



digital health
CRC

Annual Report

1 JULY 2019 TO 30 JUNE 2020

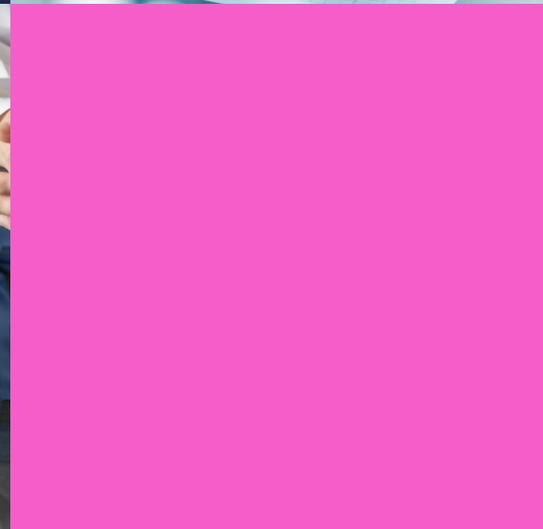


Table of Contents

Report from the CEO	3
1. Executive Summary	6
1.1 Achievements	8
1.2 COVID-19 Pandemic	8
1.3 CRC Future Plans and Transition Arrangements	9
2. Performance Against Activities	11
2.1 Research	11
2.1.1 Project Pipeline	11
2.1.2. Project Examples and Highlights.....	14
2.2 Translation and Commercialisation	19
2.3 Education and Workforce Capacity Building Program	19
2.4 Collaboration	23
2.5 SME Engagement	25
2.6 Communications	26
2.6.1 E-Newsletter, media releases and mailing lists	26
2.6.2 Website	26
2.6.3 Social Media	27
2.6.4 Communications Plan	27
2.7 Partnerships and Third Parties	28
2.8 Governance - Board, Committees and Key Staff.....	31
2.8.1 Status	31
2.8.2 DHCRC Governance Structure	31
2.8.3 DHCRC Board	32
2.8.4 Board Membership	32
2.8.5 Board Committees	40
2.8.6 Key Staff	41
2.9 Financial Management	42

Report from the CEO



"It's certainly an exciting time to be working in digital health, and while the COVID-19 pandemic has brought many challenges, it has also driven profound innovation and adoption."

With a challenging year behind us, we face an equally challenging year ahead, with continued uncertainty. Now more than ever is an important time to ensure we are set up for business continuity and stability. The DHCRC has not been without its challenges over the last two years, and with a dynamic and emerging new era for digital health, now is the time to reset and refocus.

It's certainly an exciting time to be working in digital health, and while the COVID-19 pandemic has brought many challenges, it has also driven profound innovation and adoption. Use of digital technology in healthcare delivery, medical research and pharmaceuticals has never been higher nor needed so much. Let's consider the challenges and opportunities.

Each day, our healthcare leaders and advocates make progress toward a healthier future for individuals, families, communities and the workplace. Passionate professionals are shaping the future of health and medical research. But in an industry facing complexity and uncertainty, these professionals face significant challenges. At

the DHCRC, we believe our health heroes must be liberated from obstacles, silos, unnecessary complexities. Let's look at some of these challenges in more detail.

The cost of delivering care is rising fast. By 2030, the estimated global economic impact of chronic disease will be \$47 trillion. Managing vulnerable populations is essential. The number of people over the age of 60 will reach 2 billion by 2050. The volume of published research is rapidly increasing. The required weekly reading for a healthcare professional to keep up with new professional insights is 167 hours. Social determinants of health are as important as clinical and genomic factors. Social and environmental factors account for approximately 50 per cent of population health status. Consumerism is growing. Over 75 per cent of patients are expected to use digital health services in the future.

At the same time, we are witnessing an explosion in healthcare related data. Each one of us will generate over one million gigabytes of health-related data in our lifetime, the equivalent to

about 300 million books. Globally, health data is set to double every 73 days. Surprisingly, 90 per cent of the data in the world today has been created in the last two years alone. Big data technology has exponentially grown our collection of the health data that is at the centre of prevention, diagnosis, treatment, and discovery.

Running parallel to the explosion of data, we have seen a fundamental shift in the technology we use to gather, analyse and deliver it. We have transitioned from the tabulating systems era to the programmable systems era – and now, to the era of artificial intelligence (AI) and machine learning. AI can help us gain insights from information, using knowledge sources (scientific papers, guidelines, publications, etc.) and data sources (longitudinal records, patient data, etc.). AI systems have the ability to ingest and understand a huge amount of information, extending, improving and democratising human expertise. They can understand, reason, learn and interact. This raises the need for principles such as the purpose of these new technologies, transparency of decision making, and the skills needed to train, support and use this technology. This creates a need to train the workforce of the future, maximising a new partnership between humanity and technology.

As we reset the strategy for the next chapter of the DHCRC, we are considering all of these factors, and positioning our organisation at the forefront

of digital technology identification, evaluation, incubation, innovation and commercialisation. This will be a major focus for us, ensuring Australia takes advantage of new and emerging technology in health and medical research. We have created new key roles to support the execution of our strategy and have attracted major global talent. More on this to come shortly.

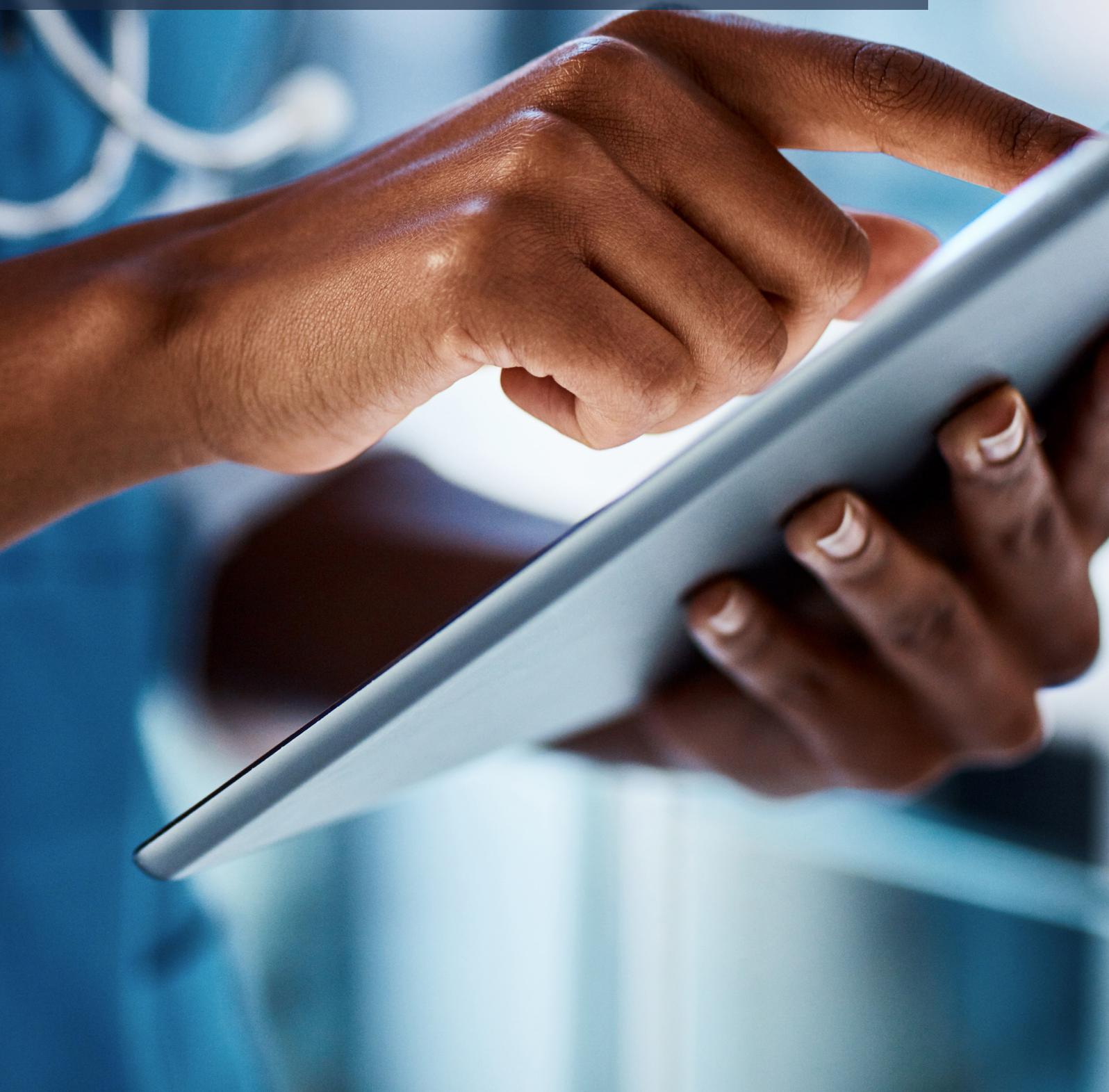
We will increase our focus on commercialisation of digital health, working with partners to maximise economic impact, jobs growth and talent attraction. The digital health market is worth almost \$2 billion in Australia, \$200 billion globally, rising to over \$500 billion over the next few years. The DHCRC will act as an intermediary, connecting real world problems with digital solutions in an intelligent and informed way. We will identify the best of global technology and support localising for Australia. We will identify the best of Australian technology and support its adoption here, and opportunities to export globally. In short, we will be the digital health innovation hub for Australia. We will help to solve the most pressing healthcare challenges through the use of innovative technologies, underpinned by research excellence.

Wishing you all good health,

Dr Terry Sweeney CMG
February 3 2021



1. Executive Summary



1. Executive Summary

The Digital Health CRC (DHCRC, the Company) is the world's largest digital health research and development cooperative with over 70 participants spanning the health ecosystem. One of Australia's largest Cooperative Research Centres, we will invest over \$230M in digital health research and technology to: improve health outcomes, reduce waste in the health system, develop the digital workforce of the future and build businesses and jobs.

