

# Towards new models of cancer care in Australia: lessons from Victoria's response to the COVID-19 pandemic

Craig Underhill<sup>1,2</sup>, Phillip Parente,<sup>3</sup> Grant McArthur,<sup>4,5,6</sup> Andrew Haydon,<sup>7</sup> Sue-Anne McLachlan,<sup>8</sup> Zee Wan Wong<sup>9</sup> and Eva Segelov,<sup>10</sup> Victorian COVID-19 Cancer Network

<sup>1</sup>Border Medical Oncology, Albury-Wodonga Regional Cancer Centre, and <sup>2</sup>University of NSW Rural Clinical School Albury, New South Wales, and <sup>3</sup>Department of Oncology, Monash University and Eastern Health, <sup>4</sup>Victorian Comprehensive Cancer Centre, <sup>5</sup>Sir Peter MacCallum Department of Oncology, and <sup>8</sup>Department of Oncology, St Vincent's Hospital Melbourne and Department of Medicine, University of Melbourne, <sup>6</sup>Department of Medical Oncology, Peter MacCallum Cancer Centre, <sup>7</sup>Department of Medical Oncology, Alfred Hospital Melbourne and Central and Eastern Medical School Monash University, <sup>9</sup>Oncology Unit, Peninsula Health, Monash University, and <sup>10</sup>Department of Oncology, Monash University and Monash Health Melbourne, Victoria, Australia

## Key words

cancer, COVID-19, health services administration, tele-health.

## Correspondence

Craig Underhill, Border Medical Oncology, Albury-Wodonga Regional Cancer Centre, Albury, NSW, Australia.  
Email: craig.underhill@bordermedonc.com.au

Received 9 June 2020; accepted 2 August 2020.

## Abstract

In response to the COVID-19 pandemic, the Department of Health and Human Services Victoria (DHHS), the Monash Partners Comprehensive Cancer Consortium (MPCCC) and Victorian Comprehensive Cancer Centre (VCCC) pooled their combined infrastructure to establish the Victorian COVID-19 Cancer Network (VCCN) backed by a Taskforce of expert members. In a few short months, this state-wide clinical network implemented a number of new models of care including clinics to manage acutely presenting cancer patients away from emergency departments, chemotherapy in the home, telehealth models and addressing sustainability of clinical trials.

The COVID-19 pandemic response in Australia has involved governments, health services and individual health providers preparing for a worst-case scenario. The expectation was that 'usual care' would be impacted, to varying degrees, according to the rate of community transmission of SARS-COV2.

For cancer services, there was concern from patients and clinicians on two fronts: care of cancer patients who contracted COVID-19 and the continuation of standard care in uninfected patients. Guidelines on treatment modifications were rapidly developed based on expert opinion in an evidence-free zone.<sup>1</sup>

In the cancer sector, we have effectively been operating on a 'war-footing' for many years. Politicians speak of the 'war' on cancer; the WHO first warned in the 1990s of the coming 'cancer pandemic' and a 'tsunami' of cases, which is now upon us as the global population ages and more effective treatments are found.<sup>2</sup> Although mortality rates have improved, cancer remains a leading cause of death in Australia; it is the disease with the highest burden and has substantial social and economic impacts.<sup>3,4</sup> In Victoria in 2018, 35 203 people were diagnosed with cancer and 11 134 people died, far in excess of those likely now to succumb to COVID-19.<sup>5</sup>

The cancer sector, drawing together existing networks and informal collaborations, was able to respond nimbly to the COVID-19 threat, the legacy of which should allow lasting positive change. Whilst some similar work has occurred in other jurisdictions, we report state-wide cancer sector responses in Victoria.

## Governance and a new era of collaboration

With the backing of Department of Health and Human Services Victoria (DHHS), the Monash Partners Comprehensive Cancer Consortium (MPCCC) and Victorian Comprehensive Cancer Centre (VCCC) pooled their combined infrastructure to establish the Victorian COVID-19 Cancer Network (VCCN) backed by a Taskforce of expert members.<sup>6</sup> The VCCN also partnered with Cancer Council Victoria to focus specifically on support and communications needs of patients.

