Medications that Interfere with Continuous glucose monitors (CGMs)

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Disclosure Statement

Speaker has no relevant financial relationships with ineligible companies to disclose

The contents of this presentation represent the views of the speaker and do not represent the views of the Department of Veterans Affairs or the United States Government.

Learning Objectives: RPh

At the completion of this activity, you will be able to:

1. Identify medications that can cause false CGM readings

2. Evaluate CGM readings given potential interfering medications

Learning Objectives: CPT

At the completion of this activity, you will be able to:

1. Recall risks associated with false CGM readings

2. Name which CGMs can have false readings

Pre-Test Questions: RPh

1. Which medication interferes with Freestyle but not Dexcom?
   - Ascorbic Acid
   - Hydroxyurea
   - Oxycodone

Pre-Test Questions: RPh

2. Patient TK has a Dexcom sensor and consistently takes 2g of Tylenol every 8 hours (despite being told not to by PCP). What could this do to her CGM readings?

- Falsely lower her readings
- Nothing, readings will be normal
- Falsely raise her readings

Pre-Test Questions: CPT

1. What is the most concerning risk of false CGM readings?
   - Patients changing sensor too frequently
   - Patients having low blood sugars without knowing
   - No risk is known, the readings are not that different

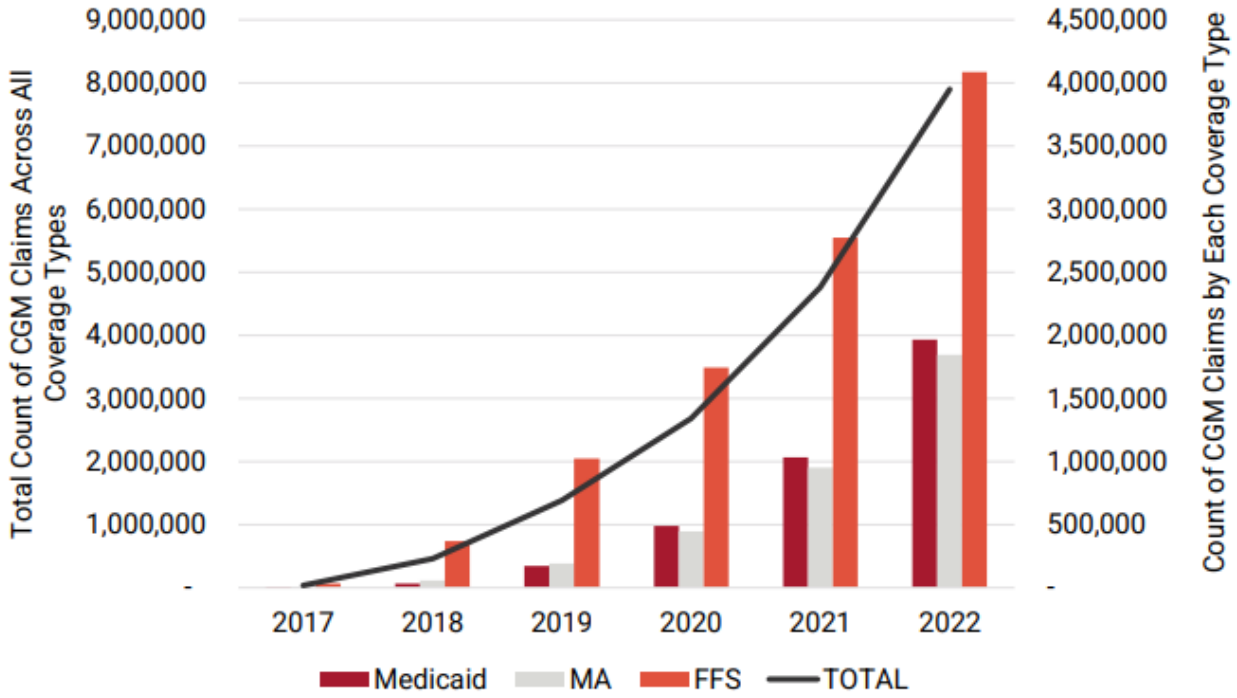
Pre-Test Questions: CPT

2. Which CGM(s) can have false readings with certain medications?

- Dexcom
- Freestyle
- Both

Background

- Estimated 40.1 million people in the United States have diagnosed or undiagnosed diabetes
- Number of CGM claims rising amongst both federal and state insurance



Dexcom CGM

Dexcom: Hydroxyurea

- Drug class: antineoplastic medication
- CGM impact: falsely **elevates** sensor readings
  - Dose dependent
- Solution:
  - Double check with glucometer

Dexcom: Acetaminophen

- Drug class: analgesic

- CGM impact: falsely **elevates** sensor readings
  - Doses >1,000 mg Q6H

- Solution:
  - Reduce intake of acetaminophen

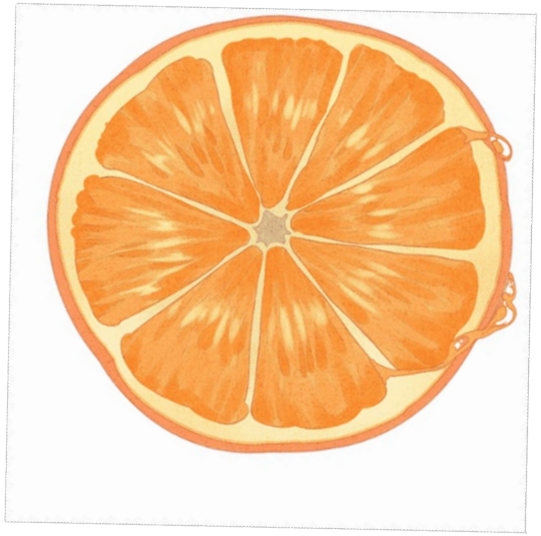
Freestyle Libre 2 & 3 Plus

Freestyle Libre 2 & 3 Plus: Ascorbic Acid

- Drug class: water soluble vitamin

- CGM impact: falsely **elevates** sensor readings
  - Doses >1,000 mg per day

- Solution:
  - Reduce intake of ascorbic acid
  - Double check with glucometer



Freestyle Libre 2 Plus: Aspirin

- Drug class: NSAID, salicylate

- CGM impact: falsely **lowers** sensor readings
  - Doses not defined

- Solution:
  - Double check with glucometer

Clinical Importance

- Over correcting insulin resulting in hypoglycemia
- Prescribing medications that aren't necessary
- Missed hypoglycemic events leading to patient harm

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Pre-Test Questions: CPT

2. Which CGM(s) can have false readings with certain medications?
   - Dexcom
   - Freestyle
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Thank you!

Questions?

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Resources

- Continuous Glucose Monitoring System. www.freestyle.abbott. https://www.freestyle.abbott/us-en/safety-information.html
- CGM Interfering Substances & Procedures. ADCES. Published 2025. https://www.adces.org/education/danatech/glucose-monitoring/continuous-glucose-monitors-(cgm)/cgm-selection-training/cgm-interfering-substances---procedures
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- Abbott. Substances That May Affect FreeStyle Libre 2 Plus Sensor Accuracy. Freestyle.abbott. Published 2025. Accessed March 27, 2026. https://www.freestyle.abbott/en-om/support/what-substances-could-interfere-with-the-results-generated-by-the-freestyle-libre-2-plus-system-1.html
- CDC. National diabetes statistics report. Centers for Disease Control and Prevention. Published May 15, 2024. https://www.cdc.gov/diabetes/php/data-research/index.html