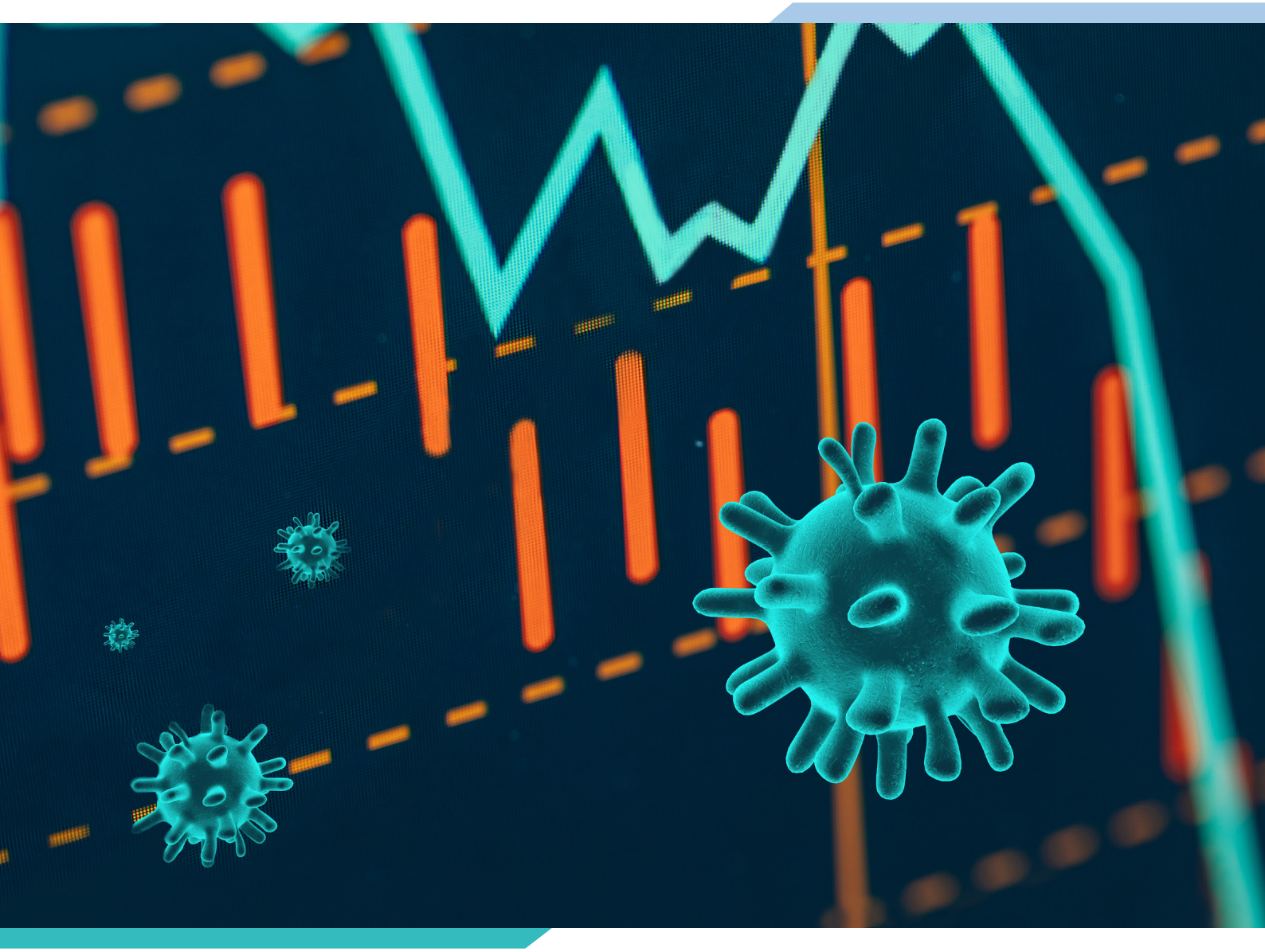
MTPConnect
MedTech and Pharma Growth Centre



MTPConnect COVID-19 Impact Report: The Impact of COVID-19 on the Australian Medical Technology, Biotechnology & Pharmaceutical Sector

Executive summary

June 2020

Introduction

Globally, more than 6 million cases and 375,000 deaths have been reported since the beginning of the outbreak in November 2019 to the end of May 2020[1]. Australia was amongst the first wave of countries to record COVID-19 cases, with the first case recorded in late January. After a sharp rise in new COVID-19 cases during the month of March, the curve was subsequently 'flattened' and by the end of May the number of cases had stabilised at around 7,200, with 103 people losing their lives to COVID 19. Australia's success in managing the first wave of infections was in large part due to the swift and decisive actions to implement social distancing measures, targeted regulations, intergovernmental cooperation and a strong focus on testing.

