

SUPPLEMENTARY MATERIAL

Cover page

Title:

BLOOD GLUCOSE MONITORING EXPERT GROUP AND BEST PRACTICE RECOMMENDATION- FITTER BiG

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➤ **Supplementary Table S0. Demographic and Professional Characteristics of Expert Panel Members**

Expert Name	Country	Specialty / Role	Years of Clinical Experience	Practice Setting	Area of Expertise
Prof. Siew Pheng Chan	Malaysia	Endocrinologist, Professor	25+ years	University hospital (academic)	Adult endocrinology, diabetes education
Dr. Tri Juli Edi Tarigan	Indonesia	Endocrinologist	25+ years	Academic hospital	T2D management, metabolic disorders
Dr. Beena Bansal	India	Endocrinologist	20+ years	Private/clinical diabetes center	Diabetes technology, patient education
Dr. Joy Arabelle C. Fontanilla	Philippines	Endocrinologist	25+ years	Tertiary hospital	Diabetes therapy, clinical practice models
Dr. Sueziani Zainudin	Singapore	Endocrinologist	20+ years	Public hospital	Diabetes education, structured DSME
Ms. Uoon Jeong Shin	South Korea	Diabetes Nurse Specialist / Educator	15+ years	Diabetes center	DSME/DSMES, patient counselling
Dr. Supawadee Likitmaskul	Thailand	Paediatric Endocrinologist	25+ years	University hospital	Paediatric diabetes, T1D management

➤ **S1: Search Strategy**

#	Search Strategy	#Hits
1	Diabetes, Gestational/ or exp Diabetes Mellitus/ or exp "Diabetes Mellitus, Type 1"/ or exp "Diabetes Mellitus, Type 2"/ or exp "Diabetes Mellitus, Lipoatrophic"/ or ("Diabetes Mellitus" or "Juvenile Diabetes" or "Juvenile Diabetes Mellitus" or "Labile Diabetes" or "Brittle Diabetes" or "Infantile Diabetes" or Neonatal Diabetes or "Type 1 Diabetes" or "Type 1 Diabetes Mellitus" or "Insulin-Dependent Diabetes" or "Lipoatrophic Diabetes" or "Gestational Diabetes" or "Type 2 Diabetes" or "Type 2 Diabetes Mellitus" or "Non-insulin-dependent diabetes" or NIDDM or MODY or "Maturity-onset diabetes of the young" or Diabetes or T2DM or IDDM or T1D).ti,ab.	2428767
2	exp "Blood Glucose Self-Monitoring"/ or ("Blood Glucose Self-Monitoring" or "SMBG" or "SMBG Device*" or "Point-of-Care Systems" or "POCT" or "Point-of-Care Testing" or "Point-of-Care Blood Glucose Testing" or "Self-monitoring blood glucose devices" or "blood glucose monitoring" or "Self-monitoring of blood glucose" or "continuous glucose monitoring" or CGM).ti,ab.	59543
3	exp "practice guidelines as topic"/ or ("Best Practices" or "clinical practice guideline*" or "evidence-based practice*" or "recommendation*" or "standard of care" or "clinical protocol*" or "expert opinion*" or "consensus statement*" or guideline*).ti,ab.	2902325
4	1 and 2 and 3	4563
5	limit 4 to yr="2005 - 2025"	4215
6	limit 5 to english language	4031
7	limit 6 to human	3936
8	remove duplicates from 7	2917
9	Without conference and abstract	1431

➤ **S2: Inclusion and Exclusion Criteria (The inclusion and exclusion criteria are derived based on the PICO framework as below):**

