COMMERCIAL IN CONFIDENCE

FINAL REPORT

Impact of the VCCC Alliance

Creating the building blocks for better long term cancer outcomes

Prepared for
VCCC Alliance

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THE CENTRE FOR INTERNATIONAL ECONOMICS
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Contents

BOXES, CHARTS AND TABLES

Summary

The Victorian Comprehensive Cancer Centre (VCCC) Alliance connects research, academic and clinical institutions to build the capacity of the myriad of stakeholders across the health system in a way that few other organisations can.

Taking a systems view to improving the Victorian cancer system, the VCCC Alliance has put into place governance arrangements, networks, and capacity building capability to support ongoing clinical practice change for the betterment of patients.

It has effectively and successfully:

- expanded cancer research collaboration, capacity and capability
- embedded consumers and lived experience across the cancer system
- supported innovations in and around clinical trials, including for regional patients
- strengthened the cancer workforce to work at the top of their scope
- provided access to best practice expertise for patients outside the Melbourne Biomedical Precinct to improve consistency in cancer treatment and care
- expanded access to precision medicine, and directed effort to less common cancers to improve patient outcomes, and
- shared best practice knowledge across multiple topics, and to large numbers of participants, through an array of educational forums.

All these features represent building blocks for improving screening, early detection, cancer outcomes, survivorship, and patient experiences with cancer care.

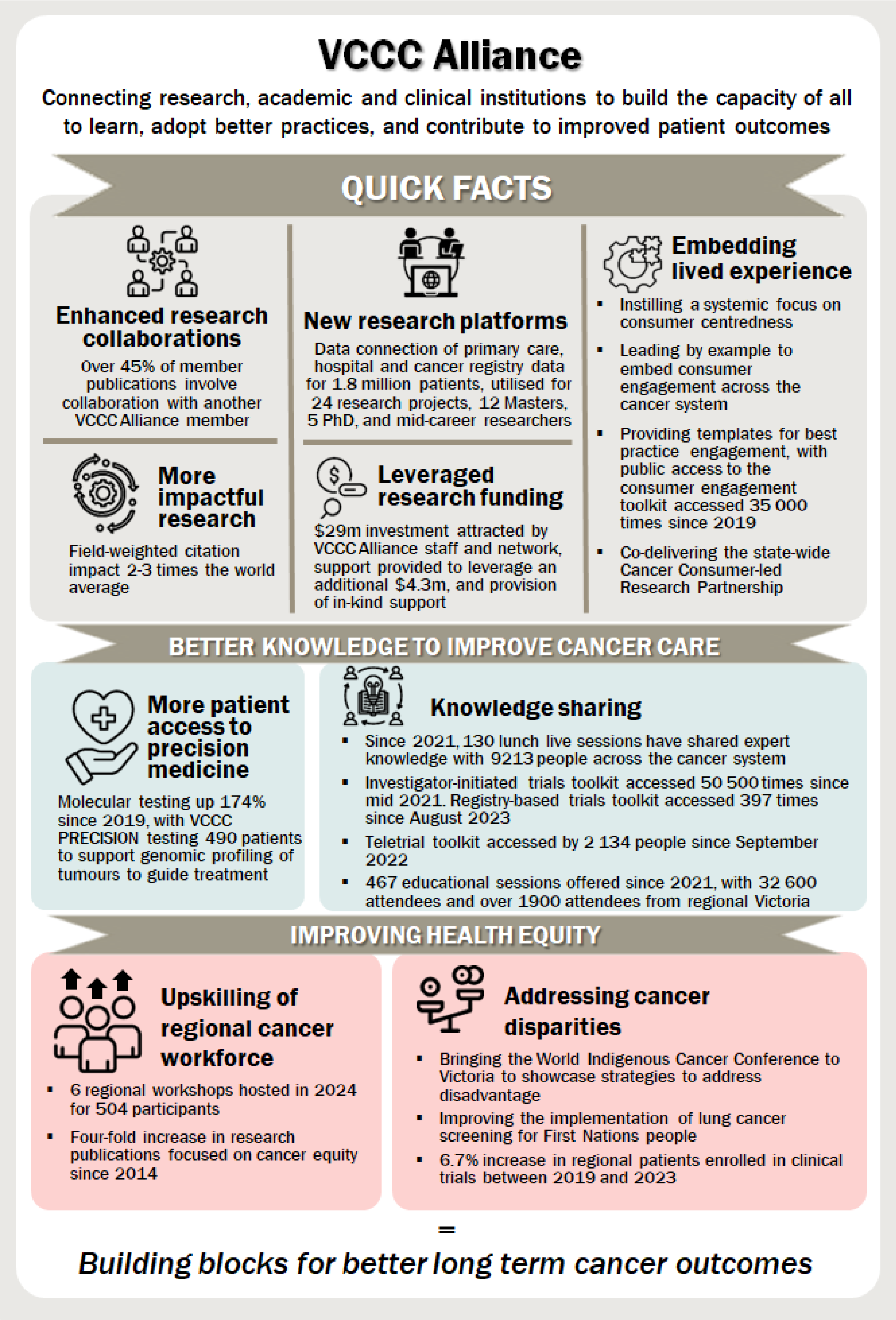
Indicators of impact are highlighted throughout this report to demonstrate the contribution of the VCCC Alliance to improving research outcomes and their translation into clinical practice, strengthening the cancer workforce, and improving patients' experience with the cancer system. Some impacts are immediate, and others are necessary elements of longer-term practice change.

While the focus of this report is on impacts that are seeded by the VCCC Alliance, it is acknowledged that there are other organisations that similarly strengthen the cancer system as part of a collective impact model.

What is clear is that the deliverables made available by the VCCC Alliance have set in place a positive framework that supports and develops the cancer workforce, directs effort to important initiatives that patients want and need, and contributes to the highly valued cancer system in the State of Victoria.

Key highlights and impacts to date are summarised in chart 1.

1 Evidence of impact of the VCCC Alliance



VCCC Alliance

Connecting research, academic and clinical institutions to build the capacity of all to learn, adopt better practices, and contribute to improved patient outcomes

QUICK FACTS

Enhanced research collaborations

Over 45% of member publications involve collaboration with another VCCC Alliance member

More impactful research

Field-weighted citation impact 2-3 times the world average

New research platforms

Data connection of primary care, hospital and cancer registry data for 1.8 million patients, utilised for 24 research projects, 12 Masters, 5 PhD, and mid-career researchers

Leveraged research funding

$29m investment attracted by VCCC Alliance staff and network, support provided to leverage an additional $4.3m, and provision of in-kind support

Embedding lived experience

- Instilling a systemic focus on consumer centredness
- Leading by example to embed consumer engagement across the cancer system
- Providing templates for best practice engagement, with public access to the consumer engagement toolkit accessed 35 000 times since 2019
- Co-delivering the state-wide Cancer Consumer-led Research Partnership

BETTER KNOWLEDGE TO IMPROVE CANCER CARE

More patient access to precision medicine

Molecular testing up 174% since 2019, with VCCC PRECISION testing 490 patients to support genomic profiling of tumours to guide treatment

Knowledge sharing

- Since 2021, 130 lunch live sessions have shared expert knowledge with 9213 people across the cancer system
- Investigator-initiated trials toolkit accessed 50 500 times since mid 2021. Registry-based trials toolkit accessed 397 times since August 2023
- Teletrial toolkit accessed by 2 134 people since September 2022
- 467 educational sessions offered since 2021, with 32 600 attendees and over 1900 attendees from regional Victoria

IMPROVING HEALTH EQUITY

Upskilling of regional cancer workforce

- 6 regional workshops hosted in 2024 for 504 participants
- Four-fold increase in research publications focused on cancer equity since 2014

Addressing cancer disparities

- Bringing the World Indigenous Cancer Conference to Victoria to showcase strategies to address disadvantage
- Improving the implementation of lung cancer screening for First Nations people
- 6.7% increase in regional patients enrolled in clinical trials between 2019 and 2023

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Building blocks for better long term cancer outcomes

Data source: CIE.

1 About this study

This impact report focuses on key areas of impact of the VCCC Alliance since 2021. It is based on a detailed review of available data and information, and engagement with over 60 stakeholders in the Victorian cancer system.

About the VCCC Alliance

Since 2009, the VCCC Alliance has been a partnership between ten leading research, academic and clinical institutions with the shared aim to expedite and amplify leading edge cancer research, knowledge, and expertise to improve outcomes for people affected by cancer. This includes the Peter MacCallum Cancer Centre, The Royal Melbourne Hospital, University of Melbourne, The Royal Women's Hospital, WEHI, The Royal Children's Hospital, Western Health, St Vincent's Hospital Melbourne and St Vincent's Institute, Austin Health and Olivia Newton-John Cancer Research Institute, and Murdoch Children's Research Institute.

It was founded under the principles of the Comprehensive Cancer Centre model. While VCCC Alliance partners are delivering research and services, the model itself is one of connecting research, academic and clinical institutions in a way that builds the capacity of all to learn and adopt better practices that contribute to improved patient outcomes.