Together with MTPConnect, the Growth Centre for Australia's medical technology, biotechnology and pharmaceutical (MTP) sector, L.E.K. has explored the impacts of the COVID-19 pandemic on the Australian MTP sector over the period February – May 2020. The findings were published in the MTPConnect COVID-19 Impact Report: The Impact of COVID-19 on the Australian Medical Technology, Biotechnology & Pharmaceutical Sector. This document summarises the key insights from our report.

Assessment of COVID impact on MTP sector

Assessment of overall sector impact

Key organisations impacted	Key issues encountered	Types of responses
Those focused on early stage R&D and clinical trials	Clinical trials halted	Immersion in the COVID-19 response
Smaller organisations	R&D efforts slowed due to restrictions and lack of funding	Pivoting to support the COVID-19 response
Organisations whose products / services are not aligned to COVID-19 response efforts	Supply chain challenges in terms of available capacity and cost of air and sea freight	Protecting organisation viability and sustainability
	Changes in end-user demand for products / services	Continuing operations while observing distancing requirements & constraints

The COVID-19 crisis has had a strongly negative impact on the MTP sector, as it has many other parts of the Australian economy. Sector executives and senior leaders rated the overall impact on their businesses as 2.5 on a scale of 1 to 7, where a rating of 1 is a highly negative impact and 7 is highly positive.

Commercial activity across the sector, as measured by the market capitalisation of ASX-listed MTP companies has fallen $11 billion (or 5%) from $211 billion in February 2020 to $200 billion in May 2020.

[1] Hien Lau and Veria Khosrawipour, Internationally lost COVID-19 cases, Journal of Microbiology, Immunology and Infection, 14 March 2020

While this decline is lower than the corresponding 24% decline of the S&P / ASX All Ordinaries index over the same period, it is primarily driven by the steady market capitalisations of CSL and ResMed, two companies that have both played significant roles in responding to COVID-19. Excluding these two companies from the analysis reveals the rest of the Australian sector has experienced nearly a 16% decline in market capitalisation, akin to the S&P / ASX index over the same period.[2]

The impact of the COVID-19 crisis has been particularly severe on three types of organisations within the sector:

a. Organisations focused on earlier stage R&D and clinical trials in the MTP value chain have been impacted more than those focused on manufacturing and sales & distribution,

b. Smaller organisations rather than larger companies, and

c. Organisations whose products / services are not aligned to the COVID-19 response efforts.

Value chain focus

Lockdown and social distancing measures across Australia have limited the ability of workers to work on-site and physically continue R&D activities in laboratories[3]. In contrast, manufacturing operations, particularly in the pharma / biotech and medtech sub-sectors, were widely deemed essential services and continued to operate, albeit with stricter social distancing and hygiene guidelines.

Organisation size

Larger companies had more significant cash reserves to withstand the impact of a revenue slow-down compared to smaller companies and have benefited from diversified operations, for example, continued demand and revenue for products in some parts of their business while facing reduced demand in other areas. Smaller companies, particularly start-ups and early-stage biotech / medtech / digital health companies, were further disadvantaged if they were pre-revenue as these organisations have not been eligible for JobKeeper payments from the Federal Government.

Alignment to COVID-19 efforts

A differentiating factor of the MTP sector compared to others in the Australia economy is that many organisations have played a direct role in responding to the COVID-19 crisis, including developing ventilators, vaccines and therapeutics against SARS-CoV-2, producing and sourcing vital medical supplies and protective equipment for healthcare workers. Consequently, the impact on organisations has varied depending on whether their products and capabilities have been aligned to COVID-19 crisis needs.