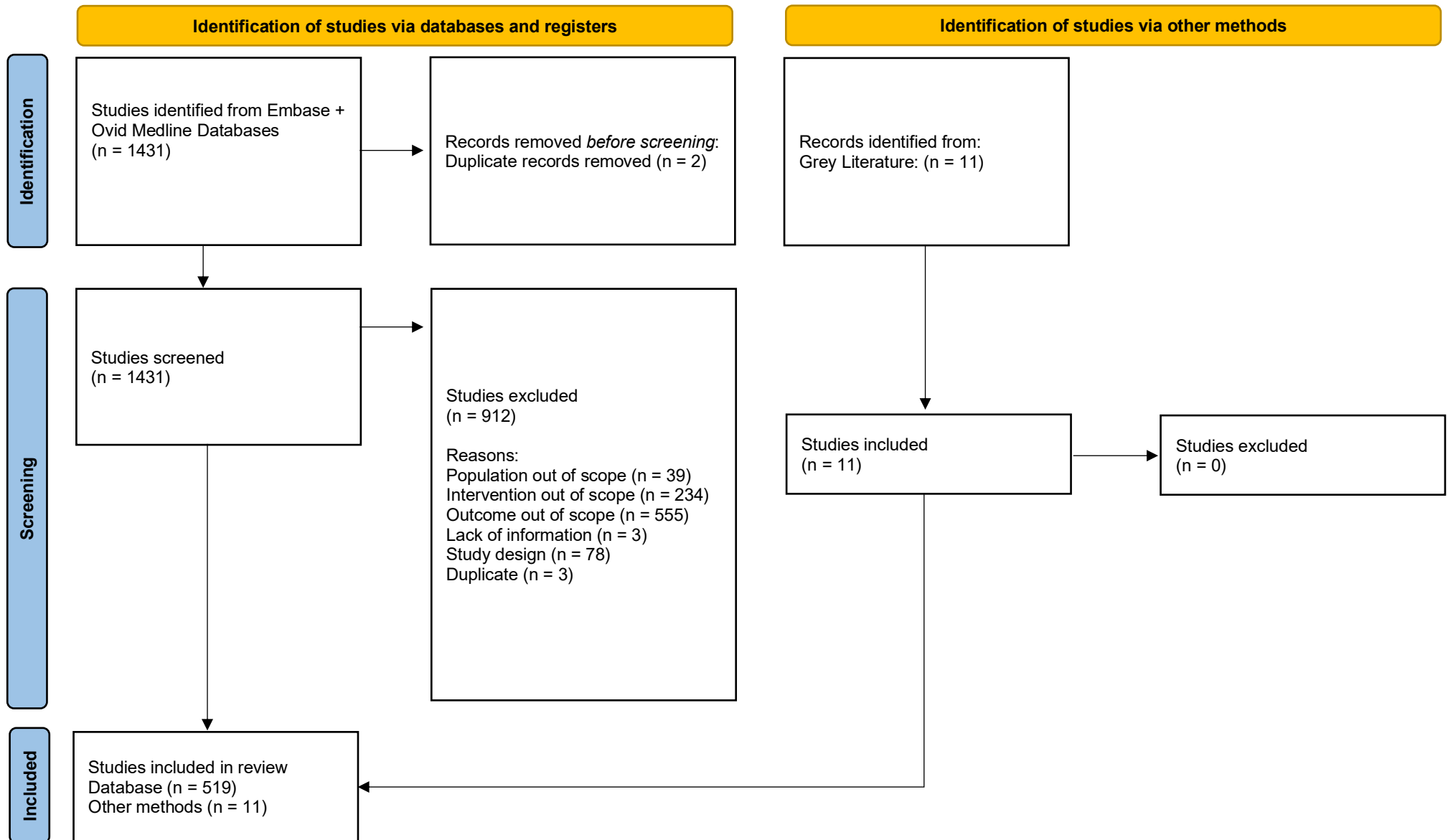
Population (P)	Individuals with diabetes in Asia, including subgroups such as type 1 diabetes, type 2 diabetes (on insulin and oral agents), gestational diabetes, pediatric older adult and elderly populations.
Intervention (I)	Use of blood glucose monitoring (BGM) modalities including self-monitoring of blood glucose (SMBG), continuous glucose monitoring (CGM), hybrid models, and structured diabetes self-management education (DSME).
Comparison (C)	Comparison between different BGM modalities (e.g., CGM vs SMBG), structured vs unstructured SMBG, and regions with vs without reimbursement or education programs.
Outcome (O)	Improved glycemic control (HbA1c reduction), enhanced patient engagement and adherence, reduced hypoglycemia, improved quality of life, and policy-level recommendations for equitable access and education.

➤ **S3: Database Search Terms**

To support the targeted literature review (TLR) across the five thematic domains - monitoring practices, clinical decision-making, patient engagement, technology and innovation, and policy and reimbursement, the following search terms were used:

General Terms	Population-Specific Terms	Technology and Innovation	Policy and Reimbursement	Outcomes and Adherence	Databases Searched
• "Blood glucose monitoring" • "Diabetes monitoring" • "Self-monitoring of blood glucose" OR "SMBG" • "Continuous glucose monitoring" OR "CGM" • "Hybrid glucose monitoring" • "Glycemic control" AND "Asia" • "Diabetes self-management education" OR "DSME"	• "Type 1 diabetes" AND "Asia" • "Type 2 diabetes" AND "Asia" • "Gestational diabetes" AND "monitoring" • "Pediatric diabetes" AND "glucose monitoring" • "Older adult diabetes patients" AND "SMBG" • "Elderly diabetes patients" AND "SMBG"	• "Digital health" AND "diabetes" • "Mobile apps" AND "blood glucose monitoring" • "AI in diabetes care" • "Wearable sensors" AND "glucose monitoring"	• "Diabetes reimbursement policies" AND "Asia" • "Insurance coverage" AND "blood glucose monitoring" • "Health policy reform" AND "diabetes" • "Public-private partnerships" AND "diabetes care"	• "HbA1c reduction" AND "SMBG" • "Patient adherence" AND "glucose monitoring" • "Quality of life" AND "diabetes monitoring" • "Structured SMBG" AND "clinical outcomes"	• PubMed • Embase • Ovid MEDLINE • Google Scholar (for grey literature)

