

---

# Practicum: Case Studies



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

**5 April 2022**  
**1300-1430**

**Lt Col Jeffrey Colburn, MD,  
FACP, FACE**

Program Director

Endocrinology, Diabetes, and Metabolism  
San Antonio Uniformed Services Health  
Education Consortium (SAUSHEC)

**Lt Col Darrick J. Beckman  
MD, USAF MC**

Clinical Professor of Medicine,  
Uniformed Services University

Director, Diabetes Center of Excellence  
APD Endocrinology Fellowship Program  
Wilford Hall Ambulatory Surgical Center

**Capt Jessica John, MD  
MC, USAF**

Fellow –Endocrinology, Diabetes and  
Metabolism

San Antonio Military Medical Center  
Wilford Hall Ambulatory Surgical Center

**Capt Courtney Clutter, MD  
MC, USAF**

Fellow –Endocrinology, Diabetes and  
Metabolism

San Antonio Military Medical Center  
Wilford Hall Ambulatory Surgical Center

- **Jeffrey Colburn, Darrick Beckman, Courtney Clutter, & Jessica John** have no relevant financial or non-financial relationships to disclose relating to the content of this activity.
- The views expressed in this presentation are those of the author and do not reflect the official views or policy of the Department of Defense or its Components. No Federal endorsement of (manufacturer) is intended.
- This continuing education activity is managed and accredited by the Defense Health Agency J7 Continuing Education Program Office (DHA J7 CEPO). DHA J7 CEPO, as well as all accrediting organizations, does not support or endorse any product or service mentioned in this activity
- DHA J7 CEPO, as well as, activity planners and reviewers have no relevant financial or non-financial interest to disclose
- Commercial support was not received for this activity

# *Learning Objectives*

---

At the conclusion of this knowledge-based activity, participants will be able to:

1. Analyze the healthcare team workflow, roles and actions in the management of a patient with diabetes
2. Develop strategies for initiation/titration of insulin and/or non-insulin therapy
3. Outline management of diabetic complications

- Many therapeutic options/combinations available
- Individualization to meet patient needs
  - Medical
  - Psychosocial
  - Educational
- Excellent care requires collaborative team work
  - Clinical staff
  - Patient

---

# Case Study

## NIM

**Lt Col Darrick Beckman, MD**



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

---

46 y/o Caucasian male with Type 2 DM, HTN, HLP

Reason for appointment:  
Routine follow-up

A1C: 8.2%

---

## Vital Signs/Intake:

BP 128/78 P 78 BMI 31.2 Ht 70 in Wt 218 lb

## Labs:

A1C 8.2% Creat 0.9 mg/dL Chol 207 LDL 120 HDL 28 Trig 295

## Meds:

Janumet 12.5/1000 po bid  
Candesartan 32 mg daily

Atorvastatin 20 mg HS

## Other:

Retinal Exam: current, no issues

Glucose log averages: B 142 L 134 S 118 BT 155

---

## Treatment options:

### ■ Medications:

Janumet 12.5/1000 po bid    Atorvastatin 20 mg HS    Candesartan 32 mg daily

- Glycemic med adjustment
  - Options
  - Advantages/disadvantages
- Cholesterol med adjustment?
- Blood pressure med adjustment?
- Other medications?

### Education:

---

## Screening fibroscan suggestive of fatty liver

- NAFLD

GI evaluation confirms NASH

---

**Treatment options:**

**Medications:**

**Education:**

**Other:**

F/U appointments/labs: When? What?

---

# Case Study

## MTI

### Capt Courtney Clutter, MD



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

---

37 y/o African American female with Type 2 DM,,  
HLP

Reason for appointment:

Elevated A1C, hyperglycemia

A1C: 9.3%

---

**Vital Signs/Intake:**

BP 122/70 P 72 BMI 28.9 Ht 61 in Wt 153 lb

**Labs:**

A1C 9.3% (eAG 219 mg/dL) Creat 0.8 mg/dL  
Chol 196 LDL 117 HDL 37 Trig 210

**Meds:**

Insulin Glargine 60 units sq bid Metformin 1000mg po bid  
Pravastatin 40 mg daily

**Other:**

Retinal Exam: last exam 2018  
Glucose log averages: B 146 L 170 S 159 BT 216  
30 day glucometer download: Avg 184 mg/dL  
SD 74 mg/dL

Reports: hypoglycemia if misses a meal

---

---

## Treatment options:

### ■ Medications:

Insulin Glargine 60 units sq bid Metformin 1000mg po bid Pravastatin 40 mg qd

- Glycemic med adjustment
  - Options
  - Advantages/disadvantages
- Cholesterol med adjustment?
- Other medications?

