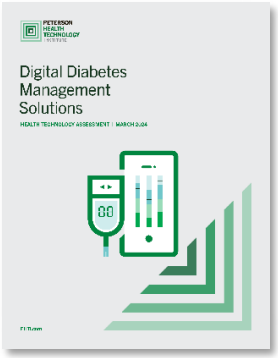
Digital Diabetes Management Solutions Evaluation — Appendices

March 2024 | Version 1.1

Version 1.1 was released on March 28, 2024. This version includes additional details about company-submitted evidence in Appendix E through H. It also adds a reference in Appendix table C-2 for a company-submitted study that was reviewed pre-publication as part of this evaluation but was published after 2023 when the literature review ended.

Accessing PHTI's Full Report

You can access the full report here.



PETERSON HEALTH TECHNOLOGY INSTITUTE

Appendix A — Methodology Overview

This evaluation of digital diabetes management solutions followed PHTI's standard process for stakeholder engagement and technology assessment. The assessment methodology is set forth in the ICER-PHTI Assessment Framework for Digital Health Technologies. Additional information about PHTI's process and advisors can be found at phti.com.

Assessment Framework

PHTI partnered with the Institute for Clinical and Economic Review (ICER), a leader in health technology assessment, to develop the ICER-PHTI Assessment Framework for Digital Health Technologies that will guide this and all other PHTI evaluations. The assessment framework prioritizes products' clinical benefits and economic impact, while also considering effects on health equity, data privacy, and security.

The selection process for which technologies are evaluated will be based on several factors, including market relevance, disease burden, level of spend and claimed savings, and evidence quality and availability.

PHTI's goal is to provide decision-makers with relevant and valuable information to make effective decisions to improve overall performance and deliver better health outcomes at lower costs. By helping purchasers identify bright spots in digital health innovation, PHTI aims to raise the bar for technology-driven advances in healthcare delivery, including superior outcomes, convenience, access, and affordability. The assessment framework can also guide technology developers and investors about performance standards and the evidence needs required to demonstrate stated clinical and economic benefits.

Clinical Assessment

The Systematic Literature Review (SLR) was conducted to identify all relevant published literature evaluating clinical impact of non-continuous blood glucose monitoring with an associated mobile or web application. The SLR was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This SLR followed the methods and standard set forth in the ICER-PHTI Assessment Framework to provide a rigorous evaluation of digital health technologies. The study was registered a priori with PROSPERO (registration number CRD42023469877).

Data from two literature databases, MEDLINE and EMBASE, were systematically searched for inclusion into the SLR. Conference proceedings were hand-searched to retrieve relevant publications. Potentially eligible studies were identified via the search strategy outlined in Tables 1 and 2 below). Studies were considered for inclusion in the SLR based on the population, intervention, comparators, outcomes, timing, and setting/study design (PICOTS) criteria presented in Table 3 below. Title/abstract and full-text screening was conducted by two independent investigators and discrepancies were resolved by a third investigator.

In addition, all companies included in the report were given an opportunity to submit data for inclusion in the report. Data requested included both public and proprietary clinical, economic, and commercial information.

All company-submitted data were screened using the PICOTs criteria, and relevant studies were evaluated and included in the final results.

Table 1 reports the comprehensive search strategy conducted in Medline, and Table 2 reports the search strategy conducted in Embase.

Table 1. Medline Search Strategy

Search	Terms	# of References
#1: Clinical indication	"Diabetes mellitus, type 2"[Mesh] OR "Type 2 diabetes mellitus"[tiab:~0] OR "T2DM"[tiab] OR "Type 2 diabetes"[Text Word] OR "Type 2 diabetes"[tiab:~0] OR "NIDDM"[tiab] OR "Stable diabetes mellitus"[Text Word] OR "Adult-onset diabetes mellitus"[Text Word] OR "T2D"[tiab] OR "blood glucose"[MeSH Terms] OR blood glucose[Text Word]	414,003
#2: Remote patient monitoring	"remote monitoring program*"[tiab] OR "RPM"[tiab] OR "telemedicine"[MeSH Terms] OR telehealth[Text Word] OR "mobile applications"[MeSH Terms] OR mobile application[Text Word]OR "wearable sensor"[tiab:~0] OR "digital care program"[tiab:~0] OR "telemedicine"[tiab] OR "DCP"[tiab]	89,194
#3: Blood glucose monitoring or management	"Blood glucose self-monitoring"[MeSH Terms] OR "Blood glucose self-monitoring/methods"[MAJR] OR "Connected blood glucose meter"[tiab:~0] OR "Connected glucose meter"[tiab:~0] OR "self-management"[tiab] OR "Digital diabetes prevention"[tiab:~1] OR "Diabetes management"[tiab:~0] OR "glycemic control"[MeSH] OR "glycemic control"[Text Word] OR "glycemic management"[Text Word]	71,081
#4 Companies/ interventions	"Omada"[Title/Abstract] OR "Perry Health"[Title/Abstract:~0] OR "Virta"[Title/Abstract] OR "Precision Xtra"[Title/Abstract:~0] OR "Livongo"[Title/Abstract] OR "CareSimple"[Title/Abstract] OR "Cecelia Health"[Title/Abstract:~0] OR "Glooko"[Title/Abstract] OR "Lark"[Title/Abstract] OR "Vida"[Title/Abstract] OR “Dario Health”[Title/Abstract] OR “Onduo”[Title/Abstract]	1,943
#5	#1 AND #2 AND #3	1,154
#6	#1 AND #4	87
#7: Combination	#5 OR #6	1,233
#8: Publication type exclusions	#7 NOT (“case reports”[pt] OR “case report”[tiab] OR comment[pt] OR editorial[pt] OR review[pt] OR “clinical trial protocol”[pt])	1,008
#9: Not animal studies	#8 NOT (“Animals”[MeSH] NOT “Humans”[MeSH])	1,001
Timeframe	Published between 2013 and 2023	850
Filter	Language: English	834

Table 2. Embase Search Strategy

Search	Terms	# of References
#1: Clinical indication	'non insulin dependent diabetes mellitus'/exp OR 'non insulin dependent diabetes mellitus'	343,012
#2: Clinical indication	(((adult OR 'ketosis resistant' OR matur* OR late OR 'non-insulin depend*' OR 'noninsulin depend*' OR slow OR stable OR 'type 2' OR 'type ii' OR lipoatrophic) NEAR/3 diabet*):ti,ab) OR t2d*:ti,ab OR niddm:ti,ab	325,198
#3: Remote patient monitoring	'telemonitoring' OR 'telemedicine' OR 'mobile application' OR 'wearable device' OR 'remote patient monitoring':ti,ab OR 'digital care program':ti,ab OR 'dcp':ti,ab	94,604
#4: Blood glucose monitoring or management	'blood glucose monitoring' OR 'blood glucose meter' OR 'connected blood glucose meter':ti,ab OR (('non-continuous' OR 'connected') NEAR/1 'blood glucose meter')	43,703
#5: Companies/intervention	'omada':ti,ab OR (('perry' NEAR/0 'health'):ti,ab) OR 'virta':ti,ab OR (('precision' NEAR/0 'xtra'):ti,ab) OR 'livongo':ti,ab OR 'caresimple':ti,ab OR (('cecelia' NEAR/0 'health'):ti,ab) OR 'glooko':ti,ab OR 'lark':ti,ab OR 'vida':ti,ab OR (‘dario NEAR/0 health’):ti,ab OR ‘onduo’:ti,ab	2,236
#6:	#1 OR #2	414,018
#7:	#3 AND #4	1,217
#8	#6 AND #7	420
#9: Combination	#5 AND #6	69
#10: Publication type exclusions	#9 NOT ([editorial]/lim OR [letter]/lim OR [note]/lim OR [short survey]/lim OR [review]/lim OR 'case report' OR 'case study')	485
Timeframe	Published between 2013-2023	314
Filter	Language: English	305

Grey Literature

The SLR included a review of the “grey” literature, which captured data from sources not indexed in the databases but are available from scientific conferences, the US Food and Drug Administration (FDA) website, company websites, information provided by manufacturers, and reports from the Diabetes Technology Society.

Conference proceedings were hand-searched for abstracts of interest for the last three years, including the American Diabetes Association, Advanced Technologies & Treatment for Diabetes, and the Endocrine Society Annual Meeting.

Table 3. PICOTS Inclusion and Exclusion Criteria

Category	Inclusion criteria	Exclusion criteria
Population	Adults with type 2 diabetes mellitus	Adults or children with type 1 diabetes mellitus Children with type 2 diabetes mellitus
Digital health technology interventions	Noncontinuous blood glucose monitoring with associated mobile or web application[a] • DarioHealth • Glooko • Livongo • Omada • Onduo • Perry Health • Vida • Virta	Continuous blood glucose monitoring systems Standalone health applications and personal devices Smart insulin pens and pen caps Standalone insulin pumps Non-invasive sensors
Comparators	Standard of care (nonconnected blood glucose meter) Usual care	
Outcomes	• HbA1c level / blood glucose • Body weight • Cardiovascular risk factors • Cardiovascular events • Safety of connected blood glucose meters • PROs • Safety • User experience; patient satisfaction • Adherence • Use of medication • HCRU (ED, hospitalization, clinic visits) • Shifts in care delivery driven by connected blood glucose meters • Health equity	
Study designs	• Clinical trials (phase 2 or 3; single arm or controlled) • Observational (prospective and retrospective) studies • Systematic reviews and meta-analyses	• Commentaries, letters, editorials, opinions, study protocols • Nonsystematic and narrative reviews • Case reports or series
Geography	Global	Interventions not approved or available in the United States
Language	Articles and abstracts published in English	
Date of publication	January 1, 2013, to October 4, 2023	

Notes. HbA1c = glycated hemoglobin. PRO = patient-reported outcome. HCRU = healthcare resource use. ED = emergency department.
[a] Please note that these technologies are part of comprehensive type 2 diabetes control programs.

Screening

All publications identified by the systematic literature searches were reviewed against the predefined selection criteria. Study selection followed a two-stage screening process based on the review of titles and

abstracts (stage I) and full-text articles (stage II). Following completion of title/abstract review, all full texts of publications identified for inclusion during this stage were retrieved for further review. Title/abstract and full-text screening were conducted by two independent investigators with any disagreements resolved by discussion with a third independent investigator, if needed. All screening was conducted using DistillerSR software, which provides a platform where articles retrieved from the database searches can be organized and screened using customizable entry forms. During both screening stages, abstracts and articles were excluded based on the following criteria:

1. Population not of interest
2. Intervention not of interest
3. Study design or publication type not of interest
4. Outcomes not of interest*
5. Articles published in language other than English

* Applied only during full text screening phase.

For conference abstracts, where no poster could be located and for database abstracts without a full text available, studies were screened based on the available information within the abstract.

Data Extraction

Data were extracted by one investigator with quality assurance against the original source publication completed by another independent investigator. Table 4 lists the reported data captured for each included study.

Table 4. Study Data Collected

Study characteristics
Study identifier or trial name
Publication citation
Study design
Source of data
Time frame of data collection
Geography
Patient characteristics
Specific population[a]
Sample size
Age
Sex (male, female)
Race/ethnicity
Income
Education
HbA1c level at baseline (where available)
Concomitant/background therapies
Interventions
Digital health technology intervention
Standard of care
Active care plan
Unit of service (e.g., RPM wearable and platform or telehealth)
Schedule
Place in therapy
Outcomes
HbA1c level
Body weight or body mass index
Cardiovascular risk factors
Cardiovascular events
Safety of digital health technology
User experience
Patient satisfaction
Adherence patterns or program completion
HbA1c testing frequency
DHT-driven shifts in care delivery
HCRU (office visit, ED visit, surgery)
Health equity
Accessibility
Access and distribution

Notes. HbA1c = glycated hemoglobin. DHT = digital health technology. HCRU = healthcare resource use. ED = emergency department.
[a] Whether the study focused on any specific factors (age, comorbidity, etc.). [b] Included mean, median, and/or effect estimates as reported, along with corresponding uncertainty measures (e.g., 95% CI).

Study Quality Assessment

All included randomized controlled trials (RCTs) were assessed for potential bias using the Cochrane Collaboration Risk of Bias in Randomized Trials Version 2 (RoB2)[1]. The RoB2 includes a maximum of 22 questions that considers the following domains:

Domain 1: Risk of bias arising from the randomization process
Domain 2: Risk of bias due to deviations from the intended interventions (effect of assignment or adherence to intervention)
Domain 3: Missing outcome data
Domain 4: Risk of bias in measurement of the outcome
Domain 5: Risk of bias in selection of the reported result

An overall risk of bias is then reported based on judgement of bias within these domains (Appendix D).

Table 5. Risk of Bias Categories for RoB2

Overall risk of bias judgement	Criteria
Low risk of bias	The trial is judged to be at low risk of bias for all domains for this result.
Some concerns	The trial is judged to raise some concerns in at least one domain for this result, but not to be at high risk of bias for any domain.
High risk of bias	The trial is judged to be at high risk of bias in at least one domain for this result. OR The trial is judged to have some concerns for multiple domains in a way that substantially lowers confidence in the result.

Note: RoB2 = risk of bias in randomized trials version 2.

Results from non-randomized studies were assessed using the Newcastle-Ottawa Scale (NOS)[2]. Studies were evaluated for multiple criteria within 3 categories: selection, comparability, and either exposure or outcome, depending on the type of study.

Table 6. Risk of Bias Rating Using NOS

Rating	Description
++	All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
+	Some of the checklist criteria have been fulfilled, where they have not been fulfilled or not adequately described, the conclusions are unlikely to alter.
-	Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Note: NOS = Newcastle Ottawa Scale.

[1] Higgins, Julian P.T., Jelena Savović, Matthew J. Page et al., eds, "Chapter 8: Assessing Risk of Bias in a Randomized Trial," in *Cochrane Handbook for Systematic Reviews of Interventions,* version 6.4, updated August 2023, https://training.cochrane.org/handbook/current/chapter-08.
[2] Wells, G.A., B. Shea, D. O'Connell et al., "The Newcastle-Ottawa Scale (NOS) for Assessing the Quality of Nonrandomised Studies in Meta-Analyses," Ottawa Hospital Research Institute, no date, https://www.ohri.ca/programs/clinical_epidemiology/oxford.asp.

In the report, we converted the two Risk of bias tool scales (CRoB2 and NOS) to a single scale: Low, Moderate, High. “Moderate” refers to original assessment score of “Some Risk of Bias” (CRoB2) or “Fair Study Quality” (NOS); “High” refers to original assessment score of “High Risk of Bias” (CRob2) or “Poor Study Quality” (NOS).

Minimally Clinically Important Difference (MCID) Ratings

To comment on the clinical effect of DHTs, comparative studies that included the key outcomes of HbA1c and/or blood glucose were identified. Change from baseline estimates and between-group differences comparing the DHT with usual care were captured, if reported. The magnitude of the changes or differences were evaluated against available minimum clinically important difference (MCID) estimates as defined by the National Institute for Health and Care Excellence.[3] The thresholds for HbA1c and blood glucose were 0.5%pt and 1 mmol/L (18 mg/dL), respectively.

Economic Assessment

We developed a de novo budget impact analysis for remote patient monitoring with a connected blood glucose meter for US adults with type 2 diabetes. The base case time horizon was one year, and a three-year time horizon was explored as a sensitivity analysis. In a hypothetical U.S. health plan with one million members, a closed cohort approach was utilized, where patients initiated remote patient monitoring or usual care in the first year of the analysis and were followed until the end of the time horizon. It was assumed that no cohort initiated monitoring in subsequent years.

In the base case, our analysis estimates the budget impact of DHT assuming 25% displacement of usual care (i.e., market share of 25%). Cost categories include remote patient monitoring and usual care, drug costs, and outpatient and inpatient costs. Given lack of available data for each company, the model focused on a single hypothetical DHT for remote patient monitoring using the best available data to inform clinical inputs.

The budget impact model assumes that patients enter the model and receive usual care in the scenario without remote patient monitoring, or remote patient monitoring in the scenario where it is reimbursed. The budget impact is the difference in costs between these two scenarios. Based on a targeted review of healthcare resource use costs for type 2 diabetes patients and available data from the clinical SLR, our analysis uses data from Lage 2021[4] to model annual drug, outpatient and inpatient costs based on HbA1c levels. Lage 2021 reported a 1.7% decrease in all-cause healthcare costs for every 1%pt reduction in HbA1c.

[3] National Institute for Health and Care Excellence (NICE), “Type 2 Diabetes in Adults: Management,” updated June 29, 2022, https://www.nice.org.uk/guidance/ng28.
[4] Lage, Maureen J., and Kristina S. Boye, “The Relationship Between HbA1c Reduction and Healthcare Costs Among Patients with Type 2 Diabetes: Evidence from a U.S. Claims Database,” Current Medical Research and Opinion 36, no. 9 (September 2020):1441–1447, https://doi.org/10.1080/03007995.2020.1787971.

Appendix B — Prisma Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g., for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	
	10b	List and define all other variables for which data were sought (e.g., participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	
Effect measures	12	Specify for each outcome the effect measure(s) (e.g., risk ratio, mean difference) used in the synthesis or presentation of results.	

Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g., tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g., subgroup analysis, meta-regression).	
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	
Study characteristics	17	Cite each included study and present its characteristics.	
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimates and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g., confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	
Reporting	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis	

biases		assessed.	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	
	23b	Discuss any limitations of the evidence included in the review.	
	23c	Discuss any limitations of the review processes used.	
	23d	Discuss implications of the results for practice, policy, and future research.	
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	
Competing interests	26	Declare any competing interests of review authors.	
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	

Appendix C — Complete SLR and Company Submitted References

Appendix C-1 – References Included in the SLR

Reference	Reference Type	Study Type	Reference Source	Full Citation
DARIO HEALTH				
Fundoiano-Hershcovitz 2022	Article	O	Systematic Literature Review	Fundoiano-Hershcovitz, Yifat, Dror Bacher, Marilyn D. Ritholz et al., "Blood Pressure Monitoring as a Digital Health Tool for Improving Diabetes Clinical Outcomes: Retrospective Real-World Study," *Journal of Medical Internet Research* 24, no. 2 (February 2022): e32923, doi:10.2196/32923.
Gershoni 2023	Article	O	Company-Provided Data	Gershoni, Tamar, Marilyn Ritholz, David Horwitz et al., "Glycemic Management by a Digital Therapeutic Platform Across Racial/Ethnic Groups: A Retrospective Cohort Study," *Applied Sciences* 13, no.1 (December 2023): 431, https://doi.org/10.3390/app13010431.
Hershcovitz 2021	Abstract/ Poster	O	Company-Provided Data	Hershcovitz, Yifat, Sharon Dar, Omar Manejwala et al, "Users with High-Risk Type 2 Diabetes Experience a Change in Blood Glucose Levels Using Digital Therapeutic Platform," *Diabetes* 70, no. S1 (June 2021): 611-P, https://doi.org/10.2337/db21-611-P.
Hershcovitz 2022	Abstract/ Poster	O	Systematic Literature Review	Hershcovitz, Yifat, Michal Tamir, Marilyn D. Ritholz et al., "Persons with High-Risk Diabetes, Depression, and Stress Using a Digital Health Platform Experience an Improvement in Glycemic Management," *Diabetes* 71, no. S1 (June 2022): 709-P, https://doi.org/10.2337/db22-709-P.
Hershcovitz 2022b	Poster	O	Company-Provided Data	Hershcovitz, Yifat, Tamar Gershoni, Roy Shimonovich et al., "Digital Therapeutic Platforms Improve Blood Glucose Management Across Rural/Nonrural Groups," (poster, Annual Conference of the Association of Diabetes Care & Education Specialists, Baltimore, MD, August 12–15, 2022), accessed March 13, 2024.
Hershcovitz 2023	Abstract/ Poster	O	Company-Provided Data	Hershcovitz, Yifat, Noga Yaniv, Sofia Budman et al., "Blood Glucose Reduction and Long-Term Sustainability in High-Risk Patients with Type 2 Diabetes over Three Years of Using Digital Platform," *Diabetes* 72, no. S1 (June 2023): 1070-P, https://doi.org/10.2337/db23-1070-P.
Thingalaya 2023a	Abstract/ Poster	O	Company-Provided Data	Thingalaya, Nita, David Kerr, Praveen Kumar Potukuchi et al., "Impact of Digital Diabetes Solution on Glycemic Control in Adults with Type 2 Diabetes Mellitus in the United States—A Retrospective Cohort Study," *Diabetes* 72, no. S1 (June 2023): 962–P, https://doi.org/10.2337/db23-962-P.
Thingalaya 2023b	Abstract/ Poster	O	Company-Provided Data	Thingalaya, Nita, Darren Frey D, Timothy Aungst et al., "Association Between More Frequent Engagement with the Dario Diabetes Solution, a Digital Health Technology, and Reduction in HbA1c in Adults with Type 2 Diabetes Mellitus," (poster, Annual Meeting of the Academy of Managed Care Pharmacy, Orlando, FL, October 16–19, 2023).
Wilson 2023a	Abstract/ Poster	O	Company-Provided Data	Wilson, Laura, Daniel C. Malone, Praveen Potukuchi et al., "A Retrospective Cohort Study Comparing Health Care Resource Utilization, Length of Stay, and 30-Day Readmissions in Users and Nonusers of a Digital Diabetes Health Intervention for Patients with Type 2 Diabetes Mellitus," (poster, Annual Meeting of the Academy of Managed Care Pharmacy, Orlando, FL, October 16–19, 2023).

Wilson 2023b	Abstract/ Poster	O	Company-Provided Data	Wilson, Laura, Daniel Malone, Praveen Potukuchi et al., "Comparison of All-Cause Healthcare Resource Utilization Rates Between Patients with Type 2 Diabetes Who Use a Digital Diabetes Solution Versus Non-Users: A 12-Month Retrospective Cohort Study," (poster, Annual Meeting of the Professional Society for Health Economics and Outcomes Research, May 7–10, 2023, online).
Wilson 2023c	Abstract/ Poster	O	Company-Provided Data	Wilson, Laura, Daniel C. Malone, Praveen Potukuchi et al., "Effect of a Digital Diabetes Solution on All-Cause Health Care Resource Utilization Charges for Patients with Type 2 Diabetes—A Retrospective Cohort Study," *Diabetes* 72, no. S1 (June 2023): 126-LB, https://doi.org/10.2337/db23-126-LB.
GLOOKO				
Fischer 2016	Abstract/ Poster	I	Systematic Literature Review	Fischer, J., and V. Singh, "Mhealth Enabled Remote Monitoring Improves Diabetes Outcomes," *Diabetes Technology and Therapeutics* 18, no. S1 (February 2016): A88–A89, https://doi.org/10.1089/dia.2016.2525.
Nosrat 2023	Abstract/ Poster	I	Systematic Literature Review	Nosrat, S., V. Myers, E. Nykaza et al., "The Impact of Remote Patient Monitoring on Glycated Hemoglobin for Type 2 Diabetes: A Randomized Controlled Trial," *Diabetes Research and Clinical Practice* 197, no. S1 (March 2023): 110315, https://doi.org/10.1016/j.diabres.2023.110315.
Offringa 2018	Article	O	Systematic Literature Review	Offringa, Reid, Tong Sheng, Linda Parks et al., "Digital Diabetes Management Application Improves Glycemic Outcomes in People with Type 1 and Type 2 Diabetes," *Journal of Diabetes Science and Technology* 12, no. 3 (May 2018): 701–708, https://doi.org/10.1177/1932296817747291.
Sheng 2019	Abstract/ Poster	O	Systematic Literature Review	Sheng, Tong, Sarine Babikian, and Michael Greenfield, "Immediate and Sustained Glycemic Improvements During Remote Patient Monitoring: Real-World Evidence from Pilot Programs," *Diabetes Technology and Therapeutics* 21, no. S1, (February 2019): A37, https://doi.org/10.1089/dia.2019.2525.abstracts.
Sheng 2021	Abstract/ Poster	O	Systematic Literature Review	Sheng, Tong, Sarine Babikian, Vikram Singh et al., "Immediate and Sustained Trends in Glycemic Control During Remote Patient Monitoring in People with Type 2 Diabetes," *Diabetes* 70, no. S1 (June 2021): 467-P, https://doi.org/10.2337/db21-467-P.
LIVONGO				
Amante 2021	Article	I	Systematic Literature Review	Amante, Daniel, David Harlan, Stephenie Lemon et al., "Evaluation of a Diabetes Remote Monitoring Program Facilitated by Connected Glucose Meters for Patients with Poorly Controlled Type 2 Diabetes: Randomized Crossover Trial," *JMIR Diabetes* 6, no. 1 (March 2021): e25574, doi:10.2196/25574.
Bollyky 2017	Abstract/ Poster	I	Systematic Literature Review	Bollyky, Jennifer B., Dena Bravata, Jason Yang et al., "Lifestyle Coaching Plus Connected Glucose Meter and Scale Decrease Mean Blood Glucose and Weight for People with Type 2 Diabetes," *Diabetes* 66, no. S1 (June 2017): A247, https://doi.org/10.2337/db17-890-1488.
Bollyky 2018	Article	I	Systematic Literature Review	Bollyky, Jennifer B., Dena Bravata, Jason Yang et al., "Remote Lifestyle Coaching Plus a Connected Glucose Meter with Certified Diabetes Educator Support Improves Glucose and Weight Loss for People with Type 2 Diabetes," *Journal of Diabetes Research* 2018, (2018): 3961730, https://doi.org/10.1155/2018/3961730.