The VCCN uses digital tools such as videoconferencing, online survey tools and is centred around a dedicated Slack communication platform to provide a forum for discussion, data sharing and expert consensus (Table 1).

Major areas of concern were identified, and representative subcommittees chaired by key opinion leaders were established, each supported by a project manager.

Funding: None.  
Conflict of interest: None.

**Table 1** Services and aims of the Victorian COVID-19 Cancer Network

Strategic initiatives to guide and optimise care for patients with cancer
Curated information and guidance for practitioners
Specialised channels for various tumour streams and interest areas, for example, cancer clinical trials, telehealth and haematology
Forums for shared problem solving, support and conversations

(Table 2). Participation is voluntary; within 2 weeks, around 700 multidisciplinary cancer clinicians and stakeholders had subscribed. Representatives from both public and private institutions across the state were included.

Whilst yet to be formally evaluated, these groups appear to be highly successful in facilitating communication and collaboration across the cancer sector. They have shared existing policies, guidelines and models of care and developed new paradigms for use across the state, some of which are discussed below.

## Models of care

The COVID-19 pandemic response has fast-tracked new models of care, driven by a perceived need to keep immunosuppressed patients out of emergency departments and away from hospitals as much as possible.

### Symptom and urgent review clinics

These new models include nurse-led assessment clinics within oncology outpatient units, to triage and manage immunocompromised patients within established criteria, to screen patients for COVID-risk factors and directly admit or discharge as appropriate. The Symptom and Urgent Review Clinic model has been previously piloted in some Victorian cancer centres and demonstrated to be cost-effective.<sup>7</sup> Established clinics are having their hours extended and scope and staffing enhanced, providing an alternative pathway for review and screening prior to day centre treatments. This model is suited to the assessment of patients with many other chronic diseases.

### Home-based delivery of cancer treatment and community cancer centres

The Victorian Department of Health and Human Services brought forward release of its recently commissioned Home-Based Cancer Care Framework and Toolkit, being developed in response to the increased demand for day oncology services.<sup>8</sup> In the context of COVID-19, the use of Hospital in the Home and other services for cancer treatment is highly desirable, where safe to do so. Many new cancer therapies such as immunotherapy are very

suitable for this; development of alternative formulations (e.g. subcutaneous) of common anticancer drugs has also facilitated this. This model is however limited by some safety, indemnity and resourcing constraints. Particularly for outer metropolitan and regional areas, distance impacts on the productivity of this model, cold-chain issues are more pronounced, and an emergency response is not always close by. Some have also advocated the establishment of community centres for low-risk cancer care procedures, along the lines of community dialysis centres, offering an alternative to home-based care.<sup>9</sup>

### Closest to home referrals for cancer care

At times referral pathways between services can be complex and maybe based on historical relationships. There is a balance between convenience and safety, but sometimes patients or clinicians are not aware of services that would allow care much closer to their home. The expansion of specialised oncologists based in rural and regional centres has not yet overcome longstanding biases that treatment may be better within a large city. However, with travel restrictions and general fear of the population of COVID-19, outer-lying cancer centres reported a significant efflux of patients from more central services (P. Parente *et al.*, pers. comm., 2020).

### Sharing of cancer workforce

Concerns about the impact of COVID-19 illness or the need for isolation of the Victorian specialised healthcare workforce drove a rapid state-wide cross-accreditation process. A survey of the VCCN Clinical Leads showed that 90% supported a database of skilled staff across both public and private institutions, with 100% support to protect rural sites (P. Parente, pers. comm.). To date, although workforce reallocations requests have been made, no actual redistributions have occurred.