The objectives of the DHCRC are to:

- (a) advance the Australian healthcare system, the health and wellness sectors and the related digital health technologies and solutions industry;
- (b) establish and operate a cooperative research centre with the capability of pursuing world class scientific research and development and training relevant so as to maximise the benefits to Australia and internationally from those activities;
- (c) ensure that the parties with their differing disciplines and backgrounds will, through their participation in the Company, add value to each other so that the performance of the Company will be greater than that of each Party acting independently;
- (d) carry out education activities for students and for the professional development (and skills uplift) of persons working within digital health;
- (e) build Australia's long-term capacity including building Australia's future digital health workforce;
- (f) ensure the outcomes of all activities are utilised in advancing the best interests of Australia to maximise the benefit to Australian industry and the Australian economy.

- (g) as an ancillary and supportive purpose, utilise intellectual property generated from the research in such a manner as to advance health and wellness resources and networks in Australia and ensure benefit to Australia, including Australian industry, the Australian healthcare system and the Australian economy generally.

The objectives of the DHCRC are designed to facilitate scientific research to improve the health and health care of Australians and advance the economy through collaborative research and development that combines multi-disciplinary skills, industry knowledge, technologies, networks and data to:

- (a) empower consumers;
- (b) understand and manage health risks of individuals and communities;
- (c) support clinical practice;
- (d) improve system efficiency and access to quality care; and
- (e) build and enhance businesses to provide high value jobs and solutions in a growing global market.

Our participants represent all the major players from across the digital health sector and include health service providers and funders, technology companies, research institutions and government organisations. We are funded by our participants and by the Federal Government under its Cooperative Research Centre program.

The first year was principally dedicated to establishing the company, entering into formal agreements with the 75 organisations that were part of the DHCRC bid, establishing the DHCRC's governance and organisational structures, progressing the research program and our approach to investment outlined in the bid and consulting with participants to form the Research and Education Investment Framework (REIF) to establish a project pipeline.

The second year has been dedicated to consolidating the great work performed in the first year, and has produced a project pipeline which sees 27 projects now in delivery mode and 2 completed projects at a total value of \$33.68 million. These projects involve over 50 Participants and include key areas such as pandemic response rural and remote health care, chronic disease, aged care, clinical support and more.

The DHCRC's project managers and support staff have done an exceptional job under challenging circumstances to expand our connections across the digital health sector, and in addition to our pipeline, the DHCRC had 13 projects in detailed planning, and a further 24 opportunities under development at Jun 30.

As the DHCRC moves from the project conception and negotiation phase towards delivery, the incoming Board is developing a Translation and Commercialisation Framework to support the translation of research to commercial outcomes in a strategic manner and in compliance with the National Principles of IP Management for Publicly Funded Research.

Our education and workforce capacity building program has been innovative and extensive. During FY20, the DHCRC has enrolled ten interns and postgraduate students and 11 postdoctoral researchers under the DHCRC's Higher Degree by Research (HDR), Internship and Postdoc Programs.

During FY20 the DHCRC also hosted 30 webinars, including five panel discussions, we saw 1630 learners commence the open online course on clinical data use and partnered with Microsoft to support 35 participants in an online digital health datathon which included data tools training.

The DHCRC has significantly increased its external communication reach via social media and through regular newsletters, media releases and web posts, with our newsletter audience growing by 35 per cent during the reporting period.

The DHCRC welcomed six new Participants during FY20. Two new core participants are the Minister for Health and Wellbeing (as represented by the South Australia Department for Health and Wellbeing), and Sydney Local Health District. Four additional Participants are the Australian Council on Healthcare Standards, Ramsay Hospital Research Foundation Ltd, La Trobe University and WentWest Limited.

The Company is on track to deliver projects and outcomes that meet our core objectives to improve health outcomes, reduce waste in the health system, develop the digital workforce of the future and build businesses and jobs.



1.1 Achievements

DHCRC achievements during FY20 include:

- + Company held its FY19 AGM and Participants' Forum attended by 113 participants
- + Company welcomed its new Chairman and Board
- + Engaged with the majority of the DHCRC's Participants in project discussions around our Research Flagships and extended the project pipeline
- + The Company executed a Memorandum of Understanding with aged care peak bodies, The Aged Care Guild and Aged and Community Services Australia, and the Aged Care Industry IT Council (ACIITC)
- + The Company successfully negotiated a Funding Agreement Variation with our Participants and the Commonwealth
- + Engaged our consortium of over 70 participants in the activities of the DHCRC
- + Responded to COVID-19 with the Data Analytic Platform (CDAP) and GP Data Surveillance projects
- + Delivered 30 webinars: 10,566 live attendances, 21,257 registrations, 2,585 feedback survey responses and 24,022 video recording views
- + Launched our Telehealth Hub in May 2020:
 - 3,480 users engaged in 4,170 sessions
 - viewed a total of 8,339 pages across May and June 2020
 - a mailing list of 7,695 subscribers was established
- + National workshops and webinars including the WA Telehealth forum, National Digital Health Workforce and Education Summit, Victorian Participant Forum, the DHCRC Participants' Forum
- + 2 projects completed, 27 in final delivery and 14 projects in detailed planning, and a further 23 opportunities under development
- + Launched our Participants' Portal within the DHCRC website to encourage and facilitate collaboration amongst our participants and to share information which is confidential to the DHCRC and its participants.

1.2 COVID-19 Pandemic

Since the COVID-19 pandemic has impacted Australia, the DHCRC has conducted its activities with minimum disruption to the business operations of the company.

The company's earliest response, once the Government directed businesses to work-from-home where possible, was to ensure business operations could continue safely and with the least disruption. To adapt to ongoing pandemic conditions, staff have been able to work from home as appropriate.

The DHCRC has funded two major COVID-19 related projects and fast-tracked their implementation; these projects will harness data to improve clinical outcomes for COVID-19 patients,

while serving as models to accelerate the uptake of digital health more broadly.

Shortly after the WHO declared COVID-19 a pandemic, and the Australian government established new Medicare Benefits Schedule items for telehealth, the DHCRC scheduled a series of webinars to support telehealth services and by May 2020, had launched the evidence-driven Telehealth Hub.

1.3 CRC Future Plans and Transition Arrangements

The DHCRC is at the end of its second year and the focus has been consolidating its start-up activities, and progressing its Research and Development project agenda. Importantly the DHCRC will be developing its Translation and Commercialisation framework in 2020-21 which will initiate its Translation and Commercialisation program. This program will allow the DHCRC to investigate translational and commercial opportunities, many of which will be an outcome of its research program, what is emerging is that the DHCRC provides a valuable platform for collaboration around digital initiatives, innovation

and development in the health sector.

We are seeing many parties who are traditionally competitors willing to work together through the DHCRC to achieve outcomes not only for their own organisations but for the health sector as a whole. We believe the DHCRC will provide a very powerful platform to allow many of these necessary collaborations to form. The DHCRC not for-profit and therefore neutral basis, as well as its connections to many parts of the research sector and government are a key asset in this respect.



2. Performance Against Activities



2. Performance Against Activities

A summary of activities and highlights for the DHCRC in each of these principal areas, follows below.

2.1 Research

2.1.1 Project Pipeline

In FY 20, 26 project agreements were signed to a total value of \$14,558,496, building a total of 27 projects in delivery and two completed projects

The total value of projects in the pipeline as of 30 June 2020 is \$33,682,710 with 54 DHCRC participants involved in these projects.

Work continues on the development of larger programs of work that involve multiple partners across jurisdictions. This includes the ongoing development of programs in practice analytics, intelligent decision support and rural and remote healthcare.

Research Matrix and Project Distribution

The DHCRC underlying research matrix remains the same, although the presentation has been simplified.

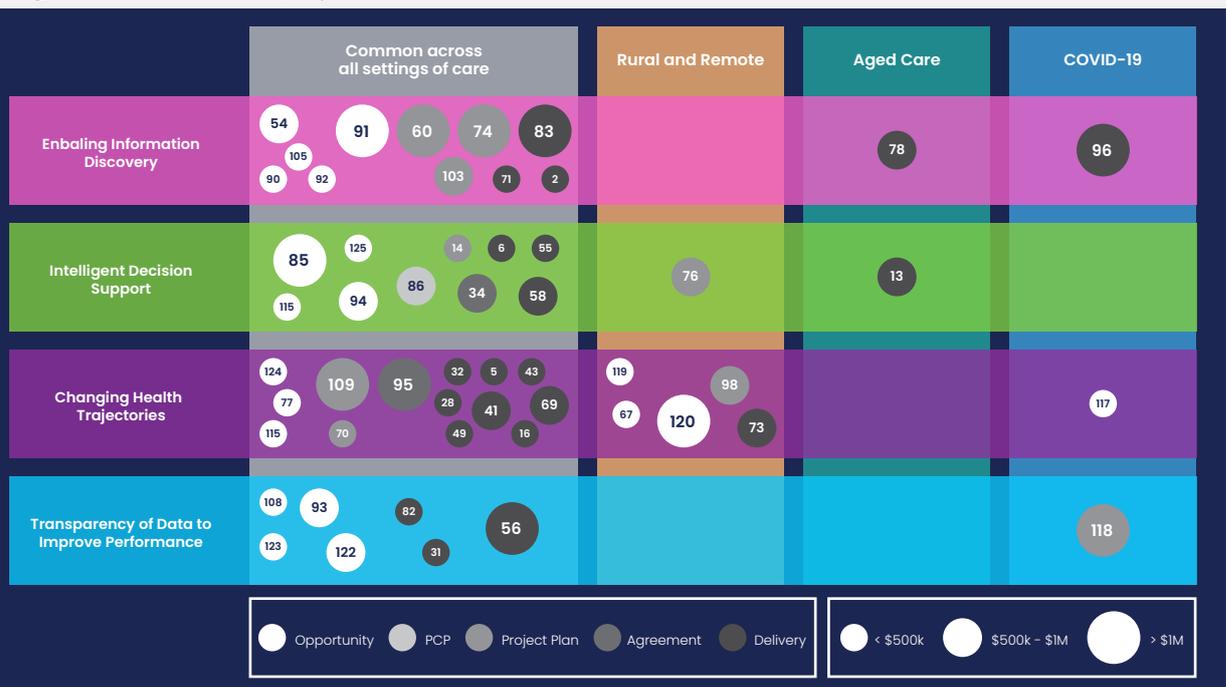
We retain our four major research themes:

- + **Research Theme 1:** Enabling Information Discovery and Application
- + **Research Theme 2:** Changing Health Trajectories Through Prevention and Personalised Models
- + **Research Theme 3:** Improve Value, Quality and Safety Through Intelligent Decision Support
- + **Research Theme 4:** Understand Clinical Practice to Support Transparency and Improve Performance

We retain a focus on a number of specific areas in healthcare including rural and remote care and aged care and we have added COVID-19 as described below.

