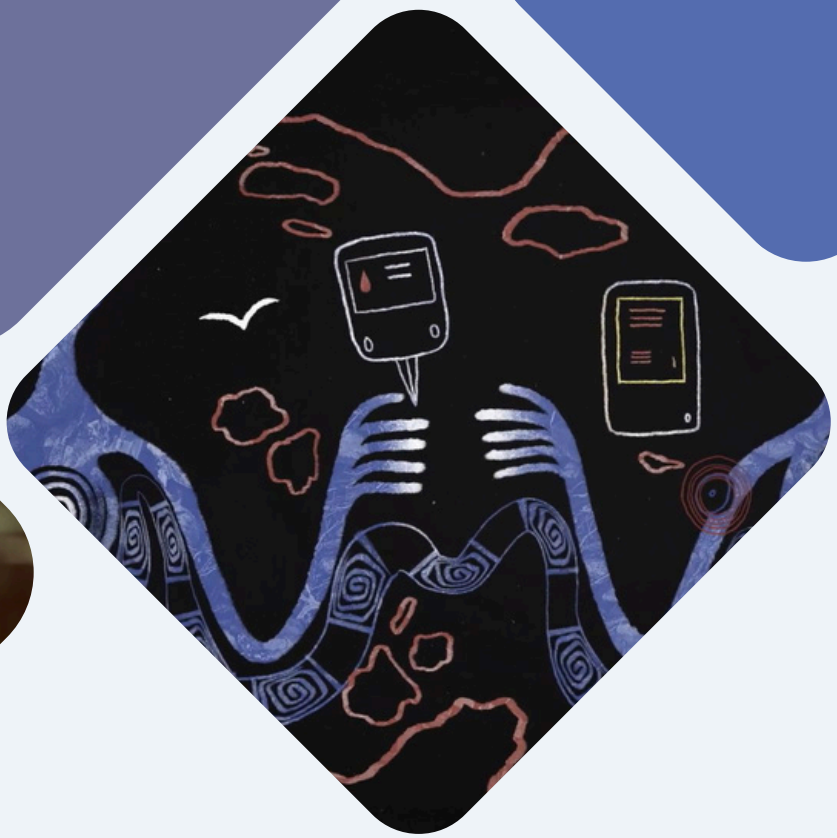


THE AUSTRALIAN CENTRE FOR ACCELERATING DIABETES INNOVATIONS

Transforming diabetes care in Australia

Jan 2022 - Dec 2024
Impact Report

ACADI
Australian Centre for
Accelerating Diabetes Innovations

Executive Summary

Diabetes is one of the top 10 leading causes of death in Australia, costing the economy $17.6 billion each year.

The Australian Centre for Accelerating Diabetes Innovations (ACADI) was established in 2022 with $10 million from MTPConnect's Targeted Translation Research Accelerator, a Medical Research Future Fund initiative, through a highly competitive bid process to pioneer new ways to manage the surge of diabetes and its complications and lead the pursuit of innovative patient-centred therapeutics, interventions, diagnostics, technologies, and digital health solutions.

ACADI specifically addresses equity in diabetes-related healthcare through targeted initiatives that ensure all Australians—regardless of geographic location or cultural background—have access to innovative products and clinical trials.

In under three years, ACADI has made significant progress toward increasing access to care and accelerating innovation in the diagnosis, prevention, and treatment of diabetes. We have:

Developed transformative, patient-centred innovations

- Supported a pipeline of 18 projects across prevention, diagnosis, management, and new therapies
- Two projects are in clinical use and seeking market expansion

Addressed a major challenge in clinical trials

- Engaged 400+ clinical trial participants from rural, remote and at-risk populations

Enhanced workforce and sector resilience

- Created over 50 jobs, scholarships and clinical and research career development awards
- Trained more than 1300 diabetes researchers, nurses, educators, allied health professionals and clinicians through expert seminars and summits

Increased access to evidence-based care for all Australians

By helping 850+ people from ages 1 to 102 years in the last six months alone through our virtual diabetes emergency service, leading to:

- 85% diversion rate from busy Emergency Departments
- 94% patient satisfaction rate with the service
- Each hospital admission for diabetes diverted saves on average $11,817 and frees up 3.5 bed days
- Initiated ketone testing in Victorian Ambulances to support rapid identification of ketoacidosis

Shaped the future of care through advice to Government

- Guidelines for the Victorian Virtual Emergency Department Diabetes Service
- Better detection of diabetes-related kidney disease
- Informed a Parliamentary inquiry into clinical research and trial investment for diabetes, and was referenced throughout an evidentiary report commissioned by Diabetes Australia

At a Glance

3	Key Priority Areas
18	Translational Projects
50+	Career Pathways Created & Supported
70+	Partners, Supporters & Research Collaborators
90+	Peer-Reviewed Research Publications
1300+	Researchers & Health Professionals Trained

Table of Contents

"ACADI is set to expand its geographical coverage to remote and under-served populations and I am supporting them in their quest. Prof Ekinci is a trailblazing leader in this country who is accelerating trial activity and MedTech innovations, and she's working with her partners to develop a ***lifeline for people*** *at time of need and reduce hospital admissions.* ***Essential, life-changing work****."*

Susan Alberti AC, philanthropist and ACADI Council Chair

Cover: **Cultural advisor and artist with ACADI, Bernard Kelly-Edwards, a member of the Gumbaynggirr, Bundjalung and Dhunghutti Nations.**

Addressing a National Crisis

Diabetes in Australia:

Top 10	leading cause of death
1.5M	Australians affected [1]
51%	increase to 1.9 million patients by 2045 [1]
$3.4B	in costs to the healthcare system [2]
$17.6B	in combined costs to the health system and loss of productivity [3]
5%	Australians aged 45-64 will leave the workforce due to diabetes (up by 4.2% in 2010) [4]
3x	Indigenous peoples affected than non-Indigenous [4]
1.3x	Rural or remote Australians than urban [4]

Australia is on the precipice of a diabetes epidemic. It is already one of the nation's top 10 causes of death, with an estimated $17.6 billion in combined healthcare and productivity costs annually. By 2045, more than 1.9 million Australians are expected to be living with diabetes.

The burgeoning diabetes crisis was highlighted in the parliamentary inquiry into diabetes, *The State of Diabetes Mellitus in Australia in 2024*. The report stressed the need for ways to better support Australians to prevent, delay the onset of and better manage diabetes. Inequitable access to services and technologies has been identified as a major barrier to diabetes care.

ACADI is already addressing several of the report's key recommendations—improving access to innovative diabetes care, clinical trials, and educational tools that strengthen the healthcare system's capacity to manage diabetes effectively (refer to page 21 for further details.)

As people with both Type 1 and Type 2 diabetes are living with the condition longer, they are at increased risk of developing its complications. Urgent action is needed to ensure that all Australians have access to life-saving diabetes innovations and turn the tide on this debilitating disease.

"We are truly facing huge health consequences if no action is taken."