The Alliance's approach and philosophy is closely aligned with the five elements of the Collective Impact Model (chart 1.1), which is an internationally recognised approach to collaborative action to achieve complex, systems-level change.

This report

The VCCC Alliance has commissioned the Centre for International Economics (CIE) to develop this Impact Report and accompanying Dashboard to capture the VCCC Alliance's key areas of impact. The key steps undertaken to assess the impact of the VCCC Alliance and its role in contributing to a more effective cancer system include:

- articulating what the VCCC Alliance is and does, and how these functions and characteristics build capacity for best practice treatment and care
- identifying which barriers to better and more equitable care are addressed by the VCCC Alliance, and where there is evidence of this being achieved, and
- showcasing impact through the use of case studies, data, and other evidence associated with the building blocks or leading indicators for better patient outcomes.

This study was substantially assisted by engagement with over 60 stakeholders to understand the collective impact of the VCCC Alliance. This included VCCC Alliance staff and Research and Education Leads across a range of areas, researchers, clinicians, and other representatives from member institutions, consumer representatives, health equity stakeholders, including members of VCCC Alliance reference groups, members of organisations representing Aboriginal and Torres Strait Islander people, regional service providers, and government and non-government entities within the Victorian cancer system.

1.1 The VCCC Alliance's approach under the Collective Impact model

Source: CIE.

2 Improved research capacity and capability

The VCCC Alliance has broken down barriers and lifted research capabilities to make a substantial contribution to progressing cancer research. A focus on building networks has created opportunities for increased collaboration and more diversified participation in research and increased the skills of the researcher workforce.

The VCCC Alliance has facilitated increased patient participation in research by increasing awareness of trial opportunities and addressing barriers to uptake. It has substantially strengthened consumer advocate involvement in research, who are active members, and sometimes leaders, of research teams.

It has also made a key investment in research capability through Data Connect, spurring new avenues for important research into diagnostic delays, optimal patient care, survival and survivorship.

Expanding networks and increasing collaboration

Collaboration in research has universal benefits in combining knowledge, sharing insights, leveraging expertise, creating opportunities to learn and support others, and reducing duplication. However, it is challenged by a highly competitive funding paradigm that traditionally drives an individual pursuit of excellence.

The VCCC Alliance has been effective in combatting this challenge by providing opportunities for researchers to come together, build connections and trust, and form research relationships and collaborative agreements. The VCCC Alliance's educational activities achieve multidisciplinary audience participation, including with consumers, and are highly valued by the research community. The 2023 VCCC Alliance Research Conference had high participant satisfaction (88.1 per cent satisfied/extremely satisfied), drove 123 tweets under the hashtag #VCCCA23 and other social media engagement, and led to published media articles by The Limbic and AAP.

The VCCC Alliance also has a key role in connecting collaborators.

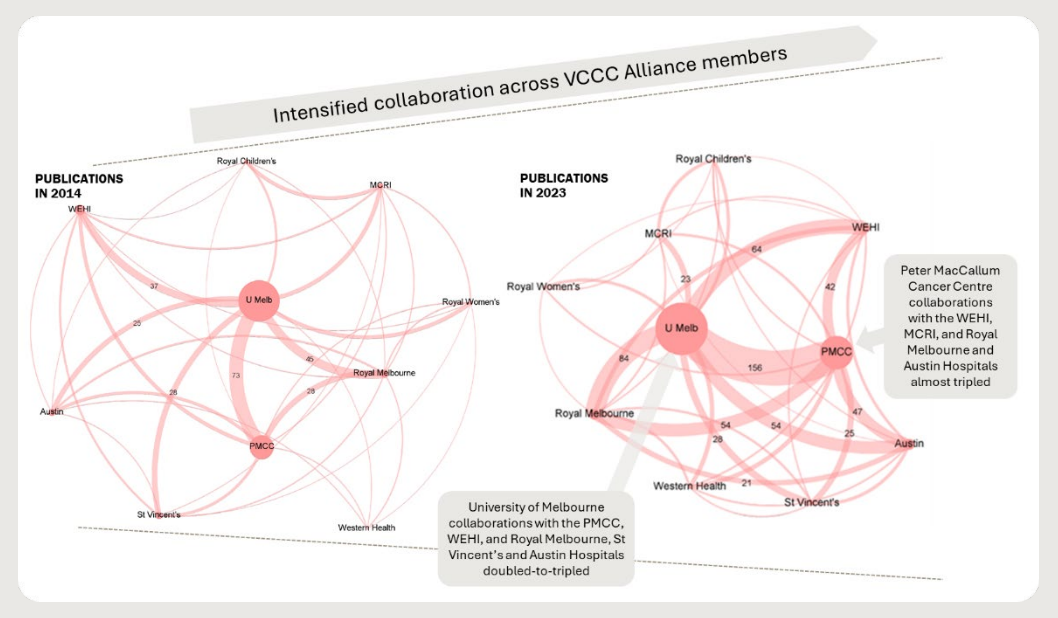
It is widely heralded as the first point of contact for researchers who want to know which institutions or researchers might be potential collaborators or can provide input to a research project.

> ‘The VCCC Alliance represents a maturation in thinking about collaboration, allowing people to change their approach to contribute to a system of care’ (university representative and VCCC Alliance member).
>
> ‘The VCCC Alliance has facilitated people to *raise their gaze*, which has been transformational’ (university representative and VCCC Alliance member).

> ‘We work better with [other VCCC Alliance members] now than we ever have’ (medical research institute and VCCC Alliance member).

The increase in research collaboration driven by the VCCC Alliance is evidenced by increased co-authorship among member institutions since the VCCC Alliance was established, with co-authored publications between medical research institutes, universities and hospitals two-to-three times higher than they were a decade ago (chart 2.1). Now over 45 per cent of member publications involve another VCCC Alliance member (chart 2.2). There has also been a large increase in academic journal publications by VCCC Alliance-affiliated researchers, with a 19 per cent increase between 2018 and 2023.[1]

2.1 Strengthening co-authorship network within the VCCC Alliance



Peter MacCallum Cancer Centre collaborations with the WEHI, MCRI, and Royal Melbourne and Austin Hospitals almost tripled

University of Melbourne collaborations with the PMCC, WEHI, and Royal Melbourne, St Vincent’s and Austin Hospitals doubled-to-tripled

Note: Each node represents a VCCC Alliance member institution, while a co-authorship between two institutions is represented by a link. Line thickness corresponds to the number of publications with authors from at least the two institutions at each end of the link with value labels showing this number when it is over 20. The charts for 2014 and 2024 have a common scale.

Data source: VCCC Alliance, based on research undertaken by Shade Wood, University of Melbourne.

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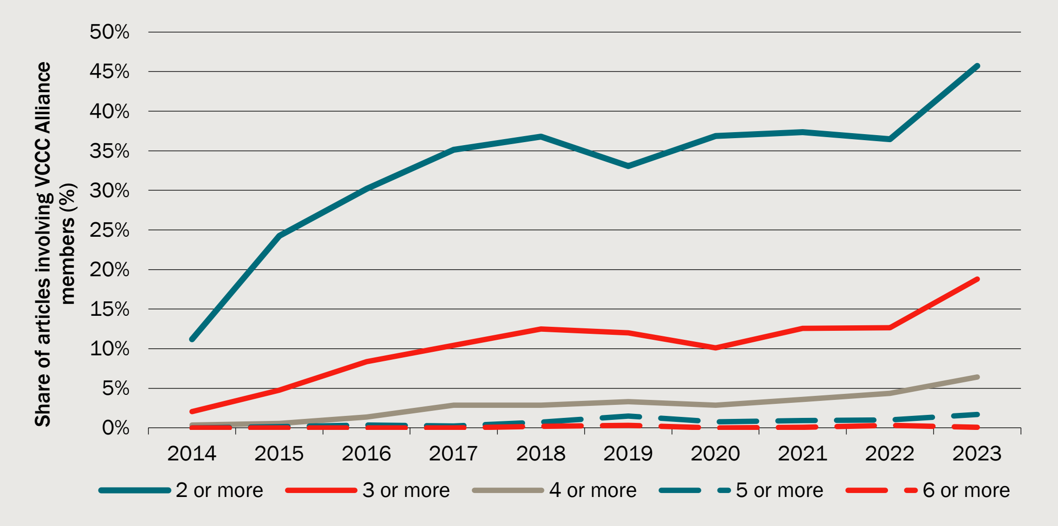
[1] Based on CIE analysis of all research publications by VCCC Alliance members between 2014 and 2023, with publication data extracted from the PubMed database, see Appendix A.

2.2 Rising multi-institutional publications from VCCC Alliance



Note: Shows multiple VCCC Alliance-affiliated authors as a share of published research with at least one VCCC Alliance-affiliated author. Legend should be read as: 2 or more authors, 3 or more authors, 4 or more authors, 5 or more authors, 6 or more authors.

Data source: CIE analysis of PubMed research database (see Appendix A).

While there are many drivers of research quality, the VCCC Alliance is expected to have enhanced the impact of VCCC Alliance-affiliated cancer research as measured by a 'Field-Weighted Citation Impact' (FWCI)[2], with the 3-year FWCI of VCCC Alliance cancer research up from 1.92 in 2011 to 3.01 in 2020 and 2.35 in 2024.

