



MONASH
University

ANNUAL REPORT 2025

AUSTRALIAN DIABETES CLINICAL QUALITY REGISTRY



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Acknowledgment of First Peoples

In the spirit of reconciliation, the Australian Diabetes Clinical Quality Registry acknowledges the Traditional Custodians of Country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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FOREWORD

FROM OUR REGISTRY LEAD

I am proud to present the third Australian Diabetes Clinical Quality Registry (ADCQR) Annual Report.

Diabetes continues to be one of Australia's most pressing health challenges. The ADCQR plays a critical role in addressing this challenge by providing a robust, evidence-based picture of diabetes care and outcomes across the country. It enables health services to benchmark their performance, identify areas for improvement (care gaps), and implement targeted strategies that make a real difference for people living with diabetes.

This year marks another important step forward. Participation grew to 65 health services contributing data on more than 3700 patients, reflecting a strong commitment to data-driven quality improvement. The insights captured in this report are the result of extraordinary collaboration between clinicians, health services, and patients who share a common goal: improving diabetes care and outcomes.

I extend my sincere thanks to everyone who has contributed to this achievement: health services teams and their patients, whose willingness to share data underpins the Registry's work to support quality improvement; the ADCQR Scientific Advisory Committee and Project Executive, for their leadership and expertise in guiding this work; our partners – the Australian

Diabetes Society and National Association of Diabetes Centres – for their ongoing support and advocacy, and the Australian Government Department of Health and Aged Care, whose funding ensures the sustainability and growth of this vital initiative.

As we look ahead, our focus will remain on strengthening collaboration across health services providing diabetes care, increasing participation, and making better use of Registry data. Our goal is to turn insights into practical actions that improve clinical care and patient outcomes at both local and national levels.

I hope our Annual Report provides valuable insights and supports continued improvements in diabetes care.



Professor Sophia Zoungas
Registry Lead, Australian Diabetes
Clinical Quality Registry

FROM THE PRESIDENT OF THE ADS

As President of the Australian Diabetes Society (ADS), I am pleased to introduce the Australian Diabetes Clinical Quality Registry (ADCQR) Annual Report 2025. This report reflects the sustained commitment of the National Association of Diabetes Centres (NADC, a Division of the ADS), the ADCQR team, and Monash University, led by Professor Sophia Zoungas, to strengthening the quality and consistency of diabetes care across Australia.

Diabetes affects more than 1.5 million Australians and represents a growing burden on individuals, communities, and the health system. Ensuring access to high-quality, evidence-based care is therefore a national priority. The ADCQR Annual Report provides a comprehensive, nationally representative overview of clinical and patient-reported outcomes, drawing on data from primary, secondary, and tertiary care settings. Importantly, it offers real-world insights into how care is delivered, where variation exists, and where targeted improvement can deliver the greatest value.

The ADCQR makes a critical contribution to Australia's health system by generating high-quality data that supports evidence-informed policy, service planning, and accountability. By enabling the evaluation of outcomes

and identifying opportunities to improve safety, equity, and efficiency, the registry supports continuous quality improvement while helping to optimise the use of health system resources.

The findings presented in the 2025 ADCQR Annual Report provide a strong evidence base to inform policy development, investment decisions, and advocacy to government. In particular, the report highlights the importance of sustaining a skilled diabetes workforce and adequately funding services to meet current and future demand. I am confident that this report will serve as a valuable resource for policymakers and health system leaders in shaping strategies that improve outcomes for people living with diabetes and support a sustainable, high performing healthcare system.



Professor Josephine Forbes
President, Australian
Diabetes Society



IN MEMORIAM

IN MEMORY OF TREVOR JONES

We respectfully acknowledge the passing of our dear colleague, Trevor Jones, who served as a valued member of the Australian Diabetes Clinical Quality Registry (ADCQR) Scientific Advisory Committee since the Registry's inception.

Trevor always provided positive, thoughtful contributions, and his ability to view our work through a consumer lens will continue to guide and strengthen our work.

Trevor will be remembered for his integrity, collaboration, and unwavering support.

We extend our deepest condolences to his family and loved ones. We honour his memory in this report.



ABBREVIATIONS AND ACRONYMS

ACE	Angiotensin Converting Enzyme
ACSQHC	Australian Commission on Safety and Quality in Health Care
ADCQR	Australian Diabetes Clinical Quality Registry
ACR	Albumin-to-Creatinine Ratio
ADS	Australian Diabetes Society
AER	Albumin Excretion Rate
ANDA	Australian National Diabetes Audit
ARB	Angiotensin II Receptor Blockers
BMI	Body Mass Index
BP	Blood Pressure
CABG	Coronary Artery Bypass Graft
CoE	Centre of Excellence
COVID-19	Coronavirus Disease-2019
CSII	Continuous Subcutaneous Insulin Infusion
CQR	Clinical Quality Registry
CVD	Cardiovascular Disease
DKA	Diabetic Ketoacidosis
DPP4	Dipeptidyl Peptidase-4
DVA	Department of Veterans Affairs
eGFR	Estimated Glomerular Filtration Rate
GIP	Gastric Inhibitory Polypeptide
GLP-1	Glucagon-Like Peptide-1
HbA1c	Glycated Haemoglobin
HDL	High-Density Lipoprotein
HHS	Hyperosmolar Hyperglycaemic State
IQR	Interquartile Range
KDIGO	Kidney Disease Improving Global Outcomes
LDL	Low-Density Lipoprotein
NADC	National Association of Diabetes Centres
NDOQRIN	National Diabetes Outcomes Quality Review Initiative
NDSS	National Diabetes Services Scheme
NMA	National Mutual Acceptance
Non-HDL	Non-High-Density Lipoprotein
PCR	Protein-to-Creatinine Ratio
PCSK9	Proprotein Convertase Subtilisin/Kexin Type 9
PER	Protein Excretion Rate
PI	Principal Investigator
REDCap	Research Electronic Data Capture
SD	Standard Deviation
SGLT2	Sodium-Glucose Co-Transporter 2
SPHPM	School of Public Health and Preventive Medicine
T1DM	Type 1 Diabetes Mellitus
T2DM	Type 2 Diabetes Mellitus

EXECUTIVE SUMMARY

Diabetes remains one of the most significant public health challenges both in Australia and worldwide. In Australia, 1 in 13 people live with diabetes, and the prevalence is projected to rise by 50% by 2050, driven by population ageing, rising rates of overweight and obesity, and improved survival. Gaining a clear understanding of the diabetes landscape, including population demographics, current standards of care, adoption of new technologies and treatments, prevalence of traditional and emerging complications, and patient-reported experiences, is essential for improving outcomes.

The Australian Diabetes Clinical Quality Registry (ADCQR), established in 2023, is funded by the Australian Government Department of Health and Aged Care as part of the National Clinical Quality Registry Program, and supported and championed by the National Association of Diabetes Centres (NADC) and Australian Diabetes Society (ADS).

As a clinical quality registry, the ADCQR plays a vital role in improving health care quality and reducing variation in care. By systematically monitoring and reporting on the appropriateness and effectiveness of care, the ADCQR benchmarks participating health services against peers and clinical guidelines and provides feedback to clinicians and health services.

In addition, the ADCQR offers resources to support quality improvement initiatives focused on reducing variation in care.

In its third year, the ADCQR engaged 65 diabetes services and collected data from 3705 adults with diabetes between May and August 2025. This report is based on pooled, de-identified data from all participating diabetes services, with rigorous checks to ensure completeness and accuracy prior to analysis. Data are grouped by health status, clinical characteristics, and patient-reported outcomes. Unless otherwise noted, results reflect the percentage of patient registrants who responded to each question rather than the total cohort.

This year, the ADCQR introduced a co-designed, user-friendly dashboard offering a more interactive experience for participating health services.

Key findings from the 2025 report include:

- Glycaemic management remains a priority, including the prevention of acute glycaemic emergencies.
- Cardiovascular risk factors, particularly blood pressure, lipids and weight, require ongoing attention. A significant proportion of patients are not meeting treatment targets and cardiorenal complication rates remain high.
- Uptake of cardiorenal protective treatments among people with type 2 diabetes continues to rise, with increased use of SGLT2 inhibitors and GLP-1/GIP receptor agonists.
- Continuous glucose monitoring (CGM) technologies use remains high among people with type 1 diabetes, with emerging uptake among those with type 2 diabetes.
- Vaccination rates remain suboptimal, highlighting the need to strengthen surveillance and improve vaccine uptake in this high-risk group.
- Kidney function monitoring and foot checks require greater attention, as current rates for these assessments are lower than those for eye examinations and cardiovascular risk monitoring.

The ADCQR sincerely thanks the diabetes services and their patients for their invaluable contributions. This registry would not exist without the generosity of patients in sharing their data and the commitment of staff who make data collection possible.

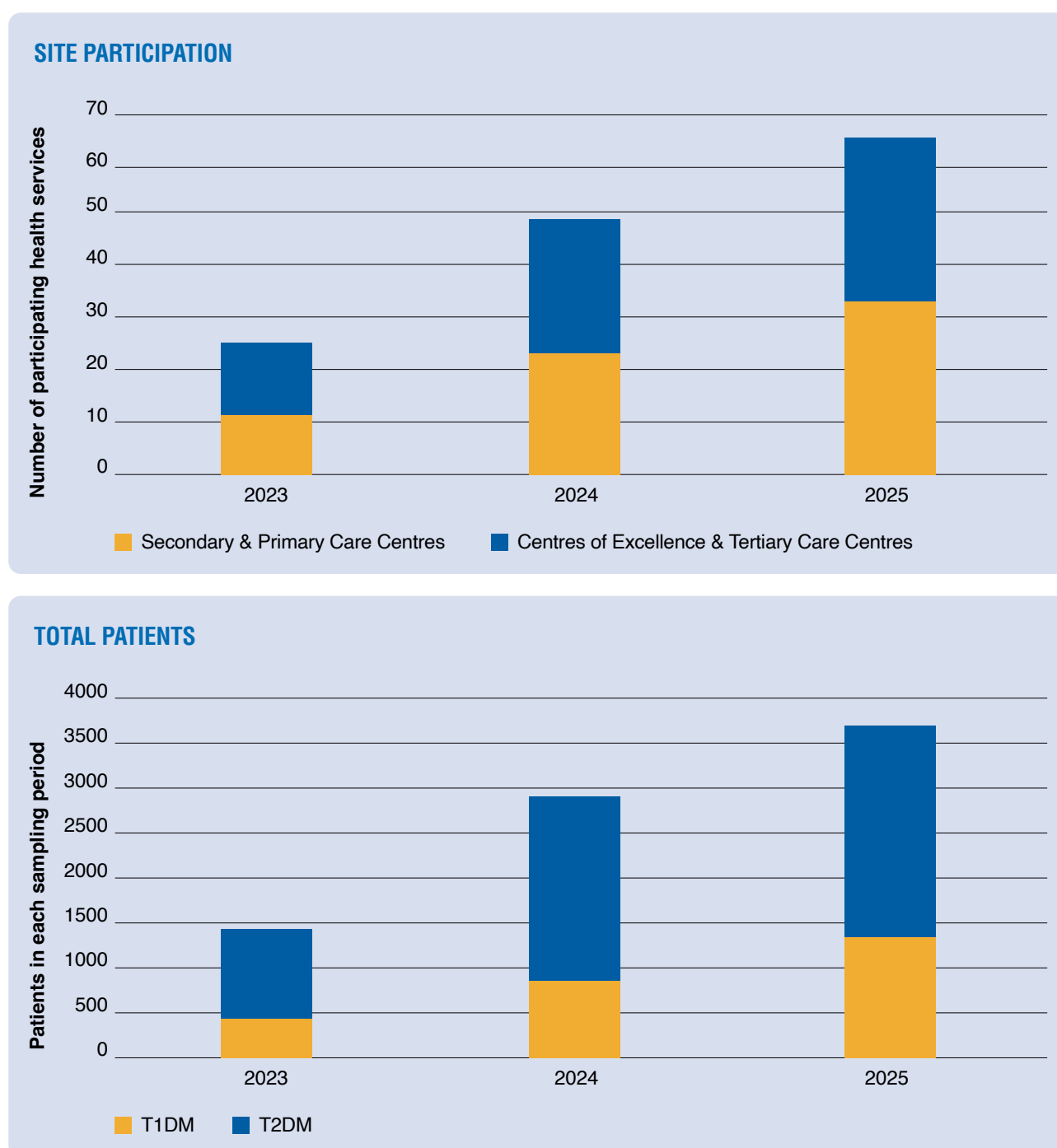
The involvement of both patients and diabetes services is deeply valued and impactful. It enables a better understanding of the challenges faced by people living with diabetes and supports efforts to improve outcomes for all.

PARTICIPATION TO DATE

In the first three years of the Registry's operation, there has been a growth in the number of sites participating in the ADCQR, which increased from 25 participating centres in 2023 to 49 centres in 2024 and 65 participating centres in 2025. Across all years, approximately 50% of participating sites are primary and secondary care centres.

The total number of patients captured in each annual cycle has increased from 1426 in 2023 to 2904 patients in 2024 and 3705 in 2025, with approximately 30% of patients with type 1 diabetes captured in each year (Figure 1).

FIGURE 1. ADCQR SITE PARTICIPATION AND TOTAL PATIENTS CAPTURED IN EACH YEAR



DEMOGRAPHICS ACROSS YEARS

The Registry saw a substantial increase in patient registrants from 2023 to 2025, alongside a slightly younger average age and a modest rise in the proportion of patients with T1DM. While overall patient characteristics remained largely stable over this period, service indicators show a notable increase in first-time (initial) visits to participating diabetes centres (Table 1).

TABLE 1. DEMOGRAPHIC DATA ACROSS YEARS

CHARACTERISTICS	2023	2024	2025
Total Number of patients	1426	2904	3705
Age (years), mean $\pm$ SD	60.2 $\pm$ 17.1	59.0 $\pm$ 16.8	57.7 $\pm$ 17.6
Sex, %			
Female	45.0	43.6	43.2
Male	55.0	56.4	56.8
Other	0.1	0.03	0.00
Pregnant, %	2.2	4.9	2.4
Diabetes duration (years), median (IQR)	15.5 (8.0, 23.7)	14.5 (7.4, 24.4)	15.5 (8.0, 25.5)
Diabetes type, %			
T1DM	27.8	27.4	34.4
T2DM	69.3	69.5	62.6
Other (secondary causes)	2.7	2.9	2.8
Don't know	0.2	0.1	0.2
Unstated	0.0	0.1	0.0
Initial visit, %	10.1	13.2	15.8
Interpreter required, %	5.0	1.8	3.1
Aboriginal/Torres Strait Islander, %	3.2	7.0	3.6
Australian-born, %	67.4	71.9	71.7
DVA, %	0.6	1.4	1.2
NDSS registrant, %	94.5	92.9	95.1

KEY FINDINGS

DEMOGRAPHICS



65

Participating Centres



3705

Patients



32

Centres of Excellence
& Tertiary Care
Centres



33

Secondary
& Primary Care
Centres



6

States
& Territories

SEX DISTRIBUTION



43.2%

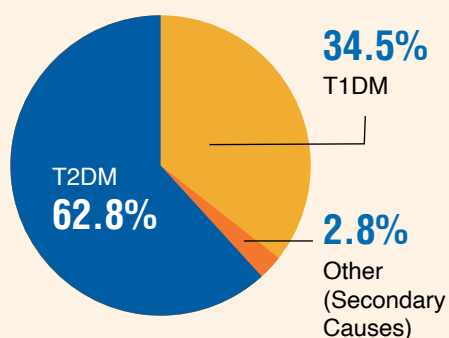
Females



56.8%

Males

TYPES OF DIABETES*



**Excluding unknown or unstated diabetes type*

MEAN AGE



MEDIAN DURATION OF DIABETES



BLOOD GLUCOSE MONITORING

T1DM BLOOD GLUCOSE MONITORING

8.3% Blood Glucose
Self Monitoring
Only

86.8% Continuous
Glucose
Monitoring Only

4.8% Both Blood &
Continuous
Glucose
Monitoring

T2DM BLOOD GLUCOSE MONITORING

14.2% No Regular
Blood Glucose
Monitoring

76.5% Blood Glucose
Self Monitoring
Only

7.1% Continuous
Glucose
Monitoring
Only

2.2% Both Blood &
Continuous
Glucose
Monitoring

T1DM: Type 1 Diabetes Mellitus; T2DM: Type 2 Diabetes Mellitus

GLUCOSE MANAGEMENT

T1DM

8.1%

MEAN HBA1C (%)

7.6%

MEDIAN HBA1C (%)



63.7%

Multiple Daily
Injections Of Insulin



36.3%

Continuous Subcutaneous
Insulin Infusion



12.4%

Additional Non-Insulin
Therapy

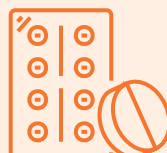
T2DM

8.4%

MEAN HBA1C (%)

7.8%

MEDIAN HBA1C (%)



14.3%

On 1 Glucose
Lowering Therapy



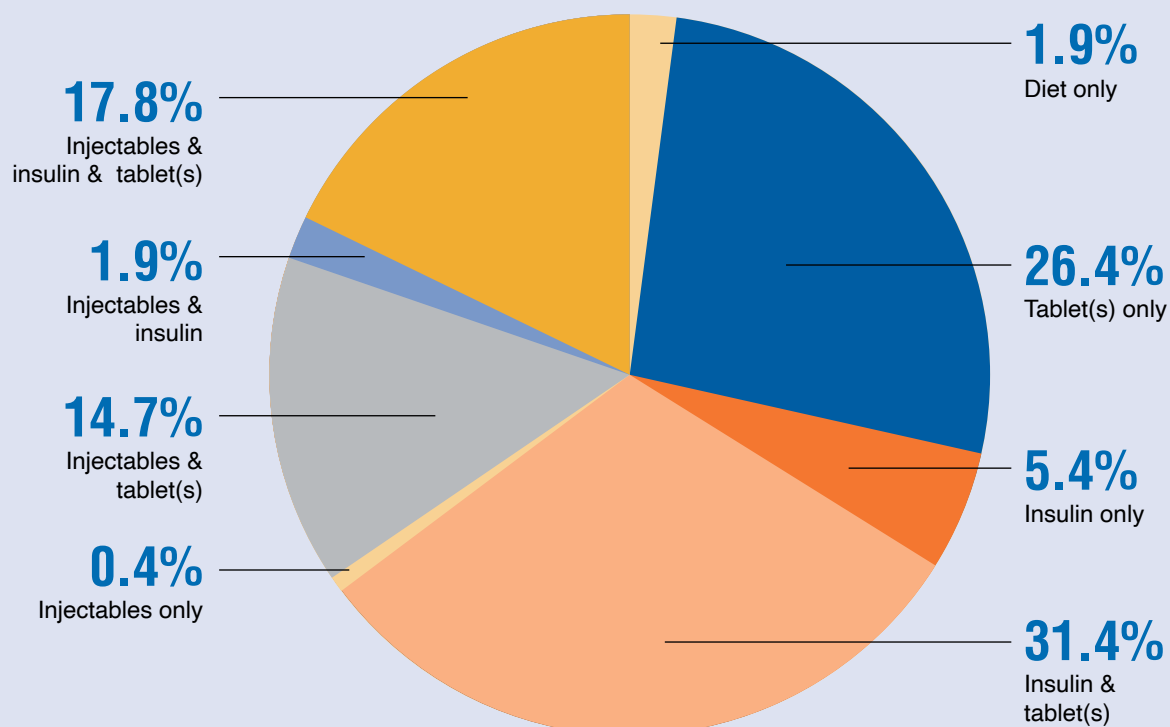
27.6%

On 2 Glucose
Lowering Therapies

58.1%

On ≥3 Glucose
Lowering Therapies

TYPES OF GLUCOSE LOWERING THERAPIES (T2DM ONLY)



RISK FACTORS

CHOLESTEROL



55.9%

Total Cholesterol ≥ 4.0 mmol/L

35.4%

Not On Lipid Modifying Therapy

SMOKING



30.7%

Past Smokers

14.3%

Current Smokers

BLOOD PRESSURE



65.0%

Blood Pressure $\geq 130/80$ mmHg

32.9%

Blood Pressure $\geq 140/90$ mmHg

41.3%

Not On Antihypertensive Therapy

BODY MASS INDEX



30.6 KG/M²

Mean BMI

T1DM 65.4%

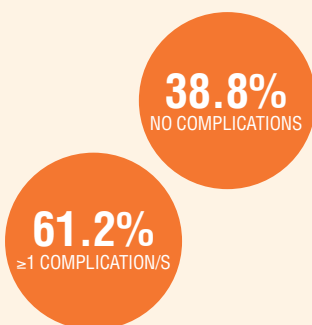
Overweight/Obese

T2DM 85.2%

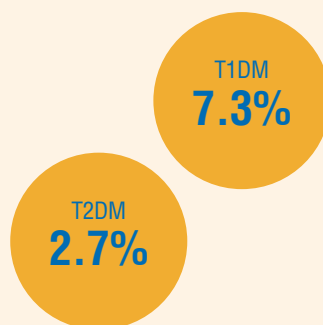
Overweight/Obese

COMPLICATIONS (EVER REPORTED)

OVERALL COMPLICATIONS

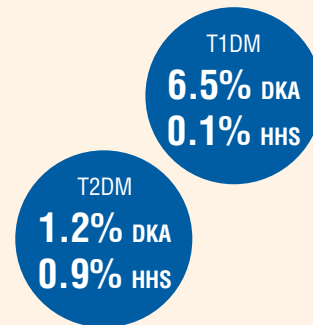


EXPERIENCED SEVERE HYPOGLYCAEMIA*



*In the last 12 months

EXPERIENCED DKA OR HHS*



*In the last 12 months

CARDIOVASCULAR DISEASE



15.1%

Myocardial Infarction/CABG



7.0%

Stroke

9.0%

Peripheral Vascular Disease

KIDNEY AND EYE DISEASE



24.5%

Retinopathy



2.3%

Blindness

5.2%

End-Stage Kidney Disease

FOOT COMPLICATIONS



10.6%

Foot Ulceration

24.5%

Peripheral Neuropathy

5.1%

Amputation

CABG: Coronary Artery Bypass Graft; DKA: Diabetic Ketoacidosis; HHS: Hyperosmolar Hyperglycaemic State

PATIENT REPORTED OUTCOMES

HEALTH PROFESSIONAL ATTENDANCES (IN THE LAST 12 MONTHS)



72.9%

Diabetes Educator/Nurse Practitioner



39.0%

Dietitian



79.8%

Ophthalmologist/Optometrist



17.0%

Psychologist/Psychiatrist



52.1%

Podiatrist



23.5%

Exercise Physiologist/
Physiotherapist

PHYSICAL ACTIVITY



60.9%

<150 Mins/Week
Moderate Or
Vigorous Activity



56.2%

No Muscle
Strengthening
Exercise

NUTRITION/DIET MANAGEMENT

17.4%

Insufficient Time To
Prepare Healthy Meals

42.2%

Too Costly To Eat Well

8.2%

Don't Know What Foods
Are Best To Eat

40.2%

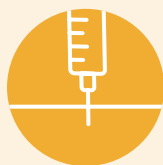
T1DM Only - Hard To
Count Carbs/Weigh Food

VACCINATIONS



78.3%

Did Not Receive A COVID-19
Vaccination/Booster In The
Last 6 Months



41.0%

Did Not Receive An
Influenza Vaccination In
The Last 12 Months



80.2%

Were Not Up-To-Date With
Pneumococcal Vaccination



SECTION 1

REGISTRY OVERVIEW

BACKGROUND

Diabetes represents one of the biggest challenges facing healthcare systems. In Australia, 1 in 20 (1.5 million) people are living with diabetes, with 300 Australians developing diabetes every day.¹ While there have been improvements in the treatment and management of diabetes, the chronic nature of the condition and complex interplay between risk factors, means that people with diabetes are more likely to develop multisystem complications such as cardiovascular and kidney diseases, and eye and foot complications. As a result, the economic burden of diabetes is large, with an estimated \$3.4 billion of health care spending in 2020-21 attributed to diabetes in Australia (representing 2.3% of

total disease expenditure).² The largest contributors to this spending were medications dispensed as part of the Pharmaceutical Benefits Scheme and hospitalisations/hospital services.

The Australian Government recognises the burden of diabetes, developing the Australian National Diabetes Strategy to outline Australia's national response to diabetes and inform how health care and other resources can be better coordinated and targeted across all levels of government.³ The main components of the Australian National Diabetes Strategy are summarised in Table 2.

TABLE 2. COMPONENTS OF THE AUSTRALIAN NATIONAL DIABETES STRATEGY, 2021-2030

Vision	Strengthen, integrate and coordinate all sectors to improve health outcomes and reduce the social and economic impact of diabetes in Australia
Principles	1. Facilitation of person-centred care and self-management throughout life 2. Reduction of health inequities 3. Collaboration and cooperation to improve health outcomes 4. Coordination and integration of diabetes care across services, settings, technology and sectors 5. Measurement of health behaviours and outcomes
Goals	1. Prevent people developing type 2 diabetes 2. Promote awareness and earlier detection of type 1 and type 2 diabetes 3. Reduce the burden of diabetes and its complications and improve quality of life 4. Reduce the impact of pre-existing diabetes and gestational diabetes in pregnancy 5. Reduce the impact of diabetes among Aboriginal and Torres Strait Islander peoples 6. Reduce the impact of diabetes among other priority groups 7. Strengthen prevention and care through research, evidence and data

The quality of care can influence the trajectory of diabetes and quality of life for people living with diabetes, as well as the economic burden. Clinical Quality Registries (CQRs) are unique safety and quality clinical data collections that systematically monitor and report on the quality of health care.⁴ Therefore, information generated by CQRs can be used to improve the quality of care, and reduce variation in care. The Australian Commission on Safety and Quality in Health Care (ACSQHC) identified diabetes as a priority area for the development of a CQR.⁵ In 2023, the ADCQR was implemented, representing the first CQR for adults with diabetes in Australia. The ADCQR captures patients from diagnosis right through to advanced complications, and will continue to reflect the nature of diabetes care as the Registry matures.

The ADCQR is a key contributor towards the goals of the Australian National Diabetes Strategy, and conforms to the ACSQHC Framework for Australian CQRs³ and Australian Government Department of Health National Clinical Quality Registry and Virtual Registry Strategy 2022-2030.⁶

The ADCQR is the successor to the national audit and feedback activity, Australian National Diabetes Audit (ANDA), and therefore has benefited and leveraged from the formative work undertaken as part of ANDA.⁷ The Registry (as part of its deliverables) produces annual site-specific reports, as well as an annual report on the current state of the nation, to identify variations in care and inform quality improvement initiatives.

VISION AND AIMS

The ADCQR endeavours to become a learning health ecosystem in diabetes care with the vision of participating health services continuously learning from the data collected (Figure 2). Its importance lies in the improvements in the quality and safety of care, and the promotion of the ADCQR for research use to better understand the trajectory of diabetes.

The aim of the ADCQR is to develop a longitudinal, multi-centre diabetes CQR to optimise quality of care provided to people diagnosed with diabetes. This will be achieved by:

1. Assessing patterns of care and access to care
2. Identifying variability in treatments/outcomes amongst people with diabetes
3. Benchmarking of process and outcome measures amongst providers of care

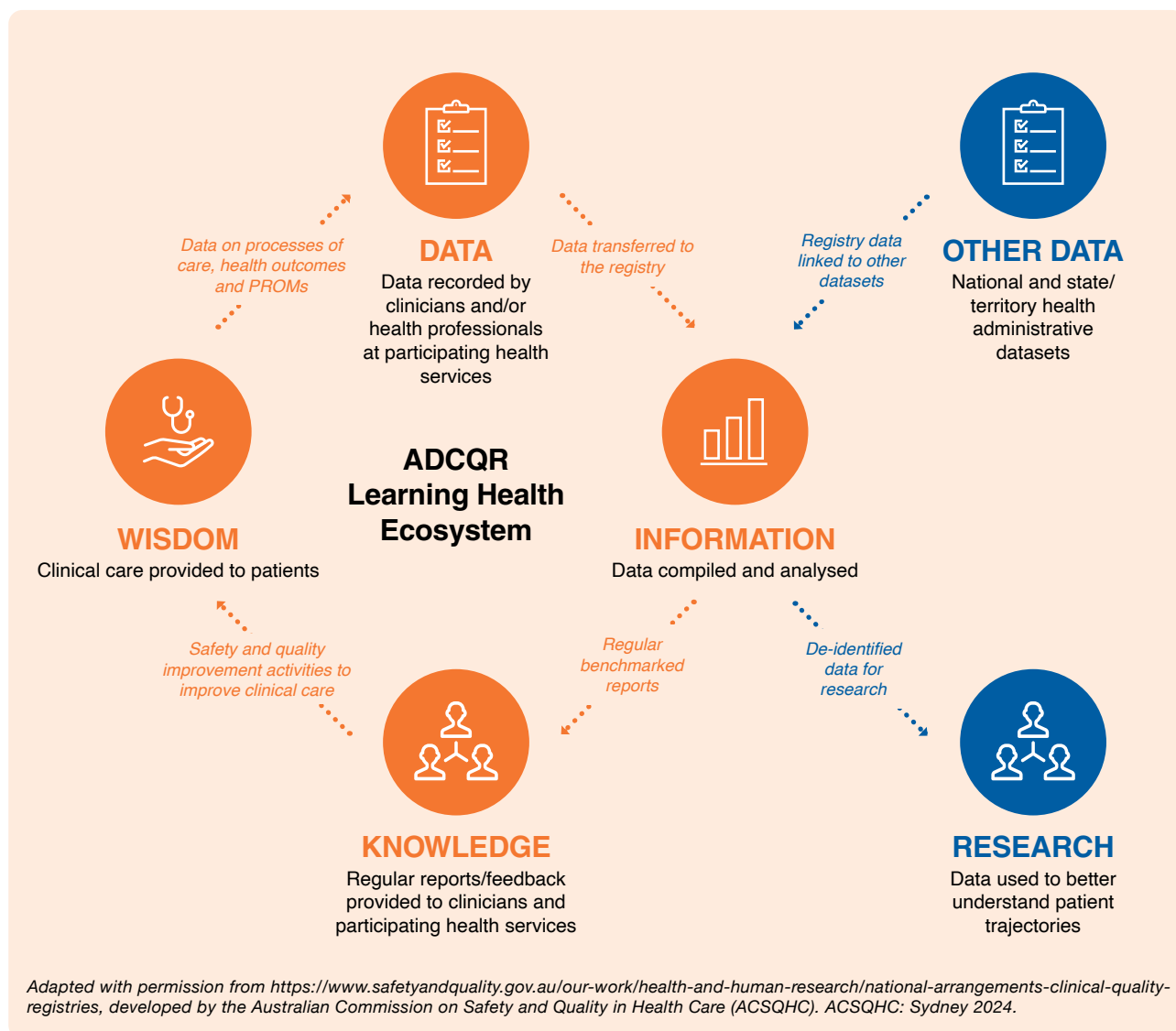
4. Determining the degree of compliance (and reasons for non-compliance) with best practice-based guidelines for the treatment of diabetes

5. Identifying patient factors and processes of care that predict favourable and unfavourable treatment outcomes.

In addition, this diabetes CQR will improve knowledge and advance treatment by:

6. Monitoring trends in outcomes and survival over time
7. Providing an infrastructure on which intervention or other studies can be established
8. Determining the clinical effectiveness of treatments in a 'real world' setting
9. Providing information to assist in the credentialing of clinicians and identification of appropriate training resources.