### Commonality of policies regarding clinical trials

Decisions to halt enrolment on cancer clinical trials were left to individual services. The VCCN Clinical Trials Taskforce is giving expert guidance on adjustment to trial practices, including remote monitoring and use of telehealth. Harmonisation of responses of individual Human Research Ethics Committees and secretariats to new national standards is seen as particularly important, with concern that individual services have imposed

**Table 2** Groups and topic areas of the Victorian COVID-19 Cancer Network (VCCN)

Group	Examples of content on VCCN platform	Examples of members of Group executive committee	Examples of projects
Clinical Directors Group	Questions about how different health services are managing various aspects of cancer care during COVID-19	DHHS representative; representative from all Victorian public, private, metropolitan and regional cancer centres, plus some Tasmanian	Survey to document each cancer services response to COVID-19; advocacy for changes to Pharmaceutical Benefits Scheme restrictions to open up home chemotherapy delivery; shared workforce arrangements
Clinical trials	Published articles or policy statements regarding clinical trials, for example, from NSW Health, FDA; journal articles reporting trial management during pandemic surge internationally	Cancer Council Victoria; trial managers; pharmacist; regional and rural trials representative; tele trials representative	Survey to document impact of changes at each service with regards to trials; response of Ethics committees to adapting trial procedures; impact of reduced income to trials units on ability to continue
Clinical Ethics	Discussion re-establishment of a rapid Ethics Response Unit; Ethics Framework for Making Resource Allocation Decisions	Call for interested VCCN members to join an expert working group	Establishment of a working group to make recommendations and provide support for specific clinical scenarios
Patient communication	Links to multilingual information produced by Cancer Australia	Cancer NGO and advocacy groups, consumer representatives	Patient FAQ sheet developed by the VCCN with Cancer Council Victoria
Telehealth	Resources for clinician and patient users; commentary about uptake and challenges	Expert Working Group has representatives from rural and regional; indigenous; clinical and ethics groups	Further tailored resource development, particularly for low telehealth literacy groups; proposals for continuation of telehealth beyond the pandemic
Indigenous cancer	DHHS Emergency response COVID-19 management plan for Aboriginal and Torres Strait Islanders	Indigenous cancer workers, clinicians, Cancer Council representatives	Manuscript prepared for publication describing impact of COVID-19 on Indigenous patients with cancer
Individual tumour-specific groups†		Multidisciplinary clinicians including medical, nursing, care coordinators, advocacy/patient group representatives	
Open channels for content uploaded by VCCN members; administration routinely search and add relevant content			
Clinical Guidance approved	Endorsed documents on management of various cancers during COVID-19: published articles or policy statements		
News	Media articles; podcast and video link to multiple relevant presentations		
General	Resilience and wellbeing presentations; articles regarding cancer workforce, personal protective equipment		

†Separate groups for each of: gynaecological oncology; sarcoma; melanoma and skin cancer; upper gastrointestinal; lower gastrointestinal; head and neck; breast; genito-urinary cancer; lung; neuro-oncology; haematology. FAQ, frequently asked questions; NGO, non-government organisations.

complex re-consent and accreditation procedures. Another development, not specific to cancer, was the fast-tracking processes set up by Research Ethics committees to approve COVID-19 related research; these rapid timelines should be supported to continue.

Other examples of shared policies include: (i) pathways for how best to manage febrile cancer patients. There is a perceived need to consider how best to manage immunosuppressed patients presenting with fever, and without exposing staff and patients within inpatient units of the risk of exposure to COVID-19. (ii) Clinical Ethics committees, which in circumstances of a pandemic surge and

resource constraint, could help provide a framework and appropriate mechanisms to assist patients, families and clinicians. Already established in a limited number of health services, clinical ethics services could address these challenging issues in a responsive, transparent and consistent manner during and beyond the COVID crisis.<sup>10</sup>

### Telehealth

The COVID-19 pandemic has catalysed a major shift to the use of telehealth across the spectrum of clinical practice. This was widely and early adopted by cancer

services. The VCCN has been active in providing and promoting guides for patients, administration and clinicians for successful implementation of cancer telehealth. Many clinicians have called for this model to continue after the pandemic in certain circumstances and a formal evaluation of uptake and barriers is planned.