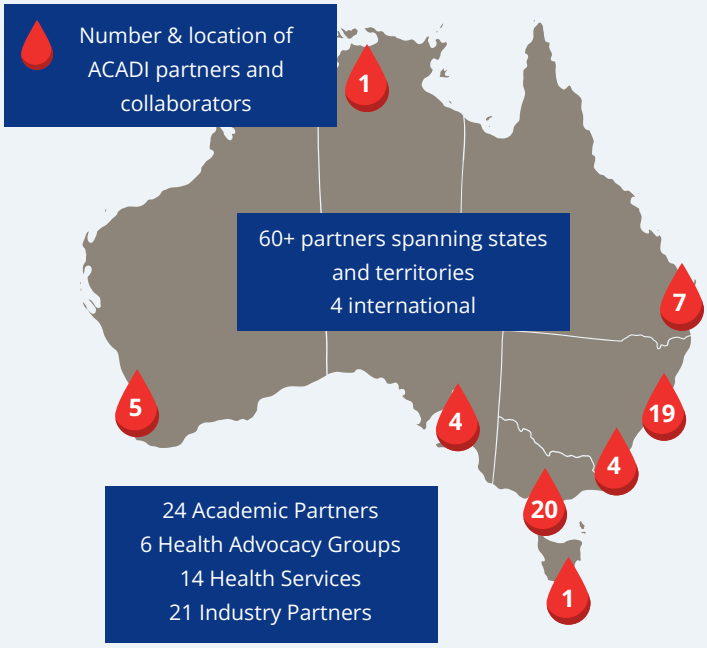
- Chair's foreword from *The State of Diabetes Mellitus in Australia in 2024* report

[1] International Diabetes Federation (2025), IDF Diabetes Atlas
[2] Australian Institute of Health and Welfare (2024), Diabetes: Australia facts
[3] Lee CM et al., (2013) The cost of diabetes in adults in Australia, Diabetes Res Clin Pract.
[4] Diabetes Australia (2024), The State of the Nation 2024

A National Centre for Impact

The Australian Centre for Accelerating Diabetes Innovations (ACADI) was established in 2022 with $10 million from MTPConnect's Targeted Translation Research Accelerator (TTRA), a Medical Research Future Fund initiative. Founded on a unique collaborative model, ACADI is the only diabetes-focused organisation that integrates clinical needs while addressing inequity. Patients, clinicians and researchers work together in strong partnership to deliver evidence-based health care.

Our growing network of over 60 partners and collaborators is delivering novel patient-centred interventions for timely diabetes diagnosis, care and prevention. Our shared vision is to reduce the physical, emotional and financial burden experienced by people living with diabetes and its complications and their families.



Core Partners

- THE UNIVERSITY OF MELBOURNE
- AUSTRALIAN NATIONAL UNIVERSITY
- DEAKIN UNIVERSITY
- DIMETRIX BIOSCIENCE
- HARRY PERKINS INSTITUTE OF MEDICAL RESEARCH
- MENZIES SCHOOL OF HEALTH RESEARCH
- QUEENSLAND UNIVERSITY OF TECHNOLOGY
- RMIT UNIVERSITY
- THE UNIVERSITY OF ADELAIDE
- UNIVERSITY OF NEW SOUTH WALES
- THE UNIVERSITY OF QUEENSLAND
- UNIVERSITY OF SOUTH AUSTRALIA
- THE UNIVERSITY OF SYDNEY
- UNIVERSITY OF TASMANIA
- THE UNIVERSITY OF WESTERN AUSTRALIA
- WESTERN SYDNEY UNIVERSITY

Refer to Appendix 1 for a list of Core and Other Partners, Supporters and Collaborators.

Australia-Wide Expertise

ACADI plays a crucial convening role across the Australian diabetes ecosystem, facilitating expert guidance, oversight, and collaboration opportunities.

This ability to bring experts together has been instrumental in fostering diverse perspectives in diabetes research and commercialisation efforts, effectively establishing ACADI as a key **coordinator**, **manager** and **leader** in the field of diabetes research.

Coordination

Since its inception, ACADI has coordinated a range of activities and established structured research platforms that connect partner organisation researchers, practitioners, students and other stakeholders through committees, seminars and expert assessor panels.

This has enabled partners to:

- Enhance awareness of cross-disciplinary practices to drive impactful innovation (e.g. through collaborative research platforms)
- Work together on developing the next generation of diabetes researchers, innovators and practitioners (e.g. National Training Program)
- Undertake joint projects, with ACADI overseeing $2 - 5 million in new grant funding

Leadership

ACADI is committed to building a sustainable future to ensure our collaborative work continues long-term.

Partners from across Australia have been actively engaged to expand the ecosystem's diversity of perspectives and expertise, and to further ACADI's mission of extending its reach through collaboration.

ACADI has also taken a leadership role in outreach to advance public awareness of diabetes and the work of ACADI partners, researchers and collaborators.

Management

ACADI oversees the full project pipeline, providing ongoing support and active oversight for 18 funded projects across the research and commercialisation lifecycle. Refer to Appendix 2 for the a list of these 18 projects.

Research project teams receive facilitated input from ACADI Advisory Groups – Community, International, Indigenous and Independent Scientific and Commercialisation – to gather feedback and help the researchers refine their project plans.

Six ACADI research platforms provide specialist advice and support to ACADI funded projects in the areas of: Behavioural Science, Biostatistics, Co-Design (community consultation), Epidemiology, Health Economics and Implementation Science.

Refer to Appendix 3 for details on ACADI's governance, leadership and platform structure.

A world-class team across Australia

DIRECTOR AND DEPUTY DIRECTOR

Director

Prof Elif Ekinci

Deputy Director

Prof David O'Neal

ACADI INDEPENDENT COUNCIL

Prof Sue Alberti, AC

Dr Megan Astle

Adj Prof Craig Bennett

Mr Simon Frost

Ms Naomi Hodgson

Mr Justin Porch

ACADI ADVISORY GROUPS

Independent Scientific and Commercialisation Advisory

Chair
Prof Geoff Donnan

Training Program Advisory

Chair
Assoc Prof Sarah Glastras

Indigenous Advisory

Chair
Ray Kelly

Management Committee

Chair
Prof Elif Ekinci

Community Advisory

Chair
Renza Scibilia

International Advisory

Chair
Prof Andrew Boulton

ACADI RESEARCH PLATFORM LEADS

Biostatistics

Prof Leonid Churilov
University of Melbourne

Behaviour & Adoption

Dr Elizabeth Holmes-Truscott
Deakin University

Co-design & Community

Meaghan Read
Diabetes Victoria

Diabetes Epidemiology

Assoc Prof Wendy Davis
University of Western Australia

Implementation Science

Dr Marlena Klaic
University of Melbourne

Health Economics & Cost-effectiveness (co-lead)

Prof Philip Clarke
University of Melbourne & University of Oxford

Health Economics & Cost-effectiveness (co-lead)

Assoc Prof An Duy Tran
University of Melbourne

Research Support

Three pillars of impact

The core purpose of ACADI is to deliver novel interventions that enable timely diagnosis, prevention, and treatment of diabetes and its complications. To achieve this, ACADI coordinates national research and development across three interlinked pillars:

1. Research Projects

Funding, support and oversight for 18 projects across key areas:

- Diabetic kidney disease (5 projects)
- Peripheral neuropathy and diabetic foot syndrome (5 projects)
- Short-term complications of hypoglycaemia and/or hyperglycaemic hyperosmolar syndrome and ketoacidosis (8 projects)

2. Research Platforms

Six specialist platforms provide expert, diabetes-specific research support to enhance project quality and impact:

- Biostatistics
- Behaviour and Adoption
- Co-Design and Community
- Diabetes Epidemiology
- Implementation Science
- Health Economics and Cost-Effectiveness.

3. National Training Program

An integrated program offering:

- Face to face and online training modules
- Seminar series
- Mentoring program
- HealthTech Innovation Challenge
- Annual symposium and stakeholder engagement events
- PhD and Early Career Researcher awards.