FIGURE 2. ADCQR FEEDBACK LOOP AND LEARNING HEALTH ECOSYSTEM





SECTION 2

REGISTRY METHODOLOGY

ETHICS APPROVAL

The ADCQR was established to improve the quality of care and outcomes for people living with diabetes and is considered to be in the public's interest.

To function as a CQR, the ADCQR collects, stores, and uses identifiable, personal and sensitive health information about people with diabetes.

The opt-out approach to participation is used to recruit participants due to the scale and significance of the Registry. In accordance with the State and Federal privacy legislation of Australia, the Australian National Statement for Ethical Conduct in Research,⁸ the ADCQR has ethics approval under the National Mutual Acceptance (NMA) scheme from the Monash Health Human Research Ethics Committee. Additional ethics approvals are sought from participating sites that do not operate under the NMA.

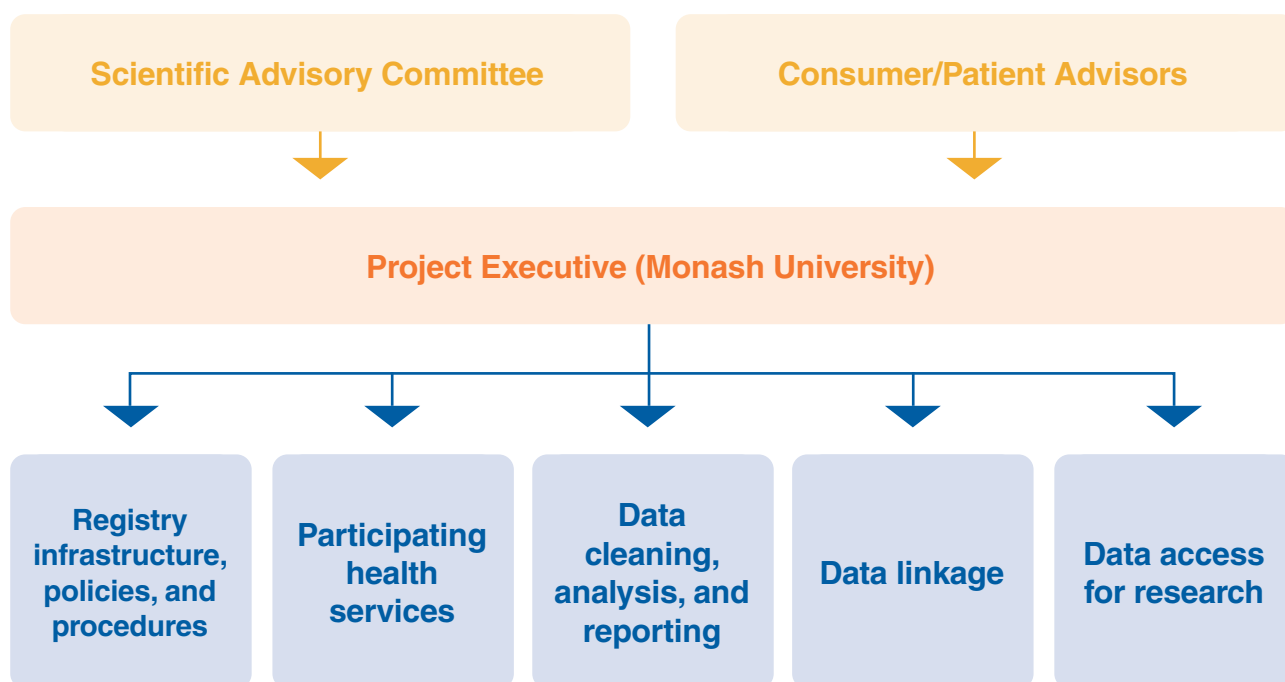
As part of local research governance processes, it is a requirement for all sites registered to obtain ethics approval and local research governance authorisation prior to commencing data collection.

GOVERNANCE

The Registry custodian is the School of Public Health and Preventive Medicine (SPHPM), Monash University, and the ADCQR is operated by the Project Executive at SPHPM, under the leadership of Professor Zoungas.

The ADCQR Scientific Advisory Committee provides strategic guidance to the Project Executive to ensure the objectives, outcomes and deliverables of the ADCQR, as specified by the Australian Government Department of Health and Aged Care are achieved (Figure 3). This committee consists of representatives of key stakeholder organisations including endocrinologists, general practitioners, consumer representatives, Aboriginal and Torres Strait Islander representatives, and representatives from national peak bodies, and is working to the agreed Terms of Reference with the ultimate vision of assisting the ADCQR to maintain high visibility, appropriate engagement and relevance for diabetes service delivery. The ADCQR Project Executive and Scientific Advisory Committee members are listed at the end of this report.

FIGURE 3. ADCQR GOVERNANCE STRUCTURE

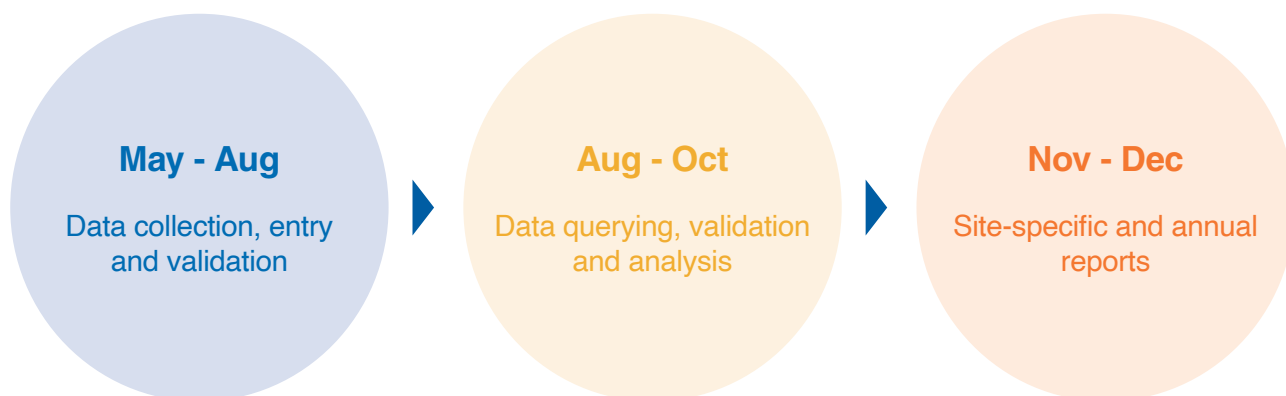


KEY REGISTRY MILESTONES

Expressions of interest to health services and local research and governance processes for interested centres are ongoing. To reduce the burden on participating health services, the ADCQR collects data during the months of May to June (n.b. participating health services self-select a continuous four-week period during the sampling period to collect data on consecutive patients with diabetes

who attend the service and meet the inclusion criteria). The data collection period may be extended until the censorship date of 31 August of each year, at which time the Registry freezes the data for data cleaning, analysis and reporting. The major Registry Milestones are summarised in Figure 4.

FIGURE 4. ADCQR KEY MILESTONES



RECRUITMENT

SITE RECRUITMENT

Sites are recruited through the National Association of Diabetes Centres (NADC), a sub-division of the Australian Diabetes Society (ADS). The NADC, established in 1994, is a national collective of centres that are involved either directly or indirectly in diabetes services and care, brought together by a common desire to see improvement in the standard of diabetes care in Australia.⁹ The NADC takes a leadership role in developing, fostering and supporting networks between diabetes services [from primary care to tertiary (hospital) care settings], recognising that diabetes care requires a shared, multidisciplinary approach. The NADC facilitates and promotes improved standards of diabetes care by implementing evidence-based policies and procedures, including developing national standards and auditing and benchmarking activities.

There are six membership/accreditation levels of the NADC. The ADCQR currently recruits sites from primary, secondary, tertiary and centre of excellence services:

- 1. Centres of Excellence**
Diabetes centres that have demonstrated excellence in education, research, service delivery, practice/policy development and national influence. These centres must be tertiary-level facilities.
- 2. Tertiary Care Diabetes Services**
These centres are hospitals with a full range of clinical diabetes service providers including endocrinologists, credentialed diabetes educators, dietitians and podiatrists on staff (full-time) and have demonstrated a high standard of care through service delivery and organisational capacity.
- 3. Secondary Care Diabetes Services**
These centres are typically community services with a range of full and/or part-time diabetes staff but often do not have an endocrinologist as part of their usual team.
- 4. Primary Care Diabetes Services**
These centres have part-time staff and work closely with local general practitioners to provide care for people with diabetes.
- 5. Pharmacy Diabetes Services**
These centres have staff that have received training and/or have expertise in diabetes and work closely with the local general practitioners (GPs) and allied health staff to provide additional care and services in the pharmacy context.
- 6. Network Members**
The NADC Network membership is offered to Primary Health Networks (PHNs) and State and Territory Government organisations who work directly with GPs, and other health care providers to facilitate improved outcomes for patients.

In 2025, there were 214 NADC member diabetes centres across Australia; these operate in a range of locations and facilities from major metropolitan adult and children's hospitals to community-based services including general practices and pharmacies.

PARTICIPANT RECRUITMENT / REGISTRATION

Participants are registered through the participating site (health service) based on the following criteria: aged 18 years or older, have T1DM, T2DM or other (secondary forms of diabetes) and have the capacity to make the decision to opt-out or to be included in the Registry. Female patients with a diagnosis of gestational diabetes (not known to have established diabetes) are not included.

As participants are recruited/registered using the opt-out approach, prospective eligible participants are provided with the Registry participant information sheet by a staff member at their health service, to inform them that their information will be shared with the Registry, and how to opt out if they change their mind and do not want their information shared. Moreover, their data are entered into the Registry 'holding database' for a two-week period where the data is stored and not used for any purpose, prior to their consent being assumed and their data included in the Registry.

DATA COLLECTION

WHAT INFORMATION DO WE COLLECT?

The ADCQR has leveraged from the formative work undertaken as part of ANDA.

The ANDA dataset used an enhanced version of the National Diabetes Outcomes Quality Review Initiative (NDOQRIN) dataset, aimed at improving diabetes care through a structured approach to patient management.¹⁰ Initially, this was based on the NDOQRIN minimum dataset linked to the NSW Clinical Management Guidelines for Diabetes,¹¹ with subsequent updates/enhancements to the dataset over the years based on feedback from participating health services, as well as the latest research and evidence in diabetes care and quality improvement.

The ADCQR minimum dataset is based on ANDA 2022. This has considerable similarity with international datasets throughout the United States of America and Europe.¹²⁻¹⁵ Compared to international registries, the ADCQR provides comprehensive reporting on multidisciplinary care, diabetes complications and psychological factors, but lacks benchmarking of structural measures, smoking counselling, conception/pregnancy counselling and contraceptive counselling.¹³ Overall, the high rates of agreement with international practice, supports the validity of the ADCQR in the benchmarking of key quality indicators regarding diabetes care within Australia.

The ADCQR captures clinical indicators as well as patient reported outcomes. The clinical component is collected by the clinician or staff member at the participating

site and may be collected during the patients' clinical consult or via medical records. It includes information on demographics, blood glucose control and management methods, other risk factors/biomarkers, medication use, as well as complications and comorbidities. The patient reported component is self-reported by the patient either directly or with a health professional at their diabetes health service prior to (in the waiting room) or during their clinical consult. Participating sites decide how best to deliver the patient reported component for their patient and/or health service. Completion of the questionnaire directly by patients is intended to reduce the burden of data collection on participating sites. The patient reported component consists of one-page and includes information on smoking status, vaccination status, health professional attendances, medication use, patient self-care practices including nutrition/diet management and physical activity.

The data collection forms capture most fields using yes/no responses or other choice options to reduce the amount of written data required. The data collection forms are included in Appendix 1.

The ADCQR provides participating health services with a data definitions document, including the ADS Type 2 Diabetes Glycaemic Management Algorithm¹⁶ to assist in the collection of data on treatments (Appendix 2). The ADCQR Public Facing Data Dictionary provides details on the variables collected and is available on the ADCQR website: <https://www.monash.edu/medicine/sphpm/adcqr>

HOW DO WE COLLECT THIS INFORMATION?

Participating sites have the option to choose from three methods of data collection outlined below.

Web-based data collection – Research electronic data capture (REDCap)

The web-based electronic data capture application employed is REDCap.¹⁷ Study data are collected and managed using REDCap electronic data capture tools hosted and managed by Helix (Monash University). REDCap is a secure, web-based application designed to support data capture for research studies,^{18,19} providing:

1. An intuitive interface for validated data entry
2. Audit trails for tracking data manipulation and export procedures
3. Automated export procedures for seamless data downloads to common statistical packages
4. Procedures for importing data from external sources

Branching logic coding is used to skip irrelevant questions. Data validations are put in place to help prevent data entry errors and reduce data queries. Staff are granted access to patients from their sites only.

Paper-based data collection

The Teleform© software is utilised for the design of paper data collection forms. Once completed by sites and sent to the ADCQR coordinating centre, the forms are entered directly into REDCap. Any printed data collection forms are stored in a locked room at SPHPM, Monash University.

Data Extraction

Site-specific data is extracted from the site's in-house database/EMR and securely transferred to the ADCQR coordinating centre via a Secure File Transfer Protocol. Once received, the data is processed to align with ADCQR variables and imported directly into REDCap. This ensures that all data is centralised in a single system for streamlined access and management.

HOW DO WE STORE THIS INFORMATION?

All Registry data are kept electronically in accordance with Monash University's Information Technology Services Security Framework policy. Patient identifiable data are stored in a highly secure database that is separate to the clinical and patient reported data, to reduce the risk of data breaches. Patient clinical and patient reported data are stored within the Registry database. The data are entered into the Registry 'holding database' for a two-week period, prior to consent being assumed and patient data included in the Registry. The date of the patient consult (clinic visit) indicates the commencement of the opt-out window.

The ADCQR maintains a Risk Register to continually assess and manage risk, including any risks associated with data collection and storage. This is a standing item on the agenda of all Project Executive and Scientific Advisory Committee meetings.

DATA VERIFICATION AND VALIDATION

Near complete data capture is required to ensure the Registry's reporting is accurate. Data validations and quality checks are performed for each site at the end of their data collection period. Reports are generated for each site, querying missing data, potential duplicate records and invalid or out-of-range values. Sites are encouraged to address data queries prior to resubmitting their data to the Registry. Where duplicate records are identified (multiple case record entries for the same patient), the most complete record with the latest information is retained. Data assumptions and manipulations are made according to a pre-defined list of criteria (see the Supplement to this Report). Corrected data items are updated in the database prior to final analysis.

STATISTICAL ANALYSES

DESCRIPTIVE STATISTICS

Results are presented descriptively as percentages for categorical variables, and mean and standard deviation (SD) for continuous variables. Variables that are not normally distributed are presented as median and interquartile range (IQR, where IQR is represented by the first quartile (Q1 or 25th percentile) and third quartile (Q3 or 75th percentile)). Percentages are calculated from total respondents (and did not include missing data in the denominator). Percentages may not always add to 100% due to rounding. Where N is reported, it refers to the number of patients with available data (denominator). The number of people that answered 'Yes' (numerator or n) can be estimated by multiplying the reported percentages by the number of patients with available data (denominator).

Complications/comorbidities are reported as ever reported (percentage of patients with a diagnosis/detection either in the last 12 months or prior to the last 12 months) and reported in the last 12 months only (percentage of patients with a diagnosis/detection in the last 12 months).

Urinary albumin and urinary protein levels are used to determine albuminuria. Albuminuria is determined using the Kidney Disease: Improving Global Outcomes (KDIGO) guidelines.²⁰ Where albumin measurement is missing, and proteinuria measurement is available, patients are categorised into albuminuria using the relevant thresholds outlined by KDIGO. Albuminuria is defined as:

- Normal to mildly increased: AER <30 mg/24 hours, ACR <3 mg/mmol, PER <150 mg/24 hours, or PCR <15 mg/mmol
- Moderately increased: AER 30-300 mg/24 hours, ACR 3-30 mg/mmol, PER 150-500 mg/24 hours, or PCR 15-50 mg/mmol
- Severely increased: AER >300 mg/24 hours, ACR >30 mg/mmol, PER >500 mg/24 hours, or PCR >50 mg/mmol

In Australia, urinary albumin and urinary protein levels are most commonly reported in terms of mg/L (AER and PER) and ratio (ACR and PCR using mg/mmol). To categorise patients into albuminuria using mg/L units of measurement, the following thresholds are employed:

- Normal to mildly increased: AER <20 mg/L or PER <20 mg/L
- Moderately increased: AER 20-200 mg/L or PER 20-200 mg/L
- Severely increased: AER >200 mg/L or PER >200 mg/L

eGFR levels are used to determine chronic kidney disease (CKD). eGFR levels are provided by the participating sites from pathology records, and as such, it is not known whether the 2009 or 2021 CKD Epidemiology Collaboration (CKD-EPI) equation was used to estimate eGFR. eGFR levels from the participating sites are prioritised because fewer participants had creatinine levels available for the Registry to calculate eGFR. KDIGO guidelines define CKD as any abnormality of kidney structure or function that is present for >3 months, with implications for health.²⁰

- Stage 1: eGFR ≥ 90 mL/min/1.73m² and evidence of kidney damage (albuminuria, urine sediment abnormalities, electrolyte and other abnormalities due to tubular disorders, structural abnormalities on histology or imaging and history of kidney transplantation)
- Stage 2: eGFR 60-89 mL/min/1.73m² and evidence of kidney damage
- Stage 3: eGFR 30-59 mL/min/1.73m²
- Stage 4: eGFR 15-29 mL/min/1.73m²
- Stage 5: eGFR <15 mL/min/1.73m²

End stage kidney disease is also captured through a separate question, where end stage kidney disease is defined as Stage 5 chronic kidney disease (eGFR <15 mL/min/1.73m²) and/or dialysis dependent (haemodialysis or peritoneal dialysis) and/or renal transplant recipient reported in the last 12 months or prior to the last 12 months.

Where number of complications are reported, these include myocardial infarction, coronary artery bypass graft (CABG)/angioplasty, stroke, congestive cardiac failure, end stage kidney disease, foot ulceration, foot amputation, retinopathy, blindness, sexual dysfunction, diabetic ketoacidosis, hyperosmolar hyperglycaemic state or severe hypoglycaemia.

Selected analyses are reported by diabetes type (T1DM, T2DM and other (secondary) causes). T1DM includes patients diagnosed with latent autoimmune diabetes in adults (LADA).

Selected analyses are also reported for people with and without cardiovascular disease (CVD), where CVD includes myocardial infarction, CABG/angioplasty, stroke, congestive cardiac failure or peripheral vascular disease.



SUBGROUP ANALYSES: CENTRE TYPE

Given the different patient populations attending primary, secondary and tertiary health care settings, results by centre type are presented. For comparability, pooled patient data from Centres of Excellence (CoE) & Tertiary care services were compared to pooled patient data from Secondary & Primary care services.

RISK ADJUSTED FUNNEL PLOTS

Funnel plots are graphical methods used to detect variation in clinical performance across participating sites by plotting the mean values or rates (proportion) of patients at each participating site for selected key clinical indicators. Funnel plots highlight where sites may be able to achieve improved outcomes with more intensive management.

Four key clinical indicators are assessed: HbA1c, low-density lipoprotein (LDL), systolic blood pressure (SBP) and rates of severe hypoglycaemia (defined as an episode of hypoglycaemia associated with neuroglycopenia and requiring third-party assistance).

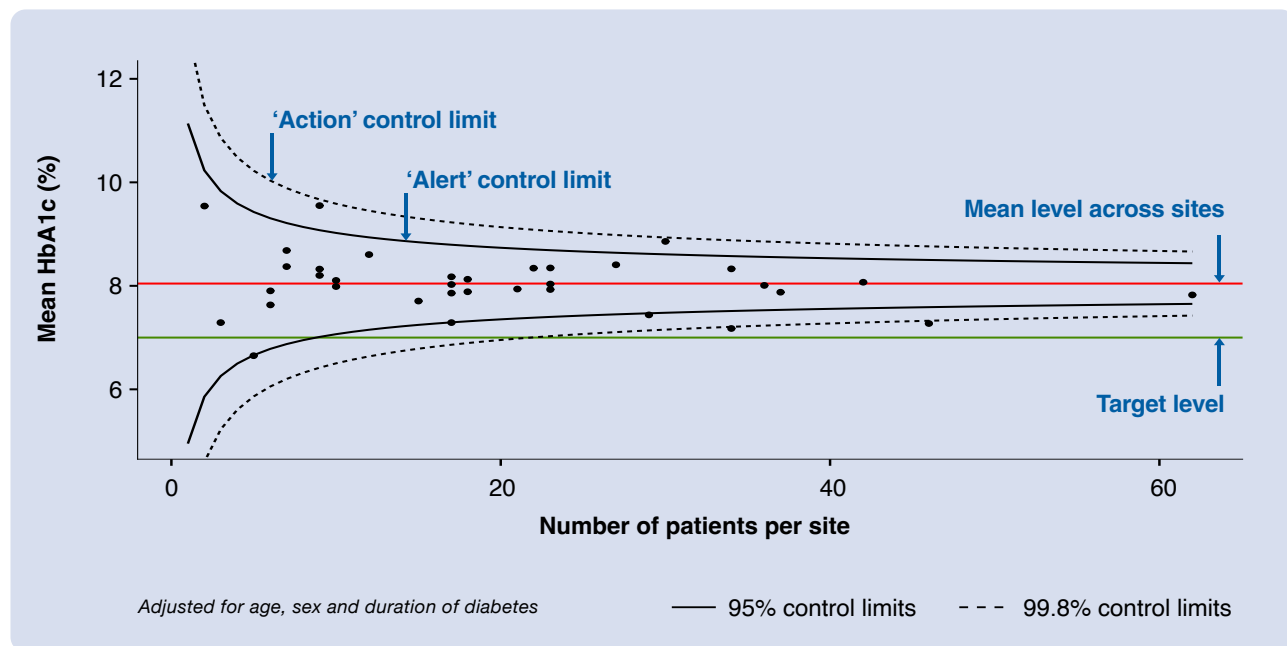
It is acknowledged that patients attending tertiary diabetes services for management are often more challenging with poorer glycaemic control and an increased complexity of care. This may skew clinical outcomes further away from target levels than may be seen in patients attending primary and secondary diabetes services. To allow comparability across sites, who may see very different patient populations, clinical performance is adjusted for statistically significant, non-care related patient factors prior to plotting such as age, sex, and duration of diabetes. The factors that have been adjusted for are included at the bottom of each graph.

'Action' control limits are set at 99.8% (approximately three SDs from the mean) and 'alert' control limits set at 95.0% (approximately two SDs from the mean). Sites positioned above the 'action' limit are considered outliers and should work towards implementing strategies to improve in this outcome measure. Sites positioned above the 'alert' limit (but below the 'action' limit) may be at risk of outlier performance.

The following is an example of how to interpret a funnel plot:

- The overall mean values or rates across all sites is shown by the horizontal red line.
- The target level for each clinical indicator is shown by the horizontal green line.
- 'Action' control limits are shown by the dashed contour lines and 'alert' control limits are shown by the solid contour lines.
- Sites positioned above the 'action' limit are considered outliers and should work towards implementing strategies to improve this outcome measure. Sites positioned above the 'alert' limit (but below the 'action' limit) may be at risk of outlier performance and should monitor performance.

FIGURE 5. EXAMPLE OF A FUNNEL PLOT AND INTERPRETATION



ADDITIONAL ANALYSES

The Supplement to this Report provides additional analyses including

- Key findings reported in terms of patients meeting target
- Frequency count data
- Missing data
- Post data collection questionnaire results

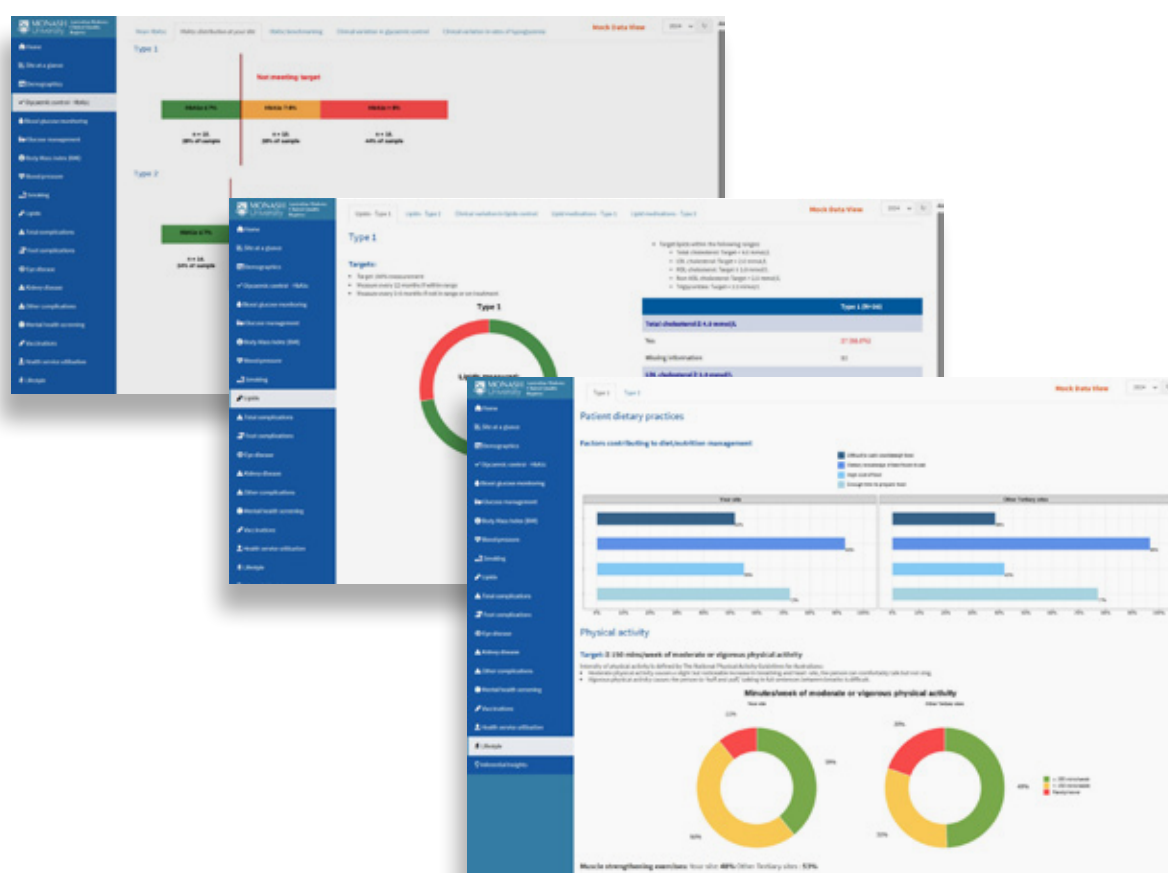
ADCQR DASHBOARD

In 2025, the ADCQR deployed a user-friendly dashboard to participating health services to provide a more interactive experience. The dashboard allows health services to securely access and interrogate their site data. The dashboard was developed through co-design with clinicians, where a prototype was deployed and a subset of participating sites provided feedback on the design, layout, usability, and interpretability.

The ADCQR dashboard provides visualisation of summary data captured in the Site Report, stratified by diabetes type. Moreover, the dashboard includes data from previous years. For example, if a participating health service collected data in 2024 and 2025, the dashboard will include data for both years. The dashboard will be updated annually, following the data collection, cleaning and analysis period. To ensure that results are reliable and interpretable, access to the dashboard is only provided to participating sites with sufficient patient numbers.

In future, the ADCQR hopes to increase dashboard user interactivity and include risk prediction tools to facilitate quality improvement activities.

FIGURE 6. SNAPSHOTS OF THE ADCQR DASHBOARD





SECTION 3

RESULTS



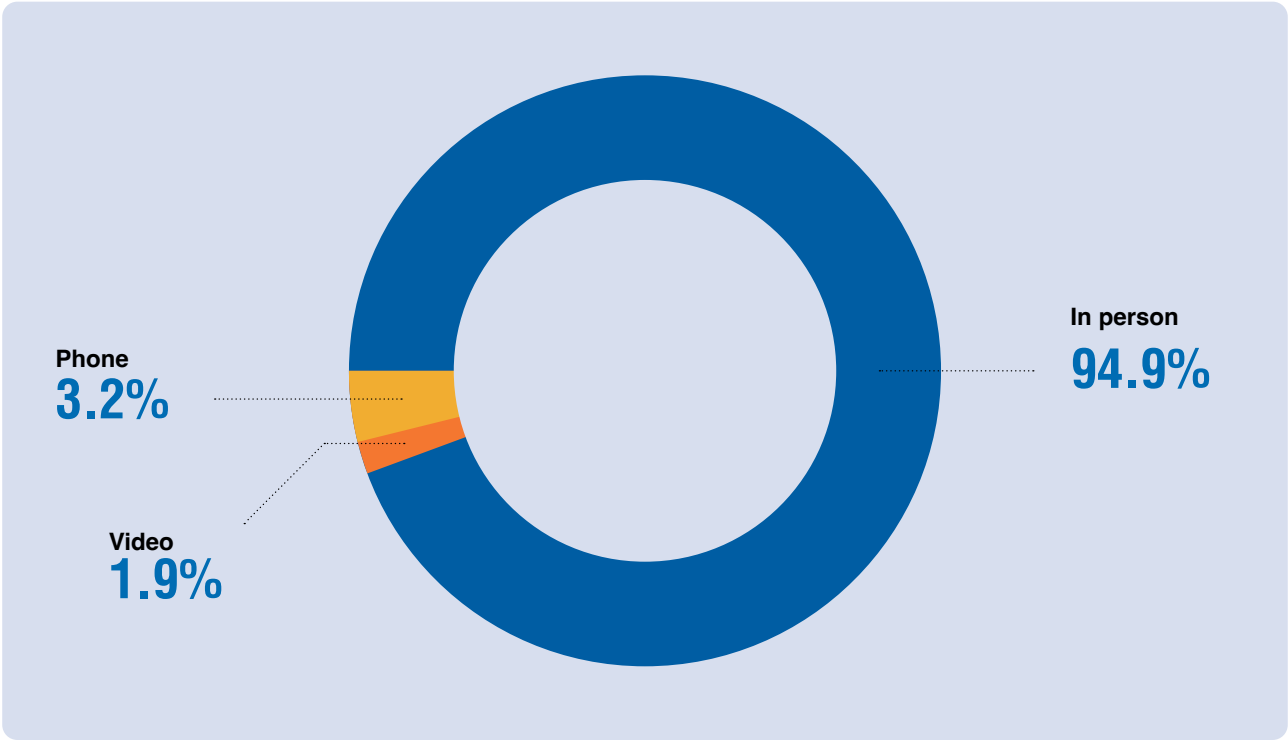
Data were collected on a total of 3705 patients.

Results in this section of the report represent the pooled analyses for the total cohort. These analyses are also reported for patients with T1DM and T2DM separately.

TYPE OF CLINICAL CONSULTATION

The majority of patients (more than 9 in 10) had in person consultations, while less than 1 in 10 patients had phone consultations and a minority had video consultations (Figure 7).

