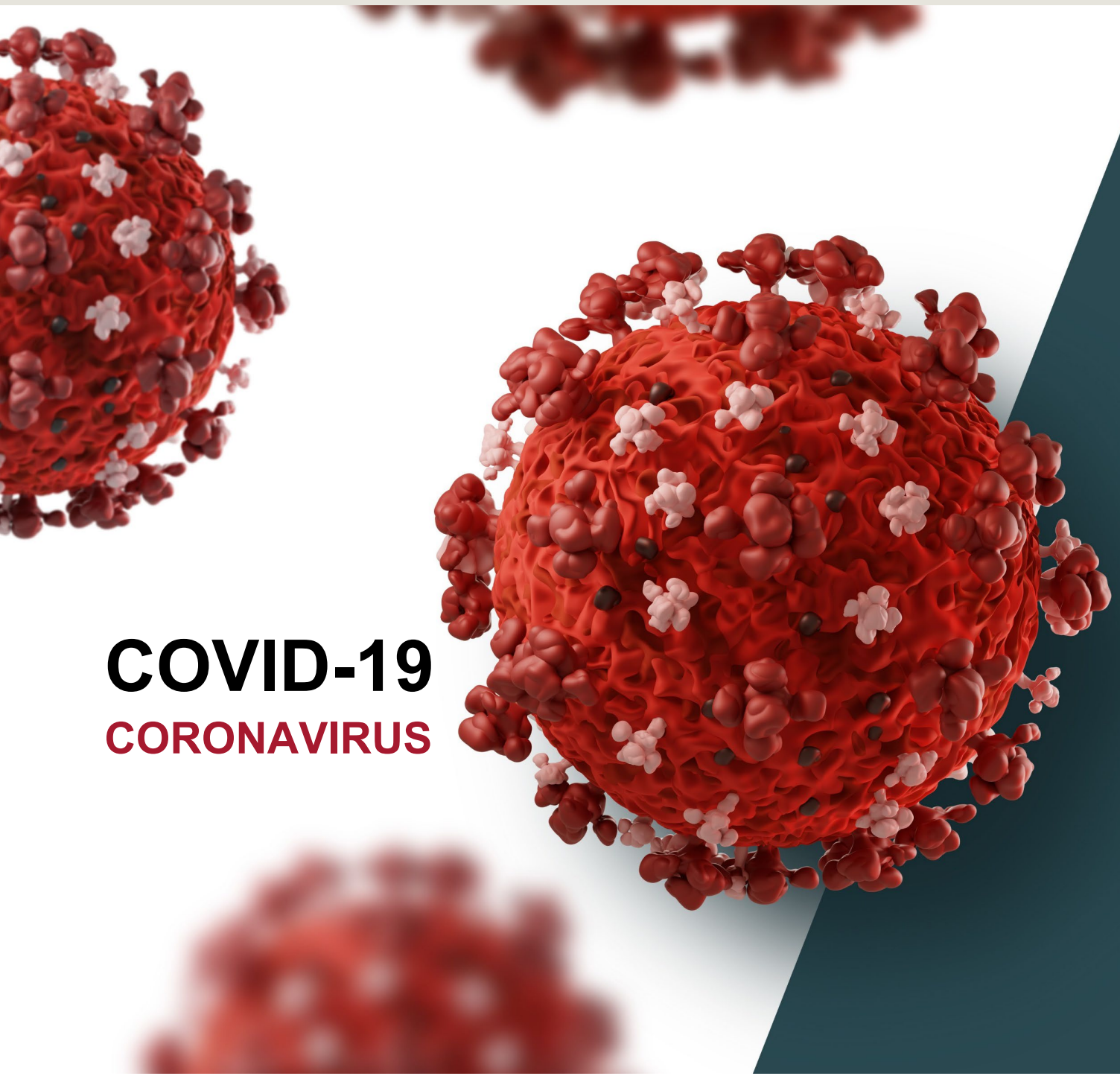




# Monitoring the impact of COVID-19 on general practice

**A SUITE OF IMPACT MEASURES FOR AUSTRALIAN GENERAL PRACTICE**



**COVID-19**  
**CORONAVIRUS**

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**Acknowledgements:**

This report has been produced as a collaborative work between the Centre for Health Systems and Safety Research at Macquarie University and the Digital Health Cooperative Research Centre, Outcome Health, Gippsland, Eastern Melbourne and South Eastern Melbourne Primary Health Networks (PHNs), and the Royal College of Pathologists of Australasia Quality Assurance Programs, with participation from Central and Eastern Sydney and South Western Sydney PHNs. The authors kindly acknowledge the contributions from all collaborating partners and particularly thank Adam McLeod, Brendan Goodger, Christopher Pearce, Emma Gault, Galina Daraganova, Gihan de Mel, Karina Gardner, Kirsty MacDougall, Kristen Short, Precious McGuire, Rochelle Parker, Shirmilla Datta, Stephen Weeding, Tony Badrick and Win Yee Tan. The authors also thank Sheree Crick and Kelly Smith for their administrative support.

**Suggested Citation:**

Thomas J, Georgiou A, Imai C, Sezgin G, Hardie R-A, Dai Z, Wabe N, Franco G, Li J. Monitoring the impact of COVID-19 on general practice: A suite of impact measures for Australian general practice. Australian Institute of Health Innovation, Macquarie University, Sydney. February 2022.

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Published 2022  
Centre for Health Systems and Safety Research  
Australian Institute of Health Innovation  
Macquarie University

ISBN 978-1-74138-490-1



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## Executive Summary

The COVID-19 pandemic has had a devastating impact on healthcare systems world-wide with each successive variant of the virus presenting renewed challenges. As the pandemic evolves over time, there is a need for evidence-based tools to monitor the ongoing impact of the pandemic on both health outcomes and healthcare systems. The purpose of the current document is to outline a suite of impact measures tailored for Australian general practice based on the identification of key areas in general practice that have been impacted by the COVID-19 pandemic.

Following the onset of the pandemic in 2020, a research project titled **COVID-19 – utilising near real-time electronic Australian general practice data to establish effective care and best-practice policy** commenced as a collaboration between the Digital Health Cooperative Research Centre, Macquarie University, Outcome Health, Gippsland, Eastern Melbourne and South Eastern Melbourne Primary Health Networks (PHNs), and the Royal College of Pathologists of Australasia Quality Assurance Programs, with participation from Central and Eastern Sydney and South Western Sydney PHNs. The project aimed to use de-identified general practice data from the Population Level Analysis and Reporting (POLAR) platform to:

- Generate near real-time reports to identify emerging trends related to COVID-19, its diagnosis, treatment and medications prescribed, and its impact on patients; and
- Monitor the impact of interventions/policy decisions.

The project was funded by the Digital Health Co-operative Research Centre with project ethics approval provided by Macquarie University Human Research Ethics Committee. Ethics to collect and use general practice data has been obtained by Outcome Health, the data custodians, granted by the Royal Australian College of General Practitioners (RACGP) ethics committee.

From the outset of the project, key stakeholders were involved in a continuing process of reiterative consultation to identify areas of concern for the impact of the pandemic on general practice. Once identified, researchers analysed each area of concern using the POLAR data. As a direct outcome, seven COVID-19 General Practice Snapshot reports were published titled:

- The uptake of GP telehealth services during the COVID-19 pandemic.
- Socioeconomic and demographic comparisons in the uptake of telehealth services during COVID-19.
- The impact of the COVID-19 pandemic on pathology testing in general practice.
- The impact of the COVID-19 pandemic on general practice consultations in residential aged care facilities.
- The impact of the COVID-19 pandemic on general practice-based HbA1c monitoring in type 2 diabetes.
- Changes in medication prescribing in general practice during the COVID-19 pandemic.
- The impact of the COVID-19 pandemic on cancer screening in general practice.

Each Snapshot presented key findings for the area of concern. For example, analysis of the uptake of telehealth services identified an increase in weekly telephone consultations from zero in 2019 to 95,357 and 42,850 in 2020 for the selected Victorian and NSW PHNs respectively; with the uptake of telehealth telephone

consultations far exceeding those undertaken via video. Cancer screening analysis found mammograms ordered in general practice decreased by 11.9% and 32.2% in NSW and Victoria respectively in 2020 when compared to 2019. The Snapshot series provided PHN's with important evidence for the impact of the pandemic on general practice activity during the first and second waves of the pandemic and served to inform the development of a suite of 'impact measures' to assist in the process of monitoring the general practice landscape during future waves of the pandemic.

The current document presents an overview of the collaborative project including a summary of the Snapshot series which informed the development of a suite of ten impact measures namely:

- Impact Measure 1 – Medication prescribing volumes
- Impact Measure 2 – Telehealth consultation in general practice, its use and patient factors
- Impact Measure 3 – Pathology test request volumes
- Impact Measure 4 – Non-acute respiratory illness testing volumes and demographics
- Impact Measure 5 – Proportion of telehealth consultations in residential aged care facilities
- Impact Measure 6 – HbA1c monitoring in type 2 diabetes – HbA1c testing volume
- Impact Measure 7 – HbA1c monitoring in type 2 diabetes- HbA1c testing frequency and HbA1c levels
- Impact Measure 8 – Cancer screening in general practice
- Impact Measure 9 – Pathology referrals during telehealth consultations
- Impact Measure 10 – Mental health consultation volumes

Each impact measure is defined in detail based on a framework which includes relevant background information, the aim of the measure, a detailed definition, the rationale for development, a categorisation and perspective, the measure's potential use, associated factors, data source- including numerators and denominators, and a suggested sample visualisation.

The proposed suite of impact measures can be used to determine the direct and indirect impacts of the COVID-19 pandemic on general practice activity both retrospectively and into the future. The impact measures also have the potential to be utilised as part of electronic decision support aids (e.g., dashboard) to allow visualisation of the impact of waves of the pandemic on general practice and to support ongoing quality improvement activities by PHNs and Australian general practices.

## Glossary of Terms

The following terms/acronyms are defined in the context of this report:

Term	Meaning
Active Patient	“the record of a patient who attended the practice/service three or more times in the past 2 years” <sup>1</sup> (pg53).
AIHI	Australian Institute of Health Innovation
CHSSR	Centre for Health Systems and Safety Research
Face-to-face	An in-person consultation between a practitioner and patient
GP	General Practitioner
MBS	Medicare Benefits Schedule
PHN	Primary Health Network
POLAR	Population Level Analysis and Reporting
PROM	Patient Reported Outcome Measure
RACF	Residential Aged Care Facility
RACGP	Royal Australian College of General Practitioners
Telehealth	“the use of telecommunications techniques for the purpose of providing telemedicine, medical education and health education over distance” (defined by the International Organization for Standardization <sup>2</sup> )



## 1 Australian Institute of Health Innovation – Overview

The Australian Institute of Health Innovation (AIHI) is a world-leading research institute located on the Macquarie University campus in Sydney, Australia. The Institute conducts world-class research spanning many facets of complex health systems and is comprised of three research centres: The Centre for Healthcare Resilience and Implementation Science, the Centre for Health Informatics, and the Centre for Health Systems and Safety Research (CHSSR).

CHSSR is an internationally recognised research centre with a mission “*to lead in the design and execution of innovative health systems research focussed on patient safety and the evaluation of information and communication technologies in the health sector to produce a world-class evidence-base which informs policy and practice*”<sup>3</sup>. The Centre conducts research in the fields of:

- diagnostic informatics
- medication safety and electronic decision support
- health engagement and workplace behaviour
- aged care evaluation and research and
- health analytics and patient safety.