Encouraging multi-disciplinary connections

The VCCC Alliance has been an important facilitator of research across disciplines, bringing diverse perspectives to framing research questions and methodologies, and addressing issues that matter to patients. It has enabled connections by funding protected time for clinicians to be involved in research, and remunerating consumers for their involvement in research and education. For instance, it has:

- funded the 'Multidisciplinary Connections' project, which promoted two networking events to foster connections between researchers in disparate areas to improve access to important biological samples and drive the translation of cancer biomarkers, and
- set up a network of Site Research Coordinators located at the Peter MacCallum Cancer Centre, Austin Health, St Vincent's Hospital Melbourne, and Western Health, to facilitate and increase access to the VCCC PRECISION study and others.

Multidisciplinary connections facilitated by the VCCC Alliance have led to more clinical, nursing and patient involvement and leadership in the research process, encouraging researchers to broaden their scope and examine areas of interest at a more systems level.

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[2] A 'Field-Weighted Citation Impact' of 1 indicates that the publication has been cited at the world average for similar publications. A '3-year' score refers to citations in the year of publication plus the following three years.

> 'The VCCC Alliance has highlighted such different areas within cancer research… bringing in the practice angle… so that our researchers get more access to that, making them think about areas that perhaps they haven't before' (university representative and VCCC Alliance member).

Building researcher capability

As the cancer care system has become more complex, so too has cancer research, making upskilling important to ensure the workforce is capable of adapting and continuing to deliver effective research. The VCCC Alliance's education program has built researcher capability by providing career development opportunities, especially for early- and mid-career researchers. Evidence includes:

- the Master of Cancer Sciences, which is a multidisciplinary online program developed by experts across the VCCC Alliance and the University of Melbourne aimed at deepening and updating cancer professionals' clinical practice knowledge
- the Leadership Academy program, which is a multidisciplinary learning network based on the VCCC Alliance Leadership Capability Framework to empower leadership across the cancer community, which hosted 18 webinars and educational sessions over 2023-24 with 644 participants
- research-related webinars accessible through the Monday Lunch Live Stream, and other webinars and workshops related to research delivered via the Centre for Cancer Education, such as developing skills for nurse-led research grant submissions, and
- the VCCC Alliance Research Education and Coaching Program 2024, which mentors and supports early and mid-career researchers, and supports researchers with commercialisation advice to shape research to be more attractive to commercial backers and identifying ways to build connections with industry.

Building nursing capability for research

The VCCC Alliance has an important role in enabling the cancer nursing workforce to engage in, and improve, research. The VCCC Alliance's Nurse-Led Research Hub (NLRH) helps nurses build research skills and knowledge to improve cancer care. It offers education, training, and networking opportunities to support nurse-led research and collaboration. A knowledgeable, research-enabled, and research-active nursing workforce is fundamental to quality, safety, and innovation in cancer care. In 2023, 415 nurses attended 13 NLRH and Cancer Nursing activities. The NLRH also saw large increases in attendees from regional Victoria (now 12 per cent of participants) and non-VCCC Alliance Melbourne organisations (now 32 per cent).

> 'In terms of the practical guidance for research, formal clinical nurse education couldn't develop what the VCCC Alliance now offers' (regional healthcare provider and VCCC Alliance member).

Through the program of workshops, webinars and an online course, nurses learn to turn clinical ideas into research, build research skills and networks, and change their clinical practice. Nurses report a high degree of satisfaction with webinars and workshops. Post NLRH webinar and workshop surveys for 2023 demonstrate a Net Promoter Score of

83.9, where 70-100 is considered world class. In 2023, 98.7 per cent of nurses agreed or strongly agreed that they intended to change practice after attending one of the hub events, demonstrating the intention to integrate new knowledge into clinical practice.

In September 2023, the Essential Research Skills for Clinical Nurses online training course was launched by the NLRH. This course is endorsed by the Australian College of Nursing and embeds consumer engagement strategies and research ethics and governance resources, across 11 modules. Since launching, 96 nurses have enrolled in the course from more than 30 organisations across Australia and New Zealand. Upon completion, 93 per cent were satisfied or very satisfied with it, 100 per cent agreed they had learned something new, and 97 per cent had already applied new knowledge.

Pathways for clinical trial administrators and study coordinators

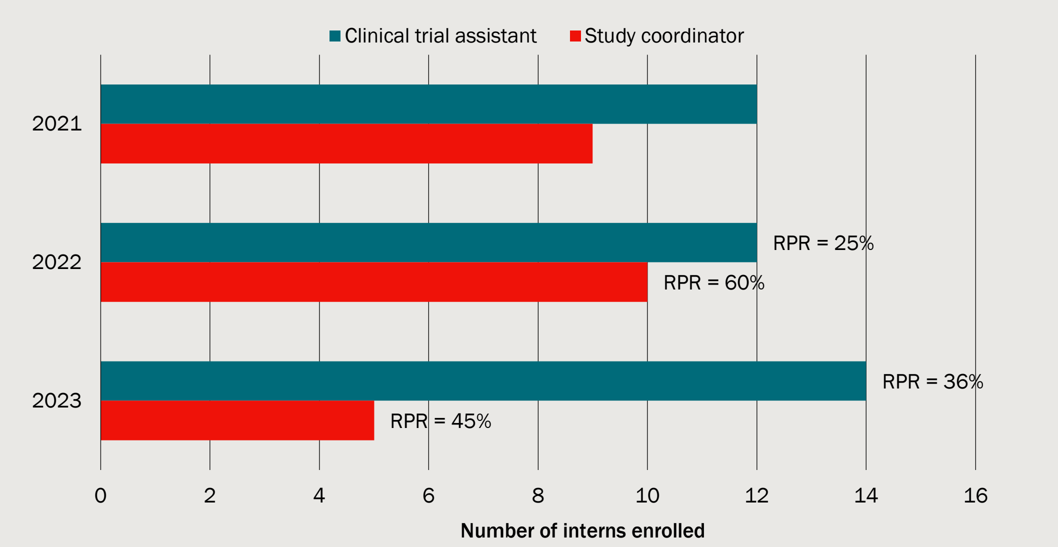
Strong workforce pipelines and best practice development pathways are essential to expanding clinical trials. The VCCC Alliance's SKILLED internship program has helped build a highly skilled clinical trial workforce. The program consists of on-the-job supervised training for a 24- or 40-week period, with internships available for clinical trial assistant and study coordinators, each supported by competency frameworks. Interns that participate in the program gain valuable skills across areas such as study management, laboratory operations, regulatory management, professional skills, and for study coordinators, interaction with participants.

The SKILLED program has been instrumental in building capability and capacity, especially in regional areas. By empowering interns to develop their skills, the program enables them to transition into senior roles within the workforce, where they can mentor junior staff, thereby enhancing local expertise and leadership.

> ‘The SKILLED internship program was beneficial for interns who often have no clinical trials experience…providing access to conversations that matter and being a great first step to build local capacity’ (university representative).

Around 30 per cent of clinical trial assistant interns and 50 per cent of study coordinator interns secured placements at regional sites, helping improve access to trials in regional areas.

2.3 SKILLED internship program enrolments and placement rates



Note: The placement rate is the share of enrolled interns that secured a placement after their internship.

Data source: VCCC Alliance, CIE.

Leadership in promoting patient and consumer participation

The VCCC Alliance has strongly supported increased patient and consumer participation in research and clinical trials.

Enabling Registry Trials

The VCCC Alliance has a unique position, being a collaboration of institutions holding data about patients. Innovations in clinical trial methodologies such as Registry Trials have been significantly enabled by collaboration facilitated by the VCCC Alliance. Registry trials are a relatively novel methodology for conducting clinical trials, combining conventional trial methodologies with clinical registries for recruitment, randomisation, and follow-up. The first Australian cancer-focused registry trials were initiated within the VCCC Alliance, which require comprehensive clinical data captured at many hospitals, including most VCCC Alliance partner hospitals. Registry trials have enabled rapid recruitment of participants at reduced cost with high external validity.

Increasing awareness of clinical trials

The VCCC Alliance has developed a clinical trials database to increase awareness of trials across institutions, which has been particularly lacking for early phase trials. The VCCC Alliance Early Phase Clinical Trials Awareness Project increased clinician visibility of trials across institutions by maintaining and promoting a database of Phase 1 cancer trials. It has also provided educational resources for consumers, translated into 18 different languages, to improve awareness and understanding of trials. Clinicians consulted as part of this study have praised the VCCC Alliance database for being accurate across sites, with dedicated staff to maintain recency.

Increasing consumers as active partners in research

The VCCC Alliance has led the way in educating researchers on the importance of involving consumers as active partners in research. Through the delivery of interactive masterclasses led by Anne McKenzie AM, an internationally recognised consumer advocate, researchers have built the skills and confidence needed to engage consumers early and meaningfully. These workshops highlight the value of consumer engagement, which is increasingly essential for securing research funding and ensuring studies are relevant and impactful. Participants learn how to overcome barriers, involve consumers in shaping research, and develop successful collaborations that drive real world improvements. The program has been running since 2019 and has involved 217 researcher and consumer participants since 2021.