Issues encountered

We surveyed over 80 senior executives in the sector to identify the nature of the issues and challenges experienced as a result of COVID-19. There were four impacts that were consistently raised as the most significant; reduction in clinical trial activity, reduction in R&D activity, supply chain disruptions and change in demand for end-user products.

[2] MTPConnect COVID-19 Impact Report: The Impact of COVID-19 on the Australian Medical Technology, Biotechnology & Pharmaceutical Sector

[3] Frank Larkins, Impact of the pandemic on Australia's research workforce, Rapid Research Information Forum, 6 May 2020

Impact on clinical trials

Many pharma, biotech and medtech companies have had to put their clinical trials on hold as it was not practical to continue treating and monitoring patients during the pandemic. Concerns regarding patient safety, hospitals that stopped clinical trial monitoring activities or healthcare infrastructure being diverted for COVID-19 purposes were the common drivers of clinical trials being put on hold. In addition, pharma and biotech companies found recruitment of patients for new clinical trials challenging as patients were not willing to participate in trials during this pandemic period.

Impact on new and ongoing R&D

Biotech companies have found it difficult to source funding for new and on-going R&D as a result of the pandemic. These delays can disrupt and delay years of planning as well as reduce the commercial attractiveness after years of investment as the sector has long development lead times of 10-15 years. Restrictions on working in laboratories due to the lockdown measures and social distancing requirements have resulted in a slow-down of R&D activity. The notable exception here is that R&D efforts directed towards the development of vaccines, diagnostic kits and therapeutics against SARS-CoV-2 have seen increased funding and levels of activity. Early-stage biotech firms, universities and MRIs have been disproportionately impacted by the slow-down.

> *"… the nation could face "generational loss" of biotechs and medtechs that are not eligible for the JobKeeper subsidy since it does not support pre-revenue innovation companies…"*
>
> ***- Chris Nave, Founding Partner and Managing Director, Brandon Capital Partners[4]***

This has significant implications for future cash reserves to complete clinical trials once they resume and the retention of jobs in the sector.

Impact on supply chains

The COVID-19 pandemic has resulted in a surge in demand for some medicines and medical devices such as respiratory products[5], ventilators and PPE. This extra demand has caused significant stress on the supply chains of pharma, biotech and medtech companies. These companies have found it increasingly challenging to source input materials or finished products from overseas given the dramatic decline in sea and air freight services internationally, combined with border closures.

Pharma and medtech companies have incurred the additional cost of transporting freight via limited air, land and sea freight services to meet the urgent demand for products. Air freight costs have increased between 3 to 10 fold during the pandemic compared to the typical pre-COVID costs and have not been passed on to buyers.

Change in demand for end-user products

Digital health and medtech companies involved in the COVID-19 response or whose products are perceived essential, including telehealth, have experienced increased activity levels and more positive financial outcomes than those who are not. Digital health companies surveyed by MTPConnect have

[4] Carrie LaFrenz, Biotechs face 'generational loss' without JobKeeper, Australian Financial Review, 25 May 2020

[5] Senior stakeholder interview with international pharmaceutical company

experienced a positive impact on their businesses because social distancing regulations have led to a rapid and robust pivot towards virtual healthcare delivery[6].

> *"The forced adoption of digital technologies has been a positive development, especially around e-prescriptions and telehealth. Rapid introduction of reimbursement was key, however this will need to be maintained and expanded to digital medicine and digital therapeutic technologies to fully capitalise on the full potential of our digital health sector."*
>
> ***- Bronwyn Le Grice, CEO and Managing Director, ANDHealth***

Medtech companies whose products are involved in elective procedures and surgeries experienced a sharp decline in demand leading to challenging earnings in the quarter. Cochlear hearing devices experienced an 80% decline in revenue across developed markets which is partially attributed to Australia's halt to elective surgeries from 25 March to 27 April 2020.[7]

Responses

The pandemic escalation period in Australia from March to April was characterised by unprecedented uncertainty and the need for businesses to respond and adapt in a rapid manner to protect staff and customers, provide support to the COVID-19 response and in some cases to simply "survive".