Bollyky 2019	Article	O	Systematic Literature Review	Bollyky, Jennifer B., Stephanie T. Melton, Tong Xu et al., "The Effect of a Cellular-Enabled Glucose Meter on Glucose Control for Patients with Diabetes: Prospective Pre-Post Study," *JMIR Diabetes* 4, no. 4 (October-December 2019): e14799, doi: 10.2196/14799.
Downing 2016	Abstract/ Poster	O	Systematic Literature Review	Downing, Janelle, and Jennifer Schneider, "Fewer Days of High and Low Blood Glucose Readings with Novel Technology," *Diabetes* 65, no. S1 (June 2016): A225, https://doi.org/10.2337/db16-861-1374.
Downing 2017	Article	O	Systematic Literature Review	Downing, Janelle, Jennifer Bollyky, and Jennifer Schneider J, "Use of a Connected Glucose Meter and Certified Diabetes Educator Coaching to Decrease the Likelihood of Abnormal Blood Glucose Excursions: The Livongo for Diabetes Program," *Journal of Medical Internet Research* 19, no. 7 (July 2017): e234, doi: 10.2196/jmir.6659.
Dzubur 2021	Abstract/ Poster	O	Systematic Literature Review	Dzubur, Eldin, Ludi Fan, Roberta James et al., "Validity of a Feeling-State Tag Accompanying Blood Glucose (BG) Measurements in a Digital Remote Diabetes Management Program (RDMP)," *Diabetes* 70, no. S1 (June 2021): 602-P, https://doi.org/10.2337/db21-602-P.
Whaley 2019	Article	O	Systematic Literature Review	Whaley, Christopher M., Jennifer Bollyky, Wei Lu et al., "Reduced Medical Spending Associated with Increased Use of a Remote Diabetes Management Program and Lower Mean Blood Glucose Values," *Journal of Medical Economics* 22, no. 9 (September 2019): 869–877, https://doi.org/10.1080/13696998.2019.1609483.
OMADA				
Wilson-Anumudu 2021	Article	O	Systematic Literature Review	Wilson-Anumudu, Folasade, Ryan Quan, Cynthia Castro Sweet et al., "Early Insights from a Digitally Enhanced Diabetes Self-Management Education and Support Program: Single-Arm Nonrandomized Trial," *JMIR Diabetes* 6, no. 1, (January-March 2021): e25295, doi: 10.2196/25295.
VIRTA				
Adams 2021	Abstract/ Poster	O	Company-Provided Data	Adams, Rebecca N., Shaminie J. Athinarayanan, Caroline G.P. Roberts et al., "Effectiveness of Telemedicine Intervention on Improving Glycemia and Reducing Pharmacologic Therapy in Older Adults with Type 2 Diabetes," *Diabetes* 70, no. S1 (June 2021): 308-OR, https://doi.org/10.2337/db21-308-OR.
Adams 2022	Article	O	Company-Provided Data	Adams, Rebecca N., Shaminie J. Athinarayanan, Amy L. McKenzie et al., "Depressive Symptoms Improve Over 2 years of Type 2 Diabetes Treatment via a Digital Continuous Remote Care Intervention Focused on Carbohydrate Restriction," *Journal of Behavioral Medicine* 45, no. 3 (June 2022): 416–427, https://doi.org/10.1007/s10865-021-00272-4.
Athinarayanan 2019	Article	I	Company-Provided Data	Athinarayanan, Shaminie J., Rebecca N. Adams, Sarah J. Hallberg et al., "Long-Term Effects of a Novel Continuous Remote Care Intervention Including Nutritional Ketosis for the Management of Type 2 Diabetes: A 2-Year Non-randomized Clinical Trial," *Frontiers in Endocrinology* 10, (June 2019): 348, https://doi.org/10.3389/fendo.2019.00348.

Athinarayanan 2022	Abstract/ Poster	I	Company-Provided Data	Athinarayanan, Shaminie J., Michelle VanTieghem, Amy L. McKenzie et al., "Five-Year Weight and Glycemic Outcomes Following a Very Low-Carbohydrate Intervention Including Nutritional Ketosis in Patients with Type 2 Diabetes," *Diabetes* 71, no. S1 (June 2022): 832-P, https://doi.org/10.2337/db22-832-P.
Hallberg 2018	Article	I	Company-Provided Data	Hallberg, Sarah J., Amy L. McKenzie, Paul T. Williams et al., "Effectiveness and Safety of a Novel Care Model for the Management of Type 2 Diabetes at 1 Year: An Open-Label, Non-Randomized, Controlled Study," *Diabetes Therapy* 9, no. 2 (April 2018): 583–612, https://doi.org/10.1007/s13300-018-0373-9.
Lyman 2022	Article	O	Company-Provided Data	Lyman, Kade S., Shaminie J. Athinarayanan, Amy L. McKenzie et al., "Continuous Care Intervention with Carbohydrate Restriction Improves Physical Function of the Knees Among Patients with Type 2 Diabetes: A Non-Randomized Study," *BMC Musculoskeletal Disorders* 23, (March 2022): 297, https://doi.org/10.1186/s12891-022-05258-0.
McKenzie 2017	Article	O	Company-Provided Data	McKenzie, Amy L., Sarah J. Hallberg, Brent C. Creighton et al., "A Novel Intervention Including Individualized Nutritional Recommendations Reduces HbA1c, Medication Use, and Weight in Type-2 Diabetes," *JMIR Diabetes* 2, no. 1 (March 2017): e5, doi: 10.2196/diabetes.6981.
McKenzie 2023a	Abstract/ Poster	O	Company-Provided Data	McKenzie, Amy L., Shaminie J. Athinarayanan, Roberts CGP et al., "Effect of Nutritional Ketosis Trajectory on Change in Glycemia, Weight, and Atherogenic Dyslipidemia over Two Years in People with Type 2 Diabetes," *Diabetes* 72, no. S1 (June 2023): 312–OR, https://doi.org/10.2337/db23-312-OR.
McKenzie 2023b	Abstract/ Poster	O	Company-Provided Data	McKenzie, Amy L., and Shaminie J. Athinarayanan, "Improved Outcomes Across Socioeconomically Advantaged and Disadvantaged Communities—A Real-World Study," *Diabetes* 72, no. S1 (June 2023): 837–P, https://doi.org/10.2337/db23-837-P.
Roberts 2022	Abstract/ Poster	O	Company-Provided Data	Roberts, Caroline G.P., Shaminie J. Athinarayanan, Michelle VanTieghem et al., "Five-Year Follow-Up of Lipid, Inflammatory, Hepatic, and Renal Markers in People with T2 Diabetes on a Very-Low Carbohydrate Intervention Including Nutritional Ketosis (VLCI) via Continuous Remote Care (CRC)," *Diabetes* 71, no. S1 (June 2022): 212-OR, https://doi.org/10.2337/db22-212-OR.
Vilar-Gomez 2019	Article	O	Company-Provided Data	Vilar-Gomez, Eduardo, Shaminie J. Athinarayanan, Rebecca N. Adams et al., "Post Hoc Analyses of Surrogate Markers of Non-Alcoholic Fatty Liver Disease (NAFLD) and Liver Fibrosis in Patients with Type 2 Diabetes in a Digitally Supported Continuous Care Intervention: An Open-Label, Non-Randomised Controlled Study," *BMJ Open* 9, no. 2 (February 2019): e023597, doi: 10.1136/bmjopen-2018-023597.
Volk 2022	Abstract/ Poster	O	Company-Provided Data	Volk, Brittanie M., Amy L. McKenzie, Shaminie J. Athinarayanan et al., "A Population Shift in Meeting Glycemic Targets Following Five-Years of a Very Low-Carbohydrate Intervention (VLCI) and Continuous Remote Care (CRC)," *Diabetes* 71, no. S1, (June 2022): 1176-P, https://doi.org/10.2337/db22-1176-P.

OTHER SOLUTIONS				
Bailey 2017	Article	O	Systematic Literature Review	Bailey, Timothy S., Jane F. Wallace, Scott Pardo et al., "Accuracy and User Performance Evaluation of a New, Wireless-Enabled Blood Glucose Monitoring System that Links to a Smart Mobile Device," *Journal of Diabetes Science and Technology* 11, no. 4, (July 2017): 736–743, https://doi.org/10.1177/1932296816680829.
Fisher 2023	Article	O	Systematic Literature Review	Fisher, Lawrence, Addie L. Fortmann, Caterina Florissi et al., "How Frequently and for How Long Do Adults with Type 2 Diabetes Use Management Apps? The REALL Study," *Journal of Diabetes Science and Technology* 17, no. 2, (March 2017): 345–352, https://doi.org/10.1177/19322968211058766.
Yang 2020	Article	I	Systematic Literature Review	Yang, Yeoree, Eun Y. Lee, Hun-Sung Kim et al., "Effect of a Mobile Phone-Based Glucose-Monitoring and Feedback System for Type 2 Diabetes Management in Multiple Primary Care Clinic Settings: Cluster Randomized Controlled Trial," *JMIR Mhealth and Uhealth* 8, no. 2 (February 2020): e16266, doi: 10.2196/16266.
Bode 2018	Article	O	Systematic Literature Review	Bode, Bruce, John G. Clarke, and Joseph Johnson, "Use of Decision Support Software to Titrate Multiple Daily Injections Yielded Sustained A1c Reductions After 1 Year," *Journal of Diabetes Science and Technology* 12, no. 1, (January 2018): 124–128, https://doi.org/10.1177/1932296817747886.
Montero 2019	Abstract/ Poster	I	Systematic Literature Review	Montero, Alex R., Clayton J. Bourges, Carine M. Nassar et al., "Cellular-Enabled, Near, Real-Time Blood Glucose Monitoring Supports Virtual Telemedicine Clinic in Delivery of Successful Care Management for Adults with Uncontrolled Type 2 Diabetes," *Journal of Diabetes Science and Technology* 13, no. 2 (March 2019): 293–409, https://doi.org/10.1177/1932296819833860.
Lee 2020	Article	I	Systematic Literature Review	Lee, Jun Y., Carina K.Y. Chan, Siew S. Chua et al., "Telemonitoring and Team-Based Management of Glycemic Control on People with Type 2 Diabetes: A Cluster-Randomized Controlled Trial," *Journal of General Internal Medicine* 35, no. 1 (January 2020): 87–94, https://doi.org/10.1007/s11606-019-05316-9.
Welch 2015	Article	O	Systematic Literature Review	Welch, Gary, Andrew Balder, and Sofija Zagarins, "Telehealth Program for Type 2 Diabetes: Usability, Satisfaction, and Clinical Usefulness in an Urban Community Health Center," *Telemedicine and e-Health* 21, no. 5 (May 2015): 395–403, https://doi.org/10.1089/tmj.2014.0069.
Shaw 2020	Article	O	Systematic Literature Review	Shaw, Ryan, Q Yang, A Barnes et al., "Self-Monitoring Diabetes with Multiple Mobile Health Devices," *Journal of the American Medical Informatics Association* 27, no. 5 (May 2020): 667–676, https://doi.org/10.1093/jamia/ocaa007.
Grady 2016	Article	O	Systematic Literature Review	Grady, Mike, Hilary Cameron, Brian L. Levy et al., "Remote Health Consultations Supported by a Diabetes Management Web Application with a New Glucose Meter Demonstrates Improved Glycemic Control," *Journal of Diabetes Science and Technology* 10, no. 3 (May 2016): 737–743, https://doi.org/10.1177/1932296815622646.

Grady 2022a	Article	O	Systematic Literature Review	Grady, Mike, Hilary Cameron, Amey Bhatiker et al., "Real-World Evidence of Improved Glycemic Control in People with Diabetes Using a Bluetooth-Connected Blood Glucose Meter with a Mobile Diabetes Management App," *Diabetes Technology & Therapeutics* 24, no. 10 (October 2022): 770–778, https://doi.org/10.1089/dia.2022.0134.
Grady 2022b	Article	O	Systematic Literature Review	Grady, Mike, Hilary Cameron, and Elizabeth H. Holt, "Real-World Evidence of Improved Glycemic Control in People Using the OneTouch Verio Flex Blood Glucose Meter with the OneTouch Reveal Mobile Application," *Diabetes* 71, no. 71 (June 2022): 60-LB, https://doi.org/10.2337/db22-60-LB.
Grady 2023	Article	O	Systematic Literature Review	Grady, Mike, Hilary Cameron, and Elizabeth H. Holt, "Sustained Improvements in Readings In-Range Using an Advanced Bluetooth® Connected Blood Glucose Meter and a Mobile Diabetes App: Real-World Evidence from More than 55,000 People with Diabetes," *Diabetes Therapy* 14, no. 6 (June 2023): 1023–1035, https://doi.org/10.1007/s13300-023-01415-3.
Greenwood 2015	Article	I	Systematic Literature Review	Greenwood, Deborah, Shelley Blozis, Heather Young et al., "Overcoming Clinical Inertia: A Randomized Clinical Trial of a Telehealth Remote Monitoring Intervention Using Paired Glucose Testing in Adults with Type 2 Diabetes," *Journal of Medical Internet Research* 17, no. 7 (July 2015): e178, doi: 10.2196/jmir.4112.
Holmen 2014	Article	I	Systematic Literature Review	Holmen, Heidi, Astrid Torbjørnsen, Astrid Klopstad Wahl et al., "A Mobile Health Intervention for Self-Management and Lifestyle Change for Persons with Type 2 Diabetes, Part 2: One-Year Results from the Norwegian Randomized Controlled Trial RENEWING HEALTH," *JMIR Mhealth and Uhealth* 2, no. 4 (2014): e57, doi:10.2196/mhealth.3882.
Katz 2020	Abstract/ Poster	O	Systematic Literature Review	Katz, Laurence B., Kristin D. Neland, Deanna J. Rolando et al., "Live Coaching Improves Glycemic Control and DSMQ Scale in People with Type 2 Diabetes," *Diabetes* 69, no. S1 (June 2020): 868-P, https://doi.org/10.2337/db20-868-P.
Katz 2022	Article	I	Systematic Literature Review	Katz, Laurence B., Maria Aparicio, Hilary Cameron et al., "Use of a Meter with Color-Range Indicators and a Mobile Diabetes Management App Improved Glycemic Control and Patient Satisfaction in an Underserved Hispanic Population: "Tu Salud"-A Randomized Controlled Partial Cross-Over Clinical Study," *Diabetes Spectrum* 35, no. 1 (January 2022): 86–94, https://doi.org/10.2337/ds20-0101.
Tsang 2013	Abstract/ Poster	O	Systematic Literature Review	Tsang, Man W., Chi S. Hung, Sze Y. Fung et al., "A Web-Based Remote Tele-Monitoring System to Monitor Blood Glucose Levels in Aged Home Residents with Type-2 Diabetes Mellitus," *Diabetes* 62, no. S1 (July 2013): A316, https://doi.org/10.2337/db13-859-1394.
Zhang 2020	Article	O	Systematic Literature Review	Zhang, Yiyu, Chaoyuan Liu, Shuoming Luo et al., "Effectiveness of Lilly Connected Care Program (LCCP) App-Based Diabetes Education for Patients With Type 2 Diabetes Treated With Insulin: Retrospective Real-World Study," *JMIR Mhealth and Uhealth* 8, no. 3 (March 2020): e17455, doi: 10.2196/17455.
Harvey 2016	Article	O	Systematic Literature Review	Harvey, Craig, Richard Koubek, Vanessa Bégat et al., "Usability Evaluation of a Blood Glucose Monitoring System with a Spill-Resistant Vial, Easier Strip Handling, and Connectivity to a Mobile App: Improvement of Patient Convenience and Satisfaction," *Journal of Diabetes Science and Technology* 10, no. 5 (September 2016): 1136–1141, https://doi.org/10.1177/19322968166580.

Hsu 2016	Article	I	Systematic Literature Review	Hsu, William C., Ka Hei, Karen Lau, Ruyi Huang et al., "Utilization of a Cloud-Based Diabetes Management Program for Insulin Initiation and Titration Enables Collaborative Decision Making Between Healthcare Providers and Patients," *Diabetes Technology & Therapeutics* 18, no. 2 (February 2016): 59–67, doi:10.1089/dia.2015.0160.
Hyun 2022	Article	MA	Systematic Literature Review	Hyun, Min K., Jang W. Lee, Seung-Hyun Ko et al., "Improving Glycemic Control in Type 2 Diabetes Using Mobile Applications and e-Coaching: A Mixed Treatment Comparison Network Meta-Analysis," *Journal of Diabetes Science and Technology* 16, no. 5 (September 2022): 1239–1252, https://doi.org/10.1177/19322968211010153.
Lee 2023	Article	MA	Systematic Literature Review	Lee, Jovin J.N., Alia Abdul Aziz, Sok-Teng Chan et al., "Effects of Mobile Health Interventions on Health-Related Outcomes in Older Adults with Type 2 Diabetes: A Systematic Review and Meta-Analysis," *Journal of Diabetes* 15, no. 1 (January 2023): 47–57, https://doi.org/10.1111/1753-0407.13346.
Menon 2019	Article	I	Systematic Literature Review	Menon, Anish, Farhad Fatehi, Hang Ding et al, "Outcomes of a Feasibility Trial Using an Innovative Mobile Health Programme to Assist in Insulin Dose Adjustment," *BMJ Health & Care Informatics* 26, no. 1 (2019): e100068, doi: 10.1136/bmjhci-2019-100068.
Montero 2021	Article	I	Systematic Literature Review	Montero, Alex R., David Toro-Tobon, Kelly Gann et al., "Implications of Remote Monitoring Technology in Optimizing Traditional Self-Monitoring of Blood Glucose in Adults with T2DM in Primary Care," *BMC Endocrine Disorders* 21, no. 1 (2021): 222, https://doi.org/10.1186/s12902-021-00884-6.
Mora 2017	Article	I	Systematic Literature Review	Mora, Pablo, Ann Buskirk, Maureen Lyden et al., "Use of a Novel, Remotely Connected Diabetes Management System Is Associated with Increased Treatment Satisfaction, Reduced Diabetes Distress, and Improved Glycemic Control in Individuals with Insulin-Treated Diabetes: First Results from the Personal Diabetes Management Study," *Diabetes Technology and Therapeutics* 19, no. 12 (December 2017): 715–722, http://doi.org/10.1089/dia.2017.0206.
Moschonis 2023	Article	MA	Systematic Literature Review	Moschonis, George, George Siopis, Jenny Jung et al., "Effectiveness, Reach, Uptake, and Feasibility of Digital Health Interventions for Adults with Type 2 Diabetes: A Systematic Review and Meta-Analysis of Randomised Controlled Trials," *Lancet Digital Health* 5, no. 3 (March 2023): e125–e143, https://doi.org/10.1016/S2589-7500(22)00233-3.
Nagrebetsky 2013	Article	I	Systematic Literature Review	Nagrebetsky, Alexander, Mark Larsen, Anthea Craven et al., "Stepwise Self-Titration of Oral Glucose-Lowering Medication Using a Mobile Telephone-Based Telehealth Platform in Type 2 Diabetes: A Feasibility Trial in Primary Care," *Journal of Diabetes Science and Technology* 7, no. 1 (January 2013): 123–134, https://doi.org/10.1177/193229681300700115.
Odom 2019	Article	I	Systematic Literature Review	Odom, Jessica M., Michelle Stancil, Bryce Nelson et al. "Improving Diabetes Control Through Remote Glucose Monitoring in a Diabetes Self-Management Program for Employees of a Health System," *Clinical Diabetes* 37, no. 3, (July 2019): 203–210, https://doi.org/10.2337/cd18-0056.
Rama Chandran 2023	Article	I	Systematic Literature Review	Rama Chandran, Suresh, Hong C. Tan, Qifan Chen et al., "Telemonitoring with a Connected Glucose Meter Improves Glycemia Among People with Insulin-Treated Type 2 Diabetes," *Journal of Diabetes Science and Technology* 17, no. 4 (July 2023): 909–915, doi:10.1177/19322968231157387.

Wang 2017	Article	I	Systematic Literature Review	Wang, Guixia, Zhengyun Zhang, Yakun Feng et al., "Telemedicine in the Management of Type 2 Diabetes Mellitus," *American Journal of the Medical Sciences* 353, no. 1 (January 2017): 1–5, https://doi.org/10.1016/j.amjms.2016.10.008.
Sachmechi 2023	Article	I	Systematic Literature Review	Sachmechi, Isaac, Sanna Salam, Masoud Amini et al., "Frequent Monitoring of Blood Glucose Levels via a Remote Patient Monitoring System Helps Improve Glycemic Control," *Endocrine Practice* 29, no. 6 (June 2023): 441–447, https://doi.org/10.1016/j.eprac.2023.03.270.
Lee 2017	Article	I	Systematic Literature Review	Lee, Min-Kyung, Kwang-Hyeon Lee, Seung-Hyun Yoo et al., "Impact of Initial Active Engagement in Self-Monitoring with a Telemonitoring Device on Glycemic Control Among Patients with Type 2 Diabetes," *Scientific Reports* 7, no. 1 (June 2017): 3866, https://doi.org/10.1038/s41598-017-03842-2.

Notes. I = interventional. O = observational. MA = meta-analysis.