➤ S4: PRISMA Flow Diagram



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

➤ S5 – Insurance and Coverage Landscape (Full Text)

This section provides detailed country-wise descriptions of CGM and SMBG access, reimbursement policies, and implementation challenges, with full citations.

Recent evidence highlights disparities in access to diabetes care including BGM are strongly influenced by socioeconomic status, geographic location, and insurance coverage. The 2025 ADA Standards of Care emphasize that social determinants of health (SDOH), including financial hardship and underinsurance, are key contributors to poor diabetes outcomes. The ADA recommends that treatment decisions be made collaboratively with patients, taking into account their financial constraints and access to care.[1] The report also underscores the need for health systems and policymakers to address structural barriers by integrating BGM into essential health benefit packages and expanding insurance coverage to reduce disparities in glycemic control and diabetes-related complications.

The ADA further notes that individuals from underserved communities including those in rural areas and low-income populations are disproportionately affected by limited access to diabetes technologies such as SMBG and CGM. These disparities are compounded by inconsistent reimbursement policies, which hinder the adoption of evidence-based monitoring practices. The report calls for multisectoral reforms to ensure equitable access to diabetes care, including the inclusion of BGM in national insurance schemes and the development of sustainable public-private partnerships.[1]

In South Korea, patient advocacy efforts led by organizations such as the Korean Diabetes Association and the Korean Pediatric Diabetes Association have significantly influenced national healthcare policies, particularly in the realm of diabetes care. A landmark policy change occurred in January 2019, when CGM systems became eligible for reimbursement. Under this policy, 70% of the cost of CGM devices is covered for individuals with type 1 diabetes, with the remaining 30% paid by patients.[2] Complementing the policy framework, access to glucose monitoring tools including SMBG, CGM, and laboratory-based testing is shaped by factors such as diabetes type, treatment regimen, risk of hypoglycemia, and patient lifestyle. Insurance coverage extends to individuals with type 1 diabetes, type 2 diabetes on insulin therapy, and gestational diabetes mellitus (GDM) treated with insulin, with a consistent reimbursement model covering 70% of the cost through government support. This structured approach has facilitated broader access to essential monitoring technologies for insulin-treated individuals, reflecting a comprehensive and patient-centered policy framework.

The Singapore's Ministry of Health's Medical Technology Advisory Committee recommends CGM for children and adults with type 1 diabetes who experience disabling or problematic hypoglycemia, have high HbA1c levels, or impaired hypoglycemia awareness. Subsidies apply only to specific CGM models and require multidisciplinary support and structured education.[3],[4] In practice, the current reimbursement framework enables individuals with type 1 diabetes to access currently marketed CGM devices with full subsidy. For those with type 2 diabetes, partial subsidy is available when the device is prescribed by an endocrinologist. Under this arrangement, the government currently subsidizes 40% of the cost for commercially available CGM devices, with the remaining 60% co-paid by patients. This coverage applies to select marketed CGM systems, excluding certain other devices not included under the reimbursement framework. With an estimated device cost of SGD 95, the typical out-of-pocket expense ranges from SGD 50 to 60. Access is facilitated through a streamlined prescription process that does not require extensive documentation, and some providers offer initial free trials. This reflects a structured yet selective approach to CGM access, aligned with diabetes type and clinical indication.