Organisation responses have typically fallen into one of four categories linked to the extent to which the organisation was impacted, and whether opportunities have existed to pivot and support the COVID-19 response:

- **Immersion in the COVID-19 response:** Those organisations experiencing a significant surge in demand for products and / or services have needed to align and adapt to support the national response to the COVID-19 pandemic
- **Pivoting to support COVID-19:** Organisations with some assets and capabilities to support the COVID-19 response have rapidly pivoted a proportion of organisation activities and resources to address needs arising from COVID-19
- **Protecting organisation viability and sustainability:** Those organisations facing significant negative economic impacts of COVID-19 have focused on preserving financial sustainability and viability
- **Continuing operations while observing distancing requirements and constraints:** Those organisations that have a modest financial impact but have had to adapt operations to meet distancing requirements distancing requirements

Most notable was the collaboration between industry and government to ensure the supply of vital medical equipment under the Health Industry Coordination Group chaired by Glenys Beauchamp PSM. The industry stepped in to fulfil manufacturing and procurement needs; this collaboration was in an unprecedented manner leading to the securement and production of vital medical equipment within Australia. The details of this collaborative effort are presented in the Supplementary Report[8].

[6] Damien Angus, Maureen Connolly and Mariella Salita, The shift to virtual care in response to COVID-19, PwC, 9 April 2020

[7] Maarten Ijzerman and Jon Emery, Is delayed cancer diagnosis a consequence of COVID-19?, Pursuit, University of Melbourne, 30 April 2020

[8] MTPConnect and MTAA, Collaborating in the Public Interest: How Australia's Medical Technology Sector joined with Government to fight COVID-19, June 2020

The table below highlights these four categories of responses.

Segment	Description	Example organisations (products / services)	Illustrative actions taken by organisations
Immersion in the COVID-19 response	A number of pharma / biotech, medtech and digital health companies have seen a surge in demand for their usual products and / or services during the COVID-19 period because these products / services have been essential for consumers, healthcare organisations and / or governments to address the health impacts of COVID-19	ResMed, notus industry consortium, (ventilators), Med-Con (PPE such as face masks), telehealth companies (MedAdvisor, Coviu), Government agencies such as the TGA, DoH	Ramped-up production and distribution of products / services seeing increased demand either on their own or in collaboration Secured alternative supply chain solutions often involving higher than normal cost of freight / logistics Increased workforce capability to serve the increased demand
Pivoting to support the COVID-19 response	Organisations that have deployed a sub-set of their capabilities to support demand for services and products to support	Alcohol producers developing hand sanitisers, Stryker, CSL, DetMold (masks), Clets Linen (gowns) CSIRO, Planet Innovation, TGA	Redeployed staff, facilities and resources to develop and / or voluntarily provided services that aid the national response Reprioritised R&D efforts to address challenges presented by COVID-19 Implemented rapidly with a more responsive pace of working internally
Protecting organisation viability and sustainability	Organisations that have experienced a significant drop in demand for their products / services due to the COVID-19 pandemic and have been unable to pivot their activities sufficiently to mitigate this decline in demand	Cochlear, small biotechs, such as Immuron, Universities and MRIs	Used cost saving tactics and sought aid to best manage the decline in demand to ensure on-going survival
Continuing operations while observing distancing requirements & constraints	MTP sector organisations that have been minimally impacted by the COVID-19 pandemic because the pandemic did not severely impact demand for their products / services	There are relatively few organisations that fall into this category e.g. some service providers such as IP advisors, market access advisors	Minimal impact on overall business with impacts typically limited to particular products or business lines (e.g. R&D and sales functions) Largely maintained the course with organisation activities, while adjusting to the COVID-19 restrictions

The road to recovery and emerging lessons from the pandemic

The road to recovery for the MTP sector is likely to be a difficult one with many uncertainties. It is currently unclear whether there will be subsequent waves of heightened community transmission of COVID-19 requiring further shutdowns. It is unclear how long Australians will need to socially distance and how cautious they will be at returning to previous behaviours, including receiving medical treatment. There is uncertainty around ongoing international border closures and movement of goods and it is also unclear how the broader Australian economy will be affected and how reduced consumer wealth and funding sources will impact on demand for MTP products and services. The MTP sector will need to continue to be agile.

There are five key factors across the MTP value chain that will affect the sector over the next six to twelve months, as summarised below.

