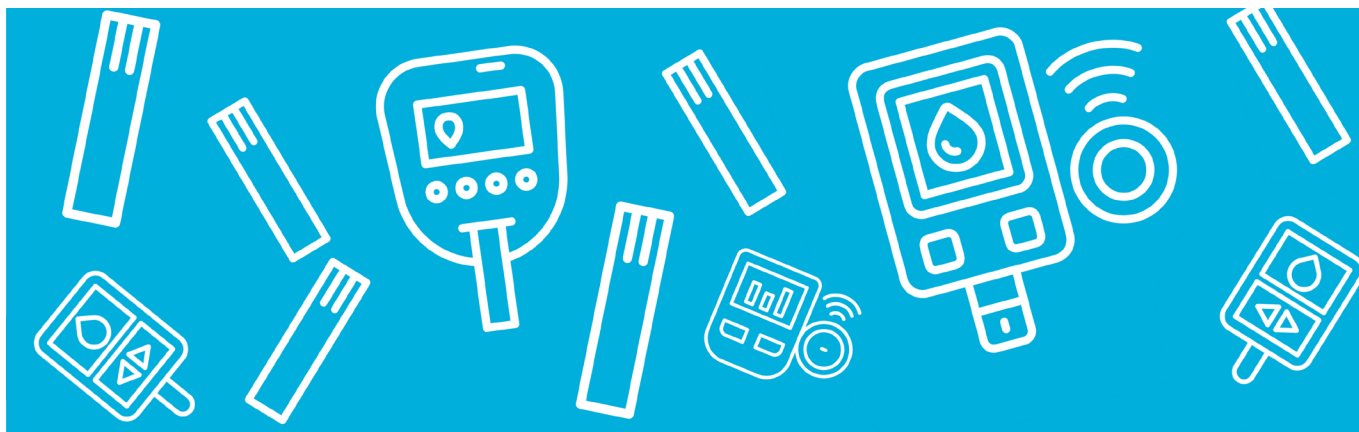


MOVING FORWARD ON **ACCESS TO GLUCOSE SELF-MONITORING** TECHNOLOGIES FOR THE MANAGEMENT OF **DIABETES**



INTRODUCTION

Diabetes is a global challenge, affecting an estimated 589 million people worldwide - 81% of whom live in low- and middle-income countries (LMICs).¹

People living with diabetes who use insulin require daily self-monitoring, which includes everybody living with type 1 diabetes and a proportion of people living with type 2 diabetes.^{2,3} This requires reliable access to affordable self-monitoring technologies, such as blood glucose meter and test strips or continuous glucose monitoring devices.

In 2022, the World Health Organization (WHO) published five global diabetes coverage targets⁴, two of which cannot be achieved without reliable access to glucose testing: “80% of people with diagnosed diabetes have good control of glycaemia” and “100% of people with type 1 diabetes have access to affordable insulin and blood glucose self-monitoring”. These targets, together with the 2021 World Health Assembly (WHA) resolution 74.4 to strengthen prevention and control of diabetes⁵, brought momentum