Figure 1 provides a visualisation of how current projects at different stages of development are distributed across the research themes.

Figure 1 - distribution of projects across research matrix



Impact of COVID-19

The COVID-19 pandemic has impacted on the work of the DHCRC. Like many organisations, a number of our participants have been financially challenged by the pandemic and all partners have understandably been focussed on their response to the pandemic. This has added complexity and time to project and contract negotiations.

However, as described below, the pandemic has also led to an unprecedented focus on digital health, both in terms of how technology can be used to support the immediate response to COVID-19 as well as how this focus can be leveraged to accelerate the uptake of digital health more broadly into existing and new models of care.

In response to the COVID-19 Pandemic, the Board established a DHCRC working party to guide the response of the DHCRC, assess COVID-19 related projects developed by the DHCRC's partners and fast track their approval for rapid implementation.

Five projects were submitted by partners for review and two have been funded to date.

These are:

- + The Pandemic Imperative: Clinical Data and Analytics Platform (CDAP) to improve clinical outcomes through point-of-care decision support and support for adaptive trials. Participants include eHealth Qld, eHealth NSW, Commonwealth Department of Health, QUT, University of Sydney, Monash University.
- + Utilising near real-time electronic General Practice data to establish effective care and best practice policy. Participants include Outcome Health, Eastern Melbourne PHN, South Eastern Melbourne PHN, Gippsland PHN, RCPA Quality Assurance Programs and Macquarie University.

The COVID-19 working party remains active to review project proposals while the pandemic continues. The same, although the presentation has been simplified.

Telehealth, Virtual Care and Rural and Remote Flagships

As described in the capacity building section of this report, a telehealth hub consisting of multiple webinars and access to online resources was developed to support the rapid rollout of telehealth services in response to the pandemic. This has been led by Curtin and La Trobe, our academic leads, Professors Suzanne Robinson and James Boyd and DHCRC Education Manager Dr Melanie Haines. Through this process, clear areas requiring further research and development have been identified and the telehealth hub is now being used as a model for how the research and development aspects of the DHCRC can be closely integrated with the capacity building program.

The DHCRC is now also working with its partners to investigate how the rapid uptake in telehealth can be both sustained and leveraged to support the integration of technology more fully into health prevention and health care. There is clear potential to deliver new, consumer-centred virtual health models that support the move from reactive to more proactive health management. These models need to be developed in a way that supports both consumer and clinician needs and expectations regarding future health management and care delivery.

Work underway includes: a survey of all participants on their main areas of interest in virtual care; a national webinar scheduled for September on what 21st Century Healthcare should look like in Australia; and a white paper to provide a roadmap for the DHCRC's investment in this area. It is anticipated that a substantial proportion of remaining funds will be committed in the virtual care space.

This program of work is being closely aligned with the Rural and Remote Flagship program led by Professor Suzanne Robinson, who is building a series of projects with our lead jurisdictional and Primary Health Network partners in Western Australia. These will be used as a template to

support the broader move towards virtual care across our partner base. The use of digital health to support Chronic Kidney Disease is one of the initial projects in this portfolio, described in the project highlight section below.

Alignment with Jurisdictional Initiatives

A key strategy of the DHCRC has been ensuring our programs of work align with key initiatives of our jurisdictional partners, including NSW Health's Collaborative Commissioning initiative which looks at patient-centred transformation of care pathways and processes between primary and acute care services.

Examples of two projects aligned with Collaborative Commissioning include Managing Patients with Atrial Fibrillation Post Discharge (in collaboration with HMS and University of Sydney) and Patient Journey Modelling (in collaboration with University of Technology and NSW Health).

Both of these projects also align closely with the virtual care program of work as they investigate how a patient's risk can be assessed using multiple data sources and then how multi-channel communication strategies can be used to change patient trajectories.

Exchange

As part of the flagship program in Enabling Information Discovery, consultant firm ThinkPlace has been commissioned to work with the DHCRC to identify opportunities to support ways for data and information to be used seamlessly to support practice and research. The lack of data integration and access remains a key block to the rollout of digital health. A series of workshops and interviews with key organisations and thought leaders is currently underway. This will culminate in a series of recommendations to guide the DHCRC's research in this area.

Aged Care

The DHCRC has welcomed Professor Sue Gordon, Flinders University, to the DHCRC as its Flagship Research and Education Director - Residential and Assisted Aged Care. Professor Gordon replaced Professor Deborah Parker who stepped down from this role for personal reasons. We thank Professor Parker for her work in the FRED role.

The recent Royal Commission into Aged Care Quality and Safety has highlighted the need for the development of digital solutions to support the delivery of improved aged care services in Australia and a series of aged care projects have now been funded including:

- + Predicting resident deterioration and acute care needs in aged care in collaboration with Telstra Health and RMIT University
- + Aged Care Data Comparison (Aged care FHIR IG API and benchmarking MVP) in collaboration with the Bupa Health Foundation, Commonwealth Department of Health and University of Queensland.

To further enhance the DHCRC's activity in aged care, in October 2019, the DHCRC entered into a formal Memorandum of Understanding (MOU) with Aged and Community Services Australia (ACSA) and The Aged Care Guild for the purpose of collaborating to advance digital health in the aged care industry in Australia to benefit Australians receiving services. This MOU includes a collaborative arrangement to establish a national network of Living Labs for aged care across Australia to provide technology partners the opportunity to co-design, trial and showcase technologies in real world settings. In March 2020, the parties welcomed the Aged Care Industry IT Council (ACIITC) as a partner to the MOU.

2.1.2 Project Examples and Highlights

The following are a sample of projects that are under development or underway.

1) The Pandemic Imperative: Clinical Data and Analytics Platform to Improve Clinical Outcomes	
Flagship	Enabling Information Discovery and Application
Industry Participants	eHealth NSW, eHealth Queensland, Commonwealth Department of Health, QUT, University of Sydney and Monash University
Summary	<p>There is a critical need for health systems to be able to use their digitised health data for improving patient care. This has been brought into especially sharp focus by the COVID-19 pandemic where treatment of patients is occurring in an information void, necessitating best guess decision-making by clinicians.</p> <p>The Clinical Data and Analytics Platform (CDAP) will support the Australian response to the COVID-19 pandemic by creating a means to capture a broad range of clinical data and patient reported data spanning the entire patient journey from diagnosis through management and into long-term follow up. The platform will enable a standardised dynamic consent front door for all of these activities and an overarching governance framework to manage access to the clinical data, employing the highest data security standards to protect patient privacy and confidentiality. This will enable rapid analysis of integrated datasets rather than analysis of individual data as is the case with the existing data registries. This program will also utilise existing resources such as the International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC-WHO) COVID-19 Case Report Form, ensuring that all data is collected in a standardised format. Finally, this platform will enable long-term follow up of people diagnosed with COVID-19 for surveillance and management of their likely morbidities arising from infection and providing a means to better understand critical outcomes such as enduring immunity.</p> <p>This DHCRC project is a partnership between QLD and NSW Health, QUT, University of Sydney and Monash University aimed at making use of the resources that each has to benefit the health of the population.</p> <p>The project team leading this initiative has established a track record in developing registry and analytics platforms that are clinical trial ready. The team has expertise in adaptive clinical trial design and in establishing appropriate governance frameworks around the use of health data. In addition, the team has developed and tested a dynamic consent capability and expertise in Bayesian network decision support.</p>
Project Objectives	<p>The specific objectives are:</p> <ul style="list-style-type: none"> a) To rapidly deploy, using an adapted existing web-based Clinical Data and Analytics Platform (CDAP), a means to systematically capture diagnostic, treatment and outcome data on people presenting to hospitals with proven or suspected COVID-19 infection; b) To build in real-time clinical decision support through relevant (Bayesian network) analytic approaches; c) To support the rapid implementation of clinical trials to quickly and robustly determine which treatment strategies save lives and avoid serious morbidity in COVID-19 infection; and d) Facilitate long-term follow up of people diagnosed with COVID-19 for surveillance and management of their likely morbidities arising from infection and providing a means to better understand critical outcomes such as enduring immunity. <p>The outcomes of this project are expected to provide insights into how live, identified data sets can be used across the nation for a variety of diseases and health care contexts.</p>

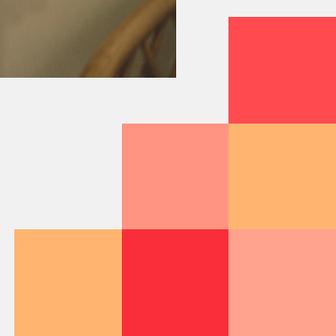
2) COVID-19 – utilising near real-time electronic General Practice data to establish effective care and best-practice policy