## Education:

F/U appointments/labs: When? What?

---

# Case Study INS

**Lt Col Jeffrey Colburn, MD**



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

---

46 y/o Pacific Islander female with Type 2 DM,  
HTN, HLP

Reason for appointment:

“Ran out of my medications”

A1C: 8.7% (>1 yr ago)

---

**Vital Signs/Intake:**

BP 146/76 P 80 BMI 38 Ht 59 in Wt 188 lb No tobacco use

**Labs:**

A1C 9.3% Creat 0.9 mg/dL Chol 146 LDL 90 HDL 42 Trig 190

**Meds:**

Metformin 1000 mg po bid

Empagliflozin 25 mg daily

Exenatide 2 mg sq wkly

Atorvastatin 40 mg daily

Lisinopril 20 mg daily

**Other:**

Retinal Exam: 6 mo ago

Foot exam: low risk foot

Glucose log averages:

B 242 L 169 S 196 BT 268

## Treatment options:

- **Medications:** Metformin 1000 mg po bid
  - Empagliflozin 25 mg daily
  - Atorvastatin 40 mg daily
  - Exenatide 2 mg sq wkly
  - Lisinopril 20 mg daily
  
- Glycemic med adjustment
  - Options
  - Advantages/disadvantages

## Treatment options:

- **Medications:** Metformin 1000 mg po bid
  - Empagliflozin 25 mg daily
  - Atorvastatin 40 mg daily
  - Exenatide 2 mg sq wkly
  - Lisinopril 20 mg daily

## Insulin:

### Barriers

- Job concerns
- Others

### Education

### Dosing

## Treatment options:

- **Medications:** Metformin 1000 mg po bid  
Empagliflozin 25 mg daily      Exenatide 2 mg sq wkly  
Atorvastatin 40 mg daily      Lisinopril 20 mg daily

## Education:

## Other:

F/U appointments/labs: When? What?

---

# Case Study

# CDP

## Capt Courtney Clutter, MD



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

---

63 y/o Hispanic male with Type 2 DM, HTN, HLP,  
Stage 4 CKD, CAD s/p stent, GERD, Gout, PVD

Reason for appointment:

Sore on right toe (4<sup>th</sup> digit) and blood sugars  
are high

A1C: 8.2

## Vital Signs/Intake:

BP 118/82 P 78 BMI 34.4 Ht 70 in Wt 240 lb Smoker (50 pk/yr)

## Labs:

A1C 8.2 Creat 2.3 Chol 177 LDL 0 HDL 30 Trig 525

## Meds:

Aspart 70/30 40 units bid	Atorvastatin 80 mg daily	Lisinopril 20 mg daily
Torsemide 20 mg daily	Fenofibrate 48 mg daily	ASA 81 mg daily
Metoprolol XL 200 mg daily	Duloxetine 120 mg daily	Niacin 1000 mg daily
Esomeprazole 20 mg daily	Amlodipine 10 mg daily	Allopurinol 100 mg daily

## Other:

Retinal Exam: 4 mo ago (6 mo f/u)

Foot exam: [\(next slide\)](#)

Glucose log averages:

B 192 L 124 S 143 BT 237

## During foot exam

- Has difficulty putting on shoes, hands shaking, c/o headache, FS 66
- States happens a lot over last couple of months
  - Sometimes mid-morning
  - Usually at quitting time
  - Feels better after eating something out of the vending machine