Seminar session led by ACADI Training Program Lead, Associate Professor Sarah Glastras.

Three key priority areas of research

1

Diabetic Kidney Disease

2

Peripheral neuropathy and diabetic foot syndrome

3

Short-term complications of hypoglycaemia and/or hyperglycaemic hyperosmolar syndrome and ketoacidosis

ACADI Australian Centre for Accelerating Diabetes Innovations

Research Impact

18	2	40%
Translational projects across prevention, diagnosis, management and new therapies	Projects are in clinical use and seeking market expansion	Projects at Technology Readiness Level 6 stage (in or completed clinical trials)

ACADI is developing patient-centred innovations including novel therapeutics, diagnostics, technologies, digital health solutions and behavioural interventions aimed at improving diagnosis, management and prevention of diabetes and its complications.

Change the Future: Saving Lives by Better Detecting Diabetes-Related Kidney Disease [5]
Commissioned to author this report for Diabetes Australia, ACADI researchers provided insights and recommendations on better detecting and managing diabetes-related kidney disease.

[5] Kwok, R; MacIsaac, R; Ekinci, E I (2023), Diabetes Australia

Through providing a suite of national specialist research platforms, ACADI is accelerating patient-centred innovation in diabetes treatment and care—helping researchers bridge the gap from discovery to patient impact.

These platforms support consumer co-design, implementation and adoption, clinical trials, epidemiology, health economics and cost-effectiveness, and patient access to novel and essential treatments and services. This support helps ensure that projects are well-positioned to achieve successful outcomes.

Refer to page 8 for Governance and Platform leadership.

ACADI's 18 rigorously selected projects focus on delivering patient benefit, commercialisation potential and health improvements in priority areas of need in diabetes, including but not limited to:

- New treatment to prevent the development of Type 1 diabetes.
- Combination therapy for reducing pain and nerve damage in peripheral neuropathy.
- First in human continuous ketone and glucose sensor trial to prevent ketoacidosis.
- Genetic test for risk of diabetic kidney disease.
- An app that monitors sleep patterns to improve sleep health for improved diabetes management and glucose control.
- AI models for more accurate kidney function assessment in people with diabetes.
- A digital platform installed in 160 metropolitan, regional and rural clinics that accelerate equitable and diverse patient recruitment in clinical trials.
- A cost-effectiveness analysis of an automated insulin delivery system designed to expand access for adults with diabetes and advanced renal disease.

Image source: Medtronic

Case study: Leigh's story

After being told she had Type 1 diabetes at the age of 62, Leigh was then diagnosed with advanced kidney disease. ACADI Director Elif Ekinci suggested Leigh would benefit from participating in the ACADI supported trial of a new hybrid closed-loop insulin pump*, but Leigh was hesitant due to the perceived complexities involved.

For several years, Leigh confounded doctors with her range of unusual symptoms and eventually she decided to participate in the trial as her condition worsened and she was assured of significant support offered by her doctors and diabetes educator, Fran Brown.

"I was going through a lot—learning to count carbs, lots of visits to Fran and the doctors. Eventually, I was put on an automatic system and the pump worked out how much insulin I needed."

Today Leigh swears by the Medtronic MiniMed 780G and discusses the tech and her readings like a pro.

"Oh, it's terrific. Everything about it is fantastic."

"**I wish I'd gone on the pump earlier.**"

The device, a bit smaller than a pack of cards, sits in a pocket and is connected to a fine tube that delivers insulin through a small disc in the abdomen. The pump can be disconnected for showering and swimming.

"Being able to sleep is one of the greatest benefits. **I used to wake up during the night, worrying I would have a hypo (low glucose reading) and never wake up.** Now I have an alarm that alerts me to problematic levels so I can sleep soundly."

According to project lead, Professor David O'Neal, the pump is being assessed in over 30 patients with Type 1 and Type 2 diabetes who also have advanced kidney disease including those on haemo- and peritoneal dialysis. "We are comparing it against the usual care these patients are offered with the goal of alleviating the mental, emotional and physical burdens of their treatment."

* This trial aims to reduce the mental, emotional, and physical burden that people with diabetes and chronic kidney disease face in managing their conditions by utilising a hybrid closed-loop system that automates insulin delivery and closely monitors blood sugar levels.

Impact Outcomes

Translating innovation into equitable impact

ACADI is committed to ensuring innovation in diabetes care benefits all Australians equitably. As part of its governance framework, five Advisory Groups were established to provide expert and lived experience input that shapes leadership, research priorities, and strategy. These include the Independent Scientific and Commercialisation, Indigenous, Community, International, and Training Program Advisory Groups.

These groups bring together people with lived experience of diabetes, clinicians, researchers, and community leaders to ensure projects are relevant, practical, and informed by diverse perspectives. Their advice helps shape research priorities and fosters collaboration.

ACADI actively connects researchers with people living with diabetes, including those from regional, remote, and underserved communities. This engagement helps make research more relevant, accessible, and impactful.

The Community and Indigenous Advisory Groups play a key role in encouraging researchers to focus on practical value and community needs from the start, supporting meaningful and inclusive outcomes.

Expert Platforms Accelerate Research Success

To strengthen research quality and impact, ACADI provides six specialist platforms that support funded projects with expert guidance in Behavioural Science, Biostatistics, Co-Design (community consultation, supported by Diabetes Victoria), Epidemiology, Health Economics, and Implementation Science.

These platforms offer proven approaches and deep disciplinary knowledge to help projects move efficiently toward key milestones and translational outcomes. By embedding good design and practical planning from the outset, they reduce the need for costly revisions and increase project success.

Building awareness of the platforms continues through regular engagement with community groups and project teams. This ensures researchers are equipped with the tools and support they need to deliver rigorous, relevant, and patient-focused outcomes.

Meaghan Read, Diabetes Victoria
Community & Research Engagement Lead
and ACADI Co-Design Platform Lead

Image credit: Bernard Kelly-Edwards

"ACADI has been a game-changer, providing platforms to accelerate translational research and drive the change needed—so often slow—to reverse the impact of Type 2 diabetes. This work isn't limited to Indigenous health—it's influencing policy for all Australians living with Type 2 diabetes."

Ray Kelly, exercise physiologist and
ACADI Indigenous Advisory Chair

Impact outcomes

Accelerating Clinical Trial Recruitment and Optimising Patient Care

Torch Recruit accelerates trial recruitment and participant diversity by identifying suitable participants based on data in General Practice electronic medical records. Led by Associate Professor Jo-Anne Manski-Nankervis, Torch Recruit has powered 10 clinical trials and been deployed at over 160 metropolitan and regional and rural sites (and growing) to recruit and connect ~1700 Australians to cutting-edge medical advancements. By ensuring nationwide accessibility, Torch Recruit significantly increases opportunities for rural and regional patients, providing more equitable access to the latest in innovative and effective diabetes treatments.

Developers of Torch Recruit are also optimising care for individuals with Future Health Today, a digital platform designed to improve clinical care outcomes for individuals with, or at risk of, chronic disease.

Future Health Today integrates latest evidence-based guidelines into clinical practice, providing real-time, patient-specific recommendations directly to healthcare professionals. It has screened 1.4 million patients and identified 135,187 at high risk of having diabetes, 4,065 needed additional tests to determine if they had diabetes and a further 1,808 showed pathology consistent with Type 2 Diabetes.

Torch Recruit significantly increases opportunities for rural and regional patients to access the latest in effective diabetes treatments.