Flagship	Enabling Information Discovery and Application
Industry Participants	Outcome Health, Gippsland, Eastern Melbourne, South Eastern Melbourne Primary Health Networks, the Royal College of Pathologists of Australasia Quality Assurance Programs and Macquarie University
Summary	<p>Identifying the impact of COVID-19 on the health care system in near real time is an urgent priority for critical decision-making about resource allocation, control measures, decision-making, policy development and community communication. Primary health care has moved into the frontline as COVID-19 testing transitions from hospitals to multiple general practice providers where tracking testing behaviours can be fragmented and delayed. Pooled GP data are a valuable resource which can be used to inform population and individual care decision-making.</p> <p>This Project is based on a collaborative relationship involving the DHCRC, Macquarie University, Outcome Health, Gippsland, Eastern Melbourne, South Eastern Melbourne Primary Health Networks and the Royal College of Pathologists of Australasia Quality Assurance Programs.</p> <p>It will use an innovative secure and comprehensive digital health platform (POLAR) to deliver:</p> <ul style="list-style-type: none"> a) A near real-time geo-spatial reporting framework at community, state and nation-wide levels to identify emerging trends and monitor the impact of interventions/policy decisions; b) Timely evidence about the impact of COVID-19 related to its diagnosis, treatment and medications prescribed and its impact on patients; c) A predictive geo-spatial analytics dashboard for timely, evidence-based decision-making at community, state and nation-wide levels; d) An evidence-based suite of general practice outcome measures to monitor the incidence, prevalence, recovery and mortality of responses to COVID-19.
Project Objectives	<p>Project Objectives include:</p> <ul style="list-style-type: none"> a) Build a meaningful near real-time COVID-19 geo-spatial reporting framework and dashboard for decision-makers at community, state and nation-wide levels, to identify and monitor emerging trends and the impact of interventions/policy decisions; b) Generate timely and critical evidence about the impact of COVID-19 across different care level dimensions. <p>Findings from this study will provide broad information on surveillance of GP data can provide information on multiple diseases to support planning and care.</p>

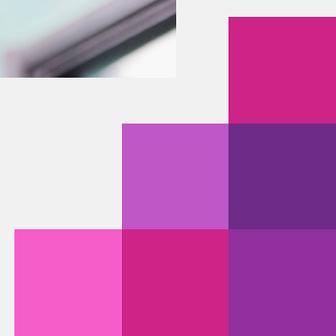


3) Reviewing and managing chronic kidney disease to improve outcomes

Flagship	Changing Health Trajectories Through Prevention and Personalised Models (rural and remote focus)
Industry Participants	WA Health, WA Country health Services, Western Australia Primary Health Alliance and Curtin University
Summary	<p>In Australia chronic kidney disease (CKD) annually affects one in ten adults (1.7 million individuals) and contributes to one in nine deaths, with a further one in three individuals at risk. CKD hospitalisation rates in remote areas are twice as high as in major cities, and Indigenous Australians are four times as likely to die from CKD as non-Indigenous Australians.</p> <p>Earlier stage CKD is unrecognised in 80-90 per cent of cases, yet these individuals have a 2-3-fold greater risk of cardiac death compared to unaffected individuals. Health care costs increase with the degree of renal impairment, with the treatment of end-stage kidney disease accounting for about 1.6 per cent of the Australian healthcare budget. There is an imminent need for better tools to identify CKD patients and enable early intervention.</p>
Project Objectives	<p>This study utilises linked data from a state-wide patient dataset to examine the clinical trajectory of individuals with CKD. The dataset includes all individuals affected by CKD in WA between 2002 onward, and links pathology results with hospital morbidity and mortality data. This unique state-wide resource will accurately establish the true epidemiology of CKD through interrogation of pathology records across WA, identifying individuals across the spectrum of CKD severity.</p> <p>The project will identify risk factors associated with progression from early to advanced stage CKD, and examine clinical variation (with a particular focus on disadvantaged groups, including patients living in rural and remote regions, the elderly, and Aboriginal Australians) that explain the variation in clinical outcomes, with an initial focus on cardiovascular morbidity and mortality. This information will inform evidence-based clinical recommendations to improve the model of care, highlighting resource requirements, and identifying targets for early intervention, leading to better outcomes for patients with CKD.</p> <p>The second aspect of this study will be to focus on development of a live digital dashboard for effective analysis, visualization and reporting of information that can be used to support both policy and population policy and clinical decision making. The purpose of the dashboard will be to provide early decision support to healthcare providers and risk stratify patient care according to those that need it most. The system will include built in surveillance loops, the ability to initiate a patient trigger based on longitudinal data and multiple composite variables, and provide reporting on Page 37 multiple levels. Additionally, the data from the primary, tertiary, government and non-government systems will be automatically extracted, linked and delivered securely to the database.</p> <p>Learnings from this study will inform models for risk assessment and decision support across multiple chronic conditions in rural, remote and urban settings.</p>



4) Engagement and Behaviour modification of patients with Atrial Fibrillation for improved outcomes	
Flagship	Changing Health Trajectories Through Prevention and Personalised Models
Industry Participants	HMS, University of Sydney
Summary	<p>Atrial fibrillation (AF) is the most frequently encountered arrhythmia globally. AF is an increasing burden for health care systems and a major contributor to stroke. It is essential that AF is managed with rate and rhythm control, anticoagulation and risk factor management to prevent stroke. A large component of AF management is enacted by patients in their daily lives. Digital tools can facilitate patient self-management of AF, by assisting with monitoring of physiologic parameters, providing reminders for medication adherence, and supporting other self-care tasks.</p> <p>The Project will evaluate, adapt and customise for Australia an existing engagement protocol originally developed by HMS for its health engagement services ("Eliza") for use in the US to improve outcomes for Atrial Fibrillation (AFib) patients through engagement and behaviour modification ('Engagement Protocol'). Using Eliza, it will also examine the effectiveness of various channels for communication in an Australian patient population. To undertake the Project, the team will engage, assess, provide disease and treatment education, and treatment support, for approximately 350 existing and newly diagnosed AFib patients, with the goals of: (1) guiding patients after discharge from hospital wards and/or the Rapid Access Arrhythmia Clinic (RAAC) into community GP practices for care and management; and (2) reducing symptoms and complications of AFib, including inappropriate Emergency Department (ED) utilization, poor anti-coagulation management and increased risk of stroke. It is envisaged that the resultant Engagement Protocol will ensure patient compliance with treatment plans, including medication adherence, attendance at regular office visits, timely completion of assessments and testing, and decreased ED utilization. Engagement will seek to gather patient reported information, including behaviours and health perceptions, barriers to care and social determinants of health.</p>
Project Objectives	<p>Project Objectives are:</p> <ul style="list-style-type: none"> a) Evaluate the effectiveness of protocols on AFib patients' compliance with treatment and secondary prevention programs. b) Examine the acceptability, utility and potential effectiveness of different channels of communication (e.g., SMS, IVR) in an Australian patient population and major sub-groups of an Australian population. c) Characterise behaviours that can be modified and strategies to improve engagement for target population and sub-groups. <p>Findings from this study will provide information more broadly on how multi-channel, high touch digital communication strategies can be used to influence care pathways and consumer behaviour.</p>



5) Aged Data Compare Project	
Flagship	Enabling Information Discovery and Application (aged care focus)
Industry Participants	Bupa Health Foundation, Commonwealth Department of Health and University of Queensland
Summary	<p>Residential aged care facilities in Australia use a variety of clinical information systems to collect and manage data related to the assessment and care of residents. These individual and distinct systems make it difficult for data sharing within organisations and hampers comparisons of care, quality and performance across provider organisations. Comparison is inconsistent, unreliable and inefficient, and hinders benchmarking of quality and performance outcomes. This proposal answers a call for aged care open standards and protocols to facilitate interoperability among systems and sharing of information to support funding and care quality reforms.</p> <p>This Project aims to produce a prototype analytics-enabled data hub that uses an aged care data interoperability standard based on the FHIR API and SNOMED CT. FHIR (Fast Healthcare Interoperability Resources) is an API (Application Programming Interface) that enables the development of an implementation guide (IG) for healthcare data exchange in a specific setting. The FHIR IG API and the prototype data hub will constitute the minimum viable product (MVP) being proposed in this Project to support data sharing and benchmarking of quality indicators across residential aged care organisations that use different aged care information technology (IT) systems.</p> <p>This Project will complement the work of the Primary Care Data Quality project funded by the Commonwealth Department of Health (DoH) to support interoperability and improvements for data quality in primary care. This Project will leverage the expertise and resources developed in the Primary Care Data Quality Project to shorten development times.</p>
Project Objectives	<p>The overall aim of this project is to produce and validate a prototype data hub to facilitate aged care assessment data interoperability across residential aged care facilities (RACFs) that use different aged care IT solutions and enable benchmarking of provider quality indicators (QIs).</p> <p>The following objectives will guide the execution of this project:</p> <ul style="list-style-type: none"> a) review and publish the global status of interoperability standards in aged care [Phase 1] b) develop a methodology for defining national clinical data standards for aged care using the FHIR API and deliver a FHIR implementation guide using the data definitions and data elements within the interRAI Long Term Care Facility (LTCF) data set [Phase 1] c) build and evaluate a prototype data hub that uses the FHIR API to achieve data interoperability and has in-built analytics capability to support a range of use cases for benchmarking quality indicators (QIs) across aged care providers [Phase 2]; d) develop a methodology for validating the use of the FHIR implementation guide with at least three aged care vendors; and e) define the FHIR API adoption journey for aged care vendors [Phase 2].



2.2 Translation and Commercialisation

The Translation and Commercialisation program has consolidated during the last 12 months, allowing the new Board to review and refocus the program. The focus for the next period will be on the development and implementation of a

Translation and Commercialisation Framework which will support the Company in translating research from current projects to commercial outcomes, as well as a direct to market commercialisation program.

2.3 Education and Workforce Capacity Building Program

A Growing Sector where Skills Gaps are Blocking Transformation

The health sector is the strongest area of employment growth in Australia employing more than 13 per cent of the workforce with another 250,000 jobs predicted to be created by 2024 (Department of Jobs and Small Business, 2019). Advancements in technology, changes to policy and more recently, public health crises, are driving transformation in the health sector. To keep up with

the rapid pace of change and effectively transform the health sector in Australia, the development of a stronger workforce equipped with the right skills is needed. The DHCRC Education and Workforce Capacity Building Program will support the growth of the health workforce, tackle widening digital skills gaps and address the current lack of relevant education and training opportunities.