Appendix C-2 — Company Submission Overview

The tables below summarize the additional references submitted by companies that were not included in the SLR.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Dario			
Asher, Inbar, Emily Gibbons, Amir Gurewitz et al., "Users Managing Diabetes with Large-Scale Digital Therapeutics Platform Experience a Change in Blood Glucose and Engagement Over Two Years," (poster, Annual Conference of the Association of Diabetes Care & Education Specialists, Houston, TX, August 4–7, 2023).	Abstract / Poster	Outcome out of scope	Limited information on population, or study design; difficult to assess results.
Fundoiano-Hershcovitz, Yifat, Eitan Feniger, Sharon Dar et al., "Digital Therapeutics for Type 2 Diabetes: Incorporating Coaching Support and Validating Digital Monitoring," *Journal of Diabetes Science and Technology* 15, no. 5 (September 2021): 1188–1189, https://doi.org/10.1177/19322968211017.	Abstract / Poster	Small population size (n=12)	Glycemic impact of coaching.
Fundoiano-Hershcovitz, Yifat, Abigail Hirsch, Sharon Dar S et al., "Role of Digital Engagement in Diabetes Care Beyond Measurement: Retrospective Cohort Study," *JMIR Diabetes* 6, no. 1. (January-March 2021): e24030, doi: 10.2196/24030.	Article	Outcome out of scope	Digital engagement in other app features reduces blood glucose vs. nonengagement.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Hershcovitz, Yifat, Amir Gurewitz, and Omar Manejwala, "Impact of a Digital Health Educational Feature on Engagement and Glycemic Outcomes," (poster, Annual Meeting of the American Diabetes Association, San Diego, CA, June 23–26, 2023).	Abstract / Poster	Outcome out of scope	The effect of educational feature on engagement and glycemic index.
Hershcovitz, Yifat, Amir Gurewitz, and Omar Manejwala, "Digital Platform Users Managing Three Chronic Conditions Diabetes, Hypertension and Overweight Experience Better Outcomes than those Who Manage One Condition Following Six Months," (poster, Annual Meeting of the American Diabetes Association, San Diego, CA, June 23–26, 2023).	Abstract / Poster	Outcome out of scope	Measures engagement by users managing multiple chronic conditions measures (blood glucose (BG), blood pressure (BP) and weight).
Hershcovitz, Yifat, Sofia Budman, Amir Gurewitz, Noga Yaniv et al., "Impact of Digital Coaching on Diabetes Self-Management and Glycemic Outcomes for People with Type 2 Diabetes," (poster, International Conference on Advanced Technologies & Treatments for Diabetes, Berlin, Germany, February 22–25, 2023).	Abstract / Poster	Press release info only	Lack of data
Hershcovitz, Yifat, Noga Yaniv, Ephraim Behar et al., "Decrease in Hypoglycemia Events Over a Year in Older Adults with Diabetes Monitoring with Digital Diabetes Management System," (poster, International Conference on Advanced Technologies & Treatments for Diabetes, Berlin, Germany, February 22–25, 2023).	Abstract / Poster	Population out of scope; limited info	Included type 1 and type 2 diabetes patients; data not split out
Hershcovitz, Yifat, Tamar Gershoni, and Omar Manejwala, "Blood Glucose Levels in High-Risk Type 2 Diabetic Users of a Digital Therapeutic Platform by Race/Ethnicity," (poster, Annual Meeting of the American Diabetes Association, New Orleans, LA, June 3–7, 2022).	Abstract / Poster	Population out of scope	Same data as presented in Gershoni 2022 paper. About 45% users used insulin pump and data is not stratified.
Hershcovitz, Yifat, Michal Tamir, and Omar Manejwala, "Hypertension Control Among Persons with Diabetes Using a Self-Management Multi-Condition Digital Platform," (poster, Annual Meeting of the American Diabetes Association, New Orleans, LA, June 3–7, 2022).	Abstract / Poster	Population out of scope	Patients with hypertension.
Hershcovitz, Yifat, Amit Lauterbach, and Omar Manejwala, "Impact of a Digital Therapeutic Platform on Weight Loss and Diabetes Self-Management," (poster, International Conference on Advanced Technologies & Treatments for Diabetes, Barcelona, Spain, April 27–30, 2022).	Abstract / Poster	Population out of scope	Patients with obesity and only 80% had T2DM; stratification for diabetes patients not reported.
Hershcovitz, Yifat, Amit Lauterbach, Omar Manejwala et al., "Efficacy of a Tailored Digital Intervention Tool Targeting Patients with Clustered	Abstract / Poster	Population out of scope	Patients with recurrent very high blood glucose >250mg/dL.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Recurrent High Glucose Readings," (poster, Annual Conference of the Association of Diabetes Care & Education Specialists, August 12–15, 2021, online).			
Hershcovitz, Yifat, Sharon Dar, Omar Manejwala et al., "Impact of Digital Intervention Tools on Engagement and Glycemic Outcomes," (poster, Annual Meeting of the American Diabetes Association, June 25–29, 2021, online).	Abstract / Poster	Intervention out of scope	Digital engagement resulting from change in product design.
Hershcovitz, Yifat, Sharon Dar, Omar Manejwala et al., "Impact of a Digital Intervention Engine on Diabetes Self-Management," (poster, International Conference on Advanced Technologies & Treatments for Diabetes, June 2–5, 2021, online).	Abstract / Poster	Outcome out of scope	Effect of digital flow on user engagement.
Hershcovitz, Yifat, Sharon Dar, and Omar Manejwala, "Impact of a Digital Therapeutic on Insulin Self-Management," (poster, International Conference on Advanced Technologies & Treatments for Diabetes, June 2–5, 2021, online).	Abstract / Poster	Outcome out of scope	Impact of insulin self-management as a result of a digital intervention.
Thingalaya, Nita, Daniel Malone, Praveen Potukuchi et al., "The Impact of Digital Health Technology on Healthcare Quality Measures and Clinical Outcomes in Adults with Type 2 Diabetes Mellitus," (poster, Annual Meeting of the Academy of Managed Care Pharmacy, Orlando, FL, October 16–19, 2023).	Abstract / Poster	Population of interest	The subgroup analysis presented in this poster was not a prespecified subgroup of interest in the SLR, therefore it was not included as part of the SLR results. Note, the overall results presented in Thingalaya 2023 ADA were included in the SLR results.
Thingalaya, Nita, David Kerr, Praveen Potukuchi et al., "Use of Digital Diabetes Solution Is Associated with Improved Glycemic Control Without Increased Risk of Severe Hypoglycemia in Adults with Type 2 Diabetes Mellitus in the United States: Retrospective Cohort Study," (poster, Annual Meeting of the American Diabetes Association, San Diego, CA, June 23–26, 2023).	Abstract / Poster	Population of interest	The subgroup analysis presented in this poster was not a prespecified subgroup of interest in the SLR, therefore it was not included as part of the SLR results. Note, the overall results presented in Thingalaya 2023 ADA were included in the SLR results.
Omada Health			
Almeida, Fabio A., Tzeyu L. Michaud, Kathryn E. Wilson et al., "Preventing Diabetes with Digital Health and Coaching for Translation and Scalability (PREDICTS): A Type 1 Hybrid Effectiveness-Implementation Trial Protocol," *Contemporary Clinical Trials* 88, (January 2020): 105877, https://doi.org/10.1016/j.cct.2019.105877.	Article	Population out of scope; intervention out of scope; methodology	Prediabetes patients; testing small group, in-person class, and (2) a digital DPP consisting of small group support, personalized health coaching, digital tracking tools, and weekly behavior change curriculum.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Barthold, Douglas, Vinay Chiguluri, Rajiv Gumpina et al., "Health Care Utilization and Medical Cost Outcomes from a Digital Diabetes Prevention Program in a Medicare Advantage Population," *Population Health Management* 23, no. 6 (December 2020): 414–421, https://doi.org/10.1089/pop.2019.0184.	Abstract / Poster	Intervention out of scope, unclear if population is of interest	No BGM and unclear if study population includes prediabetes patients, type 1 diabetics.
Berthoumieux, Ashley, Linke, Sarah, Napoleone, Jenna et al. "Long-Term Results of a Digital Diabetes Self-Management and Education Support Program Among Adults With Type 2 Diabetes: A Retrospective Cohort Study" The Science of Diabetes Self-Management and Care 50, no.1 (January 2024): 19-31. doi: 10.1177/26350106231221456.	Article	Publication date	Article published after the literature review was completed. Note, article was reviewed pre-publication and findings are consistent with those reflected in the SLR.
Birse, Charles E., Dov Shiffman, Anita Satish et al., "Impact of a Digital Diabetes Prevention Program on Risk Factors for Chronic Disease in a Workforce Cohort," *Journal of Occupational and Environmental Medicine* 62, no. 12 (December 2020): 1040–1045, doi: 10.1097/JOM.0000000000002044.	Abstract / Poster	Population out of scope; outcome out of scope	Population includes both prediabetes and t2DM patients, no blood glucose, focused on chronic disease risk factors.
Castro Sweet, Cynthia M., Vinay Chiguluri, Rajiv Gumpina et al., "Outcomes of a Digital Health Program with Human Coaching for Diabetes Risk Reduction in a Medicare Population," *Journal of Aging and Health* 30, no. 5 (June 2018): 692–710, https://doi.org/10.1177/0898264316688791.	Article	Population out of scope	People at risk of diabetes; people with diagnosed diabetes were excluded.
Castro Sweet, Cynthia, Carolyn B. Jasik, Amy Diebold et al., "Cost Savings and Reduced Health Care Utilization Associated with Participation in a Digital Diabetes Prevention Program in an Adult Workforce Population," *Journal of Health Economic and Outcomes Research* 7, no. 2 (August 2020): 139–147, doi:10.36469/jheor.2020.14529.	Article	Population out of scope	Excludes type 2 diabetes patients; only prediabetes patients included.
Chen Fang, Carolyn B. Jasik, Timothy M. Dall et al., "Impact of a Digitally Enhanced Diabetes Self-Management Program on Glycemia and Medical Costs," *Science of Diabetes Self-Management and Care* 48, no. 4 (August 2022): 258–269, https://doi.org/10.1177/26350106221100779.	Article	Methodology	Microsimulation
Chen, Fang, Wenqing Su, Shawn H. Becker et al., "Clinical and Economic Impact of a Digital, Remotely-Delivered Intensive Behavioral Counseling Program on Medicare Beneficiaries at Risk for Diabetes and Cardiovascular Disease," *PLoS One* 11, no. 10 (October 2016): e0163627, https://doi.org/10.1371/journal.pone.0163627.	Article	Intervention out of scope	No BGM and included prediabetes population.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Fontil, Valy, Kelly McDermott, Lina Tieu et al., "Adaptation and Feasibility Study of a Digital Health Program to Prevent Diabetes Among Low-Income Patients: Results from a Partnership Between a Digital Health Company and an Academic Research Team," *Journal of Diabetes Research* 2016, (2016): 8472391, https://doi.org/10.1155/2016/8472391.	Article	Population out of scope; intervention out of scope	Prediabetes patients; user- focused research on product design.
Katula, Jeffrey A., Emily V. Dressler, Carol A. Kittel et al., "Effects of a Digital Diabetes Prevention Program: An RCT," *American Journal of Preventive Medicine* 62, no. 4 (April 2022): 567–577, https://doi.org/10.1016/j.amepre.2021.10.023.	Article	Population out of scope; intervention out of scope	Prediabetes population and blood glucose via venous blood sample with laboratory derived HbA1c.
Kim, Sue E., Cynthia M. Castro Sweet, Edward Cho et al., "Evaluation of a Digital Diabetes Prevention Program Adapted for Low-Income Patients, 2016–2018," *Preventing Chronic Disease* 16, (November 2019): E155, http://dx.doi.org/10.5888/pcd16.190156.	Article	Intervention out of scope	Does not include BGM and population with prediabetes.
Kim, Sue E., Cynthia M. Castro Sweet, Eliza Gibson et al., "Evaluation of a Digital Diabetes Prevention Program Adapted for the Medicaid Population: Study Design and Methods for a Non-Randomized, Controlled Trial," *Contemporary Clinical Trials Communications* 10, (June 2018): 161–168, https://doi.org/10.1016/j.conctc.2018.05.007.	Article	Population out of scope; methodology	Prediabetes patients; testing of diabetes prevention program adapted for Medicaid population.
Michaud, Tzeyu L., Kathryn E. Wilson, Fabiana Silva et al., "Costing a Population Health Management Approach for Participant Recruitment to a Diabetes Prevention Study," *Translational Behavioral Medicine* 11, no. 10 (October 2021): 1864–1874, https://doi.org/10.1093/tbm/ibab054.	Article	Population out of scope; outcome out of scope	The study investigates and reports on costing approach for participant recruitment.
Moin, Tannaz, Kristyn Ertl, Jessica Schneider et al., "Women Veterans' Experience with a Web-Based Diabetes Prevention Program: A Qualitative Study to Inform Future Practice," *Journal of Medical Internet Research* 17, no. 5 (2015): e127, doi: 10.2196/jmir.4332.	Article	Population out of scope; intervention out of scope	Prediabetes patients and no BGM.
Moin, Tannaz, Laura J. Damschroder, Mona AuYoung et al., "Results from a Trial of an Online Diabetes Prevention Program Intervention," *American Journal of Preventive Medicine* 55, no. 5 (November 2018): 583–591, https://doi.org/10.1016/j.amepre.2018.06.028.	Article	Population out of scope; Intervention out of scope; outcome out of scope	Prediabetes patients; no BGM.
Sepah, S. Cameron, Luohua Jiang, and Anne L. Peters, "Long-Term Outcomes of a Web-Based Diabetes Prevention Program: 2-year Results	Article	Population out of scope;	Prediabetes patients and no BGM; only a connected scale.

Reference	Reference Type	Reason	Details on Reason for Exclusion
of a Single-Arm Longitudinal Study," *Journal of Medical Internet Research* 17, no. 4 (April 2015): e92, doi: 10.2196/jmir.4052.		intervention out of scope	
Sepah, S. Cameron, Luohua Jiang, and Anne L. Peters, "Translating the Diabetes Prevention Program into an Online Social Network: Validation Against CDC Standards," *Diabetes Educator* 4, no. 40 (July-August 2014): 435-443, https://doi.org/10.1177/0145721714531339.	Article	Population out of scope; intervention out of scope	Self-diagnosed prediabetes patients; blood glucose measured via whole blood test. Kits for sample collection were mailed to study participants.
Sepah, S. Cameron, Luohua Jiang, Robert J. Ellis et al., "Engagement and Outcomes in a Digital Diabetes Prevention Program: 3-Year Update," *BMJ Open Diabetes Research and Care* 5, no. 1 (September 2017): e000422, doi: 10.1136/bmjdrc-2017-000422.	Article	Population out of scope; intervention out of scope	Prediabetes patients and no BGM.
Su, Wenqing, Fang Chen, Timothy M. Dall et al., "Return on Investment for Digital Behavioral Counseling in Patients with Prediabetes and Cardiovascular Disease," *Preventing Chronic Disease* 13, (January 2016): E13, http://dx.doi.org/10.5888/pcd13.150357.	Article	Population out of scope	Reports on return on investment for Prediabetes patients and cardiovascular at-risk population.
Wilson, Kathryn E., Tzeyu L. Michaud, Fabio A. Almeida et al., "Using a Population Health Management Approach to Enroll Participants in a Diabetes Prevention Trial: Reach Outcomes from the PREDICTS Randomized Clinical Trial," *Translational Behavioral Medicine* 11, no. 5 (May 2021): 1066–1077, https://doi.org/10.1093/tbm/ibab010.	Article	Population out of scope; outcome out of scope	The study reports on recruitment processes for digital diabetes-prevention management.
Wilson, Mark G., Cynthia M. Castro Sweet, Michael D. Edge et al., "Evaluation of a Digital Behavioral Counseling Program for Reducing Risk Factors for Chronic Disease in a Workforce," *Journal of Occupational and Environmental Medicine* 59, no. 8 (August 2017): e155, doi: 10.1097/JOM.0000000000001091.	Article	Population out of scope; intervention out of scope	Participants were excluded if they were already diagnosed with Type 1 or 2 diabetes; no use of BGM.
Wilson-Anumudu, Folasade, Ryan Quan, Christian Cerrada et al., "Pilot Results of a Digital Hypertension Self-Management Program Among Adults with Excess Body Weight: Single-Arm Nonrandomized Trial," *JMIR Formative Research* 6, no. 3 (March 2022): e33057, doi: 10.2196/33057.	Article	Population out of scope; intervention out of scope	Hypertension management program
Wu, Justin, Jenna Napoleone, Sarah Linke et al., "Long Term Results of a Digital Hypertension Self-Management Program: A Retrospective Cohort Study," *JMIR Cardio* 7, no. 1 (January-December 2023): e43489, doi: 10.2196/43489.	Article	Population out of scope; intervention out of scope	Hypertension self-management study.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Virta			
Adams, Rebecca N., Shaminie J. Athinarayanan, Brittanie M. Volk et al., "Sleep Improves Over Five Years of Very Low Carbohydrate Nutrition Therapy for Prediabetes Delivered by Continuous Remote Care," *Diabetes* 72, no. S1 (June 2023): 62–LB, https://doi.org/10.2337/db23-62-LB.	Abstract / Poster	Population out of scope; outcome out of scope	Prediabetes population; focused on sleep.
Adams, Rebecca N., Shaminie J. Athinarayanan, Brittanie M. Volk et al., Sleep Improves Over 5 Years of Very Low Carbohydrate Nutrition Therapy for T2D Delivered by Continuous Remote Care," *Annals of Behavioral Medicine* 57, no. S1 (April 2023): S421, https://doi.org/10.1093/abm/kaad011.	Abstract / Poster	Population out of scope; outcome out of scope	Prediabetes population; focused on sleep.
Adams, Rebecca N., Amy L. McKenzie, Shaminie J. Athinarayanan et al., "Adherence to Carbohydrate Restriction for T2D Management Is Associated with Improvements in Depressive Symptoms," (abstract/poster, Annual Meeting of the Society for Behavioral Medicine, April 12–16, 2021, online).	Abstract / Poster	Outcome out of scope	Depression symptoms for patients with low-carbohydrate diet.
Adams, Rebecca N., Amy L. McKenzie, Shaminie J. Athinarayanan et al., "Depression Improves Among T2D Participants Who Adhere to Carbohydrate Restriction Nutrition Therapy," (abstract/poster, Annual Meeting of the Society for Behavioral Medicine, April 12–16, 2021, online).	Abstract / Poster	Outcome out of scope	Depression symptoms for patients with low-carbohydrate diet.
Adams, Rebecca N., Michelle VanTieghem, Brittanie M. Volk et al., "Perceived Control Over Eating Improves Following Initiation of Carbohydrate-Restricted Nutrition Therapy in a Continuous Remote Care Model," *Diabetes* 71, no. S1 (June 2022): 50-LB, https://doi.org/10.2337/db22-50-LB.	Abstract / Poster	Outcome out of scope	Perceived control over eating (PCOE)
Athinarayanan, Shaminie J., Rebecca N. Adams, Amy L. McKenzie et al., "Performance of Different LDL-C Equations in an Intervention Improving Atherogenic Dyslipidemia in Participants with Type 2 Diabetes," (abstract/poster, National Lipid Addociation Annual Meeting 2021, in-person and online)	Abstract / Poster	Study type not of interest	A study on the most appropriate equation for measuring hypertriglyceridemia in type 2 diabetes patients.
Athinarayanan, Shaminie J., Rebecca N. Adams, Michelle VanTiegham et al., "The Impact of COVID 19 Pandemic on the Effectiveness of a Weight Loss Intervention Delivered Through Telemedicine," (abstract/poster, meeting of the Obesity Society, November 1–5, 2021, online).	Abstract / Poster	Outcome out of scope	Assessment of the impact of this pandemic on weight loss from a telemedicine-delivered very-low-carbohydrate intervention targeting nutritional ketosis (NKI).

Reference	Reference Type	Reason	Details on Reason for Exclusion
Athinarayanan, Shaminie J., Rebecca N. Adams, Michelle VanTiegham et al., "Impact of the COVID-19 Pandemic on the Effectiveness of a Metabolic Health Telemedicine Intervention for Weight Loss: A Propensity Score Matching Analysis," *Frontiers in Public Health* 10, (2022): 897099, https://doi.org/10.3389/fpubh.2022.897099.	Abstract / Poster	Outcome out of scope	Impact of pandemic on very-low-carbohydrate telemedicine intervention.
Athinarayanan, Shaminie J., Sarah J. Hallberg, Amy L. McKenzie et al., Impact of a 2-Year Trial of Nutritional Ketosis on Indices of Cardiovascular Disease Risk in Patients with Type 2 Diabetes," *Cardiovascular Diabetology* 19, (2020): 208, https://doi.org/10.1186/s12933-020-01178-2.	Article	Outcome out of scope	Cardiovascular risk factors.
Athinarayanan, Shaminie J., Amy L. McKenzie, Rebecca N. Adams et al., "Effect of a Low Carbohydrate Intervention with Nutritional Ketosis on Liver Markers: A Real-World Experience," (abstract/poster, Meeting of the American Association for the Study of Liver Diseases, November 12–15, 2021, online).	Abstract / Poster	Outcome out of scope; Population out of scope	Real world evidence study on impact of nutritional ketosis on non-alcoholic fatty liver disease.
Athinarayanan, Shaminie J., Amy L. McKenzie, Rebecca N. Adams et al., "Factors Associated with Liver Marker Resolution in Patients with T2D Receiving a Very Low Carbohydrate Intervention," (abstract/poster, Meeting of the American Association for the Study of Liver Diseases, November 12–15, 2021, online).	Abstract / Poster	Outcome out of scope; study type not of interest	Factors associated with liver marker resolution.
Athinarayanan, Shaminie J., Caroline G.P. Roberts, Rebecca N. Adams et al., "Two-Year (2y) eGFR Slope in People with Type 2 Diabetes (T2D) Receiving a Very Low Carbohydrate Diet (VLCD) Intervention," *Diabetes* 72, no. S1 (June 2023): 410–P, https://doi.org/10.2337/db23-410-P.	Abstract / Poster	Outcome out of scope	Impact of NK on renal function (eGFR slope).
Bhanpuri, Nasir H., Sarah J. Hallberg, Paul T. Williams et al., "Cardiovascular Disease Risk Factor Responses to a Type 2 Diabetes Care Model Including Nutritional Ketosis Induced by Sustained Carbohydrate Restriction at One Year: An Open Label, Non-Randomized, Controlled Study," *Cardiovascular Diabetology* 17 (2018): 56, https://doi.org/10.1186/s12933-018-0698-8.	Article	Outcome out of scope	CVD risk factors with NK.
Creighton, Brent C., Parker N. Hyde, Carl M. Maresh et al., "Paradox of Hypercholesterolaemia in Highly Trained, Keto-Adapted Athletes," *BMJ Open Sport and Exercise Medicine* 4, no. 1, (2018): e000429, https://doi.org/10.1136/bmjsem-2018-000429.	Article	Population out of scope	Highly trained, keto-adapted athletes.

Reference	Reference Type	Reason	Details on Reason for Exclusion
Cucuzzella, Mark, Karen Riley, Diana Isaacs D et al., "Adapting Medication for Type 2 Diabetes to a Low Carbohydrate Diet," *Frontiers in Nutrition* 8, (August 2021): 688540, https://doi.org/10.3389/fnut.2021.688540.	Article	Outcome out of scope	Medication modification guidance for T2D undergoing NK.
Fell, Brandon, Michelle VanTieghem, Amy L. McKenzie et al., "Outcomes Among Veterans with T2D at Time of Departure from Virtual Clinic: A Nationwide Real World Study, *Diabetes* 71, no. S1 (June 2022): 1245-P, https://doi.org/10.2337/db22-1245-P.	Abstract / Poster	Outcome out of scope	Impact of departure from Virta clinic in veterans.
Kim, Darlene, Caroline Roberts, Amy McKenzie et al., "Nutritional Ketosis to Treat Pulmonary Hypertension Associated with Obesity and Metabolic Syndrome: A Case Report," *Pulmonary Circulation* 11, no. 1 (January-March 2021): 1–4, https://doi.org/10.1177/2045894021991426.	Abstract / Poster	Methodology	Case report on 62-year-old woman.
Hallberg, Sarah J., Victoria M. Gershuni, Tamara L. Hazbun et al., "Reversing Type 2 Diabetes: A Narrative Review of the Evidence," *Nutrients* 11, no. 4 (April 2019): 766, https://doi.org/10.3390/nu11040766.	Article	Outcome out of scope	Literature review on articles pertaining to diabetes reversal of remission.
Hallberg, Sarah, and David Harrison, "Telemedicine via Continuous Remote Care: A Proactive, Patient-Centered Approach to Improve Clinical Outcomes," *JMIR Diabetes* 6, no. 4 (October-December 2021): e23646, https://diabetes.jmir.org/2021/4/e23646.	Article	Outcome out of scope	Exploration of patient-centered telemedicine experience is continuous remote care (CRC).
Hallberg, Sarah J., Nancy E. Dockter, Jake A. Kushner et al., "Improving the Scientific Rigor of Nutritional Recommendations for Adults with Diabetes: A Comprehensive Review of the American Diabetes Association Guidelines Recommended Eating Patterns," *Diabetes, Obesity and Metabolism* 21, no. 8 (April 2019): 1769–1779, https://doi.org/10.1111/dom.13736.	Article	Outcome out of scope	Review of The ADA Guidelines recommended eating patterns.
Hyde, Parker N., Teryn N. Sapper, Christopher D. Crabtree et al., "Dietary Carbohydrate Restriction Improves Metabolic Syndrome Independent of Weight Loss," *JCI Insight* 4, no. 12 (June 2019): e128308, https://doi.org/10.1172/jci.insight.128308.	Article	Outcome out of scope	Impact of low-carbohydrate diet on metabolic syndrome (MetS).
LaFountain, Richard A., Vincent J. Miller, Emily C. Barnhart et al., "Extended Ketogenic Diet and Physical Training Intervention in Military Personnel," *Military Medicine* 184, no. 9–10 (September-October 2019): e538-e547, https://doi.org/10.1093/milmed/usz046.	Article	Population out of scope	Healthy adults

Reference	Reference Type	Reason	Details on Reason for Exclusion
Lechner, Katherina, Amy L. McKenzie, Nicole N. Kraenkel et al., "High-risk Atherosclerosis and Metabolic Phenotype: The Roles of Ectopic Adiposity, Atherogenic Dyslipidemia and Inflammation," *Metabolic Syndrome and Related Disorders* 18, no. 4 (May 2020): 176–185, https://doi.org/10.1089/met.2019.0115.	Article	Outcome out of scope	Discussion of atherosclerosis measurement.
Lechner, Katherina, Clemens von Schacky, Amy L. McKenzie et al., "Lifestyle Factors and High-Risk Atherosclerosis: Pathways and Mechanisms Beyond Traditional Risk Factors," *European Journal of Preventive Cardiology* 27, no. 4 (March 2020): 394–406, https://doi.org/10.1177/2047487319869400.	Article	Outcome out of scope	Discussion of lifestyle factors and the impact on atherosclerosis.
Lennerz, Belinda S., Anna Barton, Richard K. Bernstein et al., "Management of Type 1 Diabetes with a Very Low–Carbohydrate Diet," *Pediatrics* 141, no. 6 (June 2018): e20173349, https://doi.org/10.1542/peds.2017-3349.	Article	Population out of scope	Type 1 diabetes population
Low Wang, Cecilia C., Raymond O. Estacio, Stephanie Coronel-Mockler et al., "VICTOR-Pilot Study of a Virtual Dietary Intervention to Improve Diabetes and Cardiovascular Risk in Rural Communities - Primary Results," *Journal of the Endocrine Society* 7, no. S1 (October-November 2023): bvad114.691, https://doi.org/10.1210/jendso/bvad114.691.	Article	Reference type not of interest	Describes trial that is ongoing and fully enrolled; no results.
Ludwig, David S., Walter C. Willet, Jeff S. Volek et al., "Dietary Fat: From Foe to Friend?" *Science* 362, no. 6416 (November 2018): 764–770, doi: 10.1126/science.aau20.	Article	Outcome out of scope	Review of evidence on dietary fat.
McKenzie, Amy L., Shaminie J. Athinarayanan, Rebecca N. Adams et al., "Predictors of Normalization of Fasting Glucose in Patients with Prediabetes Using Remote Continuous Care Emphasizing Low Carbohydrate Intake," *Journal of the Endocrine Society* 5, no. S1 (April-May 2021): A323, https://doi.org/10.1210/jendso/bvab048.659.	Article	Population out of scope	Prediabetes population
McKenzie, Amy L., Shaminie J. Athinarayanan, Rebecca N. Adams et al., "Mean Blood Beta-Hydroxybutyrate Predicts Clinically Significant Weight Loss Following 90 Days Carbohydrate Restricted Nutrition Therapy," *Diabetes* 70, no. S1 (June 2021): 307-OR, https://doi.org/10.2337/db21-307-OR.	Abstract / Poster	Outcome out of scope	Mean blood beta as a predictor of weight loss.
McKenzie, Amy L., Shaminie J. Athinarayanan, Jackson J. McCue et al., "Type 2 Diabetes Prevention Focused on Normalization of Glycemia: A	Article	Population out of scope	Prediabetes population