In Indonesia, despite near-universal coverage under the national health insurance scheme (JKN), access to BGM devices remains limited due to lack of reimbursement for outpatient use, forcing patients to rely on out-of-pocket payments. Public facilities rarely stock BGM devices for home use, and private pharmacies and online platforms

serve as primary sources, though affordability is a major barrier with low-income individuals required to work several days to afford basic supplies. CGM systems are even less accessible, with costs equivalent to up to two month's wages. Structural challenges, including limited digital literacy, inadequate provider training, and poor rural infrastructure, further restrict CGM adoption. These disparities highlight the urgent need for policy reforms to include BGM and CGM in JKN coverage, regulate supply chain mark-ups, support local manufacturing, and promote digital literacy and provider education to ensure equitable diabetes care across Indonesia.[5],[6]

In practice, access to glucose monitoring in Indonesia remains particularly constrained for individuals with type 1 and type 2 diabetes. Government insurance (BPJS) currently reimburses only conventional lab-based glucose testing and HbA1c assessments every 3-6 months. At-home monitoring is limited, with only about 30% of BPJS-covered patients in urban areas owning glucometers, all purchased out of pocket. In contrast, approximately 60% of patients in private hospitals self-monitor using personal glucometers. Rural areas face even greater limitations, where monitoring typically occurs only during monthly visits to primary health centers.

In the Philippines, government reimbursement policies significantly influence glucose monitoring practices. CGM costs are not reimbursed for individuals with either Type 1 or Type 2 diabetes, limiting its accessibility and adoption. Similarly, SMBG and HbA1c testing are not subsidized, contributing to lower utilization rates across the country. The absence of financial support for these monitoring tools, coupled with limited CGM training among primary healthcare providers, has further hindered the widespread adoption of CGM compared to traditional methods like HbA1c and SMBG.[7] Building on this, insights from clinical practice reveal that all home-based glucose monitoring—including SMBG and CGM—is entirely out-of-pocket, with no government or insurance subsidy available. While hospital-based glucose checks performed by nurses may be covered if the patient has insurance, any monitoring conducted outside the hospital setting must be self-funded. This creates a significant financial barrier to consistent and effective diabetes management for many patients across the country.

Thailand's nationwide rollout of the Diabetes Self-Management Program and Network System (DSMP-NS), under the Universal Health Coverage (UHC) framework, has demonstrated significant improvements in clinical outcomes for individuals with Type 1 Diabetes (T1D). Implemented across 37 hospitals, the program provided free access to intensive insulin therapy, BGM supplies, and structured Diabetes Self-Management Education and Support (DSMES). After 12 months, the proportion of patients achieving a composite outcome defined as improved glycemic control (HbA1c goal or $\geq 0.5\%$ reduction), absence of diabetic ketoacidosis (DKA), and absence of severe hypoglycemia (SH) increased from 17.6% to 43.0% ($p < 0.001$). Frequent BGM (≥ 3 times/day) was strongly associated with improved outcomes (adjusted odds ratio [aOR] 2.02; 95% CI 1.38–3.53; $p = 0.001$), with each additional daily test increasing the likelihood of success by 39%. These findings underscore the value of integrating clinical care with structured education and patient empowerment, particularly in resource-constrained settings.[8]

Building on this foundation, Thailand's UHC system has supported the development of a comprehensive DSMP-NS tailored to the needs of individuals with T1D and GDM. The initiative includes:

- SMBG and CGM programs for individuals with T1D.
- SMBG programs for women diagnosed with GDM.

These programs aim to equip patients with the tools and knowledge necessary for effective metabolic control and improved quality of life. The Diabetes Association of Thailand and the Thai Society of Pediatric Endocrinology collaborate with the UHC system to ensure SMBG access for all T1D patients both pediatric and adult, as well as for GDM and pregnancy-related diabetes cases. Eligible patients receive SMBG supplies for 3-4 tests per day throughout the year, contingent upon management at one of approximately 100 trained hospitals nationwide. Participation in a structured education program is a prerequisite for initiating SMBG.

While support for Type 2 Diabetes remains in its early stages, there are plans to extend coverage to individuals diagnosed before age 30, regardless of insulin use. Notably, SMBG support is currently exclusive to patients enrolled under the Universal Coverage Scheme (UCS), one of Thailand's three main reimbursement systems, which also include the Civil Servant Medical Benefit Scheme (CSMBS) and the Social Security Scheme (SSS). Neither CSMBS nor SSS currently provide SMBG coverage.

In parallel, Thailand has established the Type 1 Diabetes and Diabetes Diagnosed before Age 30 Registry Care and Network (T1DDAR CN) since 2014. This registry facilitates coordinated care and data collection for early-onset diabetes, enhancing long-term outcomes and supporting research efforts. Continued investment in patient education, self-management skills, and fostering positive health attitudes remains essential. These efforts, underpinned by UHC, are critical to achieving sustainable improvements in diabetes care across the country.