Design Principles

To instigate change and make a significant impact, bold actions are needed. The DHCRC will collaborate and codesign education with

industry, universities and consumers to create modern learning experiences at the nexus of digital transformation and the future of work.

Key Initiatives

Higher Degree by Research, Internship and Postdoc Programs

The Higher Degree by Research (HDR), Internship and Postdoc Programs will help train the next generation of health informaticians, technologists and data scientists. These Programs will equip participants with the skills to succeed and deliver impact in a health sector that is rapidly evolving as a consequence of digital transformation. The DHCRC is using Inkpath (a skills and career management platform) to audit and track professional development activities and monitor employment destinations.

Higher Degree by Research (HDR) Program

The HDR Program includes four-year PhD and two-year research master degrees, with full-time, part-time and top-up scholarships available for domestic and international students.

The DHCRC HDR Program offers students a diverse range of personal development opportunities and support, embedded industry experience and financial assistance (including an education allowance and access to a merit-based fund for international collaboration purposes). It also incorporates mentoring, tailored training and professional development activities, including a personalised learning plan, annual conference and education retreat. The DHCRC's students meet online monthly via a Research Support Group,

which is currently led by the DHCRC Education Manager and coach but will eventually become a peer-led network.

Milestone progress (4.1.1)

In the FY20, seven PhD students, one masters student and two interns were enrolled and commenced on DHCRC projects. An additional two PhD students were awarded PhD top-up scholarships. Currently, a further 13 students and four interns are ready to commence in the FY21.

Internship Program

The DHCRC Internship Program connects undergraduate and postgraduate students with industry through short-term research projects that seek to solve healthcare-related problems. This Program empowers students to develop practical, industry-relevant skills, build networks, enhance their CV and improve their employment prospects. Students are supported by both an industry and academic mentor, and are invited to spend one day per week in the DHCRC office environment to engage with DHCRC staff, and mentors and interns from other universities.

Milestone progress (4.1.2)

In FY20 two semester-long internship projects were undertaken by Masters of Health Information Management students at Western Sydney University in partnership with Health Management Systems (HMS, US). Both projects are exploring Medicaid claims data related to substance abuse and emergency department overuse and aim to deliver findings that will be of benefit to HMS

Datathons and MOOCs

The DHCRC is combining forces with industry and university partners to solve industry problems of varying complexity via interdisciplinary team datathons (or hackathons) of variable durations. These initiatives are expected to produce real-world solutions for industry, upskill people effectively and efficiently, and raise awareness of potential career pathways in digital health.

Massive Open Online Courses (MOOC) are

industry clients in terms of improving treatment success rates and quality of care. Both internships will be completed in the first quarter of the FY21.

Postdoc Program

Researchers who can work at the interface of academia and industry and move back and forth through both dimensions are highly sought-after individuals with positive employment prospects in our changing world. Through our bespoke Postdoc Program, DHCRC postdocs have access to the best of both the academic and industrial worlds, and an impressive network of mentors to support them.

The DHCRC's postdocs contribute to cutting-edge digital health research that delivers relevant, real-world outcomes and belong to an exclusive community of bright minds and emerging talent. Whether they are supervising students for the first time, wanting to commercialise an idea, aiming to do social good, or aspire to mobilise their research to influence policy our innovative training opportunities have them covered.

The DHCRC's postdocs receive personalised training along with industry-based experiences and benefit from using our in-house industry-researcher development matrix and planning tools to custom-build their own unique professional development package.

Milestone progress (4.1.3)

In the FY20, 11 postdocs were active on DHCRC research projects.

free online courses available for anyone to enrol in. They provide the existing and future health workforce an affordable and flexible way to learn new skills and advance their careers while allowing the DHCRC and partner organisations to deliver quality educational experiences at scale.

Milestone progress (4.2.1)

DHCRC, Microsoft and MyScoreIT datathon
In partnership with Microsoft for Healthcare,

Microsoft Education and MyScoreIT, the DHCRC ran an [online datathon](#) in June 2020. In small teams, academia and industry came together virtually around a MyScoreIT dataset (comprised of patient reported outcome measures). During the intensive, multi-day format, participants were first trained in the Microsoft Power BI and Azure Machine Learning packages and then applied their newly learned skills to solve clinical problems posed by MyScoreIT.

To recruit datathon participants an expression of interest process was advertised that attracted 150 applications. Thirty-five individuals were selected to participate via a competitive process and divided into seven teams (each comprised of a data scientist, data practitioner, health information manager, health practitioner and student). Of the 35 participants 18 were from industry and 17 from universities (and included eight students, four of whom hold DHCRC scholarships). Each team produced tools and models that were provided to MyScoreIT to assist them to build clinical evidence and improve decision making. Pitch training was provided as part of the datathon as it was mandatory for all teams to present their solutions to MyScoreIT at the end of the event.

DHCRC, University of Sydney and NSW Health MOOC

In the 18/19 FY, the DHCRC partnered with the University of Sydney and NSW Health to deliver a MOOC that provides the existing and future health workforce with insights into the use of healthcare data. The MOOC, titled '[Using clinical health data for better healthcare](#)', consists of over 30 videos and associated learning resources, delivered by subject matter experts from across health, education and industry. The content shows those enrolled how health data contained within digital systems can be utilised and assists them to build foundational capabilities in information seeking, knowledge creation and decision making. At the end of the 19/20 FY, the MOOC has had

16,431 unique visitors and 3,378 enrolments with 1,630 learners commencing the course and 290 completing it.

Webinar Series

In partnership with participants and the broader health sector, the DHCRC is hosting a webinar series to keep the digital health community (including academics, students, health professionals and consumers) connected. This is an important platform to share ideas, knowledge and experience at a time when the health system is undergoing significant change.

Milestone progress (4.2.2)

During the FY20, the DHCRC ran 30 webinars (including five panel discussions) with 10,566 live attendances, 21,257 registrations, 2,585 feedback survey responses and 24,022 video recording views. The webinar series included expert presenters from local and international origins, DHCRC staff and industry and university participants (including postdocs and students). Four of the 30 webinars were small interactive sessions to allow the DHCRC's students to come together and connect with each other and the presenters. Students from other CRCs were invited to attend. Twenty-six of the 30 webinars were open to the public and attracted diverse audiences including health professionals, industry employees, academics, researchers, students and consumers.

Micro-credentialed Short Courses

Micro-credentialed short courses are an emerging educational currency in Australia and globally. In collaboration with industry and university partners, the DHCRC's vision is to create industry-relevant micro-credentials designed to revolutionise the capability of healthcare professionals, shape the future of the health workforce across Australia and build a community of life-long learners, successfully navigating the world of work. All learning will be created with the Australian Qualifications Framework in mind, to enable future stacking into open degrees and postgraduate qualifications accredited by universities.

Milestone progress (4.2.3)

A pilot comprised of three micro-credentialed short courses in health transformation were designed in collaboration with RMIT Online and industry partners (Queensland Health, Telstra Health and CanTeen) in the 19/20 FY. All three courses will commence in the FY21. Ten subject matter experts from industry were selected from the DHCRC's Participants and affiliates to review and develop course materials. A further two subject matter experts from the DHCRC's Participant universities (University of Canberra and the Swinburne University of Technology) contributed to course mapping and content delivery.

Clinical Fellows Program

Investing in the development of people alongside technology is critical in the delivery of effective healthcare. The Clinical Fellows Program which is being designed in partnership with Queensland Health and The University of Queensland (with support from the Australian Digital Health Agency and Australasian Institute of Digital Health) will develop a wave of digital health leaders and change agents who are capable and confident in using data and technology. The Program will equip health professionals with skills and competencies to lead change, think critically and creatively, and influence, shape and rebuild their workplaces to meet the evolving needs of the health sector. The Fellows will learn how to use cutting-edge systems,

tools and data to maximise health outcomes and patient care and will upskill in parallel to their day jobs so they can apply their learnings for immediate impact.

Milestone progress (4.2.4)

The design of the Clinical Fellows Program began in the FY20 and is expected to launch in the 20/21 FY with a group of 10 clinicians as the first cohort. This Program is the first step in the development of a cross-jurisdictional collaborative model under the CREATE brand (logo below).



Telehealth Hub

The Telehealth Hub is the first of three DHCRC virtual co-design and ecosystem facilitation initiatives designed to foster engagement and disseminate digital health knowledge.

Milestone progress (4.2.5)

In response to COVID-19, the DHCRC launched a Telehealth Hub in May 2020. The content for the Hub was crowdsourced from the digital health community via a series of telehealth webinars held at the outset of the pandemic. The Hub serves as a directory and portal for several hundred quality-assured online resources on the use and application of telehealth, and is accessed by clinicians, health professionals, policy makers, students, researchers and consumers. In the first eight weeks of operation, the Hub had 3,480 users who engaged in 4,170 sessions and viewed a total of 8,339 pages. The DHCRC has been contacted by several universities who have asked to use the Telehealth Hub and webinar recordings in their degree courses.

Mailing Lists

The DHCRC has embarked on building several digital health networks and channels to assist in the dissemination of education and capacity building materials.

2.4 Collaboration

Research Collaboration

The DHCRC has focused on fostering collaboration amongst its participants through a variety of structured and unstructured activities. COVID-19 has impacted our activity in regard to collaboration including plans for face to face participant meetings in NSW, Queensland and Western Australia. Where possible we have moved towards online events.