Associate Professor Jo-Anne Manski-Nankervis,
ACADI Project 1C Lead

Predicting Diabetic Kidney Disease Risk with a Simple Saliva Test

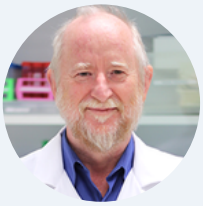
A groundbreaking genetic test has been developed, by project lead Professor Grant Morahan and his team, to predict the risk of diabetic kidney disease (DKD), a leading cause of irreversible kidney damage worldwide.

Currently, there's no effective way to know who could be at the highest risk of developing diabetic kidney disease.

Validated using data from Victoria, Western Australia, and the UK, this non-invasive saliva-based test has been trialed with 4,000 participants across five international cohorts. Results show that 50% of high-risk individuals develop DKD within 10 years.

This innovative test enables early intervention, potentially transforming health outcomes by improving quality of life and reducing the $2.6 billion annual cost of DKD in Australia. Its effectiveness across diverse populations, including First Nations communities, underscores its national and global impact.

This non-invasive saliva-based test has been trialed with 4000 participants across five international cohorts.



Professor Grant Morahan,
ACADI Project 1A Lead

Training and Workforce Development

50+

Jobs, scholarships and clinical and research career development awards created

1300+

Diabetes researchers, nurses, educators and clinicians trained in the diabetes expert seminars and summits

ACADI is addressing the outbound flow of talent and securing and future-proofing Australia's future diabetes workforce.

*"**Well-funded diabetes research is the key** to long-term success. We will continue to work with people living with diabetes to optimise their health, prevent diabetes complications, and reduce healthcare costs."*

Professor Elif Ekinci, ACADI Director

*"The work is conducted locally by community members, many of whom are new to research but have been upskilled throughout this project... **Trust takes time to be earned and nurtured** and is paramount when working with people and communities."*

Mariam Hachem, Clinical Trial Manager and ACADI Early Career Research Awardee

*"ACADI scholarships open doors for students, **providing a pathway to research** and helping them secure further funding like RTP or NHMRC scholarships."*

Associate Professor Sarah Glastras, endocrinologist and ACADI Training Program Chair

Building tomorrow's diabetes experts and innovations

Dr. Anish Menon, an early career researcher and endocrinologist at Princess Alexandra Hospital in Brisbane is transforming diabetes management with cutting-edge technology that personalises monitoring and care. Emerging from PhD research, the impact of this innovation was amplified through ACADI's collective expertise and training and development support.

REMODel (Rethinking Model of Outpatient Diabetes Care Using eHealth) is a service that enables patients to use a Bluetooth-enabled glucose meter to track their blood sugar levels. These readings are automatically uploaded to a clinician dashboard, where smart alerts flag individuals who may need immediate intervention.

Susan, a participant in Dr. Menon's trial, has experienced firsthand how REMODel has positively transformed her diabetes management. With her blood glucose levels monitored live and sent directly to her care team, she receives timely support without needing to visit a clinic.

"One time, while we were travelling in our caravan, I had a low [blood sugar episode]," Susan recalls. "Next thing I know, I get a call: 'How can we help you, Sue? We've noticed you're low.'"

Dr. Menon highlights the impact of the initiative on managing diabetes complications and health system savings: "It's saving money and reducing complications with people better managing their readings and receiving the support they need, when they need it and where they need it (which could be at home or away using this technology)."

Health economic analysis of REMODel has shown significant benefits, including fewer cardiovascular and microvascular events and sustained improvements in self-management. This award-winning initiative is now embedded as a business-as-usual model of care and moving to a statewide roll out.

Dr. Menon highlights the collaborative expertise of ACADI and its 60+ partners and collaborators and training initiatives as a key factor in the success and translational impact of this research.

"I feel extremely supported, as do other PhD students and early career scholars who benefit from the ACADI mentor-mentee program. The collegiality with diabetes colleagues has been invaluable, and it's this collaborative environment that drives our shared goals and accelerates progress in diabetes care." says Dr. Menon.

Dr Anish Menon (second from right) and the REMODel team.
Image source: "Met South Remodel" by Queensland Department of Health through CC BY 4.0.

Community Engagement

Shaping future care through evidence and community involvement

Working with peak bodies in diabetes care, ACADI engages people with lived experience to ensure research, clinical trials, and models of care reflect their perspectives. This approach fosters meaningful participation and co-design across activities.

Clinical leaders within the ACADI network are already driving improvements in care. Community input—particularly from rural, remote, and First Nations groups—has shaped trial design and innovation to ensure solutions are relevant, inclusive, and impactful.

Contributors to the Victorian Virtual Emergency Department Diabetes Service.

Together we have:

- ☑ Developed guidelines for the Victorian Virtual Emergency Department Diabetes Service
- ☑ Consulted with over 90 community members and consumers on advisory groups and committees
- ☑ Informed the Parliamentary inquiry supporting clinical trial investment
- ☑ Informed the Parliamentary inquiry of the need to improve detection of diabetes-related kidney disease.

*"There's great satisfaction, working with consumers to provide them with a useful tool. Their **feedback is very positive**. They report an improvement in their quality of life so, yeah, great satisfaction."*

Dr Marlena Klaic, ACADI Implementation Science Platform Lead

The FlashGM Study

The FlashGM Study, Australia's first multicenter clinical trial for Aboriginal and Torres Strait Islander Australians with Type 2 diabetes, is transforming diabetes care using Freestyle Libre 2 glucose monitoring technology.

This trial, the first in Australia to use this groundbreaking technology, provided access to innovations that weren't even widely available to Type 1 diabetes patients at the time. Involving 25 health services across Australia, the trial is conducted locally by community members, many of whom were new to research and have been upskilled through the project.

This approach not only ensures culturally relevant delivery but also builds long-term capacity. Participants gain research experience and exposure to cutting-edge technology, creating lasting benefits beyond the trial itself.

The trial investigates if a device that sits under the skin on the arm, to provide immediate blood glucose monitoring, improves diabetes management compared to finger prick testing. Clinical trials play a critical role in addressing the health inequities experienced by First Nations communities. ACADI is unique for its skill and capability in this space.

> ***My health changed so dramatically after starting to use the device... It was an easy decision to encourage others to join.***

> ***I can't believe the change. My sugars are going down and I can see the direct result of different foods I've eaten, and exercise.***

> ***I've gone from regular readings of 16 down to 7.3 and I'm 'in-range' 71 per cent of the time...***

*"The **Australian community will benefit** as we lead the development of world-first diabetes solutions. Now we need to move from trials to implementation for the community to have ongoing access to simple tools that make a massive difference to their lives."*

Professor Elif Ekinci, ACADI Director

Case study: Bernard's journey

Pictured: Bernard Kelly-Edwards

Bernard Kelly-Edwards, a proud member of the Gumbaynggirr, Bundjalung, and Dhunghutti Nations, has turned his life around after a decade of health struggles and neglecting his Type 2 diabetes. The turning point came when a First Nations doctor took the time to listen, connect, and meet his needs. "I can be my authentic self with a doctor who knows how to listen", Bernard says.

Motivated by the need to retain his driver's licence and employment at early childhood centres—essential for keeping his apartment, supporting his daughter, and continuing his work as an artist—Bernard committed to transforming his health. He has since lost over 20 kilograms by walking 4.5km each day, learnt to cook healthy meals, and is energetically caring for his daughter. "I didn't want my daughter to grow up without a dad." Thanks to his hard work, he has retained his driver's licence for another two years.