Comprised of a team of multidisciplinary researchers with qualitative and quantitative research expertise, CHSSR is focussed on producing translational evidence-based research to inform policy and improve patient safety and outcomes.



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**AUSTRALIAN INSTITUTE  
OF HEALTH INNOVATION**

## 2 Introduction

The COVID-19 pandemic has had, and continues to have, a devastating impact on healthcare systems around the world. Countries most severely impacted by the pandemic had recorded in excess of 10,000 confirmed cases per 100,000 population<sup>4</sup> (as at 30 June 2021) compared to Australia, which recorded 119.85 confirmed cases per 100,000 population<sup>4</sup>. As of 30 June 2021, Victoria and NSW recorded the highest percentages of Australia's 30,610 total cases (67.7% and 19% respectively)<sup>5</sup>.

The unpredictability of COVID-19 has been clearly demonstrated through the emergence of the Delta variant, with Australia's first Delta case being reported in June 2021. The rapid spread of the Delta variant had a marked impact on Australia's infection rate with case numbers increasing to 170,458<sup>6</sup> as at 31 October 2021; with Victoria and NSW accounting for 52.1% (88,824) and 44.2% (75,278) respectively (96.3% total)<sup>7</sup> of Australia's total COVID-19 case numbers. As of 2 November 2021, Australia had recorded 674.63 confirmed cases per 100,000 population<sup>4</sup>, prior to a NSW Health media release on 28 November 2021 which announced that the Omicron variant had been detected in NSW<sup>8</sup>. By 17 February 2022, Australia's confirmed cases had soared to 10,133.89 per 100,00 population<sup>4</sup>. The dramatic and erratic impact of COVID-19 outbreaks highlight the need for readily available, evidence-based tools to consistently measure and monitor the impact of the pandemic.

### 2.1 Research Project Overview

The **COVID-19 – utilising near real-time electronic Australian general practice data to establish effective care and best-practice policy** project commenced in 2020 as a collaborative relationship involving the Digital Health Cooperative Research Centre, Macquarie University, Outcome Health, Gippsland, Eastern Melbourne and South Eastern Melbourne Primary Health Networks (PHNs), and the Royal College of Pathologists of Australasia Quality Assurance Programs, with participation from Central and Eastern Sydney and South Western Sydney PHNs. The project has utilised an innovative secure and comprehensive digital health platform, **Population Level Analysis and Reporting**<sup>9</sup> (POLAR) to:

- Generate near real-time reports to identify emerging trends related to COVID-19, its diagnosis, treatment and medications prescribed, and its impact on patients.
- Monitor the impact of interventions/policy decisions.

The project methods, proposed studies, data source and project components have been comprehensively detailed in a project protocol paper published in *Health Research Policy and Systems*<sup>10</sup>. The project aimed to:

*“examine the feasibility of using near real-time electronic general practice data to promote effective care and best-practice policy”<sup>10 pg 2</sup>*

The project protocol paper details four key mechanisms through which the project aim would be realised, with mechanism #4 informing the current report, namely:

*“the establishment of an evidence-based suite of general practice outcome measures required to monitor the quality and effectiveness of care related to incidence and prevalence, recovery and mortality.”<sup>10 pg 2</sup>*

The activities undertaken to achieve this key project deliverable form the basis of this report.



### 3 Document Purpose

As the pandemic continues to evolve, the Australian general practice COVID-19 landscape is likely to be characterised by localised outbreaks across states and territories, ongoing vaccination rollout (including vaccinations performed by General Practitioners (GPs))<sup>11</sup> and the potential for longer term impacts on the healthcare needs of COVID-19 patients<sup>12</sup>. The availability of a suite of impact measures (arrived at as part of a collaborative process involving PHNs, GPs and researchers), can assist the process of monitoring the general practice COVID-19 landscape into the future.

The purpose of the current report is to outline a suite of impact measures tailored for Australian general practice based on the identification of key areas in general practice that have been impacted by the COVID-19 pandemic. The development and consultation processes undertaken to achieve this key project deliverable are presented in detail in this report, including the final outcome- a suite of ten impact measures developed specifically for, and tailored to, Australian general practice.

These measures can be used to determine the direct and indirect impacts of the COVID-19 pandemic on general practice both retrospectively and into the future. The impact measures can be utilised as part of electronic decision support aids (e.g., dashboard) to allow visualisation of the impact of waves of the pandemic on general practice and to support ongoing quality improvement.

### 4 Impact Measures

#### 4.1 Definition

Clinical indicators play an important role in quality improvement<sup>13</sup> and suites of clinical indicators are well established in Australian general practice<sup>14</sup>. According to Mainz<sup>13</sup>:

*“An ideal outcome indicator would capture the effect of care processes on the health and well being of patients and populations.” pg 526*

Beyond the obvious health consequences, COVID-19 engendered rapid and transitory changes to Australian social and policy environments through the introduction of pandemic response measures<sup>15-18</sup>, which can have an impact on health outcomes<sup>19, 20</sup>. The suite of impact measures presented in this report have been developed to complement clinical and outcome indicators that demonstrate the impact of the pandemic on activities undertaken within the general practice setting. **It should be stressed that the impact measures are not measures of performance and do not imply targets for achievement**, rather they are designed to measure and monitor the impact of COVID-19 on general practice activity.

Each impact measure has been structured to include a minimum set of information which is presented in a structured framework. The development of the framework has been informed by existing literature<sup>13, 21, 22</sup> in the areas of clinical and outcome indicators, which has been adapted to suit the requirements of an impact measure.

## 4.2 Scope

The current suite of impact measures has been developed to specifically focus on the impact of COVID-19 on Australian general practice and include both general practice activity and health related measures. The scope of the proposed suite is limited to aspects of general practice which can be measured using routinely collected data available via the POLAR platform. This approach is highly advantageous in that it provides a readily available source of information without added workload or the need to collect more data.

The scope of the current suite of measures excludes patient reported outcome measures (PROM's), which are an additional facet of COVID-19 measures of international interest<sup>23</sup>. Sentinel indicators, which identify "individual events or phenomena that are intrinsically undesirable..."<sup>13 pg524</sup> (e.g., adverse events) are also outside of the scope of the current suite.

## 4.3 Data Source

The impact measures utilise the statistical analysis of routinely collected data extracted from the POLAR<sup>9</sup> platform. POLAR<sup>9</sup> is a secure and comprehensive digital health platform that collects de-identified data from approximately 800 consenting general practices within participating PHNs. The platform includes data from<sup>24</sup>:

- Eastern Melbourne PHN (urban Victoria)
- South Eastern Melbourne PHN (urban Victoria)
- Gippsland PHN (mainly rural Victoria)
- Central and Eastern Sydney PHN (urban NSW) and
- South Western Sydney PHN (urban NSW incorporating rural areas Wingello to Bundanoon).

## 4.4 Snapshots Using POLAR Data

Initial analyses of POLAR data were published in the form of Snapshot reports covering seven key areas of general practice activity impacted by the COVID-19 pandemic. The analyses undertaken for each Snapshot served to inform the development of one or more impact measures in each area of focus.

The seven Snapshots have been published on the CHSSR website<sup>25</sup> namely:

1. **[The uptake of GP telehealth services during the COVID-19 pandemic. COVID-19 General Practice Snapshot. Issue 1: 2 November 2020.](https://doi.org/10.25949/C3HE-F430)** Sydney: Macquarie University. <https://doi.org/10.25949/C3HE-F430>
2. **[Socioeconomic and demographic comparisons in the uptake of telehealth services during COVID-19. COVID-19 General Practice Snapshot. Issue 2: 22 January 2021.](https://doi.org/10.25949/YYH4-3T30)** Sydney: Macquarie University. <https://doi.org/10.25949/YYH4-3T30>
3. **[The impact of the COVID-19 pandemic on pathology testing in general practice. COVID-19 General Practice Snapshot. Issue 3: 12 February 2021.](https://doi.org/10.25949/ZX36-8S49)** Sydney: Macquarie University. <https://doi.org/10.25949/ZX36-8S49>

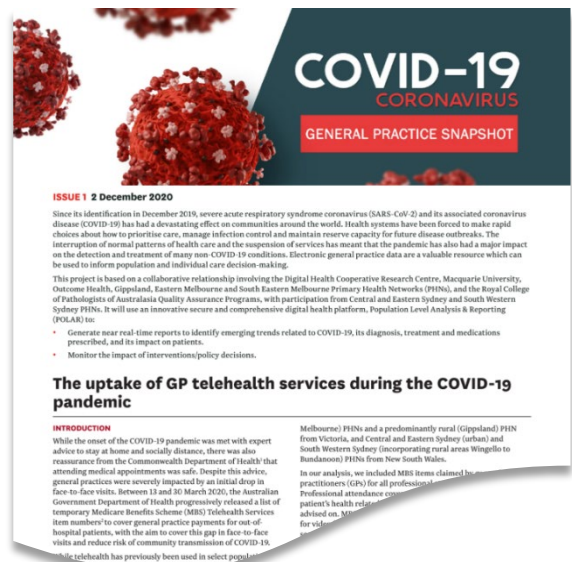
4. [The impact of the COVID-19 pandemic on general practice consultations in residential aged care facilities. General Practice Snapshot. Issue 4: 31 March 2021.](#) Sydney: Macquarie University. <https://doi.org/10.25949/71JM-QG60>
5. [The impact of the COVID-19 pandemic on general practice-based HbA1c monitoring in type 2 diabetes. Issue 5: 31 March 2021.](#) Sydney: Macquarie University. <https://doi.org/10.25949/Q9BE-BJ06>
6. [Changes in medication prescribing in general practice during the COVID-19 pandemic. COVID-19 General Practice Snapshot. Issue 6: 12 May 2021.](#) Sydney: Macquarie University. <https://doi.org/10.25949/zpw2-wj80>
7. [The impact of the COVID-19 pandemic on cancer screening in general practice. General Practice Snapshot. Issue 7: 10 June 2021.](#) Sydney: Macquarie University. <https://doi.org/10.25949/5Z8Y-2E49>

The Snapshot reports were produced between December 2020 and June 2021. A summary of the subject matter and key findings from each Snapshot report is presented in the sections to follow.

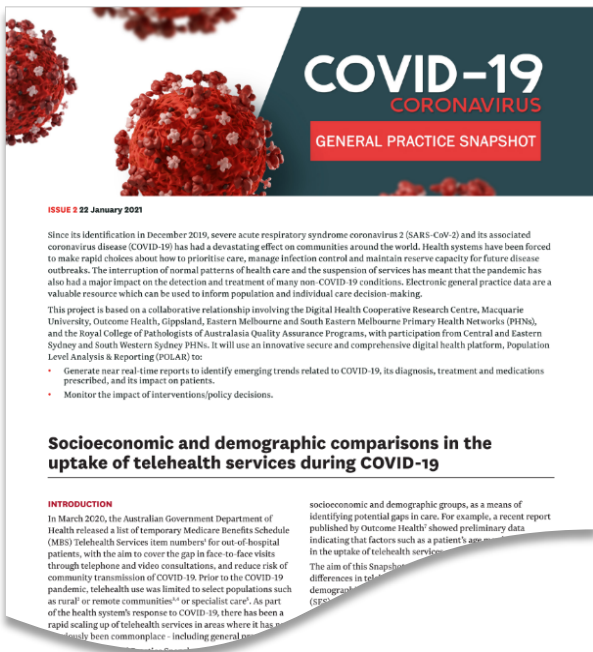
#### 4.4.1 General practice COVID-19 Snapshot #1 – Telehealth uptake

The first COVID-19 general practice Snapshot examined ‘*The uptake of GP telehealth services during the COVID-19 pandemic*’<sup>26</sup>.