FIGURE 7. TYPE OF CLINICAL CONSULTATION (N=3559)



DEMOGRAPHIC DATA

The demographic data are included in Table 3. Overall, the mean age of patients was 57.7 years, and males represented slightly more of the cohort than females. The majority of patients included in the analysis identified as being born in Australia. Among those not born in Australia, there were more than 100 countries of birth recorded. Less than 1 in 20 patients identified as Aboriginal/Torres Strait Islander people. Most patients were registered with the National Diabetes Services Scheme (NDSS). About 6 in 10 patients had T2DM with a median duration of diabetes of 15.2 years (Table 4), and more than 3 in 10 patients had T1DM with a median duration of 19.5 years. A minority had other (secondary causes) of diabetes.

TABLE 3. DEMOGRAPHIC DATA

CHARACTERISTICS	N	
Total Number of patients	3705	
Age (years), mean $\pm$ SD	3705	57.7 $\pm$ 17.6
Sex, %	3705	
Female		43.2
Male		56.8
Other		0.00
Pregnant, %	643	2.5
Diabetes duration (years), median (IQR)	3621	15.5 (8.0, 25.5)
Diabetes type, %	3705	
T1DM		34.4
T2DM		62.6
Other (secondary causes)		2.8
Don't know		0.2
Unstated		0.0
Initial visit, %	3570	15.8
Interpreter required, %	3440	3.1
Aboriginal/Torres Strait Islander, %	3628	3.6
Australian-born, %	3537	71.7
DVA, %	3524	1.2
NDSS registrant, %	3524	95.1

Patients with T1DM were approximately 20 years younger than patients with T2DM but had a slightly longer duration of diabetes (Table 4).

TABLE 4. AGE AT VISIT AND DURATION OF DIABETES BY DIABETES TYPE

CATEGORY	N	T1DM	N	T2DM
Age (years), mean + SD	1274	45.5 $\pm$ 18.4	2320	64.4 $\pm$ 13.2
Duration (years), median (IQR)	1238	19.5 (9.8, 30.5)	2274	15.2 (7.5, 23.6)

GLUCOSE MONITORING AND MANAGEMENT

Table 5 outlines the methods of blood glucose monitoring undertaken by patients with T1DM and T2DM.

Almost all patients with T1DM performed regular blood glucose monitoring with 9 in 10 using continuous glucose monitoring (CGM) technologies. The majority of these patients used CGM only, about 1 in 10 patients used finger pricking only and 1 in 20 patients used CGM and finger pricking. Over 8 in 10 patients with T2DM performed regular blood glucose monitoring with the vast majority using the finger prick method and almost 1 in 10 patients using CGM only. Those with T2DM were more likely to use CGM if on insulin therapy, with almost 2 in 10 patients on insulin only using CGM and 1 in 10 patients on insulin and other glucose lowering medications using CGM (Table 6).

TABLE 5. BLOOD GLUCOSE MONITORING BY DIABETES TYPE

METHOD	T1DM (N=1274) %	T2DM (N=2320) %
Any	100.0	85.8
None	0.0	14.2
Finger pricking*	13.0	75.3
Continuous glucose monitoring (CGM)*	90.7	8.9
Method categories		
Finger pricking only	8.3	76.5
CGM only	86.8	7.1
Finger pricking and CGM	4.8	2.2

*Total may be greater than 100% due to patients indicating multiple methods

TABLE 6. CONTINUOUS GLUCOSE MONITORING BY TYPES OF GLUCOSE LOWERING MEDICATIONS IN PATIENTS WITH T2DM

FINGER PRICK TESTING	INSULIN ONLY (N=125) %	INSULIN & OTHER (N = 1174) %	NON-INSULIN (N=953) %
Continuous glucose monitoring (CGM)	16.8	12.1	4.2

Of those who performed regular blood glucose monitoring using the finger prick method, over 6 in 10 patients performed testing as often as recommended, with a small proportion unsure of recommended testing (Table 7). Patients with T1DM performed similarly to patients with T2DM. On average, patients with T1DM performed finger pricking around 3 times per day while patients with T2DM performed finger pricking 2 times per day.

TABLE 7. BLOOD GLUCOSE MONITORING BY FINGER PRICKING PERFORMED AS OFTEN AS RECOMMENDED BY DIABETES TYPE

FINGER PRICK TESTING	T1DM (N=155) %	T2DM (N=1668) %
Yes	64.5	58.5
No	27.1	34.8
Unsure of recommended testing	8.4	6.7
Number of times per day, mean ± SD	3.5 ± 3.1	1.9 ± 1.2

Of those that used CGM technologies (flash or other CGM), the majority of patients used sensors for at least 14 days in the last 3 months with the sensor active for at least 70% of the time (Table 8). Specifically, more than 8 in 10 patients with T1DM and more than 6 in 10 patients with T2DM used sensors for at least 14 days in the last 3 months with the sensor active for at least 70% of the time.

TABLE 8. BLOOD GLUCOSE MONITORING BY CONTINUOUS GLUCOSE MONITORING AND SENSOR USE BY DIABETES TYPE

PROPORTION OF TIME USING SENSORS	T1DM (N=1093) %	T2DM (N=201) %
Sensor worn for ≥14 days in last 3 months	96.2	78.6
Sensor worn for ≥14 days in last 3 months and active ≥70% of time	85.8	65.2

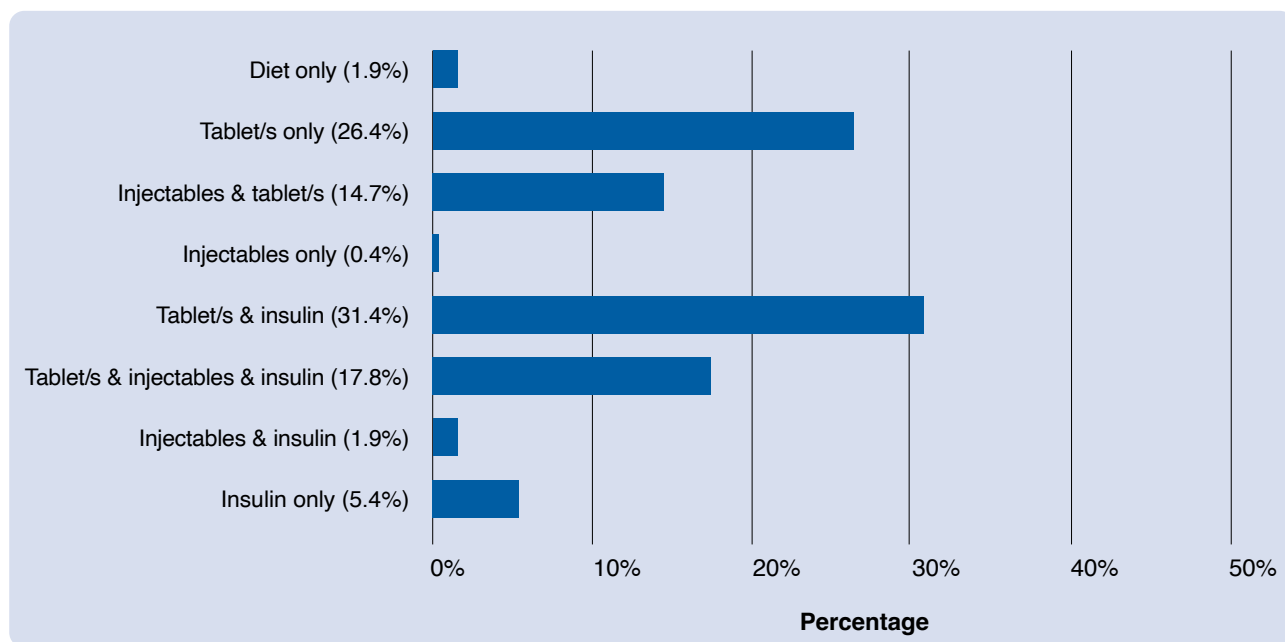
Table 9 details the classes of glucose lowering medications patients were treated with. All patients with T1DM were treated with insulin, and the most commonly co-prescribed adjuvant glucose lowering agent was metformin with almost 1 in 10 patients reporting adjuvant metformin. Of those patients with T2DM, more than 7 in 10 patients were treated with metformin, more than 5 in 10 were treated with insulin, 5 in 10 were treated with sodium-glucose co-transporter 2 (SGLT2) inhibitors and 3 in 10 patients were treated with glucagon-like peptide-1 (GLP-1) agonists or GLP-1/ gastric inhibitory polypeptide (GIP) receptor agonists. Almost 9 in 10 patients with T2DM were using tablets and 3 in 10 patients were using injectables (Figure 8).

TABLE 9. CLASSES OF GLUCOSE LOWERING MEDICATIONS BY DIABETES TYPE

TREATMENT*	T1DM (N=1274) %	T2DM (N=2296) %
Metformin	7.9	76.8
SGLT2 inhibitor	2.6	50.6
GLP-1 agonist or GLP-1/GIP dual agonist	4.3	34.8
DPP4 inhibitor	0.5	24.0
Sulphonylurea	0.0	20.6
Thiazolidinedione	0.0	0.4
Acarbose	0.0	0.3
Insulin*	100.0	56.6

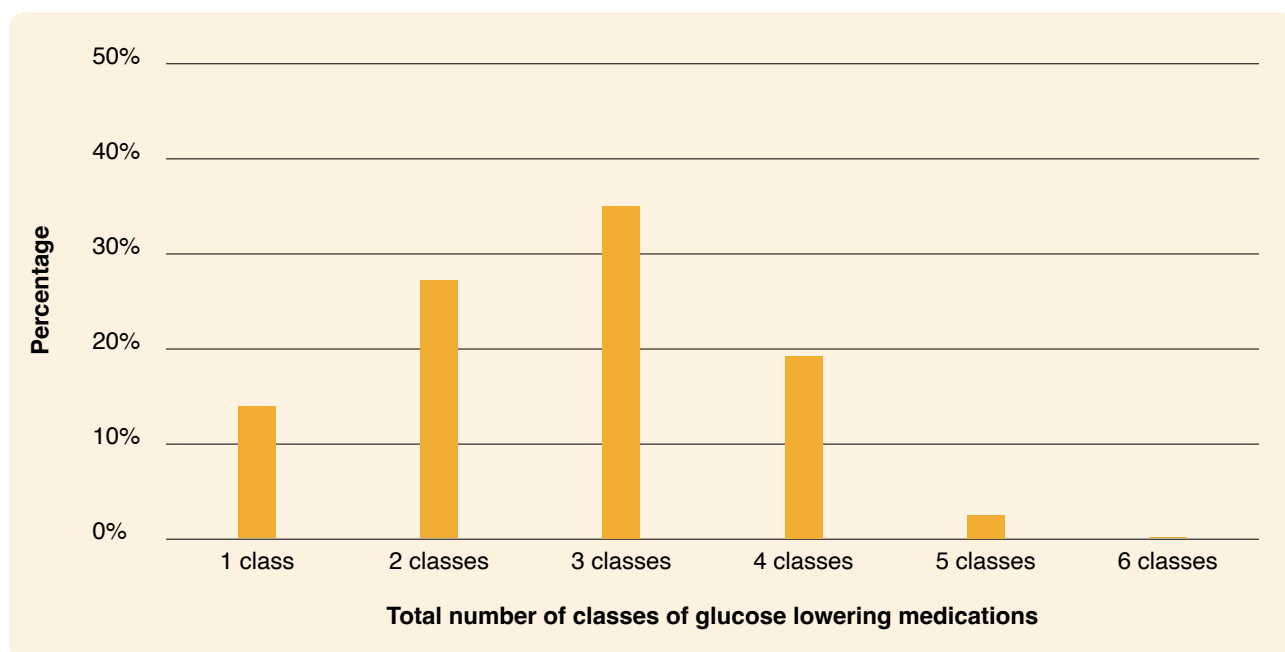
Total may be greater than 100% due to patients being on multiple agents
*Monotherapy or in combination with other treatments

FIGURE 8. TYPES OF TREATMENTS USED IN PATIENTS WITH T2DM (N=2320)



About 6 in 10 patients with T2DM were on 3 or more classes of glucose lowering medications (Figure 9).

FIGURE 9. PROPORTION OF PATIENTS WITH T2DM TREATED WITH MULTIPLE CLASSES OF GLUCOSE LOWERING MEDICATIONS (N= 2248)



Of those treated with insulin, almost 6 in 10 patients with T1DM were treated with a basal-bolus insulin regimen, and 3 in 10 patients were using continuous subcutaneous insulin infusion (CSII; automated or non-automated) systems (Figure 10). Of those patients with T2DM, almost 5 in 10 patients used a pre-mixed regimen, with the remainder mostly using either a basal-bolus or basal-only regimen (Figure 11).

FIGURE 10. MODALITIES OF INSULIN USE IN PATIENTS WITH T1DM (N=1274)

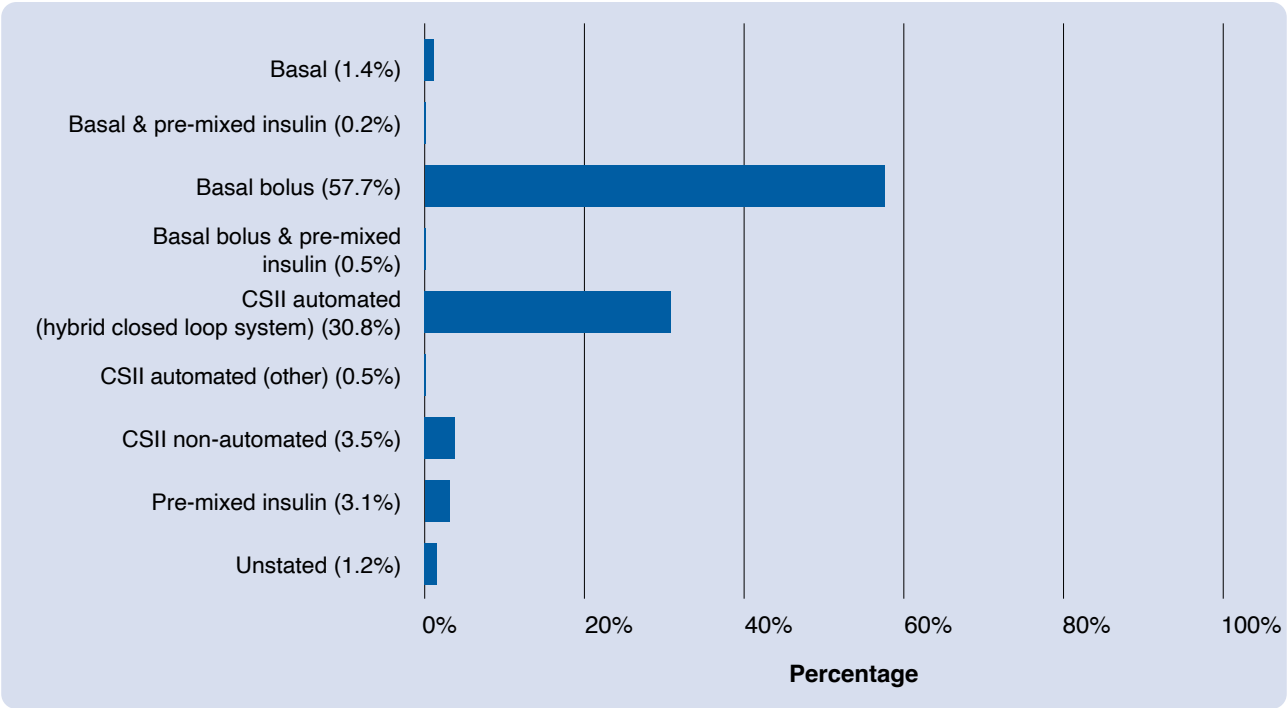
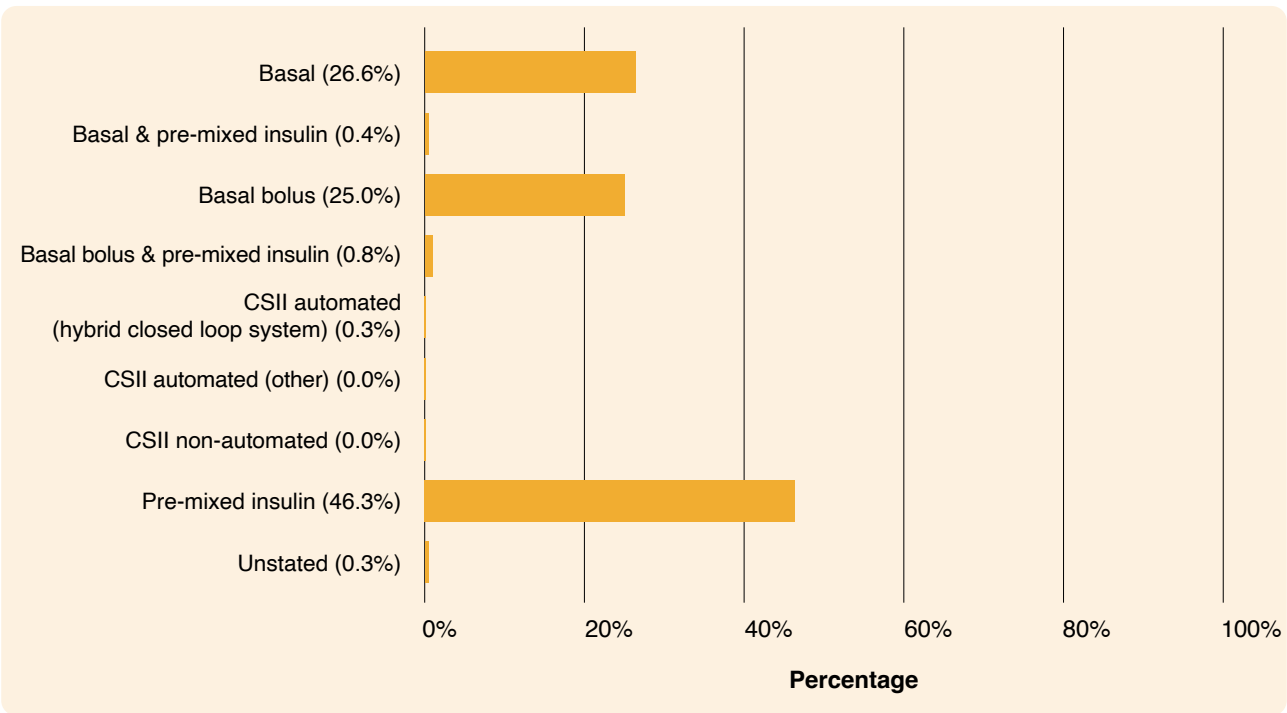


FIGURE 11. MODALITIES OF INSULIN USE IN PATIENTS WITH T2DM (N=1299)



A photograph of two men camping in a grassy field. One man is sitting on the ground, smiling and holding a white mug. The other man is sitting on a blue folding chair behind him, also smiling and looking at the first man. In the foreground, there is a red and black portable gas stove with a black Moka pot on it. A white mug is next to the stove. The background is a blurred green field under a clear sky.

Our experience shows that focusing on a single priority area each year is the most effective way to achieve sustainable change. This deliberate approach not only ensures meaningful progress but also demonstrates the powerful role of data collection and benchmarking in turning insights into measurable, lasting improvements.

— A/Prof Shane Hamblin, Western Health

CLINICAL PARAMETERS, COMPLICATIONS AND COMORBIDITY DATA

Table 10 presents clinical parameters for the total cohort. Normally distributed data are presented as mean $\pm$ SD, and non-normally distributed data are presented as median and IQR. Tables 10-17 detail risk factors, complications and comorbidities of the total cohort. These data are reported as number of people with available data (N) and percent (%) of patients who responded 'Yes' to the question, unless otherwise indicated.

CLINICAL PARAMETERS

Overall, the average values for clinical parameters/cardiovascular risk factors were above targets with a mean HbA1c of 8.3% (median of 7.9%), mean systolic blood pressure of 132 mmHg, mean total cholesterol of 4.3 mmol/L, LDL cholesterol of 2.2 mmol/L and non-HDL cholesterol of 3.0 mmol/L. Diastolic blood pressure, triglycerides and HDL cholesterol were the only parameters meeting recommended target levels. Mean BMI was in the obese range (30.6 kg/m²).

TABLE 10. CLINICAL PARAMETERS

METABOLIC DATA	TARGET	N	MEAN $\pm$ SD
HbA1c (%)	≤ 7.0	3519	8.3 $\pm$ 2.0
HbA1c (mmol/mol)	≤ 53.0	3519	66.8 $\pm$ 21.4
HbA1c (%), median (IQR)	≤ 7.0	3519	7.9 (6.9, 9.2)
HbA1c (mmol/mol), median (IQR)	≤ 53.0	3519	63.0 (52.0, 77.0)
Systolic BP (mmHg)	< 130	3501	132 $\pm$ 18
Diastolic BP (mmHg)	< 80	3501	77 $\pm$ 10
Total cholesterol (mmol/L)	< 4.0	2690	4.3 $\pm$ 1.3
HDL cholesterol (mmol/L)	≥ 1.0	2441	1.3 $\pm$ 0.4
LDL cholesterol (mmol/L)	< 2.0	2402	2.2 $\pm$ 1.0
Non-HDL cholesterol	< 2.5	2435	3.0 $\pm$ 1.2
Triglyceride (mmol/L)*, median (IQR)	< 2.0	2513	1.4 (0.9, 2.1)
BMI (kg/m ²)	< 25	3523	30.6 $\pm$ 7.2

CARDIOVASCULAR RISK FACTORS

A high prevalence of cardiovascular risk factors was observed across the cohort (Table 11). Overall, almost 8 in 10 patients were overweight or obese, more than 6 in 10 patients had blood pressure above target, more than 5 in 10 patients had total cholesterol and LDL cholesterol above target and just over 1 in 10 reported current smoking.

TABLE 11. RISK FACTORS FOR CARDIOVASCULAR DISEASE

RISK FACTORS	N	%
Current smokers	2790	14.3
Past smokers	2790	30.7
Never smoked	2790	55.0
On antihypertensive therapy	3642	58.7
On lipid modifying therapy	3663	64.6
Blood pressure $\geq 130/80$ (mmHg)	3501	65.0
Blood pressure $\geq 140/90$ (mmHg)	3501	32.9
Raised total cholesterol ≥ 4.0 (mmol/L)	2690	55.9
Raised LDL cholesterol ≥ 2.0 (mmol/L)	2402	53.5
Reduced HDL cholesterol < 1.0 (mmol/L)	2441	23.2
Raised triglycerides ≥ 2.0 (mmol/L)	2513	27.9
Raised non-HDL cholesterol ≥ 2.5 (mmol/L)	2435	61.4
Overweight/obese BMI ≥ 25 (kg/m ²)	3523	77.7

ESTIMATED GLOMERULAR FILTRATION RATE (eGFR)

Figures 12 and 13 represent the proportion of patients in each eGFR category, by sex for those with T1DM and T2DM, respectively. Just over 1 in 10 males with T1DM had an eGFR <60 mL/min/1.73m² and 1 in 10 females with T1DM had an eGFR <60 mL/min/1.73m². Almost 3 in 10 males with T2DM had an eGFR <60 mL/min/1.73m² and over 2 in 10 females with T2DM had an eGFR <60 mL/min/1.73m².

FIGURE 12. eGFR CATEGORIES BY SEX IN PATIENTS WITH T1DM (N=1078)

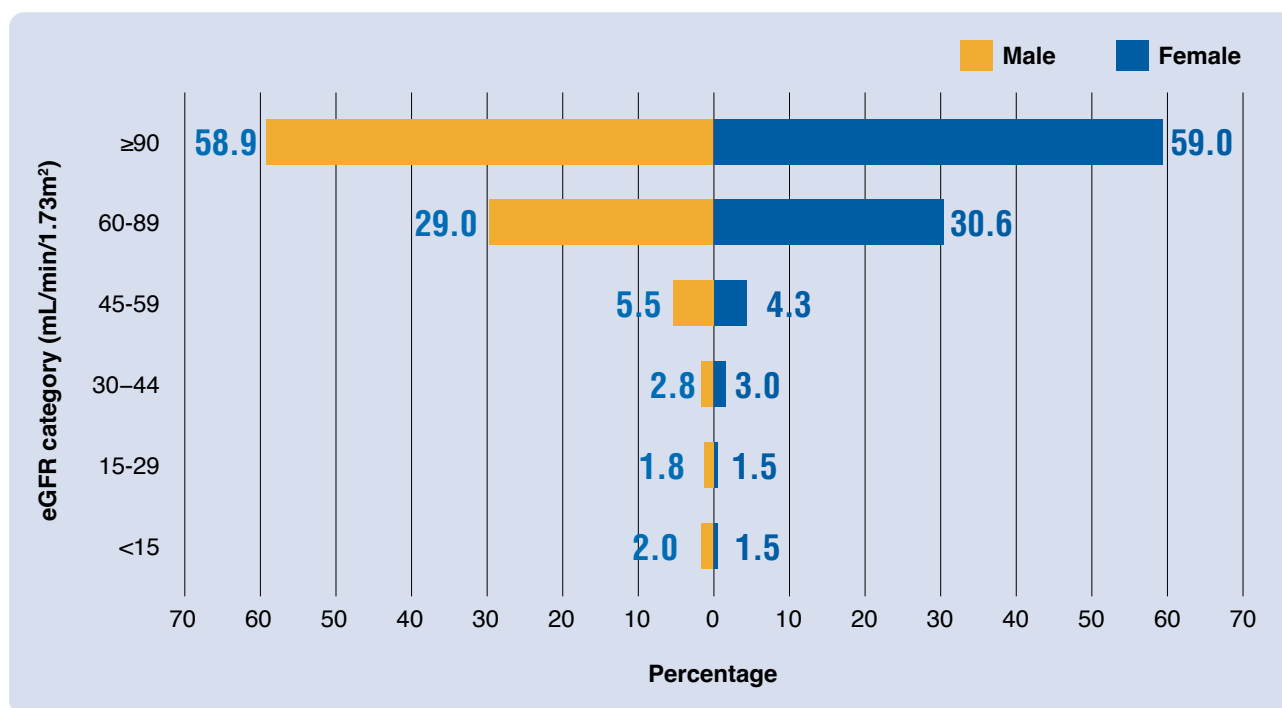
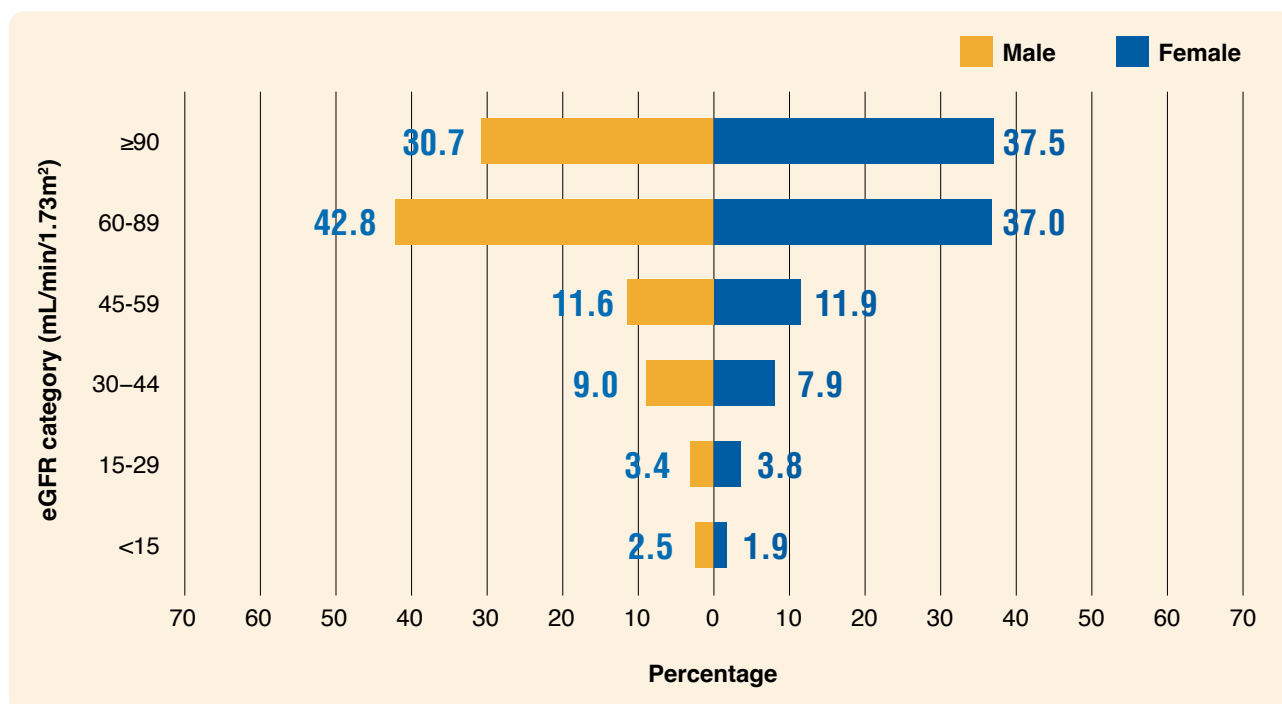


FIGURE 13. eGFR CATEGORIES BY SEX IN PATIENTS WITH T2DM (N=2140)



ACUTE METABOLIC COMPLICATIONS

Both hyperglycaemic and hypoglycaemic emergencies in the last 12 months, including impaired awareness of hypoglycaemia, were more common in patients with T1DM compared with T2DM (Table 12). Just over 1 in 20 patients with T1DM reported diabetic ketoacidosis, and a similar proportion reported impaired awareness of hypoglycaemia, and/ or severe hypoglycaemia. Of those patients who reported severe hypoglycaemia, more than half experienced 1-2 episodes.

TABLE 12. GLYCAEMIC EMERGENCIES IN THE LAST 12 MONTHS BY DIABETES TYPE

COMPLICATION/EVENT	T1DM (N=1274)	T2DM (N=2320)
	%	%
Diabetic ketoacidosis	6.5	1.2
Hyperosmolar hyperglycaemic state	0.1	0.9
Impaired awareness of hypoglycaemia	8.9	2.6
Severe hypoglycaemia	7.3	2.7
1-2 episodes	4.0	1.8
3-5 episodes	2.1	0.4
>5 episodes	1.1	0.4

EYE COMPLICATIONS

The majority of patients attended an optometrist or ophthalmologist in the last 12 months, with 8 in 10 patients self-reporting optometrist or ophthalmologist attendances (Table 13). Eye complications were common, with about 2 in 10 patients reporting retinopathy, and almost 3 in 10 reporting cataract/s. A minority of patients reported blindness. Of the patients reporting eye complications, almost 1 in 10 patients reported retinopathy and a similar proportion of patients reported cataract in the last 12 months.

TABLE 13. EYE COMPLICATIONS

EYE TESTING AND COMPLICATIONS	EVER REPORTED		REPORTED IN THE LAST 12 MONTHS
	N	%	%
Attended optometrist/ ophthalmologist*	2873	N/A	79.8
Retinopathy	3479	24.5	8.3
Treatment for retinopathy	3440	14.2	5.5
Cataract	3469	27.8	10.8
Blindness	3426	2.3	0.7

*Attendances to optometrists/ophthalmologists reflect attendances in the last 12 months only

FOOT COMPLICATIONS

The majority of patients had foot checks by a health professional in the last 12 months, with about 6 in 10 patients self-reporting foot checks by a health professional (Table 14). Foot complications were common, with more than 2 in 10 patients reporting peripheral neuropathy, and about 1 in 10 reporting foot ulcerations. About 1 in 20 patients reported lower limb amputation. Of the patients reporting foot complications, more than 1 in 10 patients reported peripheral neuropathy and over 1 in 20 patients reported foot ulceration in the last 12 months.

