

Supplementary Material: Evaluating the Cost-Effectiveness of Real-Time Continuous Glucose Monitoring versus Self-Monitoring of Blood Glucose in the Treatment of Patients with Insulin-Treated Type 2 Diabetes in Australia

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Running title	Evaluating the Cost-Effectiveness of Real-Time Continuous Glucose Monitoring versus Self-Monitoring of Blood Glucose in the Treatment of Patients with Insulin-Treated Type 2 Diabetes in Australia
Abbreviations	CDM: CORE Diabetes Model; CKD: Chronic Kidney Disease; FOH: Fear of Hypoglycemia; ICERs: Incremental Cost-Effectiveness Ratios; QALYs: Quality-Adjusted Life Years; QoL: Quality of Life; RT-CGM: Real-Time Continuous Glucose Monitoring; SMBG: Self-Monitoring of Blood Glucose; T2D: Type 2 Diabetes

15 **Tables**16 *Supplementary Table 1. Baseline patient characteristics*

Characteristics	Base Cohort (Baseline Value) [Mean/SD]	Source
Demographics		
Mean Age (Years)	64.5 ± 12.2	Karter <i>et al.</i> [1]
Duration of Diabetes (Years)	16 ± 8.8	Karter <i>et al.</i> [1]
Proportion Male (%)	50.5	Karter <i>et al.</i> [1]
Risk Factors		
HbA _{1c} (%)	8.3 ± 1.6	Karter <i>et al.</i> [1]
Body Mass Index (kg/m ²)	33.4 ± 7.5	Karter <i>et al.</i> [1]
Systolic Blood Pressure (mmHg)	130.7 ± 15.7	Karter <i>et al.</i> [1]
Diastolic Blood Pressure (mmHg)	69.5 ± 11.2	Karter <i>et al.</i> [1]
Total Cholesterol (mg/dL)	156.5 ± 43.1	Karter <i>et al.</i> [1]
High Density Lipoprotein Cholesterol (mg/dL)	44.6 ± 12.2	Karter <i>et al.</i> [1]
Low Density Lipoprotein Cholesterol (mg/dL)	81.4 ± 33.3	Karter <i>et al.</i> [1]
Triglycerides (mg/dL)	170.6 ± 136.7	Karter <i>et al.</i> [1]
Heart Rate (beats/min)	72 ± 0	Buse <i>et al.</i> [2], Gerstein <i>et al.</i> [3]
Smoking Status (%)	5.9%	Karter <i>et al.</i> [1]
eGFR (ml/min/1.73m ²)	72.8 ± 26.6	Karter <i>et al.</i> [1]
Hemoglobin (g/dl)	14.5 ± 0	Gerstein <i>et al.</i> [3]
WHR	0.93 ± 0	Gerstein <i>et al.</i> [3]
WBC (10 ⁶ /ml)	6.8 ± 0	Gerstein <i>et al.</i> [3]
Urinary Albumin to Creatinine Ratio - uACR, (mg/mmol)	3.1 ± 0	Gerstein <i>et al.</i> [3]
Serum Creatinine (mg/dl)	1.1 ± 0	Gerstein <i>et al.</i> [3]
Serum Albumin (g/dl)	3.9 ± 0	Palmer <i>et al.</i> [4]
Ethnic Group (%)		
White	69.42%	Australian Bureau of Statistics [5]
Black	0%	Assumption
Hispanic	0%	Assumption
Native American	0%	Assumption
Asian/Pacific Islander	19%	Australian Bureau of Statistics [5]
Australian (South European)	8.40%	Australian Bureau of Statistics [5]
Indigenous	3.18%	Australian Bureau of Statistics [5]
Cardiovascular Disease		
Angina Pectoris	11.6%	Karter <i>et al.</i> [1]
Myocardial Infarction	5.1%	Karter <i>et al.</i> [1]
Congestive Heart Failure	14.1%	Karter <i>et al.</i> [1]
Stroke	3.7%	Karter <i>et al.</i> [1]

Characteristics	Base Cohort (Baseline Value) [Mean/SD]	Source
Peripheral Vascular Disease	14.6%	Karter <i>et al.</i> [1]
Atrial Fibrillation	5.1%	Gerstein <i>et al.</i> [3]
LVH detected by ECG	4.2%	Gerstein <i>et al.</i> [3]
Renal Disease		
Microalbuminuria	54.7%	Karter <i>et al.</i> [1]
Gross Proteinuria	10.1%	Karter <i>et al.</i> [1]
End-stage renal disease	2.2%	Karter <i>et al.</i> [1]
Retinopathy		
Background Diabetic Retinopathy	33.1%	Gerstein <i>et al.</i> [3]
Proliferative Diabetic Retinopathy	9.2%	Karter <i>et al.</i> [1]
Severe Vision Loss	3.0%	Gerstein <i>et al.</i> [3]
Neuropathy/ Foot Ulcer Complications		
Peripheral Neuropathy	44.7%	Karter <i>et al.</i> [1]
Healed Ulcer	10.0%	Karter <i>et al.</i> [1]
Amputation	3.3%	Karter <i>et al.</i> [1]
Other Eye Complications		
Macular Edema	9.0%	Karter <i>et al.</i> [1]
Cataract	11.0%	Karter <i>et al.</i> [1]

