leszczy, M., & Mazzulli, T. (2003). The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *CMAJ*, 168(10), 1245–1251.

Namey, E., Guest, G., Thairu, L., & Johnson, L. (2008). Data reduction techniques for large qualitative data sets. *Handbook for team-based Qualitative Research*, 2(1), 137–161.

Paredes, A. Z., Diaz, A., & Pawlik, T. M. (2020). COVID-19 pandemic and mental health: The surgeon’s role in re-engaging patients. *American Journal of Surgery*, 220(5), 1366.

Patel, M. S., Phillips, C. B., Pearce, C., Kljakovic, M., Dugdale, P., & Glasgow, N. (2008). General practice and pandemic influenza: A framework for planning and comparison of plans in five countries. *PLoS One*, 3(5), e2269. https://doi.org/10.1371/journal.pone.0002269

Peeters, G., Beard, J. R., Deeg, D. J., Tooth, L. R., Brown, W. J., & Dobson, A. J. (2019). Longitudinal associations between lifestyle, socio-economic position and physical functioning in women at different life stages. *European Journal of Ageing*, 16(2), 167–179. https://doi.org/10.1007/s12604-018-0484-1

Pfefferbaum, B., & North, C. S. (2020). Mental health and the Covid-19 pandemic. *New England Journal of Medicine*, 383(6), 510–512. https://doi.org/10.1056/NEJMr2008017

Renfrew, M. J., Cheyne, H., Craig, J., Duff, E., Dykes, F., Hunter, B., Lavender, T., Page, L., Ross-Davie, M., Spiby, H., & Downe, S. (2020). Sustaining quality midwifery care in a pandemic and beyond. *Midwifery*, 88, 102759. https://doi.org/10.1016/j.midw.2020.102759

Runkle, J. D., Brock-Martin, A., Karmaus, W., & Svendsen, E. R. (2012). Secondary surge capacity: A framework for understanding long-term access to primary care for medically vulnerable populations in disaster recovery. *American Journal of Public Health*, 102(12), e24–e32. https://doi.org/10.2105/AJPH.2012.301027

Schrag, D., Hershman, D. L., & Basch, E. (2020). Oncology practice during the COVID-19 pandemic. *JAMA*, 323(20), 2005–2006. https://doi.org/10.1001/jama.2020.6236

Schull, M. J., Stukel, T. A., Vermeulen, M. J., Zweifel, M., Alpert, D. A., Manuel, D. G., Guttmann, A., Laupacis, A., & Schwartz, B. (2007). Effect of widespread restrictions on the use of hospital services during an outbreak of severe acute respiratory syndrome. *CMAJ*, 176(13), 1827–1832. https://doi.org/10.1503/cmaj.061174

Scott, V., Crawford-Browne, S., & Sanders, D. (2016). Critiquing the response to the Ebola epidemic through a Primary Health Care Approach. *BMJ Public Health*, 16(1), 1–9. https://doi.org/10.1186/s12889-016-3071-4

Shadmi, E., Chen, Y., Sourour, I., Faran-Perach, I., Furler, J., Hangoma, P., Hanvoravongchai, P., Obando, C., Petrovsy, V., Rao, K. D., & Ruano, A. L. (2020). Health equity and COVID-19: Global perspectives. *International Journal for Equity in Health*, 19(1), 1–16. https://doi.org/10.1186/s12939-020-01218-z

Solomon, M. D., McNulty, E. J., Rana, J. S., Leong, T. K., Lee, C., Sung, S.-H., Ambrosy, A. P., Sidney, S., & Go, A. S. (2020). The Covid-19 pandemic and the incidence of acute myocardial infarction. *New England Journal of Medicine*, 383(7), 691–693. https://doi.org/10.1056/NEJMct2015630

Søreide, K., Hallet, J., Matthews, J. B., Schnitzbauer, A. A., Line, P. D., Lai, P. B. S., Otero, J., Callegaro, D., Warner, S. G., Baxter, N. N., Teh, C. S. C., Ng-Kamstra, J., Meara, J. G., Hagander, L., & Lorenzon, L. (2020). Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. *The British Journal of Surgery*, 107(10), 1250–1261.

Spoorthy, M. S., Pratapa, S. K., & Mahant, S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review. *Asian Journal of Psychiatry*, 51, 102119. https://doi.org/10.1016/j.ajp.2020.102119

Tsang, H. W., Scudds, R. J., & Chan, E. Y. (2004). Psychosocial impact of SARS (Letter). *Emerging Infectious Diseases*, 10(7), 1326–1327.

Ware, J. E. Jr, & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 30, 473–483.