Malaysia faces notable challenges in expanding access to glucose monitoring technologies. While insulin is consistently provided through government support, home-based monitoring tools such as SMBG and CGM are largely funded out-of-pocket by patients. The Malaysian Clinical Practice Guidelines recommend frequent SMBG for individuals with T1D, yet its adoption is often hindered by cost, inconvenience, and social stigma.[9] Structured SMBG programs have shown promise in improving glycemic control and quality of life among individuals with T2D, but these remain limited in accessibility. Some pediatric units benefit from donor-supported initiatives that provide test strips and insulin pumps for children with T1D, though these programs are narrow in scope. Outside of these efforts, patients must self-fund all monitoring tools, highlighting a significant gap in comprehensive diabetes care coverage and underscoring the need for broader policy support.

In India, the insurance and reimbursement landscape for glucose monitoring technologies such as SMBG and CGM remains underdeveloped, posing a significant barrier to optimal diabetes management. Despite the clinical importance of regular glucose monitoring, especially in patients with T1D, insulin-treated T2D, and GDM, the high out-of-pocket costs associated with these technologies limit their widespread adoption. SMBG, while more accessible than CGM, still imposes a financial burden due to the recurring cost of test strips (₹660–₹1245 per 50 strips) and lancets (₹105–₹200 per 100 lancets), which are not typically covered by insurance. This financial strain is exacerbated in rural and low-income populations, where awareness and education about SMBG are also lacking. CGM, though clinically superior in detecting glycemic variability and hypoglycemia, is even less accessible due to its high cost, limited reimbursement, and the need for frequent sensor replacements. The lack of insurance coverage for CGM devices further restricts their use to a small subset of patients who can afford them out-of-pocket. Studies have shown that cost is a primary deterrent to SMBG adherence, particularly among patients with T1D and their families. Moreover, there is a notable absence of structured reimbursement policies or government-supported programs to subsidize these essential monitoring tools.[10]

These disparities highlight the urgent need for comprehensive policy reforms. Integrating BGM into national essential health benefit packages, expanding insurance coverage, and fostering public-private partnerships are pivotal strategies to enhance accessibility. Addressing social determinants of health and implementing incentives for healthcare providers can further improve equity in diabetes care. A 2025 report by the Centers for Disease Control and Prevention (CDC) emphasized that socioeconomic and geographic factors are key drivers of disparities in diabetes management, and that broadening insurance coverage is critical to improving clinical outcomes.[11]

1. American Diabetes Association Professional Practice Committee. 1. Improving Care and Promoting Health in Populations: Standards of Care in Diabetes—2025. *Diabetes Care*. 2024;48:S14–26. <https://doi.org/10.2337/dc25-S001>
2. APACMed-Digital-Health-Reimbursement-Policy-Database-APAC.pdf [Internet]. [cited 2026 Feb 5]. <https://apacmed.org/wp-content/uploads/2020/09/APACMed-Digital-Health-Reimbursement-Policy-Database-APAC.pdf>. Accessed 5 Feb 2026
3. continuous-glucose-monitoring-systems-for-t1dm-(published-1-may-2024).pdf [Internet]. [cited 2026 Feb 5]. <https://isomer-user-content.by.gov.sg/68/629c62f2-f461-4622-b697-89fa8ac63a37/continuous-glucose-monitoring-systems-for-t1dm-%28published-1-may-2024%29.pdf>. Accessed 5 Feb 2026
4. No subsidies for glucose monitoring devices now because not all patients benefit [Internet]. Ministry of Health. [cited 2026 Feb 5]. <https://www.moh.gov.sg/newsroom/no-subsidies-for-glucose-monitoring-devices-now-because-not-all-patients-benefit/>. Accessed 5 Feb 2026
5. Ramadaniati HU, Anggriani Y, Lepeska M, Beran D, Ewen M. Availability, price and affordability of insulin, delivery devices and self-monitoring blood glucose devices in Indonesia. *PLoS One*. 2024;19:e0309350. <https://doi.org/10.1371/journal.pone.0309350>
6. Hutapea DMM. Diabetes Compliance Management Revolution in Indonesia: Uncovering the Latest Trends in Continuous Glucose Monitoring (CGM) Usage. *Maneggio. Nawala Education*; 2025;2:24–33. <https://doi.org/10.62872/w2w1rx62>
7. Twigg S, Lim S, Yoo S-H, Chen L, Bao Y, Kong A, et al. Asia-Pacific Perspectives on the Role of Continuous Glucose Monitoring in Optimizing Diabetes Management. *J Diabetes Sci Technol*. 2024;18:1460–71. <https://doi.org/10.1177/19322968231176533>
8. Dejckhamron P, Santiprabhob J, Likitmaskul S, Deerochanawong C, Rawdaree P, Tharavanij T, et al. Type 1 diabetes management and outcomes: A multicenter study in Thailand. *Journal of Diabetes Investigation*. 2021;12:516–26. <https://doi.org/10.1111/jdi.13390>
9. Johari SM, Razalli NH, Chua KJ, Shahar S. The efficacy of self-monitoring of blood glucose (SMBG) intervention package through a subscription model among type-2 diabetes mellitus in Malaysia: a preliminary trial. *Diabetol Metab Syndr*. 2024;16:135. <https://doi.org/10.1186/s13098-024-01379-9>
10. Makkar BM, Agarwal S, Seshadri KG, Kesavadev J, Chawla M, Saboo B. RSSDI Expert Consensus for Optimal Glucose Monitoring in Diabetes Mellitus in India and Recommendations for Clinical Practice.
11. Bowen S-A. Public Health Research and Program Strategies for Diabetes Prevention and Management. *Prev Chronic Dis* [Internet]. 2025 [cited 2026 Feb 5];22. <https://doi.org/10.5888/pcd22.240501>