One of the pandemic response measures introduced by the Australian Government was Medicare Benefits Schedule (MBS) temporary telehealth item numbers<sup>27</sup>. The impact of the introduction of these item numbers on consultation volumes in general practice was the subject of this Snapshot. The Snapshot compared face-to-face and telehealth (both video and telephone) consultation volumes between January 2019 and September 2020 in both NSW and Victorian PHNs using POLAR data. Key findings included an increase in weekly telephone consultations from zero in 2019 to 95,357 and 42,850 in 2020 for the selected Victorian and NSW PHNs respectively; with the uptake of telehealth telephone consultations far exceeding those undertaken via video.



#### 4.4.2 General practice COVID-19 Snapshot #2 – Telehealth socioeconomic and demographic comparisons



The topic of telehealth in general practice was explored in further detail in Snapshot 2- ‘Socioeconomic and demographic comparisons in the uptake of telehealth services during COVID-19’<sup>28</sup>. The Snapshot explored whether the uptake of telehealth consulting was associated with patient socioeconomic (SES) or demographic factors. Key findings included:

- Females had a greater proportion of telehealth consultations
- Children and adolescents had the highest proportion of face-to-face consultations and
- Low to mid SES had the lowest uptake of telehealth.

#### 4.4.3 General practice COVID-19 Snapshot #3 – Pathology testing in general practice

The COVID-19 pandemic had the potential to impact many aspects of general practice. ‘The impact of the COVID-19 pandemic on pathology testing in general practice’<sup>29</sup> was explored in general practice Snapshot #3.

The Snapshot reported the weekly total number of pathology results per 1,000 consultations in NSW and Victorian PHNs between January 2017 and September 2020. Additional data analysis was also included for weekly volumes of non-acute respiratory illness test results per 1,000 consultations in 2020. The key findings are summarised in the infographic reproduced in Figure 1<sup>29</sup>.

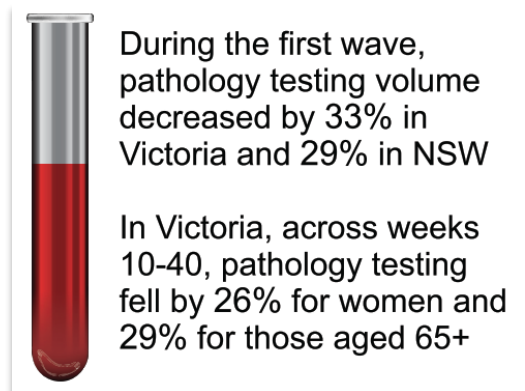
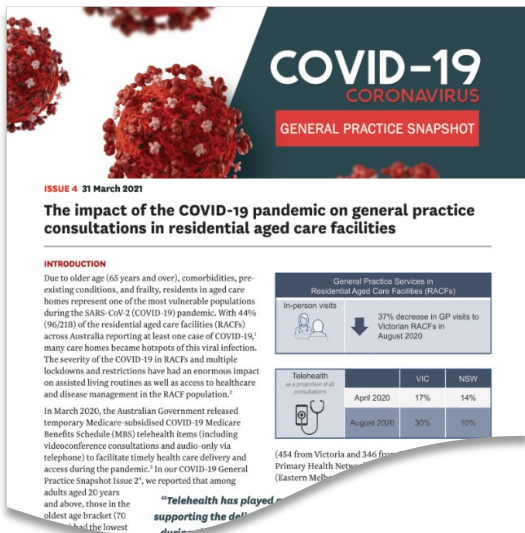


Figure 1- Snapshot 3 Infographic of Key Findings

4.4.4 General practice COVID-19 Snapshot #4 – Consultations in residential aged care facilities



Exploring the impact of the pandemic on the provision of GP services to elderly residents in aged care was the focus of Snapshot #4- *‘The impact of the COVID-19 pandemic on general practice consultations in residential aged care facilities’*<sup>30</sup>. Utilising MBS billing data from POLAR, monthly volumes of service items pertaining specifically to residential aged care facilities (RACFs) in 2020 were compared to the previous year. The proportion of services provided by telehealth (phone and video) and face-to-face was also presented for both NSW and Victoria.

A key finding included a 37% decrease in the number of GP visits to RACFs in Victoria in August 2020, coinciding with the state’s second wave of COVID-19.

4.4.5 General practice COVID-19 Snapshot #5 – HbA1c monitoring in type 2 diabetes

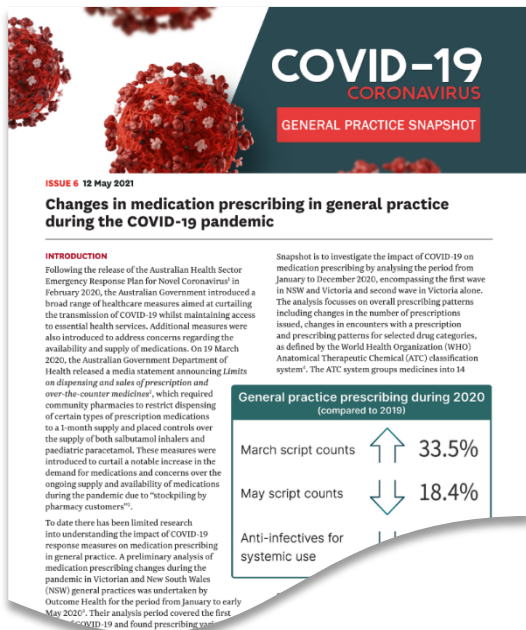
Snapshot #5 focussed on *‘The impact of the COVID-19 pandemic on general practice-based HbA1c monitoring in type 2 diabetes’*<sup>31</sup>. The weekly average number of HbA1c tests performed in NSW and Victoria from the POLAR data were compared for 2018-2019 and 2020. Further sub-group analysis was also reported for testing frequency. The Snapshot highlighted a decline in HbA1c testing during pandemic waves in both states for patients with type 2 diabetes<sup>31</sup> with the key findings summarised in the Snapshot infographic reproduced in Figure 2:

HbA1c monitoring in type 2 diabetes	VIC	NSW
% change in number of HbA1c tests March-May 2020 vs mean 2018-2019	-25.6% (8,439 vs 10,596 tests)	-19.1% (5,962 vs 7,103 tests)
% of patients outside target HbA1c level	34.4% (2020) 30.8% (2019)	32.5% (2020) 29.0% (2019)

Figure 2- Snapshot 5 Infographic of Key Findings



#### 4.4.6 General practice COVID-19 Snapshot #6 – Medication prescribing



'Changes in medication prescribing in general practice during the COVID-19 pandemic'<sup>32</sup> was explored in Snapshot #6. Changes in the volume of prescriptions throughout 2020 were compared to the previous year including monthly changes in prescription encounters per 100 consultations. Prescription volumes of anti-infectives for systemic use were also compared between 2019 and 2020.

The key findings from the Snapshot included relative increases in prescription counts coinciding with pandemic waves with a 33.5% increase in script counts in March 2020, when compared to the previous year. There was also an overall decrease of 4.4 per 100 consultations in anti-infectives for systemic use<sup>32</sup>.

#### 4.4.7 General practice COVID-19 Snapshot #7 – Cancer screening

The final topic explored in the Snapshot series was '*The impact of the COVID-19 pandemic on cancer screening in general practice*'<sup>33</sup>. Using POLAR data, the number of mammograms and cervical screening tests performed between January and September of 2019 and 2020 were compared to publicly available data from national screening programs reported by the Australian Institute of Health and Welfare. The analyses identified decreases in testing activity with the key findings presented in the Snapshot infographic reproduced in Figure 3.

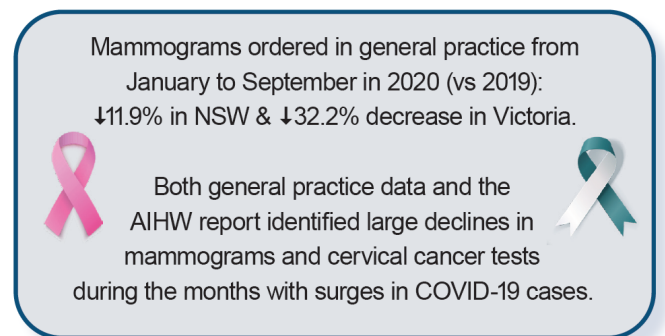


Figure 3- Snapshot 7 Infographic of Key Findings

In addition to the seven Snapshot reports the topic of mental health was also considered. However, the complexities of the data analysis for mental health were deemed beyond the scope of a Snapshot report and this topic is currently being explored in a detailed statistical analysis. Once completed, the analyses will be published in the form of a journal article. The early data exploration was used to inform the development of a mental health impact measure.

### 4.5 Consultation Process

The **COVID-19 – utilising near real-time electronic general practice data to establish effective care and best-practice policy** project governance structure included a Project Management Team (meeting monthly from July 2020–December 2021), Project Control Group (meeting biannually from



September 2020–December 2021) and Design Thinking/Action Research sessions with key stakeholders (seven sessions between August 2020–November 2021).

The consultation process involved a design thinking<sup>34, 35</sup> approach with a focus on the key elements of collaboration between the research team and a range of stakeholders; engaging stakeholders from the outset of the project to identify research areas; iterative development of Snapshots through stakeholder discussion of preliminary findings; presenting findings in the form of draft Snapshots to stakeholders for feedback and comment before publishing each Issue in the Snapshot series; and translating the research findings into a suite of impact measures. Emerging evidence from the literature and input from key stakeholders informed the selection of general practice activities (topic areas) that had the potential to be impacted by the pandemic. Snapshot reports were drafted after analysing POLAR data relevant to each topic area. The draft Snapshot reports were then provided to key stakeholders from both the project management team and PHNs for consultative review and feedback. The Snapshot reports were finalised using the feedback and input from the key stakeholders. Upon completion, Snapshot reports were disseminated to participating PHNs and published on the CHSSR website.

The published Snapshot reports served to inform the selection and development of a set of impact measures relevant to general practice. A template for an impact measure was developed using evidence from published literature. The impact measures were then defined using the evidence generated from the Snapshot series and data available within the POLAR platform. Extending on the Snapshots, the topic of telehealth was explored in greater depth with the analysis being documented as a journal article (Hardie, R.-A., et al., *Telehealth-based diagnostic testing in general practice during the COVID-19 pandemic: an observational study. BJGP Open, 2022.*)<sup>36</sup> serving to inform the development of an additional impact measure. A report of the draft impact measures was then provided to key stakeholders for review and comment. The current report, including the final suite of indicators, was finalised based on the feedback received from the governance groups and participating PHN stakeholders.

## **4.6 Limitations**

The impact measures developed in this report are based on data availability at the time of defining. Any changes to Medicare MBS item numbers or the data source would need to be considered in the use of the proposed impact measures.

## **5 Ethics**

Ethics approval for the **COVID-19 – utilising near real-time electronic general practice data to establish effective care and best-practice policy** project was provided by Macquarie University Human Research Ethics Committee (52020675617176). Approval to collect and use general practice data has been obtained by Outcome Health, the data custodians<sup>9</sup>, granted by the Royal Australian College of General Practitioners (RACGP) ethics committee (17-008).

De-identified and aggregate data are used for the calculation of each impact measure.