He had worked with members of the ACADI team for some time but in 2024, he was contacted by the ACADI team to do some more work for diabetes community engagement for First Nations and non-First Nations communities.

"My journey with Type 2 diabetes had been pretty impacting until I was asked to work on this project. It was a real kick up the backside. This diabetes isn't just about me. It's about helping my mob, nationally."

"I am a multimedia artist, I work with paint, film, photography, storytelling, poetry and digital art. I live on the mid north coast of NSW and live in Gumbaynggirr (Galimbirla (Coffs Harbour)). My bloodline connects me to many aspects of Mother Nature and I walk in both worlds with a deeper sense of purpose and awareness."

Bernard is the artist behind the ACADI video used by doctors when seeking informed consent from Aboriginal and Torres Strait Islander peoples who are considering participating in the FlashGM study. FlashGM is a trial recruiting 350 Indigenous Australians with Type 2 diabetes for continuous blood monitoring, a study that will likely lead to major, cost-effective health gains for Indigenous Australians, and significantly improved health-service delivery for Indigenous and other high-risk Australians.

With the support of ACADI, Bernard has recently won a scholarship to the University of Melbourne's Poche Indigenous Health Leadership Program and continues to support the FlashGM study as a cultural advisor, **"We need to encourage oral storytelling through the FlashGM study; we need to listen to our elders and ask them how they have found life with diabetes."**

Through his artwork, wisdom and advocacy, Bernard is an essential member of the ACADI team.

Stakeholder Engagement

Addressing a major challenge in clinical trials

Australians with diabetes—particularly First Nations peoples, those in rural and regional areas, and the most vulnerable patients—often face barriers to accessing the latest technologies and advances in diabetes care.

ACADI and Diabetes Australia have launched Australia's first Australian Diabetes Clinical Trials Network to increase the number, quality and inclusivity of diabetes clinical trials in Australia.

This initiative demonstrates ACADI's role as a project convenor and expert guide to encourage collaboration and effective trial design.

"ACADI's capacity to promote research in Australia and to deliver large-scale, well-designed clinical trials positions this country ***as a leader in diabetes research****, helping to test and implement new therapies that reflect the unique needs of our healthcare system and population."*

Professor David O'Neal, clinical endocrinologist and ACADI Deputy Director

ACADI has already:

• Engaged 400+ clinical trial participants from rural, remote and at-risk populations.

• Developed 70+ partnerships and collaborations with research and industry organisations and clinical researchers in Australia and internationally.

Expansion of the Australian Diabetes Clinical Trials Network will:

- Expand support to trials year on year
- Increase the number of participants enrolled annually across all states and territories
- Double trial sites to create a country-wide network and increasing rural, remote, and regional participation
- Engage at risk and marginalised participants, including culturally diverse and First Nations communities
- Provide expertise in commercialisation, translation and health economics for accelerated translation into patient care and access

The team behind the country's first diabetes clinical trial network.

ACADI Australian Centre for Accelerating Diabetes Innovations

Health Economics Impact

A Virtual Emergency Department for Diabetes

850+

People from ages 1 to 102 years helped in past 6 months

85%

Diversion rate from busy emergency departments

94%

Patient satisfaction rate with the service

A proven success, virtual emergency departments provide access to all Australians, keeping people out of ambulances, emergency departments, and waiting rooms, and providing a lifeline to those in rural and remote settings.

In July 2024, ACADI commenced Australia's first Virtual Emergency Department Diabetes Service as a pilot in Victoria in partnership with the Victorian Virtual Emergency Department, Northern Health, Ambulance Victoria, Diabetes Victoria, and Royal Flying Doctors Service.

We are removing access barriers to urgent care for those in regional, remote and First Nations communities.

The nationwide Virtual Emergency Department Diabetes Service is expected to:

- Close the gap in diabetes emergency care for rural and remote Australians, and access for First Nations and underserved communities across all states and territories.
- Initially support 6,200+ people living with diabetes each year across Australia.
- Manage patients from all parts of Australia to achieve 80-90% diversion from hospital and emergency departments, saving millions in operational costs.

The rapidly growing service provides a free video consultation to people with non-life-threatening complications, offering immediate 'on the spot' emergency diabetes management support to reduce the need for emergency visits and hospitalisation.

In a national first, Victorian paramedics are accessing the service when they need advice on patients, thanks to ACADI-initiated ketone testing on-board, supported by industry partner, Abbott.

A typical hospital admission for a person with diabetes **costs $11,817** and is on **average 3.5 days**. The Virtual Emergency Department Diabetes Service has enabled significant health cost savings in a short period of time.

*"Paramedics are now able to provide valuable blood ketone results when they call us for advice, this guides patient care and treatment decisions. Often **we can prevent patients having to go to hospital**."*

Cecily Foged,
Virtual Emergency diabetes nurse practitioner

Contribution to National Policy

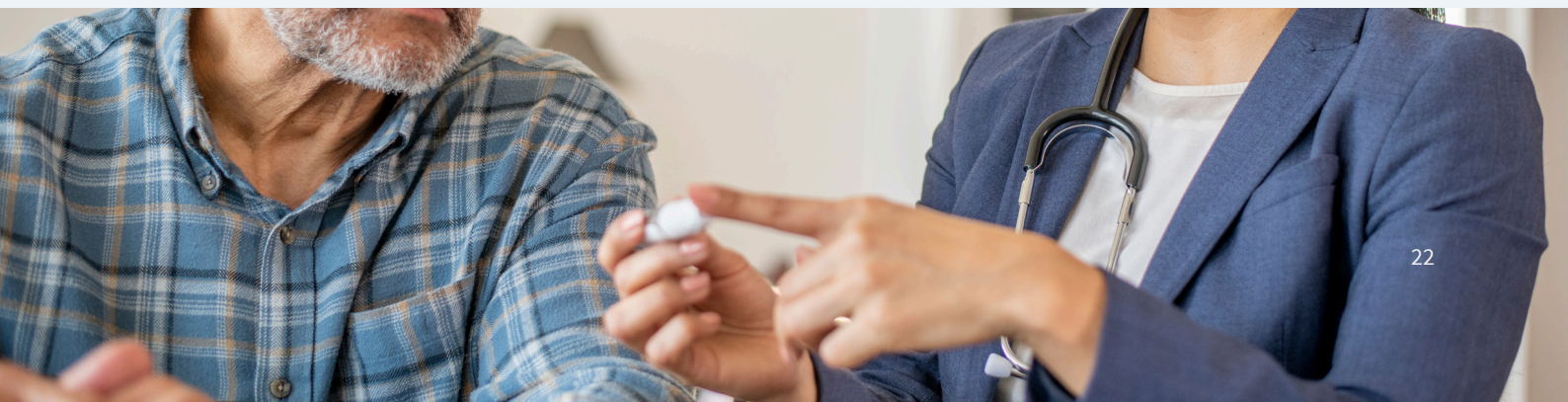
The State of Diabetes Mellitus in Australia in 2024 parliamentary report offers clear and actionable recommendations to improve diabetes treatment and management across the country. Referenced throughout the 2023 Parliamentary Inquiry into Diabetes, ACADI's activities have played a key role in shaping national priorities for clinical research and clinical trial investment. The table below highlights some of the ways ACADI aligns with, and can directly contribute to, supporting these important recommendations.

