Supplementary File 2

Supplementary Table 1. Further details on quantitative survey questions

Respondent	Survey Section	Question Type	Constructs Measured	Response Format	Number of Items
HCP	Facilitators of CGM (i-PARiHS: Innovation, Context, Recipients, Facilitation, Others)	Closed + Open-ended	Perceived enablers of CGM use	Yes/No + Open text	8 closed, 1 open
HCP	Barriers to CGM (i-PARiHS: Innovation, Context, Recipients, Facilitation, Others)	Closed + Open-ended	Barriers to adoption and integration	Yes/No + Open text	14 closed, 1 open
HCP	Training helpfulness	Mixed	Training effectiveness	Yes/No + Open text	1 closed, 1 open
HCP	Overall feedback, CGM indications, multimodal use	Open-ended	Acceptability, utility, practice integration	Open text	3 open
Patient	CGM device used	Closed	Device identification	Categorical (Dexcom G6 OR Freestyle Libre)	1

Patient	CGM usability or experience	Closed	Ease, comfort, information, lifestyle fit	6-point Likert (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree, don't know)	6
Patient	CGM impact	Closed	Diabetes knowledge, self-care, and quality of life	6-point Likert (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree, don't know)	11
Patient	Challenges with CGM	Closed	Device-related discomfort and barriers	Multiple-choice for issues + 4-point scale for interference with daily activities (none, small, moderate, larger)	4
Patient	Willingness to reuse	Closed	Acceptability	Categorical (yes, no, don't know)	1
Patient	Received training	Closed	Perceived training adequacy	Yes/No	1
Patient	HCP discussion of data	Closed	Engagement with care	Yes/No	1
Patient	Like/dislike CGM	Open-ended	User feedback	Open text	1
Patient	Willingness to pay	Closed	Future intention to use/purchase	Categorical (yes, no, don't know)	1

Supplementary Table 2. Joint display of integrated findings from quantitative and qualitative data on CGM user experience

Key Insights	Quantitative Findings (Survey results)	Qualitative Findings (Interview quotes/themes)
Acceptance & Ease of Use	*83.3% of patients found CGM easy to use; 83.3% comfortable to wear. *More than 90% had no significant difficulty with daily activities.	*Patients reported initial apprehension but quickly adapted: *"now it's part of me… it doesn't come off easily."* (IDP04) *No major device problems; a few minor issues (occasional loose sensor) were easily managed.
Data Usefulness & Understanding	*91.7% agreed CGM provided meaningful info about their glucose. *75.0% felt they better understood their diabetes because of CGM. *0% reported difficulty understanding CGM graphs/data.	*Continuous data helped patients connect the dots between habits and glucose, a new insight beyond quarterly HbA1c tests. *Some less tech-savvy patients didn't use the app much on their own, relying on clinic for interpretation (one reason none *reported* difficulty might be low engagement by those who would find it hard).
Behaviour Changes (Diet & Self-Care)	*83.3% became more consistent in checking sugars during CGM use.	*Many patients described immediate diet changes: e.g., reducing intake of foods that caused spikes (IDP01). One said an alarm *"scared"* him into stopping eating at that moment (IDP07), showing real-time self-regulation.

	*83.3% adjusted their eating based on CGM readings; 58.3% felt more consistent overall in healthy habits. *50.0% became more consistent adjusting insulin (others neutral, possibly not on insulin or hesitant).	*Some increased exercise (taking walks when seeing high trends). However, staff observed these changes often tapered off post-CGM, indicating feedback-driven habits that weren't all sustained without the device.
Glycemic Control Perceptions	*58.3% felt their sugars were consistently at better levels with CGM; 41.7% were unsure/no change. * 41.7% felt overall health/quality of life improved; 50% neutral (modest perceived health impact for many).	*Providers and patients noted improved glucose trends (more time in range, fewer extreme highs) during CGM periods. Some patients even lowered HbA1c after the pilot (anecdotal). *Cases cited where CGM data led to medication changes that reduced hyperglycaemia or avoided hypoglycaemia, validating perceived improvements. A few patients saw little change and felt disappointed, aligning with those neutral in the survey.
Patient Empowerment & Confidence	*66.7% felt more confident in managing their diabetes after using CGM. *50.0% felt more confident they could avoid future complications (half remained unsure).	* Patients felt more in control and knowledgeable: real-time awareness gave a sense of agency in managing diet/activities. * Some felt safer and less anxious about "silent" highs or lows, knowing the sensor would alert them (peace of mind). Family viewing of CGM data (in one case) added reassurance and support.