## 6 Framework Specification

The elements of the framework, their definition and rationale for inclusion are as follows:

Elements	Definition and rationale for inclusion
Background	Indicators should be evidence-based <sup>13</sup> . Based on this principle, the background information for each impact measure will detail current available evidence and any relevant research in the field of interest.
Definition	A clear and precise definition of what the indicator is measuring.
Aim	The aim of the measure and how it will serve to inform general practice.
Rationale	The reason for developing the measure in the context of general practice.
Perspective <sup>21</sup> and categorisation <sup>13</sup>	<p>Whether the indicator is:</p> <ul style="list-style-type: none"> <li>- patient focussed</li> <li>- provider focussed</li> <li>- organisation focussed</li> <li>- population based.</li> </ul> <p>The need for indicators to measure a wide range of aspects of healthcare has been highlighted by Jennings et al<sup>21</sup> who proposed an outcome classification scheme with three categories, namely: patient focussed outcomes (including diagnosis focussed e.g., test results, and holistic indicators e.g., health status), provider focussed outcomes (e.g., prescribing rates) and organisation focussed outcomes (e.g., mortality). The authors<sup>21</sup> also recognised the importance of population based indicators as an additional category. The ‘perspective’ classification has been included in the current suite of impact measures to facilitate a logical grouping of individual indicators based on perspectives of interest.</p> <p>Alternative classifications of clinical indicators have been proposed by Mainz<sup>13</sup> with categories including, for example: rate-based or sentinel, structure, process, outcome, generic or disease-specific. Adapting aspects of Mainz’s classification relevant to the scope (and dataset) of the current suite of impact measures, each measure will also be categorised according to whether it is:</p> <ul style="list-style-type: none"> <li>- process related (as defined by Mainz: “<i>Process indicators measure the activities and tasks in patient episodes of care.</i>”<sup>13</sup> pg 525)</li> <li>- outcome related (as defined by Mainz: “<i>An ideal outcome indicator would capture the effect of care processes on the health and wellbeing of patients and populations.</i>”<sup>13</sup> pg 525-526)</li> </ul>
Potential uses	Impact measures may be used in many ways including, for example, to inform quality improvement activities in healthcare or for temporal comparisons <sup>13</sup> . Each measure will include suggestions for its potential use in the general practice setting.

Associated factors	Confounding variables that may impact/contribute to the measurement or interpretation of findings, for example: patient demographics, co-morbidities <sup>13</sup> . Accordingly, this element will identify factors associated with the measure, include risk adjustments.
Data source	The data source for each measure will be specified including the data to be used to calculate the numerator and denominator for proportion/rate-based indicators <sup>13</sup> . Inclusion and exclusion criteria should be specified <sup>22</sup> . Units of measurement will also be specified e.g., per 1,000 consultations.
Numerator	
Denominator	
Sample visualisation	A sample graphical representation to be included for each indicator. The graphical representation will be based on actual data as specified by the numerator and denominator.

Each impact measure has been developed on the basis of this framework.

## 7 Impact Measure 1 – Medication prescribing volumes

Background	<p>During March 2020, the Australian government announced the introduction of temporary limits on the sale and dispensing of a range of prescription and over-the-counter medicines<sup>37</sup>. This measure was introduced to address the increase in demand for medicines and excessive purchasing during the early weeks of the pandemic<sup>38</sup>. The limits introduced included:</p> <ul style="list-style-type: none"> <li>- limiting the dispensing of specified prescription medicines to a one-month supply</li> <li>- limiting the sale of specified over-the-counter medicines to one unit per purchase.</li> </ul> <p>Notable examples of the medicines included on the ‘Affected products’ list included Salbutamol inhalers and Children's paracetamol liquid formulations<sup>38</sup>.</p> <p>In addition, the Australian Government also announced that the implementation of electronic prescribing (ePrescribing) would be fast-tracked and this measure, combined with the Home Medicines Service, aimed to ensure access to medicines during the pandemic<sup>39, 40</sup>. General practice Snapshot #6<sup>32</sup> found fluctuations in medication prescription counts throughout 2020 with a notable increase during March 2020 (+33.5%) and another relative increase from May to July 2020, coinciding with the first and second waves of the pandemic in Australia.</p>
Aim	To monitor the monthly volume of medication prescribing in general practice before, during and after the pandemic.
Definition	The volume of prescriptions (counts) for all medications per month regardless of the number of GP consultations.
Rationale	Near real-time reporting of prescription volumes (counts) can be used to identify periods of increased or decreased demand for medication/prescriptions.
Perspective	<p>Provider focussed.</p> <p>Process related.</p>
Potential use	The medication prescribing volume indicator can be used to detect surges or declines in prescribing volume (counts) and hence be used to inform the development of best practice guidelines for managing prescribing, especially during pandemic or epidemic circumstances.
Associated Factors	Whilst GPs are responsible for medication prescribing, the demand for prescription medication may be confounded by patient demographics. Confounding factors such as age, sex, health status, location may impact on this indicator. Inclusion of the indicator on an interactive dashboard could allow the user to select each potential confounder for the purpose of stratifying the data. For example, a graph of total prescription counts

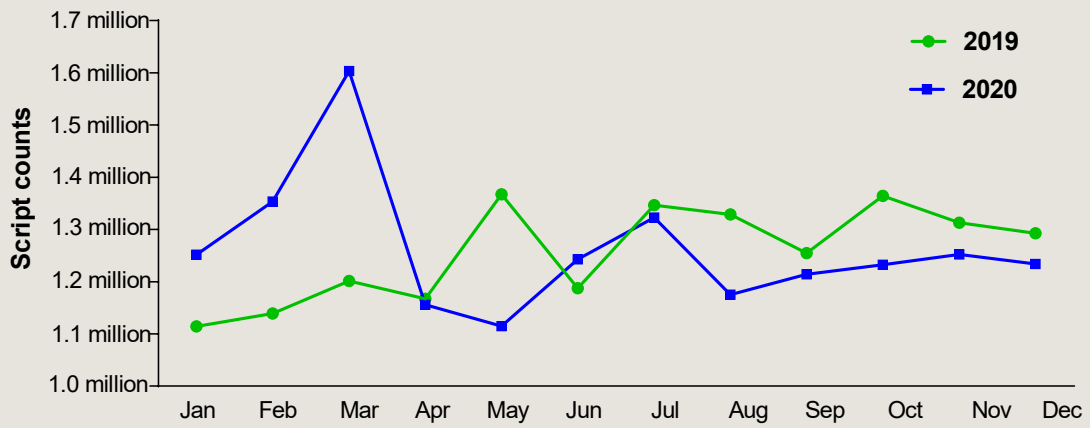
per month could be filtered to display total prescription counts by age category, sex, or rural vs urban.

**Data source** Data elements are sourced from POLAR and include MBS items claimed by GPs for all professional attendance type items

**Numerator** Count of prescriptions per month

**Denominator** n/a

Sample Visualisation



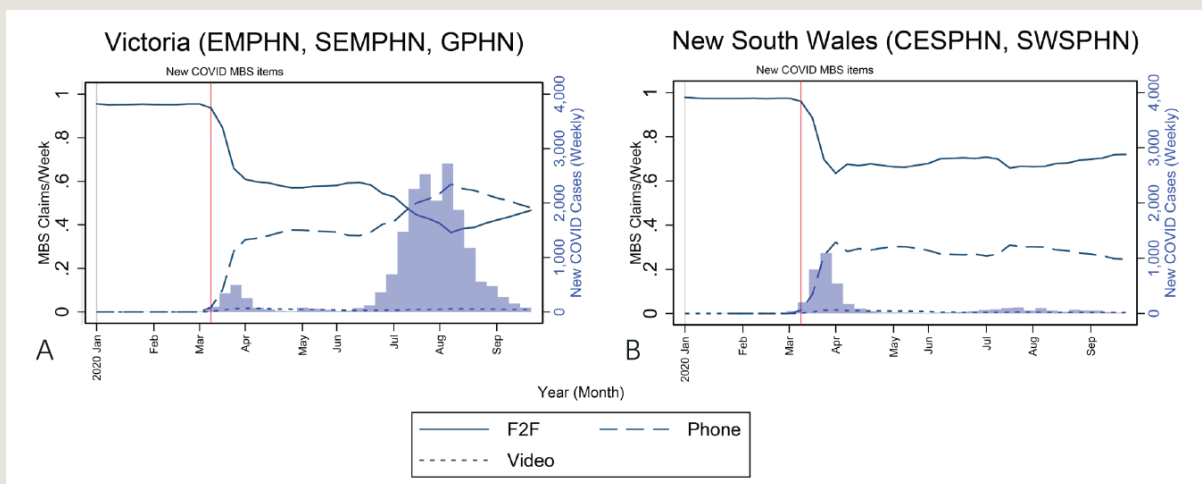
## 8 Impact Measure 2 – Telehealth consultation in general practice, its use and patient factors

Background	<p>The COVID-19 pandemic has resulted in changes to delivery of general practice consultations, with a shift from face-to-face consultations to telehealth; which may be delivered through either phone or video communication services. This shift was mediated by the introduction of telehealth specific items for a number of services in the Medicare Benefit Schedule (MBS). These items were initially introduced as a temporary measure to ensure continued healthcare access during COVID-19, however, the continued usefulness of these services in ensuring access to care has resulted in several extensions. General practice Snapshot #1- <i>The uptake of GP telehealth services during the COVID-19 pandemic</i><sup>26</sup> and Snapshot #2- <i>Socioeconomic and demographic comparisons in the uptake of telehealth services during COVID-19</i><sup>28</sup>, have demonstrated the importance of these items for continued healthcare access, with their increased use at times of COVID-19 restrictions being observed.</p>
Aim	<p>To monitor: (1) the consultation delivery method in general practice during and following the COVID-19 pandemic and; (2) patient demographic factors related to consultation delivery type.</p>
Definition	<p>Weekly proportions of general practice consultations which are face-to-face/phone/video overall, and by sociodemographic characteristics including remoteness and socioeconomic status.</p>
Rationale	<p>Telehealth may potentially become a favourable mode of healthcare delivery in general practice even after the COVID-19 pandemic; particularly in areas where healthcare access was difficult prior to the pandemic; such as in remote areas or for patients with reduced mobility. Continued monitoring of modality of healthcare access may provide insight into how and where telehealth may be desirable or even required.</p>
Perspective	<p>The indicator has relevance to patient, provider, and organisation. Patients with difficulties in accessing healthcare due to personal reasons, such as disability, age, or residence, may rely on telehealth. The indicator might provide insight into sociodemographic characteristics of patients for whom telehealth consultations are important. It may also provide key insights into patient characteristics or groups of patients where there is a gap in use, allowing for the identification and allocation of resources, training, or alternate consultation delivery type to ensure access to care. Providers may rely on telehealth for certain types of consultations for which a face-to-face consultation is not necessary or desirable, such as reporting of pathology results. Providers in remote areas may also rely more on telehealth, where travel may be a barrier to healthcare access, while patients in remote areas sometimes have the barrier of poor internet or mobile service, resulting in lower telehealth access. Monitoring of telehealth consultations can also provide an indication of a reliance on telehealth, which can prompt plans for extra resources.</p>



Potential use	The indicator could provide insight into the frequency of, and sociodemographic differences in telehealth use, including differences in phone and video use, and specific telehealth item numbers, which may be used to determine areas in need of further attention.
Associated factors	There may be unknown reasons for telehealth use or barriers to low telehealth use not measurable from general practice data.
Data source	The data are sourced from general practice electronic health records, collected by the POLAR platform. Primarily, Medicare service and patient sociodemographic characteristics data will be used.
Numerator	<p>Numerator is number of face-to-face/video/phone consultations per week. Initially overall, and subsequently stratified by sociodemographic characteristics.</p> <p>Items numbers for the numerator:</p> <p>Face-to-face: 3, 23, 36, 44</p> <p>Phone: 91890, 91891, (for data pre- 30 June 2021: 91795, 91809, 91810, 91811)</p> <p>Video: 91790, 91800, 91801, 91802</p> <p>Note: The item numbers may change according to the MBS policy changes. Please check for updates on:</p> <p><a href="http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Factsheet-TempBB">http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Factsheet-TempBB</a></p>
Denominator	Denominator is number of face-to-face/video/phone consultations per week. Initially overall, and subsequently stratified by sociodemographic characteristics. Denominator is the weekly sum of the above indicated item numbers.