In summary:

- + The DHCRC hosts a bi-monthly Research Leads meeting for all University participants.
- + The DHCRC leadership team continues to meet with University leads one-on-one to understand University priorities and skills. This has included University of Technology Sydney, Federation University, Macquarie University and Western Sydney University.
- + The DHCRC and the Victorian Department of Health and Human Services (DHHS) jointly hosted a Forum for Victorian Participants in February. The successful event was attended by the majority of Victorian-based industry partners and universities and provided the opportunity to showcase projects by industry partners and promote collaboration.
- + The DHCRC and DHHS provided support to a workshop in Ballarat in March 2020, hosted by Federation University and the Western Alliance, to help identify, develop and support rural research collaborations
- + The DHCRC hosted a full National Participants Online Forum in June 2020. This event, attended by 113 participants, provided the opportunity for Participants to meet the new Board, receive an update on project developments and opportunities and to hear from DHCRC student researchers.
- + The DHCRC hosted multiple ongoing meetings in 2019/2020 with partners to foster research collaboration and develop project proposals. In areas such as practice analytics this has led to new partners joining project.
- + Monthly /six weekly meetings between our Flagship Research and Education Directors (FREDs) ensures our flagship leaders are in constant communication with each other and clusters of partners that relate their flagship area.
- + The DHCRC has hosted a large number of meetings between related SME groups in all States and Territories (other than Northern Territory), such as small to medium technology companies, to facilitate development of shared projects.
- + The DHCRC leadership team continues to develop the linkage between the capacity building portfolio and research portfolio to support collaboration. This has been exemplified in the telehealth space where the ongoing feedback from the webinar series and other activities is being used to help set the research agenda

Education and Workforce Capacity Building Collaborations

- + Between August and November 2019, the DHCRC conducted a successful digital health education landscape mapping exercise (including an analysis of Department of Education and Training data) and dual-phase consultation process involving DHCRC Participants and the broader Australasian digital health community. A total of 42 responses were received across both phases of the consultation (21 from higher education providers and 17 from industry organisations). The findings of the consultation have been used to inform the DHCRC Education and Workforce Capacity Building Plan, which will be finalised in the first half of the FY21.
- + In collaboration with the Australian Digital Health Agency, the DHCRC co-hosted the National Digital Health Workforce and Education Summit in November 2019. This crucial Summit brought together over 100 leading academics, industry partners, policy makers, consumers and health and care workers from across Australia to discuss and collaborate on the draft National Digital Health Workforce and Education Roadmap. The Roadmap builds upon Australia's National Digital Health Strategy and the associated Framework for Action and will be launched in September 2020.
- + In the FY20, the DHCRC collaborated with various parties to deliver education initiatives. This included a [datathon](#) held in partnership with Microsoft and MyScoreIT and supported by BizData (non-DHCRC participants) and online data masterclasses co-hosted with HMS (a DHCRC Participant) and Amazon Web Services and RONIN (non-DHCRC participants). The DHCRC collaborated with the digital health community to crowdsource resources to build the [Telehealth Hub](#) and partnered with RMIT Online (a DHCRC Participant) to design three micro-credentialed digital health short courses. Multiple [webinars](#) were also hosted which engaged DHCRC Participants, staff and students along with non-DHCRC participants as presenters and attendees.
- + The DHCRC is an engaged representative on the trans-Tasman Academic Roundtable (an initiative endorsed by the former Australasian College of Health Informatics Council), which is the only group that brings together university education leaders in health informatics, digital health and health data science across Australia and New Zealand. Collective attention is needed to assure the health sector and the general public of the quality of academic education and research training programs in digital health fields, and to establish their place in professional career structures. The role of the Academic Roundtable is to better represent, engage and reflect academic education institutions and their needs.

- + The DHCRC is an engaged representative on the Digital Health Workforce Implementation Group (Workstream 4: Developing career pathways/maps to support the current health workforce and develop a future health workforce in NSW; convened by eHealth NSW and industry partners). The Workstream seeks to deliver a collaborative mechanism to support the growth and development of the digital health workforce across NSW. This will support the sharing of information and promotion of learning, development and engagement opportunities relevant to the current and future digital health workforce. A collaboration hub pilot has been conceptualised focussing on three initial audiences; secondary school students, mature and displaced workers and health professionals. If the proof of concept is successful the platform will be built upon and the operational model shared across jurisdictions.
- + The DHCRC is a member of the CRC Association Education Managers Group and the Digital Health Informatics Network, which actively connects parties with common interests, fosters a sense of community, promotes collaboration, shares projects and resources, and encourages purposeful networking and online engagement.

2.5 SME Engagement

In our second year of operation, the DHCRC has continued to apply multiple strategies to engage SMEs in the activities undertaken by DHCRC. The DHCRC recognises the importance SMEs play in implementation and utilisation of the research outputs generated through our projects. In summary:

- + The DHCRC has implemented a communication strategy with all SMEs that includes regular monitoring of communication and formal assignment of a Program Manager to each SME to promote engagement. This is supported by the continued development of the Salesforce CRM system used within the DHCRC;
- + Throughout the year multiple projects have been built around collaboration between and participation of SMEs. An example of this is the DHCRC research project “Utilising near real-time electronic General Practice data to establish effective care and best-practice policy” where DHCRC SME technology participant Outcome Health is working with four Primary Health Networks (PHNs) and Macquarie University;
- + All SME participants have been provided access to the education program within the DHCRC to promote capacity building and innovation e.g. Micro-credentialed short courses;
- + Finally, the DHCRC continues to receive approaches by SMEs to join the DHCRC. Where SMEs are seen to have the potential for inclusion in any of our projects, a member of the DHCRC will meet with these enterprises to discuss opportunities.

2.6 Communications

During 2019-20, the DHCRC has significantly increased its external communication reach via social media and through regular newsletters, media releases and web posts. The main methods of communication with industry and university participants (including researchers and students), the media, state and federal politicians and policy advisors and other external stakeholders have been via social media, website posts and Electronic Direct Mail (EDM).

COVID-19 disrupted organisations around the

globe in often-unexpected ways. The Australian government's expansion of approved telehealth items under the Medicare Benefits Scheme brought a new opportunity for the DHCRC to connect with an audience desperate for reliable information. The DHCRC launched a series of telehealth webinars that were attended by around 5,000 people – mostly clinicians – and the information shared in these sessions was developed into the Telehealth Hub, an online communication and education hub which continues to see high levels of engagement.

2.6.1 E-Newsletter, media releases and mailing lists

During the reporting period, the DHCRC produced eight newsletters. The newsletter audience has grown by 35 per cent during the reporting period, from 2,374 subscribers to 3,202 subscribers. Each new issue of the newsletter is also promoted via our social media channels, which has helped to grow our audience.

There were also nine media releases issued during the reporting period, as follows:

- + 22 Oct 19 Predictive analytics for aged care residents
- + 11 Nov 19 Living Better Lab
- + 20 Nov 19 Critical Roadmap to equip Australian health workers
- + 2 Dec 19 New study on digital tools to help tackle obesity
- + 3 Mar 20 ACIITC joins DHCRC
- + 16 Mar 20 Geospatial mapping project to target health hotspots

- + 11 May 20 CDAP - Digital health platform for COVID-19 treatment
- + 16 Jun 20 Datathon
- + 17 Jun 20 AFib Treatment plan to increase cardiac survival

The DHCRC has also developed two large specialist subscription lists serving large audiences; one comprises participants in the hugely successful Telehealth webinars (7,695 subscribers at 30 Jun 20), and the second caters for PhD students and early career researchers in the Digital Health field (8,954 subscribers at 30 Jun 20). These have been used to alert audiences to upcoming webinars in their area of interest.

The DHCRC manages a range of direct mailing lists in the Customer Relationship Management system, Salesforce, which include the following lists: academic leaders; industry participants; core members; members representatives and all DHCRC participants. These are used for direct correspondence with participants – for example, the regular Communique from the Chair.

2.6.2 Website

The DHCRC launched its Participants' Portal in November 2019. It contains information which is confidential to the DHCRC and its participants. To

encourage and facilitate collaboration amongst our participants, participants can see:

- + Information about each participant, including their contribution to the DHCRC and contact details;
- + Project pipeline;
- + Access to resources which are relevant to our participants.

Articles in the DHCRC's e-newsletter are published on the website along with media releases and other updates. The website plays a key role in the DHCRC's communications and is usually the first place people look for information. Our recent Twitter posts appear on the site's front page, upcoming

2.6.3 Social Media

The DHCRC's social media following continues to grow significantly.

From Jul 1 2019 to Jun 30 2020, DHCRC social media audience grew as follows:

- + Twitter: Grew 44 per cent - from 900 to 1,596 followers on Twitter;
- + Facebook: Grew 74 per cent - from 269 to 1,020 followers on Facebook; and
- + LinkedIn: Grew 55 per cent - from 500 to over 1,100 connections.

2.6.4 Communications Plan

The success of the DHCRC's internal and external communication mechanisms in communicating with its participants and other key stakeholders – and also in effectively promoting the DHCRC's work – is regularly considered and assessed at meetings of DHCRC's management and advisors.

As the DHCRC moves from the project initiation

webinar registrations are easy to find on the site, and recordings of previous webinars are also available to access.

Analytics have shown that our website audience grew substantially over the reporting period, with around 42,000 individual users visiting the site.

The patterns of website visits reflect other activities underway – for example, webinars, newsletter and media release distribution – with the highest audience growth coinciding with the three Telehealth webinars held between Mar 23 and Apr 21 2020.

The DHCRC uses social media in a number of ways:

- + to promote the research projects it undertakes with its Participants, other work underway (such as discussion papers), and other services it offers to the digital health sector (for example, webinars, micro-credentialled courses and datathons);
- + to promote key industry events and initiatives that it is supporting; and
- + as a regular information-sharing mechanism to update stakeholders on key developments and research and development work being undertaken in the digital health space, both in Australia and overseas.

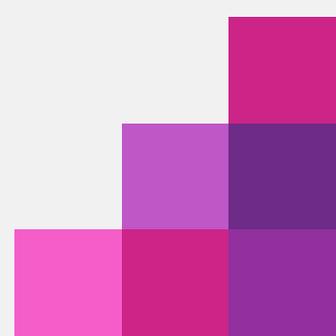
phase towards a project maintenance phase, the communications focus is also moving towards sharing project findings and results. The DHCRC will continue to undergo communications data collection and analysis to inform and target future communications activities.