Blood Glucose Monitoring

Pre-meeting survey questionnaire (Supplementary Table S6)

SECTION 1	Current Monitoring Practices in Blood Glucose Monitoring
TIME	5-7 minutes

1. What types of blood glucose monitoring do you routinely recommend? (Select all that apply.)

- ☐ Traditional Self-Monitoring of Blood Glucose (SMBG) – Finger-prick blood test
- ☐ Continuous Glucose Monitoring (CGM) *[includes Real-time Continuous Glucose Monitoring (rtCGM) and Flash Glucose Monitoring (FGM)]*
- ☐ Laboratory-based testing (e.g., HbA1c)
- ☐ Others (please specify):

2. What is your preferred method of glucose monitoring for: [Select all that apply]

Type 1 Diabetes:	Type 2 Diabetes on insulin:	Type 2 Diabetes on oral agents:	Gestational Diabetes:	Others (please specify):
☐ SMBG ☐ CGM <i>(includes rtCGM and FGM)</i> ☐ HbA1c	☐ SMBG ☐ CGM <i>(includes rtCGM and FGM)</i> ☐ HbA1c	☐ SMBG ☐ CGM <i>(includes rtCGM and FGM)</i> ☐ HbA1c	☐ SMBG ☐ CGM <i>(includes rtCGM and FGM)</i> ☐ HbA1c	

3. What is your recommended frequency of Self-Monitoring of Blood Glucose (SMBG) for the following patient groups in routine clinical practice? (Please select the most common practice in your setting)

Patient Group	Frequency Options
Type 1 Diabetes	☐ 6–10 times/day ☐ 3–5 times/day

	☐ <3 times/day ☐ Other: _____
Type 2 Diabetes on insulin	☐ 3–5 times/day ☐ 2–3 times/day ☐ Weekly ☐ Other: _____
Type 2 Diabetes on oral agents	☐ Daily ☐ 2–3 times/week ☐ Weekly ☐ Other: _____
Gestational Diabetes	☐ 4 times/day (fasting + post-meals) ☐ 2–3 times/day ☐ Other: _____
Pediatric patients	☐ 6–10 times/day ☐ 3–5 times/day ☐ Other: _____
Older adult patients	☐ Daily ☐ Weekly ☐ Based on symptoms ☐ Other: _____

4. To what extent do you incorporate data from Continuous Glucose Monitoring (CGM) systems when making therapeutic adjustments for your patients?
- ☐ Routinely - I frequently use CGM data to guide treatment decisions and adjust treatment.
☐ Occasionally - I refer to CGM data in certain cases, depending on the patient's condition
☐ Rarely - I seldom use CGM data for therapy adjustments.
☐ Not at all - I do not currently use CGM data in my clinical decision-making.
5. Based on your clinical experience, which outcomes show the most significant improvement with regular use of Self-Monitoring of Blood Glucose (SMBG) via finger-prick testing?

- ☐ Improved glycemic control (e.g., HbA1c reduction)
- ☐ Better prevention and detection of hypoglycemia
- ☐ Increased patient engagement and self-awareness
- ☐ More informed and timely treatment adjustments
- ☐ Other (please specify): _____

6. In your clinical practice, what steps do you routinely recommend to patients for proper Self-Monitoring of Blood Glucose (SMBG) using finger-prick testing? Please indicate which of the following are part of your standard patient instructions. (Select all that apply.)