Factors	Implications	Path to recovery
Healthcare system burden	The healthcare system is likely to be challenged by a surge in the volume of patient consultations and severity of interventions required as patients have delayed diagnoses and treatments during the pandemic.	Public and private sector organisations and government need to continue to work together to encourage patients to seek regular medical care.
Potential for increased unemployment	There may be an increase in job cuts if JobKeeper support is scaled down before a sufficiently strong recovery in market conditions, particularly at early-stage MTP companies and research institutions.	Consideration of a range of policy options, such as matching capital through several mechanisms, including revenue contingent, convertible loans, to support pre-revenue and early-stage biotech and medtech companies to deliver the services and products for the healthcare of Australians.
Continued high shipping costs and supply chain disruptions	While international travel is restricted, companies will face compounding financial pressures resulting due to lower revenues and lower margins due to higher freight costs.	There is a need to continue growing air freight capacity and improve its cost effectiveness, building on the good work of government departments such as the Department of Industry, Science, Energy and Resources and Austrade during the pandemic. There is also a need to continue to ensure supply chains are diversified to avoid disruptions from nations impacted by the pandemic.
Slowing of the innovation pipeline	Shortfalls in research funding and lack of alternative revenues (e.g. international student fees, philanthropic donations) could require research institutions to rationalise their research efforts.	A collaborative approach to safely expedite international students returning / coming to Australia once travel bans are lifted is key. A review of the research funding model in light of Australia's innovation agenda would also be valuable.
Opportunity to strengthen Australia's clinical trials reputation	There is a short-term opportunity to leverage Australia's position as one of the lesser-affected Organisation for Economic Co-operation and Development (OECD) nations to attract clinical trials and associated R&D activity to Australia.	Strategies increasing patient recruitment and restarting trials that were put on hold during the pandemic, including risk mitigation plans to cope with further waves of infection which may arise over the next six months.

Emerging lessons learned

Although the impacts of the COVID-19 pandemic on the MTP sector are yet to be fully realised, our engagements with senior MTP sector stakeholders have highlighted a number of key lessons learned from the journey thus far in dealing with the pandemic.

Lessons learned to be applied to future practices	Description
Enhance government, industry and research sector collaboration	Significant work has been undertaken to align efforts across states and territories in Australia, especially with R&D and procurement for COVID-19 preparedness. This collaboration between government and industry and across all levels of government has been regarded as a quantum leap forward and should continue post-pandemic
Accelerate adoption and realise the potential of digital innovation and capabilities	Remote access to data for clinical trial teams, the introduction of remote / at-home monitoring of patients, the introduction of a COVID-19 tracking app, and the ability to e-sign documents are examples of broader digital health capabilities within Australia that have been successfully adopted in Australia during COVID-19. Maintaining the changes in behaviour while also accelerating the rate of adoption of digital health innovation will be critical to drive productivity gains and improve the quality of healthcare delivery in Australia
Add diversity to supply chains and the development of local manufacturing	Ensuring a diverse supply chain and sources with built in redundancies, sufficient local manufacturing capabilities and / or state and national stockpiles would better prepare Australia for future pandemics
Develop a structured approach to pandemic monitoring and detection	Consistent and sustainable funding for research, development and manufacturing capabilities for infectious diseases and associated medical diagnostics would better prepare Australia for future pandemics[9]

Conclusion

The COVID-19 pandemic, and the restrictions implemented to control its spread, have caused significant negative impacts to the MTP sector over the past three months. Many sector companies and organisations have seen severe declines in revenue and margins. Supply chain integrity for many companies has been compromised and with a necessary emphasis on preserving cash until better times, jobs have been lost. Up to 90% of clinical trials have been put on hold and R&D activities have been slowed down or stopped. Complications in access to capital for early-stage companies could lead to a generational loss of start-ups from the Australian ecosystem.

The MTP sector is innovative and resilient, characteristics which came to the fore in the unique collaboration between industry and government to ensure effective supply of the critical healthcare technologies, goods and services necessary to support the public health response to COVID-19. Many organisations have pivoted their own activities to contribute to the pandemic response, often absorbing higher costs and consequently lower margins. This has now placed Australia among the leading countries globally in terms of recovery from the pandemic.