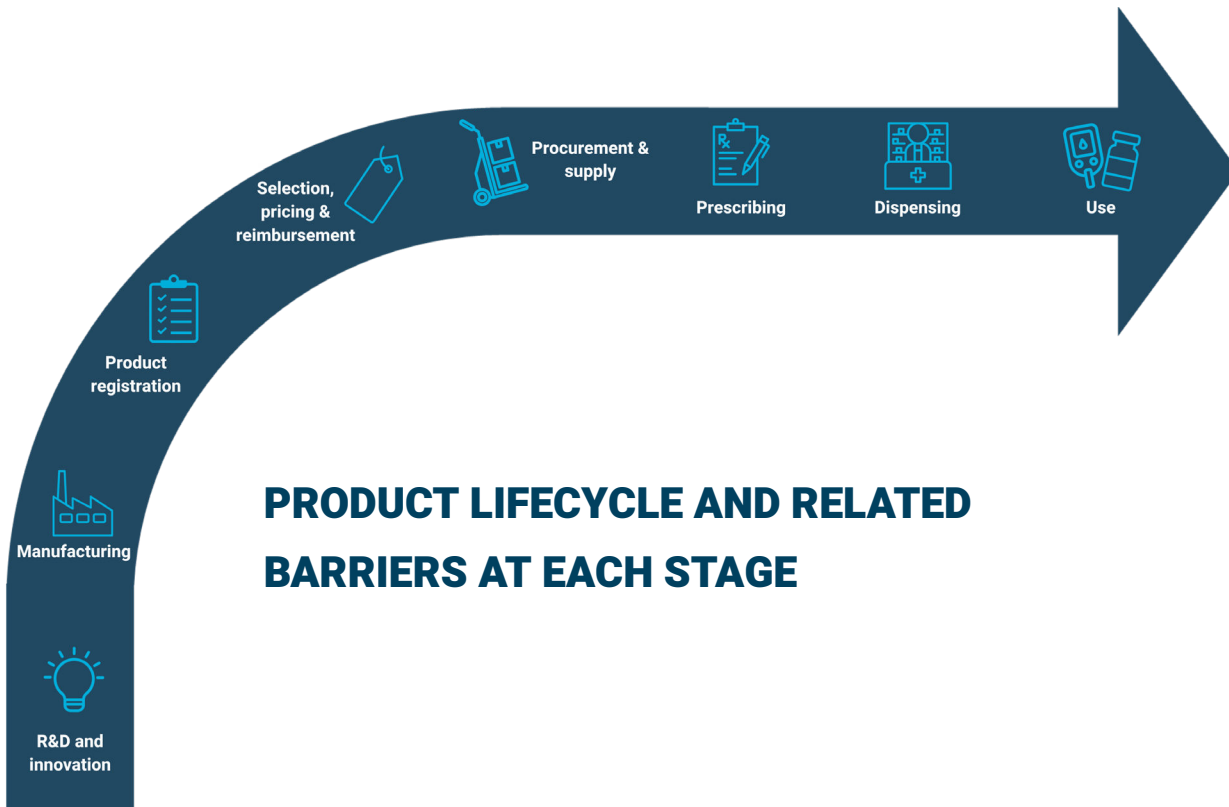
and strong commitment by the global health community to move forward on better access to glucose self-monitoring technologies.

However, to date, it is estimated that only a fraction of people in LMICs are able to practice regular self-monitoring.⁶ Reasons for this are multifactorial and span across all areas of a country’s health system and the life cycle of self-monitoring technologies in this system.

APPROACH

The product life cycle framework used in the report *Moving Forward on Access to Glucose Self-Monitoring Technologies for the Management of Diabetes* aims to map the activities of the current global stakeholders engaged in access to diabetes treatment and care. The report categorises these activities within a structured life cycle framework in order to identify gaps and opportunities for future work.

Below, we present a summary of the key barriers across the product lifecycle and recommendations identified in the report.



PRODUCT LIFECYCLE AND RELATED BARRIERS AT EACH STAGE



- Accuracy of new devices is often sub-optimal.
- Innovation activity for blood glucose meters (BGMs) is limited.
- Strong patent protection impedes innovation.



- Local manufacturing of test strips can be cost-effective, but only if process is fully automated.
- LMIC market volumes for test strips are frequently too low for investment in full automation.
- New continuous glucose monitoring device (CGM) manufacturers struggle to drive down CoGS due to initial low volumes.



- Test strip product quality can decline after registration and market introduction.
- Capacity of local regulators to detect and investigate products of sub-standard quality is limited.
- Lack of CGM registration in LMIC markets.



- Technical documents to aid in product selection are complex and likely underused by LMIC buyers/procurers.
- Not enough independent post-market scientific evaluations of BGMs sold in LMICs and new CGMs are conducted.
- National essential diagnostics lists (EDLs) may not prioritise inclusion of BGMs for self-testing.



- Procurement practices for test strips are not optimised, leading to higher prices.
- Procurement of test strips for self-testing is not prioritised.
- Supply chain costs can be considerable.



- Health care providers often do not discuss self-monitoring with patients in depth due to knowledge gap.
- Recommendation of BGMs may not prioritise technical features that aid management.
- Large knowledge gap exists in LMICs around CGM integration into diabetes management.