Reference	Reference Type	Reason	Details on Reason for Exclusion
Two-Year Pilot Study," *Nutrients* 13, no. 3 (March 2021): 749, https://doi.org/10.3390/nu13030749.			
McKenzie, Amy L., Shaminie J. Athinarayanan, Michelle VanTieghem et al., "Long Term Sustainability and Durability of Diabetes Prevention via Nutritional Intervention," *Diabetes* 71, no. S1 (June 2022): 59-OR, https://doi.org/10.2337/db22-59-OR.	Article	Population out of scope	Prediabetes population
McKenzie, Amy L., and Robert E. Ratner, "Weight Loss Following 72 Weeks Nutrition Therapy and Telemedicine Treatment: A Real-World Study," *Obesity* 30, no. S1 (November 2022): 55–293, https://onlinelibrary.wiley.com/doi/full/10.1002/oby.23626.	Abstract / Poster	Population out of scope	Pre-obesity and obesity patients
McKenzie, Amy L., Michelle VanTieghem, Brandon Fell et al., "Impact of Carbohydrate-Restricted Nutrition Therapy Delivered via Continuous Remote Care on Prevalence of Glycemic Target Achievement and Type 2 Diabetes Remission Among Veterans: A Nationwide, Real-World Study," *Diabetes* 71, no. S1 (June 2022): 932-P, https://doi.org/10.2337/db22-932-P.	Abstract / Poster	Outcome out of scope	One- and two-year effects on lipids and renal and hepatic markers in a real-world sample of veterans with T2D.
McKenzie, Amy L., Michelle VanTieghem, Brandon Fell et al., "Two-Year Effects of Carbohydrate-Restricted Nutrition Therapy Delivered via Continuous Remote Care among Veterans with Type 2 Diabetes: A Nationwide, Real-World Study," *Diabetes* 71, no. S1 (June 2022): 834-P, https://doi.org/10.2337/db22-834-P.	Abstract / Poster	Insufficient detail	Abstract only with insufficient methods
McSwiney, Fionn T., Bruce Wardrop, Parker N. Hyde et al., "Keto-Adaptation Enhances Exercise Performance and Body Composition Responses to Training in Endurance Athletes," *Metabolism* 81, (April 2018): 25–34, https://doi.org/10.1016/j.metabol.2017.10.010.	Abstract / Poster	Population out of scope	Endurance athletes
Siegmann, Morgan S., Shaminie J. Athinarayanan, Sarah J. Hallberg et al., "Improvement in Patient-Reported Sleep in Type 2 Diabetes and Prediabetes Participants Receiving a Continuous Care Intervention with Nutritional Ketosis," *Sleep Medicine* 55, (March 2019): 92–99, https://doi.org/10.1016/j.sleep.2018.12.014.	Abstract / Poster	Outcome out of scope	Sleep disruption in Prediabetes population and Type 2 diabetes patients.
Strombotne, Kiersten L., Jessica Lum, Nambie J. Ndugga et al., "Effectiveness of a Ketogenic Diet and Virtual Coaching Intervention for Patients with Diabetes: A Difference-in-Differences Analysis," *Diabetes,*	Abstract / Poster	Methodology	Difference-in-differences analysis, estimated the five-month change in HbA1c, body mass index, blood pressure, prescription medication

Reference	Reference Type	Reason	Details on Reason for Exclusion
Obesity and Metabolism 23, no. 12 (December 2021): 2643–2650, https://doi.org/10.1111/dom.14515.			use and costs, as well as healthcare utilization.
VanTieghem, Michelle, Amy L. McKenzie, Robert E. Ratner, "Impact of Carbohydrate-Restricted Nutrition Therapy Delivered via Continuous Remote Care on Metabolic Markers in Veterans with Type 2 Diabetes: A Nationwide, Real-World Study," *Diabetes* 71, no. S1 (June 2022): 29-OR, https://doi.org/10.2337/db22-29-OR.	Abstract / Poster	Outcome out of scope	One- and two-year effects on lipids and renal and hepatic markers in a real-world sample.
Volek, Jeff S., Daniel J. Freidenreich, Catherine Saenz et al., "Metabolic Characteristics of Keto-Adapted Ultra-Endurance Runners," *Metabolism* 65, no. 3. (March 2016): 100–110, https://doi.org/10.1016/j.metabol.2015.10.028.	Abstract / Poster	Population out of scope	Endurance athletes
Volek, Jeff S., Stephen D. Phinney, Ronald M. Krauss et al., "Alternative Dietary Patterns for Americans: Low-Carbohydrate Diets," *Nutrients* 13, no. 10 (October2021): 3299, https://doi.org/10.3390/nu13103299.	Article	Reference type not of interest	Review paper
Volk Brittanie M., Caroline G.P. Roberts, Michelle VanTieghem et al., "Reduced COVID-19 Severity Elicited by Weight Loss from a Medically Supervised Ketogenic Diet in a Geographically Diverse Ambulatory Population with Type 2 Diabetes and Obesity," *BMJ Nutrition, Prevention & Health* 5, no. 2 (December 2022): e000444, doi: 10.1136/bmjnph-2022-000444.	Article	Outcome out of scope	Factors associated with COVID-19 severity in ambulatory individuals with T2DM and obesity treated with a (MSKD).
Volk Brittanie M., Caroline G.P. Roberts, Michelle VanTieghem M et al., "COVID-19 Severity in a Geographically Diverse, US-Based, Ambulatory Population with Type 2 Diabetes on a Medically Supervised Ketogenic Diet," *Diabetes* 70, no. S1 (June 2021): 40-LB, https://doi.org/10.2337/db21-40-LB.	Abstract / Poster	Outcome out of scope	Incidence of COVID-19 for those on a medically supervised ketonic diet.

Notes. Conference abstracts beyond three years were not included. BGM = blood glucose monitor.

Appendix D — Risk of Bias in Interventional and Observational Studies

Table 1: Risk of Bias in Interventional Studies

Company	Reference evaluated	Overall risk	Random sequence generation	Deviation from intended intervention bias	Missing outcome data	Outcomes measurement bias	Selective reporting
Biosensor Inc	Yang 2020	High[1]	High	Low	Low	Low	High
Entra Health	Lee 2020	High[2]	High	Some	Low	Low	Low
LifeScan	Greenwood 2015	Low	Low	Low	Low	Low	Low
LifeScan	Holmen 2014	Low	Low	Low	Low	Low	Low
LifeScan	Katz 2022	Low	Low	Low	Low	Low	Low
Livongo	**Amante 2021**	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**
Livongo	**Bollyky 2018**	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**
NR	Hsu 2016	Some[3]	Low	Low	Low	Low	Low
NR	Wang 2017	Some[4]	Low	Low	Some	Some	Low
Rightmetrics	Sachmechi 2023	High[5]	High	Low	Low	High	Low
Samsung	Lee 2017	Low	Low	Low	Low	Low	Low
Virta	**Athinarayanan 2019**	**Some**	**Some**	**Low**	**Low**	**Low**	**Low**
Virta	**Hallberg 2018**	**Some**	**Some**	**Low**	**Low**	**Low**	**Low**

Notes. Risk of bias methodology can be found in Appendix A – Table 5. NR = not reported. **Companies in scope are bolded.** Abstracts were unable to be assessed for risk of bias.
[1] High risk of bias arising from allocation process. [2] High risk of bias arising from randomization process. [3] Some risk of bias arising from deviations from the intended interventions and from missing outcome data. [4] Some risk of bias arising from missing outcome data and from measurement of the outcome. [5] High risk of bias arising from measurement of the outcome.

Table 2: Risk of Bias in Observational Studies

Company	Citation evaluated	Overall risk[1]	Selection	Comparability	Outcome/Exposure
Case-Control Study					
Dario Health	**Fundoiano-Hershcovitz 2022**	**Poor**	**++**		**+**
Dario Health	**Gershoni 2023**	**Poor**	**+**		**+++**
Cohort Studies					
Ascencia Diabetes Care	Bailey 2017	Poor	+		++
Ascencia Diabetes Care	Fisher 2023	Poor	+		+++
BioTel Telcare	Bode 2018	Fair	++		+++
Glooko	**Offringa 2018**	**Poor**	**+**		**+++**
Ideal Life	Welch 2015	Poor	+		+++
iHealth	Shaw 2020	Poor	+		+++
LifeScan	Grady 2022	Fair	++	+	+++
LifeScan	Grady 2022	Fair	++	+	+++
LifeScan	Grady 2023	Fair	++		+++
LifeScan	Grady 2016	Poor		+	+++
Livongo	**Bollyky 2019**	**Poor**	**+**		**+++**
Livongo	**Downing 2017**	**Poor**	**+**		**+++**
Livongo	**Whaley 2019**	**Poor**	**+**		**+++**
Lilly	Zhang 2020	Fair	+	+	+++
Virta	**McKenzie 2017**	**Poor**	**+**		**+++**
Virta	**Vilar-Gomez**	**Fair**	**++**	**+**	**+++**
Virta	**Adams 2022**	**Poor**	**+**		**+++**
Virta	**Lyman 2022**	**Fair**	**++**	**+**	**+++**

NR	Harvey 2016	Poor		+	+++
NR	Menon 2019	Poor	+		+++
NR	Montero 2021	Poor	+		+++
NR	Mora 2017	Poor	+		+++
NR	Nagrebetsky 2013	Fair	++	+	+++
NR	Odom 2019	Poor	+		+++
NR	Rama Chandran 2023	Poor	+		+++
Omada	**Wilson-Anumudu 2021**	**Poor**			**+++**

Notes. Risk of bias methodology can be found in Appendix A – Table 6. NR = not reported. C**ompanies in scope are bolded.**
[1.] Newcastle-Ottawa Scale was applied to observational and single arm studies included in the review. Studies are evaluated for multiple criteria within 3 categories: selection, comparability, and either exposure or outcome, depending on the type of study.

Appendix E — Glycated Hemoglobin (HbA1c) Levels in Prospective Interventional and Observational Trials

Table 1: HbA1c in Prospective Interventional Trials

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
GLOOKO									
Nosrat 2023	ITT	24 Weeks	Glooko RPM	T2DM	98	8.7 (1.2)	NR[1]	NR	−0.34 (0.04)[2]
			Usual care		97	8.6 (1.1)	NR[3]	NR	reference
LIVONGO									
Amante 2021	ITT	6 Months	Livongo for Diabetes Program	T2DM, HbA1c >8.0%	59	10.3 (1.4)	NR	−1.1 (1.5)	NR (0.29)
			Usual Care		60	10.0 (1.4)	NR	−0.8 (1.5)	reference
		1 Year	Livongo for Diabetes Program then Usual Care	T2DM, HbA1c >8.0%	59	10.3 (1.4)	NR	0.2 (1.7)	NR (0.07)
			Usual Care then Livongo for Diabetes Program		60	10.0 (1.4)	NR	−0.4 (1.5)	reference
	Completers	6 Months	Livongo for Diabetes Program	T2DM, HbA1c >8.0%	59	10.3 (1.4)	NR	−1.1 (1.5)	NR (0.14)
			Usual Care		60	10.0 (1.4)	NR	−0.7 (1.3)	reference
		1 Year	Livongo for Diabetes Program then Usual Care	T2DM, HbA1c >8.0%	59	10.3 (1.4)	NR	0.3 (1.7)	NR (0.03)
			Usual Care then Livongo for Diabetes Program		60	10.0 (1.4)	NR	−0.4 (1)	reference
Bollyky 2018	ITT	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >32	115	7.8 (1.8)	7.3 (1.4)	−0.40 (1.3); p=0.02	NR
			Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-	T2DM, HbA1c >7.5%, BMI >36	67	7.5 (1.8)	6.6 (1.3)	−0.70 (1.5); p=0.02	NR

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
			intensity coaching, and connected scale						
			Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >40	73	7.2 (1.6)	6.9 (1.5)	−0.40 (1.4); p=0.02	NR
				T2DM, HbA1c >7.5%, BMI >44	330	7.5 (1.9)	7.1 (1.4)	−0.40 (1.5); p=0.02	NR
			Livongo for Diabetes Program and no Restore Health Lifestyle Modification Program and no connected scale	T2DM, HbA1c >7.5%, BMI >48	75	7.6 (2.1)	7.5 (1.3)	−0.10 (1.6); p=0.02	NR
Bollyky 2017	ITT	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program	T2DM, HbA1c >7.5%, BMI >25	252[4]	8.5 (NR)	7.5 (NR)	NR; p=0.01	NR
VIRTA									
Hallberg 2018	Completers	1 Year	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	7.49 (1.4)	6.20 (0.94)_	−1.32 (0.09)	−1.54 (0.19)
			Usual care		87	7.74 (1.82)	7.94 (1.82)	0.22 (0.16)	reference
Athinarayanan 2019	ITT	2 Years	Virta continuous remote care		262	7.7 (0.1)	6.7 (0.1)	−0.9 (0.1)	−1.2 (0.02)
			Usual care		87	7.5 (0.2)	7.9 (0.2)	0.4 (0.2)	reference
Athinarayanan 2022	ITT	5 Years	Virta continuous remote care		122	7.5 (NR)	7.2 (NR)	-0.3 (-0.6, 0.0)	NA
OTHER									
Rama Chandran 2023	ITT	24 Weeks	Contour Plus ONE BGMS and Contour Diabetes application	T2DM, HbA1c 8.5% to <12.5%, BMI ≤40 kg/m^2, on basal-plus or basal-bolus insulin	40	9.8 (0.9)	8.1 (0.9)	p<0.05	NA

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
				therapy for ≥3 months					
Yang 2020	ITT	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	8 (0.8, 0)	NR	-0.63 (95% CI -0.77, -0.50)	−0.30 (0.003)
			Usual care (face-to-face)		97	7.9 (0.8)	NR	-0.28 (95% CI -0.42, -0.13)	reference
			Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	NR	NR	−6.93 mmol/L (95% CI -8.38, -5.48)	−3.32 mmol/L (0.003)
			Usual care (face-to-face)		97	NR	NR	−3.02 mmol/L (95% CI -4.62, -1.42)	reference
Montero 2019	ITT	3 Months	Biotel BGM System, Biotel BGM System dashboard	T2DM, HbA1C >9%	366	11.2 (NR)	8.1 (NR)	NR	−1.8 (<0.001)[5]
			Propensity matched controls		366	11.3 (NR)	9.9 (NR)	NR	NR
Lee 2020	Completers	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	9 (95% CI 8.97, 9.03)	8.69 (95% CI 8.64, 8.75)	-0.33 (95% CI -0.37, -0.29); p=0.226	NR
			Usual care, personal BGM with no mobile application		104	9 (95% CI 8.97, 9.03)	8.70 (95% CI 8.65, 8.74)	-0.30 (95% CI -0.33, -0.27)	NR
Katz 2022	ITT	12 Weeks	OneTouch Verio Flex BGM, OneTouch Reveal mobile application	T1DM or T2DM, HbA1c >7.5%, own personal BGM with no mobile application[6]	81	9.57 (SE 0.18)	8.48 (SE 0.15)	-0.99 (SE 0.14)	NR
			Usual care, personal BGM with no mobile application		39	9.47 (SE 0.23)	8.82 (SE 0.22)	-0.63 (SE 0.2)	NR

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
		24 Weeks	OneTouch Verio Flex BGM, OneTouch Reveal mobile application	T1DM or T2DM, HbA1c >7.5%, own personal BGM with no mobile application[7]	81	9.57 (SE 0.18)	8.31 (SE 0.16)	-0.16 (SE 0.13) [8]	NR
			Usual care, personal BGM with no mobile application		39	9.47 (SE 0.23)	8.16 (SE 0.2)	-0.55 (SE 0.13)	NR
Holmen 2014	ITT	1 Year	OneTouch Ultra Easy BGM, Few Touch Application and health counseling	T2DM, HbA1c >7.0%	50	8.1 (95% CI 7.76, 8.43)	8.0 (95% CI 7.49, 8.41)	-0.15 (95% CI -0.58, 0.29)	NR
			OneTouch Ultra Easy BGM, Few Touch Application and no health counseling		51	8.1 (95% CI 7.72, 8.53)	7.8 (95% CI 7.48, 8.15)	-0.31 (95% CI -0.67, 0.05)	NR
			Usual care		50	8.4 (95% CI 7.97, 8.76)	8.2 (95% CI 7.77, 8.61)	-0.16 (95% CI -0.50, 0.18)	NR
			OneTouch Ultra Easy BGM, Few Touch Application and health counseling	T2DM, HbA1c >7.0%	50	65 mmol/L (95% CI 61, 69)	63 mmol/L (95% CI 58, 68)	−1.6 mmol/L (95% CI -6.3, 3.1)	NR
			OneTouch Ultra Easy BGM, Few Touch Application and no health counseling		51	65 mmol/L (95% CI 61, 70)	62 mmol/L (95% CI 58, 66)	−3.4 mmol/L (95% CI -7.4, 0.6)	NR
			Usual care		50	68 mmol/L (95% CI 64, 72)	66 mmol/L (95% CI 62, 71)	−1.7 mmol/L (95% CI -5.4, 2.0)	NR
Nagrebetsky 2013	ITT	6 Months	OneTouch Ultra 2 BGM, Bluetooth cradle, and mobile telephone, and usual care	T2DM, HbA1c 8.0%-10.9%, taking oral glucose-lowering medication	7	64 mmol/L (11)	NR	Median -10 mmol/L (IQR -21, 3)	–6 mmol/L (0.35)
			Usual care, personal BGM, lifestyle coaching		7	66 mmol/L (13)	NR	Median -5 mmol/L (IQR -13, 6)	NR
Greenwood 2015	ITT	6 Months	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	8.5 (1.1)	7.35 (NR)	-1.11%	−0.11 (0.55)

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
			Intel Care Innovations Health Suite, OneTouch connected glucometer		45	8.2 (1.1)	7.46 (NR)	-0.70%	reference
Wang 2017	ITT	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	8.0 (0.8)	7.4 (1.3)	NR; p<0.01	NR
			Connected glucometer, medical team monitoring, and usual care		106	7.9 (0.7)	6.8 (0.7)	NR; p<0.05	NR
Hsu 2016	ITT	3 Months	Glucose meter wirelessly connected to tablet computer, tablet computer and education	T2DM, new to basal insulin, HbA1c 9%-14%	20	10.8 (1.2)	7.7 (1.6)	–3.2 (1.5); p<0.0001	NR (0.048)
			Usual care (face-to-face)		20	10.9 (1.2)	8.9 (2.2)	–2.0 (2.0); p<0.0003	reference
	Completers	3 Months	Glucose meter wirelessly connected to tablet computer, tablet computer and education	T2DM, new to basal insulin therapy	20	10.7 (1.2)	7.4 (1.2)	NR	NR (0.0004)
			Usual care (face-to-face)		20	10.6 (0.9)	8.4 (1.7)	NR	reference
Odom 2019	ITT	NR	Connected glucose meter with online portal	T1DM or T2DM, HbA1C ≥8%, insured	50 [9]	10.252 (SE 0.239)	8.386 (SE 0.265)	–1.856 (0.265); p<0.05	NR
Sachmechi 2023	ITT	12 Weeks	Usual care	T2DM, HbA1c ≥7.5%	78	9.6 (SE 1.41)	9 (NR)	NA ; p=0.213	NR
			Connected BGM and Vivovitals diabetes platform		78	9.5 (SE 1.7)	8 (NR)	NA ; p=0.213	NR
			Usual care	T2DM, HbA1c ≥7.5%	78	76 mmol/L (NR)	75 mmol/L (NR)	NA; p<.001	NR
			Connected BGM and Vivovitals diabetes platform		78	76 mmol/L (NR)	64 mmol/L (NR)	NA; p<.001	NR
Mora 2017	ITT	6 Months	Accu-Chek Connected BGM, mobile application,	T1DM and T2DM, insulin use [10]	84	8.8 (1.6)	7.9 (1.5)	-0.9 (1.6); p<0.0001	NR

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
			and online data management web portal						
Lee 2017	ITT	6 Months	Samsung Health Diary telemonitoring device	Frequent users of telehealth, T2DM, Kaiser Permanente members	53	9.2 (1.4)	NR	-2.4 (SE 1.6)	reference
				Infrequent users of telehealth, T2DM, Kaiser Permanente members	54	9.4 (1.4)	NR	-1.5 (SE 1.5)	NR (0.003)
			Standard care	T2DM, Kaiser Permanente members	91	9.2 (1.5)	NR	-1.8 (SE 1.7)	NR
Lee 2023	ITT	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3,257	NR	–0.24 (95% CI -0.44, -0.05)	NR	NR
Moschonis 2023	ITT	NR	Digital health interventions as text messages	T2DM	11,486	NR	–0.37 (95% CI -0.57, -0.17)	NR	NR
			Digital health interventions on smartphone applications		11,486	NR	–0.42 (95% CI -0.63, -0.20)	NR	NR
			Digital health interventions on websites		11,486	NR	–0.09 (95% CI -0.64, -0.46)	NR	NR
			Digital health interventions		11,486	NR	–0.30 (95% CI -0.42, -0.19)	NR	NR
Hyun 2022	ITT	3 Months	Mobile application only	T2DM	NR	NR	0.06 (95% CI -0.34, 0.45)	NR	NR
			Mobile application and lifestyle coaching		NR	NR	–0.22 (95% CI -0.47, 0.02)	NR	NR
		6 Months	Mobile application only	T2DM	NR	NR	–0.60 (95% CI -1.04, -0.16)	NR	NR

References	Analysis Population	Time	Group	Population	n	Baseline HbA1c (%) Mean (SD)	Follow-up HbA1c (%) Mean (SD)	Change from Baseline Mean (SD)	Betwn. Group Diff. Mean (P-value)
			Mobile application and lifestyle coaching		NR	NR	–0.14 (95% CI -0.41, 0.13)	NR	NR

Notes. BGM = blood glucose monitor, BMI = body mass index, HbA1c = glycated hemoglobin, ITT = intent-to-treat, NA = not applicable, NR = not reported, RCT = randomized controlled trial, SD = standard deviation, T1DM = Type 1 Diabetes Mellitus, T2DM =Type 2 Diabetes Mellitus.
[1.] Reported in figure. [2.] Mean adjusted difference (between groups) at 24 weeks (95% CI): -0.34 (-0.67, -0.02). [3.] Reported in figure. [4.] Manual calculation: 113 (nothing Group) + 72 (lightweight coaching) + 67 (full-intensity coaching) = 252. [5.] Percent difference in HbA1c. [6.] 95% had T2DM and 5% had T1DM. [7.] 95% had T2DM and 5% had T1DM. [8.] Change from Week 12 to Week 24. [9.] 94% of participants had T2DM. [10.] 88.5% of participants had T2DM.

Table 2: HbA1c in Observational Studies

References	Analysis Population	Time	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
LIVONGO									
Bollyky 2019	ITT	3 Months	Livongo for Diabetes Program	T2DM	48	7.7 (NR)	7 (NR)	NR; p=0.11	NR
		6 Months	Livongo for Diabetes Program		48	7.7 (NR)	7.1 (NR)	NR; p=0.46	NR
		1 Year	Livongo for Diabetes Program		48	7.7 (NR)	7.1 (NR)	NR; p=0.42	NR
		3 Months	Livongo for Diabetes Program	T2DM, no insulin use	27	6.8 (NR)	6.3 (NR)	NR; p=0.22	NR
		6 Months	Livongo for Diabetes Program		27	6.8 (NR)	6.3 (NR)	NR; p=0.50	NR
		1 Year	Livongo for Diabetes Program		27	6.8 (NR)	6.6 (NR)	NR; p=1.00	NR
Whaley 2019	ITT	NR	Livongo for Diabetes enrolled members[3]	Livongo for Diabetes enrolled members[4]	2,261	7.83 (NR)[5]	NR	NR	NR

References	Analysis Population	Time	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
DARIO									
Thingalaya 2023a	ITT	6 Months	Dario diabetes solution	T2DM, HbA1c ≥7.0%, receiving ≥1 diabetes medication, used Dario diabetes solution	568	9.14 (1.78)	NR	−1.02 (95% CI, −1.15, −0.89)	-0.23 (0.004)
			Non-users of Dario diabetes solution	T2DM, HbA1c ≥7.0%, receiving ≥1 diabetes medication, did not use Dario diabetes solution but received usual care	1699	9.13 (1.85)	NR	−0.79 (95% CI, −0.87, −0.71)	
Thingalaya 2023b	ITT	6 months	Dario diabetes solution users between 2017-2021	T2DM, HbA1c ≥7.0%, receiving ≥1 diabetes medication	568	9.1 (1.8)	NR	NR[6]	NA
OMADA									
Wilson-Anumudu 2021	Completers	4 Months	Omada for Diabetes	T2DM, Members of Achievement[7]	149	8.9 (1.9)	8.1 (NR)	−0.8 (95% CI, −1.1, −0.5)	NA
VIRTA									
Adams 2022	Completers	2 Years	Virta continuous remote care, HbA1c meets clinical cut-off	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	7.85 (SE, 0.24)	6.87 (SE, 0.23)	NR	NA
			Virta continuous remote care, HbA1c does not meet clinical cut-off			7.56 (SE, 0.10)	6.62 (SE, 0.09)	NR	

References	Analysis Population	Time	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
			Virta continuous remote care, diagnosis in chart			8.05 (SE, 0.20)	6.84 (SE, 0.21)	NR	
			Virta continuous remote care, no diagnosis in chart			7.50 (SE, 0.10)	6.61 (SE, 0.09)	NR	
			Virta continuous remote care, prescribed antidepressants			7.61 (SE, 0.15)	6.64 (SE, 0.14)	NR	
			Virta continuous remote care, not prescribed antidepressants			7.60 (SE, 0.11)	6.67 (SE, 0.11)	NR	
McKenzie 2017	Completers	11 Weeks	Virta continuous remote care, Abbott Precision Xtra BGM, connected scale	T2DM, HbA1c ≥6.5% or <6.5% and taking at least one hypoglycemic medication	238	7.6 (1.5)	6.5 (1.0)	−1.1 (1.1)	NA
McKenzie 2023a	ITT	2 Years	Virta continuous remote care	Unsustained nutritional ketosis	NR	7.4 (0.3)	7.2 (0.3)	NR	NR
				Low nutritional ketosis	NR	7.6 (0.1)	6.8 (0.1)	NR	NR
				Moderately declining nutritional ketosis	NR	7.7 (0.2)	6.7 (0.1)	NR	NR
				Sustained nutritional ketosis	NR	7.8 (0.4)	6.1 (0.3)	NR	NR
				Usual care	NR	7.6 (0.2)	8.0 (0.2)	NR	NR
McKenzie 2023b	Completers	1 Year	Area deprivation Index Q1	T2DM, receiving care at nationwide	19955	7.7 (NR)	6.5 (NR)	NR	NA

References	Analysis Population	Time	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
			Area deprivation Index Q2	telemedicine clinic, utilizing carbohydrate nutritional approach and continuous remote care model		NR	NR		
			Area deprivation Index Q3			NR	NR		
			Area deprivation Index Q4			NR	6.6 (NR)		
			Area deprivation Index Q5				6.7 (NR)		
			Area deprivation Index Q4 and Q5			7.8 (NR)	NR	NR	NA
Volk 2022	Completers	5 Years	T2DM, remission: HbA1c <6.5%, no medication ≥3 months	Virta continuous remote care	120	0 (0.0)	24 (20.0%)	NR	NA
			T2DM, HbA1c <6.5%, no anti-diabetes medication or only metformin			14 (11.7%)	39 (32.5%)		
			T2DM, AACE glycemic target: HbA1c ≤6.5%			28 (23.3%)	50 (41.7%)		
			T2DM, HbA1c ≤7.0%, no anti-diabetes medication or only metformin			9 (7.5%)	28 (23.3%)		
			ADA glycemic target: HbA1c ≤7.0%			62 (51.7%)	67 (55.8%)		
			HEDIS guidance: HbA1c ≤8.0%			87 (72.5%)	91 (75.8%)		
OTHER									
Bode 2018	ITT	1 Year	Biotel BGM and Glytec CDSS	Primarily T2DM requiring insulin[8]	46	10.2 (NR)	7.2 (NR)	NR	NR
Welch 2015	ITT	3 Months	BGM, automatic BP cuff, and MedMinder pillbox	T2DM, HbA1c 7%-11%, age >50 years	30	8.3 (0.8)	NR	NR	NR
Tsang 2013	ITT	1 Year	Web-based glucose monitoring system based on One-Touch glucometer and health counseling	T2DM	113	7.42 (1.36)	NR	–0.70 (1.57)	NR
			Usual care		113	7.6 (1.64)	NR	–0.46 (1.37)	NR (0.041)

References	Analysis Population	Time	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
Grady 2016	Overall	12 Weeks	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations	T1DM and T2DM, referred to hospitals for ongoing diabetes care	40	8.3 (SE 0.2)	7.9 (SE 0.2)	–0.40 (95% CI -0.63, -0.17)	NR
	ITT	12 Weeks	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations		17	7.9 (SE 0.2)	7.5 (SE 0.2)	–0.38 (95% CI -0.83, 0.07)	NR
Katz 2020	ITT	24 Weeks	OneTouch Verio Flex BGM, OneTouch Reveal mobile application, and health counseling	T2DM, HbA1c ≥8.0%	67	9.19	NR	–0.78; p<0.05	NR

Notes. BG = blood glucose. BGM = blood glucose monitor, BP = blood pressure. CDSS = clinical decision support software. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NA = not applicable. NR = not reported. SD = standard deviation. SE = standard error. T1DM = Type 1 Diabetes Mellitus, T2DM = Type 2 Diabetes Mellitus.
[1.] Months 0-3. [2.] Months 0-3. [3.] Enrolled members who used glucose meter for at least one BG check. [4.] Enrolled members who used glucose meter for at least one BG check. [5.] Self-reported outcome.
[6.] Modeled change in HbA1c per active day in the first 60 days of follow-up was -0.02% and -0.01% in the second 60 days of follow-up.[7.] Achievement is an online community and mobile-based community in the United States where members can connect their activity trackers, and fitness and health apps to the platform and, by logging activities, accumulate points that are redeemable for monetary rewards. Additionally, members self-report on various health conditions and are invited to participate in remote research opportunities as relevant studies become available. In this study, recruitment was targeted to members who had self-reported T2DM.[8.] n = 35 (76%) had T2DM.