TABLE 14. FOOT COMPLICATIONS

FOOT CHECKS AND COMPLICATIONS	EVER REPORTED		REPORTED IN THE LAST 12 MONTHS
	N	%	%
Foot check by health professional*	2865	N/A	59.2
Foot ulceration	3607	10.6	7.2
Peripheral neuropathy	3563	24.5	12.1
Lower limb amputation	3544	5.1	2.2
Minor†		4.2	1.8
Major†		0.9	0.4

*Foot checks by health professionals reflect checks in the last 12 months only

†Missing data for a small number of patients

KIDNEY COMPLICATIONS

Kidney complications were common (Table 15). About 3 in 10 patients had moderately increased albuminuria and 1 in 10 patients had severely increased albuminuria. More than 2 in 10 patients were classified as having stage 3-5 chronic kidney disease (CKD) with most having stage 3 CKD.

TABLE 15. KIDNEY COMPLICATIONS

COMPLICATIONS	%
Albuminuria* (N = 2171)	
Normal to mildly increased albuminuria	62.3
Moderately increased albuminuria	26.7
Severely increased albuminuria	11.1
Chronic Kidney Disease† (N = 3239)	
Stage 1	42.2
Stage 2	34.5
Stage 3	18.0
Stage 4	3.2
Stage 5††	5.2

*Reported in the last 12 months

†This N reflects the total number of patients with eGFR data and end stage kidney disease prevalence data used to estimate CKD stage

††Stage 5 chronic kidney disease is defined as end stage kidney disease and included patients with an eGFR <15 mL/min/1.73m² and/or dialysis dependent (haemodialysis or peritoneal dialysis) and/or renal transplant recipient.

CARDIOVASCULAR COMPLICATIONS

Almost 3 in 10 patients reported cardiovascular complications (including myocardial infarction, CABG/angioplasty, stroke, congestive cardiac failure or peripheral vascular disease). About 1 in 10 patients reported myocardial infarction, 1 in 10 patients reported CABG/angioplasty, almost 1 in 10 reported peripheral vascular disease and a smaller number reported other cardiovascular complications. Of the patients reporting cardiovascular complications, a minority reported occurrences in the last 12 months (Table 16).

TABLE 16. CARDIOVASCULAR COMPLICATIONS

COMPLICATION/EVENT	EVER REPORTED		REPORTED IN THE LAST 12 MONTHS
	N	%	%
Myocardial infarction	3557	10.9	2.7
CABG/angioplasty	3585	11.6	2.4
Cerebral stroke	3549	7.0	1.6
Congestive cardiac failure	3536	5.9	1.3
Peripheral vascular disease	3540	9.0	4.5

OTHER COMPLICATIONS AND COMORBIDITIES

Other complications and comorbidities are shown in Table 17. The most commonly reported complication/comorbidity was depression and/or anxiety. More than 2 in 10 patients reported depression and 2 in 10 patients reported anxiety. The presence of depression and/or anxiety was defined as a formal diagnosis from a clinician or prescribed pharmacotherapy for depression and/or anxiety. Sexual dysfunction and malignancy were each reported by 1 in 10 patients. More than 1 in 10 patients reported mild liver disease and less than 1 in 20 reported moderate/severe liver disease. Less than 1 in 20 patients reported ever being hospitalised for COVID-19. Dementia was uncommonly reported among the cohort. Of those patients reporting complications and comorbidities, 1 in 10 patients reported depression, 1 in 10 patients reported anxiety, and just over 1 in 20 patients reported sexual dysfunction in the last 12 months. Other complications were less commonly reported to have occurred in the last 12 months.

TABLE 17. OTHER COMPLICATIONS AND COMORBIDITIES

COMPLICATION/EVENT	EVER REPORTED		REPORTED IN THE LAST 12 MONTHS
	N	%	%
Depression	3427	25.1	8.5
Anxiety	3429	21.4	8.7
Sexual dysfunction	3498	12.5	6.5
Malignancy	3477	10.4	3.5
Dementia	3575	1.7	0.6
Hospitalisation for COVID-19	3342	3.3	0.8
Liver disease*	3551		
Mild		N/A	11.6
Moderate/Severe		N/A	3.1

*Prevalence of liver disease refers to the presence of liver disease at the time of the patient's clinical consult

CARDIORENAL PROTECTIVE AGENTS

Diabetes is associated with heightened cardiovascular risk. Therefore, treatment of modifiable risk factors such as lipids and blood pressure are recommended.²¹⁻²³

Around 4 in 10 patients with T1DM were on lipid modifying therapy. Statin therapy was most common with almost 4 in 10 patients treated with statins. About 1 in 20 patients were treated with ezetimibe and a similar proportion were treated with fibrates. A minority of patients were treated with fish oil and/or proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors.

The majority of patients with T2DM were on lipid modifying therapy, with almost 8 in 10 patients on one or more lipid modifying medications. Statin therapy was most common with 7 in 10 patients treated with statins. Over 1 in 10 patients were treated with ezetimibe and a similar proportion were treated with fibrates. A minority of patients were treated with fish oil and/or PCSK9 inhibitors (Table 18).

TABLE 18. LIPID MODIFYING MEDICATIONS BY DIABETES TYPE

TREATMENT	T1DM (N=1258) %	T2DM (N=2295) %
Any	41.7	77.9
Statin	37.4	73.5
Fibrate	4.1	12.1
Ezetimibe	6.7	14.6
Fish oil	2.5	3.3
PCSK9 inhibitor	0.5	0.9

Total may be greater than 100% due to patients being on multiple agents

More than 3 in 10 patients with T1DM were treated with one or more antihypertensive medications. Almost 2 in 10 patients were treated with angiotensin-converting enzyme (ACE) inhibitors. Just over 1 in 10 patients were treated with angiotensin receptor blockers (ARB) and a similar proportion with calcium channel blockers. About 1 in 20 patients were treated with thiazides/other diuretics and a similar proportion with beta blockers. A minority were treated with other antihypertensive medications.

The majority of patients with T2DM were treated with antihypertensive medications, with more than 7 in 10 patients on one or more antihypertensives. About 3 in 10 patients were treated with ARBs, and almost 3 in 10 patients with ACE inhibitors and/or calcium channel blockers. Over 2 in 10 patients were treated with beta blockers, over 1 in 10 with thiazides/other diuretics and about 1 in 20 with other antihypertensive medications (Table 19).

TABLE 19. ANTIHYPERTENSIVE MEDICATIONS BY DIABETES TYPE

TREATMENT	T1DM (N=1248) %	T2DM (N=2286) %
Any	33.6	73.0
ACE inhibitor	16.9	28.2
ARB	12.3	31.0
Calcium channel blocker	11.0	24.7
Thiazides/other diuretics	6.1	14.5
Beta blocker	7.4	25.1
Other antihypertensive	2.9	7.1

Total may be greater than 100% due to patients being on multiple agents

In patients with T1DM, more than 1 in 10 were treated with aspirin and/or other antiplatelet medications, and a minority were treated with anticoagulants. In patients with T2DM, over 3 in 10 were treated with aspirin and/or other antiplatelet medications, and over 1 in 10 patients were treated with anticoagulants (Table 20).

TABLE 20. ANTIPLATELET AND ANTICOAGULANT MEDICATIONS BY DIABETES TYPE

TREATMENT	T1DM		T2DM	
	N	%	N	%
Aspirin and/or other antiplatelets	1252	14.7	2290	34.5
Aspirin	1252	13.7	2292	30.8
Other antiplatelets	1253	2.2	2289	7.9
Anticoagulants	1253	3.8	2288	10.9

Use of newer glucose lowering medications with cardiorenal benefits was relatively high in patients with T2DM, with 5 in 10 patients treated with SGLT2 inhibitors and over 3 in 10 patients treated with GLP-1 agonists or GLP-1/GIP dual agonists. A minority of patients with T1DM were treated with SGLT2 inhibitors and GLP-1 agonists or GLP-1/GIP dual agonists (Table 21).

TABLE 21. OTHER CARDIORENAL PROTECTIVE MEDICATIONS BY DIABETES TYPE

TREATMENT	T1DM (N=1274)	T2DM (N=2320)
	%	%
SGLT2 inhibitor	2.6	50.0
GLP-1 agonist or GLP-1/GIP dual agonist	4.3	34.4

Patients with existing CVD were more likely to be treated with lipid lowering therapy. In patients with T1DM, almost 9 in 10 patients with CVD were treated with one or more lipid modifying medications, compared to just over 3 in 10 patients without CVD. In patients with T2DM, a similar proportion of patients with CVD were treated with one or more lipid modifying medications (9 in 10 patients) and 7 in 10 patients without CVD. (Table 22).

TABLE 22. LIPID MODIFYING MEDICATIONS BY DIABETES TYPE AND CARDIOVASCULAR DISEASE STATUS

TREATMENT	T1DM		T2DM	
	CVD (N=143) %	NO CVD (N=1086) %	CVD (N=757) %	NO CVD (N=1464) %
Any	88.1	36.0	89.3	71.7
Statin	80.4	32.1	85.7	66.8
Fibrate	9.8	3.4	13.2	11.6
Ezetimibe	21.7	4.8	22.9	10.5
Fish oil	1.4	2.8	2.9	3.6
PCSK9 inhibitor	2.1	0.3	1.7	0.5

Total may be greater than 100% due to patients being on multiple agents

Treatment with antihypertensives was higher in patients with existing CVD. In patients with T1DM, over 7 in 10 patients with CVD were treated with one or more antihypertensive medications, compared to about 3 in 10 patients without CVD. In patients with T2DM, over 8 in 10 patients with CVD were treated with antihypertensives, compared to over 6 in 10 patients without CVD (Table 23).

TABLE 23. ANTIHYPERTENSIVE MEDICATIONS BY DIABETES TYPE AND CARDIOVASCULAR DISEASE STATUS

TREATMENT	T1DM		T2DM	
	CVD (N=143) %	NO CVD (N=1087) %	CVD (N=754) %	NO CVD (N=1464) %
Any	74.8	28.3	86.6	65.8
ACE Inhibitor	37.1	14.2	31.3	26.3
ARB	26.6	10.8	33.3	29.6
Calcium channel blocker	28.0	8.6	28.4	22.5
Thiazides/other diuretics	24.5	3.7	21.5	11.0
Beta blocker	35.7	3.7	45.7	14.6

Patients with CVD were more likely to be treated with antiplatelets and anticoagulants. In patients with T1DM, more than 6 in 10 patients were treated with antiplatelets (6 in 10 with aspirin and almost 2 in 10 with other antiplatelets) and almost 2 in 10 patients treated with anticoagulants. Almost 1 in 10 patients without CVD were treated with antiplatelets and a minority were treated with anticoagulants. In patients with T2DM and CVD, a similar proportion of patients with T1DM and CVD were treated with antiplatelets and anticoagulants (almost 6 in 10 with aspirin, 2 in 10 with other antiplatelets, and 2 in 10 with anticoagulants). In patients with T2DM and without CVD, about 2 in 10 patients were treated with antiplatelets and 1 in 20 patients with anticoagulants (Table 24).

TABLE 24. ANTIPLATELET AND ANTICOAGULANT MEDICATIONS BY DIABETES TYPE AND CARDIOVASCULAR DISEASE STATUS

TREATMENT	T1DM		T2DM	
	CVD (N=143) %	NO CVD (N=1085) %	CVD (N=757) %	NO CVD (N=1464) %
Aspirin and/or other antiplatelets	66.4	7.9	65.6	19.5
Aspirin only	60.8	7.6	57.7	18.0
Other antiplatelets only	14.7	0.6	19.9	1.9
Anticoagulants	17.5	2.0	21.0	6.1

Patients with CVD were more likely to be treated with SGLT2 inhibitors. In patients with T1DM, 1 in 10 patients with CVD were treated with SGLT2 inhibitors and over 1 in 20 patients were treated with GLP-1 agonists or GLP-1/GIP dual agonists, compared to a minority of patients without CVD. In patients with T2DM, almost 6 in 10 patients with CVD were treated with SGLT2 inhibitors and almost 5 in 10 patients without CVD. Treatment with GLP-1 agonists or GLP-1/GIP dual agonists was comparable in patients with T2DM, with and without CVD, with over 3 in 10 patients on GLP-1 agonists or GLP-1/GIP dual agonist therapy (Table 25).

TABLE 25. OTHER CARDIORENAL PROTECTIVE MEDICATIONS BY DIABETES TYPE AND CARDIOVASCULAR DISEASE STATUS

TREATMENT	T1DM		T2DM	
	CVD (N=143) %	NO CVD (N=1087) %	CVD (N=757) %	NO CVD (N=1464) %
SGLT2 inhibitor	8.4	1.9	59.0	45.6
GLP-1 agonist or GLP-1/GIP dual agonist	5.6	4.3	32.4	35.6

MANAGEMENT OF CARDIOVASCULAR DISEASE

There were 612 patients with existing CVD and data available for LDL cholesterol and lipid modifying therapy. Of these patients, more than 4 in 10 patients had LDL cholesterol levels above target (≥ 1.8 mmol/L). Over 1 in 10 patients with an LDL cholesterol level above target were not receiving lipid modifying therapy, reflecting a prescribing gap, which may include either provider non-prescription, patient non-adherence, or medication intolerance (Figure 14).

Of the 558 patients with CVD on lipid modifying therapy, 4 in 10 patients had LDL cholesterol levels not meeting target, reflecting a treatment gap (Figure 15).

FIGURE 14. PRESCRIBING GAP IN LIPID MODIFYING THERAPY FOR PATIENTS WITH CARDIOVASCULAR DISEASE (N=267)

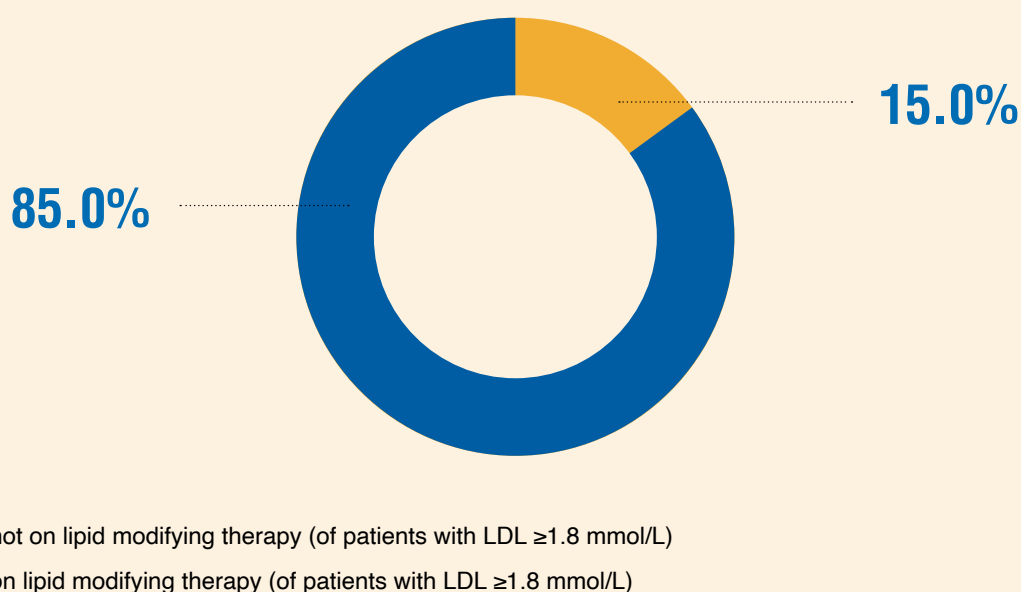
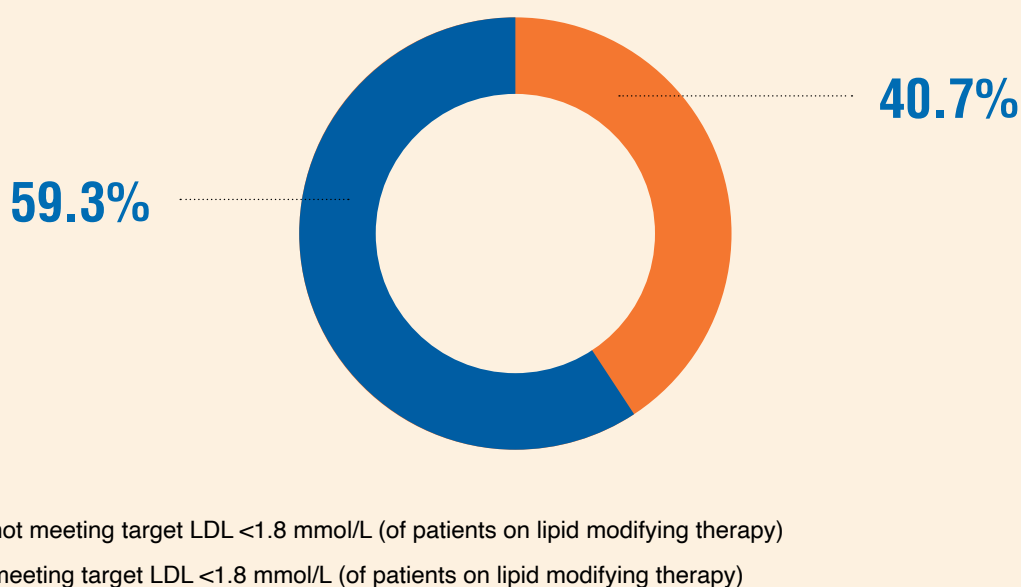


FIGURE 15. TREATMENT GAP IN LIPID MODIFYING THERAPY FOR PATIENTS WITH CARDIOVASCULAR DISEASE (N=558)



There were 884 patients with existing CVD and data available for blood pressure and antihypertensive therapy. Of those patients, more than 6 in 10 patients were above target blood pressure, and of those above targets, about 1 in 10 patients were not receiving antihypertensive therapy, reflecting a prescribing gap (Figure 16).

Among the 748 patients receiving antihypertensive therapy, over 6 in 10 patients were not meeting target blood pressure, reflecting a large treatment gap (Figure 17).

FIGURE 16. PRESCRIBING GAP IN ANTIHYPERTENSIVE THERAPY FOR PATIENTS WITH CARDIOVASCULAR DISEASE (N=574)

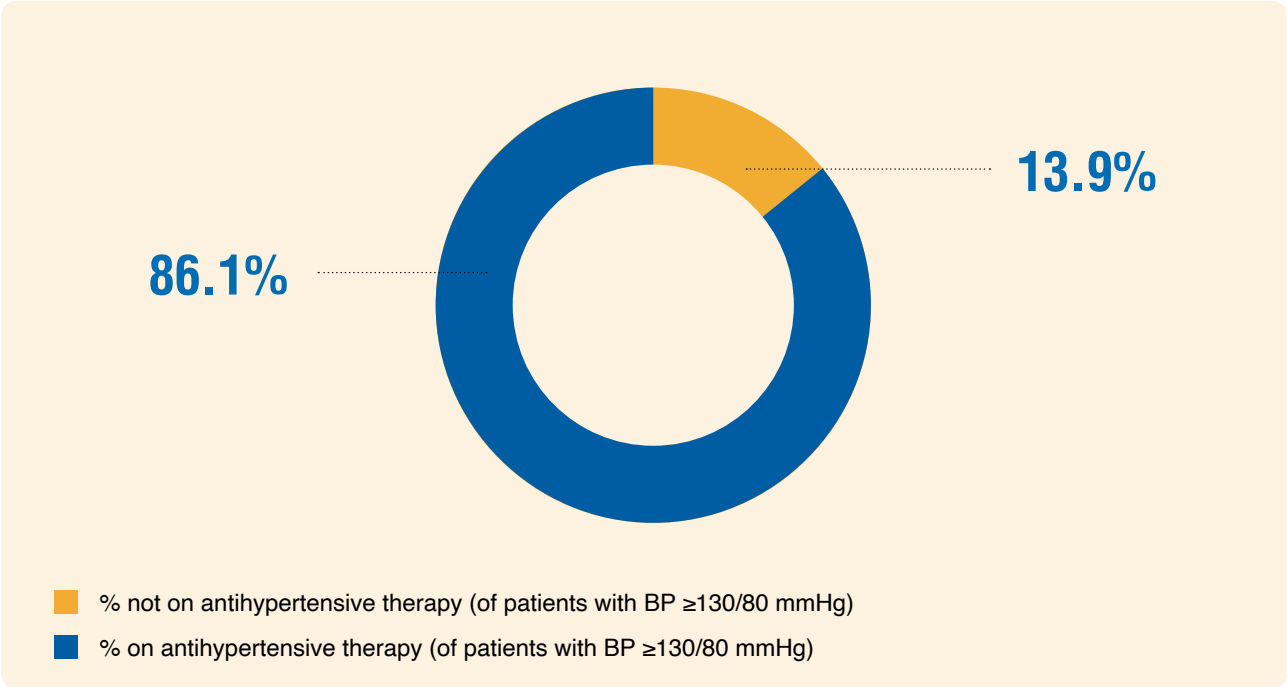


FIGURE 17. TREATMENT GAP IN ANTIHYPERTENSIVE THERAPY FOR PATIENTS WITH CARDIOVASCULAR DISEASE (N=748)

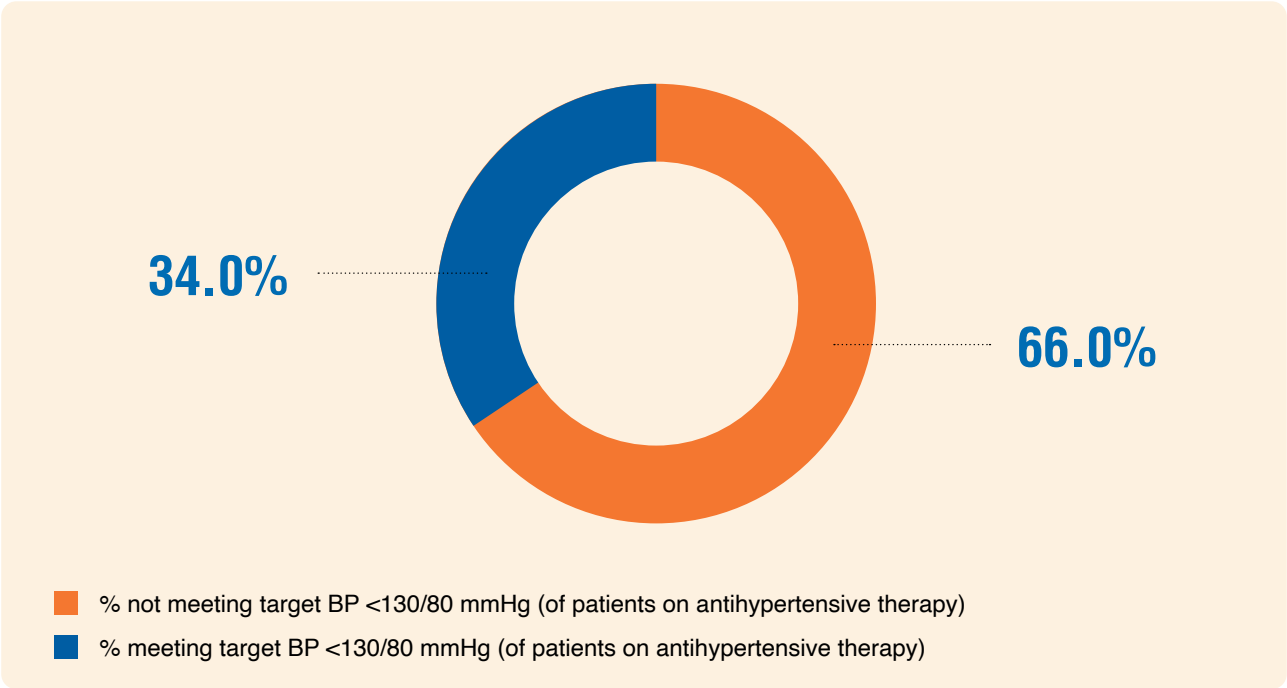
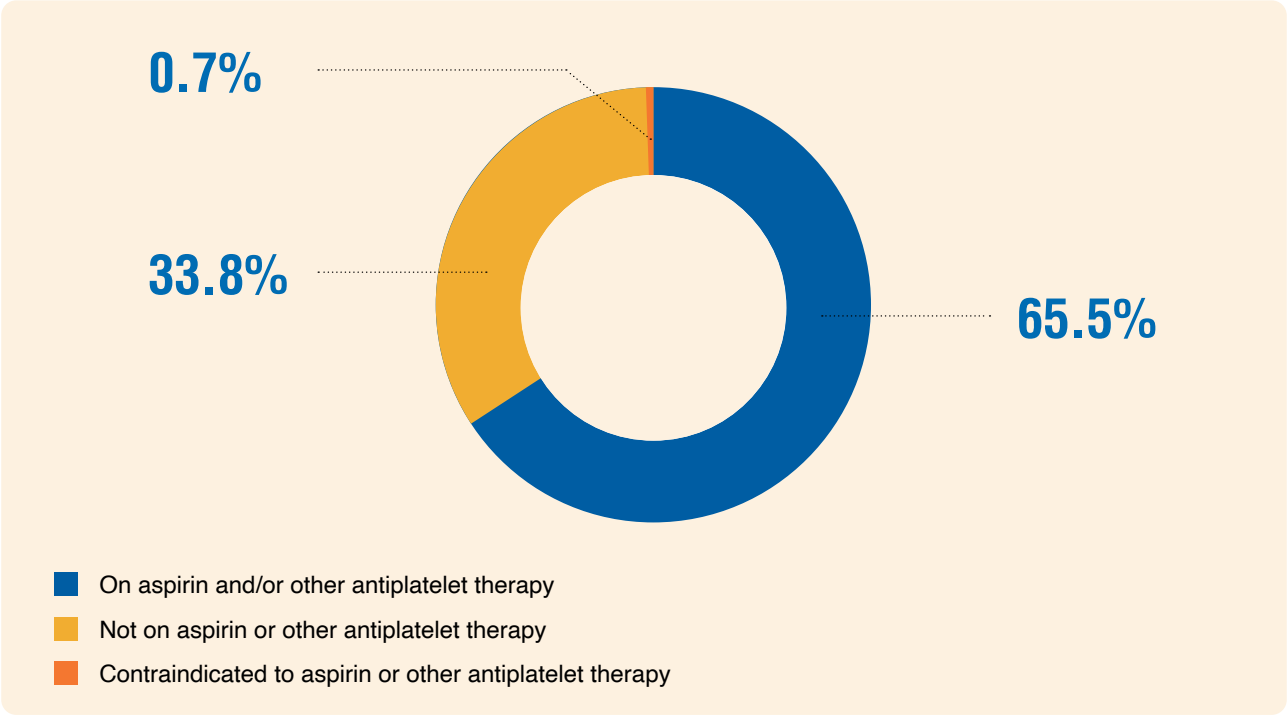


Figure 18 demonstrates antiplatelet use in patients with CVD (including myocardial infarction, CABG/angioplasty, stroke, congestive cardiac failure or peripheral vascular disease).

Among those with CVD, more than 6 in 10 patients reported use of aspirin and/or other antiplatelet therapies, while about 3 in 10 patients reported no antiplatelet use. A minority of patients had a contraindication to aspirin and/or other antiplatelet therapies.

FIGURE 18. ANTIPLATELET THERAPY USE IN PATIENTS WITH CARDIOVASCULAR DISEASE (N=917)



A photograph of a woman with long dark hair, wearing a white polo shirt and a black watch, laughing heartily while sitting at a table outdoors. She is holding a black coffee cup. In the foreground, the back of a man's head and shoulders are visible, partially obscuring the view. The background shows green foliage and a brick wall.

SECTION 4

CLINICAL PERFORMANCE INDICATORS

BENCHMARKING TO NATIONAL TREATMENT TARGETS

The data collected for ADCQR 2025 as compared to the Royal Australian College of General Practitioners evidence-based guidelines for the management of type 2 diabetes,²¹ National Heart Foundation of Australia blood pressure and lipid guidelines,^{22, 23} and the Australian Diabetes Society (ADS) position statement on glycaemic targets²⁴ are summarised in Table 26.

These data provide a snapshot of the overall performance of participating centres with respect to key treatment targets and clinical indicators.

Table 26 demonstrates key data against benchmarking and treatment targets for patients with diabetes. For ease of interpretation, data in this table are presented without SD and IQR.

Glycaemic control targets were poorly met, with the mean (and median) HbA1c for both T1DM and T2DM being above target, with 3 in 10 patients with T1DM and a similar proportion with T2DM meeting target. The attainment of lipid targets was fair, with almost 5 in 10 patients meeting total cholesterol target, almost 5 in 10 patients meeting the LDL cholesterol target, over 7 in 10 patients meeting the HDL cholesterol target, and 7 in 10 patients meeting the triglyceride target. The target for non-HDL, which has been shown to be an important predictor of CVD,²⁵ was met by less than 4 in 10 patients. In regard to blood pressure and weight management, almost 5 in 10 patients met the blood pressure target of <130/80 mmHg, and only 2 in 10 patients met the BMI target, with patients with T2DM having a higher mean BMI than patients with T1DM.

TABLE 26. BENCHMARKING TO NATIONAL TREATMENT TARGETS

RISK FACTOR	TARGET	MEAN	% MEETING TARGET
HbA1c (%) overall	≤7.0*	8.3	29.0
HbA1c (%) T1DM	≤7.0*	8.1	29.5
HbA1c (%) T2DM	≤7.0*	8.4	28.9
HbA1c (%) overall, median	≤7.0*	7.9	29.1
HbA1c (%) T1DM, median	≤7.0*	7.8	29.5
HbA1c (%) T2DM, median	≤7.0*	7.9	28.9
Systolic BP (mmHg)	<130	132	47.3
Diastolic BP (mmHg)	<80	77	57.7
Total cholesterol (mmol/L)	<4.0	4.3	44.1
HDL cholesterol (mmol/L)	≥1.0	1.3	76.8
LDL cholesterol (mmol/L)	<2.0	2.2	46.5
Non-HDL cholesterol (mmol/L)	<2.5	3.0	38.6
Triglycerides (mmol/L) [†] , median	<2.0	1.6	72.1
BMI (kg/m ²) overall	<25	30.6	22.3
BMI (kg/m ²) T1DM	<25	27.9	34.6
BMI (kg/m ²) T2DM	<25	32.1	14.8

**In 2009, the Australian Diabetes Society published a position statement describing the need for individualisation of glycaemic targets.²² The key conclusions were that for most people with diabetes the general HbA1c target is 7.0% (53 mmol/mol), however*

- in people without known CVD, a long duration of diabetes, severe hypoglycaemia or another contraindication, the HbA1c target is ≤6.5% (48 mmol/mol)*
- in people with reduced hypoglycaemia awareness or major comorbidities, the target may increase to 8.0% (64 mmol/mol)*
- in people with limited life expectancy, aim for symptom control*
- in women planning a pregnancy, aim for the tightest achievable control without severe hypoglycaemia before and during pregnancy; preferably ≤6.0% (42 mmol/mol)*

For this analysis, a HbA1c target of 7.0% or less was applied to all patients.

