

# The impact of COVID-19 on chronic disease management in primary care: lessons for Australia from the international experience

The continuation of chronic disease management in primary care remains essential during the COVID-19 pandemic

International primary care responses to the coronavirus disease 2019 (COVID-19) pandemic have seen the prioritisation of acute and urgent services for people with COVID-19 as well as seeing many practitioners involved in COVID-19 vaccination counselling and delivery.<sup>1,2</sup> This prioritisation has often resulted in partial or complete disruption to chronic disease management (CDM),<sup>1</sup> including care for conditions such as hypertension, diabetes and cancer.<sup>2</sup> CDM in Australian primary care has been similarly disrupted, with reports of decreased time spent on CDM activities and preventive care,<sup>3</sup> particularly for elements of care that require in-person examination or testing,<sup>4</sup> and delays in investigation, diagnosis, referred appointments and elective procedures, resulting in prolonged pain, anxiety and deterioration for patients.<sup>5</sup> The introduction of telehealth items under the Medicare Benefits Schedule (MBS) may have both alleviated and contributed to disruption.<sup>5-7</sup> Although early data suggested that there was little reduction in the total volume of services provided against the MBS, when accounting for telehealth services, and little change in medications used to manage chronic diseases,<sup>8</sup> these data paint a complex and dynamic picture with differential changes in certain service types, such as allied health and referred and non-referred services. A recent study from the United Kingdom has suggested that few studies have reported the impact of increases in COVID-19-related respiratory consultations in primary care and that these consultations might mask other reductions in service volume.<sup>9</sup>

People with chronic diseases are at increased risk of severe illness from COVID-19 and vulnerable to the potential worsening of pre-existing conditions because of disruptions to their care.<sup>10-12</sup> Strategies to ensure continuous care for chronically ill individuals during the pandemic included the use of telehealth modalities, ensuring the supply of medications and other essential products, protecting health workers with personal protective equipment (PPE), and collaborating with health care and other external stakeholders to meet changing health needs.<sup>10,11,13,14</sup> In this article, we reflect on the pandemic's impact on CDM in primary care, identifying lessons that could be instructive in the Australian context (Box 1).

## The key problem: deferring or cancelling usual and preventive care

Evidence from Australia,<sup>3-6</sup> Belgium<sup>15</sup> and the Netherlands<sup>16</sup> indicates that the diversion of



resources to COVID-19 relief efforts and the rationing of routine care have compromised essential aspects of CDM and preventive care. The temporary suspension or cancellation of services like screening and regular check-ups,<sup>3-6,15,16</sup> reduced referrals,<sup>5,6,16</sup> diversion of staff to provide COVID-19-specific care,<sup>16,17</sup> and insufficient PPE,<sup>3,6,11,16</sup> has impeded CDM, particularly in low resource settings.<sup>11</sup> Diminished access to CDM services has been compounded by movement restrictions due to lockdown and other public health orders, and disruptions to the supply of medications, diagnostic services and self-monitoring capacity in Belgium,<sup>15</sup> the UK,<sup>18</sup> the Netherlands<sup>16</sup> and the United States.<sup>19</sup> Patients' fears of being exposed to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in face-to-face consultations have also contributed to reduced service utilisation.<sup>15,16,18,19</sup>

Delayed or missed diagnoses of chronic conditions have been observed for type 2 diabetes,<sup>18,20</sup> circulatory diseases,<sup>18</sup> hypertension<sup>20</sup> and cancer<sup>16</sup> across a range of countries. Moreover, treatment for these conditions has been delayed due to a decline in referrals from primary to secondary care<sup>15,16,18</sup> and postponement of curative services.<sup>16,18</sup> There is a risk of additional morbidity and mortality associated with diagnostic and treatment delays, which could place a strain on primary care services in the future due to an increased demand for CDM, and the management of complications once the pandemic resolves. As care for people with COVID-19 becomes integrated into routine care, and with guidelines indicating most cases are mild and can be appropriately managed by general practice,<sup>21</sup> adding this care to the primary care workload may further worsen the ability of practices to refocus on already delayed CDM.