Appendix F — Blood Glucose Outcomes in Interventional and Observational Trials

Table 1. Blood Glucose in Prospective Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
GLOOKO										
Fischer 2016	Completers	Blood glucose	10 Weeks	Usual care and self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters	T2DM, HbA1c ≥8.5%, and/or insulin naïve	14	NR	NR	-6.09 (19.9)	Change over time –2.538 (0.013)[1]
				(All participants) Usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters, and clinical interactions with nurse practitioner		36	NR	NR	-16.16 (9.1)	Change over time –2.237 (0.026)[1]
				1-2 clinical interactions with nurse practitioner, usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters		7	NR	NR	-19 (10.2)	Change over time vs usual care –1.21 (0.227)[1]
				≥ 3 clinical interactions with nurse practitioner, usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters		15	NR	NR	-33.7 (14.9)	Change over time vs usual care –2.126 (0.035)[1]
		Glycemic variability	10 Weeks	Usual care and self-managing of diabetes via Glooko application on	T2DM, HbA1c ≥8.5%, and/or	14	NR	NR	-11.26 (8.7)	Change over time -2.675 (0.009)[1]

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
				compatible smartphones and SMBG meters	insulin naïve					
				(All participants) Usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters, and clinical interactions with nurse practitioner		36	NR	NR	-10.5 (4.7)	Change over time -2.611 (0.01)[1]
				1-2 clinical interactions with nurse practitioner, usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters		7	NR	NR	-9.71 (7.6)	Change over time vs usual care 0.205 (0.838)[1]
				≥ 3 clinical interactions with nurse practitioner, usual care, self-managing of diabetes via Glooko application on compatible smartphones and SMBG meters		15	NR	NR	-10.83 (7.7)	Change over time vs usual care 1.358 (0.176)[1]
LIVONGO										
Bollyky 2018	ITT	Blood glucose	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >33	115	170 (43)	165 (51)	−2.80 (SD 47); p=0.02	NR
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-	T2DM, HbA1c >7.5%, BMI >37	67	169 (51)	146 (40)	−19.4 (SD 35); p=0.02	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
				intensity coaching, and connected scale						
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >41	73	159 (40)	148 (36)	−11.3 (SD 35); p=0.02	NR
				Livongo for Diabetes Program and Restore Health Lifestyle Modification Program	T2DM, HbA1c >7.5%, BMI >45	330	168 (50)	158 (46)	−8.30 (SD 44); p=0.02	NR
				Livongo for Diabetes Program and no Restore Health Lifestyle Modification Program and no connected scale	T2DM, HbA1c >7.5%, BMI >49	75	172 (65)	168 (51)	−4.20 (SD 52); p=0.02	NR
Bollyky 2017	ITT	Blood glucose	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-intensity coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >27	67	NR	NR	-19.4	NR
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >29	73	NR	NR	-11.3	NR (0.02)
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >31	115	NR	NR	-2.9	NR (0.02)
VIRTA										

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
Hallberg 2018	Completers	Fasting glucose	1 Year	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	8.8 (3.28)	6.84 (1.87)	−2.02 (0.26)	−2.83 (0.53)
				Usual care		87	8.71 (3.96)	9.3 (4.74	0.81 (0.45)	reference
Athinarayanan 2019		Fasting glucose	2 Years	Virta continuous remote care		262	163.67 (3.90)	134.58 (4.13)	−29.10 (4.88)	NR (0.01)
				Usual care		87	151.21 (6.93)	172.89 (7.00)	21.68 (8.28)	reference
Athinarayanan 2022		Fasting insulin	5 Years	Virta continuous remote care		122	25.8 mIU/L	24.5 mIU/L	-7.9 mIU/L (-10.0, -5.8)	NR
OTHER										
Yang 2020	ITT	Fasting plasma glucose	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	150.7 (57.2)	NR	-19.11 (95% CI -29.80, -8.43)	–17.29 (0.005)
				Usual care (face-to-face)		97	147.9 (48.7)	NR	-2.41 (95% CI -13.64, 8.82)	reference
Lee 2020	Completers	Fasting plasma glucose	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	9.52 (95% CI 9.39, 9.65)	8.95 (95% CI 8.78, 9.11)	-0.57 (95% CI -0.71, -0.44); p=0.261	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	9.59 (95% CI 9.48, 9.70)	9.13 (95% CI 8.99, 9.26)	-0.47 (95% CI -0.59, -0.36)	NR
Odom 2019	ITT	Fasting serum glucose	NR	Connected glucose meter with online portal	T1DM or T2DM, HbA1C ≥8%, insured	502	170.7 (SE 5.42)	NR	NR	NR
Mora 2017	ITT	Blood glucose	6 Months	Accu-Chek Connected BGM, mobile application,	T1DM and T2DM, insulin use[3]	87	189.4 (48)	164.6 (37.5)	-24.8 (SD 50.8)	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
				and online data management web portal						
Lee 2023	ITT	Fasting serum glucose	NR	mHealth interventions	T2DM, older adults	3,257	NR	–0.61 (95% CI -1.25, 0.04)	NR	NR
Hyun 2022	ITT	Fasting serum glucose	3 Months	Mobile application and lifestyle coaching	T2DM	NR	NR	–0.89 (95% CI -1.88, 0.1)	NR	NR
			6 Months	Mobile application and lifestyle coaching	T2DM	NR	NR	–0.72 (95% CI -0.99, -0.44)	NR	NR

Notes. BGM = blood glucose monitor. BMI = body mass index. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NR = not reported. SD = standard deviation. SE = standard error. SMBG = self-monitoring of blood glucose. T1DM = Type 1 Diabetes Mellitus. T2DM = Type 2 Diabetes Mellitus.
[1.] T score. [2] 94% of participants had T2DM. [3] 88.5% of participants had T2DM.

Table 2: Blood Glucose in Observational Studies

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
DARIO HEALTH										
Gershoni 2023	ITT	Blood glucose	1 Year	T2DM, high risk, all users	Dario digital therapeutics solution	1,000	230 (58)	197 (47)	14%	NA
				T2DM, high risk, hyperglycemia, White persons		736	229 (58)	197 (47)	14%	NS
				T2DM, high risk,		264	233.35 (60)	198.94 (47)	15%	

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				hyperglycemia, People from racial and ethnic minority group						
				T2DM, high risk, hyperglycemia, Latino		122	237 (59)	202 (48)	15%	
				T2DM, high risk, hyperglycemia, Black		103	230 (63)	196 (48)	15%	
				T2DM, high risk, hyperglycemia, Asian		39	229 (55)	195 (43)	15%	
Hershcovitz 2023	ITT	Blood glucose	3 Years	Dario digital therapeutics solution	T2DM, high risk, hyperglycemia	1,239	212 (42)	179 (55)	15.6%	NA
				Dario digital therapeutics solution, users who completed at least one engagement type		433	212 (45)	172 (51)	18.8%	NR
				Dario digital therapeutics solution, users who did not complete at least one engagement type		806	212 (NR)	183 (NR)	NR	
Thingalaya 2023a	ITT	Blood glucose	6 Months	Dario diabetes solution	T2DM, HbA1c ≥7.0%, receiving	568	NR	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
					≥1 diabetes medication, used Dario diabetes solution					
				Non-users of Dario diabetes solution	T2DM, HbA1c ≥7.0%, receiving ≥1 diabetes medication, did not use Dario diabetes solution but received usual care	1699	NR	NR	NR	NR
Hershcovitz 2022a	ITT	Blood glucose	1 Year	NA	T2DM, comorbid depression and stress	491	204 (60)	234 (55)	13%; p<0.001	NR
					High-risk T2DM, comorbid depression and stress[1]	379	233 (54)	201 (66)	14%; p<0.001	NR
Fundoiano-Hershcovitz 2022	Completers	Blood glucose	6 Months	Dario digital therapeutics solution BP monitoring system (BPM group)	T2DM and poorly controlled blood pressure	137	144 (NR)[2]	143 (NR)[3]	NR	NR
				Dario digital therapeutics solution never used BP-monitoring system (NBPM group)	T2DM and poorly controlled blood pressure	132	144 (NR)	137 (NR)[4]	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Hershcovitz 2022b	Completers	Blood glucose	1 Year	Dario digital therapeutics solution	Urban Users: High-risk T2DM, blood glucose > 180 mg/dL	1157	228 (NR)	190 (NR)	17%; p<0.001	reference
					Rural Users: High-risk T2DM, blood glucose > 180 mg/dL	176	224 (NR)	196 (NR)	13%; p<0.001	NR (p=0.142)
GLOOKO										
Sheng 2021	ITT	Blood glucose	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	177.1 (NR)	159.5 (NR)	–20; p<0.05[5]	NR
			6 Months	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	177.1 (NR)	155.7 (NR)	NR; p<0.05	NR
			3 Months	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	177.1 (NR)	154.2 (NR)	NR; p<0.05	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Sheng 2019	ITT	Blood glucose	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	Diabetes	213	11.1 (NR)	9 (NR)	NR	NR
Offringa 2018	NR	Probability of hypoglycemic event	2 Months	Usual care and uploaded data in HCP's office, and have accompanying mobile application	T2DM and T1DM	899[8]	8.4 (NR)	NR	NR	Compared to usual care NR (0.02)
		Probability of hyperglycemic event	2 Months	Usual care and uploaded data in HCP's office, and have accompanying mobile application	T2DM and T1DM	899[9]	15.6 (NR)	NR	-10.7%	NR (<0.001)
		Blood glucose	2 Months	Usual care and uploaded data in HCP's office, and have accompanying mobile application	T2DM and T1DM	899 [10]	165 (NR)	158.6 (NR)	-6.4 (2.0, 10.7); p<0.001	NR
				Usual care and uploaded data in HCP's office, but did not have accompanying mobile application	T2DM and T1DM	900[11]	173.5 (NR)	173.9 (NR)	0.4, p=0.024	NR (0.024)
LIVONGO										

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Bollyky 2019	ITT	Blood glucose	1 Year	Livongo for Diabetes Program	T2DM, insulin use	21	146 (91)	120 (116)	NR	NR
					T2DM, no insulin use	27	129 (127)	85 (71)	NR	NR
Downing 2017	ITT	Blood glucose	1 Year[12]	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings [13]	3303	NR	150 (NR)	NR	NR
VIRTA										
McKenzie 2017	Completers	Fasting glucose	11 Weeks	Virta continuous remote care, Abbott Precision Xtra BGM, connected scale	T2DM, HbA1c ≥6.5% or <6.5% and taking at least one hypoglycemic medication	236	163 (62)	129 (34)	−33 (58)	NA
Adams 2021	ITT	Mean glucose	1 Year	Virta continuous remote care	T2DM, HbA1c >7.5%, ≥65 years old	201	147.3 (3.8)	NR	-18.8 (3.7)	NA
Adams 2022	Completers	Fasting glucose	2 Years	Virta continuous remote care, HbA1c meets clinical cut-off	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	175.94 (SE, 9.78)	142.54 (SE, 9.02)	NR	NA
				Virta continuous remote care, HbA1c does not meet clinical cut-off			158.23 (SE, 4.06)	130.67 (SE, 3.75)	NR	
				Virta continuous remote care,			186.31 (SE, 8.34)	137.67 (SE, 8.57)	NR	

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				diagnosis in chart						
				Virta continuous remote care, no diagnosis in chart			154.73 (SE, 4.06)	131.19 (SE, 3.72)	NR	
				Virta continuous remote care, prescribed antidepressants			158.27 (SE, 6.03)	133.62 (SE, 5.58)	NR	
				Virta continuous remote care, not prescribed antidepressants			162.48 (SE, 4.75)	131.76 (SE, 4.37)	NR	
OTHER										
Grady 2016	Overall	Blood glucose	12 Weeks	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations	T1DM and T2DM, referred to hospitals for ongoing diabetes care	40	175 (NR)	161 (NR)	NR (<0.001)	NR
Grady 2022b	Completers	Blood glucose	90 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	13623	157.8 (NR)	139.6 (NR)	-18.2 (-18.9, -17.5); p<0.0005	NR
Grady 2023	ITT	Blood glucose	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	45132	158.8 (NR)	138.9 (NR)	-19.8 ; p<0.0005	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Grady 2022a	Completers	Blood glucose	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	119876	165.5 (NR)	145 (NR)	-19.5 ; p<.005	NR
Zhang 2020	ITT	Fasting blood glucose	12 Weeks	Connected BGM and LCCP education courses	T2DM, receiving insulin, with FBG records on the application for <1 week at week 1 and week 12	5011	7.79 (2.18)	7.46 (1.95)	NR; p<.001	NR
				Connected BGM and Lilly Connected Care Program education courses Group A (0-4 courses)	T2DM, receiving insulin, with FBG records on the application for <1 week at week 1 and week 12	1328	7.93 (2.26)	7.67 (2.08)	NR; p<.001	NR
				Connected BGM and Lilly Connected Care Program education courses Group B (5-29 courses)	T2DM, receiving insulin, with FBG records on the application for <1 week at week 1 and week 12	2258	7.76 (2.15)	7.44 (1.91)	NR; p<.001	NR
				Connected BGM and Lilly Connected Care Program education	T2DM, receiving insulin, with FBG records on the	1425	7.69 (2.15)	7.28 (1.87)	NR; p<.001	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				courses Group C (≥ 30 courses)	application for <1 week at week 1 and week 12					

Notes. BG = blood glucose, BGM = blood glucose monitor, BP = blood pressure, BPM = blood pressure monitor, CI = confidence interval, FBG = fasting blood glucose, HCP = healthcare provider, ITT = intent-to-treat, LCCP = Lily Connected Care Program, NBPM = non-blood pressure monitor, NA = not applicable, NR = not reported, SD = standard deviation, SMBG = self-monitoring of blood glucose,T1DM = Type 1 Diabetes Mellitus, T2DM = Type 2 Diabetes Mellitus. [1.] High-risk T2DM defined as having started with mean blood glucose >180 mg/dL. [2.] Data obtained from digitized figure. [3.] Data obtained from digitized figure. [4.] Data obtained from digitized figure. [5.] 12% decrease. [6.] n = 285 participants with T2DM. [7.] Mean difference between intervention and control group at baseline (95% CI): -8.5 mg/dL (-3.9, -13.0). [8.] n = 285 participants with T2DM. [9.] n = 285 participants with T2DM.[10.] n = 285 participants with T2DM. [11.] n = 15 participants with T2DM. [12.] Mean blood glucose for the full 12-month period; not measured at 12 months. [13.] 72.69 % (n = 3303) of participants had T2DM. [14.] Calculated.

Appendix G — Other Health Outcomes in Interventional and Observational Trials

Table 1: Other Health Outcomes in Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
LIVONGO										
Bollyky 2018	ITT	Weight	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >34	115	224 (52)	223 (SD 50)	−1.10 (SD 13.7); p=0.02	NR
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-intensity coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >38	67	244 (55)	238 (SD 53)	−6.4 (SD 9.7)	NR
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and	T2DM, HbA1c >7.5%, BMI >42	73	246 (49)	242 (SD 49)	−4.1 (SD 9.4); p=0.02	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				connected scale						
				Livongo for Diabetes Program and Restore Health Lifestyle Modification Program	T2DM, HbA1c >7.5%, BMI >46	330	236 (52)	233 (SD 51)	−3.50 (SD 11.6); p=0.02	NR
				Livongo for Diabetes Program and no Restore Health Lifestyle Modification Program and no connected scale	T2DM, HbA1c >7.5%, BMI >50	75	NR	NR	NA; p=0.02	NR
Bollyky 2017	ITT	Weight	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >28	73	NR	NR	-4.1	NR (0.01)
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and	T2DM, HbA1c >7.5%, BMI >30	115	NR	NR	−1.1	NR (0.01)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				connected scale						
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-intensity coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >26	67	NR	NR	−6.4 (NR)	reference
OMADA										
Wilson-Anumudu 2021	Completers	Blood pressure - Diastolic	4 Months	Omada for Diabetes	T2DM, elevated cardiovascular risk factors, Members of Achievement	114	84.7 (NR)	82.0 (NR)	–2.7 (–4.3, –1.0)	NA
		Blood pressure - Systolic				114	131.6 (NR)	132.5 (NR)	0.9 (–2.1, 3.9)	
		Total cholesterol				43	230.0 (NR)	190.5 (NR)	–39.5 (–51.3, –27.6)	
		Weight			T2DM, Members of Achievement	147	231.4 (NR)	228.3 (NR)	–3.0 (–5.8, –0.3)	
VIRTA										
Hallberg 2018	Completers with data	Weight	1 Year	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	184	115.42 (24.62)	101.17 (22.06)	−13.81 (0.63)	−12.7 (1.26)
				Usual care		69	106.79 (22.18)	106.82 (22.52)	−1.11 (1.06)	reference

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
		Blood pressure - Diastolic		Virta continuous remote care		187	81.59 (8.05)	78.0 (7.55)	−3.5 (0.7)	−3.10 (1.44)
				Usual care		67	81.1 (8.07)	80.99 (9.59)	0.39 (1.21)	Reference
		Blood pressure - Systolic		Virta continuous remote care		187	132.51 (14.54)	125.84 (13.22)	−6.52 (1.24)	−6.07 (2.55)
				Usual care		67	128.72 (12.65)	128.57 (11.82)	- 0.45 (2.15)	reference
		LDL		Virta continuous remote care		172	100.08 (32.56)	2.87 (0.98)	0.28 (0.07)	0.56 (0.15)
				Usual care		48	100.38 (37.93)	2.32 (0.8)	−0.28 (0.13)	Reference
		HDL		Virta continuous remote care		186	1.1 (0.36)	1.29 (0.41)	0.19 (0.02)	0.2 (0.05)
				Usual care		59	0.96 (0.29)	0.92 (0.32)	−0.02 (0.04)	reference
		Triglycerides		Virta continuous remote care		186	2.27 (1.73)	1.71 (1.64	−0.56 (0.18)	−0.92 (0.38)
				Usual care		59	3.36 (5.17)	3.7 (5.67)	−0.35 (0.32)	reference
		Total cholesterol		Virta continuous remote care		186	4.68 (1.03)	4.92 (1.18)	0.24 (0.08)	0.25 (0.18)
				Usual care		59	4.72 (1.26)	4.72 (1.62)	0.0 (0.16)	reference
Athinarayanan 2019	Completers with data	Weight	2 Years	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	257	115.97 (24.94)	102.62 (1.10)	-11.94 (0.96)	NR (0.43)
				Usual care		83	105.32 (21.81)	112.35 (1.90)	1.28 (1.63)	reference
		Blood pressure - Diastolic		Virta continuous remote care		192	81.7 (8.0)	78.7 (0.6)	-3.1 (SE 0.7)	NR (0.65)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Usual care		61	82.1 (8.8)	81.6 (1.1)	-0.6 (SE 1.3)	reference
		Blood pressure - Systolic		Virta continuous remote care		192	132.2 (14.2)	125.9 (1.9)	-5.8 (SE 1.2)	NR (0.83)
				Usual care		61	129.0 (13.6)	129.9 (1.8)	-0.5 (SE 2.1)	reference
		LDL		Virta continuous remote care		173	101.1 (33.0)	114.6 (2.8)	11.1 (2.8)	NR (0.08)
				Usual care		56	103.8 (38.3)	90.9 (5.1)	-9.1 (5.1)	reference
		HDL		Virta continuous remote care		184	42.5 (13.7)	49.5 (1.0)	7.8 (0.9)	NR (0.02)
				Usual care		62	38.3 (11.5)	42.5 (1.7)	3.8 (1.6)	reference
		Triglycerides		Virta continuous remote care		184	200.7 (153.5)	153.3 (10.4)	-43.9 (14.0)	NR (0.75)
				Usual care		62	283.7 (443.6)	209.5 (18.5)	-73.4 (55.9)	reference
		Total cholesterol		Virta continuous remote care		184	181.9 (40.3)	194.1 (3.5)	9.7 (SE 3.6)	NR (0.96)
				Usual care		62	186.5 (49.3)	180.9 (6.2)	-0.3 (SE 6.4)	reference
		Inflammatory marker high-sensitivity c-reactive protein		Virta continuous remote care		184	8.92 (16.35)	4.69 (0.40)	2.76 (0.34)	NR
				Usual care		62	9.08 (8.91)	8.38 (0.74)	-0.65 (0.65)	
Athinarayanan 2020	ITT	Total HDL		Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	194	22.9 (SE 0.3)	22.8 (SE 0.4)	− 0.1 (− 1.1 to 0.9)	− 2.5 (NR)
				Usual care		68	25.1 (SE 0.5)	25.3 (SE 0.5)	0.2 (− 1.2 to 1.6)	reference

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
		Total LDL		Virta continuous remote care		194	256.6 (SE 8.0)	288.9 (SE 8.4)	32.2 (9.6 to 54.9)	27.3 (NR)
				Usual care		68	255.1 (SE 11.9)	261.5 (SE 12.3)	6.4 (−26.5 to 39.4)	reference
Athinarayanan 2022	ITT	Weight	5 Years	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	122	116.4 (NR)	107.6 (NR)	-8.8 (-11.0, -6.6)	NA
		Fasting insulin					25.8 mIU/L (NR)	24.5 mIU/L (NR)	-7.9 mIU/L (-10.0, -5.8)	
Roberts 2022	ITT	HDL	5 years	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	169	43.0 (NR)	50.6 (NR)	17.7% (NR)	NA
		Total cholesterol					NR	NR	0	
		Triglycerides					202.3 mg/dL (NR)	165.1 mg/dL (NR)	-18.4 (<0.01)	
		Inflammatory marker high-sensitivity c-reactive protein					7.8 nmol/L (NR)	4.4 nmol/L (NR)	-43.6% (NR)	
OTHER										
Rama Chandran 2023	ITT	Weight	24 Weeks	Contour Plus ONE BGMS and Contour Diabetes application	T2DM, HbA1c 8.5% to < 12.5%, BMI ≤40 kg/m^2, on basal-plus or basal-bolus insulin therapy for ≥3 months	40	74 (15.2)	74.9 (15.2)	NR	NR (<.05)
Yang 2020	ITT	Weight	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	70.6 (12.8)	NR	-0.63 (-1.02, -0.24)	0.22 (0.77)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	67.2 (14.2)	NR	-0.88 (-2.65, 0.90)	reference
Holmen 2014	ITT	Weight	1 Year	OneTouch Ultra Easy BGM, Few Touch Application and health counseling	T2DM	50	89.7 (95% CI 82.45, 96.90)	88.9 (82.28, 95.67)	-0.7 (-2.29, 0.84)	NR
				OneTouch Ultra Easy BGM, Few Touch Application and no health counseling	T2DM	51	96.3 (95% CI 87.99, 104.64)	95.0 (87.54, 103.22)	-1.3 (-3.05, 0.43)	NR
				Usual care	T2DM	50	94.3 (95% CI 85.31, 103.22)	93.0 (84.44, 101.36)	-1.2 (-2.75, 0.54)	NR
Hsu 2016	ITT	Weight	3 Months	Glucose meter wirelessly connected to tablet computer, tablet computer and education	T2DM, new to basal insulin therapy	20	203.9 (NR)	NR	-0.48 (NR)	NR
				Usual care (face-to-face)	T2DM, new to basal insulin therapy	20	211.1 (NR)	NR	-0.87 (NR)	NR
Lee 2017	ITT	Weight	6 Months	Samsung Health Diary telemonitoring device	Telemonitoring: Frequent users	53	104.4 (15.9)	NR	2.5 (SE 18.2)	reference

