

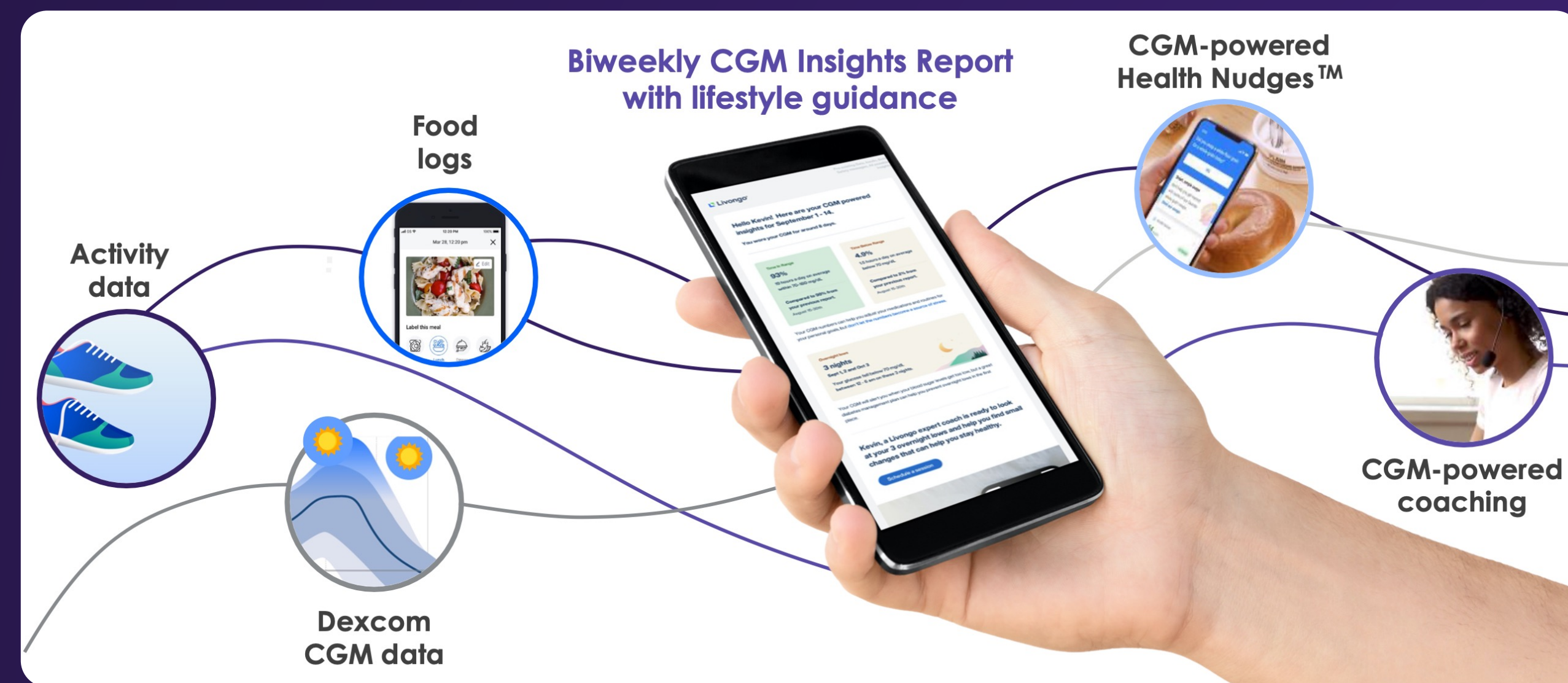
## A Personalized Retrospective CGM Report Improves Engagement and Glycemic Control in a Remote Diabetes Monitoring Program (RDMP)

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### Background and Aims

- Retrospective review of CGM data is associated with improved glycemic control, but self-initiated data review is uncommon. [1]
- Objective: To examine the impact of a novel “CGM-powered Insights Report” on program engagement and glycemic control within Livongo for Diabetes, an RDMP.**



### Methods

- Members enrolled in the RDMP and who authorized data sharing of their existing Dexcom CGM [2] automatically received **biweekly Insight Report emails**.
- Reports provided **personalized analysis** of CGM trends and **suggested next steps** within the digital coaching program.
- The impact of engaging with Insight Reports was assessed via:
  - Odds ratios and Fisher’s exact tests on the relative recency of key RDMP **program feature utilization**
  - Multiple linear regression to quantify its impact on **changes in glycemic control**.