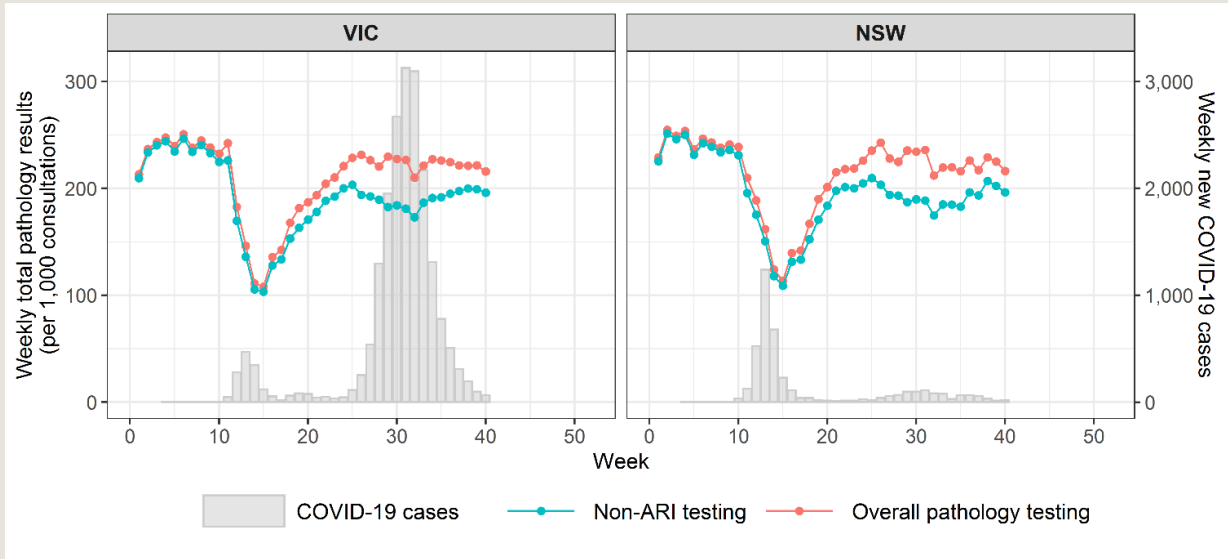
Sample Visualisations



## 9 Impact Measure 3 – Pathology test request volumes

Background	An important component of the diagnosis and ongoing management of disease is pathology testing. Studies into the initial changes in the weekly numbers of pathology test orders during the first 38 weeks of the pandemic in NSW and Victorian general practices have been undertaken by Outcome Health and showed periods of both decline and recovery <sup>41</sup> .
Aim	To quantify pathology test volumes in general practice.
Definition	The overall volume of pathology testing as well as the volume of testing excluding tests for acute respiratory illness (ARI) such as respiratory viral pathogen PCR and COVID-19 testing (i.e., non-ARI testing).
Rationale	To understand how waves of the pandemic impact pathology testing volumes in general practice.
Perspective and Categorisation	Provider focussed. Process related.
Potential use	Understanding the impact of the pandemic and its associated restrictions on laboratory test requesting in general practice has the potential to guide general practitioners in identifying areas in need of action, for example, potentially important or critical missed tests.
Associated Factors	n/a
Data source	Data elements are sourced from POLAR and include MBS items claimed by GPs for all professional attendance type items.  Pathology tests included in this analysis should include clinical laboratory testing using body fluids and tissues (e.g., full blood count, lipid profile, urinalysis, cultures). As pathology tests can be ordered either as a single (e.g., red blood cell) or a battery of tests (e.g., full blood count), the number of recorded test results per one request can vary by order. Thus, in this analysis, pathology test results should be counted as part of one result per patient per day, regardless of the number of recorded test results.
Numerator	Weekly total pathology results
Denominator	Weekly total consultations

Sample Visualisation

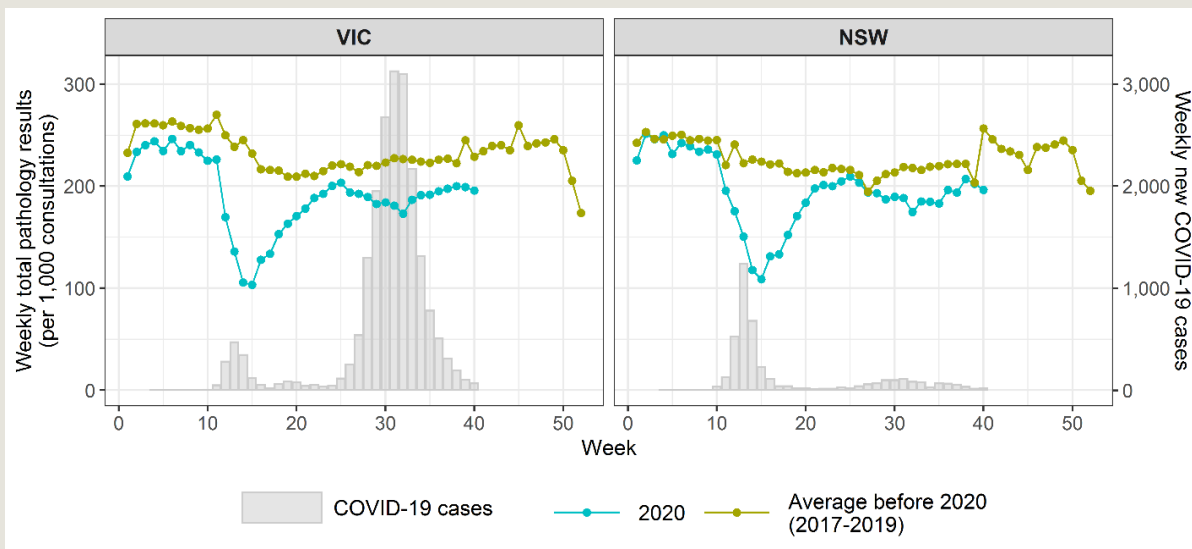


Sample visualisation for the first 40 weeks of 2020.

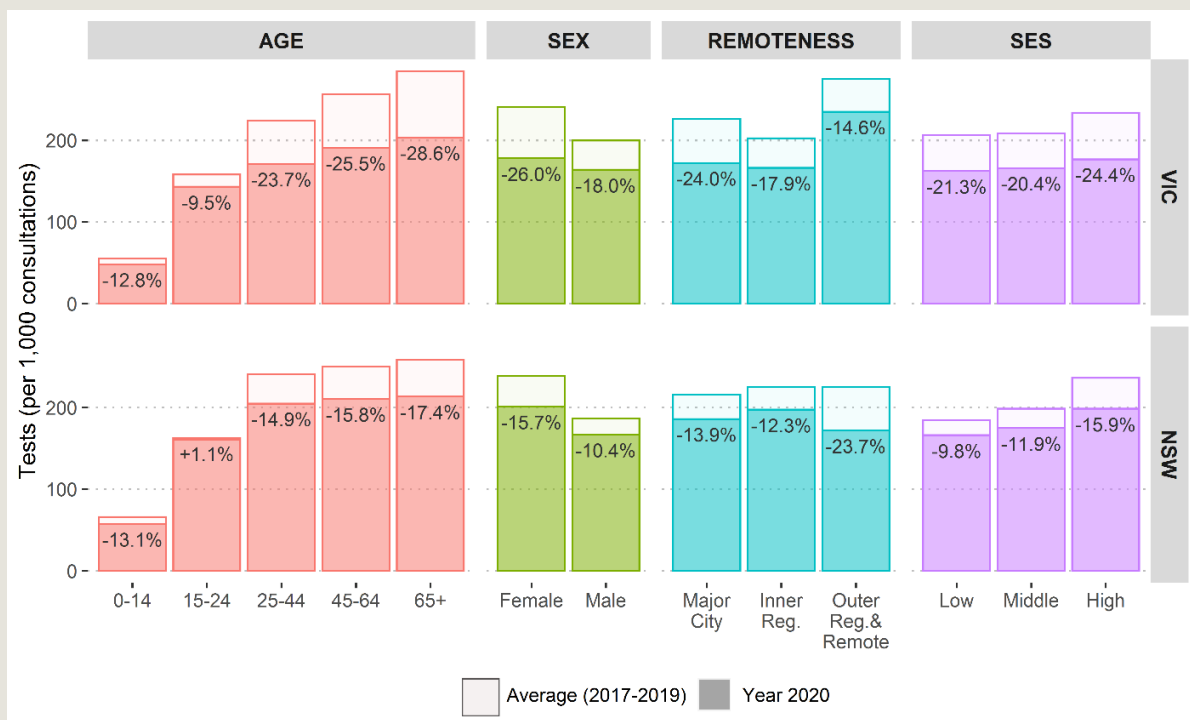
## 10 Impact Measure 4 – Non-acute respiratory illness testing volumes and demographics

Background	An important component of the diagnosis and ongoing management of disease is pathology testing. Studies into the initial changes in the weekly numbers of pathology test orders during the first 38 weeks of the pandemic in NSW and Victorian general practices has been undertaken by Outcome Health and showed periods of both decline and recovery <sup>41</sup> .
Aim	To compare non-acute respiratory illness (non-ARI) pathology testing volumes in general practice before and following the pandemic.
Definition	The volume of non-ARI pathology test requests in general practice and associated sociodemographic characteristics.
Rationale	To understand how waves of the pandemic impact non-ARI pathology testing volumes in general practice and identify the socio-demographic characteristics of patients who required non-ARI testing.
Perspective and Categorisation	Provider focussed. Process related.
Potential use	Understanding the impact of the pandemic and its associated restrictions on laboratory test requesting in general practice has the potential to guide GPs in identifying areas in need of action, for example, potentially important or critical missed tests. Examining the socio-demographic characteristics of patients requiring non-ARI testing can aid in understanding the impact on specific patient sub-groups.
Associated Factors	n/a
Data source	Data elements are sourced from POLAR. These include MBS items claimed by GPs for all professional attendance type items.  Pathology tests included in this analysis should include clinical laboratory testing using body fluids and tissues (e.g., full blood count, lipid profile, urinalysis, cultures). As pathology tests can be ordered either as a single (e.g., red blood cell) or a battery of tests (e.g., full blood count), the number of recorded test results per one request can vary by order. Thus, in this analysis, pathology test results should be counted as part of one result per patient per day, regardless of the number of recorded test results.
Numerator	Weekly total non-ARI pathology results
Denominator	Weekly total consultations