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Samsung Health Diary telemonitoring device	T2DM, Kaiser Permanente members, infrequent users of Samsung Health Diary telemonitoring device	54	104.2 (20.8)	NR	0.3 (SE 10.6)	NR (0.445)
				Standard care	T2DM, Kaiser Permanente members	91	104.4 (20)	NR	-1.1 (SE 11.4)	NR
Yang 2020	ITT	Blood pressure - Diastolic	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	77.3 (9)	NR	-2.02 (-3.47, -0.57)	-2.77 (0.01)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	74.1 (10.3)	NR	0.68 (-0.94, 2.30)	reference
Lee 2020	Completers	Blood pressure - Diastolic	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	78.8 (95% CI 78.2, 79.4)	81.3 (80.8, 81.9)	2.54 (1.95, 3.13); p=0.189	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	78.7 (95% CI 78.1, 79.3)	81.8 (81.3, 82.2)	3.10 (2.46, 3.66)	NR
Greenwood 2015	ITT	Blood pressure - Diastolic	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	77.3 (9.1)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	76.6 (11)	NR	NR	NR
Wang 2017	ITT	Blood pressure - Diastolic	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 80.0 (IQR 75.0, 90.0)	Median 80.0 (IQR 75.0, 84.0)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 84.0 (IQR 80.0, 89.0)	Median 80.0 (IQR 78.0, 85.0)	NR	NR
Lee 2023	ITT	Blood pressure - Diastolic	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	-1.71 (-3.71, 0.29)	NR	NR
Yang 2020	ITT	Blood pressure - Systolic	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	126.3 (10.9)	NR	-0.20 (-2.30, 1.90)	-3.66 (0.01)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	124.5 (11.9)	NR	3.55 (1.30, 5.81)	reference
Lee 2020	Completers	Blood pressure - Systolic	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	134.8 (95% CI 134.3, 135.4)	135.1 (134.5, 135.8)	0.31 (-0.12, 0.74); p<0.05	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	134.8 (95% CI 134.3, 135.3)	135.7 (135.2, 136.2)	0.90 (0.49, 1.24)	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Greenwood 2015	ITT	Blood pressure - Systolic	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	126.9 (13.2)	NR	NR	NR
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	128.8 (13.9)	NR	NR	NR
Wang 2017	ITT	Blood pressure - Systolic	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 130.0 (IQR 120.0, 140.0)	Median 134.0 (IQR 125.0, 138.0)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 130.0 (IQR 120.0, 139.0)	Median 134.0 (IQR 127.0, 138.0)	NR	NR
Lee 2017	ITT	Blood pressure - Systolic	6 Months	Samsung Health Diary telemonitoring device	Frequent users of telehealth, T2DM, Kaiser Permanente members	53	129 (16.1)	NR	-2.5 (SE 17.9)	reference
				Samsung Health Diary telemonitoring device	Infrequent users of telehealth, T2DM, Kaiser Permanente members	54	126.8 (15.4)	NR	-0.3 (SE 16.1)	NR (0.505)
				Standard care	T2DM, Kaiser Permanente members	91	127.3 (17.1)	NR	-1.1 (SE 16.8)	NR
Lee 2023	ITT	Blood pressure - Systolic	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	-0.82 (-4.65, 3.00)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Rama Chandran 2023	ITT	BMI	24 Weeks	Contour Plus ONE BGMS and Contour Diabetes application	T2DM, HbA1c 8.5% to < 12.5%, BMI ≤40 kg/m^2, on basal-plus or basal-bolus insulin therapy for ≥3 months	40	27.8 (4.3)	28.2 (SD 4.3)	NR	NR (<0.05)
Yang 2020	ITT	BMI	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	26.3 (3.7)	NR	-0.26 (-0.40, -0.11)	0.09 (0.77)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	25.7 (3.9)	NR	-0.41 (-1.21, 0.40)	reference
Wang 2017	ITT	BMI	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 24.9 (IQR 22.8, 27.2)	Median 24.4 (IQR 22.6, 27.5)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 25.8 (IQR 24.0, 27.8)	Median 25.5 (IQR 23.7, 27.8)	NR	NR
Lee 2017	ITT	BMI	6 Months	Samsung Health Diary telemonitoring device	Frequent users of telehealth, T2DM, Kaiser Permanente members	53	9.2 (1.4)	NR	-0.1 (SE 2.4)	reference
				Samsung Health Diary telemonitoring device	Infrequent users of telehealth, T2DM, Kaiser	54	35.5 (6.5)	NR	0 (SE 1.5)	NR (0.796)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
					Permanente members					
				Standard care	T2DM, Kaiser Permanente members	91	9.2 (1.5)	NR	-0.02 (SE 1.2)	NR
Yang 2020	ITT	HDL	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	46.9 (11)	NR	2.44 (1.16, 3.73)	1.40 (.15)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	51.1 (13.5)	NR	0.24 (-1.35, 1.84)	reference
Lee 2020	Completers	HDL	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	1.25 (95% CI 1.22, 1.28)	1.21 (1.19, 1.23)	-0.04 (-0.06, -0.02); p=0.125	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	1.26 (95% CI 1.23, 1.28)	1.20 (1.18, 1.22)	-0.06 (-0.07, -0.04)	NR
Greenwood 2015	ITT	HDL	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	37.9 (12.2)	NR	NR	NR
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	39.8 (10.6)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Wang 2017	ITT	HDL	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	1.2 (0.3)	1.3 (SD 0.3)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	1.2 (0.5)	1.2 (SD 0.2)	NR	NR
Lee 2023	ITT	HDL	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	0.05 (-0.03, 0.13)	NR	NR
Yang 2020	ITT	LDL	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	89.6 (26.1)	NR	-2.99 (-6.03, 0.04)	-4.46 (.09)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	94.5 (26.6)	NR	-0.16 (-4.60, 4.28)	reference
Lee 2020	Completers	LDL	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	2.88 (95% CI 2.88, 2.87)	3.07 (3.03, 3.11)	0.19 (0.14, 0.24); p=0.758	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	2.85 (95% CI 2.82, 2.88)	3.03 (2.99, 3.07)	0.18 (0.14, 0.23)	NR
Greenwood 2015	ITT	LDL	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	92.8 (28.8)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	92.1 (29.4)	NR	NR	NR
Wang 2017	ITT	LDL	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	2.9 (0.8)	2.8 (SD 0.8)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	2.9 (0.7)	2.9 (SD 0.6)	NR	NR
Lee 2017	ITT	LDL	6 Months	Samsung Health Diary telemonitoring device	T2DM, Kaiser Permanente members, infrequent users of Samsung Health Diary telemonitoring device	54	91.7 (35.4)	NR	-9.1 (SE 32.8)	NR (0.576)
			6 Months	Standard care	T2DM, Kaiser Permanente members	91	88.4 (31.6)	NR	-5.4 (SE 28)	NR
				Samsung Health Diary telemonitoring device	Telemonitoring: Frequent users	53	90.6 (37.5)	NR	-12.8 (SE 35.5)	NR
Lee 2023	ITT	LDL	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	NR	-0.06 (-0.14, 0.02)	NR
Yang 2020	ITT	Total cholesterol	3 Months	Glucometer, mobile phone application,	T2DM, volunteers from	150	156.6 (29.8)	NR	-3.06 (-6.73, 0.60)	-3.81 (.23)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				100 testing strips and education	primary care clinics					
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	165 (30.5)	NR	-2.77 (-8.01, 2.48)	reference
Lee 2020	Completers	Total cholesterol	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	5.01 (95% CI 4.96, 5.05)	5.18 (5.14, 5.23)	0.17 (0.13, 0.22); p=0.999	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	4.98 (95% CI 4.94, 5.02)	5.14 (5.10, 5.19)	0.17 (0.13, 0.20)	NR
Greenwood 2015	ITT	Total cholesterol	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	161 (38)	NR	NR	NR
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	164.4 (35.6)	NR	NR	NR
Wang 2017	ITT	Total cholesterol	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	4.9 (1.0)	4.7 (SD 1.1)	NR	NR
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	5.1 (1.1)	4.9 (SD 0.8)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Lee 2023	ITT	Total cholesterol	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	NR	-0.09 (-0.21, 0.03)	NR
Yang 2020	ITT	Triglycerides	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	160.3 (106.1)	NR	-16.72 (-31.36, -2.08)	-8.27 (.38)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	165.3 (81.1)	NR	-16.88 (-30.14, -3.62)	reference
Lee 2020	Completers	Triglycerides	1 Year	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	1.91 (95% CI 1.89, 1.93)	1.82 (1.79, 1.86)	-0.08 (-0.11, -0.05); p=0.062	NR
				Usual care, personal BGM with no mobile application	T2DM, HbA1c 7.5%-11.0%	104	1.90 (95% CI 1.88, 1.92)	1.79 (1.77, 1.81)	-0.11 (-0.11, -0.10)	NR
Greenwood 2015	ITT	Triglycerides	NR	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	170.5 (112.3)	NR	NR	NR
				Intel Care Innovations Health Suite, OneTouch connected glucometer	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	175.5 (111.3)	NR	NR	NR
Wang 2017	ITT	Triglycerides	6 Months	Non-connected BGM and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 1.7 (IQR 1.1, 2.5)	Median 1.5 (IQR 1.1, 2.2)	NR; p<0.01	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Connected glucometer, medical team monitoring, and usual care	T2DM confirmed for >1 year, HbA1c 7%-10%	106	Median 2.0 (IQR 1.5, 3.2)	Median 1.8 (IQR 1.4, 2.6)	NR; p<0.01	NR
Lee 2023	ITT	Triglycerides	NR	mHealth interventions of 16 RCTs	T2DM, older adults	3257	NR	NR	-0.09 (-0.17, -0.02)	NR
Yang 2020	ITT	Waist circumference	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	89.5 (8.9)	NR	-0.93 (-1.46, -0.40)	Compared to usual care 0.30 (.52)
				Usual care (face-to-face)	T2DM, volunteers from primary care clinics	97	87 (9.8)	NR	-0.88 (-1.61, -0.16)	reference

Notes. BGM = blood glucose monitor. BGMS = blood glucose monitoring system. BMI = body mass index. CI = confidence interval. HbA1c = glycated hemoglobin. HDL = high density lipoprotein. IQR = interquartile range. ITT = intent-to-treat. LDL = low density lipoprotein. mHealth = mobile health. NA = not applicable. NR = not reported. RCT = randomized controlled trial. SD = standard deviation. SE = standard error. T2DM = Type 2 Diabetes Mellitus.

Table 2: Other Health Outcomes in Observational Studies

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
VIRTA										
Adams 2021	Completers	Level 1 hypoglycemia events per	1 Year	Virta continuous remote care	T2DM, HbA1c	201	NR	149 (NR)	NR	NA

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		100 person-years			>7.5%, ≥65 years old					
		Level 2 hypoglycemia events per 100 person-years					NR	28 (NR)	NR	
		Level 3 hypoglycemia events per 100 person-years					NR	0 (NR)	NR	
Adams 2022	Completers	Weight	2 Years	Virta continuous remote care, HbA1c meets clinical cut-off	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	263.07 (SE, 9.15)	231.09 (SE, 9.45)	NR	NA
				Virta continuous remote care, HbA1c does not meet clinical cut-off			255.58 (SE, 3.71)	225.80 (SE, 3.55)	NR	NA
				Virta continuous remote care, diagnosis in chart			258.54 (SE, 7.83)	232.75 (SE, 7.54)	NR	NA
				Virta continuous remote care, no diagnosis in chart			256.26 (SE, 3.82)	225.09 (SE, 3.64)	NR	NA
				Virta continuous remote care, prescribed antidepressants			261.17 (SE, 5.62)	231.49 (SE, 5.50)	NR	NA

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				Virta continuous remote care, not prescribed antidepressants			254.02 (SE, 4.37)	223.64 (SE, 4.06)	NR	NA
		Inflammatory marker c-reactive protein	10 Weeks	Virta continuous remote care		262	7.6 nmol L^{-1} (6.71)	NR	NR[1]	NA
McKenzie 2017	Completers	BMI	11 Weeks	Virta continuous remote care, Abbott Precision Xtra BGM, connected scale	T2DM, HbA1c ≥6.5% or <6.5% and taking at least one hypoglycemic medication	238	40.8 (8.9)	37.9 (8.5)	−2.9 (1.2)	NA
		Weight				238	117 (25.7)	109 (24.3)	−9 (4.5)	
		Blood pressure - Diastolic				236	82 (10)	78 (9)	−4 (12)	
		Blood pressure - Systolic				236	132 (17)	125 (15)	−7 (20)	
		Triglycerides				238	185 (129)	145 (84)	−41 (112)	
		Total cholesterol				238	177 (41)	172 (41)	−6 (33)	
McKenzie 2023a	ITT	Weight	2 Years		Unsustained nutritional ketosis	NR	113.6 (2.0)	112.7 (3.7)	NR	NR
		Triglycerides					186.5 (48.9)	173.2 (43.4)		
		HDL					42.0 (2.5)	44.7 (3.2)		
		Weight			Low nutritional ketosis	NR	114.5 (0.9)	105.9 (1.7)		
		Triglycerides					193.6 (23.5)	196.3 (20.0)		
		HDL					41.2 (1.2)	46.8 (1.5)		
		Weight			Moderately declining	NR	115.7 (1.0)	100.3 (1.7)		

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		Triglycerides			nutritional ketosis		194.3 (24.5)	143.9 (20.5)		
		HDL					42.4 (1.3)	51.6 (1.5)		
		Weight			Sustained nutritional ketosis	NR	116.4 (2.4)	94.5 (3.7)		
		Triglycerides					280.3 (57.4)	119.3 (45.5)		
		HDL					44.3 (3.0)	59.0 (3.3)		
		Weight			Usual care	NR	110.4 (1.2)	112.0 (1.9)		
		Triglycerides					267.4 (30.0)	232.1 (24.2)		
		HDL					38.7 (1.6)	42.2 (1.8)		
OTHER										
Bode 2018	ITT	BMI	1 Year	Biotel BGM and Glytec CDSS	Primarily T2DM requiring insulin[2]	46	31.2 (NR)	33 (NR)	NR	NR
		Weight					93.8 (52.7)	96.3 (53.0)	2.5	NR

Notes. BGM = blood glucose monitor. BMI = body mass index. CDSS = clinical decision support software. ITT = intent-to-treat. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus.
[1] Change in c-reactive protein was not significant at 10 weeks (p = 0.05), [2] n = 35 (76%) had T2DM.

Table 3: Proportion of Blood Glucose Readings In Range (70-180 mg/dL unless specified otherwise) In Prospective Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline % (SD)	Follow-up % (SD)	Change from Baseline % (SD)	Between Group Difference Mean (P-value)
Rama Chandran 2023	ITT	Proportion in range	24 Weeks	Contour Plus ONE BGMS and Contour Diabetes application	T2DM, HbA1c 8.5% to < 12.5%, BMI ≤40 kg/m^2, on basal-plus or basal-bolus insulin therapy for ≥3 months	40	58.8 (22)	67.1 (21.6)	NR (<.05)	NA
		Proportion above range	24 Weeks			40	39 (22.7)	31.3 (21.9)	NR (<.05)	NA
		Proportion below range	24 Weeks			40	Median 0 (IQR 0, 2.6)	Median 1.3 (IQR 0, 2.3)	NR (<.05)	NA

Notes. BGMS = blood glucose monitoring system. BMI = body mass index. HbA1c = glycated hemoglobin. IQR = Interquartile range. ITT = intent-to-treat. NA = not applicable. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus.

Table 4: Proportion of Blood Glucose Readings in Range (70-180 mg/dL unless specified otherwise) In Observational Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
GLOOKO										
Sheng 2021	ITT	Proportion in range	1 Year	Glooko application on	T2DM	424	60.7 (NR)	NR	22%; p<0.05[2]	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
			6 Months	compatible smartphones and SMBG meters and coaching as needed				NR	NR; p<0.05	NR
			3 Months					NR	NR; p<0.05	NR
Sheng 2019	ITT	Proportion in range	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	Diabetes	213	47.5 (NR)	68.2 (NR)	NR	NR
Offringa 2018	NR	Proportion in range	2 Months	Usual care and uploaded data in HCP's office, and have accompanying mobile application	T2DM and T1DM	899[3]	63.6 (NR)	67.1 (NR)	3.5; p<0.001	NR
			2 Months	Usual care and uploaded data in HCP's office, but did not have accompanying mobile application	T2DM and T1DM	900[4]	61.2 (NR)	62.1 (NR)	0.9; p<0.19	NR
Sheng 2021	ITT	Proportion above range	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	14.1 (NR)[12]	8.40%	NR; p<0.05	NR
			6 Months				14.1 (NR)[13]	8.10%	NR; p<0.05	NR
			3 Months				14.1 (NR)[14]	7.60%	NR; p<0.05	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
Sheng 2019	ITT	Proportion above range	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	Diabetes	213	23.6 (NR)	7.9 (NR)	NR	NR
Sheng 2021	ITT	Proportion below range	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	0.9 (NR)[28]	0.80%	NR; pn.s	NR
			6 Months	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	0.9 (NR)[28]	1.20%	NR; pn.s	NR
			3 Months	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	0.9 (NR)[28]	1.00%	NR; pn.s	NR
LIVONGO										
Bollyky 2019	ITT	Proportion in range	1 Year	Livongo for Diabetes Program	T2DM, no insulin use	27	89.6 (SD 13.7)[1]	86.1 (SD 22.2)	NR	NR
					T2DM, insulin use	21	65.9 (SD 30.8)[2]	72.8 (SD 29.5)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
Downing 2016	NR	Proportion out of range	1 Year	Livongo Health digital BGM	Livongo Health members	3,355	NR	NR	NR	NR[1]
Downing 2017	ITT	Proportion below range	1 Year[16]	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[17]	4,544	NR	6.10%	NR	Compared to usual care -18.4 (NR)[18]
			9 Months	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[19]	4,544	NR	% NR (-10.5, -1.8)	NR	Compared to usual care -29 (NR)[20]
			NR	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[21]	4,544	NR	NR	NR	Compared to usual care -18.4 (NR) [22]
Downing 2017	ITT	Proportion above range	3 Months	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[6]	4,544	NR	NR (-19.5, -13.1)	NR	Compared to usual care -21 (NR)[7]
			NR	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[8]	4,544	NR	NR	NR	Compared to usual care -16.4 (NR)[9]

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
			1 Year[10]	Livongo Health connected BGM	Livongo for Diabetes Program enrolled members with ≥2 BG readings[11]	4,544	NR	33.4 (NR)	NR	NR
OTHER										
Grady 2016	ITT	Proportion in range	12 Weeks	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations	T2DM, referred to hospitals for ongoing diabetes care	17	66 (NR)	75 (NR)	NR (0.001)	NR
Katz 2020	ITT	Proportion in range	24 Weeks	OneTouch Verio Flex BGM, OneTouch Reveal mobile application, and health counseling	T2DM, HbA1c ≥8.0%	67	NR	NR	14.41%; p<0.05	NR
Grady 2022b	Completers	Proportion in range	90 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	13,623	72.4 (NR)	83.6 (NR)	11.2 (95% CI 10.8, 11.6); p<0.0005	NR
Grady 2023	ITT	Proportion in range	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	45,132	72.8 (NR)	84.8 (NR)	12.0; p<0.0005	NR
Grady 2022a	Completers	Proportion in range	180 Days	OneTouch Verio Flex BGM,	T2DM	119,876	67.5 (NR)	80.1 (NR)	11.9; p<.005	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				OneTouch Reveal web application						
Hershcovitz 2022	ITT	Proportion in range	1 Year	NA	High-risk T2DM, comorbid depression and stress[5]	491	69.4 (NR)	46.9 (NR)	NR (<0.001)	NR
Grady 2022b	Completers	Proportion above range	90 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	13,623	26.4 (NR)	15.1 (NR)	-11.3 (95% CI -11.8, -10.9); p<0.0005	NR
Grady 2023	ITT	Proportion above range	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	45,132	26.2 (NR)	14.1 (NR)	-12.2 ; p<0.0005	NR
Grady 2022a	Completers	Proportion above range	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	119,876	30.9 (NR)	18.3 (NR)	-12.0 ; p<.005	NR
Grady 2016	ITT	Proportion above range[15]	12 Weeks	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations	T2DM, referred to hospitals for ongoing diabetes care	17	33%	24%	NR (0.002)	NR
Bode 2018	ITT	Proportion below range[23]	1 Year	Biotel BGM and Glytec CDSS	Primarily T2DM requiring insulin[24]	46	NR	33 (NR)[25]	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
			1 Year	Biotel BGM and Glytec CDSS	Primarily T2DM requiring insulin[26]	46	NR	5 (NR)[27]	NR	NR
Grady 2022b	Completers	Proportion below range	90 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	13,623	1.2 (NR)	1.3 (NR)	0.1 (95% CI 0.06, 0.21); p<0.0005	NR
Grady 2023	ITT	Proportion below range	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	45,132	1 (NR)	1.1 (NR)	0.1 ; p<0.0005	NR
Grady 2022a	Completers	Proportion below range	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	119,876	1.5 (NR)	1.6 (NR)	0.1 ; p<.005	NR

Notes. BG = blood glucose. BGM = blood glucose monitor. BGMS = blood glucose monitoring system. BMI = body mass index. CDSS - clinical decision support software. CI = confidence interval. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NA = not applicable. NR = not reported. SD = standard deviation. SMBG = self-monitoring of blood glucose. T1DM = Type 1 Diabetes Mellitus. T2DM = Type 2 Diabetes Mellitus.

[1.] Per abstract, statistically significant difference in every month compared with first month (baseline).[2.] 13 percentage points. [3.] n = 285 participants with T2DM. [4.] n = 15 participants with T2DM. [5.] High-risk T2DM defined as having started with mean blood glucose >180 mg/dL. [6.] 72.69 % (n = 3303) of participants had T2DM. [7.] 21% lower at the 3-month timepoint.

[8.] 72.69 % (n = 3303) of participants had T2DM. [9.] 16.4% lower. [10] For the full 12-month period; not measured at 12 months. [11.] 72.69 % (n = 3303) of participants had T2DM. [12.] Proportion >250 mg/dL. [13.] Proportion >250 mg/dL. [14.] Proportion >250 mg/dL. [15] High blood glucose refers to 3 readings occurring outside of the default range (70-180 mg/dL) in the same 3-hour timeframe over the preceding 5 days. [16] For the full 12-month period; not measured at 12 months. [17] 72.69 % (n = 3303) of participants had T2DM. [18] 18.4% lower.

[19] 72.69 % (n = 3303) of participants had T2DM. [20] 29% lower at the 9-month timepoint. [21]. 72.69 % (n = 3303) of participants had T2DM. [22]. 18.4% lower. [23]. "Hypoglycemia" Defined as < 54mg/dL. [24]. n = 35 (76%) had T2DM. [25] "Hypoglycemia" Defined as < 54mg/dL. [26] n = 35 (76%) had T2DM. [27] "Severe Hypoglycemia" Defined as < 40mg/dL. [28] Proportion >250 mg/dL.