## Findings:

- Callouses plantar surface
- Decreased pedal pulses
- Dry skin w/cracks to heel
- Cool to touch
- LOPS bilaterally
- Decreased vibratory sensation
- Hammer toes R foot
- + onycholysis R great toe
- 4<sup>th</sup> R digit w/reddened area
  - approx 1 cm diameter
  - Tender, no exudates
- Shoes well-worn
  - leather cracking
  - soles unevenly worn
- Socks with slight odor

# Treatment options:

## Medications:

Aspart 70/30 40 units bid      Atorvastatin 80 mg daily      Lisinopril 20 mg daily  
Torsemide 20 mg daily      Fenofibrate 48 mg daily      Amlodipine 10 mg daily  
Duloxetine 120 mg daily      Niacin 1000 mg daily      Esomeprazole 20 mg daily  
Metoprolol XL 200 mg daily      ASA 81 mg daily      Allopurinol 100 mg daily

- Glycemic med adjustment
  - Options
  - Advantages/disadvantages
- Cholesterol med adjustment?
- Blood pressure med adjustment?
- Other medications?

---

**Treatment options:**

**Education:**

**Other:**

**F/U appointments/labs: When? What?**

---

# Case Study: CGM

**Lt Col Jeffrey Colburn, MD**



DIABETES CENTER OF EXCELLENCE

Outreach • Clinical • Research • Excellence

---

50 y/o Hispanic female with Type 2 DM, HTN

Reason for appointment:

Post-hospitalization for Hypoglycemia

A1C: 8.8%

---

**Vital Signs/Intake:**

BP 132/68 P 74 BMI 28.2 Ht 64 in Wt 164 lb

**Labs:**

A1C 8.8% FBS 105 Creat 1.0 Chol 188 LDL 110 HDL 58 Trig 100

**Meds:**

Insulin Glargine 60 units sq daily Metformin 500mg po bid Lisinopril 5 mg daily

**Other:**

Retinal Exam: None in EHR

Glucose log averages: No glucose log

Reports: low blood sugars at night or if skips meals

## Treatment options:

### ■ Medications:

Insulin Glargine 60 units sq daily      Metformin 500mg po bid  
Lisinopril 5 mg daily

- Glycemic med adjustment
  - Options
  - Advantages/disadvantages
- Identify way to obtain more data
  - Glucose data
- Other medication options?
- Other diagnosis considerations?

---

## Treatment options:

### Medications: I

Insulin Glargine 60 units sq daily

Metformin 500mg po bid

Lisinopril 5 mg daily

## Requirements for TRICARE coverage of CGM/Flash glucometer:

### Education:

### Other:

F/U appointments/labs: When? What?

- During patient visit, patient complains of sore on right 4<sup>th</sup> digit. Foot exam findings: LOPS bilaterally, decreased vibratory sensation, hammer toes with a 1 cm diameter open wound on right 4<sup>th</sup> digit, red, tender. Note shoes well-worn, sock with slight odor. What recommendations should be made?
  - a) Referral to podiatrist
  - b) Address proper footwear, including socks
  - c) Daily self-foot exam/care
  - d) Wound care
  - e) All of the above

- The best example of conversion from 70/30 to a basal bolus regimen is
  - a) TDD = 50% basal, 50% bolus divided over 3 meals
  - b) TDD = 70% basal, 30% bolus divided over 3 meals
  - c) TDD = 40% basal, 60% bolus divided between meals and snacks
  - d) TDD = 60% basal, 20% at breakfast and 20% at supper

- American Diabetes Association. (2022). 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S46-S59.
- American Diabetes Association. (2022). 5. Facilitating Behavior Change and Well-being to Improve Health Outcomes: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S60-S82.
- American Diabetes Association. (2022). 6. Glycemic Targets: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S83-S96.
- American Diabetes Association. (2022). 7. Diabetes Technology: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S97-S112.

---

American Diabetes Association. (2022). 9. Pharmacologic Approaches to Glycemic Treatment:

Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S125-S143.

American Diabetes Association. (2022). 10. Cardiovascular Disease and Risk Management:

Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S144-S174.

American Diabetes Association. (2022). 12. Retinopathy, Neuropathy, and Foot Care:

Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(Supplement 1), S185-S194.