2.7 Partnerships and Third Parties

Participants as at 30 June 2020 are provided below.

Participant Name
Cabrini Health Limited
Commonwealth Department of Health
Curtin University
Department of Health (Northern Territory)
Federation University Australia
Flinders University
Minister for Health and Wellbeing (Government of South Australia (SA Health))
Health Management Systems Inc.
Insurance Australia Group Limited
Lorica Health Pty Ltd
Macquarie University
Metro South Hospital and Health Service
Ministry of Health (NSW)
Monash University
Peter MacCallum Cancer Institute
Queensland Department of Health (being the State of Queensland acting through Queensland Health)
Queensland University of Technology
Royal Melbourne Institute of Technology
Swinburne University of Technology
Sydney Local Health District
The University of Queensland
The University of Sydney
University of Canberra
University of Technology Sydney

Participant Name
University of Wollongong
Victorian Department of Health and Human Services
WA Country Health Services
Western Sydney University
ACT Health
Adventist Healthcare Ltd
Alfred Health
Alicidion Corporation Pty Ltd
Amgen Australia Pty Ltd
ANDHealth Ltd
Australian Commission on Safety and Quality in Health Care
Australian Digital Health Agency
Australian Health Practitioner Regulation Agency
Bupa Foundation (Australia) Limited
Capital Health Network
Care Circle Health Pty Ltd trading as HELPA.APP
Complexity Science Medical Systems Pty Ltd
Deloitte Consulting Pty Ltd
Department of Health WA
Eastern Health
Eastern Melbourne Healthcare Network Ltd
Gippsland Health Network Limited
GoAct Pty Ltd
Infoxchange
La Trobe University
LoneAlarm Pty Ltd
Melbourne East General Practice Network Limited



Participant Name
Metro North Hospital and Health Service
Mirus Australia Pty Ltd
Pen CS Pty Ltd
Persona Informatics Inc.
Potential(x) Pty Ltd
Ramsay Hospital Research Foundation Ltd
Royal Australasian College of Physicians
Royal Australasian College of Surgeons
Sapphire Holdings Group Ltd
Sisu Wellness Pty Ltd
South Eastern Melbourne Primary Health Network Ltd
Springday Pty Ltd
St John of God Health Care Inc
The Australian Council on Health Care Standards
The University of Notre Dame Australia
University of South Australia
University of Western Australia / Population Health Research Network
WA Primary Health Alliance
Wave Digital Pty Ltd
WentWest Limited
Yourtown



2.8 Governance – Board, Committees and Key Staff

2.8.1 Status

The DHCRC is a Company Limited by Guarantee, registered with the Australian Charities and Not-for-Profit Commission. It attained not-for-profit status

effective 11 May 2018, and is therefore tax-exempt from its commencement.effective 11 May 2018, and is therefore tax exempt from its commencement.

2.8.2 DHCRC Governance Structure

The DHCRC is governed by a Board of Directors and subject to a Constitution. Following the resignation of several Directors, seven new Board members were appointed at the FY19 Annual General Meeting held on 28 November 2019, including the current Board Chair, Mr Michael Walsh.

and Remuneration; Research and Education). Prior to 5 December 2019 there was also a Translation and Commercialisation Committee. The governance structure of the DHCRC as at 30 June 2020 is presented in Figure 2.

There are three Board sub-committees (Audit, Risk, Privacy and Finance Management; Nominations

Figure 2 – DHCRC Governance Structure



Dr Victor Pantano resigned as CEO in mid-June 2020, and Dr Michael Costello was appointed Interim CEO on an initial three-month contract, while a search was undertaken for a permanent appointee.

Ms Eve Martin continued as Company Secretary throughout FY20, in conjunction with her role as Director of Commercial and Operations.

2.8.3 DHCRC Board

The following Directors resigned during FY20:

- + Professor Michael Aitken AM;
- + Professor Christine Bennett AO;
- + Dr Bronwyn Evans;
- + Professor Bruce Robinson AM;
- + Professor Graeme Samuel AC.

From mid July 2019 the Board comprised three members (Professor Aitken, Professor Bennett and Dr Hambleton), until the election of the following Directors at the FY19 AGM which was held on 28 November 2019:

- + Dr Neale Fong;
- + Mr William (Bill) Lucia;
- + Mr Paul McBride;
- + Ms Kate Munnings;
- + Dr Megan Robertson;
- + Professor Priscilla Rogers;
- + Mr Michael Walsh.

The first Board meeting of the new Board was held on 5 December 2019, at which time Mr Michael Walsh was elected as Chair of the Board.

2.8.4 Board Membership

Directors - Current

The following persons are currently Directors of the DHCRC Limited:



Dr Neale Fong

Appointed 28 November 2019

MBBS DipCS MTS MBA FSCSM(Hon) FAIM FAICD

Non-Independent

Neale is a registered medical practitioner with over 35 years' experience in medical and health care delivery and a wide range of leadership roles. His strengths lie in systems management, reform and change management, developing strategic directions and leading and managing both health policy and operational entities. He has held and continues to hold very senior positions in many health care sectors covering government services, private hospitals, academia, health research, public health, aged care and not for profit organisations.

Neale is currently Chair of the Western Australian Country Health Service Board, Professor of Healthcare Leadership at Curtin University, CEO of Bethesda Health Care, and President of the Australasian College of Health Service Management. In addition, Dr Fong is a director of a number of health companies including ASX-listed Little Green Pharma, Australis Health Advisory, Sleep Studies Australia and Alerte Digital Health.

He is a former Director General of the WA Department of Health, CEO of St John of God Hospital Subiaco, Director of the Curtin Health and Innovation Research Institute and project lead for the establishment of the Curtin University Medical School.



Dr Steve Hambleton

Appointed 11 May 2018

Chair, Audit & Risk Management Committee (18 July 2019 to 5 December 2019)

Member, Nominations & Remuneration Committee

MBBS FAMA FRACGP(hon) FAICD

Independent

Dr Steve Hambleton is a GP in Kedron in Brisbane and a former State and Federal President of the Australian Medical Association and an Adjunct Professor at the University of Queensland.

He was the Chairman of National eHealth Transition Authority (NEHTA) and is currently an independent Clinical Advisor to the Australian Digital Health Agency.

He is Co-Chair of the Primary Healthcare Reform Steering Committee and he also holds board positions with Avant Mutual Group Limited, the AMA Queensland Foundation, Mercy Community Services and the Qld Aboriginal and Islander Health Council.



William (Bill) Lucia

Appointed 28 November 2019

Non-Independent

Bill Lucia has served as HMS chairman, president, and chief executive officer since March 2009. He has been a member of the board of directors since May 2008 and was appointed chairman in July 2015. From May 2005 to March 2009, Bill served as HMS president and chief operating officer. He joined the company in 1996 and continues to lead HMS through the evolving healthcare landscape, demonstrating the ability to formulate and implement key strategic initiatives.

Prior to HMS, Bill served as senior vice president of operations and chief information officer for Celtic Life Insurance Company, and senior vice president of Insurance Operations for North American Company for Life and Health Insurance. He also is a director on the board of AllyAlign Health.

Bill also is a Fellow of the Life Management Institute program through LOMA, an international association of insurance and financial services companies engaging in research and educational activities to improve operations.



Paul McBride

Appointed 28 November 2019

Member, Audit, Risk, Privacy & Finance Committee (from 5 December 2019)

BComm; MTaxLaw

Non-Independent

Paul is First Assistant Secretary in the Commonwealth Department of Health. He has spent more than a decade in senior policy and advisory roles, with a primary focus on Taxation, Superannuation, Housing, Welfare Payments and most recently Health.

Since joining Health in October 2018, Paul worked to develop a whole of health system understanding of how incentives, structures and funding from governments and health care providers drive patient level outcomes. He also had responsibility for data modelling and analytics functions and, as part of that, responsibility for the DHCRC. Current Responsibilities include the Medical Benefits schedule (including telehealth and pathology), Private Health Insurance, and the policy responsibility for the Covid Safe App.

Paul's previous board roles include Housing Supply Council, Australian Institute of Health and Welfare (AIHW) and the Australian Housing and Urban Research Institute (AHURI). His previous senior governance roles include: DSS Audit committee deputy chair, deputy chair of Department of Social Services Research Ethics Committee.



Kate Munnings

Appointed 28 November 2019

Chair, Audit, Risk, Privacy and Finance Committee (from 5 December 2019)

LLB; BHLthSc (Nursing)

Independent

Kate joined Virtus Health Limited as CEO & Managing Director in March 2020. A qualified lawyer and registered nurse, Kate has a diverse breadth of professional and operational experience spanning more than 30 years.

Most recently, Kate led the strategy, hospital operations and significant organisational change program as Chief Operating Officer at Ramsay Health Care Australia. Prior to that, as Chief Executive Operations at Transfield Services (now Broadspectrum), Kate led a portfolio of complex government contracts across Australia, New Zealand and Melanesia.

Kate was a partner at law firms Corrs Chambers Westgarth and Baker McKenzie, specialising in construction law, and she was also Chief Risk & Legal Officer/Company Secretary at Transfield Services, responsible for corporate and M&A advice, risk management and commercial management across international business. Early in her career, Kate practised as a registered nurse, specialising in HIV/AIDS.

Kate has been a Director on a number of private, listed and government Boards including four years as a member on South East Sydney Local Health District Board.



Dr Megan Robertson

Appointed 28 November 2019

Member, Research & Education Committee (from 5 December 2019)

Chair, Research & Education Committee (from 27 August 2019)

MBBS FRACP FANZCA FCICM

Independent

Megan Robertson is an alumna of the University of Melbourne where she completed a Bachelor of Medicine, Bachelor of Surgery (MBBS). She is the current Group Chief Research Officer at St Vincent's Health Australia and Director of Research at St Vincent's Hospital, Melbourne. She also works as a Senior Intensive Care Consultant at Epworth HealthCare (Richmond and Freemasons).