	National recommendation	How ACADI has contributed
Policy and education	**A national public health campaign to increase awareness of the importance of prevention, identification of early signs, and good management of all forms of diabetes**	• Strong national network with key stakeholders and key opinion leaders to facilitate communications push • Evidence-base to support policy and educational initiatives • Leverage ACADI's awareness-building activities
	Education tools and resources to support all staff across the healthcare system to improve understanding of diabetes, the early signs and management	• Projects include integrating latest diabetes research into healthcare practices and empowering GPs • National training platform to drive workforce excellence, expanding reach and access to training for regional and rural health and allied health workforces
Equitable access to healthcare	**Improving equitable access to healthcare for people living with all forms of diabetes**	• Virtual Emergency Department significantly increased access to healthcare for priority populations • Equity lies at the heart of ACADI - developing accessible and adaptable technologies for all • Expert clinical trials network for better co-design and trial design
	Expanding subsidised access to Continuous Glucose Monitors beyond T1D and expanded subsidised access to insulin pumps for all Australians with T1D	• ACADI was one key organisation, led by ACADI Deputy Director Professor David O'Neal, in the advocacy campaign for insulin pump subsidy for all Type 1 diabetes patients. It will continue to advocate for and ensure community awareness to enable broader access to insulin pump therapy. Leading health economics and health technology assessment to accelerate access • Community-led co-design - learning from local voices and experts
Ecosystem and products	**Active steps to manage diabetes research efforts through the Australian Centre for Disease Control by coordinating with peak bodies** **Increased funding for T1D research and diabetes clinical trials**	• World-leading development of person-centred and co-designed innovations • Increase number and quality of clinical trials in T1D and T2D • Collaborative research platforms accelerating R&D pipeline • Transforming practice by scaling and implementing breakthrough diagnostic tools, interventions and models of care
	Undertake survey of current diabetes-related data, with a view to developing strategies for establishing new and improving data sources and for establishing a national diabetes mellitus register	• Data-driven change - a unified national system for monitoring and outcomes • Setting the standard - driving policy and guideline excellence nationwide

ACADI Australian Centre for Accelerating Diabetes Innovations

ACADI Outcomes Summary

What ACADI has achieved so far...	
Rollout of Australia's first Virtual Emergency Department Diabetes Service in Victoria (VVED Diabetes), an extension to the VVED	• Helped 850+ people with a diabetes-related emergency in the last 6 months • 84% diversion rate from presentations in Victorian hospitals • As high as 94% patient satisfaction ratings from people with diabetes using the service
Launch of the Australian Diabetes Clinical Trials Network (ADCTN)	• 7 clinical trials • 400+ patients enrolled in clinical trials • 200+ rural, remote, regional participants enrolled • 200+ at-risk participants enrolled
Strengthening of the national diabetes training program	• 51 community engagement events • 1,800 stakeholders engaged • On track to deliver 12 competitive PhD scholarships and 12 ECR fellow awards and onboarded 50+ trainees over the duration of the four-year grant • Delivered mentoring program, seminars and masterclasses
Provided Australians access to the latest cutting edge person-centred innovations in diagnosis, treatment and management of diabetes and complications	• A pipeline of 18 projects across prevention, diagnosis, management and new therapies • 40% of ACADI research projects sit at Technology Readiness Level TRL6 (in or completed clinical trials) • 2 projects are in market and seeking market expansion
Provided Australians with equitable and faster access to cutting edge innovations in diabetes care	• Verified the gap in equitable awareness, and inclusion of participants into clinical trials • Identified need for cost effectiveness data to support subsidisation and access to existing and new treatments, and devices • Significant opportunities to leverage Australia's clinical leadership, high quality trial standards, and globally recognised regulatory agency to increase domestic and global clinical trial sponsors and business



Appendix 1: ACADI Core and Other Partners, Supporters and Collaborators

ACADI Core Partners

The University of Melbourne
Australian National University
Deakin University
Dimerix Bioscience Pty Ltd
Harry Perkins Institute of Medical Research
Menzies School of Health Research
Queensland University of Technology
RMIT University
The University of Adelaide
University of New South Wales
The University of Queensland
University of South Australia
The University of Sydney
University of Tasmania
The University of Western Australia
Western Sydney University

ACADI Other Partners

Australian Diabetes Educators Association (ADEA)
Australian Diabetes Society (ADS)
Bayer Australia Ltd
Biointelect Pty Ltd
Bolton Clarke
CSL
Diabetes Australia
Diabetes Victoria
Endocrinology Melbourne
Flinders University
Goulburn Valley Health
Inside Public Relations
Lilly Australia Pty Ltd
Monash University
Ray Kelly Fitness
St Vincent's Institute of Medical Research
University of the Sunshine Coast Australia

ACADI Supporters and Collaborators

3Aim Solutions
Abbott Diabetes Care
Advanced Genetic Diagnostics
Applied Infrared Sensing
Austin Health
Canberra Health Services
Curve Tomorrow
Dexcom
Diabetes Research Western Australia
Insulet Australia Pty Ltd
KeyLead Health
Khondrion BV
Mater Health
Medtronic Diabetes
NHMRC Clinical Trials Centre, University of Sydney
Northern Health
Novo Nordisk Pharmaceuticals Pty Ltd
Percusense
Princess Alexandra Hospital
Proteomics International
Royal Melbourne Hospital
Royal North Shore Hospital
Sanofi
South Western Sydney LHD (SWSLDH)
Southern Adelaide Local Health Network
St Vincent's Hospital Melbourne
St Vincent's Hospital Sydney
Torch Recruit Pty Ltd
University of California Irvine
University of Oxford
University of Queensland Australasian Kidney Trials Network
Western Health

Appendix 2: ACADI Supported Projects

ACADI has funded 18 rigorously selected projects that have been designed to deliver meaningful patient outcomes, health system improvements, and successful commercial translation.

These projects span three key priority areas of research: **diabetic kidney disease** (5 projects), **peripheral neuropathy and diabetic foot syndrome** (5 projects), and **short-term complications such as hypoglycaemia, hyperglycaemic hyperosmolar syndrome, and ketoacidosis** (8 projects).

ACADI provides strategic support and active oversight across the research and commercialisation pipeline to maximise the success and translational potential of each project.

Research Priority Area 1

Diabetic kidney disease (DKD)

Project 1A: Genetic testing for risk of diabetic kidney disease.

PROJECT LEAD: Professor Grant Morahan (Harry Perkins Institute of Medical Research)
COLLABORATORS: Bek Brittain (Harry Perkins Institute of Medical Research), Dr Laya Jose (Harry Perkins Institute of Medical Research), Dr Aleena Ali (Austin Health), Professor Elif Ekinci (Austin Health, University of Melbourne), Associate Professor Wendy Davis (Fremantle Hospital, UWA), Professor Tim Davis (Fremantle Hospital, UWA).

Project 1B: ID-DKD International Consortium and RenoTrue – Better diagnosis of DKD risk and progression eGFR.

PROJECT LEAD: Professor Elif Ekinci (University of Melbourne)
COLLABORATORS: Rodney Kwok (University of Melbourne), Kartik Kishore (University of Melbourne), Digsu Koye (University of Melbourne), Tina Zafari (Austin Health).

Project 1C: Increasing efficiency of clinical trials by optimising Torch Recruit software used to aid patient recruitment.

PROJECT LEAD: Associate Professor Jo-Anne Manski-Nankervis (University of Melbourne)
COLLABORATORS: Laura van Rooyen (University of Melbourne), Dr Tim Monaghan (University of Melbourne), Stephen Dolan (Torch Recruit), Sean Lo (Torch Recruit), Western Health.

Project 1D: Glucose control with next generation hybrid closed loop systems in adults with diabetes and advanced renal disease.