[†] Reported as median as data were not normally distributed

NATIONAL CLINICAL MANAGEMENT GUIDELINES FOR DIABETES

National evidence-based guidelines for the clinical management of diabetes²¹ emphasise the importance of patient assessment and management with regards to blood glucose control, blood pressure, lipids, BMI, eyes, foot and kidney function. The data below indicate process and outcome indicators based on these clinical management guidelines.

BLOOD GLUCOSE CONTROL

Process: 95.0% of patients had a HbA1c measurement recorded.

Outcome:		Mean	Median (IQR)
All patients	Overall HbA1c (%):	8.3 ± 2.0	7.9 (6.9, 9.2)
T1DM	Overall HbA1c (%):	8.1 ± 1.8	7.8 (6.9, 8.8)
	Initial visit, HbA1c (%):	8.8 ± 2.3	8.5 (7.2, 10.0)
	Follow-up visit, HbA1c (%):	8.0 ± 1.7	7.7 (6.9, 8.8)
T2DM	Overall HbA1c (%):	8.4 ± 2.0	7.9 (6.9, 9.3)
	Initial visit, HbA1c (%):	9.0 ± 2.4	8.5 (7.1, 10.2)
	Follow-up visit, HbA1c (%):	8.2 ± 1.9	7.9 (6.9, 9.2)

BLOOD PRESSURE

Process: 94.5% of patients had blood pressure recorded, with the majority (91.7%) measured in clinic and 8.3% self-reported. Overall, 58.7% of patients were prescribed antihypertensive treatment. Of these patients, 40.8% were on an ACE inhibitor, 41.2% on an ARB, 33.3% on a calcium channel blocker, 31.8% on a beta blocker, 19.4% on a thiazide or other diuretic and 9.4% on an alternative antihypertensive therapy.

Outcome: Overall, 33.5% achieved a blood pressure of <130/80 mmHg, and 64.5% achieved a blood pressure <140/90 mmHg.

Overall blood pressure			
<130/80 mmHg:	35.0%	≥130/80 mmHg:	65.0%
<140/90 mmHg:	67.1%	≥140/90 mmHg:	32.9%
Aged ≤60 years			
<130/80 mmHg:	35.7%	≥130/80 mmHg:	64.3%
<140/90 mmHg:	71.1%	≥140/90 mmHg:	28.9%
Aged >60 years			
<130/80 mmHg:	34.4%	≥130/80 mmHg:	65.6%
<140/90 mmHg:	63.6%	≥140/90 mmHg:	36.4%

LIPIDS

Process:

72.6% of patients had a total cholesterol level recorded, 64.8% had an LDL cholesterol level, 65.9% had an HDL cholesterol level and 67.8% had a triglyceride level recorded. Overall, 60.2% of patients were on statin therapy, 11.7% on ezetimibe, 9.2% on fibrate, 3.0% on fish oil and 0.7% on a PCSK9 inhibitor.

Outcome:

Total cholesterol			
<4.0 mmol/L:	44.1%	≥4.0 mmol/L:	55.9%
LDL cholesterol			
<2.0 mmol/L:	46.5%	≥2.0 mmol/L:	53.5%
HDL cholesterol			
≥1.0 mmol/L:	76.8%	<1.0 mmol/L:	23.2%
Triglyceride			
<2.0 mmol/L:	72.1%	≥2.0 mmol/L:	27.9%
Non-HDL cholesterol			
<2.5 mmol/L:	38.6%	≥2.5 mmol/L:	61.4%

BODY MASS INDEX (KG/M²)

Process:

97.0% of patients had a weight measurement recorded and 95.8% of patients had a height measurement recorded so that BMI could be calculated for 95.1% of patients overall.

Outcome:

<25 kg/m ² :	22.3%	25–<30 kg/m ² :	31.2%	≥30 kg/m ² :	46.5%
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EYES

Process:

79.8% had an eye review by an ophthalmologist, an optometrist or both in the last 12 months.

Outcome:

24.4% of patients had retinopathy and 14.2% had treatment for retinopathy.

FEET

Process:

59.2% had a foot check by a health professional in the last 12 months.

Outcome:

10.6% of patients had foot ulceration, 24.5% peripheral neuropathy and 5.1% recorded lower limb amputation.

KIDNEYS (ALBUMINURIA AND eGFR)

Process: 56.8% of patients had a urinary protein/albumin and eGFR recorded.

Outcome:

Adaptation of Prognosis of CKD by GFR and albuminuria categories: KDIGO 2024 ²⁰				Persistent albuminuria categories		
				Description and range		
				A1	A2	A3
				Normal to mildly increased AER <20 (mg/L) ACR <3 (mg/mmol)	Moderately increased AER 20–200 (mg/L) ACR 3–30 (mg/mmol)	Severely increased AER >200 (mg/L) ACR >30 (mg/mmol)
GFR categories (ml/min/1.73m ²) Description and range	G1	Normal or high	≥90	30.9%	8.2%	1.7%
	G2	Mildly decreased	60–89	22.0%	9.7%	2.5%
	G3a	Mildly to moderately decreased	45–59	5.8%	4.4%	1.9%
	G3b	Moderately to severely decreased	30–44	2.6%	3.4%	1.9%
	G4	Severely decreased	15–29	0.6%	1.2%	2.1%
	G5	Kidney failure	<15	0.0%	0.2%	0.9%

Green: low risk (if no other markers of kidney disease, no CKD); yellow: moderately increased risk; orange: high risk; red: very high risk.

BENCHMARKING TO INTERNATIONAL KEY METRIC TARGETS

The World Health Organisation (WHO) Global Diabetes Compact is a WHO-driven initiative uniting stakeholders around goals of reducing diabetes risk and ensuring that people with diabetes have equitable access to comprehensive, affordable care and prevention. The WHO Global Diabetes Compact have set out five key national metrics and target levels for United Nations member states to achieve.²⁶

Of all people,

1. At least 80% have been clinically diagnosed

Of all people with diagnosed diabetes,

2. 80% have HbA1c <8.0% (<63.9 mmol/mol)
3. 80% have blood pressure <140/90 mmHg
4. At least 60% of people ≥40 years are receiving statin therapy
5. Each person with type 1 diabetes has continuous access to insulin, blood glucose meters, and test strips

Table 27 demonstrates key data against benchmarking to key metric targets outlined by the WHO Global Diabetes Compact. Over 5 in 10 patients met the glycaemic target, almost 7 in 10 patients met the blood pressure target, over 9 in 10 patients met the statin therapy target, and all patients with T1DM had access to insulin.

TABLE 27. BENCHMARKING TO WHO GLOBAL DIABETES COMPACT KEY METRIC TARGETS

RISK FACTOR	TARGET	% MEETING TARGET
HbA1c (%)	<8	52.2
Blood pressure (mmHg)	<140/90	67.1
Statin therapy in adults aged ≥40 years	>60%	93.7
Continuous access to insulin – T1DM patients only	100%	100.0

Furthermore, the European Society of Cardiology (ESC) 2023 Guidelines for the Management of Cardiovascular Disease in Patients with Diabetes²⁷ were developed to guide prevention and management of the manifestations of CVD in patients with diabetes, and provide clear recommendations on how to reduce cardiovascular risk in patients with diabetes. These guidelines provide treatment and targets levels for lifestyle changes (diet/nutrition, physical activity and smoking cessation) and other modifiable risk factors including HbA1c, blood pressure, lipids and BMI.

Table 28 provides key data against benchmarking to targets outlined in the 2023 ESC Guidelines that were not already captured in this report. Almost 5 in 10 patients met the systolic blood pressure target of <130 mmHg, and more than 5 in 10 patients met the individualised systolic blood pressure target. Just over 7 in 10 patients met the antihypertensive therapy recommendations. About 7 in 10 patients met the LDL cholesterol target of <2.6 mmol/L and this was further reduced to almost 4 in 10 patients meeting target when a lower LDL cholesterol target of <1.8 mmol/L was employed. Of those who were considered overweight/obese, almost 3 in 10 patients were on GLP-1/GIP agonists.

TABLE 28. BENCHMARKING TO 2023 ESC GUIDELINES FOR CARDIOVASCULAR DISEASE MANAGEMENT IN DIABETES

RISK FACTOR	TARGET	% MEETING TARGET
Systolic BP (mmHg)	<130	47.3
Systolic BP (mmHg)	Individualised*	56.2
Antihypertensive therapy when BP ≥140/90 mmHg	100%	71.4
LDL cholesterol (mmol/L)	<2.6†	68.8
LDL cholesterol (mmol/L)	<1.8††	38.0
GLP-1/GIP agonists if BMI ≥25 kg/m ²	100%	28.4

*Individualised systolic BP targets where target is <130 mmHg if aged ≤65 years and target is 130-139 mmHg if aged >65 years

†Target for patients at high risk of CVD, defined as patients with DM without CVD and/or severe target organ damage (TOD) and not fulfilling the moderate risk category (patients with well controlled short-standing DM (e.g. <10 years), no evidence of TOD and no additional CVD risk factors)

††Target for patients at very high risk of CVD, defined as patients with DM with established CVD and/or severe TOD

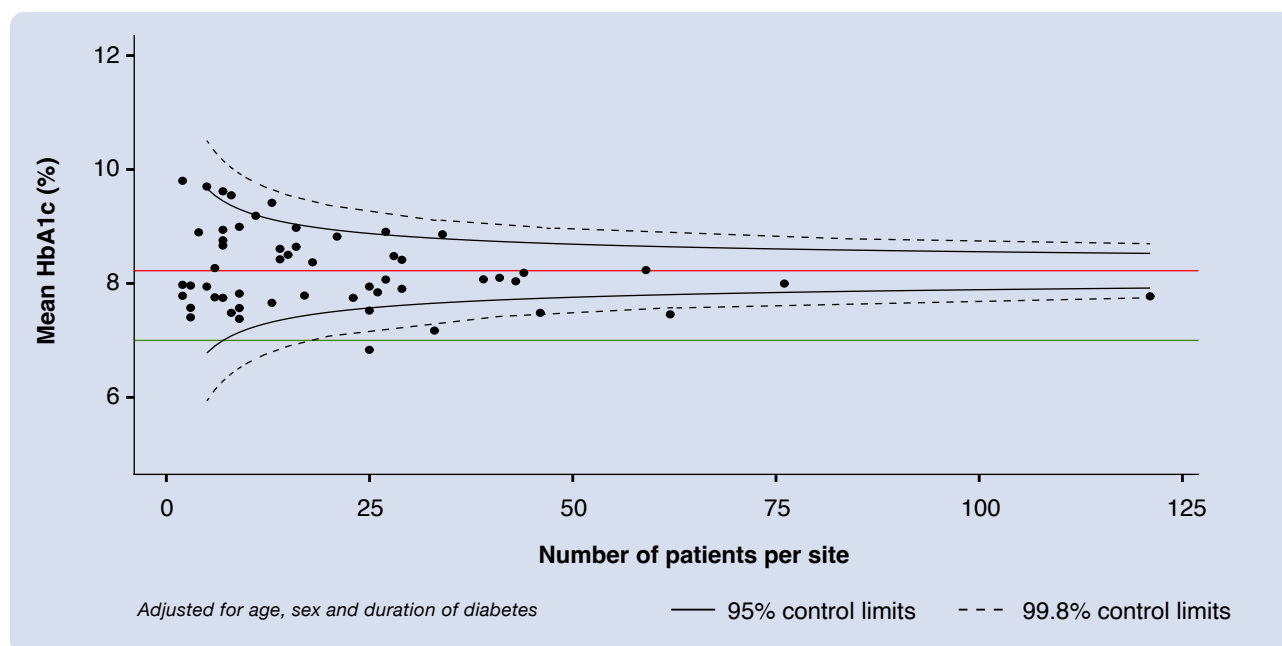
- eGFR <45 mL/min/1.73 m² irrespective of albuminuria
- eGFR 45-59 mL/min/1.73 m² and microalbuminuria (ACR 30-300 mg/g)
- Proteinuria (ACR >300 mg/g)
- Presence of microvascular disease in at least 3 different sites (e.g. microalbuminuria plus retinopathy plus neuropathy)

BENCHMARKING TO PARTICIPATING SITES

Herein are the funnel plots providing benchmarking to participating sites. To allow comparability across sites, who may see very different patient populations, clinical performance was adjusted for statistically significant, non-care related patient factors. As such, the mean level (highlighted by the red line) may be slightly different to that reported in the main results.

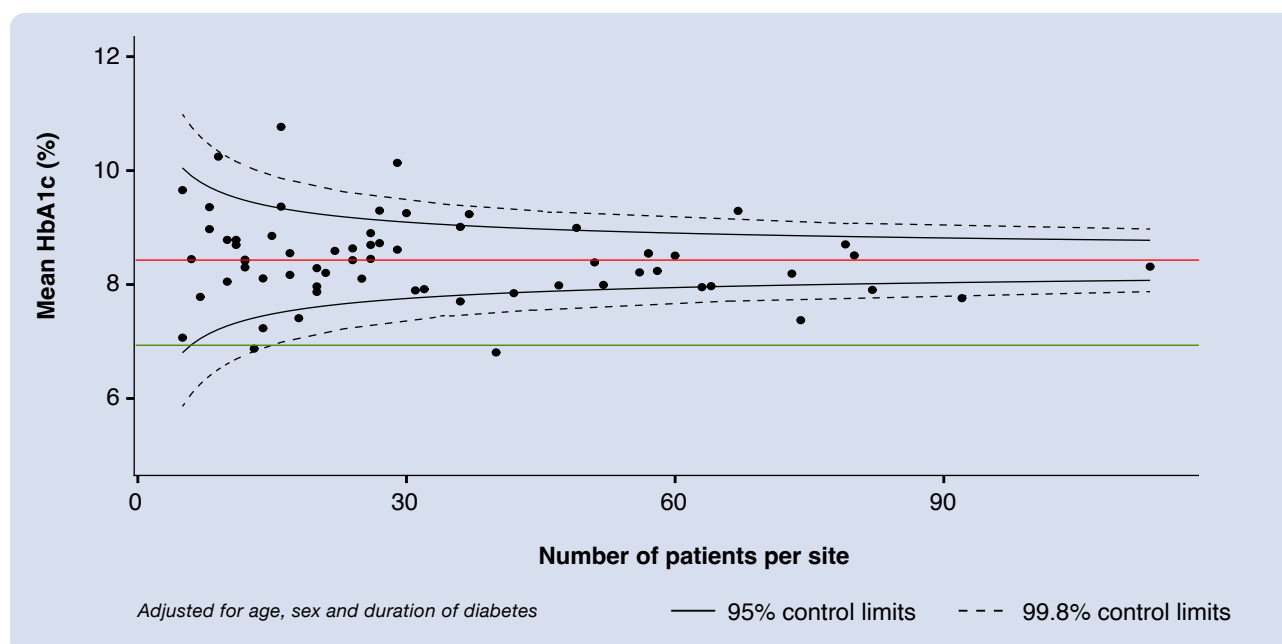
Among patients with T1DM, there were no outliers identified for mean HbA1c (mean of T1DM cohort = 8.2%), however, there were six sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the HbA1c treatment target ($\leq 7.0\%$).

FIGURE 19. MEAN HbA1c IN PATIENTS WITH T1DM BY SITE



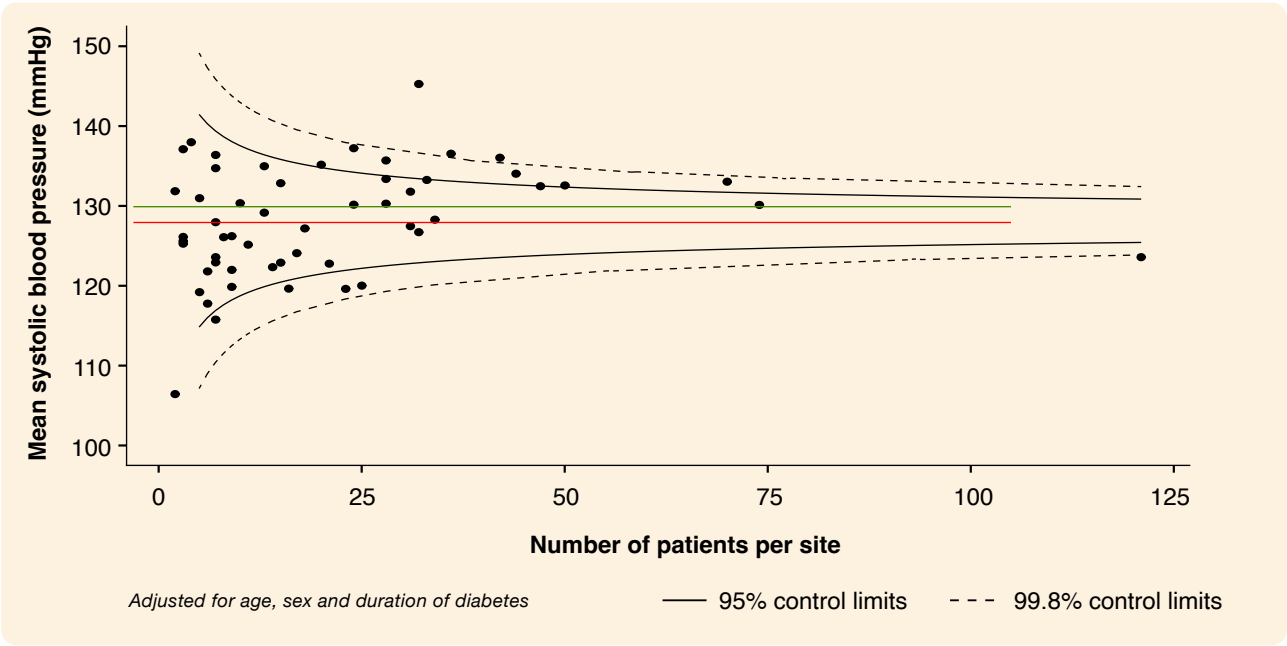
Among patients with T2DM, three outliers were present above the action control limit for mean HbA1c (mean of T2DM cohort = 8.4%). There were six sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the HbA1c treatment target ($\leq 7.0\%$).

FIGURE 20. MEAN HbA1c IN PATIENTS WITH T2DM BY SITE



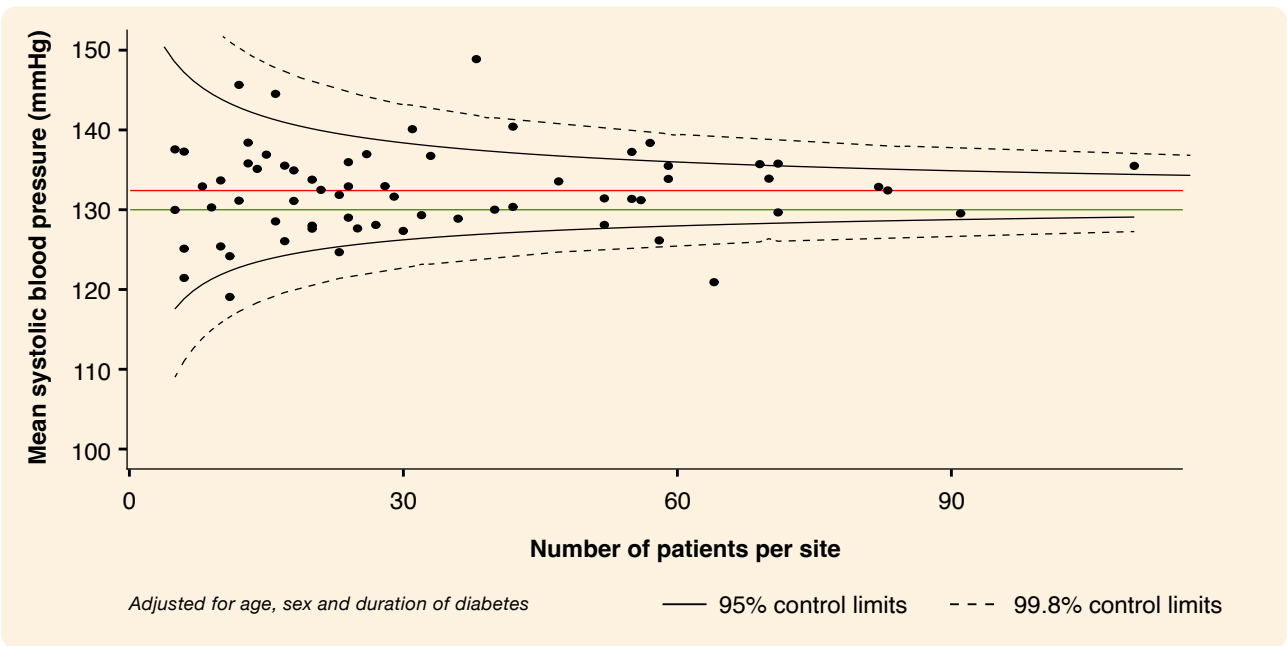
Among patients with T1DM, there were three outliers present above the action control limit for mean systolic blood pressure (mean of T1DM cohort = 128 mmHg). There were seven sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the blood pressure treatment target (<130 mmHg).

FIGURE 21. MEAN SYSTOLIC BLOOD PRESSURE IN PATIENTS WITH T1DM BY SITE



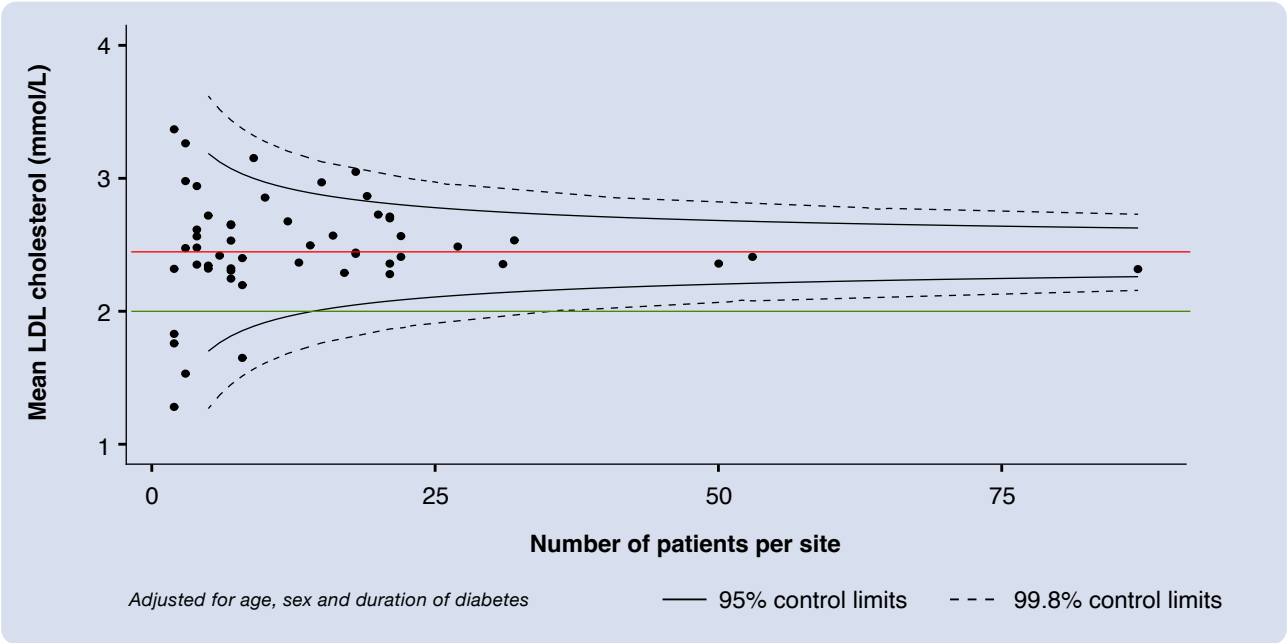
Among patients with T2DM, there were two outliers present above the 99.8% control limit for mean systolic blood pressure (mean of T2DM cohort = 132 mmHg), and six sites were positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the blood pressure treatment target (≤ 130 mmHg).

FIGURE 22. MEAN SYSTOLIC BLOOD PRESSURE IN PATIENTS WITH T2DM BY SITE



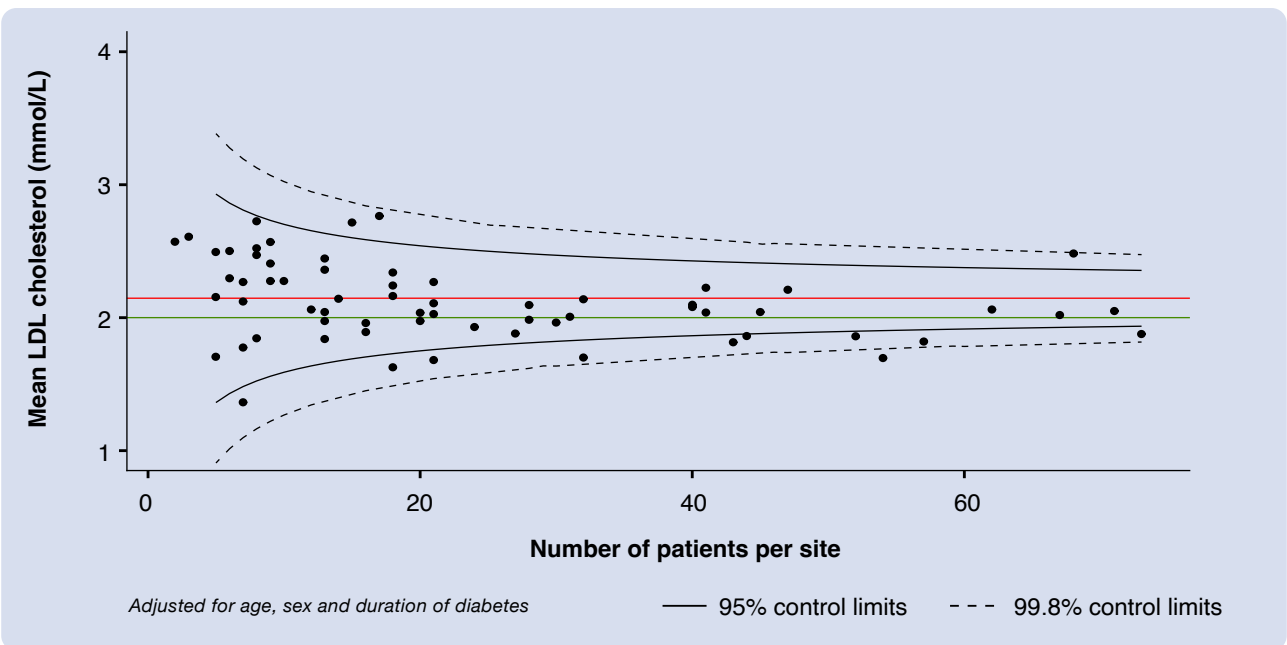
Among patients with T1DM, there was one outlier present above the 99.8% control limit for mean LDL cholesterol (mean of T1DM cohort = 2.4 mmol/L) and three sites were positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the LDL treatment target (<2.0 mmol/L).

FIGURE 23. MEAN LDL CHOLESTEROL IN PATIENTS WITH T1DM BY SITE



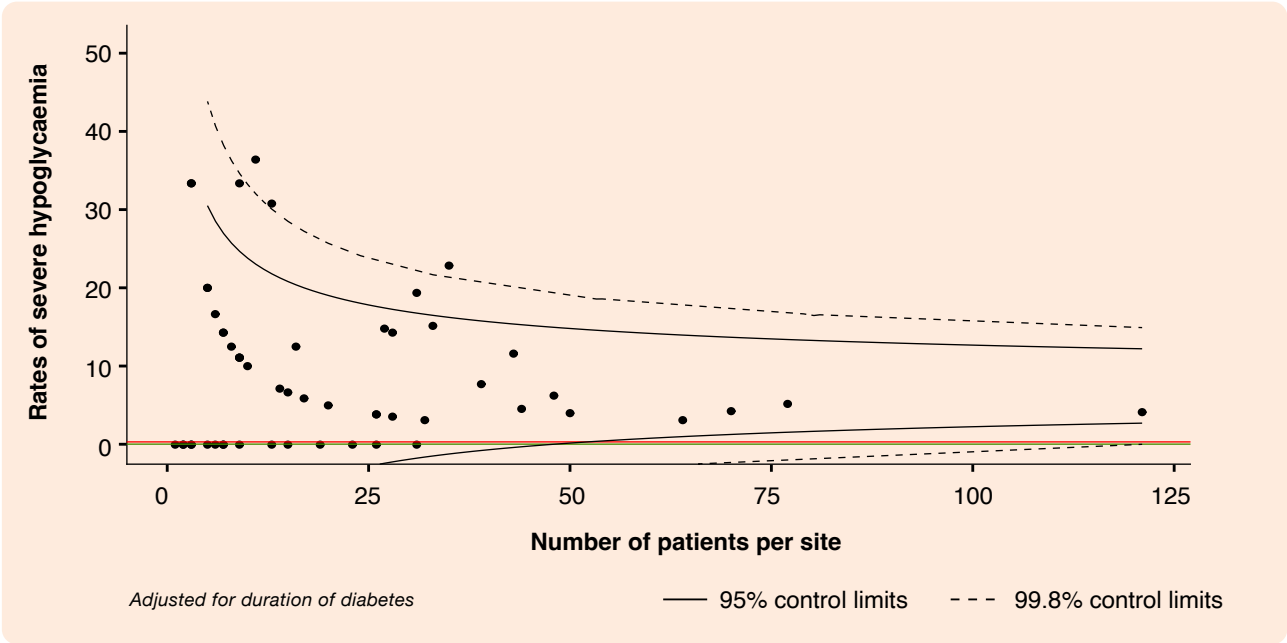
Among patients with T2DM, there were no outliers identified for mean LDL cholesterol (mean of T2DM cohort = 2.1 mmol/L), and there were three sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the LDL treatment target (<2.0mmol/L).

FIGURE 24. MEAN LDL CHOLESTEROL IN PATIENTS WITH T2DM BY SITE



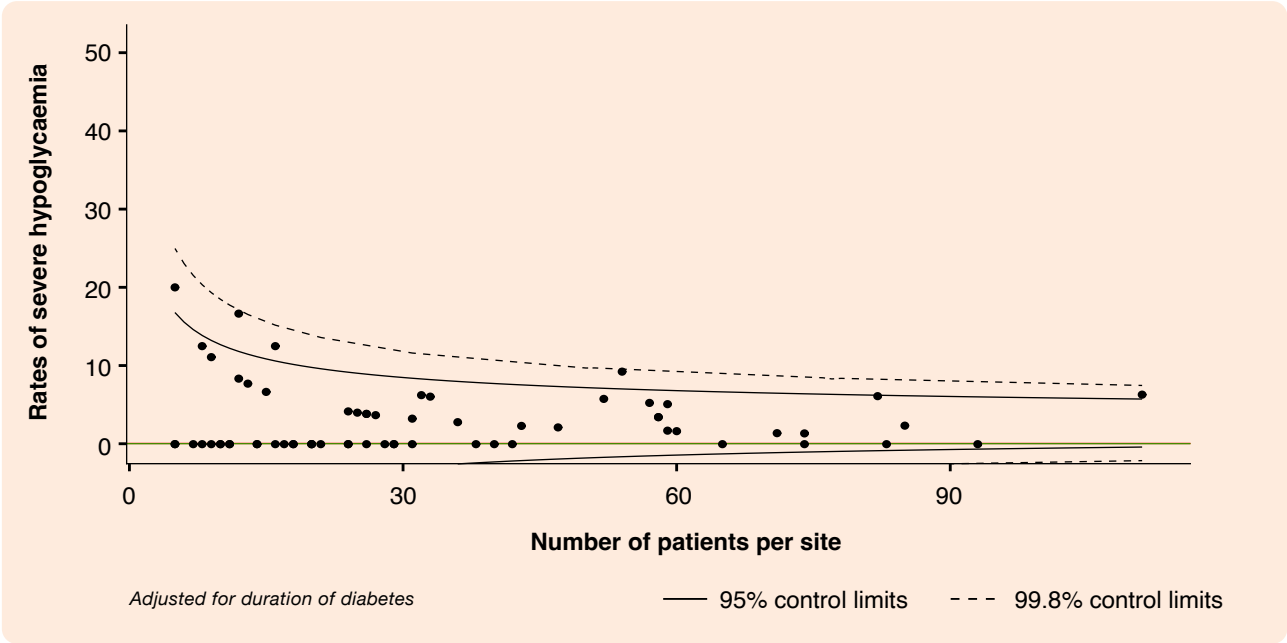
Among patients with T1DM, there were three outliers identified for severe hypoglycaemia (mean of T1DM cohort = 0.07%), and there were two sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the target severe hypoglycaemia event rate (0%).