Before Measurement:

- ☐ Check the expiry of test strips
- ☐ Wash hands thoroughly with soap and water
- ☐ Dry hands completely before testing, and ensure hands are warm
- ☐ Avoid alcohol swabs unless soap and water are unavailable
- ☐ Use a new, sterile lancet for each test

Finger Pricking:

- ☐ Use the side of the fingertip (not the center)
- ☐ Rotate fingers regularly to prevent callus formation
- ☐ Adjust lancet depth based on skin thickness and comfort
- ☐ Dispose of used lancets safely in a sharps container

During Testing:

- ☐ Apply blood to the test strip as directed (usually at the edge, not on top)
- ☐ Ensure an adequate blood sample for accurate results
- ☐ Avoid excessive squeezing of the finger to prevent dilution of the sample

After Testing:

- ☐ Record the result in a logbook, app, or digital platform
- ☐ Interpret the reading based on individualized target ranges
- ☐ Take appropriate action if the reading is out of range
- ☐ Share glucose data with a healthcare provider regularly
- ☐ Store test strips properly (cool, dry place, sealed container)

7. Do you provide patients with written or visual instructions specifically for Self-Monitoring of Blood Glucose (SMBG) using finger prick testing?
- ☐ Yes, written handouts or printed guides
 - ☐ Yes, video tutorials or app-based instructions
 - ☐ No, I provide only verbal instructions during consultations
 - ☐ Other (please specify): _____
8. What key factors do you consider when recommending Self-Monitoring of Blood Glucose (SMBG) using finger-prick tests versus Continuous Glucose Monitoring (CGM) to your patients? *[Please rank your top 3 choices (1 = most important, 3 = third most important). You may also place same rank for two choices.]*
- 1) ☐ Cost and affordability for the patient
 - 2) ☐ Insurance coverage or reimbursement availability
 - 3) ☐ Type of diabetes (e.g., T1D, T2D, GDM)
 - 4) ☐ Frequency of hypoglycemia or glycemic variability
 - 5) ☐ Patient's ability to understand and act on glucose readings
 - 6) ☐ Availability of SMBG supplies in your region
 - 7) ☐ Clinical guidelines or institutional protocols
 - 8) ☐ Patient preference or lifestyle compatibility
 - 9) ☐ Other (please specify): _____
9. In your clinical practice, when do you recommend ketone testing for patients with diabetes? (Select all that apply)
- ☐ In patients with Type 1 Diabetes during illness or stress
 - ☐ In patients with Type 1 Diabetes with persistent hyperglycemia (≥ 200 mg/dL)
 - ☐ In patients with suspected diabetic ketoacidosis (DKA)
 - ☐ In pregnant women with diabetes
 - ☐ In patients using SGLT2 inhibitors
 - ☐ Routinely for all insulin-treated patients
 - ☐ Rarely or never
 - ☐ Other (please specify): _____
10. Which method of ketone testing do you most commonly recommend?
- ☐ Urine ketone strips

- ☐ Blood ketone meters
- ☐ Both, depending on the situation.

If you selected "Both," please briefly describe the key factors or clinical indicators that help you choose between urine strips and blood meters: _____

- ☐ Not applicable

SECTION 2	Guidelines and Clinical Decision-Making
TIME	2 minutes

11. Is SMBG included in your country's national diabetes management guidelines?

- ☐ Yes
- ☐ No - *(If No, please proceed to Question 13.)*

12. Do you believe current guidelines are adequate for real-world practice in your country?

- ☐ Yes
- ☐ No

13. In the absence of routine self-monitoring of blood glucose (SMBG), which international clinical guidelines do you refer to for glucose monitoring recommendations in your practice, in addition to national guidelines? (Please select all that apply.)

- ☐ American Diabetes Association (ADA)
- ☐ International Diabetes Federation (IDF)
- ☐ European Association for the Study of Diabetes (EASD)
- ☐ World Health Organization (WHO)
- ☐ Other (please specify): _____
- ☐ None

14. Which of the following do you consider the most critical gaps in current national or international guidelines related to self-monitoring of blood glucose (SMBG)? (Select up to 3)

- ☐ Limited guidance for self-monitoring of blood glucose (SMBG) in non-insulin-treated patients
- ☐ Inadequate training for healthcare providers on interpreting SMBG data
- ☐ Insufficient integration of SMBG results into personalized care plans

- ☐ Reimbursement and access disparities for SMBG technologies
- ☐ Lack of standardized tools for CGM data analysis and interpretation
- ☐ Inconsistent use of Time-in-Range (TIR) and other CGM metrics in clinical practice
- ☐ Other (please specify): _____

SECTION 3	Patient Engagement and Adherence
TIME	2 minutes

15. In your opinion, what are the most common reasons patients in your setting do not adhere to self-monitoring of blood glucose (SMBG) recommendations? (Select up to 3)