Table 5: Medication Use in Prospective Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
VIRTA										
Hallberg 2018	Completers	Any diabetes medication, excluding metformin	Baseline	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	55.50 (3.37)	NR	NR	NR
				Usual care		87	68.49 (5.44)	NR	NR	NR
		Use of Sulfonylurea		Virta continuous remote care		262	24.31 (2.91)	NR	NR	NR
				Usual care		87	23.29 (4.95)	NR	NR	NR
		Use of Insulin		Virta continuous remote care		262	28.44 (3.06)	NR	NR	NR
				Usual care		87	50.0 (5.66)	NR	NR	NR
		Use of Thiazolidinedione		Virta continuous remote care		262	1.83 (0.91)	NR	NR	NR
				Usual care		87	1.37 (1.36)	NR	NR	NR
		Use of SGLT-2		Virta continuous remote care		262	10.55 (2.08)	NR	NR	NR
				Usual care		87	15.07 (4.19)	NR	NR	NR
		Use of DPP-4		Virta continuous remote care		262	10.09 (2.04)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Usual care		87	8.22 (3.21)	NR	NR	NR
		Use of GLP-1		Virta continuous remote care		262	12.84 (2.27)	NR	NR	NR
				Usual care		87	16.44 (4.34)	NR	NR	NR
		Use of Metformin		Virta continuous remote care		262	71.56 (3.06)	NR	NR	NR
				Usual care		87	61.64 (5.69)	NR	NR	NR
Athinarayanan 2019	Completers	Any diabetes medication, excluding metformin	1 Year	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	194	55.67 (3.58)	NR	NR	NR
				Usual care		68	66.18 (5.78)	NR	NR	NR
		Use of Sulfonylurea		Virta continuous remote care		194	25.77 (3.15)	NR	NR	NR
				Usual care		68	22.06 (5.07)	NR	NR	NR
		Use of Insulin		Virta continuous remote care		194	29.38 (3.28)	NR	NR	NR
				Usual care		68	48.53 (6.11)	NR	NR	NR
		Use of Thiazolidinedione		Virta continuous remote care		194	1.55 (0.89)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Usual care		68	1.47 (1.47)	NR	NR	NR
		Use of SGLT-2		Virta continuous remote care		194	9.79 (2.14)	NR	NR	NR
				Usual care		68	14.71 (4.33)	NR	NR	NR
		Use of DPP-4		Virta continuous remote care		194	9.28 (2.09)	NR	NR	NR
				Usual care		68	5.88 (2.87)	NR	NR	NR
		Use of GLP-1		Virta continuous remote care		194	13.40 (2.45)	NR	NR	NR
				Usual care		68	19.12 (4.80)	NR	NR	NR
		Use of Metformin		Virta continuous remote care		194	71.65 (3.24)	NR	NR	NR
				Usual care		68	60.29 (5.98)	NR	NR	NR
Athinarayanan 2022	ITT	Total number of diabetes medications deprescribed, N (%)	5 Years	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m2	122	NR	NR	NR (-46%)	NR
		Total number of diabetes medications					NR	NR	NR (-59.9%)	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
		deprescribed, excluding metformin N (%)								
		Percent of patients prescribed diabetes medication					85.20%	71.30%	NR (-13.9%)	0.01
OTHER										
Rama Chandran 2023	ITT	Total daily dose of insulin	24 Weeks	Contour Plus ONE BGMS and Contour Diabetes application	T2DM, HbA1c 8.5% to < 12.5%, BMI ≤40 kg/m^2, on basal-plus or basal-bolus insulin therapy for ≥3 months	40	0.80 (95% CI 0.65, 0.97)	0.84 (0.67, 1.1)	NR	NR (<0.05)
		Total daily dose of basal insulin				40	0.41 (95% CI 0.35, 0.51)	0.43 (0.33, 0.56)	NR	NR (<0.05)
		Total daily dose of bolus insulin				40	0.39 (95% CI 0.28, 0.50)	0.40 (0.30, 0.53)	NR	NR (<0.05)
Yang 2020	ITT	MMAS-6 Total	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	4.4 (1.3)	NR	0.52 (0.31, 0.74)	0.31 (0.02)
				Usual care (face-to-face)		97	4.7 (1.1)	NR	0.06 (-0.15, 0.28)	reference
		MMAS-6 Motivation	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	2 (1)	NR	0.39 (0.23, 0.54)	0.23 (0.02)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (95% CI)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
				Usual care (face-to-face)		97	2.3 (0.9)	NR	0.04 (-0.11, 0.20)	reference
		MMAS-6 Knowledge	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	2.4 (0.7)	NR	0.14 (0.00, 0.28)	0.12 (.12)
				Usual care (face-to-face)		97	2.3 (0.6)	NR	0.02 (-0.13, 0.17)	reference

Notes. BGMS = blood glucose monitoring system. BMI = body mass index. CI = confidence interval. HbA1c = glycated hemoglobin. ITT = intent-to-treat. MMAS = Morisky Medication Adherence Scale. NA = not applicable. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus.

Table 6: Medication Use in Prospective Observational Studies

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
VIRTA										
Adams 2022	Completers	Antidepressant prescribed, N (%)	Baseline	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	99 (37.8)	NR	NR	NR
		Insulin prescribed, N (%)					78 (29.8)	NR	NR	NR
		Insulin dosage (among those prescribed)					90.6 (69.2)	NR	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		Number of diabetes-specific medications prescribed					1.7 (1.1)	NR	NR	NR
McKenzie 2017	Completers	Increased medication prescription or dose	11 Weeks	Virta continuous remote care, Abbott Precision Xtra BGM, connected scale	T2DM, HbA1c ≥6.5% or <6.5% and taking at least one hypoglycemic medication	13	8.5 (2.0)	7.4 (1.4)	NR	NA
		Decreased medication prescription or dose				112	8 (1.6)	6.8 (1.1)		
		Complete elimination of medications				21	6.7 (0.9)	6.1 (0.5)		
		No medications prescribed				28	7.3 (1.3)	6.3 (1.1)		
		No change in medication prescription or dose				88	7.2 (1.2)	6.5 (1.0)		
Adams 2021	ITT	Proportion of medications deprescribed	1 Year	Virta continuous remote care	T2DM, HbA1c >7.5%, ≥65 years old	231	NR	61%	NR	NA
		Proportion of insulin medications deprescribed					NR	45%		
		Proportion of sulfonylureas medications deprescribed					NR	85%		

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		Average dosage of insulin			T2DM, HbA1c >7.5%, ≥65 years old; still prescribed insulin at 1 year	38	98.5 (66.0) IU/day	36.2 (29.2) IU/day	NR	NA
		Average number of diabetes prescriptions per patient					1.2 (0.9)	0.5 (0.7)		
McKenzie 2023a	ITT	Medication use	2 Years	Unsustained nutritional ketosis	Virta continuous remote care	262	NR	NR	NR	NA
				Low nutritional ketosis			NR	NR	NR	
				Moderately declining nutritional ketosis			NR	NR	NR	
				Sustained nutritional ketosis			NR	NR	NR	
				Usual care		87	NR	NR	NR	
McKenzie 2023b	Completers	Insulin medication class	1 Year	Area deprivation Index Q1	T2DM, receiving care at nationwide telemedicine clinic, utilizing carbohydrate nutritional approach and continuous remote care model	19955	18 (NR)	10	NR	NA
		Sulfonylureas medication class					18 (NR)	NR	NR	
		Insulin medication class		Area deprivation Index Q2			21 (NR)	NR	NR	
		Sulfonylureas medication class					19 (NR)	NR	NR	
		Insulin medication class		Area deprivation Index Q3			NR	NR	NR	

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		Sulfonylureas medication class					NR	NR	NR	
		Insulin medication class		Area deprivation Index Q4			NR	NR	NR	
		Sulfonylureas medication class					NR	NR	NR	
		Insulin medication class		Area deprivation Index Q5			25 (NR)	14 (NR)	NR	
		Sulfonylureas medication class					23 (NR)	NR	NR	
OMADA										
Wilson-Anumudu 2021	Completers	Adherent to current medications	4 Months	Omada for Diabetes	T2DM, Members of Achievement[1]	158	20.3 (NR)	31.0 (NR)	10.7 (NR)	NA
OTHER										
Welch 2015	ITT	Medication adherence	3 Months	BGM, automatic BP cuff, and MedMinder pillbox	T2DM, HbA1c 7%-11%, age >50 years	30	NR	80 (NR)	NR	NR

Notes. BGM = blood glucose monitor. BP = blood pressure. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus.

[1.] Achievement is an online community and mobile-based community in the United States where members can connect their activity trackers, and fitness and health apps to the platform and, by logging activities, accumulate points that are redeemable for monetary rewards. Additionally, members self-report on various health conditions and are invited to participate in remote research opportunities as relevant studies become available. In this study, recruitment was targeted to members who had self-reported T2DM.

Appendix H — User Experience Outcomes

Table 1: Self-Efficacy, Knowledge, Behavior In Prospective Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (95% CI)	Follow-up Mean (95% CI)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
Lee 2020	Completers	Diabetes Knowledge Test	24 Weeks	MyGlucoHealth connected BGM, usual care, lifestyle coaching	T2DM, HbA1c 7.5%-11.0%	104	40.29 (39.57, 41.01)	52.45 (51.93, 52.96)	12.16 (95% CI 4.97)	NR
				Usual care, personal BGM with no mobile application		104	41.49 (40.79, 42.19)	52.77 (52.32, 53.21)	11.27 (95% CI 4.90)	NR
Greenwood 2015	ITT	Diabetes Empowerment Scale-Short Form	3 Months	OneTouch Ultra 2 BGM and Care Innovations Guide	T2DM, HbA1c 7.5%-10.9%, no insulin use	45	3.8 (3.2, 4.4)	4.1 (2.8, 5.3)	NR	NR
		Diabetes Empowerment Scale-Short Form	3 Months	Intel Care Innovations Health Suite, OneTouch connected glucometer		45	3.5 (3.3, 3.8)	3.8 (3.2, 3.3)	NR	NR
		Diabetes Knowledge Test	3 Months	OneTouch Ultra 2 BGM and Care Innovations Guide		45	12.4 (10.9, 13.9)	12.1 (9.1, 14.0)	NR	NR
		Diabetes Knowledge Test	3 Months	Intel Care Innovations Health Suite, OneTouch connected glucometer		45	12.0 (11.3, 12.6)	11.4 (10.1, 12.6)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (95% CI)	Follow-up Mean (95% CI)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
Odom 2019	ITT	Diabetes Knowledge Test	6 Months	Connected glucose meter with online portal	T1DM or T2DM, HbA1C ≥8%, insured	50[1]	35.1 (NR)	45.8 (NR)	NR	NR
		Diabetes Knowledge Test	1 Year			50[1]	35.1 (NR)	49.2 (NR)	NR	NR
		Diabetes self-management behaviors	6 Months			50[1]	22.9 (NR)	32 (NR)	NR	NR
		Diabetes self-management behaviors	1 Year			50[1]	22.9 (NR)	34.6 (NR)	NR	NR
		Diabetes self-monitoring behaviors	6 Months			50[1]	3.1 (NR)	4.1 (NR)	NR	NR
		Diabetes self-monitoring behaviors	1 Year			50[1]	3.1 (NR)	4 (NR)	NR	NR
Mora 2017	ITT	Diabetes Distress Scale	6 Months	Accu-Chek Connected BGM, mobile application, and online data management web portal	T2DM, insulin use	77	2.0 (SD 0.8)	1.6 (SD 0.6)	-0.4 (SD 0.5)	NR
Lee 2017	ITT	Self-Efficacy Scale	6 Months	Samsung Health Diary telemonitoring device	Frequent users of telehealth, T2DM, Kaiser Permanente members	53	161.6 (SD 27.6)	NR	7.7 (22.1)	Reference
		Self-Efficacy Scale	6 Months	Samsung Health Diary telemonitoring device	Infrequent users of telehealth, T2DM, Kaiser	54	142 (SD 30)	NR	10.6 (35.1)	NR (0.611)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (95% CI)	Follow-up Mean (95% CI)	Change from Baseline Mean (SE)	Between Group Difference Mean (P-value)
					Permanente members					
		Self-Efficacy Scale	6 Months	Standard care	T2DM, Kaiser Permanente members	91	144.8 (SD 34.3)	NR	14.7 (33.1)	NR

Notes. BGM = blood glucose monito., CI = confidence interval. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NR = not reported. SD = standard deviation. SE = standard error. T1DM = Type 1 Diabetes Mellitus. T2DM = Type 2 Diabetes Mellitus. [1] 94% of participants had T2DM.

Table 2: Self-Efficacy, Knowledge, Behavior In Observational Studies

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
LIVONGO										
Dzubur 2021	ITT	Stress[1]	1 Year	Livongo for Diabetes Program	Livongo for Diabetes enrolled members[2]	470	46% (23, 75)	NR	4.25 (<0.0001)[3]	NR
					Livongo for Diabetes enrolled members[2]	470	14% (4, 26)	NR	2.72 (<0.01)[3]	NR
OMADA										
Wilson-Anumudu 2021	Completers	Mean DDS score	4 Months	Omada for Diabetes	T2DM, Members of Achievement	167	2.6 (NR)	2.3 (NR)	-0.3 (-0.5, -0.1)	NA
		Emotional burden[4]					2.7 (NR)	2.4 (NR)	-0.3 (-0.5, -0.1)	
		Physician-related[4]					2.1 (NR)	1.8 (NR)	-0.3 (-0.4, -0.1)	
		Regimen-related[4]					3.0 (NR)	2.6 (NR)	-0.4 (-0.6, -0.3)	

		Interpersonal[4]					2.7	2.4	-0.3 (-0.5, -0.1)	

Notes. CI = confidence interval. DDS-SF = Diabetes Distress Scale. ITT = intent-to-treat. NR = not reported. OR = odds ratio. T2DM = Type 2 Diabetes Mellitus.
[1.] Each additional point on the DDS-SF scale was associated with a 46% increased likelihood of any stress tag at that time point. [2.] 91% of participants reported having T2DM. [3.] Z score. When stress was endorsed, each additional point on the DDS-SF scale was associated with a 14% increase in the proportion of stress tags for that period. 4. Participants completed an online survey of the DDS, which is a 17-item scale of different dimensions of distress and burden related to diabetes. A total or subscale score greater than 2.0 (moderate distress) is considered clinically meaningful; average scores below 2.0 reflect little or no distress, between 2.0 and 2.9 reflect moderate distress, and 3.0 or greater reflect high distress.

Table 3: Patterns of Use In Prospective Interventional Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
LIVONGO										
Bollyky 2018	ITT	Blood glucose checks per day	12 Weeks	Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >35	115	0.99 (0.85)	0.78 (0.82)	−0.21 (0.85); p=0.26	NR
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-intensity coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >39	67	1.07 (1.09)	0.8 (0.81)	−0.28 (0.85); p=0.26	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	T2DM, HbA1c >7.5%, BMI >43	73	0.95 (1.09)	0.92 (1.06)	−0.03 (0.8); p=0.26	NR
				Livongo for Diabetes Program and Restore Health Lifestyle Modification Program	T2DM, HbA1c >7.5%, BMI >47	330	1.05 (1)	0.86 (0.9)	−0.19 (0.82); p=0.26	NR
				Livongo for Diabetes Program and no Restore Health Lifestyle Modification Program and no connected scale	T2DM, HbA1c >7.5%, BMI >51	75	1.2 (1.01)	0.97 (0.94)	−0.25 (0.74); p=0.26	NR
VIRTA										
Athinarayanan 2019	Completers	At least one serum beta hydroxybutyrate	2 Years	Virta continuous remote care	T2DM, HbA1c >6.5%,	161	NA	61.5%	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
		reading of 0.5 $mmol^{-1}$ or more by handheld measure between 1 and 2 years		Usual care	BMI>25 kg/m^2		NA	NR	NR	
Hallberg 2018	ITT	Serum beta hydroxybutyrate	1 Year	Virta continuous remote care	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	262	0.54 (0.01) mmol L^{-1}	0.30 (0.02) mmol L^{-1}	NR	NR
				Usual care			NA	NR	NR	
		At least one serum beta hydroxybutyrate reading of 0.5 $mmol^{-1}$ or more by handheld measure		Virta continuous remote care			NA	96%	NR	NR
OTHER										
Montero 2021	ITT	Blood glucose checks per person	NR[1]	Biotel BGM System, Biotel BGM System dashboard, and Diabetes Boot Camp (education and telemedicine)	T2DM, HbA1c ≥9%	366	NR	134 (66)	NR	NR
		Blood glucose checks per day	NR[1]	Biotel BGM System, Biotel BGM System dashboard, and Diabetes Boot Camp (education			NR	1.49 (0.73)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				and telemedicine)						

Notes. BGM = blood glucose monitor. BMI = body mass index. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus. 1. Average per participant during the 90 days of the intervention.

Table 4: Patterns of Use In Observational Studies

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
GLOOKO										
Sheng 2021	ITT	Blood glucose checks per day	1 Year	Glooko application on compatible smartphones and SMBG meters and coaching as needed	T2DM	424	2.1 (NR)	1.7 (NR)	NR	NR (0.05)[1]
DARIO										
Gershoni 2023	ITT	Average frequency of measurements	1 Year	T2DM, high risk, hyperglycemia, White persons	51	NR	NA	NR	10.6 (2.3)	1.08 (0.3)
				T2DM, high risk, hyperglycemia, People from racial and ethnic minority group	53	NR	NA	NR	10.42 (2.46)	
Hershcovitz 2021	ITT	Percentage of readings >180 mg/dL	1 Year	Dario digital therapeutics solution	T2DM, high risk, hyperglycemia	11,101	71.3%	44.4%	37.7%	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
		Percentage of readings 70-180 mg/dL					28.4%	54.8%	26.4%	
Hershcovitz 2023	ITT	High readings ratio	1 Year	Dario digital therapeutics solution	T2DM, high risk, hyperglycemia	1,239	NR	NR	-39% (NR)	NA
					Dario digital therapeutics solution, users who completed at least one engagement type	433	NR	NR	-45% (NR)	NA
OMADA										
Wilson-Anumudu 2021	Completers	Average times per week using BGM	4 Months	Omada for Diabetes	T2DM, Members of Achievement	158	NA	7.4 (NR)	NA	NA
		Average times interacting with CDCES					NA	1.6 (NR)	NA	NA
		Average times per week interacting with peer group					NA	0.9 (NR)	NA	NA
		Average number of lessons completed per week					NA	0.8 (NR)	NA	NA
		Average times per week tracking physical activity					NA	5.3 (NR)	NA	NA

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
		Average times per week tracking meals					NA	10.2 (NR)	NA	NA
OTHER										
Fisher 2023	Overall	Duration of use of BGM and application ≥16 weeks	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users and non-insulin-users who linked their meter with the Application during invitation period	461	NR	273 (59.2%) [2]	NR	NR (0.83)
	ITT	Duration of use of BGM and application ≥16 weeks	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users who linked their meter with the Application during invitation period	108	NR	63 (58.3%)	NR	NR
					T2DM non-insulin-users who linked their meter with the Application during invitation period	353	NR	210 (59.5%)	NR	NR
	Overall	Frequency of use of BGM	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users and non-insulin-users who linked their meter with the Application	461	NR	99.4 (96.6)	NR	NR (<0.001)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
					during invitation period					
	ITT	Frequency of use of BGM	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users who linked their meter with the Application during invitation period	108	NR	131.4 (119.2)	NR	NR
					T2DM non-insulin-users who linked their meter with the Application during invitation period	353	NR	88.0 (84.2)	NR	NR
	Overall	Intensity of use of BGM	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users and non-insulin-users who linked their meter with the Application during invitation period	461	NR	7.7 (6.3)	NR	NR (<0.001)
	ITT	Intensity of use of BGM	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users who linked their meter with the Application during invitation period	108	NR	10.5 (8.4)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
					T2DM non-insulin-users who linked their meter with the Application during invitation period	353	NR	7.0 (5.9)	NR	NR
	Overall	Intensity of use of application	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users and non-insulin-users who linked their meter with the Application during invitation period	461	NR	2.1 (2.1)	NR	NR (0.002)
	ITT	Intensity of use of application	16 Weeks	Contour Next ONE BGMS and Contour Diabetes application	T2DM insulin-users who linked their meter with the Application during invitation period	108	NR	2.8 (2.8)	NR	NR
					T2DM non-insulin-users who linked their meter with the Application during invitation period	353	NR	2.1 (2.1)	NR	NR

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (95% CI)	Between Group Difference Mean (P-value)
Welch 2015	ITT	Retention rate	3 Months	BGM, automatic BP cuff, and MedMinder pillbox	T2DM, HbA1c 7%-11%, age >50 years	30	NR	29 (96.6%)	NR	NR
Grady 2022b	Completers	Blood glucose checks per day	90 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	13623	2.7 (NR)	2 (NR)	-0.67 (-0.69, -0.64); p<0.0005	NR
Grady 2023	ITT	Blood glucose checks per day	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	45132	2.3 (NR)	1.6 (NR)	-0.7; p<0.0005	NR
Grady 2022a	Completers	Blood glucose checks per day	180 Days	OneTouch Verio Flex BGM, OneTouch Reveal web application	T2DM	119876	2.3 (NR)	1.7 (NR)	-0.5; p<.005	NR

Notes. BGM = blood glucose monitor. BGMS = blood glucose monitoring system. BP = blood pressure. CI = confidence interval. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NR = not reported. SMBG = self-monitoring of blood glucose. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus. [1] Lower frequency of SMBG checks per day at 12-month compared to baseline. [2] Proportion with duration of use ≥16 weeks.

Table 5: Diabetes Treatment Satisfaction in Prospective International Trials

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
LIVONGO										
Amante 2021	ITT	DTSQ	6 Months	Livongo for Diabetes Program	T2DM, HbA1c >8.0%	56	29.6 (5.3)	NR	12.9 (5.5)	vs usual care NR (0.09)
			6 Months	Usual Care	T2DM, HbA1c >8.0%	59	28.4 (5.2)	NR	10.7 (6.6)	NR
			1 Year	Livongo for Diabetes Program	T2DM, HbA1c >8.0%	56	29.6 (5.3)	NR	11.5 (6.8)	vs usual care NR (0.15)

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				then Usual Care						
			1 Year	Usual Care then Livongo for Diabetes Program	T2DM, HbA1c >8.0%	56	28.4 (5.2)	NR	13.4 (5.8)	NR
OTHER										
Yang 2020	ITT	DTSQ	3 Months	Glucometer, mobile phone application, 100 testing strips and education	T2DM, volunteers from primary care clinics	150	28.2 (6.2)	NR	2.40 (95% CI 1.22, 3.58)	vs usual care 2.21 (0.01)
				Usual care	T2DM, volunteers from primary care clinics	97	27.6 (6.1)	NR	0.45 (95% CI -1.03, 1.92)	reference
Hsu 2016	ITT	DTSQ	3 Months	Glucose meter wirelessly connected to tablet computer, tablet computer and education	T2DM, new to basal insulin therapy	20	31.9 (10.1)	42.0 (3.8)	NR	vs usual care NR (0.01)
				Usual care	T2DM, new to basal insulin therapy	20	34.3 (8.5)	36.4 (8.9)	NR	reference
Mora 2017	ITT	DTSQ	6 Months	Accu-Chek Connected BGM, mobile	T2DM, insulin use	77	29.8 (5.8)	14.3 (5.1)[1]	NR; p<0.0001	NA

References	Analysis Population	Outcome	Timepoint	Group	Population	n	Baseline Mean (SD)	Follow-up Mean (SD)	Change from Baseline Mean (SD)	Between Group Difference Mean (P-value)
				application, and online data management web portal						

Notes. BGM = blood glucose monitor. CI = confidence interval. DTSQ = Diabetes Treatment Satisfaction Questionnaire. HbA1c = glycated hemoglobin. ITT = intent-to-treat. NA = not applicable. NR = not reported. SD = standard deviation. T2DM = Type 2 Diabetes Mellitus. Diabetes Treatment Satisfaction Questionnaire (DTSQ) is an 8-item measure with responses ranging from very satisfied to very dissatisfied for a total scale score range of 0 to 36, with a higher score indicating higher treatment satisfaction. [1] Note this is an error in the publication as written, as satisfaction was reported to increase, rather than decrease; may represent change from baseline.

Appendix I — Between Group Comparisons for Glycated HbA1c Levels by Solution Category

Study Reference (I/O)	N	Timepoint	Comparator Group	Mean %pt at Baseline	Mean %pt Change from Baseline	Between-Group Difference [a]	Risk of Bias
Remote Patient Monitoring							
Nosrat 2023 (I)	195	6 Months	DHT	8.7	NR	0.34*	NA
			UC	8.6	NR		
Greenwood 2015 (I)	90	6 Months	DHT	8.5	–1.11	0.41**	Low
			UC	8.2	–0.70		
Nagrebetsky 2013 (I)	14	6 Months	DHT	8.0	-0.9	0.4[b]	Moderate
			UC	8.2	-0.5		
Lee 2017 (I)	144	6 Months	DHT	9.2	–2.4	0.6**[c]	Low
			UC	9.2	–1.8		
Hsu 2016 (I)	40	3 Months	DHT	10.8	–3.2	1.2*[c]	Moderate
			UC	10.9	–2.0		
Behavior and Lifestyle Modification							
Thingalaya 2023a (O)	2267	6 Months	DHT	9.14	−1.02	0.23**	NA
			UC	9.13	−0.79		
Tsang 2013 (O)	226	1 Year	DHT	7.42	–0.70	0.24*[c]	NA
			UC	7.6	–0.46		
Yang 2020 (I)	247	3 Months	DHT	8	–0.63	0.30**	High
			UC	7.9	–0.28		
Amante 2021 (I)	119	12 Months	DHT	10.3	-0.9[b]	0.37	Low
			UC	10.0	-1.2[b]		
Nutritional Ketosis							
Athinarayanan 2019 (I)	349	1 Year	DHT	7.7	-1.3	1.3***	Moderate
			UC	7.5	0.2		
	262	2 Years	DHT	7.7	−0.9	1.2***	
			UC	7.5	0.4		

Notes. *p<.05; **p<.01; ***p<.001. (I/O): I = Interventional Study; O = Observational Study. DHT = Digital health technology. UC = Usual Care. NA = Not Applicable; Insufficient methodological data to assess study quality and risk of bias for conference proceedings. [a] Between-group difference in mean change from baseline HbA1c %pt. Values indicate between-group difference in %pt improvements in glycemic control. [b]HbA1c was calculated based on mmol/mol reported in study article. [c] Calculated value based on data provided in study article.