Sample Visualisations



Weekly number of non-ARI tests in 2020 compared to pre-2020 average



Sociodemographic comparisons of non-ARI testing volumes

## 11 Impact Measure 5 – Proportion of telehealth consultations in residential aged care facilities

Background	<p>Due to older age (65 years+), comorbidities, pre-existing conditions, and frailty, aged care residents are among the most vulnerable populations to contract the virus during the COVID-19 pandemic. Indeed, outbreaks were more likely to occur in residential aged care facilities (RACFs) than in other healthcare settings in a contained environment.<sup>42</sup> Thus, the pandemic has had an enormous impact on assisted living routines and care access. In March 2020, the Australian Government expanded Medicare-subsidised COVID-19 MBS telehealth items to ensure timely and safe healthcare delivery in general practice. With limited data available, it is of clinical importance to understand the utilisation of telehealth in residential aged care settings and develop metrics to support quality of care during and post pandemic.</p> <p>Results from our Snapshot #4<sup>30</sup> suggest that face-to-face consultations in RACFs began to decline in April 2020. The decrease was more apparent in Victoria than in NSW. Simultaneously, telephone consultations trended upwards overall in Victoria, with an increase of 14% in April and 26% in August. In NSW, telephone consultations were stable overall, with 13% in April and 10% in August. To be noted, April and August represented, respectively, the first and second waves of the COVID-19 outbreaks and lockdowns in Australia. By contrast, the utilisation of telehealth video consultations was low overall in both states (&lt;4%).<sup>30</sup></p>
Aim	To measure the patterns of general practice consultations in RACFs during the COVID-19 pandemic.
Definition	Number of GP consultations in RACFs per month from March to December in 2019 and 2020, including face-to-face consultations, telephone, and videoconferencing consultations; and proportion for each mode against the total number of GP consultations. <sup>43</sup>
Rationale	Telehealth has the potential to provide sustainable, affordable, and improved quality of care to aged care residents. The temporary telehealth service MBS items provided during the COVID-19 pandemic offer an opportunity to study trends and the factors affecting its use.
Perspective	Provider focussed Process related.
Potential use	The change in the number of GP consultations in RACFs over time indicates the utility of each mode (face-to-face, telehealth (telephone and video) of GP consultations. Using the proportion of telephone or videoconferencing against the overall GP consultation numbers can identify utilisation patterns of these platforms of health delivery. This can serve as a benchmark for situations such as an infectious disease outbreak in facilities that are limited in healthcare resources. Alternatively, a future report may also provide



telehealth consultations per 100 persons which can be used to compare with residential age care populations in other regions or countries.

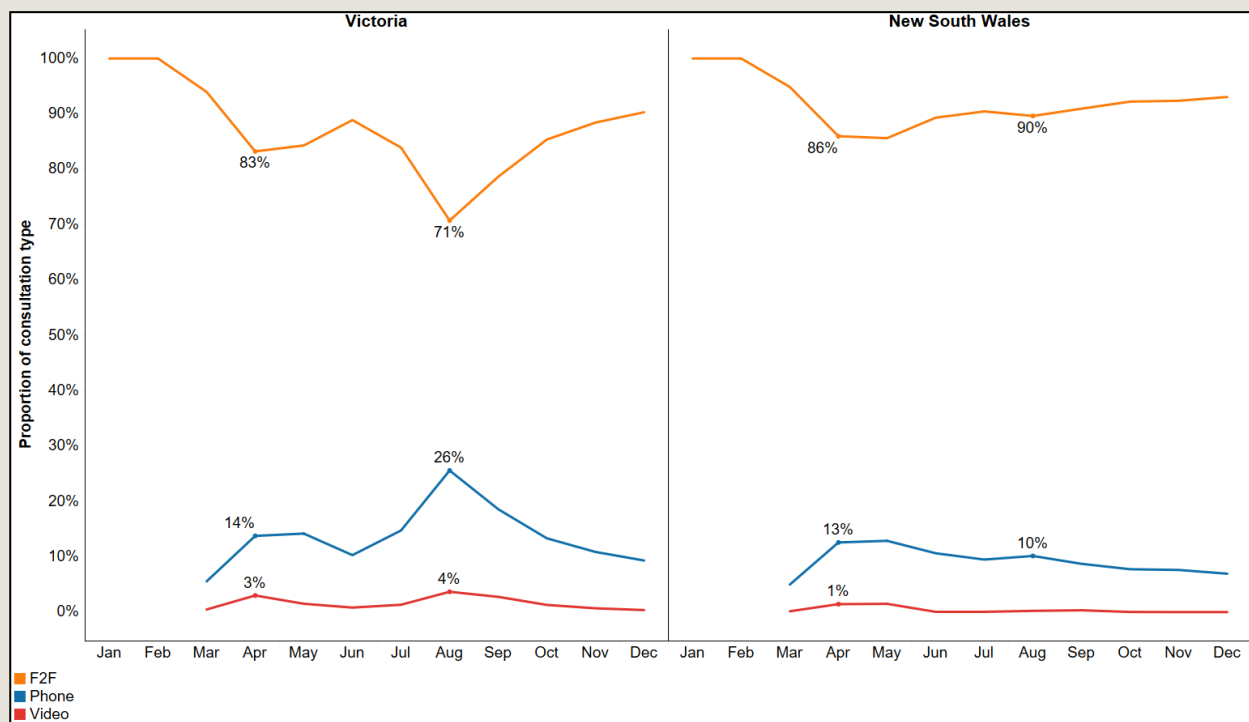
**Associated factors** Age, sex, socioeconomic status, remoteness (regional versus metropolitan areas), and residential state.

**Data source** POLAR platform, which covers metropolitan and rural/regional areas from over 800 general practices in five primary health networks in Victoria and NSW.

**Numerator** Sub-total of face-to-face consultations, sub-total of telephone consultations, and sub-total of videoconferencing consultations. All of which are counted by the relevant MBS items i.e.: face-to-face consultations (MBS items: 90020, 90035, 90043, 90051 and 5010, 5028, 5049, 5067), telehealth telephone consultations (91809, 91810, 91795, 91811), and telehealth videoconferencing consultations (91800, 91801, 91790, 91802)

**Denominator** Total number of GP consultations, specified by the total of MBS items counts.

Sample Visualisation

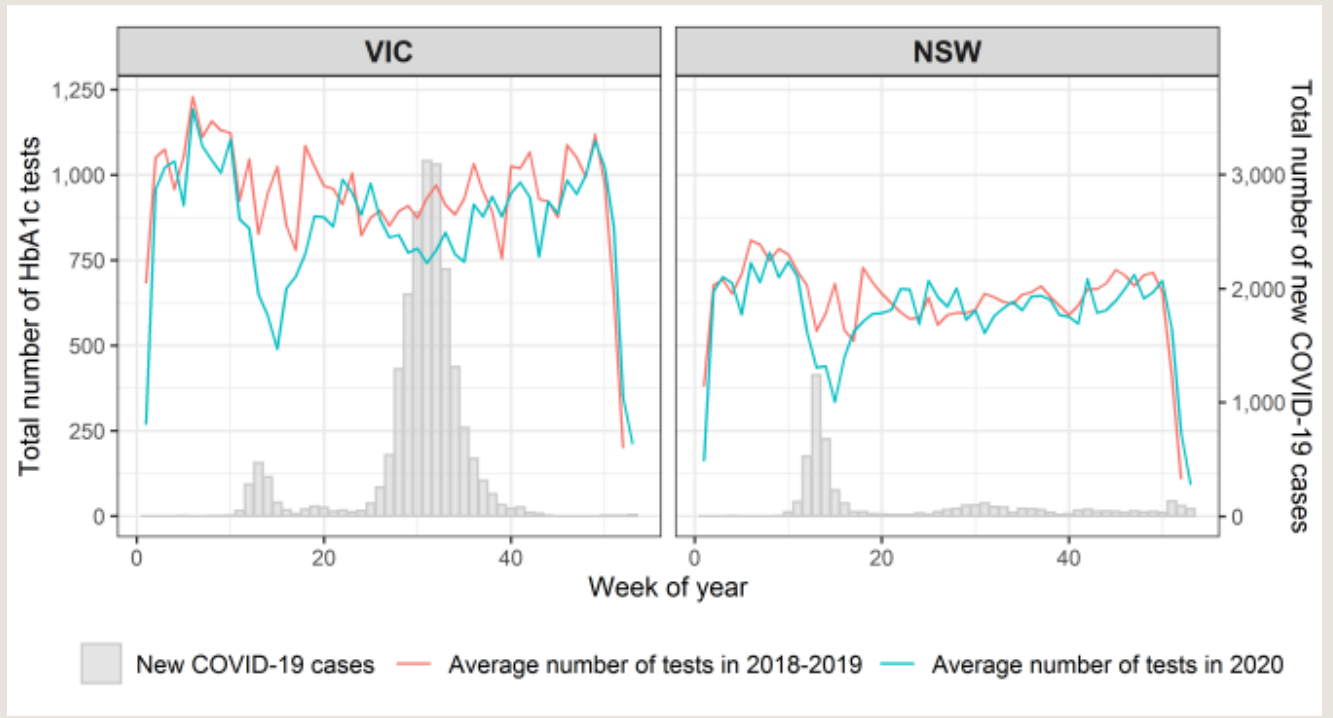


## 12 Impact Measure 6 – HbA1c monitoring in type 2 diabetes- HbA1c testing volume

Background	In addition to self-monitoring of blood glucose, people living with type 2 diabetes are recommended to receive glycated haemoglobin A1c (HbA1c) tests to monitor long-term glycaemic control. Guidelines in Australia and overseas recommend HbA1c monitoring at least every 6 months for well controlled diabetes, and more often (3 months) if HbA1c results are out of the recommended range <sup>44-47</sup> . Existing evidence indicates that patients with poor blood glucose control are at a higher risk of co-morbidities such as micro- (e.g., renal) and macro-vascular (e.g., coronary heart) diseases <sup>48</sup> , and worse outcomes in general <sup>49-51</sup> . The full long-term extent of the COVID-19 lockdown and restrictions on diabetes care and management remain unclear.
Definition	For patients who have had a diagnosis of type 2 diabetes before 2017 and are ‘active patients’ based on the RACGP definition’: <ul style="list-style-type: none"> <li>- the weekly volume of HbA1c testing comparing the volumes to the mean of previous years.</li> </ul>
Aim	To examine the potential impacts of the COVID-19 pandemic on diabetes care in Australian general practice, by looking at patients with type 2 diabetes using the volume of HbA1c tests conducted during this period as an indicator of care/access to care.
Rationale	It has been reported that patients with type 2 diabetes, especially those with poor glycaemic control <sup>52</sup> , who become infected with COVID-19 have a greater risk of developing severe COVID-19 symptoms which can lead to intensive care admission and death <sup>53, 54</sup> , and that better glycaemic control might help in reducing the disease severity of COVID-19 <sup>55</sup> .
Perspective and categorisation	Provider focussed. Process related.
Potential uses	HbA1c testing volume comparisons with previous years can help identify whether waves of the pandemic are impacting on patients access to diabetes care e.g., through identification of periods of decreased testing activity.
Associated factors	This impact measure is based on ‘active patients’ attending a general practice, where an active patient is defined by the RACGP as “the record of a patient who attended the practice/service three or more times in the past 2 years” <sup>1</sup> (pg53).
Data source	POLAR platform, which covers metropolitan and rural/regional areas from over 800 general practices in five primary health networks in Victoria and NSW.
Numerator	The weekly volume of HbA1c tests