### Results

- 1,105 members (436 T1D, 464 T2D using insulin, 205 T2D not using insulin) who received their first Report by 1 February 2022 were included for analysis.
- Members received a median of 7 Reports, with an overall open rate of 49.3% across all individual Reports (N = 8,302).
- Members who **opened at least one Report** (vs. opened no Reports) were **more likely to subsequently utilize** the mobile app, web portal, food logger, and 1-on-1 coach chat RDMP program features (Table 1, below).

**Table 1. Percentage of members who utilized core program features after receiving their first Insight Report**

Group split	Used mobile app post-Insight	Used web portal post-Insight	Used food logger post-Insight	Used Coach chat post-Insight
<b>Never opened</b> an Insights Report (group N = 218)	71.4% (155 / 217)	33.2% (70 / 211)	22.4% (17 / 76)	20.0% (5 / 25)
<b>Opened 1+</b> Insights Report (group N = 887)	80.1% (710 / 886)	47.9% (415 / 866)	34.5% (109 / 316)	44.2% (53 / 120)
Percentage point difference	+8.7	+14.7	+12.1	+24.2
Odds Ratio	1.6	1.9	1.8	3.2
<b>Fisher’s exact P-value (1-tailed)</b>	<b>0.004</b>	<b>&lt; 0.001</b>	<b>0.027</b>	<b>0.019</b>

1. Wong JC, Neinstein AB, Spindler M, Adi S. A Minority of Patients with Type 1 Diabetes Routinely Downloads and Retrospectively Reviews Device Data. *Diabetes Technol Ther.* 2015;17(8):555-562.  
 2. Teladoc Health and Dexcom Bring CGM Technology and Personalized Insights to People with Type 2 Diabetes at No Cost. Press release, 11 January 2021. <https://perma.cc/PZ3V-3V69>

### Results (continued)

- After controlling for demographics, clinical characteristics, baseline glucose metrics, and the number of Reports received, members who **opened more Insight Reports** were more likely to **show improvements** in mean glucose, CV of glucose, TIR, and TAR.

**Table 2. Summary OLS regression coefficients (t-values) associated with change in glucose metrics from first Report to latest Report (≥ 2)**

Y-variable: CGM metric at most recent Report (N = 957)

X-variables	Mean SG (mg/dL)	SG coef. of variation	% Time In Range (70–180 mg/dL)	% Time Above Range (>180 mg/dL)
Is Male	1.16 n.s.	0.06 n.s.	-1.06 n.s.	1.00 n.s.
Is T1D	-0.42 n.s.	5.75 ***	0.01 n.s.	-0.37 n.s.
Uses Insulin	2.02 *	2.73 **	-1.75 *	2.03 *
Age at start	-0.75 n.s.	-0.26 n.s.	0.25 n.s.	-0.40 n.s.
Years living with DM	0.60 n.s.	1.99 *	-1.20 n.s.	0.95 n.s.
Months enrolled	0.76 n.s.	1.20 n.s.	-1.08 n.s.	0.73 n.s.
CGM metric at <u>first</u> Report	26.51 ***	27.38 ***	24.36 ***	28.32 ***
Reports received	2.81 **	4.21 ***	-3.59 ***	3.25 ***
<b>Reports opened</b>	<b>-2.57 **</b>	<b>-1.83 *</b>	<b>2.66 **</b>	<b>-2.48 **</b>
(Model R <sup>2</sup> value)	0.46	0.62	0.50	0.49

One-tailed P-values (via partial correlations):  
 \*\*\* P ≤ .001 \*\* P ≤ .01 \* P ≤ .05 n.s. P > .05

### Conclusion

For CGM users within an RDMP, engagement with a personalized Insights Report is associated with **subsequent utilization** of core program features and **improvements in glycemic control**.

Beyond the benefits of CGM itself, surfacing actionable insights within an RDMP **adds value** by driving members towards increased core program engagement; in particular, **1-on-1 digital coaching**.