- BGM/test strip product availability can be inconsistent.
- Complex supply chains augment the problem of reliable supply.
- CGM retail prices do not mirror lower purchasing power in LMICs.



- Barriers to "Use" are better researched and documented in HICs.
- Relationship between the different barriers to "Use" are not well quantified.

OPPORTUNITIES FOR OVERCOMING BARRIERS AT EACH LIFECYCLE STAGE



R&D and innovation

- R&D and innovation for new technologies should focus on highly flexible devices, adaptable to user needs.
 - Target product profiles need to be taken into consideration, more awareness raising among developers is needed.
 - Partnerships are needed between manufacturers and technology development organisations focusing on LMIC needs, to jointly develop optimal products.
 - Innovative ideas are required to overcome meter/strip exclusivity.
 - Assess degree of opportunities that may lay in off-patent aspects of self-monitoring technologies.
-



Manufacturing

- Explore market mechanisms on viability to secure test strip volumes for fully locally manufactured test strips in combination with government / payer commitments at national or regional level.
 - Explore pooling of CGM demand at regional level to enable new CGM manufacturers to drive down CoGS and launch products at competitive prices.
 - Pressure on established CGM manufacturers should be increased to adjust selling prices in relation to CoGS; more CoGS examples are needed, particularly for CGMs.
-



Product registration

- Raise awareness among LMIC regulators and procurers of added value of WHO PQ.
 - Conduct technical research on supply chain impact of test strip product quality; consider lot-testing.
 - Strengthen capacity of national regulators for post-market surveillance and investigation of technical complaints.
 - Work with CGM manufacturers and regional regulatory fora to harmonise registration requirements; test approach of collaborative registration.
-



Selection, pricing & reimbursement

- Develop easy-to-use fact sheets or digital quick guides to support product selection for all self-testing technologies.
 - Conduct more independent scientific evaluations for BGMs and CGMs in LMICs to close the local data gap.
 - Work with relevant authorities to ensure BGM use for self-monitoring is included in national EDLs.
 - Explore market dynamics and purchasing behaviour for self-testing products based on willingness to pay data.
-



Procurement & supply

- Raise awareness at country level of test strip procurement guidelines and opportunities (pooling, procurement channels); identify concrete opportunities to test these.
- Explore mechanisms for links to insulin procurement.
- Use available data on affordability to advocate at country level for inclusion of self-testing tools into UHC.
- Use affordability data to quantify accessible market at lower price point.



Prescribing

- Continue to encourage use of available training resources for self-monitoring to address knowledge gap.
- Develop locally-adapted CGM training courses and encourage medical training councils to include CGM use in curriculum.
- Integrate CGM considerations into LMIC-adapted global guidelines.
- Develop quick guides for product selection.



Dispensing

- Bring together manufacturers, distributors and country procurers to jointly work on consistent supply and maintain product ownership.
- Identify levers to mandate manufacturers to develop and implement access strategies for BGMs/CGMs in LMICs and monitor progress.



Use

- Generate data on the interconnectedness of all self-testing barriers in LMICs in different geographies and population segments.
- Continue modelling and studies to quantify impact of self-monitoring on diabetes care and quality of life

For the full report, see the [HAI website](#).

Links

1. [IDF Facts & Figures 2025](#)
2. [ADA Consensus Statement on SMBG; Diabetes Care 1987](#)
3. [Green et al. Type 1 diabetes: global estimates; Diabetologia 2021](#)
4. [Basu et al. Estimation of global insulin use for type 2 diabetes; Lancet D&E 2019](#)
5. [Stephanie et al. Systematic review: Self-management of diabetes in Sub-Saharan Africa; BMC Public Health 2018](#)
6. [WHO Global Diabetes Coverage Targets 2022](#)

Author: Beatrice Vetter PhD, Independent Global Health Consultant

Contact: acciss3@haiweb.org

The ACCISS Study is supported by The Leona M. and Harry B. Helmsley Charitable Trust. The analysis included in this report is that of the authors alone and does not necessarily reflect the views of the Helmsley Charitable Trust. All references and conclusions are intended for educational and informative purposes and do not constitute an endorsement or recommendation from the Helmsley Charitable Trust.