After a number of years of strong growth and sustained contributions to the Australian economy, COVID-19 is testing the MTP sector like never before. The uncertain path over the next 6 – 12 months, with the possibility of future waves of infection, will have flow-on impacts for the MTP sector and the broader Australian economy. Our research has shown that the MTP sector has played a key role in responding to COVID-19, and is of vital importance to the recovery efforts and to building sovereign capabilities for future pandemic resilience.

As the impact of COVID-19 continues to evolve, MTPConnect and L.E.K. will continue to monitor the health and responses of the MTP sector. A follow-up report will be published in Quarter 3 2020 that will articulate a more comprehensive view on the lessons learned from the sector's collective experiences of the COVID-19 pandemic, outline strategies and initiatives to position it for future growth and enhance Australia's future pandemic preparedness.

[9] Sophie McNeill, Jeanavive McGregor and Lauren Day, How Australia's 'panic and neglect' funding cycle has left us vulnerable to pandemics like coronavirus, ABC News, 8 June 2020

Acknowledgments

This COVID-19 impact report was developed with input from over 80 senior sector executives, through an online survey and targeted stakeholder consultations. The perspectives shared by these senior stakeholders from industry associations, companies, regulatory bodies, research organisations, government representatives and funders have informed key insights, themes, stories and recommendations within this report. A special thanks to the Medical Technology Association of Australia for its contribution to producing the supplementary report to this Impact Report. The list of stakeholders consulted through interviews is shown in the table below.

List of senior sector stakeholders consulted

Name	Organisation	Name	Organisation
Dr Peter Thomas	AMMRI	Ian Burgess	MTAA
Bronwyn Le Grice	ANDHealth	Sue MacLeman	MTPConnect
Liz Chatwin	AstraZeneca	Dr Nicholas Cerneaz	MTPConnect
Lorraine Chiroiu	AusBiotech	Alex Fowkes	MTPConnect
Dr Chris Nave	Brandon Capital Partners	Julie Phillips	MTPConnect
Brooke O'Rourke	Cochlear	Dr Douglas Robertson	MTPConnect
Dr Rob Grenfell	CSIRO	Sam Lanyon	Planet Innovation
Dr Charmaine Gittleson	CSL	Helen Aunedi	R&D Taskforce
Dr Masha Somi	Department of Health	Carrie Bloomfield	R&D Taskforce
Glenys Beauchamp PSM	Department of Industry, Science, Energy and Resources	James Doyle	Stryker, MTAA Working Group
Mandie Lammens	Grey Innovation	Adjunct Professor John Skerritt	Department of Health (TGA)
Elizabeth De Somer	Medicines Australia	Tracey Duffy	Department of Health (TGA)
Petrina Keogh	Medicines Australia	Dr Jane Cook	Department of Health (TGA)
Mark Stewart	Medicines Australia	Professor Duncan Ivison	University of Sydney
Sara Pantzer	Medicines Australia		

MTPConnect would like to thank all those who shared their time and insights through the online survey and stakeholder consultations. The views and opinions expressed in this report are those of the authors and do not necessarily reflect those of the Australian Government or the Portfolio Ministers for the Department of Industry, Science, Energy and Resources.

MTPConnect
MedTech and Pharma Growth Centre

Contact us for further
Information

Phone +61 3 7019 0917 **Email** info@mtpconnect.org.au

GET SOCIAL

Join the conversation:
@MTPConnect_AUS
#MTPConnect #AusInnovation

Follow MTPConnect
@MTPConnect

Subscribe on:
Apple Podcasts

Head Office
Level 20
15 William Street
Melbourne VIC 3000
Australia

NSW Sydney Hub
Level 5
J12 School of IT
University of Sydney
1 Cleveland Street
Darlington
NSW 2006
Australia

QLD Brisbane Hub
Translational
Research Institute
Level 7
37 Kent Street
Woolloongabba
QLD 4102
Australia

VIC Melbourne Hub
Monash University
Clayton
VIC 3168
Australia

WA Perth Hub
The University
of Western Australia
Harry Perkins
Institute of Medical
Research Building
QEII Medical Centre
6 Verdun Street
Nedlands WA 6009
Australia

MTPCONNECT.ORG.AU

Australian Government
Department of Industry, Science, Energy and Resources

Industry Growth Centres

Further information about the Industry Growth Centres Initiative is available at www.business.gov.au/industrygrowthcentres