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## 1 Lessons for Australian primary care

Advancing telehealth services to support chronic disease management:

- Telehealth has been critical for maintaining continuity and coordination of care. It is important to ensure patients who are disadvantaged by the digital divide are still able to access care in ways that keep them and others safe.

Self-management support:

- Patients need continued support and encouragement from their primary care team to stay on track to manage their chronic conditions, especially those who are vulnerable and may be isolated during periods of extended lockdown.

Proactive care for at-risk patients:

- Electronic medical records have been valuable for identifying and contacting vulnerable patients who need close monitoring. It is important to engage with patients before any escalation of their condition to mitigate risk.

Community partnerships:

- Maintaining and enhancing linkages between acute and community sectors has been important in ensuring continuity of chronic disease management during the coronavirus disease 2019 (COVID-19) pandemic, especially in low resource settings.

Consideration of funding model reform:

- The anticipated increase in chronic conditions and complications, especially among individuals who have experienced delays in diagnosis and treatment, makes a focus on funding model reform all the more urgent to consider, particularly in regions where disruptions to health care services have been substantial.

## 2 An adaptive response to improve chronic disease management

In response to the coronavirus disease 2019 (COVID-19) pandemic in the United States, many older people chose to socially isolate at home to reduce their risk of exposure to COVID-19. Primary care clinicians were faced with a need to rapidly innovate and adapt a traditionally hands-on model of care to accommodate restrictions on in-person contact.

One successful strategy developed by a large US practice was the implementation of a Safe at Home program combining regular telehealth consultations and check-ins, non-invasive monitoring devices connected via a smartphone to transmit data, and a dedicated clinical staff member as a care manager (eg, a medical assistant or nurse to manage a panel of patients) to remotely support patients with chronic illness and/or COVID-19 to manage their care at home.<sup>19</sup>

Such a program in Australia could enhance the support of individuals in regions of extended lockdown, as well as improving care provision for those with reduced access to care, including people living in rural settings and people with decreased mobility.

### What can Australian primary care learn from the experiences of other countries?

#### Telehealth services have been key to supporting chronic disease management

In Australia, telehealth has been critical for maintaining continuity and coordination of care.<sup>22</sup> Likewise, telehealth has been widely adopted in primary care settings in many other countries to minimise the risk of exposure to SARS-CoV-2 for patients and providers and to maintain CDM.<sup>15-19,23,24</sup> Importantly, the easing of regulatory restrictions on telehealth licensing in some countries and clinician reimbursement has enabled rapid expansion.<sup>23</sup> A range of modalities have been integrated into primary care, most commonly telephone and video consultations.<sup>15,16,22</sup> Although unable to offer physical examination, telehealth provides capacity for monitoring individuals with chronic diseases. CDM has also been enabled in some settings through novel remote patient monitoring and using smartphone applications coupled with home-based monitoring devices, such as Bluetooth-enabled glucose meters and blood pressure cuffs.<sup>19</sup> Although telehealth has proven useful for maintaining continuity of care, inequitable access to virtual care has been noted, particularly for low income patients and those in resource-constrained settings.<sup>11,18</sup> It is clear that telehealth does not work equally well for everyone and it is important to ensure that patients who are disadvantaged by the digital divide are still able to access care in ways that keep them and others safe.

#### Supporting patients to self-manage requires well resourced and supported teams

Loss of practice revenue in some countries has led to reductions in the number of employed staff who are usually involved in self-management support, including nurses,<sup>3</sup> dietitians and other allied health professionals.<sup>15</sup> The extended impact of COVID-19 on the health and wellbeing of primary care clinicians and staff has also contributed to the risk of workforce attrition.<sup>25,26</sup> Workforce attrition is a major risk to sustaining chronic disease care, particularly in rural and regional areas, although strategies that focus on safety, practical support, reducing administrative burden and improving mental health support for clinicians have been proposed in the US.<sup>27</sup> Building strong interprofessional primary care teams has alleviated burnout in Israel,<sup>28</sup> and the need to nurture multidisciplinary working and staff wellbeing has been recognised in the UK.<sup>29</sup> Patient self-management has been further compromised by confinement measures and interruptions to the supply of medications, as well as the potential for unhealthy diets, decreased physical activity, and non-adherence to treatment, demonstrating the need for support services.<sup>10,15</sup> In the US, some clinicians implemented a Safe at Home program, combining regular telehealth consultations, non-invasive monitoring devices and a dedicated clinical staff member as a care manager (eg, a medical assistant or nurse to manage a panel of patients), to remotely support patients with chronic illness to manage their care at home (Box 2).<sup>19</sup> Patients need continued support

and encouragement from their primary care team to stay on track to manage their chronic conditions, especially those who are vulnerable and may be isolated during periods of extended lockdown.