> ‘Consumer engagement through the VCCC Alliance is more than just a community engagement process: it is a different lens… it provides a consumer voice from the bottom to the top’ (VCCC Alliance consumer advocate).
>
> ‘The VCCC Alliance has made it normal for consumers to be involved with different health services and to share information in a more open way… if you go back 10 years it is so different now to how the health services work with respect to consumers’ (VCCC Alliance consumer advocate).

Investing in data linkage to proliferate research opportunities

Inconsistent and separate data collections across institutions are a major challenge for cancer research, particularly for longitudinal research along the care continuum.

A major collaboration of the VCCC Alliance has been the linking of primary care and hospital data for the first time in Australia through Data Connect, in partnership with the University of Melbourne, hospitals, and BioGrid Australia. Now the records of 1.8 million cancer patients from General Practitioner (GP) visits, hospital visits, and cancer registry data are available to researchers to study the continuum of cancer care. The data collection spans the reasons for GP visits, information obtained from consultations, and information about later treatments, cancer stage, and survival.

> ‘The VCCC Alliance has helped scale up the ability to do data linkage studies to both inform optimal care pathways *and* identify where there is inequitable investment in cancer… including inequitable access to diagnostics’ (university representative and VCCC Alliance member).

Since 2019, linked data has facilitated 24 cancer research projects and supported capacity building for 5 PhD students and 12 Master of Cancer Sciences students. Already, research using this data has resulted in an increased understanding of diagnostic and treatment pathways, the association between diagnostic delay and poorer cancer outcomes, patterns of pathology testing preceding diagnosis of colorectal and lung cancer, and informed optimal care pathways.

Leveraging more funding for cancer research

Over the past three years, the VCCC Alliance has helped attract close to $29 million in investment in cancer research, where VCCC Alliance staff and network are directly involved in a funding application as part of VCCC Alliance work. It has also provided capability or seed funding to support successful funding applications for an additional $4.3 million and supported other successful funding applications through in-kind support.[3]

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[3] VCCC Alliance SPP Annual Reports for 2022, 2023 and 2024.

3 Embedding lived experience into the cancer system

The VCCC Alliance has played a pivotal role in transforming the culture of the cancer system to focus on consumer needs and outcomes that matter to patients. It has embedded lived experience and patient-driven outcomes into research, clinical trials, and routine care, and increased appreciation of the psychosocial impact of research and treatment. It has demonstrated to the cancer network how to do patient centredness, and helped orient the cancer system towards patient and carer need.

Systemic consumer focus

Leading by example

The VCCC Alliance has been a leader in genuine integration of the consumer voice into the Victorian cancer system. Consumers are well represented across all aspects of program governance, with several consumer representatives in all Strategic Program Plan steering groups and working groups.

Between April 2023 and March 2024, 144 consumers were involved in consumer engagement activities across the ten programs funded by the VCCC Alliance.[4] Consumer involvement is a requirement for all VCCC Alliance-sponsored events, ensuring consumers participate in panels, opening and closing speeches, as co-chairs, judges, and in oral and poster presentations. They are active in governance, research, education, and communications. Consumers guide the development of platforms, programming, resources and educational content for the VCCC Alliance, participating at all levels of governance, and leading journal clubs in the Master of Cancer Sciences.

The VCCC Alliance operationalised the Cancer Australia National Framework for Consumer Involvement in Cancer Control[5], providing members with a model for implementing best practice systems and processes for consumer engagement, which are now prominent across the Victorian cancer network.

The VCCC Alliance has improved the consumer engagement practices at each of its member institutions through training sessions on consumer engagement implementation, and the provision of a consumer engagement toolkit[6], which since December 2019 has seen more than 35 000 pageviews and over 3 600 downloads of sample documents

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[4] 2024 edition of the Strategic Program Plan (SPP) Annual Report.

[5] See https://www.canceraustralia.gov.au/publications-and-resources/cancer-australia-publications/national-framework-consumer-involvement-cancer-control

[6] The toolkit can be accessed here: https://vcccalliance.org.au/consumer-engagement/

templates and guides. It was widely agreed among stakeholders that these resources are beneficial, with widespread use of the VCCC Alliance cost model for consumer remuneration.

Today, each member of the VCCC Alliance has a strong consumer focus and employs a dedicated consumer engagement manager, who are assisted in their role by the resources made available by the VCCC Alliance.

> ‘The VCCC Alliance’s consumer engagement materials are a significant reference point: its model of engagement is on my wall’ (consumer engagement manager from a health service provider).

Building consumer leaders

The VCCC Alliance has built significant capacity among consumers to play an effective role in the cancer system and provided leadership and training opportunities for consumers to equip them with the skills and knowledge to positively drive consumer led outcomes.

Consumers have strong engagement with VCCC Alliance education activities. Across all VCCC Alliance education events, 430 consumers attended between 2023 and July 2024, including 71 consumers at the fifth annual Consumer Engagement Forum in December 2023. Consumer attendance has also been high at the Monday Lunch Livestream sessions, which provide information relating to progress with personalised patient education, consumers as partners, and improved models of care for cancer survivors.

> ‘The VCCC Alliance has had a real impact on making consumers *good consumer advocates*, and good consumers to involve in consumer engagement’ (VCCC Alliance consumer advocate).

Consumers and the VCCC Alliance Cancer Consumer Advisory Committee have developed tools for consumer engagement for research institutions, and assisted Victorian researchers win grant funding dependent on achieving consumer outcomes by understanding and articulating the impacts of research on consumers.

Consumer leadership and advocacy

The VCCC Alliance has broadened the opportunities for consumers to engage with the cancer network. Through VCCC Alliance consumer engagement pathways, consumers can engage directly with researchers and drive the direction of research and education.

In 2023, the VCCC Alliance and other cancer control organisations across the state (Monash Partners Comprehensive Cancer Consortium, Regional Trials Network, Cancer Council Victoria, and the University of Melbourne) formed the Cancer Consumer-led Research Partnership. The Partnership represents a statewide $1.6 million investment in delivering consumer leadership to enhance consumer engagement practices through collaboration and consumer-led approaches.

The VCCC Alliance has also conducted consumer-led research pilot projects, including research on patient and carer experiences accessing and receiving tumour genetic profiling, and understanding the importance of interpreters to patients from diverse backgrounds when communicating with care providers.

> '[Thanks to the VCCC Alliance], consumers are involved much earlier in the process of influencing the research question: shaping the research, and the target audience of the research… influencing actual research' (VCCC Alliance consumer advocate).

Now strong consumer engagement processes have gone on to shape several positive research resources including:

- PRIMCAT[7], a large consumer-informed multi-institutional MRFF funded research program to provide 5-year epidemiological estimates of eligible patient populations and quantify the economic impact of new cancer treatments. Consumers were central to the focus on the quality, not just quantity, of life
- various circulating tumour DNA studies to explore scope for using locally administered blood tests in place of PET scans for cancer recurrence, now being validated in large clinical trials, and
- a VCCC Alliance developed online course for GPs to better care for cancer patients on release from hospital, providing treatment advice and guidance on how to communicate to patients when they need to be directed back to hospital. This module is also used to train upcoming doctors and improve clinical care.

Since 2014, the number of VCCC Alliance-affiliated research publications focused on patient centred care has risen from 34 to 123 in 2023.[8]

Improved consumer experience with the cancer system

Patient satisfaction and experience with the cancer system in Victoria is strong. The Victorian Patient Experience Survey reports that 98 per cent of adult patients of Victorian cancer services have a positive overall health experience.[9] Cancer patients reported that Victorian cancer services were most effective in meeting their physical needs, with 79 per cent selecting the most positive answer option. Seventy-four per cent of cancer patients believed their psychological and information needs were met. Only 54 per cent reported most positively that social needs were met, reflecting ongoing need for information and support to family and friends of the patient. Smaller and regional cancer services often performed above the state average.[10]

These results in part reflect the proactive role of the VCCC Alliance in championing the consumer experience and providing tools and templates to help member organisations

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[7] University of Melbourne, PRIMCAT: Predicting the population health economic impact of current and new cancer treatments, https://mdhs.unimelb.edu.au/centre-for-cancer-research/flagships/primcat-predicting-the-population-health-economic-impact-of-current-and-new-cancer-treatments

[8] CIE analysis of PubMed research database (see Appendix A).

[9] Victorian Department of Health, Insights from the Cancer Patient Experience Survey 2022.

[10] Results are calculated for each cancer service, weighted by the size of their patient cohort, hence capture differences in complexity serviced by different services.

improve their consumer engagement strategies. For example, the consumer engagement strategy at the Peter MacCallum Cancer Centre has enabled consumers to drive its patient experience strategic plan, and direct investment to improve the experience of patients and carers. Consumers co-designed the VCCC Alliance's educational material for patients diagnosed with rectal cancer, leading to changes in the care plan template and patient information sheet to align with information patients receive in consultations.