The use of telehealth to conduct clinical trials (so called 'tele-trials') has been pioneered by the cancer sector.<sup>11</sup> The importance of continuing clinical trials for cancer was paramount during COVID-19, where patients were not deemed at excess risk from trial participation and were seen to be at a disadvantage without a trial option. Changes have included remote monitoring and new trial start-up, home delivery of trial medication and direct data entry from redesigned electronic case report forms. However, there is a need for development and implementation of national standards to achieve a future state of virtual trial management.

## Addressing disparity

Despite improvements in cancer outcomes, pockets of disparity remain, such as a 4% gap in 5-year outcomes for regional Victorians, which translates into approximately 500 excess deaths each year.<sup>5</sup> Inequity exists in

areas of lower socioeconomic status and indigenous, refugee, elderly and Culturally and Linguistically Diverse communities, almost certainly related to insufficient total investment, as well as maldistribution of resources.<sup>12</sup>

We call for a renewed effort by our national and state governments to improve cancer outcomes. Just as Australia is leading the world in its response to COVID-19, equally it should lead the world in improving cancer control for all its population. This requires an ongoing rational, needs-based investment where infrastructure and resources are lacking. It requires better investment and access to research and clinical trials, widespread access to tumour genomic testing and other technologies, building a world class training system and working with primary care in better prevention, screening and shared care. Telehealth is an important tool to drive improvements.

## Conclusion

The rapid changes that have occurred in response to the threat of a pandemic demonstrate what can be achieved at a time of need. We hope this is a call to lasting changes in cancer care provision. We call on a refocussed effort to overcome the biggest health threat to our communities in the 21st century, the ongoing epidemic of cancer.

## References

- 1 Segelov E, Underhill C, Prenan H, Karapetis C, Jackson C, Nott L. Practical considerations for treating cancer patients in the COVID-19 pandemic. *JCO Oncol Pract* 2020; **16**: 467–82.
- 2 World Health Organization (WHO). The World Health Report 1999: making a difference. Geneva, Switzerland: WHO; 1999.
- 3 Australian Institute of Health and Welfare. *Australian Burden of Disease Study: Impact and Causes of Illness and Death in Australia 2015. Australian Burden of Disease Series No. 19. Cat. No. BOD 22.* Canberra: AIHW; 2019.
- 4 Australian Institute of Health and Welfare. *Cancer in Australia 2019.* Cancer Series No.119. Cat. No. CAN 123. Canberra: AIHW; 2019.
- 5 Victorian Cancer Registry. *Cancer in Victoria: Statistics & Trends 2018.* Melbourne: Cancer Council Victoria; 2019.
- 6 The Victorian COVID-19 Cancer Network. 2020 [cited 2020 May 2]. Available from URL: <https://www.viccompncancerctr.org/victorian-covid-19-cancer-network/>
- 7 Shih STH, Mellerick A, Akers G, Whitfield K, Moodie M. Economic assessment of a new model of care to support patients with cancer experiencing cancer-and treatment-related toxicities. *JCO Oncol Pract* 2020; **16**: e884-92.
- 8 Department of Health and Human Services Victoria. Home based cancer care framework and toolkit. Melbourne: Department of Health and Human Services; 2020.
- 9 Mayor S. COVID-19: impact on cancer workforce and delivery of care. *Lancet Oncol* 2020; **21**: 633.
- 10 Sydney Health Ethics. An ethics framework for making resource allocations decisions within clinical care: responding to COVID-19. 2020 [cited 2020 May 2]. Available from URL: <https://www.sydney.edu.au/news-opinion/news/2020/04/08/covid-19-ethics-framework-to-help-guide-decision-making.html>
- 11 Clinical Oncological Society of Australia. Australasian Tele-trial Model: access to clinical trials close to home using tele-health Version 7.0. 2016.
- 12 Australian Institute of Health and Welfare. *Australia's health 2018.* Australia's Health Series No. 16. AUS 221. Canberra: AIHW; 2018.