Appendix J — Baseline Patient Demographic Characteristics

Table 1: Patient Characteristics in Interventional Studies

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
GLOOKO									
Nosrat 2023	T2DM	Glooko RPM	58.4 (9.6)	48%	Asian: 5% Black: 6% Hispanic: 13% White: 87% Other: 0%	34.5 (7.7)	NR	NR	NR
		Usual care	59.6 (10.7)	47%	Asian: 4% Black: 6% Hispanic: 5% White: 93% Other: 2%	35.7 (6.9)	NR	NR	NR
Fischer 2016	T2DM, HbA1c ≥8.5% and/or insulin naïve	Glooko RPM	NR	NR	NR	NR	NR	NR	NR
LIVONGO									
Amante 2021	T2DM, HbA1c >8.0%	Livongo for Diabetes Program, Livongo In Touch connected glucose meter, and 6-month supply of testing supplies	56.1 (11.1)	58%	Asian: NR Black: 10% Hispanic: 19% White: 78% Other: 8%	NR	NR	Some High School: 15% High School: 31% Some College: 24% Bachelor's: 19% Master's: NR	NR
		Usual care	57.4 (12.1)	48%	Asian: NR Black: 5% Hispanic: 15% White: 80% Other: 10%	NR	NR	Some High School: 12% High School: 28% Some College: 27% Bachelor's:	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
								22% Master's: NR	
Bollyky 2018	T2DM, HbA1c >7.5%, BMI >50	Livongo Diabetes Program and Restore Health Lifestyle Modification Program full-intensity coaching, and connected scale	NR	65.7%	Asian: NR Black: 9% Hispanic: 1.5% White: 65.7% Other: 7.5%	NR	NR	NR	NR
		Livongo Diabetes Program and Restore Health Lifestyle Modification Program lightweight coaching, and connected scale	NR	52.8%	Asian: NR Black: 13.7% Hispanic: 0% White: 68.5% Other: 2.7%	NR	NR	NR	NR
		Livongo Diabetes Program and Restore Health Lifestyle Modification Program no coaching, and	NR	49.6%	Asian: NR Black: 9.6% Hispanic: 1.7% White: 63.5% Other: 15.7%	NR	NR	NR	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		connected scale							
	T2DM, HbA1c >7.5%, BMI >25	Livongo for Diabetes Program and no Restore Health Lifestyle Modification Program and no connected scale	NR	60%	Asian: NR Black: 12% Hispanic: 0% White: 60% Other: 18.7%	NR	NR	NR	NR
		Livongo for Diabetes Program and Restore Health Lifestyle Modification Program	NR	55.8%	Asian: NR Black: 10.9% Hispanic: 0.9% White: 64.2% Other: 11.8%	NR	NR	NR	NR
Bollyky 2017	T2DM, HbA1c >7.5%, BMI >25	Livongo for Diabetes Program and Restore Health Lifestyle Modification Program	NR	NR	NR	NR	NR	NR	NR
VIRTA									
Hallberg 2018	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	Virta continuous remote care	53.75 (8.35)	66.79	Black: 6.87%	40.42 (8.81)	NR	NR	NR
		Usual care	52.33 (9.52)	58.62	Black 0%	36.72 (7.26)	NR	NR	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Athinarayanan 2019	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	Virta continuous remote care	53.8 (8.4)	66.79%	Black: 6.9%	40.42 (8.81)	NR	NR	NR
		Usual care	52.3 (9.5)	58.62%	Black: 0.0%	36.72 (7.26)	NR	NR	NR
Athinarayanan 2022	T2DM, HbA1c >6.5%, BMI>25 kg/m^2	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
		Usual care	NR	NR	NR	NR	NR	NR	NR
OTHER									
Rama Chandran 2023	T2DM, on basal-plus or basal-bolus insulin therapy for ≥3 months, HbA1c 8.5% to <12.5%, BMI ≤40 kg/m^2	Ascensia Diabetes Care	57.9 (10.7)	55%	Asian: NR Black: NR Hispanic: NR White: NR Other: 0%[1]	27.8 (4.3)	NR	NR	NR
Yang 2020	T2DM, volunteers from primary care clinics	Glucometer, mobile phone application, 100 testing strips and education	54.1 (10.1)	NR	NR	26.3 (3.7)	Urban: 100% Rural: 0%	NR	NR
		Usual care (face-to-face)	60.6 (10.2)	NR	NR	25.7 (3.9)	Urban: 100% Rural: 0%	NR	NR
Montero 2019	T2DM, HbA1c >9%	Biotel BGM System, Biotel BGM System dashboard	56.1 (NR)	63%	Asian: NR Black: 79% Hispanic: NR White: NR Other: NR	NR	NR	NR	NR
		Biotel BGM System, Biotel BGM System dashboard	56.1 (NR)	63%	Asian: NR Black: 79% Hispanic: NR White: NR Other: NR	NR	NR	NR	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Montero 2021	T2DM, HbA1c ≥9%	Biotel BGM System, Biotel BGM System dashboard, and Diabetes Boot Camp (education and telemedicine)	56.7 (10.6)	62%	Asian: NR Black: 81% Hispanic:1% White: 13% Other: NR	NR	NR	NR	NR
Lee 2020	T2DM, HbA1c 7.5%-11.0%	MyGlucoHealth connected BGM, usual care, lifestyle coaching	56 (NR)	NR	NR	NR	NR	NR	NR
		MyGlucoHealth connected BGM, usual care, lifestyle coaching	56.3 (8.6)	55.8%	NR	NR	NR	Some High School: NR High School: 46.7% Some College: NR Bachelor's: 6.7% Master's: NR	32.5%
		Usual care, personal BGM with no mobile application	56.1 (9.2)	54.2%	NR	NR	NR	Some High School: NR High School: 63.3% Some College: NR Bachelor's: 6.7% Master's: NR	29.2%
Katz 2022	T2DM, HbA1c >7.5%, own personal BGM with no mobile application	OneTouch Verio Flex BGM, OneTouch Reveal mobile application	51.6 (NR)	48%	Asian: NR Black: NR Hispanic: 95% White: NR Other: NR	31.1 (5.7)	NR	Some High School: 32% High School: NR Some College: 1%	90.1%[2]

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
								Bachelor's: NR Master's: NR	
	T1DM or T2DM, HbA1c >7.5%, own personal BGM with no mobile application[3]	OneTouch Verio Flex BGM, OneTouch Reveal mobile application	51.1 (NR)	49%	Asian: NR Black: NR Hispanic: 95% White: NR Other: NR	31.3 (6.1)	NR	Some High School: 29% High School: NR Some College: 2% Bachelor's: NR Master's: NR	92.5%[4]
		Usual care, personal BGM with no mobile application	50 (NR)	51%	Asian: NR Black: NR Hispanic: 95% White: NR Other: NR	31.6 (6.8)	NR	Some High School: 23% High School: NR Some College: 3% Bachelor's: NR Master's: NR	97.4%[6]
Holmen 2014	T2DM, HbA1c >7.0%	OneTouch Ultra Easy BGM, Few Touch Application and health counseling	57.4 (12.1)	50%	NR	NR	NR	Some High School: 52% High School: 20% Some College: 28% Bachelor's: NR Master's: NR	63%
		OneTouch Ultra Easy BGM, Few Touch Application and no health counseling	58.6 (11.8)	33%	NR	NR	NR	Some High School: 51% High School: 8% Some College: 41% Bachelor's: NR Master's: NR	44%

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		Usual care	55.9 (12.2)	40%	NR	NR	NR	Some High School: 62% High School: 6% Some College: 32% Bachelor's: NR Master's: NR	53%
Nagrebetsky 2013	T2DM, HbA1c 8.0%-10.9%, taking oral glucose-lowering medication	OneTouch Ultra 2 BGM, Bluetooth cradle, and mobile telephone, and usual care	56 (8)	29%[7]	Asian: NR Black: NR Hispanic: NR White: 100% Other: NR	33.4 (7.1)	NR	NR	NR
		OneTouch Ultra 2 BGM, Bluetooth cradle, and mobile telephone, and usual care	58 (11)	29%[7]	Asian: NR Black: NR Hispanic: NR White: 100% Other: NR	32.9 (6.4)	NR	NR	NR
		Usual care, personal BGM, lifestyle coaching	60 (13)	29%[7]	Asian: NR Black: NR Hispanic: NR White: 100% Other: NR	32.4 (6.2)	NR	NR	NR
Greenwood 2015	T2DM, HbA1c 7.5%-10.9%, no insulin use	OneTouch connected glucometer, Intel Care Innovations Health Suite	53.9 (10.4)	25%	Asian: 3% Black: 1% Hispanic: 7% White: 33% Other: 5%[8]	34.1 (6.8)	NR	Some High School: NR High School: 18% Some College: NR Bachelor's: 20% Master's: 9%	29%

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		Usual care, referral for diabetes education	57.5 (10.6)	21%	Asian: 5% Black: 2% Hispanic: 9% White: 31% Other: 2%[8]	34.1 (6.6)	NR	Some High School: NR High School: 12% Some College: NR Bachelor's: 21% Master's: 14%	24%
Wang 2017	T2DM confirmed for >1 year, HbA1c 7%-10%	Connected glucometer, medical team monitoring, and usual care	52.6 (9.1)	NR	NR	25.8 (NR)	Urban: 0% Rural: 100%	NR	NR
		Non-connected BGM and usual care	54.7 (10.3)	NR	NR	24.9 (NR)	Urban: 0% Rural: 100%	NR	NR
Hsu 2016	T2DM, new to basal insulin, HbA1c 9%-14%[9]	Glucose meter wirelessly connected to tablet computer, tablet computer and education	53.3 (NR)	NR	NR	30.8 (NR)	NR	NR	NR
		Usual care (face-to-face)	53.8 (NR)	NR	NR	31.7 (NR)	NR	NR	NR
Odom 2019	T1DM or T2DM, HbA1c ≥8%, insured[10]	Usual care and wireless-enabled glucose meter	NR	84%	Asian: 2% Black: 44% Hispanic: NR White: 54% Other: NR	NR	NR	NR	NR
Sachmechi 2023	T2DM, HbA1c ≥7.5%	Connected BGM and Vivo vitals	58.9 (10.3)	44.7%[11]	NR[12]	NR	NR	NR	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		diabetes platform							
		Usual care	64.5 (13.6)	56.6%[11]	NR[12]	NR	NR	NR	NR
Menon 2019	T2DM, referred to tertiary hospital IDA service[19]	Accu-Chek Aviva Connect BGM, smartphone mobile application, CDE coaching	NR[20]	45%	NR	NR	NR	NR	NR
Mora 2017	T1DM and T2DM, insulin use[21]	Accu-Chek Connected BGM, mobile application, and online data management web portal	57.9 (12.0)	51.7%	Asian: NR Black: 16.1% Hispanic: NR White: 77.0% Other: 6.9%[13]	34.8 (7.4)	NR	Some High School: NR High School: 24.1% Some College: 26.4% Bachelor's: 35.6% Master's: 13.8%[14]	NR
Lee 2017	T2DM, Kaiser Permanente members, frequent users of Samsung Health Diary telemonitoring device	Samsung Health Diary telemonitoring device	55.8 (9.9)	32.7%	NR	34.1 (6.4)	NR	NR	NR
	T2DM, Kaiser Permanente members, infrequent users of Samsung Health Diary	Samsung Health Diary telemonitoring device	53.5 (9.6)	41.8%	NR	35.5 (6.5)	NR	NR	NR

References	Population	Group	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
	telemonitoring device								
	T2DM, Kaiser Permanente members	Standard care	56.4 (8.7)	39.6%	NR	35.5 (6)	NR	NR	NR
Lee 2023	T2DM, mean age ≥65 years	mHealth	NR	NR	NR	NR	NR	NR	NR
Moschonis 2023	T2DM	Digital health interventions as text messages	NR	NR	NR	NR	NR	NR	NR
Hyun 2022	T2DM	Usual care	NR	NR	NR	NR	NR	NR	NR

Notes. BGM = blood glucose monitor. BMI = body mass index. CDE = Certified Diabetes Educator. HbA1c = glycated hemoglobin. mHealth = mobile health. NA = not applicable. NR = not reported. IDA – insulin dose adjustment, RPM – remote patient monitoring, SD – standard deviation, T1DM – Type 1 Diabetes Mellitus, T2DM – Type 2 Diabetes Mellitus.
[1]Other – Reports the following ethnicities: Chinese: 28(70); Indian 9 (22.5); Malay 3 (7.5). [2]Manual calculation: 73/81 = 90.1%. [3]98% of participants had T2DM and 2% of participants had T1DM. [4] Manual calculation: 111/120 = 92.5%. [5]. 95% had T2DM and 5% had T1DM. [6] Manual calculation: 38/39 = 97.4%. [7]Manual calculation: Divided number of females from total population. [8] Other – Manual calculation (added up "American Indian", "Other", and "Not Reported"). [9] "Poor glycemic control" defined as HbA1c levels of 9-14%. [10]. 94% of participants had T2D. [11]Manual calculation: Percent male provided. [12]Other -- Not specified. [13]Other -- Manual calculation (sum of "Native American" and "Other" categories), Manual calculation (sum of "Native American" and "Other" categories). [14]Bachelor's -- Refers to technical school/college grad.

Table 2: Patient Characteristics in Observational Studies

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
DARIO HEALTH									
Fundoiano-Hershcovitz 2022	T2DM	Dario digital therapeutics solution	62.0 (11.9)	36.1%	NR	31.7 (6.4)	NR	NR	NR
Gershoni 2022	White persons	Dario digital therapeutics solution	NR	51%	White: 100%	NR	NR	NR	NR
	People from racial and ethnic minority groups	Dario digital therapeutics solution	NR	53%	Asian: 15% Black: 39% Latino: 46%	NR	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Hershcovitz 2021	T2DM, high risk, hyperglycemia	Dario digital therapeutics solution	NR	NR	NR	NR	NR	NR	NR
Hershcovitz 2022a	T2DM, comorbid depression and stress	Dario digital therapeutics solution	NR	NR	NR	NR	NR	NR	NR
Hershcovitz 2022b	T2DM, high risk	Dario digital therapeutics solution users between 2019-2021	NR	NR	NR	NR	Nonrural: 87% Rural: 13%	NR	NR
Hershcovitz 2023	T2DM, high risk, HbA1c ≥7.5%	Dario digital therapeutics solution users between 2017-2020	NR	NR	NR	NR	NR	NR	NR
Thingalaya 2023a	T2DM, HbA1c ≥7.0%, receiving at least 1 diabetes medication	Dario digital therapeutics solution	57.3 (11.3)	NR	NR	NR	NR	NR	NR
Thingalaya 2023b	T2DM, HbA1c ≥7.0%, receiving at least 1 diabetes medication	Dario digital therapeutic solution users between 2017-2021	57.3 (10.5)	46.1%	Asian: 1.4% Black: 9.7% Hispanic: 11.6% White: 55.6%	NR	USA Region Mid-Atlantic: 16.7% Northeast: 4.0% Northwest: 1.8% Southeast: 32.0% Southwest: 17.0% West: 12.2% Other territories: 0.5%	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		Non-users of Dario digital therapeutic solution users between 2017-2021	57.6 (11.6)	46.1%	Asian: 1.3% Black: 10.2% Hispanic: 11.9% White: 54.9%	NR	USA Region Mid-Atlantic: 16.0% Northeast: 5.1% Northwest: 11.7% Southeast: 32.0% Southwest: 17.0 West: 12.2% Other territories: 0.5%	NR	NR
Wilson 2023a	T2DM, receiving at least 1 diabetes medication	Dario digital therapeutics solution	58.2 (10.6)	53.3%	NR	NR	USA Region: Mid-Atlantic: 18.5% Mid-West: 24.9% Northeast: 4.3% Northwest: 4.8% Southeast: 25.4% Southwest: 15.2% West: 6.5% Other territories: 0.4%	NR	NR
		Non-users of Dario digital therapeutics solution	58.3 (12.5)	53.3%	NR	NR	USA Region: Mid-Atlantic: 18.7% Mid-West: 25.5% Northeast: 4.5% Northwest: 4.7%	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
							Southeast: 24.5% Southwest: 14.7% West: 6.8% Other territories: 0.6%		
Wilson 2023b	T2DM, receiving at least 1 diabetes medication	Dario digital therapeutic solution users between 2017-2021	58.2 (NR)	46.7%	Asian: 1.3% Black: 10.4% Hispanic: 8.1%% White: 62.3% Unknown: 16.9% Other: 0.9%	NR	USA Region Mid-Atlantic: 19.5% Northeast: 4.3% Northwest: 4.8% Southeast: 25.4% Southwest: 15.2% West: 5.5% Other territories: 0.4%	NR	NR
		Non-users of Dario digital therapeutic solution users between 2017-2021	58.29 (NR)	46.7%	Asian: 1.3% Black: 10.5% Hispanic: 8.5% White: 62.5% Unknown: 16.3% Other: 0.8%	NR	USA Region Mid-Atlantic: 16.0% Northeast: 5.1% Northwest: 1.7% Southeast: 32.7% Southwest: 19.5% West: 6.0% Other territories: 0.5%	NR	NR
Wilson 2023c	T2DM, receiving at	Dario digital therapeutic	58.2 (NR)	46.7%	NR	NR	USA Region	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
	least 1 diabetes medication	solution users between 2017-2021					Mid-Atlantic: 19.5% Mideast: 29.4% Northeast: 4.3% Northwest: 4.8% Southeast: 25.4% Southwest: 15.2% West: 5.5% Other territories: 0.5%		
		Non-users of Dario digital therapeutic solution users between 2017-2021	58.3 (NR)	46.7%	NR	NR	USA Region Mid-Atlantic: 16.0% Mideast: 13.5% Northeast: 5.1% Northwest: 1.7% Southeast: 32.7% Southwest: 19.5% West: 6.0% Other territories: 0.5%	NR	NR
GLOOKO									
Offringa 2018	T2DM and T1DM	Usual care and uploaded data in HCP's office, and have	49 (19.3)	NR	NR	NR	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
		accompanying mobile application							
		Usual care and uploaded data in HCP's office, but did not have accompanying mobile application	57 (20.5)	NR	NR	NR	NR	NR	NR
Sheng 2021	T2DM	Glooko application on compatible smartphones and SMBG meters and coaching as needed	NR	46%	NR	NR	NR	NR	NR
Sheng 2019	Diabetes	Glooko application on compatible smartphones and SMBG meters and coaching as needed	NR	42.6%	NR	NR	NR	NR	NR
LIVONGO									
Bollyky 2019	T2DM, insulin use	Livongo for Diabetes Program	57.1 (12.1)	57.1%	Asian: NR Black: 4.8% Hispanic: 0% White: 4.8% Other: 90.5%	36.8 (10.7)	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
	T2DM, no insulin use	Livongo for Diabetes Program	59 (12.1)	37%	Asian: NR Black: 3.7% Hispanic: 0% White: 7.4% Other: 88.9%	31 (4.4)	NR	NR	NR
Downing 2016	Livongo Health members	Livongo Health connected BGM	NR[1]	55%	NR	NR	NR	NR	NR
Downing 2017	Livongo for Diabetes Program enrolled members with ≥2 BG readings[2]	Livongo Health connected BGM	NR[3]	55%	NR	NR	NR	NR	NR
Dzubur 2021	Livongo for Diabetes enrolled members[4]	Livongo for Diabetes Program	59.7 (NR)	50%	Asian: NR Black: NR Hispanic: NR White: 80% Other: NR	NR	NR	NR	NR
Whaley 2019	Livongo for Diabetes enrolled members[5]	Livongo for Diabetes Program	52 (NR)	55%	NR	NR	NR	NR	NR
	Livongo for Diabetes non-enrolled members[6]	Livongo for Diabetes Program	51 (NR)	56%	NR	NR	NR	NR	NR
VIRTA									
Adams 2021	T2DM, HbA1c >7.5%, ≥65 years old	Virta continuous remote care	69 (1.6)	27%	NR	NR	NR	NR	NR
Adams 2022	T2DM, HbA1c ≥6.5% or <6.5% and taking ≥1 hypoglycemic medication	Virta continuous remote care	53.2 (8.4)	66.8%	Black: 6.9%	40.4 (8.8)	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Lyman 2022	T2D, HbA1c >6.5%, BMI>25 kg/m^2	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
		Usual care	NR	NR	NR	NR	NR	NR	NR
McKenzie 2017	T2DM, HbA1c ≥6.5% or <6.5% and taking ≥1 hypoglycemic medication	Virta continuous remote care, Abbott Precision Xtra BGM, connected scale	54 (8)	66.80%	NR	NR	NR	NR	NR
McKenzie 2023a	T2DM	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
McKenzie 2023b	T2DM	Virta continuous remote care	55 (9)	50.9%	Asian: 5.2% Black: 13.4% Hispanic: 12.7% White: 57.5% Other: 3.5%	35.5 (7.7)	NR	NR	NR
Roberts 2022	T2DM	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
Vilar-Gomez 2019	T2DM	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
Volk 2022	T2DM	Virta continuous remote care	NR	NR	NR	NR	NR	NR	NR
OMADA									
Wilson-Anumudu 2021	T2D, Members of Achievement	Omada for Diabetes	45.1 (8.9)	136% (69.7)	Asian: 3.1% Black: 16.4% Hispanic: 8.7% White: 67.2% Other: 4.6%	37.5 (8.3)	NR	NR	NR
OTHER									

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Bailey 2017	T1DM or T2DM adults, BGMS naïve[7]	Ascensia Diabetes Care	54 (NR)[8]	52%	Asian: 3% Black: 10% Hispanic: NR White: 84% Other: 6%[9]	NR	NR	NR	NR
Bode 2018	Primarily T2DM requiring insulin[10]	Biotel BGM and Glytec CDSS	57.3 (14)	37%	NR	31.2 (NR) kg/m^2	NR	NR	NR
Fisher 2023	T2DM insulin-users and non-insulin-users who linked their meter with the Application during invitation period	Ascensia Diabetes Care	51.6 (11.6)	48.4%	Asian: NR Black: NR Hispanic: NR White: 82.0% Other: NR	NR	NR	Some High School: NR High School: 8.5% Some College: 41.9% Bachelor's: 22.6% Master's: 25.8%[11]	68.1%
	T2DM insulin-users who linked their meter with the Application during invitation period	Ascensia Diabetes Care	52.6 (12.6)	47.2%	Asian: NR Black: NR Hispanic: NR White: 77.8% Other: NR	NR	NR	Some High School: NR High School: 0.0% Some College: 39.8% Bachelor's: 28.7% Master's: 20.4%[12]	55.6%
	T2DM non-insulin-users who linked their meter with the Application	Ascensia Diabetes Care	51.4 (11.3)	47.3%	Asian: NR Black: NR Hispanic: NR White: 83.3% Other: NR	NR	NR	Some High School: NR High School: 7.6% Some	72.0%

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
	during invitation period							College: 42.5% Bachelor's: 20.7% Master's: 27.5%[13]	
Grady 2016	Referred to hospitals for ongoing diabetes care	OneTouch Verio BGM, OneTouch Reveal web application, telephone consultations	49.3 (NR)	55%	NR	NR	NR	NR	NR
Grady 2022a	T2DM	OneTouch Verio Flex BGM, OneTouch Reveal web application	NR	NR	NR	NR	NR	NR	NR
Grady 2022b	T2DM	OneTouch Verio Flex BGM, OneTouch Reveal web application	NR	NR	NR	NR	NR	NR	NR
Grady 2023	T2DM	OneTouch Verio Flex BGM, OneTouch Reveal web application	NR	NR	NR	NR	NR	NR	NR
Harvey 2016	T1DM and T2DM, insulin use, already using connected BGM	Accu-Chek Guide Meter BGM, smartphone mobile application	NR	NR	NR	NR	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Katz 2020	T2DM, HbA1c ≥8.0%	OneTouch Verio Flex BGM, OneTouch Reveal mobile application, and health counseling	NR	NR	NR	NR	NR	NR	NR
Shaw 2020	T2DM	FDA-approved wireless glucometer by iHealth, triaxial accelerometer and associated fitness application by Fitbit, cellular-enabled Scale by BodyTrace	54.68 (11.70)	71.67%	Asian: NR Black: 60.0% Hispanic: 3.3% White: 35.0% Other: 5.0%[14]	36.3 (7.8)	NR	Some High School: NR High School: 23.3% Some College: 33.3% Bachelor's: 21.7% Master's: 15.0%[15]	NR
Tsang 2013	T2DM, older adults	Usual care	78.8 (7.6)	NR	NR	NR	NR	NR	NR
		Web-based glucose monitoring system based on One-Touch glucometer and health counseling	83.3 (5.1)	NR	NR	NR	NR	NR	NR

References	Population	Groups	Age, years Mean (SD)	Female	Race/Ethnicity	BMI Mean (SD)	Geographic Location (urban or rural)	Education Level	Employment (part or full)
Welch 2015	T2DM, HbA1c 7%-11%, >50 years old	BGM, automatic BP cuff, and MedMinder pillbox	60.6 (7.1)	56.7%	Asian: NR Black: 73.3% Hispanic: 26.7% White: 23.3% Other: 3.3%[16]	31.8 (5.7)	Urban: 100% Rural: 0%	Some High School: 20.0% High School: 23.3% Some College: 26.7% Bachelor's: 6.7%[17]	33.3%
Zhang 2020	T2DM, receiving insulin, with FBG records on the application for >1 week at weeks 1 & 12	Connected BGM and Lilly Connected Care Program education courses	NR	43.98%	NR	NR	NR	High School: 32.81% Some College: NR Bachelor's: 39.81%	NR

Notes. BG – blood glucose, BGM – blood glucose monitor, BGMS – blood glucose monitoring system, BMI – body mass index, CDSS – clinical decision support software, FBG – fasting blood glucose, FDA – Food and Drug Administration, HbA1c – glycated hemoglobin, HCP – healthcare provider, NA – not applicable, NR – not reported, SD – standard deviation, SMBG – self-monitoring of blood glucose, T1DM – Type 1 Diabetes Mellitus, T2DM – Type 2 Diabetes Mellitus.

[1] 65% of members were between ages 45 and 65 years.[2] 72.69 % (n = 3303) of participants had T2D. [3] The study reports the following age breakdown: Age (years), n (%) 18-44 years, 1254 (27.60) 45-64 years, 2853 (62.79) ≥65 years, 436 (9.60) [4] 91% of participants reported having T2D. [5] 84.7% of participants reported having T2D; Continuously enrolled in health benefits for 12mo before and after getting access to Livongo. [6] Did not enroll in Livongo but had access through health insurance. [7] 70 (52%) participants had T2D. [8] Mean [range]: 54 years [18, 77]. [9] Other -- Manual calculation: Sum of "American Indian/Alaska Native" and "Hawaiian/Pacific Islander" and "No Answer". [10] 35 (76%) participants had T2D. [11] Some High School -- Less than some high school: 6, Less than some high school: 1.3. [12] Some High School -- Less than some high school: 12, Less than some high school: 11.1. [13] Some High School -- Less than some high school: 6, Less than some high school: 1.7. [14] Black -- or African American Hispanic -- or Latino. [15] High School -- Refers to High School or Less. [16] Black or African American. [17] Bachelor's or associate degree or higher.