FIGURE 25. RATES OF SEVERE HYPOGLYCAEMIA IN PATIENTS WITH T1DM IN THE LAST 12 MONTHS BY SITE



Among patients with T2DM, there were no outliers identified above the 99.8% action control limit for severe hypoglycaemia (mean of T2DM cohort = 0.03%), and there were six sites positioned above the 'alert' limit (but below the 'action' limit) and may be at risk of outlier performance. The green line represents the target severe hypoglycaemia event rate (0%).

FIGURE 26. RATES OF SEVERE HYPOGLYCAEMIA IN PATIENTS WITH T2DM IN THE LAST 12 MONTHS BY SITE



A photograph of an elderly woman with short, curly grey hair and red-rimmed glasses. She is wearing a purple long-sleeved shirt and is bent over, harvesting a large bunch of green onions in a garden. She is wearing grey gloves on her hands. The background shows a wooden fence and green foliage. The image has a blue gradient overlay on the left side where the text is located.

SECTION 5

HEALTH OUTCOMES BY DIABETES TYPE

BLOOD GLUCOSE CONTROL

Mean and median HbA1c was slightly higher in patients with T2DM compared with patients with T1DM and other type of diabetes (Table 29). In patients with T1DM, HbA1c was lower in patients using CGM compared to patients not using CGM. In patients with T2DM, HbA1c was higher in patients using CGM than in those not using CGM (Table 30).

TABLE 29. BLOOD GLUCOSE CONTROL BY DIABETES TYPE

DIABETES TYPE	N	HBA1C (%)	HBA1C (MMOL/MOL) MEAN ± SD
Overall	3519	8.3 ± 2.0	66.8 ± 21.4
T1DM	1193	8.1 ± 1.8	64.8 ± 19.4
T2DM	2222	8.4 ± 2.0	67.8 ± 22.0
Other (Secondary causes)	96	8.1 ± 2.2	65.5 ± 24.3
MEDIAN (IQR)			
Overall	3521	7.9 (6.9, 9.2)	63.0 (52.0, 77.0)
T1DM	1198	7.8 (6.9, 8.8)	62.0 (52.0, 73.0)
T2DM	2219	7.9 (6.9, 9.3)	63.0 (52.0, 78.0)
Other (Secondary causes)	96	7.7 (6.7, 8.9)	61.0 (50.0, 74.3)

TABLE 30. BLOOD GLUCOSE CONTROL BY BLOOD GLUCOSE MONITORING METHOD AND BY DIABETES TYPE

DIABETES TYPE	N	HBA1C (%)	HBA1C (MMOL/MOL) MEAN ± SD
T1DM			
CGM	1080	8.0 ± 1.8	64.1 ± 19.3
No CGM	113	8.7 ± 1.8	71.9 ± 19.1
T2DM			
CGM	196	8.7 ± 2.2	71.9 ± 24.6
No CGM	2026	8.3 ± 2.0	67.4 ± 21.7
MEDIAN (IQR)			
T1DM			
CGM	1080	7.7 (6.9, 8.7)	61.0 (52.0, 72.0)
No CGM	113	8.4 (7.5, 9.8)	68.0 (58.0, 84.0)
T2DM			
CGM	196	8.4 (7.2, 9.7)	68.0 (55.0, 83.2)
No CGM	2026	7.9 (6.9, 9.3)	63.0 (52.0, 78.0)

Data for patients with other (secondary causes) are not presented due to small patient numbers

BODY MASS INDEX

Of all patients captured, 97.0% reported weight, and 95.8% reported height. Table 31 shows the mean BMI of patients with diabetes. The mean BMI of patients with T1DM and other (secondary causes) was in the overweight range, while the mean BMI of patients with T2DM was in the obese range.

TABLE 31. BODY MASS INDEX BY DIABETES TYPE

DIABETES TYPE	BMI (KG/M ²)	
	N	MEAN ± SD
Overall	3523	30.6 ± 7.2
T1DM	1205	27.9 ± 5.9
T2DM	2214	32.1 ± 7.4
Other (Secondary causes)	96	28.2 ± 7.2

BLOOD PRESSURE

Table 32 presents the mean blood pressure for patients with T1DM and T2DM, as well as those on antihypertensive therapy. The mean blood pressure of patients with T1DM was 130/77 mmHg and therefore met the blood pressure target of <130/80 mmHg. The mean blood pressure of patients with T2DM was 133/77 mmHg and therefore was slightly higher than the blood pressure target of <130/80 mmHg but was less than the more modest target of <140/90 mmHg.

Mean blood pressure was typically higher in those patients taking antihypertensive medication, likely reflecting a treatment gap.

TABLE 32. BLOOD PRESSURE AND ANTIHYPERTENSIVE THERAPY BY DIABETES TYPE

ANTI-HYPERTENSIVE THERAPY	SYSTOLIC BP	DIASTOLIC BP
	MEAN ± SD	MEAN ± SD
T1DM (N=1178)		
Overall	130 ± 17	77 ± 10
On anti-hypertensive therapy	138 ± 18	77 ± 11
Not on anti-hypertensive therapy	125 ± 15	77 ± 10
T2DM (N=2198)		
Overall	133 ± 18	77 ± 11
On anti-hypertensive therapy	134 ± 18	76 ± 11
Not on anti-hypertensive therapy	129 ± 16	78 ± 9
Other (Secondary causes) (N=95)		
Overall	132 ± 18	79±11

Data stratified by antihypertensive therapy are not presented for patients with other (secondary causes) due to small patient numbers

LIPIDS

Mean total cholesterol, HDL and LDL cholesterol were higher in patients with T1DM compared with T2DM, but no differences were observed for non-HDL (Table 33). In contrast, median triglycerides were higher in patients with T2DM compared with T1DM.

TABLE 33. LIPIDS BY DIABETES TYPE

LIPIDS (MMOL/L)	N	MEAN ± SD
T1DM		
Total cholesterol	850	4.5 ± 1.1
HDL cholesterol	756	1.5 ± 0.5
LDL cholesterol	760	2.5 ± 0.9
Non-HDL cholesterol	755	3.0 ± 1.1
Triglyceride*, median (IQR)	826	0.9 (0.7, 1.3)
T2DM		
Total cholesterol	1771	4.1 ± 1.3
HDL cholesterol	1626	1.2 ± 0.4
LDL cholesterol	1583	2.1 ± 1.0
Non-HDL cholesterol	1621	3.0 ± 1.3
Triglyceride*, median (IQR)	1625	1.6 (1.2, 2.3)
Other (Secondary causes)		
Total cholesterol	63	4.7 ± 1.4
HDL cholesterol	54	1.4 ± 0.5
LDL cholesterol	54	2.3 ± 1.1
Non-HDL cholesterol	54	3.2 ± 1.2
Triglyceride*, median (IQR)	59	0.7 (0.0, 1.4)

*Reported as median (IQR) as data are not normally distributed

Table 34 shows that patients on lipid modifying therapy had lower mean/median cholesterol levels than patients not on lipid modifying therapy. On average, patients with T1DM on lipid modifying therapy met HDL (≥ 1.0 mmol/L) and triglyceride (< 2.0 mmol/L) targets but did not meet the total cholesterol (< 4 mmol/L), LDL (< 2.0 mmol/L) or non-HDL (< 2.5 mmol/L) targets. On average, patients with T2DM on lipid modifying therapy met total cholesterol, HDL, LDL and triglyceride targets, but did not meet the non-HDL targets.

TABLE 34. LIPIDS AND LIPID MODIFYING THERAPY USE BY DIABETES TYPE

LIPIDS (MMOL/L)	ON LIPID MODIFYING THERAPY	NOT ON LIPID MODIFYING THERAPY
	MEAN ± SD	
T1DM		
Total cholesterol	4.3 ± 1.2	4.8 ± 1.0
HDL cholesterol	1.5 ± 0.5	1.5 ± 0.4
LDL cholesterol	2.2 ± 0.9	2.8 ± 0.9
Non-HDL cholesterol	2.8 ± 1.1	3.2 ± 1.0
Triglyceride*, median (IQR)	1.0 (0.7, 1.4)	0.9 (0.7, 1.2)
T2DM		
Total cholesterol	4.0 ± 1.3	4.9 ± 1.1
HDL cholesterol	1.2 ± 0.4	1.2 ± 0.3
LDL cholesterol	1.9 ± 0.9	2.8± 0.9
Non-HDL cholesterol	2.8 ± 1.3	3.7 ± 1.1
Triglyceride*, median (IQR)	1.6 (1.2, 2.3)	1.6 (1.2, 2.3)

*Reported as median (IQR) as data are not normally distributed

Data stratified by lipid lowering therapy are not presented for patients with other (secondary causes) due to small patient numbers

EYE COMPLICATIONS

Table 35 show eye testing and complications data among patients with T1DM and T2DM. Most eye complications were more common in patients with T1DM, except for cataract which was more common in patients with T2DM. However, similar proportions of patients with T1DM and T2DM self-reported attendances at an eye specialist in the last 12 months. A minority of patients with T1DM and T2DM reported blindness.

TABLE 35. PREVALENCE OF EYE TESTING AND COMPLICATIONS BY DIABETES TYPE

EYE TESTING AND COMPLICATIONS	N	%
T1DM		
Attended optometrist/ophthalmologist*	1048	81.1
Retinopathy	1211	27.6
Treatment for retinopathy	1201	17.6
Cataract	1201	17.5
Blindness	1195	2.3
T2DM		
Attended optometrist/ophthalmologist*	1739	79.6
Retinopathy	2161	23.5
Treatment for retinopathy	2133	12.9
Cataract	2160	33.9
Blindness	2125	2.4

*Attendances to optometrists/ophthalmologists reflect attendances in the last 12 months only

FOOT COMPLICATIONS

Table 36 highlights foot complications among patients with T1DM and T2DM. Compared to patients with T1DM, patients with T2DM were more likely to have self-reported a foot check by a health professional in the last 12 months. Foot complications including amputation were more common in patients with T2DM compared with T1DM. Almost 3 in 10 patients with T2DM reported peripheral neuropathy, more than 1 in 10 reported foot ulceration, and 1 in 10 reported peripheral vascular disease. A minority of patients with T1DM and T2DM reported lower limb amputation.

TABLE 36. PREVALENCE OF FOOT COMPLICATIONS BY DIABETES TYPE

FOOT CHECKS AND COMPLICATIONS	N	%
T1DM		
Foot check by health professional*	1043	54.8
Foot ulceration	1240	6.0
Peripheral vascular disease	1231	5.1
Peripheral neuropathy	1235	16.1
Lower limb amputation**	1232	2.7
Minor		2.2
Major		0.7
T2DM		
Foot check by health professional*	1736	62.6
Foot ulceration	2258	13.6
Peripheral vascular disease	2200	11.4
Peripheral neuropathy	2219	29.7
Lower limb amputation**	2202	6.6
Minor		5.7
Major		1.1

*Foot checks by a health professional were only captured in the last 12 months

**A small number of patients specified amputation was both major and minor

KIDNEY COMPLICATIONS

Almost twice as many patients with T2DM compared with T1DM had moderately/severely increased albuminuria. CKD was also more common in T2DM, with about 3 in 10 patients with T2DM reporting stage 3-5 CKD compared to just over 1 in 10 patients with T1DM. Stage 5 CKD (end stage kidney disease) was almost twice as common in patients with T2DM compared to T1DM (Table 37).

TABLE 37. KIDNEY COMPLICATIONS BY DIABETES TYPE

COMPLICATIONS	%	%
Albuminuria*	T1DM (N=698)	T2DM (N=1426)
Normal to mildly increased	77.7	54.9
Moderately increased	16.0	31.7
Severely increased	6.3	13.4
Chronic Kidney Disease *	T1DM (N=1080) [†]	T2DM (N=2144) [†]
Stage 1	58.8	33.1
Stage 2	28.0	36.8
Stage 3	8.1	20.8
Stage 4	1.2	3.0
Stage 5 ^{††}	3.9	6.2

*Reported in the last 12 months

[†]This N reflects the total number of patients with eGFR data and end stage kidney disease prevalence data used to estimate CKD stage

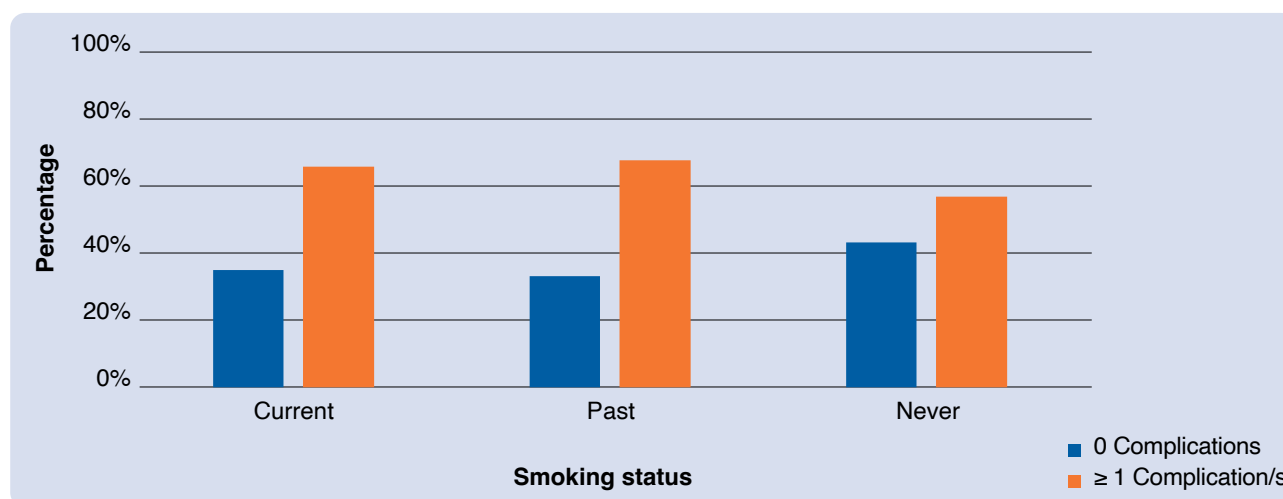
^{††}Stage 5 chronic kidney disease is defined as end stage kidney disease and included patients with an eGFR <15 mL/min/1.73m² and/or dialysis dependent (haemodialysis or peritoneal dialysis) and/or renal transplant recipient.



IMPACT OF SMOKING

Past smokers and current smokers recorded a similar proportion of complications, with almost 7 in 10 patients recording at least 1 complication (Figure 27).

FIGURE 27. DIABETES RELATED COMPLICATIONS BY SMOKING STATUS (N=2790)



A similar proportion of patients with T1DM and T2DM were current smokers. More specifically, of those with T1DM, over 1 in 10 patients were current smokers and over 2 in 10 patients were past smokers. Of those with T2DM, over 1 in 10 patients were current smokers and over 3 in 10 patients were past smokers (Table 38).

TABLE 38. SMOKING STATUS BY DIABETES TYPE

SMOKING STATUS	T1DM (N=994)	T2DM (N=1714)
	%	%
Current	15.3	13.7
Past	22.6	35.4
Never	62.1	50.9

MENTAL HEALTH SCREENING

Mental health screening was defined as screening using a validated questionnaire such as the Patient Health Questionnaire (PHQ-9) screening tool for depression, Generalised Anxiety Disorder scale (GAD-7) screening tool for anxiety and the Problem Areas In Diabetes (PAID) screening tool for diabetes distress.

Compared to patients with T2DM, patients with T1DM were more likely to be screened for mental health conditions. Of those with T1DM, about 1 in 10 patients were screened for depression, anxiety and/or diabetes distress. Of those with T2DM, about 1 in 20 patients were screened for mental health (Table 39).

TABLE 39. MENTAL HEALTH SCREENING IN THE LAST 12 MONTHS BY DIABETES TYPE

MENTAL HEALTH SCREENING	T1DM		T2DM	
	N	%	N	%
Depression*	1111	11.5	1955	6.3
Anxiety*	1105	9.2	1958	4.6
Diabetes Distress	1207	12.9	2150	5.4

* Screening for depression/anxiety was only applicable to those who were not already diagnosed in the last 12 months



SECTION 6

PATIENT REPORTED OUTCOMES

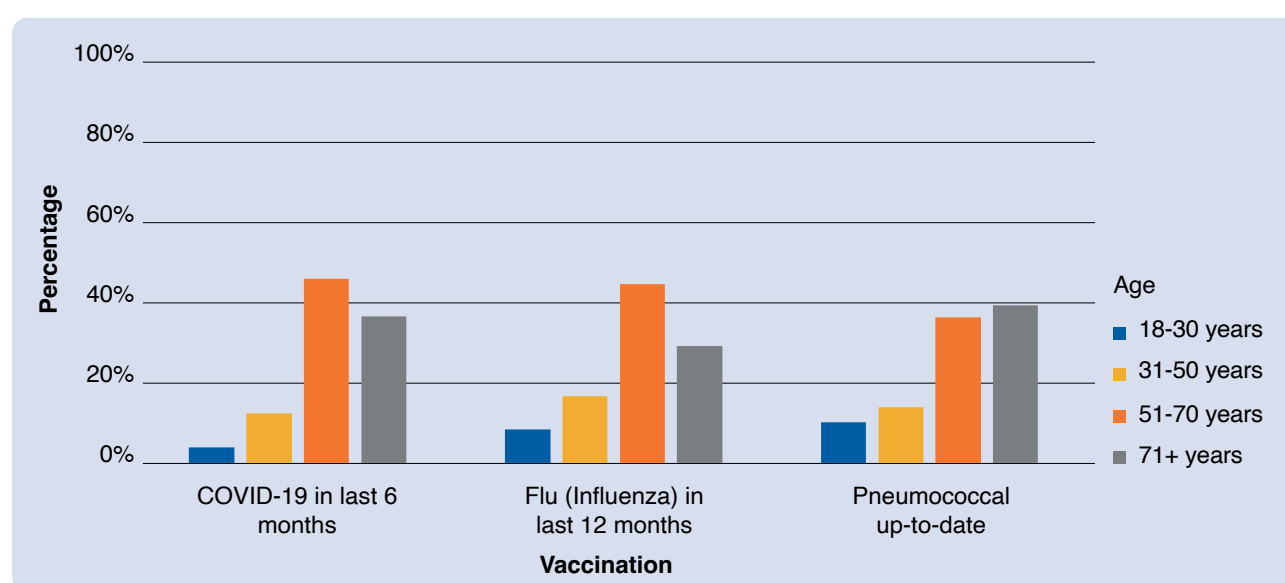
VACCINATIONS

About 6 in 10 patients self-reported vaccination against influenza in the last 12 months, 2 in 10 patients self-reported vaccination against COVID-19 in the last 6 months and almost 2 in 10 patients self-reported vaccination against pneumococcal was up-to-date (Table 40). Almost 5 in 10 patients were unsure if they were up-to-date with vaccination against pneumococcal. Those aged over 50 years were more likely to be vaccinated, with vaccination rates against COVID-19 and influenza highest in those aged over 51-70 years followed by those aged over 70 years (Figure 28).

TABLE 40. VACCINATIONS

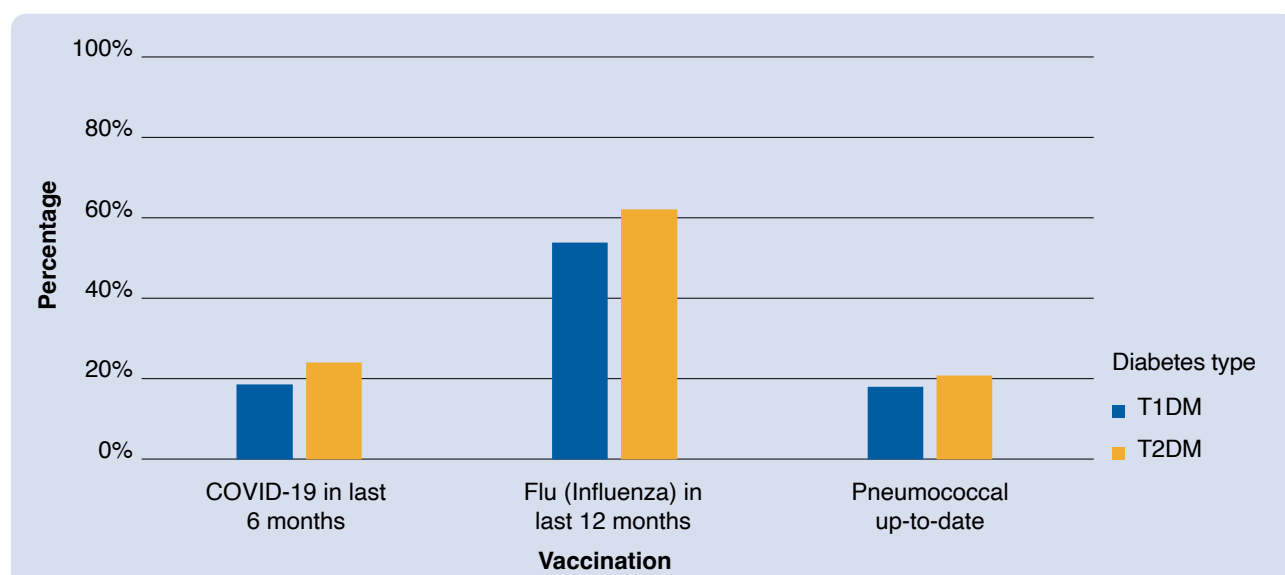
VACCINATION	N	%
COVID-19 in last 6 months	2869	21.7
Flu (Influenza) in last 12 months	2871	59.0
Pneumococcal up-to-date	2858	19.8

FIGURE 28. DISTRIBUTION OF PATIENTS VACCINATED BY AGE



Patients with T2DM were more likely to be vaccinated against COVID-19, influenza and pneumococcal compared to patients with T1DM (Figure 29).

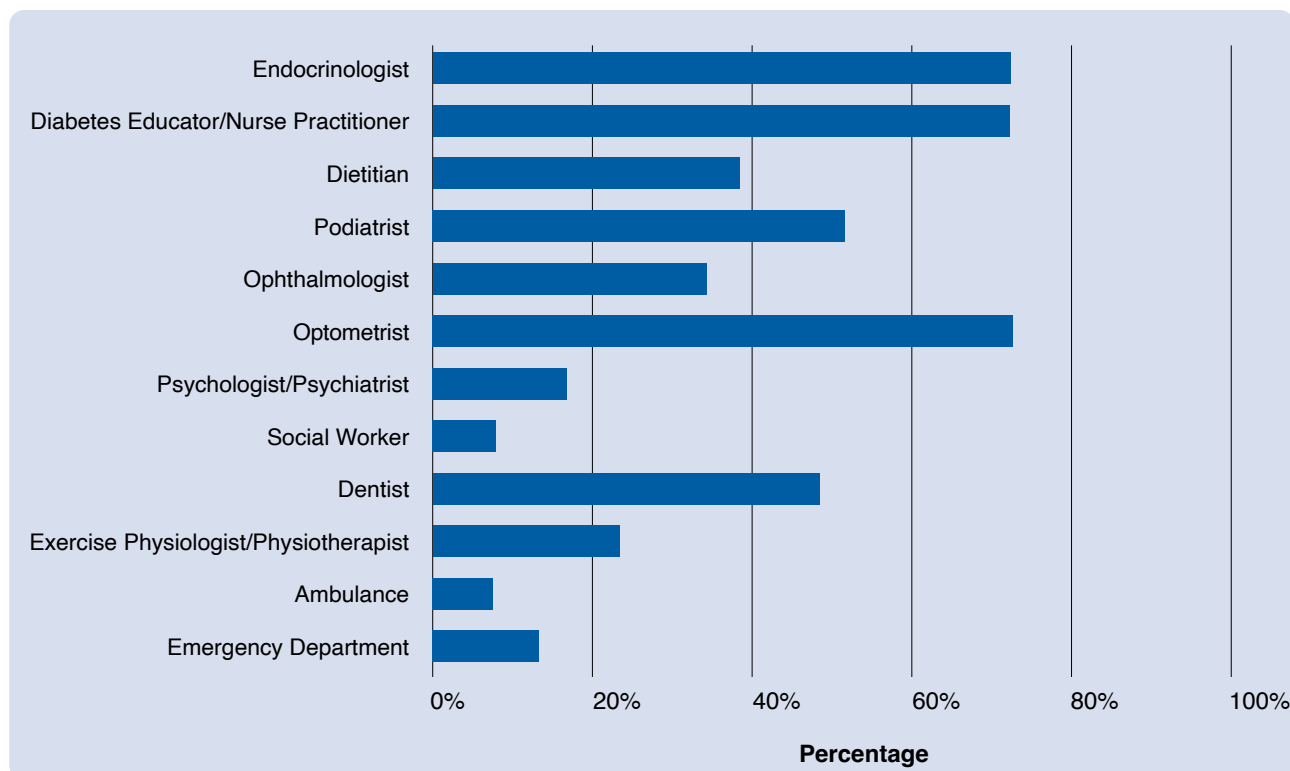
FIGURE 29. VACCINATIONS BY DIABETES TYPE



HEALTH PROFESSIONAL ATTENDANCES

Figure 30 presents health professional attendances in the last 12 months. Most patients self-reported consultations with endocrinologists (over 7 in 10 patients), and a similar proportion self-reported consultation with a diabetes educator or nurse practitioner. Over 7 in 10 patients self-reported consultations with an optometrist and over 3 in 10 consultations with an ophthalmologist. Over 5 in 10 patients self-reported consultations with a podiatrist, almost 5 in 10 consultations with a dentist, and almost 4 in 10 consultations with a dietitian. Almost 2 in 10 patients self-reported seeing a psychologist or psychiatrist. Emergency department and ambulance attendances were less common.

FIGURE 30. HEALTH PROFESSIONAL ATTENDANCES IN THE LAST 12 MONTHS



MEDICATION USE

The majority of patients self-reported that they usually take all of their medications as recommended (8 in 10 patients) (Table 41). Among those patients who do not take their medications as recommended, the average number of times this occurred was 4 times in the last two weeks.

TABLE 41. MEDICATION USE

MEDICATION USE	N	%
Not taken medication as recommended in the last 2 weeks	2869	18.8
Number of times, mean $\pm$ SD	3.8 $\pm$ 3.7	

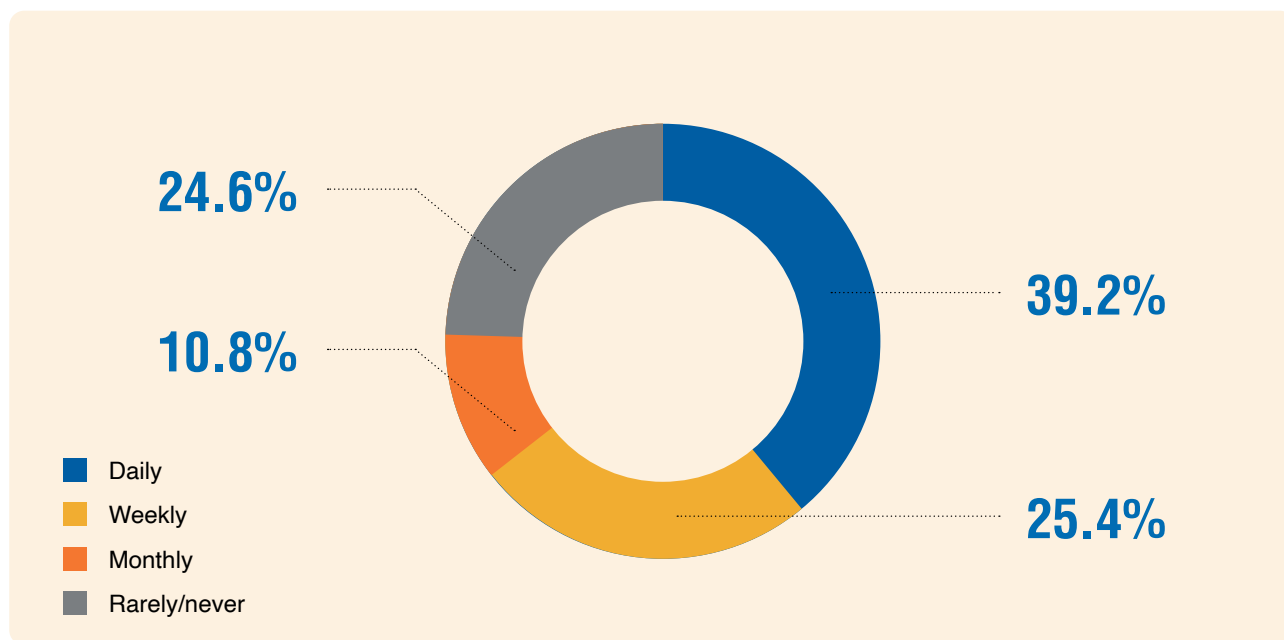
SELF-CARE PRACTICES

Patient self-care practices were collected on approximately 79.5% of patients.

FOOT CARE

About 4 in 10 patients reported self-checking their feet daily and over 2 in 10 self-checking their feet weekly. Over 2 in 10 patients reported rarely/never self-checking their feet (Figure 31).