The involvement of consumers has resulted in a wide range of practical changes across hospitals that deliver meaningful improvements to the patient experience. This includes providing disposal bins in public toilets for men following prostate cancer surgery, forums for hearing from men on what could improve their quality of life, and less invasive procedures and treatments that would be accepted. A consumer led forum organised for patients with head and neck cancer identified the need to provide better facilities for eating post-surgery, which will impact on clinical practice going forward.

> ‘[The processes and programs of the VCCC Alliance] enables early career students to hear directly from patients and helps remind them why we’re here and what we’re doing, even if they don’t have day-to-day access to patients’ (university representative and VCCC Alliance member).

4 *Equitable care and outcomes*

The VCCC Alliance has expanded the reach of comprehensive cancer care across the state and encouraged a focus on priority populations. It has:

- **built the capacity of the regional workforce and provided opportunities for regions to share their insights and experience, with strong regional participation in educational forums and workshops relevant to equity related care**
- **strengthened collaboration between regional partners and the Melbourne Biomedical Precinct with funded internships, educational courses, and Regional Partnership Officers to upskill staff, develop the capabilities of regional cancer services, and promote engagement with VCCC Alliance activities and events**
- **prioritised an equity lens across the cancer system, building awareness of equity issues, and developing networks in regional areas to strengthen ties between academic research, education and clinical practice**
- **facilitated a focus on the care needs of Aboriginal and Torres Strait Islander communities, supporting and enabling the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) to participate in the wider cancer network and contribute to initiatives that address cancer disparities**
- **better connected regional areas to comprehensive cancer care, enabling regional practitioners to access expertise from the Melbourne Biomedical Precinct, and**
- **helped achieve an increase in regional clinical trials, using its network to increase collaboration between metropolitan and regional clinical trial sites, and implement Victoria's first Teletrial program.**

Regional workforce strengthening

Regional health services in Victoria aim to meet the health care needs of 70 percent of local residents without the need for patients to travel out of the catchment for treatment. Self-sufficiency rates vary considerably across Victoria. For cancer care, it is:

- 45.8 per cent for oncology and 47.3 per cent for chemotherapy and radiotherapy at Echuca Regional Health
- 68.6 per cent for oncology and 63.2 per cent for chemotherapy and radiotherapy at Austin Health, and

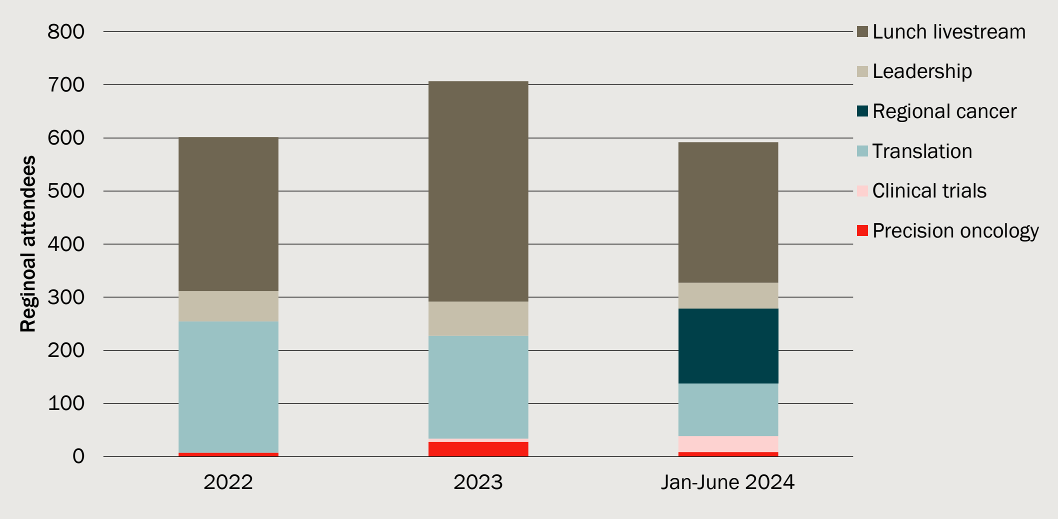
- 85.2 per cent for oncology and 88.2 per cent and 75.6 per cent for chemotherapy and radiotherapy respectively, at Grampians Health.[11]

The VCCC Alliance has helped attract skilled healthcare professionals to regional areas and trained regional resources to better enable quality cancer care to be delivered locally.

Providing access to new knowledge and connections

The VCCC Alliance has provided access to six online education forums for regional staff to be upskilled and connected to colleagues across the cancer sector without the barriers of travelling to metropolitan events, involving 504 attendees. Between 2021 and June 2024, the VCCC Alliance hosted 466 educational sessions with over 1 900 regional attendees, where regional participation in events increased from 7 per cent to 22 per cent (chart 4.1). Educational sessions have built awareness of the VCCC Alliance network and shared knowledge across the cancer system.

4.1 Regional participation in VCCC Alliance educational programs



Notes: Data for 2021 does not have regional and metropolitan attendance by program. Data for 2024 is available for only the first half of the year.

Data source: CIE

Providing regional health services with local specialist resources

The VCCC Alliance has been highly effective in facilitating skilled clinicians to work in regional areas and connecting regional and metropolitan health services through the Regional Partnership Project (RPP). This has led to collaboration agreements between the VCCC Alliance and all eight regional cancer centres to develop the capabilities of regional health cancer services, making Victoria the first state in Australia to achieve this.

The VCCC Alliance has also been effective in advocating opportunities to work in regional sites.

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[11] Echuca Regional Health (2023), Clinical Services Plan. Austin Health (2016), Clinical Services Plan. Grampians Health (2022), Clinical Services Plan.

Between 2021 and 2024, the Alliance has delivered:

- an increase in regional participation in education events, with local communications plans, targeted promotion and engagement, and the development of six regional education forums, based on an identified regional needs analysis
- an educational course for regional cancer clinical trial units (RECIST), developed with regional and metropolitan subject matter experts with a focus to increase capability of regional clinical trial units
- Stipend support provided by the Victorian Government for SKILLED regional interns to provide best practice regional cancer care from 2021
- funding for 39 SKILLED interns located at 26 regional host site placements, and eight regional novices enrolled in the formally UPSKILLED training program, with an additional 75 instances where regional clinical trials professionals engaged with educational opportunities.
- recruited six Regional Partnership Officers throughout the regions, promoting greater awareness and engagement with the VCCC Alliance educational activities and events.

> ‘The VCCC Alliance has supported advanced trainees and the junior medical workforce [when working in regional areas] who know they can maintain an involvement and engagement with issues in major centres’ (regional health service provider).

Prioritising an equity lens across the cancer system

The VCCC Alliance has been an effective advocate for addressing disparities in cancer outcomes across populations. To focus awareness and resources on addressing unmet need, the VCCC Alliance has:

- established an Equity Advisory Group (EAG) to emphasise equity, diversity and inclusion in engaging with stakeholders, and embed diverse equity perspectives into the governance and operation of the VCCC Alliance network. The EAG brings an equity lens to VCCC Alliance associated research and effort, and makes a network of gender and ethnically diverse expertise accessible to the cancer system to identify specialists and contacts to address priority population needs, and
- hosted four regional focused workshops in 2024 for 224 attendees to share regional perspectives, provide a forum for regional voices to be heard, and identify care priorities for regional communities.

The number of research publications among members focused on cancer equity has increased four-fold, from 19 in 2014 to 86 in 2023.[12]

Leadership that brought the World Indigenous Cancer Conference to Victoria

The VCCC Alliance played an integral role in bringing the World Indigenous Cancer Conference (WICC) to Victoria, bringing together 621 international delegates to identify international research priorities, foster new collaboration, enhance capacity, and share

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[12] CIE analysis of PubMed research database (see Appendix A).

knowledge. The WICC showcased world class strategies used to address cancer disparities for First Nations people and provided unprecedented networking access to leaders in addressing disadvantage. It also allowed the VCCC Alliance to identify future priorities for Indigenous programs of work.

> ‘The WICC provided an opportunity to discuss the type of work that was being undertaken to support Indigenous people, to showcase what has been working, and to build the critical mass of Indigenous researchers’ (university representative).

Trusted relationships with priority populations to address disadvantage

The VCCC Alliance has established a trusted relationship with the VACCHO to identify gaps where the cancer system does not meet the needs of Aboriginal and Torres Strait Islander people, and support strategies to close them. An exemplar of this relationship is the joint submission to the Australian Lung Cancer Screening Advisory Group[13], as part of the process of developing the Federal Government's $260 million investment in a National Lung Cancer Screening Program to reduce lung cancer mortality by 20 to 25 per cent.[14] The VCCC Alliance and VACCHO provided advice on various factors affecting disparities, and are working with Deakin University and the National Centre for Aboriginal and Torres Strait Islander Wellbeing Research to develop and implement a screening program to improve access and experiences of care, and reduce the impact of lung cancer in Aboriginal and Torres Strait Islander Communities, ahead of the launch of the National Lung Cancer Screening Program in 2025.