	*75.0% felt better supported by their healthcare team during CGM.	*Extra coaching and follow-ups made patients feel *"looked after"*, enhancing their confidence and trust in the care team. (This corresponds to the 75% who noted improved support.)
Provider Workload & Workflow	*55.6% of providers said CGM was challenging to fit into usual consultation time. *66.7% noted limited time/resources for patient training as a barrier. *44.4% felt CGM data download process was inefficient; 44.4% cited limited workflow guidance.	*Staff described the CGM workflow as time-intensive: ~30 min extra per patient for setup/education, plus additional follow-up calls and coordination, straining clinic schedules (IDH01, IDH10). *Only a few nurses were trained, causing bottlenecks. If the key person was away, CGM services paused, reflecting resource constraints (IDH02). *Managing the technology (setting up apps, downloading data) was *"the most frustrating"* part for some, indicating workflow needs streamlining (e.g., better integration into EHR).
Facilitators (Perceived Benefits)	*100% of providers agreed CGM improves clinical decisions & personalization of treatment. *100% said it improves patients' understanding and facilitates behaviour change & empowerment. *89% felt it reduced serious hypoglycaemia and improved the structure of clinic visits.	*Team-based care was key: having doctors, nurses (and sometimes dietitians) jointly review CGM data gave patients comprehensive feedback in one sitting, maximizing impact. *Dedicated care managers acting as point-of-contact kept patients engaged and ensured continuity, a noted facilitator in implementation. *Provider enthusiasm and training helped push the program forward, several staff went above and beyond (extra calls, personal device trials) out of commitment to patient success, creating a supportive environment for CGM use.

Barriers: Cost & Financing	*88.9% of providers flagged high device/sensor cost as a major barrier; 88.9% also cited lack of insurance/financial coverage. *58.3% of patients willing to pay out-of-pocket, 41.7% not willing, indicating many would struggle without subsidy.	*Universally raised in interviews: Patients and providers worry CGM is too expensive for routine use. *"Without subsidies…not sustainable",* patients call for government support (IDP07). *Providers fear that even if they want to prescribe CGM, cost to patients will limit uptake. This was identified as the number one challenge for scaling up the program.
Barriers: Technical & Device	*55.6% of providers reported technical issues/sensor failures; 44.4% noted device interoperability issues; 33.3% saw alarm fatigue in patients. *Patient challenges: 16.7% found alarms bothersome; 16.7% felt it limited activities; 8–17% experienced physical issues (irritation, pain, device coming off).0% reported difficulty with data interpretation (as noted above).	*Device/app compatibility: Some willing patients couldn't participate due to not owning a compatible smartphone (CGM app had limited device support), raising equity concerns (IDH01). * Language barrier: App only in English, non-English speakers struggled, which the survey did not capture (it's a unique local insight). *Alarms: One patient became very anxious with frequent high-glucose alarms (needed coaching to cope), illustrating that alerts can cause stress for some, though others used them constructively. No interviewee mentioned turning alarms off (no classic "alarm fatigue"), but emotional response to data is a consideration. *Sensor wear issues: Mixed feedback, most found it secure (per patients above), but one staff noted a patient complaint of easy dislodgement (IDH05). Minor inconvenience like phone battery drain was mentioned by a few. Overall technology performance was good, aligning with relatively low frequency of serious complaints in the survey.

Patient Factors & Engagement	*Quant survey included only those who participated; it didn't capture those who declined or minimally engaged, aside from the 33% who said they wouldn't wear again. *66.7% would use CGM again, 33.3% would not or unsure, hinting that a subset did not find it worthwhile.	*Some elderly or less tech-literate patients *declined participation* or participated passively due to intimidation by technology, an insight outside the survey sample. *A few participants admitted to 'passenger' or passive behaviour (wearing it but not actively learning), limiting the benefit they got. Lack of interest or low motivation meant CGM data alone couldn't drive improvement for them, highlighting the importance of tailoring to a patient's readiness to change. *Psychological aspect: Certain individuals found constant monitoring stressful, which can be a barrier to adherence (one felt despair seeing high numbers). Others thrived on the feedback. This underscores that personality and mindset influence the user experience.
Sustainability & Future Use	*Not directly queried in survey beyond willingness to pay and use again (as above). All patients did receive training (100%). *Providers identified training needs (44% lacked training protocols; 67% limited time for education).	*Need for more staff training and broader expertise was voiced to support scaling up (train all nurses and even doctors in CGM basics, not just a few). *Desire for longer monitoring period in future programs (e.g., 6 months) to solidify behaviour change or suggestion to increase frequency of sensor use or shorten gaps between wears to maintain momentum (IDH03). *Patient selection criteria for future: focus on those most likely to benefit (motivated, some technological ability, not too set in their ways, possibly earlier in disease course) to maximize impact, while ensuring less-engaged groups get additional support if included.