- ☐ Pain or discomfort from finger pricks
- ☐ High cost of test strips or devices
- ☐ Lack of understanding of the importance of monitoring
- ☐ Forgetfulness or lack of routine
- ☐ Emotional distress or diabetes burnout
- ☐ Perceived lack of immediate benefit
- ☐ Complexity or inconvenience of the monitoring process
- ☐ Limited provider feedback or follow-up
- ☐ Cultural or language barriers
- ☐ Other (please specify): _____

16. What forms of education or support do you provide to patients for effective self-monitoring of blood glucose (SMBG)? (Select all that apply)

- ☐ One-on-one counseling during clinic visits
- ☐ Structured education programs (e.g., DSMES)
- ☐ Printed materials (e.g., brochures, handouts)
- ☐ Video or app-based tutorials
- ☐ Group education sessions
- ☐ Peer support or community health worker involvement
- ☐ No formal education provided

☐ Other (please specify): _____

17. Which strategies have you found most effective in improving patient adherence to self-monitoring of blood glucose (SMBG) and addressing barriers to diabetes self-management? *(Select up to 3 that you consider most impactful.)*

- ☐ Patient education and counseling
- ☐ Personalized patient education
- ☐ Government or NGO subsidies
- ☐ Integration into primary care programs
- ☐ Use of digital tools or mobile apps (e.g., CGM alerts, SMS reminders)
- ☐ Community health worker involvement
- ☐ Public-private partnerships
- ☐ Collaborative care and shared decision-making
- ☐ Behavioral strategies (e.g., goal setting, motivational interviewing)
- ☐ Regular provider follow-up and feedback
- ☐ Involvement of family or peer support
- ☐ Simplifying the monitoring regimen
- ☐ Other (please specify): _____

SECTION 4	Technology and Innovation
TIME	5 minutes

18. What proportion of your patients currently use the following glucose monitoring methods?
(Please select the most accurate estimate for each category.)

Self-Monitoring of Blood Glucose (SMBG):	Continuous Glucose Monitoring (CGM) (includes rtCGM and FGM)
☐ <10%	☐ <10%
☐ 10-30%	☐ 10-30%
☐ 30-50%	☐ 30-50%
☐ 50-70%	☐ 50-70%
☐ 70-80%	☐ 70-80%
☐ 80-90%	☐ 80-90%

☐ >90%	☐ >90%
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19. What are the most important features you consider when selecting a blood glucose monitoring (BGM) device for your patients? (Select up to 3 options)

- ☐ High accuracy and clinical reliability of glucose readings
- ☐ Patient-friendly design and ease of use (e.g., intuitive interface, strip handling)
- ☐ Comfort, safety, and usability of the lancet device (e.g., adjustable depth, pain reduction, ease of handling)
- ☐ Affordability of the device and consumables (e.g., test strips, lancets)
- ☐ Availability and accessibility through local pharmacies or healthcare facilities
- ☐ Digital connectivity and data integration (e.g., Bluetooth, mobile apps, cloud platforms)
- ☐ Compact size and portability for patient convenience
- ☐ Established brand reputation or familiarity with the device
- ☐ Regulatory approvals and evidence-based clinical validation
- ☐ Other (please specify): _____

SECTION 5	Policy and Advocacy
TIME	1 minute

20. Is blood glucose monitoring reimbursed in your country?

- ☐ Yes, fully
- ☐ Partially
- ☐ No

21. Which policy changes do you believe would most improve access to effective glucose monitoring in your country or region? (Select up to 3)

- ☐ Expand insurance coverage for SMBG and CGM devices
- ☐ Subsidize or reduce the cost of glucose monitoring supplies
- ☐ Include glucose monitoring in national essential health benefit packages
- ☐ Address social determinants of health (e.g., housing, food, digital access)

- ☐ Provide training and incentives for healthcare providers
- ☐ Promote public-private partnerships to improve access
- ☐ Streamline regulatory approval for new monitoring technologies
- ☐ Other (please specify): _____

SECTION 6	Future Perspectives
TIME	1 minute

22. What innovations or changes would you like to see in blood glucose monitoring in your country in the next 5 years? (Select all that apply)

- ☐ Wider availability of compact, all-in-one blood glucose monitoring systems
- ☐ Improved ease of use and reduced steps in the testing process
- ☐ Enhanced integration with mobile apps and digital health platforms
- ☐ Greater affordability and broader insurance or government coverage for devices and test cartridges
- ☐ Improved accuracy and consistency of results in real-world settings
- ☐ Real-time data sharing with caregivers and healthcare providers
- ☐ Multilingual support and localized education for patients and healthcare professionals
- ☐ AI-powered insights and personalized feedback based on glucose trends
- ☐ Other (please specify): _____