The support offered by the VCCC Alliance has strengthened the advocacy and effectiveness of the VACCHO in its engagement with other stakeholders and created more productive interactions with government services to meet the needs of Aboriginal and Torres Strait Islander people.

The VCCC Alliance-VACCHO partnership has:

- led to a landmark lung cancer screening pilot project in two Aboriginal community-controlled health organisations, bringing expert research and clinical expertise to issues that matter to community-controlled health organisations
- kept VACCHO aware of developments across the cancer landscape to help identify new opportunities for Aboriginal and Torres Strait Islander people, and
- provided access to community advisory groups and consumer advocates to expand the number of representatives that can advocate for Aboriginal and Torres Strait Islander people.

> ‘The VCCC Alliance plays a critical role across the cancer system, coordinating and mobilising resources towards important strategic objectives, including cultural safety and

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[13] VCCC Alliance (2022), References to the Victorian Aboriginal Community for Lung Cancer Screening Advisory Group, available at https://vcccalliance.org.au/assets/assets-files/d2b277b805/References-to-the-Victorian-Aboriginal-Community-for-Lung-Cancer-Screening-Advisory-Group_August-2022.pdf

[14] VCCC Alliance (2023), Lung cancer screening program could reduce deaths by a quarter, https://vcccalliance.org.au/news-and-events/news/lung-cancer-screening-program-could-reduce-deaths-by-a-quarter/ accessed 23 September 2024

> equity. They enable stronger partnerships and more effective collaboration around health equity for Aboriginal and Torres Strait Islander people. Significant progress is being made through their role and efforts' (representative from VACCHO).

Leadership in cultural safety and awareness

The VCCC Alliance has developed benchmarking toolkits for cultural safety, competence, and awareness, which are critical enablers to reducing barriers to accessing cancer care for disadvantaged populations. The toolkits have been presented at conferences including the Aboriginal and Torres Strait Island health conference in Shepparton to refine the toolkit and enable its distribution.

Program of work for CALD communities to assess gaps in knowledge

VCCC Alliance has facilitated research collaborations that have created a four-year program of work for Culturally and Linguistically Diverse (CALD) communities. This has included projects such as piloting the use of translators during a clinical discussion about a care plan, which has been highly valued by CALD patients.

It has also hosted a data forum with 43 attendees to better capture data on CALD communities with cancer and developed recommendations for future activity, including identifying drivers of disadvantage and cancer disparities and designing grant applications to remedy them. This includes research to understand the extent to which CALD populations are under-utilising the Symptom and Urgent Review Clinic service designed to provide advice and minimise potentially avoidable Emergency Department visits for oncological complications, with a follow-on project now funded to explore solutions. This initiative was pioneered by VCCC Alliance member Western Health.

The VCCC Alliance has also developed a data dictionary for CALD communities. The dictionary is intended to serve as a guide for VCCC Alliance members in the collection of cancer registry data from CALD communities.

Connecting regions to best practice rare cancer care

VCCC Alliance networks play an important role in retaining connection between regional cancer providers and latest developments in best practice cancer care, including enabling multi-site shared care approaches to achieve consistent access to the best quality of care.

For instance, the VCCC Alliance established the first statewide less-common cancer framework, a demonstration model for centralised multi-disciplinary care for penile and testicular cancers (PEN-TEST), which has the potential to improve outcomes for people with penile or testicular cancer by:

- facilitating multidisciplinary discussions between statewide experts in penile and testicular cancer, regardless of a patient's geographical location
- providing a second opinion for complex cases

- increasing awareness of, and access, to clinical trials, including registry-based trials, and
- supporting local clinicians and local care where appropriate.

Through the framework, all patients are managed in a consistent way, either through a metropolitan hospital referral or managed in regional areas with structured support from metropolitan expertise. There is a centralised process for the review of pathology and radiology, with access to experts as part of case management. Referring clinicians are advised about appropriate available clinical trials, and clinicians, scientists, and students from any organisation can apply to attend meetings held fortnightly.

PEN-TEST has now been adopted by Barwon Health as an ongoing program to support patients and clinicians in regional Victoria. Nine PEN-TEST multi-disciplinary meetings were held in 2024, which discussed 16 patients across Australia, and referred three onto a clinical trial. The program has all the hallmarks of being a major success for regional innovation, with potential to scale to additional rare cancer types and tumour streams.

The VCCC Alliance has also facilitated referral pathways between regions and the Peter MacCallum Cancer Centre. For instance, through the VCCC Alliance, Barwon Health has 10 referrals for CAR-T cell therapy, plus additional sarcoma and neuro-oncology referrals over the past 2 years. Referral pathways are now well established and are managed collaboratively in Geelong and Melbourne.

Reducing barriers to regional participation in clinical trials

The VCCC Alliance is addressing historically low regional participation in clinical trials through innovative trial formats and developing networks to increase regional trial capacity. The Victorian Teletrial Collaborative, which includes the VCCC Alliance, the Regional Trial Network (Victoria) and the Alfred TrialHub, built relationships between regional, rural, and metropolitan health services, and enabled regional patients to participate in clinical trials with significant reductions in travel costs and social disruption for patients. The VCCC Alliance piloted the Teletrial program with a metropolitan primary site and two regional satellite cancer centres, through an investigator-initiated study preventing thromboembolism for lung and gastrointestinal cancer patients. The Teletrial pilot was well-accepted by patients and carers, who experienced decreased burden of access, increased clinical reassurance and increased equity of care, and was published in the journal JAMA Oncology[15].

The Teletrial program has been enhanced through the development of a toolkit for participants, investigators and sponsors, providing specialised, practical training for healthcare professionals and clinical trial staff.

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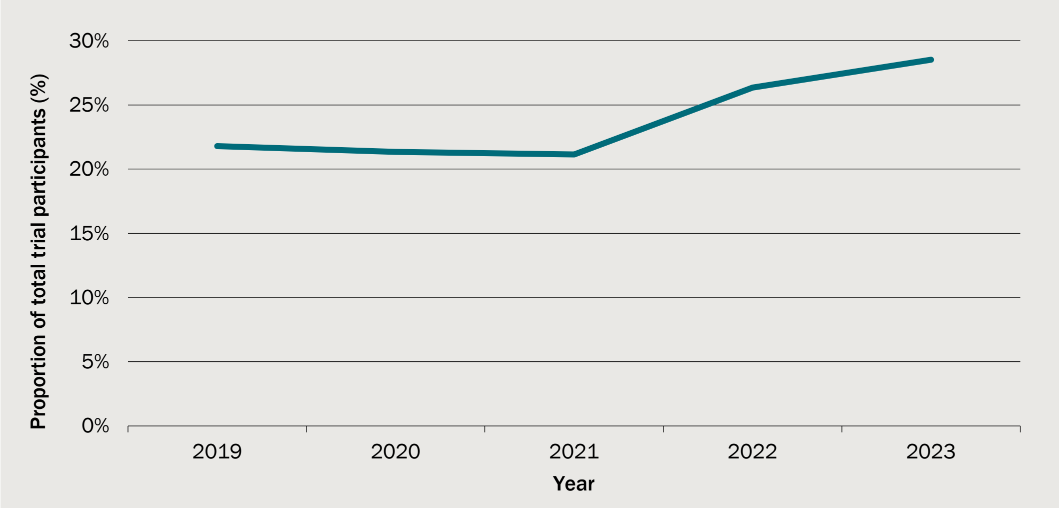
[15] Alexander M, Harris S, Underhill C, Torres J, Sharma S, Lee N, Wong H, Eek R, Michael M, Tie J, Rogers J, Heriot AG, Ball D, MacManus M, Wolfe R, Solomon BJ, Burbury K. Risk-Directed Ambulatory Thromboprophylaxis in Lung and Gastrointestinal Cancers: The TARGET-TP Randomized Clinical Trial. JAMA Oncol. 2023 Nov 1;9(11):1536-1545. doi: 10.1001/jamaoncol.2023.3634. PMID: 37733336; PMCID: PMC10514890.

The Teletrial program has helped boost regional participation in trials, which has increased from 22 per cent in 2019 to 28 per cent in 2024 (chart 4.2).

4.2 Increased proportion of participants in clinical trials from regional Victoria



Data source: VCCC Alliance, 2024, Program 7 Benefits Management Plan Report: Clinical Trials Enrolments for Regional Participants

The increase in regional trials in some regions has been dramatic, with La Trobe Regional Health increasing the number of regional trials from two to 20 over four and a half years, including more than 130 patients supported by the Alfred TrialHub programs.

The VCCC Alliance network has also helped coordinate trials that are relevant to local needs, and match together partners to address gaps in trial capacity. For instance, networks fostered by the VCCC Alliance have provided stakeholder confidence to apply for regional trial grants, including two that link regional trials with the Peter MacCallum Cancer Centre, which would not have been possible without the relationships built by the VCCC Alliance.

Several researchers also highlight the importance of the VCCC Alliance in bringing authority or imprimatur to researchers to mitigate initial hospital hesitation to collaborate in multi-centre clinical trials, resulting in more rapid deployment of funding for multi-centre trials.

> ‘We wouldn’t have bothered with a multi-centre clinical trial without the VCCC Alliance’ (metropolitan Health care provider and VCCC Alliance member).