PROJECT LEAD: Professor David O'Neal (University of Melbourne)
COLLABORATORS: St Vincent's Hospital Melbourne, Diabetes Technology Research Group, Austin Health, Melbourne Health, Southern Adelaide Local Health Network, Baker Heart and Diabetes Institute, Medtronic Diabetes.

Project 1F: Targeting energy deficiency in diabetic kidney disease using MitoA.

PROJECT LEAD: Professor Josephine Forbes (Mater Research - University of Queensland)
COLLABORATORS: Professor Carol Pollock (University of Sydney), Associate Professor Xin-Ming Chen (University of Sydney).

Appendix 2: ACADI Supported Projects

Research Priority Area 2

Peripheral neuropathy and diabetic foot syndrome

Project 2A: A novel mitochondrial combination therapy for painful peripheral neuropathy in diabetes: the MitoPPND.

PROJECT LEAD: Associate Professor Spiros Fourlanos (University of Melbourne)

Project 2B: "Feeling Aid" device for peripheral neuropathy/diabetic foot.

PROJECT LEAD: Professor Paul Breen (Western Sydney University)
COLLABORATORS: Professor Jorge Serrador (Western Sydney University), Associate Professor David Mahns (Western Sydney University), Neil Anderson (3 Aim Solutions).

Project 2C: Using textural analysis of thermal imaging to predict healing status of diabetic foot.

PROJECT LEADS: Professor Dinesh Kumar (RMIT University), Dr Rajna Ogrin (Bolton Clarke) and Professor Elif Ekinci (University of Melbourne)
COLLABORATORS: Dr Quoc Cuong Ngo (RMIT), Dr Barbara Polis (RMIT), Nila Sari (RMIT), Sam Hanna (Austin Health), Kate Waller (St Vincent's Hospital Melbourne), Justin Bradley (St Vincent's Hospital Melbourne).

Project 2D: Australian Diabetes Foot Ulcer and Infection Genomics Research Alliance (UNICORN).

PROJECT LEADS: Professor Slade Jensen (Western Sydney University), Professor Rob Fitridge (University of Adelaide) and Professor Allison Cowin (University of South Australia)

Project 2E: Predicting Diabetic Neuropathy.

PROJECT LEAD: Professor Tim Davis (University of Western Australia)

Research Priority Area 3

Short-term complications such as hypoglycaemia, hyperglycaemic hyperosmolar syndrome, and ketoacidosis

Project 3A: A Real-time Electronic Glucometric Alert System (REGAS) to decrease hypoglycaemia and DKA/HHS in people admitted to hospital.

PROJECT LEAD: Associate Professor Spiros Fourlanos (University of Melbourne)

Project 3B: REMODEL-IPC mHealth system.

PROJECT LEAD: Dr Anish Menon (University of Queensland)
COLLABORATORS: Professor Anthony Russell (Monash University), Professor Clair Sullivan (University of Queensland), Dr Namal Balasooriya (University of Queensland), Dr Charles Okafor (University of Queensland), Ms Keren Pointon (University of Queensland).

Project 3C: Preventing ketoacidosis in SGLT2i therapy using a novel ketone sensor.

PROJECT LEAD: Professor David O'Neal (University of Melbourne)
COLLABORATORS: St Vincent's Hospital Melbourne, Diabetes Technology Research Group, Austin Health, Melbourne Health, Southern Adelaide Local Health Network, Canberra Health Service, Abbott Diabetes Care, Lexicon Pharmaceuticals Inc.

Appendix 2: ACADI Supported Projects

Research Priority Area 3

Short-term complications such as hypoglycaemia, hyperglycaemic hyperosmolar syndrome, and ketoacidosis (continued)

Project 3D: Continuous glucose monitoring to improve glucose management in Indigenous Australians - enhancing quality of life assessment for Health Economic analysis (The FlashGM Study).

PROJECT LEAD: Professor Elif Ekinci (University of Melbourne)
COLLABORATORS: Coralie Cross (University of Melbourne, ADEA).

Project 3E: Targeting the Receptor for Advanced Glycation End-products (RAGE) to reduce beta cell damage at the onset of type 1 diabetes.

PROJECT LEAD: Professor Josephine Forbes (University of Queensland)

Project 3F: Associations between glycaemic extremes on quality of sleep and quality of life in diabetes.

PROJECT LEAD: Professor Elif Ekinci (University of Melbourne)
COLLABORATORS: Dr Cecilia Pham (University of Melbourne, Austin Health), Professor Leonid Churilov (University of Melbourne), Associate Professor Sara Baqar (University of Melbourne, Austin Health), Dr Christel Hendrieckx (Deakin University), Professor David O'Neal (University of Melbourne, St Vincent's Hospital Melbourne), Associate Professor Mark E Howard (University of Melbourne, Austin Health, Monash University), Dr Elizabeth Holmes-Trustcott (Deakin University).

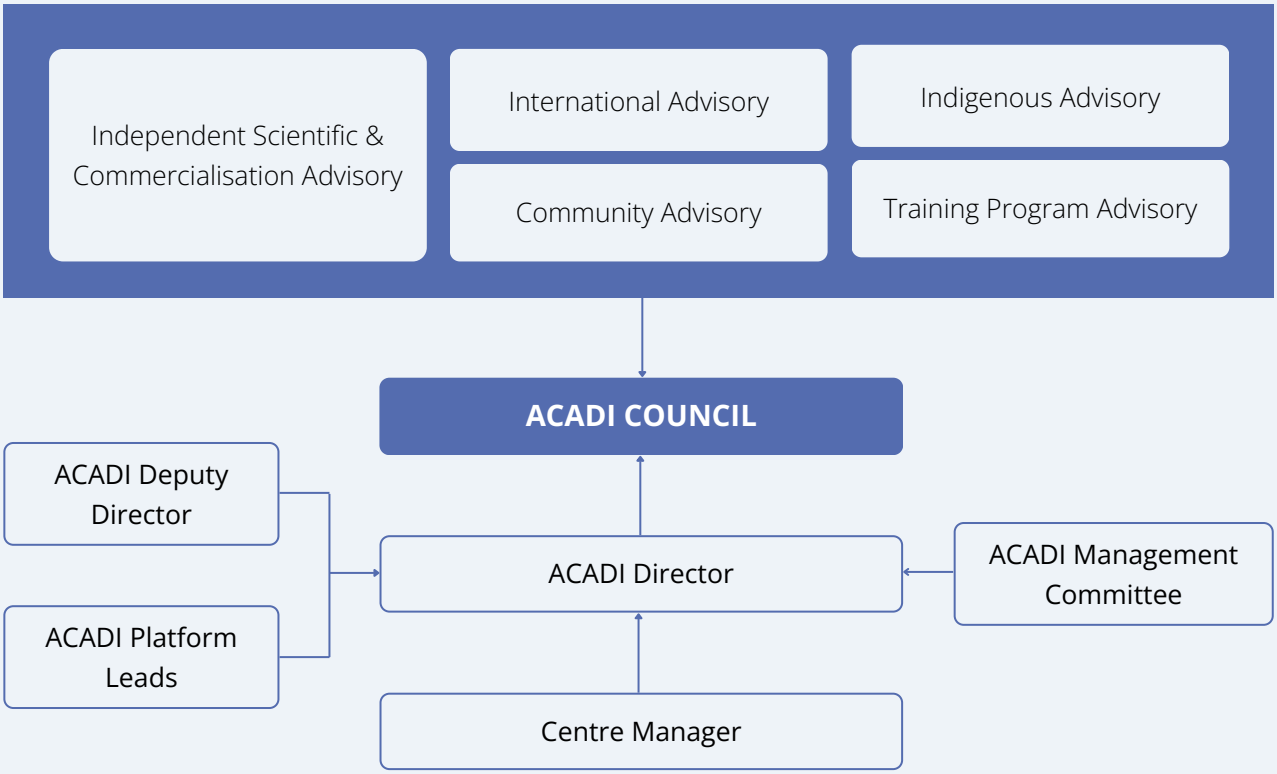
Project 3G: Development of tools and a framework for economic evaluations of interventions for diabetes and its complications in the Australian healthcare system setting.