### Proactive care that benefits patients and mitigates risk

Proactive care for patients with complex or high levels of need, such as those with recent medication changes, poorly controlled diabetes, hypertension or chronic obstructive pulmonary disease<sup>15</sup> and older patients,<sup>17,19</sup> has been prioritised in some countries. Clinical information systems, such as electronic medical records (EMRs), have proven valuable for identifying and contacting vulnerable patients who need close monitoring.<sup>15</sup> One strategy in Belgium involved risk stratification and active follow-up using EMRs to identify patients at higher risk of complications, such as older patients and those with unstable chronic conditions.<sup>15</sup> Other approaches involved the assessment of highly vulnerable patients by screening for unmet health and social needs, including loneliness for those socially isolated, and addressing barriers to care.<sup>17,19</sup> Some clinicians with medically complex patient populations also completed advance care plans with patients and emergency planning for “what if” scenarios.<sup>17</sup> Proactive care plans were developed virtually, or in-person when necessary, through a collaborative and integrated approach by multidisciplinary teams.<sup>15,17,19</sup> It is important to engage with patients before any escalation of their condition to mitigate risk. EMRs are useful to identify these patients.

### Community partnerships offer opportunities for innovation

Leveraging existing partnerships with community-based services has been an important strategy to meet patients’ needs during the pandemic. Home delivery of medication in South Africa for patients with chronic diseases was aided by an existing network of non-profit organisations and community health workers.<sup>12</sup> In the US, clinicians collaborated with external services, including community paramedics and a local hospice, in the provision of home-based care for medically complex older individuals when they were short-staffed.<sup>17</sup> Maintaining and enhancing linkages between acute and community sectors have been important in ensuring continuity of CDM during the pandemic, especially in low resource settings.

### COVID-19 has highlighted timely opportunities for primary care reform

Many primary care services have been under serious financial pressures throughout the pandemic due to factors including a decline in consultations, increased costs for PPE, and changes in workflow and roles in response to pandemic restrictions (eg, closed practices, clinicians working from home and using telehealth, diversion of staff to support COVID-19 testing and vaccination programs). These challenges have highlighted limitations to existing funding models, particularly fee-for-service models in countries that do not maintain dedicated staff with a CDM role.<sup>15,19</sup>

CDM needs to be prioritised in the ongoing pandemic response by supporting clinicians to develop and maintain new flexible models of care.<sup>6,30</sup> Anticipated increases in chronic conditions and complications, especially among those who have experienced delays in diagnosis and treatment, makes the current Australian Government focus on primary care reform and development of a Primary Health Care 10 Year Plan<sup>31</sup> a timely initiative. Proposed strategies such as voluntary patient enrolment may enable innovative, person-centred CDM models.

### Conclusion

The COVID-19 pandemic has highlighted inadequacies in health systems around the world and has demonstrated the need to strengthen primary care capacity to ensure safe and comprehensive CDM now and in the future. If primary care is to achieve its goals of chronic disease prevention, early detection and ongoing monitoring during the pandemic and beyond, then attention to enabling equitable access to telehealth and the transition of patients to the confident use of digital tools to support their CDM is needed. Around the world, clinicians have adapted to the challenges presented by the pandemic, but systemic weaknesses including a scarcity of PPE, reduced diagnostic capacity, and workforce shortages have often undermined effective responses to the crisis. The lessons from other countries underscore the continuing need to balance containment imperatives with efforts to safeguard and expand access to comprehensive CDM, including through reform of existing funding models. As COVID-19 becomes a condition that may have long term effects and is predominantly managed in community settings, ongoing research is needed to identify and test effective solutions to these challenges.

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