Megan is also on the Boards of St Vincent's Institute of Medical Research, FearLess (PTSD-ANZ), and Queen's College (University of Melbourne), and the Tuckwell

Scholarship Selection Panel at ANU. She also works with national bodies including the Australian Commission on Safety and Quality in Healthcare, AusBiotech, and the National Health and Medical Research Council. Previously, she held positions as the Director of Professional Affairs, CICM, as the Executive Director of Research at Epworth HealthCare, and as the Co-Director of the Intensive Care Unit at Epworth Freemasons.



Adjunct Professor Priscilla Rogers

Appointed 28 November 2019

Member, Nominations & Remuneration Committee (from 5 December 2019)

Member, Research & Education Committee (from 5 December 2019)

BEng; PhD (Eng)

Independent

Priscilla is a highly motivated engineer, entrepreneur and leader of industry-based health technology ventures. Her core expertise is in the research, development and commercialisation of next generation solutions for real-world problems within the health and life sciences sector. Priscilla's special interests are in digital health, medical devices and pharmaceuticals.

Currently, Priscilla is a Director and Investor at Upstart Innovations, and supports multiple companies and technologies to market. In addition to this, she is an Adjunct Professor at La Trobe University. Most recently, she was an executive for a US life sciences company. Prior to this, Priscilla was leading the Cognitive Health & Life Sciences portfolio at IBM Research – Australia, responsible for developing and commercialising innovative artificial intelligence solutions. Priscilla was a member of the DHCRC's Translation and Commercialisation Committee for FY19 and Nominations and Remuneration Committee for FY20.



Professor Deborah Sweeney

Appointed 18 June 2020

Member, Research & Education Committee (from 27 August 2020)

BOptom; PhD; GAICD

Non-Independent

Professor Deborah Sweeney is the Deputy Vice-Chancellor Research, Enterprise and International at Western Sydney University. She provides leadership and guidance to achieve the University's strategic priorities for research and innovation and focusses on quality assurance and enhancement. In addition, she is responsible for supporting the research portfolios within the Schools and Institutes.

Deborah joined Western Sydney in 2009 and has more than 20 years' experience in research and research management. She received her Bachelor of Optometry from UNSW in 1980, joining the Cornea & Contact Lens Research Unit within the School of Optometry, UNSW. Since completing her PhD in 1992, she has held various executive roles within the Cornea and Contact Lens Research Unit and Vision CRC and its predecessor the CRC for Eye Research and Technology, including five years as Chief Executive Officer of Vision CRC.

Her major research area has been corneal physiology, her work has been instrumental in developing an understanding of the physiology of the human cornea and the effects of contact lens wear and refractive surgery on corneal function characteristics and the development of alternative forms of vision correction. Deborah has received both national and international award recognition for her research. She has published over 100 refereed articles and several book chapters, and is co-inventor on two patents.

Deborah is a Graduate Member of the Australian Institute of Company Directors.





Michael Walsh

Appointed 28 November 2019

Board Chair (from 5 December 2019)

Chair, Nominations & Remuneration Committee (from 5 December 2019)

Qualifications: MBA; BA(Hons); BSc; BEd; Dip Ed

Independent

Michael provides strategic advisory services to large organisations with a focus on leadership, digital health, governance, strategy, planning and transformation.

Michael was Director-General of Queensland Health from July 2015 to September 2019. Queensland Health employs approximately 100,000 people and provides a public health and hospital system for nearly five million people.

Michael holds the position of Chair for two other organisations:

- + Health Support Services, WA Health, providing ICT, financial, human resource and procurement shared services to the health service providers in the WA Health system.
- + Queensland Reconstruction Authority, responsible for managing and coordinating (in collaboration with local, state and federal agencies) the Queensland Government's program of infrastructure renewal and recovery within disaster-affected communities and the lead agency responsible for disaster recovery, resilience and mitigation policy.

In 2020, Michael was awarded the Public Service Medal in the Queen's birthday honours list for outstanding public service to the health sector in Queensland.

Michael was chair of the Australian Health Ministers Advisory Council (AHMAC) from 2016 to 2018 and was on the Board of the Australian Digital Health Agency from July 2018 to September 2019. Michael has also previously been on the Board of Brisbane Diamantina Health Partners, an NHMRC accredited Advanced Health Research and Translation Centre.

Michael has a passion for organisational excellence and leading value-based teams achieving outcomes that improve the lives of all Australians.





Professor Mike Aitken AM

Appointed 11 May 2018

Resigned 28 November 2019

Member, Research & Education Investment Committee (to 28 November 2019)

Member, Translation & Commercialisation Committee (to 28 November 2019)

PhD, MBS BBS (Hons)

Non-Independent



Professor Christine Bennett AO

Appointed 11 May 2018

Resigned 18 June 2020

Interim Board Chair (14 June 2019 to 5 December 2019)

Chair, Research & Education Investment Committee (to 17 June 2020)

Chair, Nominations & Remuneration Committee (to 17 June 2020)

MBBS FRACP Master Paed GAICD

Non-Independent



Dr Bronwyn Evans

Appointed 27 June 2018

Resigned 6 July 2019

Chair, Audit & Risk Management Committee (to 6 July 2019)

BE (Elec), PhD, FTSE, Hon FIEAust, CPEng

Independent



Professor Bruce Robinson AM

Appointed 27 June 2018

Resigned 15 July 2019

Member, Research & Education Investment Committee (to 15 July 2019)

MD, MSc FRACP

Independent



Professor Graeme Samuel AC

Appointed 27 June 2018

Resigned 5 July 2019

Chair, Translations & Commercialisation Committee (to 5 July 2019)

Member, Audit & Risk Management Committee (to 5 July 2019)

LLB Melb, LLM Monash, FAICD

Non-Independent



2.8.5 Board Committees

The following Board Committees have been established, and meetings have been held as indicated below.

Audit, Risk, Privacy & Finance Committee (previously Audit & Risk Management Committee)	
Chair	Ms Kate Munnings (from 5 December 2019) Dr Steve Hambleton (from 19 July to 5 December 2019)
Purpose	To assist the Board on matters pertaining to financial reporting, audit and risk management.

Nominations & Remuneration Committee (NRC)	
Chair	Mr Michael Walsh (from 5 December 2019) Professor Christine Bennett AO (to 5 December 2019)
Purpose	To assist the Board in the effective discharge of its responsibilities for: <ul style="list-style-type: none"> + Board composition and succession, including nomination of non-executive directors to the Board, and Board performance including performance reviews; + appointment and performance review of the CEO; + establishing and maintaining recruitment, retention and termination policies, and practices for personnel directly reporting to the CEO, and appropriate remuneration and incentive policies and practices, including remuneration of independent directors, Board Committee members and Advisory Panel Chairs and members; + determining performance incentives and remuneration increase policies for staff employed by the DHCRC.

Research & Education Committee (previously Research & Education Investment Committee)	
Chair	Dr Megan Robertson (from 18 Jun 2020) Professor Christine Bennett AO (to 18 Jun 2020)
Purpose	To advise the Board on investment decisions relating to the Research, Education and Capacity-Building Programs. The scope of responsibility will include: development of research priorities and principles, and a supporting research framework to ensure appropriate scope, quality and utility of research, education and capacity-building; analysis and advice on relevance and potential for translation of research into industry settings and for commercial purposes, including market applications of the research outputs; undertaking appraisal of relevant trends and developments in health and other sciences, technology and analytics both domestically and internationally; and providing advice on any technical, research and education issues.

2.8.6 Key Staff

Details of key DHCRC staff during the year to 30 June 2020 were as follows:

Person	Organisation	DHCRC Role
Dr Michael Costello	DHCRC	Interim Chief Executive Officer (22 June 2020 – initial 3 month contract)
Dr Victor Pantano	DHCRC	Chief Executive Officer (to 15 Jun 2020)
Ms Eve Martin	DHCRC	Director, Commercial & Operations/Company Secretary
Professor Tim Shaw	University of Sydney	Director of Research & Capacity Building
Associate Professor Federico Girosi	Western Sydney University	Co-Chief Scientist
Professor Barry Drake	University of Technology Sydney	Co-Chief Scientist
Ms Lee-Ann Breger	DHCRC	Director of Partners and Program Office (to 31 Aug 2019)
Mr Ben Hachey	DHCRC	Head of Data Science and Innovation (to 26 Sep 2019)
Dr Isobel Frean	DHCRC	Senior Consultant (from 1 Oct 2019)
Dr Melanie Haines	DHCRC	Education Manager
Mr David Tomlins	DHCRC	Program & Commercial Manager

2.9 Financial Management

The DHCRC has received cash contributions from its participants during FY20 of \$7.582m. This is slightly down from the forecasted \$7.895m committed under agreements. This funding gap continues to be actively managed and negotiations with prospective participants continue. No Commonwealth Funding was received during FY20 due to the level of cash held by the DHCRC during the year, and these contributions have been rescheduled to be received later in the term of the CRC as research activity increases.

The DHCRC spent \$2.719m on research activities during FY20, which was slower than anticipated, but reflects the gradual improvement in the level of research activity over the year. Operational overheads totalled \$2.824m, which was under budget for the year. The net surplus from the

second year of operation of the CRC was \$2.357m, which is available to meet the increasing level of research activities over the next five years.

Staff in kind was 9.40 FTE, and \$1.234m non-staff in kind was contributed. These figures are lower than anticipated, which means participant in kind contributions should be higher in the later years of the CRC to achieve research outcomes.

The DHCRC's ongoing financial management and governance practices ensure that the financial resources of the CRC are well managed and protected. Regular reporting to management, the Audit, Risk, Privacy and Finance Committee and the Board has enabled decision making with timely and accurate financial information and strong internal controls.