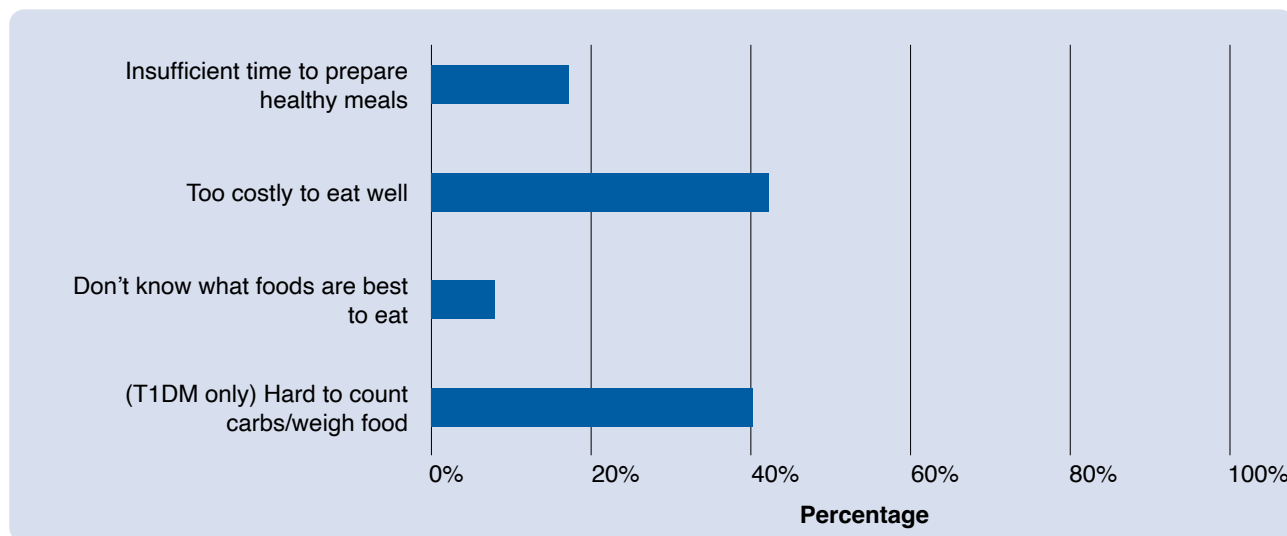
FIGURE 31. SELF-CHECKING OF FEET (N=2813)



NUTRITION/DIET MANAGEMENT

Patients with diabetes reported the greatest barrier for nutrition/diet management was the cost to eat well, followed by insufficient time to prepare healthy meals. A minority of patients reported they lack knowledge of what foods are best to eat (Figure 32). Of those with T1DM, about 4 in 10 patients reported it is too hard to count carbohydrates and weigh food.

FIGURE 32. PATIENT DIETARY PRACTICES (N=2872)



PHYSICAL ACTIVITY

Almost 4 in 10 patients self-reported that they engaged in sufficient physical activity (at least 150 total minutes of moderate to vigorous exercise per week), with over 6 in 10 patients not meeting recommended physical activity recommendations (with 3 in 10 patients rarely/never engaging in physical activity) (Figure 33). About 4 in 10 patients reported that they do muscle strengthening exercises in a usual week, including lifting weights or household tasks that involve lifting, carrying or digging while almost 6 in 10 patients reported that they do not undertake muscle strengthening exercises in a usual week (Figure 34).

FIGURE 33. PHYSICAL ACTIVITY (N=2864)

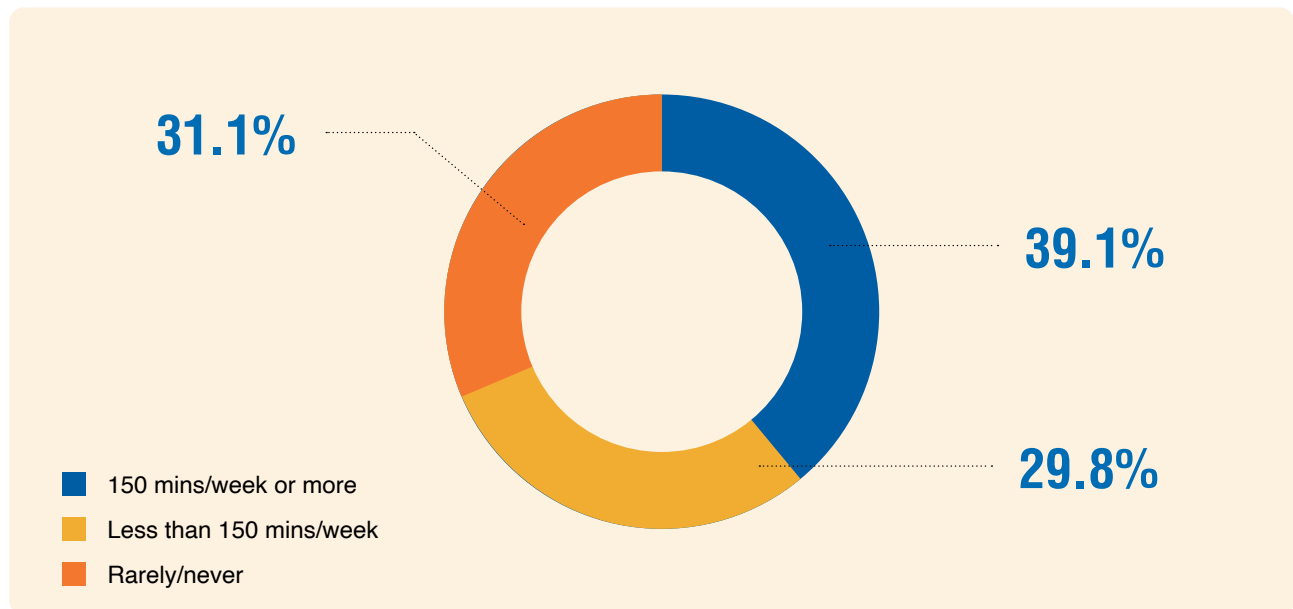
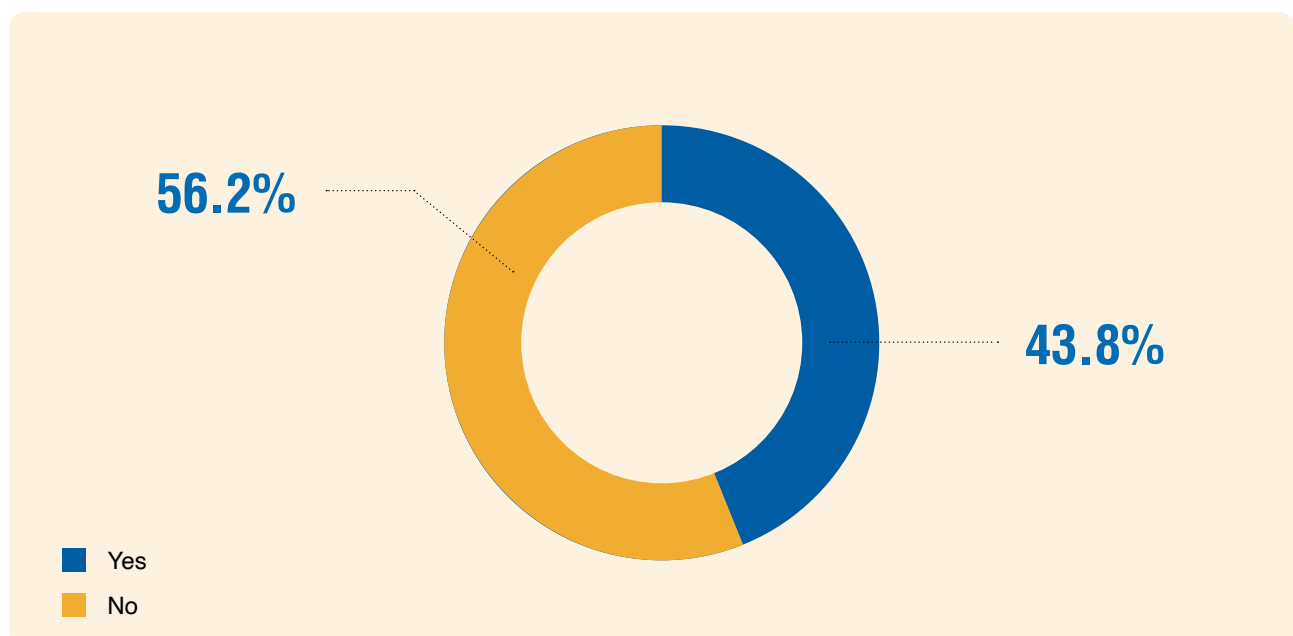


FIGURE 34. MUSCLE STRENGTHENING (N=2852)



SECTION 7

SUB-ANALYSES



CENTRE TYPE AT A GLANCE

Table 42 details the 65 centres that participated in ADCQR 2025. Of these, 32 sites were comprised of Centres of Excellence or Tertiary Care Centres (CoE/Tertiary), with the contribution from each individual site ranging from 15 to 146 patients, while 33 sites were comprised of Secondary or Primary Care Centres (Secondary/Primary), with the contribution from each individual site ranging from 6 to 158 patients. There were more than double the number of patients from Centres of Excellence or Tertiary centres than Primary or Secondary care centres.

Patients from CoE/Tertiary centres were typically younger than those from Secondary/Primary centres (56.0 vs 61.5 years), however duration of diabetes was longer in CoE/Tertiary settings (16.4 vs 14.2 years). As expected, more patients with T1DM attended CoE/Tertiary centres, while more patients with T2DM attended Secondary/Primary centres.

Patients from CoE/Tertiary centres had a comparable mean and median HbA1c to patients from Secondary/Primary centres. Blood pressure and lipid levels were also comparable across centre types, although patients from CoE/Tertiary centres were slightly more likely to be using lipid lowering therapy while patients from Secondary/Primary centres were slightly more likely to be using antihypertensive treatment.

Patients managed at CoE/Tertiary centres had greater prevalence of complications and comorbidities, including retinopathy, peripheral neuropathy, foot ulceration, and acute glycaemic complications (impaired awareness of hypoglycaemia, severe hypoglycaemia, diabetic ketoacidosis and hyperosmolar hyperglycaemic state), than patients managed at Secondary/Primary centres. The only exception was cataract which was higher in patients attending Secondary/Primary centres. The prevalence of other complications were comparable across centre types. Patients attending CoE/Tertiary centres were more likely to be screened for depression and anxiety compared to patients attending Secondary/Primary centres.

TABLE 42. DEMOGRAPHIC, MANAGEMENT AND CLINICAL OUTCOMES BY CENTRE TYPE

ITEM NO.	CLINICAL PARAMETERS	CENTRES OF EXCELLENCE & TERTIARY CARE	SECONDARY & PRIMARY CARE
	Number of sites (N)	32	33
	Number of patients (N)	2602	1103
Demographics			
	Age (calculated; years), mean $\pm$ SD	56.0 $\pm$ 17.9	61.5 $\pm$ 16.5
1.2	Sex		
	Female, %	42.9	43.8
	Male, %	57.0	56.2
	Other, %	0.0	0.0
1.4	NDSS, %	95.0	95.1
1.5	Aboriginal/Torres Strait Islander, %	3.9	3.0
1.6	Initial visit, %	13.8	20.5
1.7	Interpreter required, %	3.7	1.8
1.8	Language spoken		
	English, %	86.9	92.3
	Other, %	13.1	7.7
1.9	DVA, %	0.9	1.7
1.10	Australian-born, %	69.2	77.1
Diabetes type and management			
2.2	Type of diabetes		
	T1DM, %	38.3	25.1
	T2DM, %	58.8	71.5
	Other (Secondary causes) %	2.6	3.3
	Don't know	0.3	0.1
	Unstated	0.0	0.0
	Duration of diabetes (calculated; years), median (IQR)	16.4 (8.9, 25.6)	14.2 (5.9, 24.4)
2.3	Blood glucose monitoring		
	None, %	7.7	11.1
	Finger pricking only, %	50.2	60.2
2.3.1	Check as often as recommended, %	59.6	59.6
2.3.2	Number of times per day, mean $\pm$ SD	2.1 $\pm$ 1.6	1.9 $\pm$ 1.4
	Finger prick and CGM, %	2.7	4.7
	CGM only, %	40.4	33.3
2.3.3	If using CGM, sensor worn for $\geq$ 14 days	94.5	90.7
	Sensor worn for $\geq$ 14 days and active $\geq$ 70% of time	85.1	75.5
Lifestyle risk factors			
	Body mass index (calculated; kg/m ²), mean $\pm$ SD	30.7 $\pm$ 7.2	31.4 $\pm$ 7.2

ITEM NO.	CLINICAL PARAMETERS	CENTRES OF EXCELLENCE & TERTIARY CARE	SECONDARY & PRIMARY CARE
Blood pressure			
4.1	Systolic blood pressure (mmHg), mean $\pm$ SD	132 $\pm$ 18	132 $\pm$ 17
	Diastolic blood pressure (mmHg), mean $\pm$ SD	77 $\pm$ 10	76 $\pm$ 11
4.1.1	Blood pressure self-reported, %	7.9	9.4
	Blood pressure measured in clinic, %	92.1	90.6
4.2	On anti-hypertensive treatment, %	57.0	62.6
4.2.1	ACE inhibitor, %	23.3	23.9
	ARB, %	22.8	25.9
	Calcium channel blocker, %	19.2	19.1
	Beta blocker, %	18.2	19.1
	Thiazides/Diuretics, %	11.8	9.9
	Other, %	6.0	4.1
	Systolic BP - on anti-hypertensive treatment (mmHg), mean $\pm$ SD	135 $\pm$ 18	134 $\pm$ 18
	Diastolic BP - on anti-hypertensive treatment (mmHg), mean $\pm$ SD	77 $\pm$ 11	75 $\pm$ 11
Blood glucose control and renal function			
5.1	HbA1c (%), mean $\pm$ SD	8.3 $\pm$ 2.0	8.3 $\pm$ 1.9
	HbA1c (mmol/mol), mean $\pm$ SD	66.8 $\pm$ 21.4	66.8 $\pm$ 21.2
	HbA1c (%), median (IQR)	7.8 (6.9, 9.2)	7.9 (6.9, 9.2)
	HbA1c (mmol/mol), median (IQR)	62.0 (52.0, 77.0)	63.0 (52.0, 77.0)
5.2	eGFR (mL/min per 1.73m ²), %		
	≥ 90	45.1	35.6
	60-89	31.3	41.7
	45-59	10.7	12.0
	30-44	7.1	6.6
	15-29	3.3	2.9
	<15	2.5	1.2
5.3	Serum creatinine (μ mol/L), mean $\pm$ SD	102.0 $\pm$ 98.0	95.6 $\pm$ 76.5
5.4	Normal to mildly increased albuminuria, %	61.1	65.0
	Moderately increased albuminuria, %	26.9	26.0
	Severely increased albuminuria, %	11.9	8.9
Medications and lipids			
6.1	Aspirin, %	24.1	25.4
6.2	Other antiplatelets, %	5.8	6.0
6.3	Anticoagulants, %	7.7	10.0
6.4	On lipid modifying therapy, %	62.9	68.5
6.4.1	Statin, %	58.8	63.5
6.4.2	Fibrate, %	9.6	8.4
6.4.3	Ezetimibe, %	10.6	14.4
6.4.4	Fish oil, %	3.4	2.0
6.4.5	PCSK9 inhibitor, %	0.9	0.5
6.5	Lipids, %	73.5	74.8
6.5.1	Total cholesterol (mmol/L), mean $\pm$ SD	4.3 $\pm$ 1.2	4.3 $\pm$ 1.3
6.5.2	LDL cholesterol (mmol/L), mean $\pm$ SD	2.2 $\pm$ 1.0	2.2 $\pm$ 1.0
6.5.3	HDL cholesterol (mmol/L), mean $\pm$ SD	1.3 $\pm$ 0.4	1.3 $\pm$ 0.4
	Non-HDL, (calculated; mmol/L), mean $\pm$ SD	3.0 $\pm$ 1.2	3.0 $\pm$ 1.3
6.5.4	Triglyceride, (mmol/L), median (IQR)	1.3 (0.9, 2.0)	1.5 (1.0, 2.1)
Diabetes related eye and foot complications (Ever reported)			
7.1	Retinopathy, %	27.2	18.6
7.2	Treatment for retinopathy, %	15.7	11.0
7.3	Right or left cataract, %	25.7	32.3
7.4	Blindness, %	2.3	2.5
7.5	Peripheral neuropathy, %	26.6	19.8
7.6	Foot ulceration, %	11.9	7.7
7.7	Lower limb amputation, %	5.4	4.3
	Minor, %	4.7	3.5
	Major, %	0.9	1.0

ITEM NO.	CLINICAL PARAMETERS	CENTRES OF EXCELLENCE & TERTIARY CARE	SECONDARY & PRIMARY CARE
Complications/events/comorbidities (Ever reported)			
8.1	Cerebral stroke, %	6.9	7.4
8.2	Myocardial infarction, %	11.1	10.4
8.3	CABG/angioplasty, %	11.0	12.8
8.4	Congestive cardiac failure, %	5.7	6.4
8.5	Peripheral vascular disease, %	9.3	8.3
8.6	End stage kidney disease, %	6.1	3.1
8.7	Sexual dysfunction, %	12.3	12.7
8.8	Dementia, %	1.7	1.6
8.9	Depression, %	24.8	25.7
8.10	Anxiety, %	21.0	22.2
8.11	Malignancy, %	10.3	10.6
8.12	Diabetic ketoacidosis, %	14.7	7.4
8.13	Hyperosmolar hyperglycaemic state, %	1.0	1.5
8.14	Impaired awareness of hypoglycaemia, %	8.2	4.4
8.15	Severe hypoglycaemia, %	12.0	7.3
8.16	Liver disease		
	Mild, %	11.3	12.2
	Moderate/severe, %	3.3	2.6
8.17	Hospitalisation for COVID-19, %	7.1	6.8
Mental health screening in the last 12 months			
9.1	Screened for diabetes distress, %	8.5	7.2
9.2	Screened for depression, %	9.5	5.4
9.3	Screened for anxiety, %	7.1	4.3



Table 43 outlines diabetes management methods by centre type and diabetes type. Among patients with T2DM a comparable proportion of patients from CoE/Tertiary centres and Secondary/Primary centres were taking metformin, SGLT2 inhibitors, GLP-1 agonists or GLP-1/GIP dual receptor agonists, DPP4 inhibitors and sulphonylureas; and a greater proportion of patients from CoE/Tertiary centres were treated with insulin.

TABLE 43. DIABETES MANAGEMENT METHODS BY CENTRE TYPE AND BY DIABETES TYPE

ITEM NO.	CLINICAL PARAMETERS	CENTRES OF EXCELLENCE & TERTIARY CARE		SECONDARY & PRIMARY CARE	
		T1DM	T2DM	T1DM	T2DM
2.4	Management method				
	Diet only, %	0.0	1.2	0.0	3.2
	Metformin, %	8.2	75.6	6.9	76.9
	SGLT2 inhibitor, %	2.1	50.2	4.3	49.8
	GLP1/GIP agonist, %	3.4	35.0	7.6	33.3
	DPP4 inhibitor, %	0.3	23.3	1.4	24.7
	Sulphonylurea, %	0.0	20.6	0.0	20.2
	Thiazolidinedione, %	0.0	0.3	0.0	0.6
	Acarbose, %	0.0	0.4	0.0	0.3
	Insulin, %	100.0	59.7	100.0	48.8
	Unstated, %	0.0	0.0	0.0	0.0
2.4.1	Years on insulin (only patients using insulin), median (IQR)	18.5 (9.0, 30.0)	6.0 (2.0, 13.0)	17.4 (8.0, 31.0)	5.0 (1.1, 12.0)
2.4.2	If on insulin, mode				
	Basal, %	3.0	27.8	5.8	32.2
	Basal bolus, %	58.3	25.9	61.0	25.7
	Pre-mixed insulin, %	2.9	49.3	7.9	43.6
	Pump, %	36.7	0.4	33.2	0.5
	CSII automated, Hybrid closed loop, %	32.0	0.2	30.5	0.3
	CSII automated, Other, %	0.4	0.1	0.7	0.0
	CSII non-automated, %	4.0	0.0	2.2	0.0
	Unstated	0.5	0.9	0.7	0.0

Table 44 outlines patient health and well-being outcomes. There were comparable proportions of current and past smokers across centre types. There were also comparable proportions of patients vaccinated against COVID-19, influenza and pneumococcal across centre types.

Health professional attendances varied by centre type. As expected, patients from CoE/Tertiary centres were more likely to have consultations with an endocrinologist and/or diabetes educator/nurse practitioner, as well as a dietician, which reflects the more complex diabetes typically managed at these types of centres. Moreover, these patients were around two times more likely than patients from Secondary/Primary centres to have ambulance attendances and emergency department presentations. Patients from Secondary/Primary centres were more likely to have consultations with a podiatrist. Other health professional attendances were comparable across centre types.

In terms of self-management of diabetes, the proportion of patients that undertake daily foot checks was comparable across centre types. Patients from CoE/Tertiary centres were more likely to self-report barriers to nutrition and diet management, with the cost of healthy food being the greatest barrier and more common in patients from CoE/Tertiary compared to patients from Secondary/Primary centres. Of those with T1DM, the proportion of patients that self-reported that it was too hard to count carbs/weigh food was higher in those from Secondary/Primary centres compared to those from CoE/Tertiary centres. Patients from CoE/Tertiary centres were more likely to engage in moderate/vigorous physical activity and undertake muscle strengthening exercise compared to patients from Secondary/Primary centres.

TABLE 44. PATIENT REPORTED OUTCOMES BY CENTRE TYPE

ITEM NO. HEALTH AND WELL-BEING OUTCOMES		CENTRES OF EXCELLENCE & TERTIARY CARE	SECONDARY & PRIMARY CARE
Smoking & vaccination status			
1.1	Currently smoke tobacco, %	14.6	11.7
1.1.1	Previously smoked tobacco, %	34.7	37.9
1.2	COVID-19 vaccination - last 6 months, %	20.6	24.1
1.3	Flu (influenza) vaccination - last 12 months, %	57.9	61.3
1.4	Pneumococcal vaccination - up to date, %	19.6	20.2
Health professional attendances			
2.1	Endocrinologist, %	79.3	58.3
2.2	Diabetes Educator/Nurse Practitioner, %	72.2	72.9
2.3	Dietitian, %	41.6	33.1
2.4	Podiatrist, %	49.2	58.5
2.5	Ophthalmologist, %	35.1	32.8
2.6	Optometrist, %	72.5	73.9
2.7	Psychologist/Psychiatrist, %	18.6	13.5
2.8	Social Worker, %	9.0	6.8
2.9	Dentist, %	50.3	46.0
2.10	Exercise Physiologist/Physiotherapist, %	24.3	21.6
2.11	Ambulance, %	9.0	4.8
2.12	Emergency Department, %	15.2	9.7
Medication use			
3.1	Not taken medication as recommended in last 2 weeks, %	18.9	18.3
3.1.1	Number of times per week, mean $\pm$ SD	4.1 $\pm$ 6.3	3.7 $\pm$ 3.5
Foot care			
4.1	Feet checked by health professional	57.7	62.4
4.2	Frequency of self-foot check		
	Daily, %	38.2	41.7
	Weekly, %	26.7	22.4
	Monthly, %	10.9	10.6
	Rarely/Never, %	24.3	25.2
Nutrition and diet management			
5.1	(Adapted) Don't know what foods are best to eat, %	7.0	10.8
5.2	(Adapted) Insufficient time to prepare healthy meals, %	18.2	15.4
5.3	Too costly to eat well, %	43.5	39.4
5.4	(T1DM) Too hard to count carbs/weigh food, %	37.9	48.2
Physical activity			
6.1	Moderate/vigorous intensity physical activity, %		
	150 mins/week or more, %	41.1	34.6
	Less than 150 mins/week, %	28.3	33.1
	Rarely/never, %	30.6	32.4
6.2	Muscle strengthening exercise, %	45.7	39.6

FUTURE DEVELOPMENTS

The ADCQR continues to grow, with a 25% increase in participating health services and patient registrants compared to last year. Looking ahead, the Registry remains committed to expanding its reach and ensuring representation from a diverse mix of people living with diabetes across Australia.

The ADCQR is committed to:

1. Increasing site participation and experience, by:

- Supporting diabetes centres with the governance approval processes required for participation.
- Hosting onboarding and training webinars, as well as creating short user-guide videos to support staff training at participating health services.
- Ensuring the minimal dataset remains relevant and aligned with best practice, supported by clear data collection materials.

2. Enhancing ADCQR infrastructure and audit feedback, by:

- Updating risk-adjusted outcome models (funnel plots) to using ADCQR data over the next 12-24 months to ensure they are contemporary and relevant.
- Undertaking longitudinal analyses to capture changes over time.
- Linking internal and external data to monitor healthcare trajectories and patient outcomes.
- Refining and optimising the ADCQR dashboard to improve interactivity and add risk prediction tools.



PRESENTATIONS

- Zoungas S. Australian Diabetes Clinical Quality Registry (ADCQR): Benchmarking Best Practice in Diabetes Care. Australasian Diabetes Congress, Gold Coast, Australia, 20-22 August 2025
- Nejati H. Reporting functions of the Australian Diabetes Clinical Quality Registry. Australian 2025 Clinical Trials and Registries Symposium, Melbourne, Australia 17-19 November 2025



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INFORMATION FOR DIABETES CENTRES AND HEALTH SERVICES ON HOW TO PARTICIPATE

HOW TO PARTICIPATE

If you are a diabetes centre health service providing diabetes care and would like to contribute to the ADCQR, please register your interest by contacting the ADCQR Secretariat on adcqr@monash.edu.

Your diabetes centre or health service must nominate a local Principal Investigator (PI). The PI is the ADCQR main point of contact and is responsible for site participation and compliance with ADCQR policies and procedures.

Inclusion in the ADCQR is voluntary, and there are no financial incentives for diabetes centres/health services, clinicians or their patients to participate. The site-specific reports are provided to participating centres/health services free of charge, to be able to monitor their own performance against other similar participating diabetes centres and national benchmarks.

Once you have registered your interest, the ADCQR Secretariat and team will provide information on how to proceed and support the submission of applications for local ethics and governance approvals. The ADCQR will also provide resources to assist and train all relevant staff prior to the data collection sampling period.

REQUIREMENTS FOR PARTICIPATION

To participate in the ADCQR, your diabetes centre or health service must be able to meet the following criteria:

1. Ability and commitment to enter all eligible patients into the database.
2. Nomination of a PI to oversee and manage local data collection.
3. Ability to establish and maintain internal systems for data accuracy and timely data entry.
4. Willingness to comply with the project protocol and ethics requirements.
5. Willingness to sign an ADCQR Collaborative/Data Sharing Agreement that outlines the mutual obligations and use of data.

ADCQR COMMITTEES

ADCQR Scientific Advisory Committee Membership

MEMBER NAME	ROLE TITLE AND ORGANISATION	CONTRIBUTION
Professor Sophia Zoungas (Chair)	Head, School of Public Health and Preventive Medicine, Monash University and Clinical Endocrinologist, Alfred Health and Monash Health, Melbourne [VIC]	Registry Lead and Data Custodian
Associate Professor Sofianos Andikopoulos	Chief Executive Officer, Australian Diabetes Society [NSW]	National Peak Body Representative
Associate Professor Wendy Davis	Epidemiologist and Applied Biostatistician, The University of Western Australia [WA]	Data/Science Expert
Dr Gary Deed	General Practitioner and Medical Director, Mediwell Medical Clinic [QLD]	Primary Health Sector Representative
Mr Trevor Jones	Person living with Type 2 Diabetes [WA]	Consumer Representative
Dr Konrad Kangru	General Practitioner, Whitsunday Doctors Service [QLD]	Primary Health Sector Representative
Associate Professor Margaret McGill AM	Assistant Director, Royal Prince Alfred Hospital Diabetes Centre [NSW]	Clinical Representative
Mr Paul Moger	Group Executive, Strategy and Government Affairs, Diabetes Australia [ACT]	National Peak Body Representative
Associate Professor Odette Pearson	Co-Lead Aboriginal Health Equity Theme, South Australian Health & Medical Research Institute [SA]	Aboriginal and Torres Strait Islander Representative and Data/Science Expert
Ms Megan Phelan	Policy Officer, Clinical Quality Registry Section, Health Modelling, Partnerships and Evaluation Branch, Health Economics and Research Division, Australian Government Department of Health and Aged Care [ACT]	Australian Government Department of Health and Aged Care Representative
Dr Elaine Pretorius	Director Medical Services, Illawarra Hospital Group, Illawarra Shoalhaven Local Health District [NSW]	Clinical Representative
Ms Sally Rayner	Policy Officer, Clinical Quality Registry Section, Health Modelling, Partnerships and Evaluation Branch, Health Economics and Research Division, Australian Government Department of Health and Aged Care [ACT]	Australian Government Department of Health and Aged Care Representative
Professor Jane Speight	Chair, Behavioural and Social Research in Diabetes and Foundation Director, The Australian Centre for Behavioural Research in Diabetes [VIC]	Data/Science Expert
Ms Natalie Wischer OAM	Chief Executive Officer, National Association of Diabetes Centres [VIC]	National Peak Body Representative
Associate Professor Anthony Zimmerman	Head of Diabetes and Endocrine Services, Northern Adelaide Local Health Network [SA]	Clinical Representative

ADCQR Project Executive

NAME	ROLE
Professor Sophia Zoungas	Registry Lead
Ms Dimitra Giannopoulos	Project Manager
Professor Susannah Ahern	Technical Advisor
Professor Arul Earnest	Senior Biostatistician
Dr Ella Zomer	Research Lead
Dr Ahmad Reza Pourghaderi	Senior Data Scientist
Dr Hossein Nejati	Senior Data Manager/Analyst
Ms Mahima Choudhary	Senior Project Officer



APPENDICES

APPENDIX 1

ADCQR Data Collection Form

Australian Diabetes Clinical Quality Registry ADCQR Clinical Data Collection Form		SITE STAFF FORM Page 1 of 3																																							
 17942 Patient ID Site ID Staff Initials (optional)																																									
How was the consultation conducted? ☐ In person ☐ Video ☐ Phone Participant information sheet given ☐																																									
Section 1. Patient Demographics																																									
1.1 Date of birth / /	1.2 Sex ☐ Male ☐ Female ☐ Other → 1.2.1 Currently pregnant ☐ Yes ☐ No																																								
1.3 Date of visit / /	1.4 NDSS registrant ☐ Yes ☐ No 1.5 Aboriginal/Torres Strait Islander ☐ Yes ☐ No																																								
1.6 Initial visit ☐ Yes ☐ No	1.7 Interpreter required ☐ Yes ☐ No																																								
1.8 Main language spoken at home	1.9 DVA ☐ Yes ☐ No																																								
1.10 Country of birth	1.11 Residential postcode																																								
Section 2. Diabetes Type & Management																																									
2.1 Date of diagnosis / /	2.2 Type of diabetes ☐ Type 1 ☐ Type 2 ☐ Other (Secondary causes) ☐ Don't know																																								
2.3 Self-monitoring of glucose (Select all that apply) ☐ None ☐ Finger pricking → ☐ Continuous Glucose Monitoring ☐ Flash Glucose Monitoring	2.3.1 Does the patient check as often as recommended? ☐ Yes ☐ No ☐ Unsure of recommended frequency 2.3.2 How many times a day? 2.3.3 Was the sensor worn for ≥ 14 days in the last 3 months? ☐ Yes ☐ No <u>if YES</u>, percentage of time sensor was active ☐ <70% ☐ ≥70%																																								
2.4 Glycaemic Management method (Select all that apply) ☐ Diet only ☐ Metformin ☐ SGLT2 inhibitor ☐ GLP1/GIP agonist ☐ DPP4 inhibitor ☐ Sulphonylurea ☐ Thiazolidinedione ☐ Acarbose ☐ Insulin → 2.4.1 Insulin duration years months																																									
2.4.2 Insulin mode (Select all that apply) ☐ Basal ☐ Pre-mixed insulin ☐ CSII Automated → ☐ Hybrid closed loop system ☐ Basal bolus ☐ Pump ☐ CSII Non-automated																																									
Section 3. Weight & Height (Measured in clinic or self-reported)																																									
3.1 Weight kg	3.2 Height m																																								
Section 4. Blood Pressure																																									
4.1 Blood pressure / mmHg → 4.1.1 Measured in clinic ☐ OR Self-reported ☐	<u>if YES</u> → 4.2.1 ☐ ACE inhibitor ☐ Ca ²⁺ channel blocker ☐ Beta blocker (Select all that apply) ☐ ARB ☐ Thiazides/Diuretics ☐ Other																																								
4.2 Anti-hypertensive treatment ☐ Yes ☐ No																																									
Section 5. Blood Glucose Control & Renal Function (Most recent in last 12 months)																																									
5.1 HbA1c Result % OR ☐ Not tested	5.1.1 HbA1c test date /																																								
5.2 eGFR mL/min per 1.73m ² OR ☐ Not tested	5.3 Serum creatinine μmol/L OR ☐ Not tested																																								
5.4a Urinary albumin mg/L OR ☐ Not tested	5.4b Urinary protein mg/L OR ☐ Not tested																																								
Section 6. Medications & Lipids																																									
<table style="width: 100%; border-collapse: collapse;"><thead><tr><th></th><th style="text-align: center;">Yes</th><th style="text-align: center;">No</th><th style="text-align: center;">Contraindicated</th></tr></thead><tbody><tr><td>6.1 Aspirin</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.2 Other anti-platelets</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.3 Anti-coagulants</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.4 Lipid modifying Rx</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td><u>if YES</u> → 6.4.1 Statin</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.4.2 Fibrate</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.4.3 Ezetimibe</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.4.4 Fish oil</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr><tr><td>6.4.5 PCSK9 inhibitor</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr></tbody></table>			Yes	No	Contraindicated	6.1 Aspirin	☐	☐	☐	6.2 Other anti-platelets	☐	☐	☐	6.3 Anti-coagulants	☐	☐	☐	6.4 Lipid modifying Rx	☐	☐	☐	<u>if YES</u> → 6.4.1 Statin	☐	☐	☐	6.4.2 Fibrate	☐	☐	☐	6.4.3 Ezetimibe	☐	☐	☐	6.4.4 Fish oil	☐	☐	☐	6.4.5 PCSK9 inhibitor	☐	☐	☐
	Yes	No	Contraindicated																																						
6.1 Aspirin	☐	☐	☐																																						
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6.4.4 Fish oil	☐	☐	☐																																						
6.4.5 PCSK9 inhibitor	☐	☐	☐																																						
6.5 Lipids measured ☐ Yes ☐ No <u>if YES</u> → Complete below: Not tested																																									
6.5.1 Total Cholesterol mmol/L OR																																									
6.5.2 LDL mmol/L OR																																									
6.5.3 HDL mmol/L OR																																									
6.5.4 Triglycerides mmol/L OR																																									