PROJECT LEADS: Associate Professor An Duy Tran (University of Melbourne) and Professor Philip Clarke (University of Melbourne and University of Oxford)
COLLABORATORS: Professor Elif Ekinci (University of Melbourne), Professor David O'Neal (University of Melbourne), Dr Ting Zhao (University of Melbourne and University of Tasmania), Mr Paul Amores (University of Melbourne), Mr Dennis La (University of Melbourne), Dr Liam Fernando-Canavan (University of Melbourne), Dr Abdur Sarker (University of Melbourne and Bangladesh Institute of Development Studies), Dr Helen Dakin (University of Oxford), Associate Professor Jose Leal (University of Oxford).

Project 3H: Empowering people with T1D with technology to manage glucose levels.

PROJECT LEAD: Professor David O'Neal (University of Melbourne)
COLLABORATORS: St Vincent's Hospital Melbourne, Diabetes Technology Research Group, Austin Health, Melbourne Health, Southern Adelaide Local Health Network, Canberra Health Service, Abbott Diabetes Care, Lexicon Pharmaceuticals Inc.

Appendix 3: Governance, Leadership and Collaborative Partnerships



ACADI Advisory Groups

ACADI Independent Council
See page 8

Independent Scientific and Commercialisation Advisory
Chair: Prof Geoff Donnan
A/Prof Sof Andrikopoulos
Prof Lauren Ayton
Ms Elpis Barons
Ms Liza Dunne
Dr John Kurek
Dr Alisa Selimovic
Prof Jencia Wong

Indigenous Advisory
Chair: Ray Kelly
A/Prof Tuguy Esgin
Ms Barbara Flick
Ms Tracey Hearn
Ms Victoria Sinka

Community Advisory
Chair: Renza Scibilia
Dr Steven James
Ms Jessica Jones
Dr Ben Nash
Ms Meaghan Read
Mr Michael Smith
Mr Peter Smithson

Management Committee
Chair: Prof Elif Ekinci
Prof Alan Cass
A/Prof Wendy Davis
Prof Josephine Forbes
A/Prof Spiros Fourlanos
A/Prof Sarah Glastras
Dr Dhiraj Hans
Mr Ray Kelly
Prof Richard MacIsaac
Prof David O'Neal
Prof Steven Twigg
Dr Anna Wood

International Advisory
Chair: Prof Andrew Boulton
Co-chair: Prof Katherine Tuttle
Prof Bernhard Boehm
Prof Ohad Cohen
Prof Helen Colhoun
Prof Chantal Mathieu
Prof Gerry Rayman

Training Program Advisory
Chair: A/Prof Sarah Glastras
Prof Alan Cass
Dr Emma Hamilton
Dr Steven James
Prof Alicia Jenkins
Dr Chinmay Marathe
Dr Anish Menon
Prof Christopher Nolan
Dr Rajna Ogrin
Prof David O'Neal
Dr Michael Thompson

ACADI

Australian Centre for Accelerating Diabetes Innovations

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TTRA TARGETED TRANSLATION RESEARCH ACCELERATOR
DIABETES + CARDIOVASCULAR DISEASE
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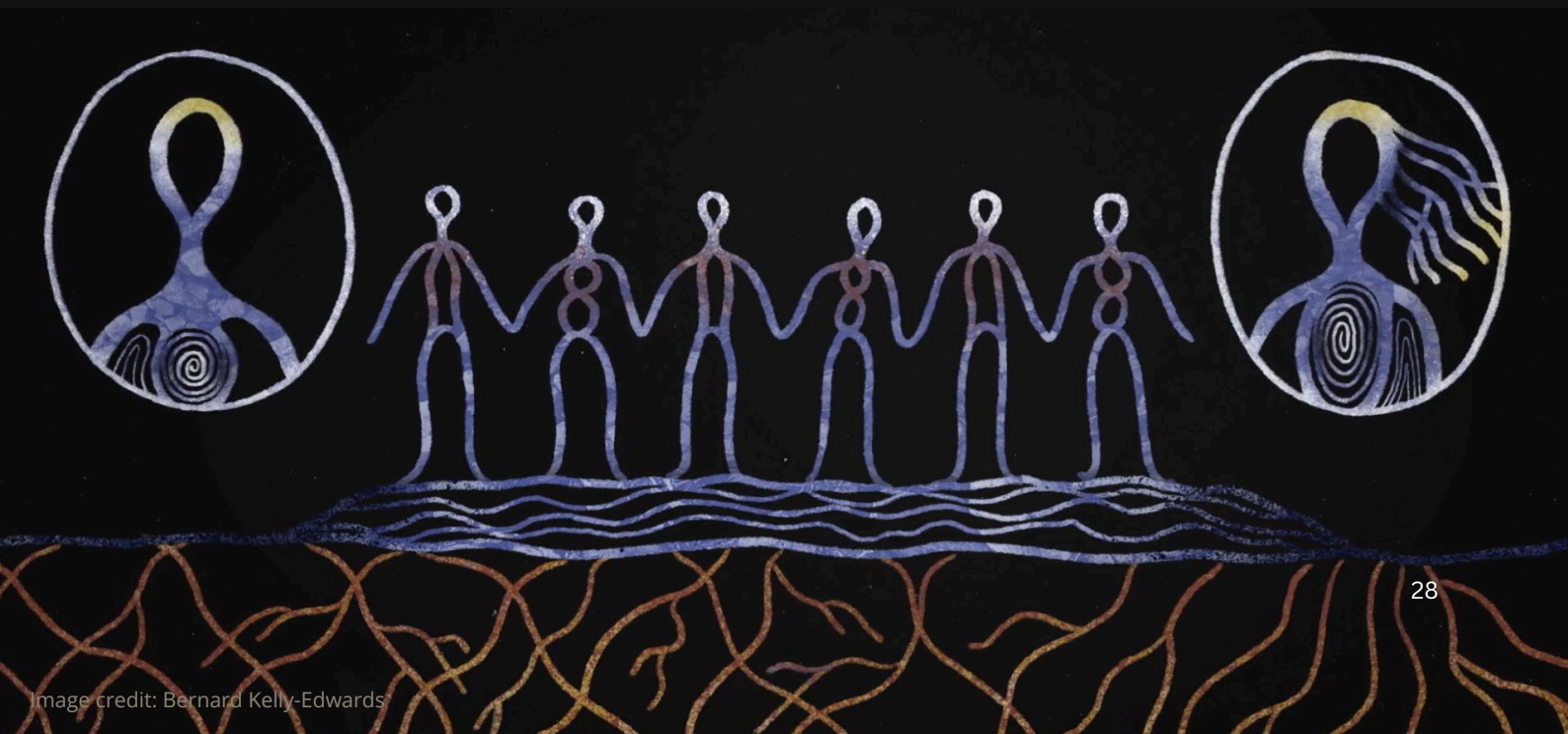

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