5 Adoption of new knowledge in practice

The VCCC Alliance has accelerated the learning and adoption of better practices to generate better outcomes for patients. In collaboration with investment partners, it has helped pave the way for Victorian cancer patients to benefit from collaborative translational research through the Centre for Cancer Immunotherapy (CCI), and investigator-initiated immunotherapy trials supported by the VCCC Alliance.

The VCCC Alliance's Personalised Cancer Care Program supported the PRECISION study, a comprehensive genomic profiling research project that resulted in more patients accessing genomic testing to enable more targeted therapies, guiding treatment and strengthening capabilities and networks for precision oncology.

The VCCC Alliance's Centre for Cancer Education has played a critical role in embedding professional development across the cancer system, ensuring the cancer workforce remains upskilled in providing best practice care.

Accelerated translation

Showcasing its strengths in promoting collaborative cutting-edge research and leveraging research investment, the VCCC Alliance has driven the establishment of the CCI, which is accelerating research excellence into immunotherapy using a patient's immune system to recognise and attack cancer cells.

The CCI draws together research experience and clinical translation capabilities from the Peter MacCallum Cancer Centre, leading academic and scientific programs from the University of Melbourne, WEHI, and the Doherty Institute, as well as all ten members of the VCCC Alliance. The CCI is now home to 40 researchers and clinicians from six Victorian institutions across multiple disciplines, focused on accelerating the discovery and clinical translation aspects of immunotherapy research.

The CCI has leveraged funding from the National Health and Medical Research Council of $5 million over four years to use innovative technologies to advance immunotherapy treatments for advanced prostate cancer patients. In 2023, the CCI was involved in $4.1 million of grant funding for the Liver Cancer Project, and Head and Neck cancer.

Expanded access to precision oncology

The VCCC Alliance plays a critical role in improving the consistency of cancer treatment, providing a platform for clinicians to access specialist cancer advice.

The Precision Oncology Roadmap (a partnership between the VCCC Alliance and the Monash Partners Comprehensive Cancer Centre) has provided a range of key recommendations and actions that would lead to more equitable access to molecular testing if implemented by the broader cancer sector.

The VCCC Alliance's Precision Oncology forums have provided an opportunity to educate over 800 clinicians and researchers to help increase the confidence of clinicians to order tests. While next-generation genome sequencing technologies are increasingly used in clinical research, and to select patients for clinical trials, they are not yet well integrated into routine clinical practice.

The VCCC Alliance has supported an approach to genomic testing based on clinical decision-making. The outcomes of this work have been shared through multiple learning forums. Since April 2022, fifteen Precision Oncology Forums have been held with over 900 attendees. In April 2023, the VCCC hosted the Victorian Precision Oncology Summit, with over 150 attendees.

Between 2019 and 2023, molecular testing for patients has increased by 174 per cent, far exceeding the original goal of 40 per cent, and VCCC PRECISION has tested 490 patients. Through these measures, the VCCC Alliance hospital partners have been able to provide some patients with access to genomic testing they would not otherwise had.

Rapid translation of new evidence into practice

The VCCC Alliance Distributed Leadership program has incorporated ten tumour stream, and four cross-cutting theme Research and Education Leads to integrate research, education, leadership, knowledge translation, and advocacy to improve survival in three poor cancer outcome cancers (lung, pancreatic, and brain) through the rapid translation of new research derived evidence into clinical practice.

There have been 142 educational events with 10 255 participants, 26 successful grant applications worth more than $25 million, and 236 peer-reviewed publications over the duration of the program. The Implementation Science pilot project, leveraged from a Cancer Council Victoria grant for the Embed project ‘Extending the Cancer Registry role into the familial cancer testing process' has progressed equity of access to the benefits of germline familial cancer tests.

The Data Project seed funding has supported seven tumour stream projects, including the linking of data from eight Pancreatic cancer: Understanding Routine Practice and Lifting End results (PURPLE) registry sites to general practice Patron data, providing a comprehensive descriptive analysis of Victorian pancreatic cancer outcomes to inform optimal care pathways.

There have been several practice changing and treatment enabling clinical trials that VCCC Alliance Leads have been involved with, including extending the LUMOS precision oncology trial for relapsed Grade 2/3 glioma to a further 15 international sites, and achieving a consensus recommendation for TP53 mutation testing for newly diagnosed mantle cell lymphoma patients to achieve consistent care quality.

> ‘The VCCC Alliance has helped avoid the isolation of isolated practitioners not exposed to advances…reducing the risk of siloing in the field’ (university representative).
>
> ‘With the amount of cancer we have, and the amount of progress we have made, means many cancers have become a chronic illnesses, which is great, but it means we can’t carry that burden in any one hospital, so all hospitals, from big to peripheral, need a network, and need that network to work together’ (medical research institute and VCCC Alliance member).

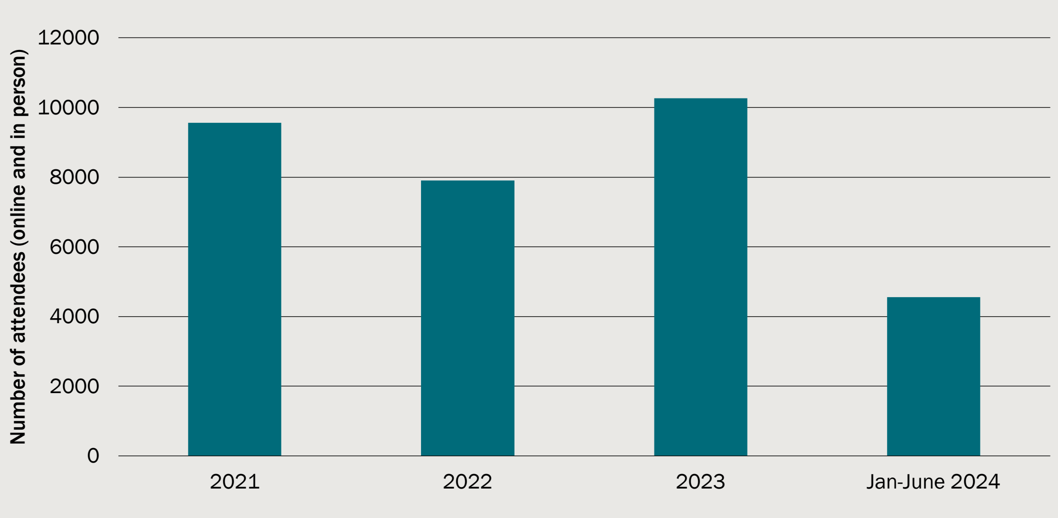
Since 2016, 12-month relative survival for lung cancer has improved 6 percentage points, 4.7 percentage points for pancreatic cancer, and 2.8 percentage points for brain cancer.

Accessible new knowledge

The VCCC Alliance has played a key role in ensuring the cancer workforce remains upskilled through statewide education for clinicians, researchers, educators and consumers. Thousands of participants have engaged in educational activities through the Centre for Cancer Education, including programs, symposia, forums, training sessions, and webinars (chart 5.1), with 467 sessions offered since 2021, attracting 32 580 attendees.

Through this platform and other online and in-person engagement, new knowledge is made accessible, and networks are built in Victoria, nationally and internationally. Opportunities for learning and education have been provided in a format that cancer health workers can accommodate around other commitments, typically without travel requirements, and with content tailored to its target audience to ensure relevance. Several stakeholders highlighted that trusted relationships were seeded by participating in VCCC Alliance educational activities, identifying contacts for collaboration and clinical advice.

5.1 Attendance online and in-person at VCCC Alliance educational activities



Data source: VCCC Alliance educational attendance data.

Monday lunch live sessions have also been a key driver for making knowledge accessible across the cancer system in an agile way. Since 2021, 130 lunch live sessions have been undertaken and attended by 9 213 people. There has also been extensive access to toolkits developed by the VCCC Alliance to disseminate current knowledge into practice with:

- the Investigator-Initiated Trials toolkit accessed by 50.5 thousand users, with 104.5 thousand page views since mid-2021
- the Teletrial toolkit accessed by 2 134 users, with 7 523 views since September 2022, and
- the Registry-based Trials toolkit accessed by 397 users, with 518 page views since August 2023.

The VCCC Alliance's education program is highly valued by stakeholders, with its focus on system-wide value, examining broader ways to improve patient care, value-based care, and patient utility, which influences the way that people operate. This is in contrast to drug company-sponsored programs, which more narrowly target a specific intervention.

> ‘The VCCC Alliance is very strong in terms of its educational content and strategy… the most tangible thing the VCCC Alliance provides, that people can touch and feel, is access to knowledge’ (member of the VCCC Alliance Equity Advisory Group).

6 Building blocks for better long term cancer outcomes

The VCCC Alliance has been successful in shaping a more effective Victorian cancer research and care system, which will build better long-term cancer outcomes in time.

Importantly, the activities and programs funded by the VCCC Alliance have a logical pathway to impact, providing confidence that the measures taken to date will improve future cancer care outcomes.