Abbreviations: ECG: Electrocardiogram; eGFR: Estimated Glomerular Filtration Rate; g/dL: Grams per deciliter; HbA1c: Hemoglobin A1c; kg/m²: Kilograms per square meter; LVH: Left Ventricular Hypertrophy; mg/dL: Milligrams per deciliter; ml/min/1.73m²: Milliliters per minute per 1.73 square meters; mmHg: Millimeters of mercury; SD: Standard Deviation; uACR: Urinary Albumin to Creatinine Ratio; WBC: White Blood Cell count; WHR: Waist to Hip Ratio

21 *Supplementary Table 2. Cost per diabetes complication or event (adjusted to AUD 2024)*

Cost Item	Cost in 2024 AUD*	Source
Myocardial Infarction, Year of Event	32,245	National Heart Foundation of Australia, 2018 [6]
Myocardial Infarction, each Subsequent Year	13,151	National Heart Foundation of Australia, 2018 [6]
Angina 1st year	19,397	National Heart Foundation of Australia, 2018 [6]
Angina each year	9,112	National Heart Foundation of Australia, 2018 [6]
Congestive Heart Failure, Year of Onset	38,557	National Heart Foundation of Australia, 2018 [6]
Congestive Heart Failure, each Subsequent Year	12,736	National Heart Foundation of Australia, 2018 [6]
Congestive Heart Failure (re)hospitalization	12,736	Assumption (same as Congestive Heart Failure, each Subsequent Year)
Stroke, Year of Event	45,398	Arora <i>et al.</i> [7]
Stroke, each Subsequent Year	13,151	Gloede <i>et al.</i> [8]
Stroke death within 30 days	32,247	Calculated
Peripheral Vascular Disease, Year of Onset	33,168	Zomer <i>et al.</i> [9]
Peripheral Vascular Disease, each Subsequent Year	6,308	Zomer <i>et al.</i> [9]
Hemodialysis each year	109,476	Gorham <i>et al.</i> [10]
Peritoneal Dialysis, Year of Onset	111,171	Gorham <i>et al.</i> [10]
Peritoneal Dialysis, each Subsequent Year	69,428	Gorham <i>et al.</i> [10]
Renal transplant, Year of Event	96,692	Cass <i>et al.</i> [11]
Renal transplant, Each Subsequent Year	13,956	Cass <i>et al.</i> [11]
LASER Treatment	514	MBS Online Australian Government Department of Health [12]
Severe Vision Loss/Blindness, Year of Onset	26,159	Clarke <i>et al.</i> [13]
Severe Vision Loss/Blindness, Subsequent Year	8,952	Clarke <i>et al.</i> [13]
Cataract Extraction	866	MBS Online Australian Government Department of Health [12]
Cataract treatment each subsequent year	310	MBS Online Australian Government Department of Health [12]
Neuropathy each year	233	The Pharmaceutical Benefits Scheme (Duloxetine) [14]
Ulcer treatment	2,499	Zhang <i>et al.</i> [15]
Amputation, Year of Event	52,341	Zhang <i>et al.</i> [15]
Post amputation	2,499	Assumption (same as ulcer treatment)
Severe hypoglycemic event requiring medical assistance (SHE2)	8,918	IHACPA [16]
Severe hyperglycaemia	8,918	Assumption (same SHE2)
Annual Cost Aspirin	51	The Pharmaceutical Benefits Scheme (Aspirin) [17]
Annual Cost Statins (20 mg)	116	The Pharmaceutical Benefits Scheme (Atorvastatin) [18]
Annual Costs Angiotensin-Converting Enzyme (ACE) Inhibitor (Ramipril 5 mg)	115	The Pharmaceutical Benefits Scheme (Ramipril) [19]
Costs of Screening for Retinopathy	68	MBS Online Australian Government Department of Health [12]

Cost Item	Cost in 2024 AUD*	Source
Costs of Screening for Microalbuminuria	68	MBS Online Australian Government Department of Health [12]
Costs of Screening for Gross Proteinuria	68	MBS Online Australian Government Department of Health [12]

* Costs were inflated to AUD 2024 using the Health component of the Consumer Price Index in Australia [20].

Abbreviations: ACE: Angiotensin-Converting Enzyme; LASER: Light Amplification by Stimulated Emission of Radiation; SHE2: Severe Hypoglycemic Event requiring medical assistance.

26 *Supplementary Table 3. Percentage of patients requiring each type of management and*
 27 *screening*

Management and Screening	Percentage Requiring Management and Screening	Source
Taking ACE-I/ARB: Primary Prevention	77.7%	Karter <i>et al.</i> [1]
Taking ACE-I/ARB: Secondary Prevention	77.7%	Karter <i>et al.</i> [1]
Taking Statins: Primary Prevention	83.7%	Karter <i>et al.</i> [1]
Taking Statins: Secondary Prevention	83.7%	Karter <i>et al.</i> [1]
Taking Aspirin: Primary Prevention	62.6%	ODPHP (aspirin use) [21]
Taking Aspirin: Secondary Prevention	62.6%	ODPHP (aspirin use) [21]
Screened for Eye Disease	65.0%	Foreman <i>et al.</i> [22]
Renal Disease	100%	NDSS [23]

28 Abbreviations: ACE: Angiotensin-Converting Enzyme Inhibitors; ARB: Angiotensin Receptor Blockers; ODPHP: Office of
 29 Disease Prevention and Health Promotion.

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