Denominator n/a

Sample visualisation



### 13 Impact Measure 7 – HbA1c monitoring in type 2 diabetes- HbA1c testing frequency and HbA1c levels

Background	In addition to self-monitoring of blood glucose, people living with type 2 diabetes are recommended to receive glycated haemoglobin A1c (HbA1c) tests to monitor long-term glycaemic control. Guidelines in Australia and overseas recommend HbA1c monitoring at least every 6 months for well controlled diabetes, and more often (3 months) if HbA1c results are out of the recommended range <sup>44-47</sup> . Existing evidence indicates that patients with poor blood glucose control are at a higher risk of co-morbidities such as micro- (e.g., renal) and macro-vascular (e.g., coronary heart) diseases <sup>48</sup> , and worse outcomes in general <sup>49-51</sup> . The full long-term extent of the COVID-19 lockdown and restrictions on diabetes care and management remain unclear.
Definition	For patients who were diagnosed with type 2 diabetes before 2017 and are ‘active patients’ based on the RACGP definition: <ul style="list-style-type: none"> <li>a) patients who had HbA1c testing in both 2018 and 2019 were evaluated for the number of HbA1c tests conducted by year from 2018 onwards to compare with the testing frequency recommended by the Australian clinical guideline (i.e. at least every 6 months)<sup>44</sup>, and</li> <li>b) for patients who had HbA1c testing- a comparison of HbA1c levels with the target HbA1c range recommended by clinical guidelines, with the target HbA1c range being defined as <math>\leq 58</math> mmol/mol as per the RACGP guideline (i.e. <math>\leq 53</math> mmol/mol with the range of 48 – 58 mmol/mol)<sup>44</sup>.</li> </ul>
Aim	To examine the potential impacts of the COVID-19 pandemic on diabetes care in Australian general practice, by looking at patients with type 2 diabetes using HbA1c levels as an indicator of glycaemic control.
Rationale	It has been reported that patients with type 2 diabetes, especially those with poor glycaemic control <sup>52</sup> , who become infected with COVID-19 have a greater risk of developing severe COVID-19 symptoms which can lead to intensive care admission and death <sup>53, 54</sup> , and that better glycaemic control might help reduce the disease severity of COVID-19 <sup>55</sup> .
Perspective and categorisation	Provider focussed and patient focussed. Process and outcome related.
Potential uses	Declines in HbA1c testing frequency or HbA1c levels above guideline recommendations can alert GPs to gaps in diabetes care and help target areas of need.
Associated factors	This impact measure is based on ‘active patients’ attending a general practice, where an active patient is defined by the RACGP as “the record of a patient who attended the practice/service three or more times in the past 2 years” <sup>1</sup> (pg53).

**Data source** POLAR platform, which covers metropolitan and rural/regional areas from over 800 general practices in five primary health networks in Victoria and NSW.

**Numerator**

**Outcome 1 : HbA1c testing frequency**

- 1) Number of patients who had no HbA1c tests
- 2) Number of patients who had  $\geq 1$  HbA1c test with the testing interval of  $> 6$  months
- 3) Number of patients who had  $\geq 1$  HbA1c test with the testing interval of  $\leq 6$  months

**Outcome 2 : HbA1c values**

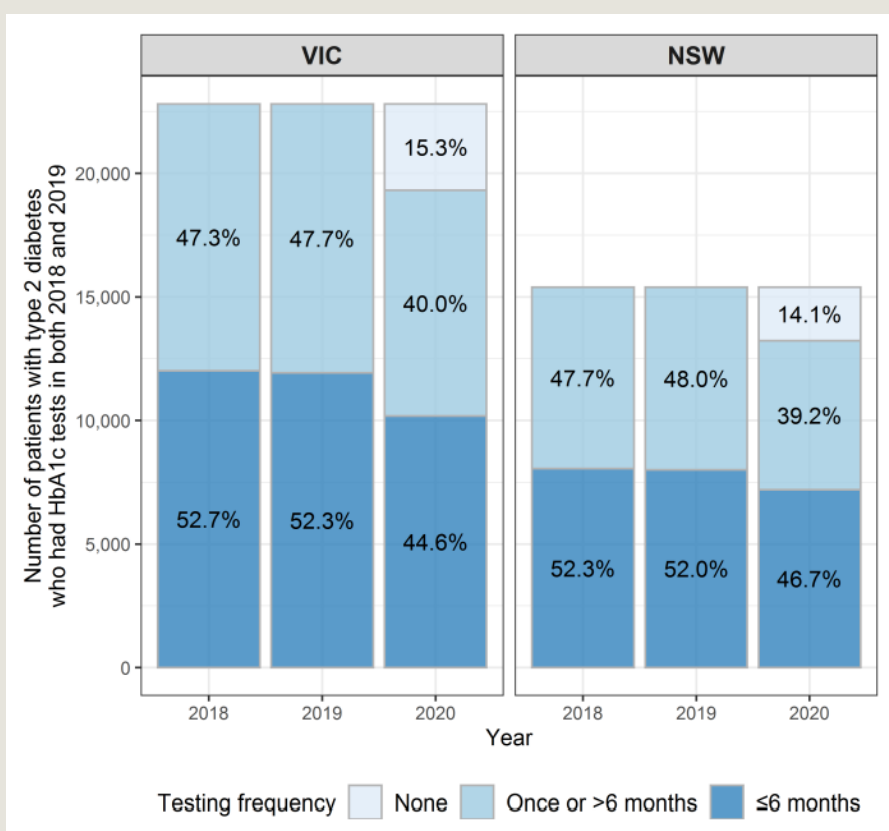
- 1) Number of patients who had the recommended levels ( $\leq 58$  mmol/mol) of HbA1c values
- 2) Patients who had HbA1c values above the recommended levels ( $>58$  mmol/mol)

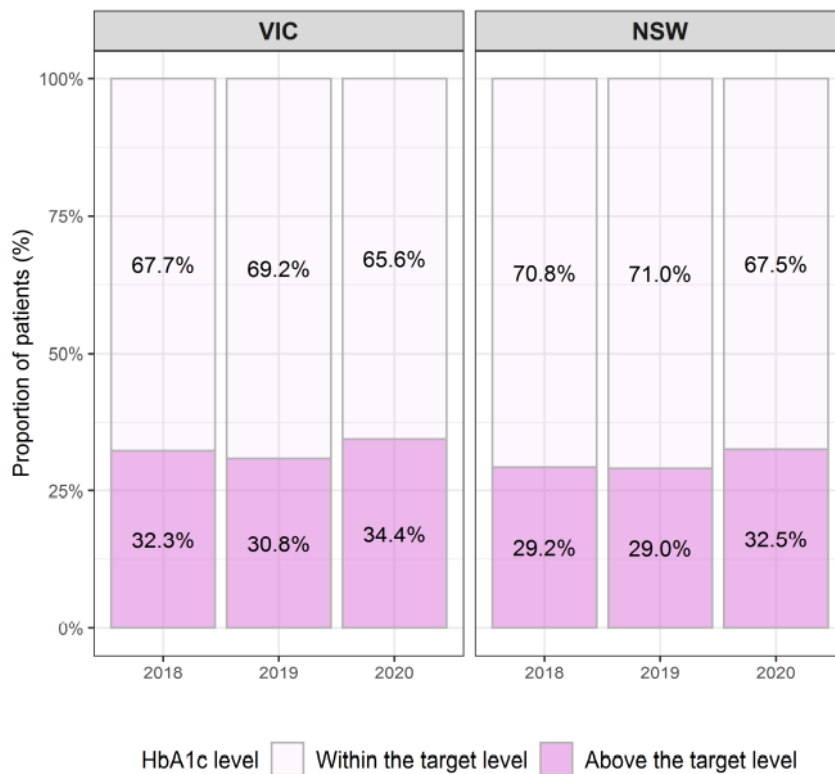
**Denominator**

Outcome 1: All diabetes patients

Outcome 2: Diabetes patients who had HbA1c tests

Sample visualisations





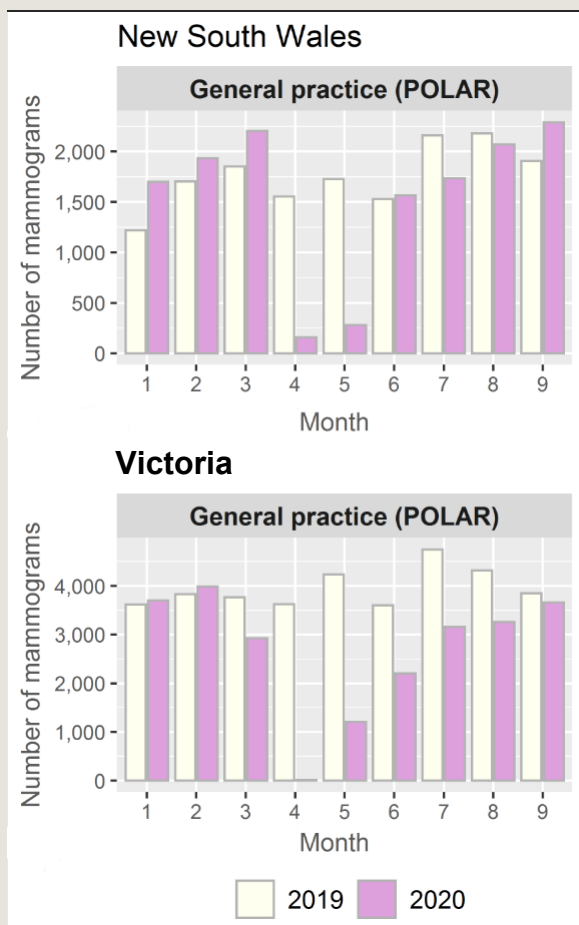


## 14 Impact Measure 8 – Cancer screening in general practice

Background	<p>General practitioners play a critical role in providing preventative care through cancer screening and counselling patients to reduce cancer risks. However, reports during 2020 showed:</p> <ul style="list-style-type: none"> <li>a) a decline in the number of general practice visits as well as pathology testing during the COVID-19 pandemic<sup>26, 29</sup> and</li> <li>b) a decline in the number of participants who undertook the national cancer screening programs during the first and second waves of the COVID-19 pandemic<sup>56</sup></li> </ul> <p>Whilst the report on national cancer screening<sup>56</sup> indicates a drop in cancer screening (by the national programs), it is unclear to what extent cancer screening in general practice settings is affected by the pandemic.</p>
Definition	The monthly total volumes of requested mammograms and cervical cancer tests in general practice.
Aim	To examine the impact of the COVID-19 pandemic on the number of mammograms and cervical screening tests performed in the general practice setting.
Rationale	It is important to understand whether cancer screening test volumes have been impacted during the pandemic, as a decline could indicate delays in undertaking routine testing and hence delayed diagnosis of cancer.
Perspective and categorisation	<p>Provider focussed.</p> <p>Process related.</p>
Potential uses	Monitoring the number of screening tests undertaken in general practice can identify any decline in cancer screening activities that may have resulted in delayed diagnosis and treatment.
Associated factors	The impact measure includes women aged 50-74 years for mammograms <sup>57</sup> and 25-74 years for cervical cancer tests <sup>56, 58</sup> , in line with the age recommendations included in clinical guidelines <sup>59</sup> and age groups offered free screening tests by the national screening programs. Cervical cancer screening included both human papillomavirus (HPV) and cytology (i.e. Pap smear) tests.
Data source	POLAR platform, which covers metropolitan and rural/regional areas from over 800 general practices in five primary health networks in Victoria and NSW.
Numerator	<p>Mammograms: Monthly number of women aged 50-74 years and had mammograms</p> <p>Cervical cancer tests: Monthly number of women aged 25-74 years and had cervical cancer tests</p>

Denominator N.A.

Sample visualisation (for breast cancer).



Similar visualisation would be used for cervical cancer.