Advocacy for systemic benefits

The VCCC Alliance has built structures and relationships to facilitate collaboration among multiple stakeholders across the cancer sector, with lasting benefits.

This includes its effective and widely heralded leadership during the COVID-19 pandemic, when in partnership with the Monash Partners Comprehensive Cancer Consortium and Cancer Council Victoria it established the Victoria COVID-19 Cancer Network (VCCN) and Taskforce. Special interest groups were set up across disciplines, such as real-time VCR data reporting, patient support, nursing and allied health, oncology, and clinical trials, to address the immediate and changing needs of cancer care.

It was the first time Cancer Directors across Victoria regularly met to address treatments and combat missed diagnoses, with the cancer sector lauded by other sectors for its exemplary response to overcoming organisational silos and meeting consumer needs.

Pathway to impact

The pathway to achieving better cancer outcomes is complex and multifaceted. Some elements provide immediate results in terms of access to resources and educational opportunities, and some require a longer-term vision to innovate, test, and embed improved clinical practices.

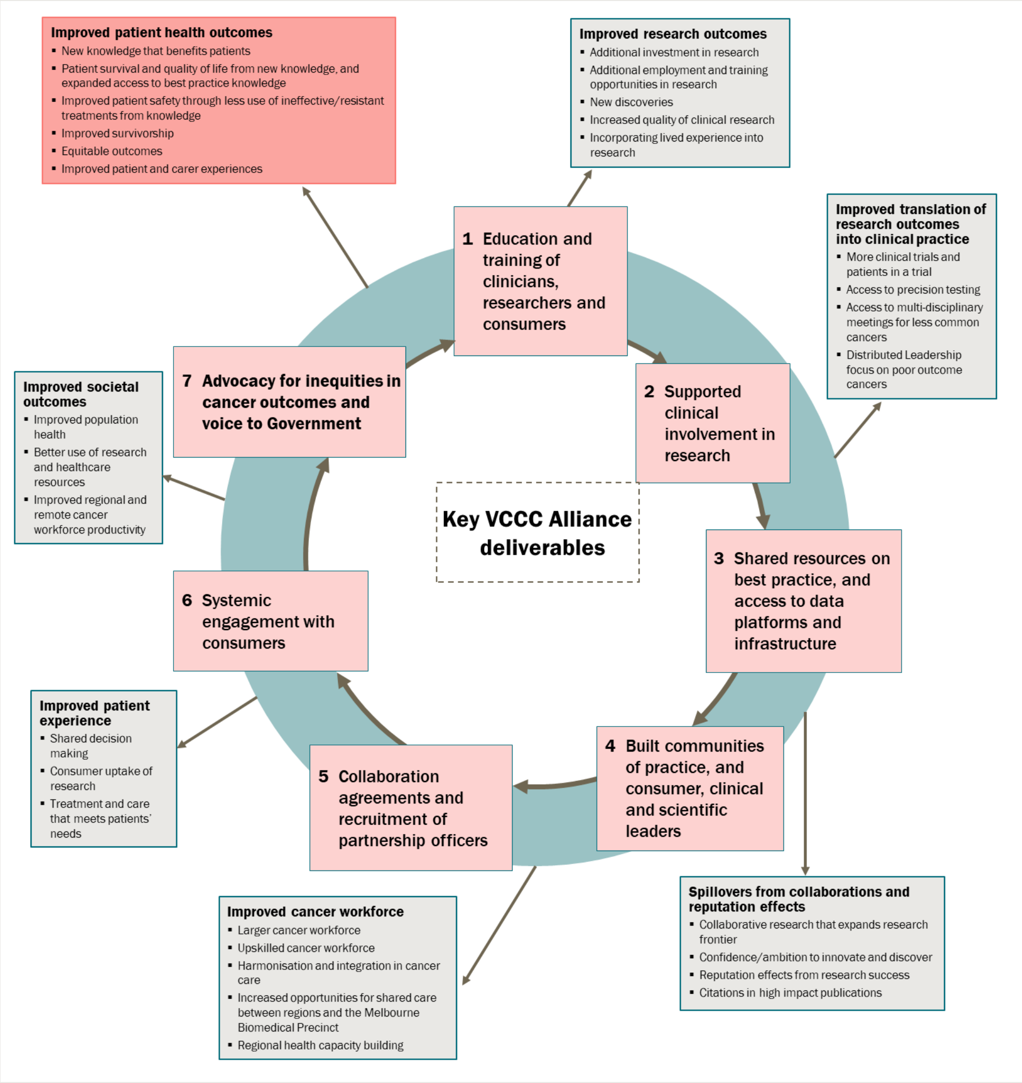
By and large, data to quantify the health impact of the VCCC Alliance, or other stakeholders in the cancer system, is lacking. This is partly due to the lag between funded initiatives and patient survival and survivorship, and to the range of influences in outcomes, particularly when multiple cancer control organisations across the state focus on strengthening the cancer system.

However, it is clear that the VCCC Alliance has set in place a positive framework that enables the cancer workforce to work at the maximum extent of its scope of practice, directs effort to initiatives that patients want, and contributes to the highly valued cancer system in the State of Victoria.

> ‘The VCCC Alliance should be a long-term play: it is the right idea, and it is not reasonable to expect it to achieve quick things’ (regional health service provider and VCCC Alliance member).

Chart 6.1 highlights some of the more direct ways that the VCCC Alliance provides the tools and resources to improve research outcomes and their translation, improves the spillovers from collaborations, strengthens the cancer workforce, improves the patient experience, and generates better outcomes for patients and the wider community.

6.1 VCCC Alliance pathway to better patient outcomes



Data source: CIE.

A Search methodology using the Pubmed database

To measure the impact of the VCCC Alliance across research collaboration, patient centred care and equity, the CIE used the PubMed research database to compile a list of all research publications by VCCC Alliance members between 2014 and 2023.[16] For research collaboration, impact can be measured by the number of research articles with authors from two or more VCCC Alliance affiliated institutions. For patient centred care and equity, impact can be measured by the number of research articles that focus on these areas.

Research collaboration

Each VCCC Alliance institution may be referred to by different names.

- Austin Health:
  - Austin Health
  - The Austin Hospital
  - Austin Hospital
  - Olivia Newton John Cancer Research Institute
  - Olivia Newton-John Cancer Research Institute
  - Olivia Newton-John Cancer Wellness & Research Centre
- Peter MacCallum Cancer Centre:
  - Sir Peter MacCallum
  - Peter MacCallum Cancer Centre
  - Peter Mac
- The Walter and Eliza Hall Institute of Medical Research (WEHI):
  - The Walter and Eliza Hall Institute of Medical Research
  - Walter and Eliza Hall Institute of Medical Research
- Murdoch Children's Research Institute (MCRI):
  - Murdoch Children's Research Institute
  - The Murdoch Children's Research Institute
- St Vincent's:
  - St Vincent's Hospital
  - St Vincent's Institute of Medical Research

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[16] Publications have been analysed and assigned to an institutional affiliation using R, an open-source programming language for data analysis. See Winter, D, 2017, rentrez: An R package for the NCBI eUtils API. The R Journal, 9(2), 520-526. https://doi.org/10.32614/RJ-2017-058.

  - St Vincent's Institute for Medical Research
  - St Vincent's Institute
- Western Health:
  - Western Health
  - Western Health Hospital
  - Western Health Footscray
- The Royal Melbourne:
  - Royal Melbourne Hospital
  - The Royal Melbourne Hospital
- The Royal Women's:
  - The Royal Women's Hospital
  - Royal Women's Hospital
- The Royal Children's:
  - Royal Children's Hospital
  - The Royal Children's Hospital
- The University of Melbourne:
  - University of Melbourne

The University of Melbourne maintains departments at several VCCC Alliance institutions, namely the Austin Clinical school and the Sir Peter MacCallum Department of Oncology. In these cases, the author is treated as first and foremost a member of the original VCCC Alliance institution, rather than the University of Melbourne.

To prevent double counting of articles, authors with multiple affiliations are identified by their primary affiliation.

Patient centredness

To estimate the number of VCCC Alliance research publications that focus on patient-centred care, the following search terms were inputted. First, at least two authors had to be affiliated with a VCCC Alliance member institution. Then, the article had to mention either cancer or oncology in the title and/or abstract, as well as one or more of the following terms relating to patient centred care:

- Survivorship
- Health-related quality of life
- HRQoL
- Quality of life
- Post-treatment care
- Psychosocial
- PROMs
- Patient-reported outcome measures
- Well-being

- Pain measurement
- Patient satisfaction
- PROMIS
- HADS
- Hospital Anxiety and Depression Scale
- Patient-centered care
- Patient-centered
- Patient-centred
- Patient-centred care
- Health utility measures
- Mental health
- PREMS
- Patient-reported experience measures

Equity

Similarly, for equity, the article had to include at least one of the following terms relating to equity:

- Equity
- Social determinants
- Socioeconomic
- Regional
- Rural
- CALD
- Culturally and linguistically diverse
- First nations
- Indigenous
- Disparity
- Disparities
- Equitable
- LGBTQ+
- Immigrant
- Low-income
- Access to care

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