The Role of Continuous Glucose Data in Remote Patient Monitoring
Agenda

- Speaker Introductions
- The role of CGM in remote monitoring
- Use in practice
- Q&A
Speaker Introductions

Adam Wolfberg, MD
Chief Medical Officer
Current Health

Egils Bogdanovics, MD
Endocrinologist
Charlotte Hungerford Hospital
Patient health at home is hidden. Patients don’t know when to call their doctor.

20% of discharged patients are readmitted within 30 days.

15% of readmissions are avoidable.

Sources:
Characteristics of 30-Day All-Cause Hospital Readmissions, 2010-2016
Glucose instability associated with diabetes adds complexity during post-acute care.

Challenges managing post-acute care:
- Close monitoring of glucose levels
- Medication titration
- Lifestyle and dietary changes
- Patient stress levels

30-day unplanned hospital readmission involve a patient with diabetes

Lack of clinical insight into patient recovery can result in hospital readmission.

47% of patients with T2DM had unrecognized hypoglycemia

Source: Chico A et al Diabetes Care 2003 Apr; 26(4): 1153-1157
A new approach to safe home-based management for patients discharged with uncontrolled diabetes.

Monitor
- Continuous FDA-cleared monitoring of vital signs
- Wireless connectivity to other devices
- PRO and symptom collection

Analyze
- A single clinical dashboard to review all patients
- Smart alerts to identify deterioration, with minimal alarm fatigue
- Optional, 24/7 RN monitoring service

Engage
- Seamless video consultations for assessments & interventions
- Educational content
- Automated reminders and phone calls to drive adherence to pathway
Continuous glucose monitoring by Dexcom, now available with Current Health

- Continuous Glucose Levels
- Respiration Rate
- Oxygen Saturation
- Mobility + Step Count
- Pulse Rate
- Body Temperature
Glucose Monitoring

**Glucose Meters:** Fingerstick glucose, single point in time

**Continuous glucose monitors (CGM)**
- Can see continuous glucose levels
- Do not need to poke finger
- Gives the whole picture

**Personal:**
- Real time
- Trend arrows
- High and low glucose warning
Dexcom G6 consists of 3 components*

**Applicator with built-in sensor:** Inserts the sensor wire under the skin; sensor measures glucose levels just underneath the skin.

**Transmitter:** Sends glucose information from the sensor to the receiver or smart device*.

**Receiver:** Displays glucose trends, showing when glucose is high, low, or within range.

Importance of CGM to inform patient recovery

Undetected hypoglycemia

Undetected hyperglycemia

● = glucometer readings
Meet Rebecca
72-Year-Old Female T2DM with CHF

Admitted for CHF exacerbation

Past Medical History:
• T2DM x 12 years on metformin, sitagliptin, and insulin
• CAD: MI and CABG 3 years ago
• Hyperlipidemia
• Hypertension

Preadmission Medications
• Metformin 1000 mg bid
• Sitagliptin 100 mg qD
• Levemir 20 units bid
• Atorvastatin 80 mg daily
• ASA 81 mg qD
• Metoprolol 25 mg bid
• Lisinopril 20 g qD
Meet Rebecca
72-Year-Old Female T2DM with CHF

Inpatient Studies:
• BP 138/84
• LVEF 36%
• eGFR 44
• HbA1c 8.0

Hospital Course
• Responded to IV diuresis
• Finger Stick Blood Glucose range 60 to 288
• SGLT2 inhibitor Dapagliflozin 5 mg daily added
• Levemir decreased to 15 units bid
Patients with both T2DM and CHF:

- Higher rate of death and hospitalization vs. patients with single diagnosis
- Poor diabetic control increases risk of rehospitalization among patients with CHF.

Prevalence of heart failure in patients with T2DM vs. general population

Source: Dunlay SM et al Circulation. 2019;140:e294–e324. DOI: 10.1161/CIR.0000000000000691
Diabetes & Heart Failure

Readmission rate for patients with CHF & Diabetes: 22%

Challenges managing post-acute care:
- Fluctuations in glucose levels
- Low EF & hypertension
- Medication changes requiring titration
- Social / logistical challenges with access / follow-up

I. 2019 CMS data
Using remote monitoring to manage post-acute care for patients with diabetes

**Monitor**
- Real-time patient vitals
- Patient history & test results
- Food logs & symptoms

**Manage**
- Change medications
- Adjust insulin levels
- Order prescription refills

**Engage**
- Virtual check-in
- Diet & exercise conversations
- Patient education
Meet Rebecca
72-Year-Old Female T2DM with CHF

Post-acute recovery with Current Health & Dexcom
Day 1: Rebecca’s kit is delivered to her home
Day 1
Provider view of patient recovery
Symptom reporting

High blood pressure
Increasing weight
Shortness of breath
Day 2
9:32am
Early signs of deterioration
Alert to care team
Early signs of deterioration

Day 2
9:32am

Alert to care team
Early signs of deterioration

Day 2
9:32am

Marie Roas said, "Patient reports feeling more shortness of breath than previous day as well as higher pulse and weight readings. Flagging for review again in 6 hours."

9:32am

Hyperglycemia alarm started
**Early signs of deterioration**

- Elevated pulse
- Elevated glucose

**Day 2**
9:32am

### DEXCOM G6 CGM

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Video Visit

Day 2
9:50am

Insulin adjustment
Patient education

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<td><strong>28</strong></td>
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<td>Pulse bpm</td>
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<td>47</td>
<td>47</td>
<td>68</td>
<td>55</td>
<td><strong>102</strong></td>
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</table>

Patient reports feeling more shortness of breath than previous day as well as higher pulse and weight readings. Flagging for review again in 6 hours.

Rebecca Parker: 04:10

%FEV1

CLQ-C30
Day 2
5:00pm
Patient stabilized
Day 3

9:32am

Alarm of hypoglycemia

Hypoglycemia Tachycardia Risk

Today at 9:32am

Patient
Rebecca Parker

Reason(s) for alarm
Glucose was below 60 mg/dl for 4 minutes
Pulse was higher than 100 bpm for 60 seconds

Review alarm conditions

Activity
Sent to role Nurse
Jan 7 at 09:30
Hyypoglycemia Tachycardia Risk started
Jan 7 at 09:32am

Send to other role Snooze Stop
Day 3
9:40am
Continued deterioration
Day 3
9:40am
Continued deterioration

Continuous data capture
Day 3
9:40am
Continued deterioration

Continuous data capture
Day 3
9:45am
Video Visit

Insulin adjustment
Continuous, remote monitoring enables early discharge and readmission avoidance

- ED
- Inpatient admission
- Step down to community
- Remote monitoring at home
- Coordination with primary care

Reduced length of stay
Hospitalization avoidance 2x
Q&A

Adam Wolfberg, MD  
Chief Medical Officer  
Current Health

Egils Bogdanovics, MD  
Endocrinologist  
Charlotte Hungerford Hospital
Thank you for joining!

To schedule a follow-up conversation to learn more, visit: currenthealth.com/dexcom