## 15 Impact Measure 9 – Pathology referrals during telehealth consultations

Background	Referral for pathology testing is an area that has evolved quickly to fit clinical workflows during the expansion of telehealth, with workarounds and solutions developed ad hoc. Pathology tests dropped significantly overall at the beginning of the pandemic <sup>29</sup> and a study showed that from March-December 2020, there was a difference in pathology test referrals between face-to-face and telehealth consultations <sup>60</sup> . Blood tests are the most common type of pathology test conducted in Australia. In a survey of Australian general practices, blood tests (including chemistry and haematology tests) accounted for over three-quarters (75.8%) of pathology tests in 2015/16. <sup>61</sup> At the start of the pandemic in Australia, no electronic systems existed to handle ‘e-referrals’. However, pathology companies have since worked to roll out options to support test referrals, <sup>62</sup> such as submitting a request online using a form, accessed through a digital portal, faxing or emailing a PDF. These techniques involved disruptive workflows and there is not yet a harmonised way for GPs to complete pathology referrals digitally, nor is it known the degree to which GPs adopted any of the proposed options.
Definition	Estimated proportion of face-to-face and telehealth GP consultations with pathology tests requiring a blood draw before and during the pandemic.
Aim	To undertake a comparison of telehealth and face-to-face general practice consultations to: identify if there are differences in the proportion of pathology test referrals from 2019-present by consultation mode (face-to-face and telehealth).
Rationale	Since the start of the COVID-19 pandemic in March 2020 in Australia, health technologies have been rapidly scaled up to enhance access to care. A significant innovation has been telehealth in general practice. Now widespread, it remains unknown how this shift to telehealth has impacted on quality-of-care indicators such as pathology testing and diagnosis.
Perspective and categorisation	Provider focussed. Process related.
Potential uses	Understanding the numbers of pathology referrals by consultation mode can be used to detect gaps in pathology testing. Stratifying further by associated factors (see below) may be used to identify subsets of patients with lower or higher rates of pathology tests.
Associated factors	These can include reason for consultation, which may differ between face-to-face and telehealth consultations. Confounding factors such as age, sex, health status, chronic diseases status or other diagnoses, and location may impact on this indicator. The type of specific test may also be considered.

**Data source** Data elements are sourced from POLAR. These include MBS items claimed by GPs for all professional attendance type items; pathology data identified from recorded pathology requests; and test results identified through Logical Observation Identifiers Names and Codes (LOINC) from recorded pathology results.

**Numerator** Estimated count of pathology referrals requiring blood test per week for each consultation mode.

**Denominator** Total number of GP consultations per week.

**Sample visualisation**

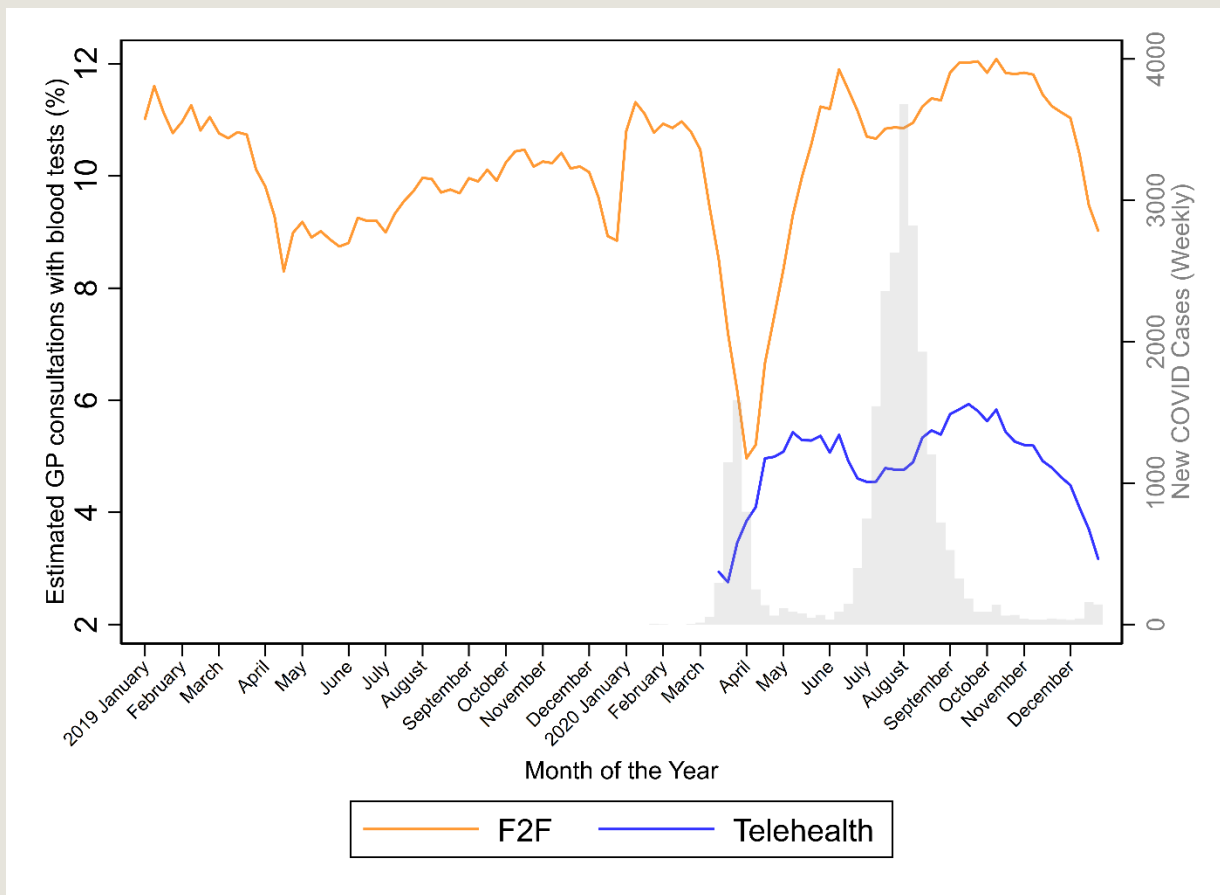


Figure reproduced with permission of the author and appeared in *Hardie, R.-A., et al., Telehealth-based diagnostic testing in general practice during the COVID-19 pandemic: an observational study. BJGP Open, 2022.*<sup>36</sup>

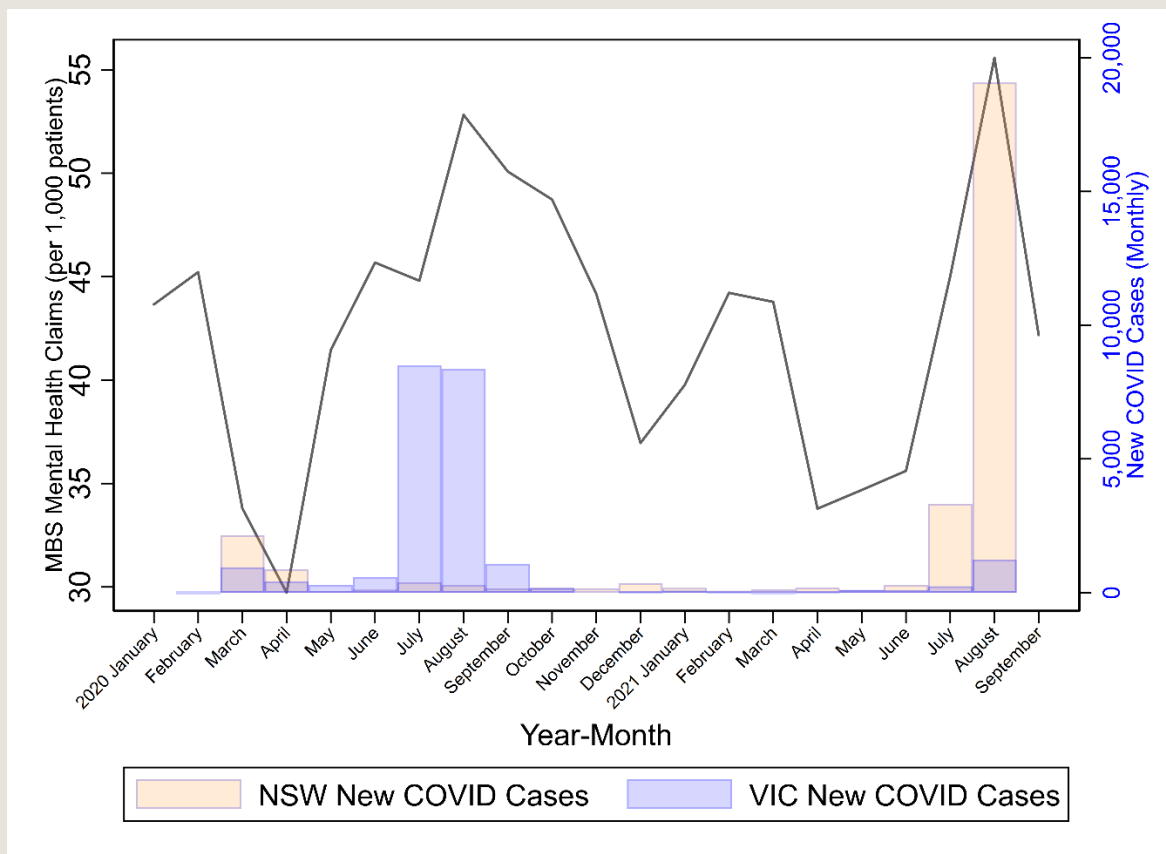
## 16 Impact Measure 10 – Mental health consultation volumes

Background	In March 2020, temporary MBS items for telehealth mental health consultations were introduced <sup>63</sup> with an additional ten MBS mental health sessions also made available from October 2020 <sup>64</sup> . During the second wave of the pandemic in Victoria, additional funding was announced to establish 15 new mental health clinics in regional and metropolitan Victoria <sup>65</sup> . During the third wave of the pandemic in 2021, the NSW Government announced \$130 million funding for mental health as a “top priority” <sup>66</sup> and the Victorian Government also announced a further \$22 million for “pop-up” mental health services as well as dedicated support for high risk groups <sup>67</sup> . The increase in demand for services during the pandemic has raised awareness of mental health and highlights the need for ongoing monitoring of the impact of the pandemic on community mental health.
Aim	To quantify mental health consultation volumes in general practice.
Definition	The overall volume of mental health consultations (as defined by Medicare mental health related item numbers) presenting to general practice during a specified time period.
Rationale	To understand how waves of the pandemic have impacted on the number of patients presenting to general practice for mental health consultations, mental health treatment plans and mental health treatment sessions.
Perspective and Categorisation	Provider-focussed. Process related.
Potential use	Understanding the impact of the pandemic and its associated restrictions on the number of mental health presentations to general practice can provide a gauge of the service demand for mental health and assist in practice planning for subsequent outbreaks. If this measure is reported over time and beyond waves of the pandemic, it can also assist in identifying the impact of COVID-19 on long term mental health outcomes.
Associated Factors	As this indicator is based on MBS item numbers for mental health related consultations, it does not capture mental health consultations that may have occurred as part of a standard consultation item number. Thus, this indicator is likely to under-represent the true demand for mental health services.
Data source	Data elements are sourced from POLAR and are based on MBS item numbers for all mental health related services, including mental health consultations, focussed psychological sessions, mental health treatment plans, RACF mental health items and eating disorders.

Numerator Total MBS item claims for a mental health condition, per month

Denominator Total number of patients with a general practice consultation, per month

Sample Visualisation



## 17 Concluding Remarks

The proposed suite of impact measures developed in this document can be used to determine the direct and indirect impacts of the COVID-19 pandemic on general practice activity both retrospectively and into the future. The impact measures also have the potential to be utilised as part of electronic decision support aids (e.g., dashboard) to allow visualisation of the impact of waves of the pandemic on general practice and to support ongoing quality improvement activities by PHNs and Australian general practices.

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