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PLEASE COMPLETE PAGE 2

ADCQR Data Collection Form - Page 2



Australian Diabetes Clinical Quality Registry ADCQR Clinical Data Collection Form

SITE STAFF FORM
Page 2 of 3

Patient ID

Site ID

Section 7. Diabetes Related Eye & Foot Complications

	Diagnosed in the last 12 months		Diagnosed previous to the last 12 months	
	Yes	No	Yes	No
7.1 Retinopathy	☐	☐	☐	☐
7.2 Treatment for retinopathy	☐	☐	☐	☐
7.3 Right or left cataract	☐	☐	☐	☐
7.4 Blindness	☐	☐	☐	☐
7.5 Peripheral neuropathy	☐	☐	☐	☐
7.6 Foot ulceration	☐	☐	☐	☐
7.7 Lower limb amputation	☐	☐	☐	☐
<i>if YES (Select all that apply) → 7.7.1</i>		☐ Minor ☐ Major		<i>7.7.2</i> ☐ Minor ☐ Major

Section 8. Other Complications/Events/Comorbidities

	Diagnosed in the last 12 months		Diagnosed previous to the last 12 months	
	Yes	No	Yes	No
8.1 Cerebral stroke	☐	☐	☐	☐
8.2 Myocardial infarction	☐	☐	☐	☐
8.3 CABG/Angioplasty	☐	☐	☐	☐
8.4 Congestive cardiac failure	☐	☐	☐	☐
8.5 Peripheral vascular disease	☐	☐	☐	☐
8.6 End stage kidney disease	☐	☐	☐	☐
8.7 Sexual dysfunction	☐	☐	☐	☐
8.8 Dementia	☐	☐	☐	☐
8.9 Depression	☐	☐	☐	☐
8.10 Anxiety	☐	☐	☐	☐
8.11 Malignancy (exclude non-melanotic skin cancers)	☐	☐	☐	☐
8.12 Diabetic ketoacidosis	☐	☐	☐	☐
8.13 Hyperosmolar hyperglycaemic state	☐	☐	☐	☐
8.14 Impaired awareness of hypoglycaemia	☐	☐	☐	☐
8.15 Severe hypoglycaemia	☐	☐	☐	☐
<i>if YES → 8.15.1 No. of episodes</i> ☐ 1-2 ☐ 3-5 ☐ >5				
8.16 Liver disease	☐ Mild ☐ Moderate/Severe ☐ Not applicable			
			<i>Last 12 months</i>	
8.17 Has the patient tested positive to COVID-19?	☐ Yes ☐ No		<i>Previous to the last 12 months</i>	
<i>if YES → 8.17.1 Was the patient hospitalised?</i>			☐ Yes ☐ No	
			8.17.2 ☐ Yes ☐ No	

Section 9. Mental Health Screening (if not previously diagnosed)

9.1 Has the patient been screened for diabetes distress in the last 12 months using a validated measure? ☐ Yes ☐ No
(e.g. PAID, DDS)

9.2 Has the patient been screened for depression in the last 12 months using a validated measure? ☐ Yes ☐ No
(e.g. PHQ_9)

9.3 Has the patient been screened for anxiety in the last 12 months using a validated measure? ☐ Yes ☐ No
(e.g. GAD-7)

Please indicate whether the patient health and well-being questionnaire will be completed?

☐ Yes → Please complete the questionnaire on page 3.

☐ No → Thank you for completing the ADCQR data collection form.



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PATIENT HEALTH & WELL-BEING QUESTIONNAIRE
 Australian Diabetes Clinical Quality Registry

PATIENT FORM
 Page 3 of 3

Patient ID

(OFFICE USE ONLY - Site staff to complete Patient ID)

Site ID

Please answer all questions by marking the appropriate box

Cross box like this: ☒
Section 1. Smoking & Vaccination Status

 1.1 Do you currently smoke tobacco? ☐ Yes ☐ No → 1.1.1 If NO, did you previously smoke tobacco? ☐ Yes ☐ No
 [i.e. cigarettes/cigars/e-cigarettes(vaping)]

 1.2 Have you had a COVID-19 vaccination in the last 6 months? ☐ Yes ☐ No

 1.3 Have you had a flu (influenza) vaccination in the last 12 months? ☐ Yes ☐ No

 1.4 Are you up to date with your pneumococcal vaccination? ☐ Yes ☐ No ☐ Unsure

Section 2. Health Professional Attendances

 2.1 Have you seen an Endocrinologist in the last 12 months? ☐ Yes ☐ No

 2.2 Have you seen a Diabetes Educator/Nurse Practitioner in the last 12 months? ☐ Yes ☐ No

 2.3 Have you seen a Dietitian in the last 12 months? ☐ Yes ☐ No

 2.4 Have you seen a Podiatrist in the last 12 months? ☐ Yes ☐ No

 2.5 Have you seen an Ophthalmologist in the last 12 months? ☐ Yes ☐ No

 2.6 Have you seen an Optometrist in the last 12 months? ☐ Yes ☐ No

 2.7 Have you seen a Psychologist/Psychiatrist in the last 12 months? ☐ Yes ☐ No

 2.8 Have you seen a Social Worker in the last 12 months? ☐ Yes ☐ No

 2.9 Have you seen a Dentist in the last 12 months? ☐ Yes ☐ No

 2.10 Have you seen an Exercise Physiologist/Physiotherapist in the last 12 months? ☐ Yes ☐ No

 2.11 Have you needed an Ambulance for your diabetes in the last 12 months? ☐ Yes ☐ No

 2.12 Have you attended the Emergency Department for your diabetes in the last 12 months? ☐ Yes ☐ No

Section 3. Medication Use

 3.1 Sometimes people do not take their medications as recommended. Has this happened to you in the last 2 weeks? ☐ Yes ☐ No

 3.1.1 → If YES, how many times?
Section 4. Foot Care

 4.1 Have you had your feet checked by a health professional in the last 12 months? ☐ Yes ☐ No

 4.2 How often do you self check your feet? ☐ Daily ☐ Weekly ☐ Monthly ☐ Rarely/Never

Section 5. Nutrition/Diet Management

 5.1 Do you know what foods are best to eat? ☐ Yes ☐ No

 5.2 Do you have enough time to prepare healthy meals? ☐ Yes ☐ No

 5.3 Does it cost too much to eat healthy meals? ☐ Yes ☐ No

 5.4 If you have type 1 diabetes - Do you find it hard to count carbs/weigh food? ☐ Yes ☐ No

Section 6. Physical Activity

 6.1 How many minutes per week of moderate or vigorous intensity physical activity do you usually do?
 (e.g. brisk walking, lawnmowing, swimming, or more vigorous activity such as jogging) ☐ 150 mins/week or more
☐ Less than 150 mins/week
☐ I rarely/never do moderate or vigorous physical activity

 6.2 Do you do any muscle strengthening exercise in a usual week?
 (e.g. lifting weights or household tasks that involve lifting, carrying or digging) ☐ Yes ☐ No

THANK YOU FOR COMPLETING THE QUESTIONNAIRE.
PLEASE RETURN TO STAFF.

APPENDIX 2

ADCQR Data Definitions

IDENTIFIERS

Patient ID	Compulsory field. Enter identifier such as record number or use the following nomenclature: site ID, the first 2 letters of the first name, and the first 2 letters of the surname (e.g. NNNFFSS) to enable you to check your records if there is a query from the ADCQR regarding the data.
Site ID	Unique site identifier (assigned by the ADCQR Secretariat).
Staff initials (optional)	Site staff initials.
Visit conduct	Record if the consultation was conducted in person, by video or by phone.
Participant information sheet given	Mark if the patient was provided with the participant information sheet.

SECTION 1. PATIENT DEMOGRAPHICS

Date of birth	Record the patient's date of birth as DD/MM/YYYY .
Sex	Mark Male or Female or Other to indicate the person's recorded sex at birth.
Currently pregnant	If sex is female, mark Yes or No to indicate if the patient is currently pregnant.
Date of visit	Record the date the patient attended as DD/MM/YYYY .
Initial visit	Mark Yes or Yes to indicate if this is an initial visit assessment at this site.
Aboriginal/Torres Strait Islander	Mark Yes or No to indicate Aboriginal/Torres Strait Islander background.
Main language spoken at home	Record the patient's main language spoken at home.
Interpreter required	Mark Yes or No to indicate if the patient requires an interpreter.
Residential postcode	Record the patient's residential postcode.
NDSS registrant	Mark Yes or No to indicate if the patient is registered on the National Diabetes Services Scheme (NDSS).
Country of birth	Record the patient's country of birth.
DVA	Mark Yes or No to indicate if the patient's medical care charges are met by the Department of Veterans' Affairs (DVA).

SECTION 2. DIABETES TYPE & MANAGEMENT

Date of diagnosis	Record first diagnostic blood glucose estimation as MM/YYYY . [If date unknown other than year, record as 01/YYYY].
Type of diabetes	Mark Type 1 or Type 2 or Other (secondary causes) or Don't know, to indicate the clinical classification of diabetes. Please note: Female patients with a diagnosis of gestational diabetes mellitus (GDM) (not known to have established diabetes, i.e. a diagnosis of diabetes prior to pregnancy) are excluded from the Registry and should not have data collected.
Self-monitoring of glucose	Mark how blood glucose levels are self-monitored by the patient. If multiple, tick all that apply within the last 12 months. None: No regular blood glucose monitoring is performed. Finger pricking: A blood sample is obtained via a finger-prick and is analysed using testing strips and a glucometer. Continuous Glucose Monitoring (CGM): Subcutaneous/interstitial glucose monitoring systems that automatically provide the user (and/or carer) with real-time glucose data via a receiver or compatible phone running an application. To indicate that a patient uses CGM, this system should have been used for at least 1 month over the last 12 months. Flash Glucose Monitoring: A factory calibrated subcutaneous/interstitial glucose monitoring system that currently requires the user (and/or carer) to scan the attached sensor with a reader or compatible phone running an application in order to view recent glucose data. To indicate that a patient uses Flash Glucose Monitoring, this system should have been used for at least 1 month over the last 12 months.
Finger pricking - Does the patient check their blood glucose level as often as recommended?	If monitoring glucose by finger pricking, mark if the patient checks their blood glucose as often as recommended (Yes/No/Unsure of recommended frequency).
Finger pricking - How many times a day?	If monitoring glucose by finger pricking, indicate the number of times the patient does finger pricking per day on average.
If using Flash/CGM, time using sensors	If monitoring glucose using Flash/CGM, mark Yes or No to indicate if the patient has worn a sensor for a minimum of 14 days in the last 3 months. If Yes, mark the percentage of time the sensor was active (<70% or ≥70%)

Management method	If multiple, tick all that apply. DPP4 – dipeptidyl peptidase IV, GIP – glucose-dependent insulinotropic polypeptide, GLP1 – glucagon-like peptide 1, SGLT2 – sodium-glucose cotransporter-2. See the Living Evidence Guidelines in Diabetes for treatment recommendations and information on each drug class. These guidelines can be found on the Australian Diabetes Society website, or with the direct links below: https://www.diabetessociety.com.au/living-evidence-guidelines-in-diabetes
Insulin duration	If the patient is on insulin, record the number of years/months the patient has been on insulin.
Insulin mode	If the patient is on insulin, mark the mode of administration(s). If multiple, tick all that apply. Basal: Intermediate-acting or long-acting insulin injection(s). Basal bolus: Insulin regime that utilises any type of basal insulin as well as any type of bolus insulin. Pre-mixed insulins are excluded from this category. Pre-mixed: Injection of any pre-mixed combination of intermediate or long-acting insulin with either short-acting or very short-acting insulin. Pump: Mode of insulin delivery being via continuous subcutaneous insulin infusion. If using a pump, mark the type of pump: CSII Automated or CSII Non-automated If using a CSII Automated pump, mark if it is a hybrid closed loop system: The simultaneous and integrated use of continuous glucose monitoring and an insulin pump with a control algorithm that may increase and decrease basal insulin delivery based on real-time interstitial glucose results.

SECTION 3. WEIGHT & HEIGHT

Weight	Record in kilograms the weight measurement without shoes or jacket. Weight may be measured in clinic or self-reported by the patient.
Height	Record in metres the height measurement without shoes. Height may be measured in clinic or self-reported by the patient.

SECTION 4. BLOOD PRESSURE

Blood pressure	Record systolic / diastolic (mmHg) measured after 5 minutes sitting, [1st and 5th phases]. Mark the option that describes where blood pressure was measured (In clinic/Self-reported)
Anti-hypertensive treatment	Mark Yes or No to indicate if the patient is on treatment for hypertension.
Anti-hypertensive medications	If Yes , select the anti-hypertensive medication(s) the patient is currently taking. ACE – angiotensin converting enzyme, ARB – angiotensin II receptor blocker. Thiazides also include thiazide-like diuretics. If on a combination tablet, tick all that apply.

SECTION 5. BLOOD GLUCOSE CONTROL & RENAL FUNCTION

HbA1c result	Record the most recent Haemoglobin A1c (HbA1c) result [%] in the last 12 months, or tick 'Not tested'. 'Not tested' refers to a test which has not been ordered by the patient's clinician/health practitioner in the last 12 months.
HbA1c test date	If HbA1c was measured, record the date as MM/YYYY for the most recent Haemoglobin A1c (HbA1c) result in the last 12 months.
eGFR	Record the result for the most recent eGFR [mL/min per 1.73m²] in the last 12 months, or tick 'Not tested'. If the result is reported as eGFR ≥ 90, record as 90. 'Not tested' refers to a test which has not been ordered by the patient's clinician/health practitioner in the last 12 months.
Serum creatinine	Record result measurement of serum creatinine [μmol/L] in the last 12 months, or tick 'Not tested'. 'Not tested' refers to a test which has not been ordered by the patient's clinician/health practitioner in the last 12 months.
Urinary albumin	Record amount of albumin [mg/L] or ratio. If the result is less than the lower limit of detection provided by the pathology service, please record the lower limit of detection. Example: If reported as <0.05 please record as 0.05. Tick 'Not tested' if a test has not been ordered by the patient's clinician/health practitioner in the last 12 months.
Urinary protein	Record amount of albumin [mg/L] or ratio. If the result is less than the lower limit of detection provided by the pathology service, please record the lower limit of detection. Example: If reported as <0.05 please record as 0.05. Tick 'Not tested' if a test has not been ordered by the patient's clinician/health practitioner in the last 12 months.

SECTION 6. MEDICATIONS AND LIPIDS

Aspirin	Mark Yes or No to indicate whether the patient is on aspirin. Indicate if contraindicated.
Other anti-platelets	Mark Yes or No to indicate whether the patient is on any other anti-platelet treatment (e.g. clopidogrel, ticagrelor or prasugrel). Indicate if contraindicated.
Anti-coagulants	Mark Yes or No to indicate whether the patient is on anti-coagulants (e.g. warfarin or non-vitamin K antagonist oral anticoagulants (NOAC)). Indicate if contraindicated.
Lipid modifying treatment	Mark Yes or No to indicate whether the patient is on lipid lowering treatment. If Yes, indicate whether they are on statin, fibrate, ezetimibe, fish oil, PCSK9 inhibitor. PCSK9 – proprotein convertase subtilisin/kexin type 9. Indicate if contraindicated. If on combination tablet, tick all that apply.
Lipids measured	Mark Yes or No to indicate if lipids have been measured in the last 12 months.
Total Cholesterol, LDL, HDL, Triglycerides	Record the most recent result(s) for total, LDL & HDL cholesterol and triglycerides [mmol/L] in the last 12 months or tick 'Not tested'. Recorded lipids can include fasting or non-fasting results. 'Not tested' refers to a test which has not been ordered by the patient's clinician/health practitioner.

SECTION 7. DIABETES RELATED EYE & FOOT COMPLICATIONS

Mark **Yes** or **No** to indicate diagnosis/detection of diabetes related eye and foot problems in the last 12 months **AND/OR** previously (prior to the last 12 months). Answer all questions.

Retinopathy	Mark Yes or No to indicate if the ophthalmological assessment revealed any diabetic retinopathy or maculopathy.
Treatment for retinopathy	Mark Yes or No to indicate if the patient has had any treatment for retinopathy. Includes any of the following: laser photocoagulation treatment, intravitreal VEGF inhibitor injection, or vitrectomy.
Right or left cataract	Mark Yes or No to indicate if the patient currently has a cataract or has had one removed.
Blindness	Mark Yes or No to indicate if the patient became legally blind (visual acuity <6/60) in either eye.
Peripheral neuropathy	Mark Yes or No to indicate clinical judgement following assessment using pin prick and vibration (using a Biothesiometer or tuning fork) or Monofilament. Includes the presence of both painful and non-painful neuropathy. Also includes the presence of Charcot foot.
Foot ulceration	Mark Yes or No to indicate past history of foot ulceration.
Lower limb amputation	Mark Yes or No to indicate lower limb amputation. Amputation of toe, forefoot or leg [above or below knee], not due to trauma or causes other than vascular disease.
Minor/Major Lower Limb Amputation	If the patient has had an amputation in either lower limb, indicate if minor and/or major. Minor = Amputation of the toe(s) or foot (below the ankle) Major = Amputation above the ankle.

SECTION 8. OTHER COMPLICATIONS/EVENTS/COMORBIDITIES

Mark **Yes** or **No** to indicate diagnosis/detection or event in the last 12 months **AND/OR** previously (prior to the last 12 months). Answer all questions.

Cerebral stroke	Mark Yes or No to indicate if the patient has had a diagnosis of ischaemic stroke (Does not include transient ischaemic attack or haemorrhagic stroke).
Myocardial infarction	Mark Yes or No to indicate if the patient has had a myocardial infarction evidenced by ECG changes, plasma enzyme changes or medical documentation.
CABG/Angioplasty	Mark Yes or No to indicate if the patient has had Coronary Artery Bypass Graft (CABG) surgery, coronary angioplasty or stent.
Congestive cardiac failure	Mark Yes or No to indicate if the patient has symptomatic congestive cardiac failure with response to specific therapy.
Peripheral vascular disease	Mark Yes or No to indicate if the patient has peripheral vascular disease. Yes: Absence of both dorsalis pedis and posterior tibial pulses in either foot and/or symptoms of peripheral vascular disease (e.g. intermittent claudication, rest pain, tissue loss/gangrene) and/or Ankle-Brachial Pressure Index <0.9 and/or confirmatory arterial ultrasound or angiography and/or previous revascularisation procedure (incl. angioplasty, stent insertion or surgical bypass).
End stage kidney disease	Mark Yes or No to indicate if the patient has any of the following: stage 5 chronic kidney disease (eGFR <15mL/min/1.73m ²) and/or dialysis-dependent (haemodialysis or peritoneal dialysis) and/or renal transplant recipient.
Sexual dysfunction	Mark Yes or No to indicate if the patient has/had experienced any of the following: If male: History or treatment of failure to achieve or maintain erection sufficient for satisfactory sexual intercourse. If female: History of persistent and recurrent problems with sexual response, desire, orgasm or pain that cause distress or relationship strain associated with diabetes.
Dementia	Mark Yes or No to indicate if the patient has had a formal diagnosis of dementia from a clinician or prescribed dementia-specific pharmacotherapy.
Depression	Mark Yes or No to indicate if the patient has had a formal diagnosis of depression from a clinician or prescribed pharmacotherapy for depression.
Anxiety	Mark Yes or No to indicate if the patient has had a formal diagnosis of anxiety from a clinician or prescribed pharmacotherapy for anxiety.
Malignancy	Mark Yes or No to indicate if the patient has had any type of malignancy. Exclude non-melanoma skin cancers.

Diabetic Ketoacidosis (DKA)	Mark Yes or No to indicate if the patient has had any hospital admission involving diabetic ketoacidosis as evidenced by blood results (glucose, ketones, pH) or medical documentation.
Hyperosmolar Hyperglycaemic State (HHS)	Mark Yes or No to indicate if the patient has had any hospital admission involving hyperosmolar hyperglycaemic state as evidenced by blood results (glucose, osmolality) or medical documentation.
Impaired awareness of hypoglycaemia	Mark Yes or No to indicate if the patient has had any of the following: Mark Yes or No to indicate if the patient has had any of the following: - Reduced ability to perceive the onset of hypoglycaemia. Includes: - Reduced symptoms of hypoglycaemia - Lower recognition of those symptoms, e.g. through diminished severity of symptoms or because those symptoms are occurring at a lower glucose level than previously - Change in symptom type, whereby the patient does not 'recognise' the new symptom as being related to hypoglycaemia onset
Severe hypoglycaemia	Mark Yes or No to indicate severe hypoglycaemia requiring assistance of another person to actively administer carbohydrates, glucagon, or other corrective actions.
Number of episodes	If Yes to 'Severe hypoglycaemia', mark the number of episodes (1-2, 3-5 or >5).
Liver disease	Indicate severity of liver disease or if not applicable. Mild: cirrhosis without portal hypertension, chronic hepatitis. Moderate to severe: cirrhosis with portal hypertension.
COVID-19 positive	Mark Yes or No to indicate if the patient has tested positive to COVID-19 confirmed by a positive Rapid Antigen Test (RAT) or Polymerase Chain Reaction (PCR) test in the last 12 months AND/OR previously (prior to the last 12 months).
COVID-19 hospitalisation	If Yes to 'COVID-19', mark Yes or No to indicate if the patient was admitted to hospital. Any hospital admission, including to a general medical ward or intensive care unit (ICU).

SECTION 9. MENTAL HEALTH SCREENING

Diabetes distress	Mark Yes or No to indicate if the patient has been screened for diabetes distress using a validated questionnaire/measure in the last 12 months. Example: Problem Areas In Diabetes questionnaire (PAID) screening tool, Diabetes Distress Scale (DDS).
Depression	Mark Yes or No to indicate if the patient has been screened for depression using a validated questionnaire/measure in the last 12 months. Example: Patient Health Questionnaire (PHQ-9) screening tool. This only applies to patients who have NOT had a formal diagnosis of depression from a clinician or prescribed pharmacotherapy for depression in the last 12 months.
Anxiety	Mark Yes or No to indicate if the patient has been screened for anxiety using a validated questionnaire/measure in the last 12 months. Example: Generalized Anxiety Disorder scale (GAD- 7) screening tool. This only applies to patients who have NOT had a formal diagnosis of anxiety from a clinician or prescribed pharmacotherapy for anxiety in the last 12 months.

PATIENT HEALTH & WELL-BEING QUESTIONNAIRE

SECTION 1. SMOKING & VACCINATION STATUS

Currently smoke tobacco	Mark if the patient currently smokes any tobacco material (Yes/No). [i.e. cigarettes/cigars/e-cigarettes(vaping)]
Previously smoked tobacco	If No to 'Currently smoke tobacco', mark if the patient previously smoked any tobacco material (Yes/No).
COVID-19 vaccination	Mark if the patient had a COVID-19 vaccination in the last 6 months (Yes/No).
Flu/Influenza vaccination	Mark if the patient had a flu (influenza) vaccination in the last 12 months (Yes/No).
Pneumococcal vaccination	Mark if the patient is up-to-date with their pneumococcal vaccination (Yes/No/Unsure).

SECTION 2. HEALTH PROFESSIONAL ATTENDANCES

Endocrinologist	Mark if the patient attended an Endocrinologist in the last 12 months (Yes/No).
Diabetes Educator/Nurse Practitioner	Mark if the patient attended a Diabetes Educator/Nurse Practitioner in the last 12 months (Yes/No).
Dietitian	Mark if the patient attended a Dietician in the last 12 months (Yes/No).
Podiatrist	Mark if the patient attended a Podiatrist in the last 12 months (Yes/No).
Ophthalmologist	Mark if the patient attended an Ophthalmologist in the last 12 months (Yes/No).
Optometrist	Mark if the patient attended an Optometrist in the last 12 months (Yes/No).
Psychologist/Psychiatrist	Mark if the patient attended a Psychologist/Psychiatrist in the last 12 months (Yes/No).
Social Worker	Mark if the patient attended a Social Worker in the last 12 months (Yes/No).
Dentist	Mark if the patient attended a Dentist in the last 12 months (Yes/No).
Exercise Physiologist/Physiotherapist	Mark if the patient attended an Exercise Physiologist/Physiotherapist in the last 12 months (Yes/No).
Ambulance	Mark if the patient needed an Ambulance for their diabetes in the last 12 months (Yes/No).
Emergency Department	Mark if the patient attended an Emergency Department for their diabetes in the last 12 months (Yes/No).

SECTION 3. MEDICATION USE

Medication use practices	Mark if the patient has not taken their medications as recommended in the last 2 weeks (Yes/No). If Yes , indicate the number of times.
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SECTION 4. FOOT CARE

Feet Checked	Mark if the patient has had their feet checked by a professional (e.g. doctor, nurse, podiatrist) in the last 12 months (Yes/No).
Self-check of feet	Mark the option that best describes how often the patient self-checks their feet (Daily, Weekly, Monthly, Rarely/never).

SECTION 5. NUTRITION/DIET MANAGEMENT

Do you know what foods are best to eat?	Mark if the patient has enough knowledge about what foods and how much are best to eat (Yes/No).
Do you have enough time to prepare healthy meals?	Mark if the patient has enough time to prepare healthy meals (Yes/No).
Does it cost too much to eat healthy meals?	Mark if the patient feels it costs too much to eat healthy meals (Yes/No).
If you have Type 1 diabetes, do you find it hard to count carbs/ weigh food?	If the patient has type 1 diabetes, mark if the patient finds it hard to count carbs and/or weigh food (Yes/No).

SECTION 6. PHYSICAL ACTIVITY

Physical activity	Mark the usual weekly duration of time (150 mins/week or more, less than 150 mins/week, or rarely/never) spent performing moderate or vigorous intensity physical activity. Physical activity is calculated in 'total minutes per week' by summing the total minutes of walking, moderate and/or vigorous physical activity in a usual 7-day period. Vigorous physical activity is weighted by a factor of two to account for its greater intensity. Intensity of physical activity is defined by The National Physical Activity Guidelines for Australians: Moderate physical activity causes a slight but noticeable increase in breathing and heart rate, the person can comfortably talk but not sing. Vigorous physical activity causes the person to 'huff and puff,' talking in full sentences between breaths is difficult.
Muscle strengthening exercise	Mark whether the patient does any muscle strengthening exercise in a usual week. (Yes/No). Muscle strengthening activities are physical activities that maintain or improve the strength, power, endurance and size of skeletal muscles. This can be physical activity with free weights, body weight or resistance machines/bands, or house/garden activities that involve muscular effort, such as, lifting, carrying or digging.

APPENDIX 3

ADCQR 2025 Participating Sites

NAME
Albury Wodonga Health
Alfred Health
Ballarat Base Hospital
Ballina District Hospital
Bankstown-Lidcombe Hospital
Barwon Health
Beechworth Health Service
Bendigo Health
Box Hill Family Clinic
Brisbane South Complex Diabetes Service
Cairns Diabetes Centre
Canberra Hospital
Clarence Diabetes Service - Grafton
Clarence Diabetes Service - Maclean
Community and Oral Health Chronic Disease Diabetes Logan
Dhelkaya Health (formerly CHIRP Community Health)
Diabetes Clinic - Armadale Health Service
Diabetes Telehealth Service, Princess Alexandra Hospital
Endocrinology East (Prof Bernie Tuch)
Goulburn Valley Health
Dr Harry Grunstein
Hunter Diabetes Centre
Ipswich Diabetes Service
Kyabram District Health Service
Latrobe Regional Health
Lismore Base Hospital
Liu Medical Centre
Liverpool Diabetes and Endocrine Service
Logan Endocrine and Diabetes Services (LEADS)
Mareeba Hospital
Mater Health
Metro North Health Diabetes Service - Caboolture
Metro North Health Diabetes Service - Chermside
Metro North Health Diabetes Service – North Lakes
Metro South Diabetes Service - Annerley
Monash Health - Clayton
Monash Health - Dandenong
Murrumbidgee Local Health District
NCN Health Cobram
NCN Health Numurkah
North Canberra Hospital
North West Diabetes Centre / North West Regional Hospital
Northern Endocrine Pty Ltd
Northern Health, Broadmeadows Hospital
Preston Market Medical Centre
Primary Care Connect
Princess Alexandra Hospital
Prof. Tim Davis
Queen Elizabeth II Jubilee Hospital

ADCQR 2025 Participating Sites

NAME
Redgum Medical Group (previously known as Corowa Medical Centre)
Ripley Satellite Health Centre
Royal Hobart Hospital Diabetes Care
Royal Melbourne Hospital
Royal North Shore Hospital - Diabetes Centre
Royal Perth Hospital
Royal Prince Alfred (RPA) Hospital
South West Hospital and Health Service, SWHHS
St Vincent's Hospital Diabetes Centre Sydney
St Vincent's Public Hospital Melbourne
Sunshine Coast Diabetes Centre - (Sunshine Coast Hospital and Health Service)
Toowoomba Hospital
Townsville Endocrine and Diabetes Centre (Townsville University Hospital)
Tweed/Byron Diabetes Service
Western Health
Westmead Hospital (listed previously as Westmead Diabetes & Endocrinology)

