

# Final Year Medical Student Diabetes Questionnaire

## MS4 Survey

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Researchers at SUNY Upstate Medical University are conducting a survey to understand how well 4th year medical students are prepared to evaluate and manage diabetes mellitus, one of the most common chronic diseases in adults. Our goal is to identify gaps in confidence and knowledge concerning the management of diabetes so that appropriate modifications in the curriculum can be proposed.

We are asking all 4th year medical students to complete this survey. This should take you approximately 5 minutes to complete. All responses will be kept confidential and you will never be identified. Completion of this survey is completely voluntary.

Age in Years:

What is your gender?

- ☐ Female  
☐ Male  
☐ Non-binary/Other  
☐ I prefer not to answer

What is your race? Check all that apply.

- ☐ White  
☐ Black or African American  
☐ Asian  
☐ American Indian or Alaska Native  
☐ Native Hawaiian or Other Pacific Islander  
☐ Other  
☐ I prefer not to answer

What ethnicity?

- ☐ I am of Latinx/Hispanic origin  
☐ I am not of Latinx/Hispanic origin  
☐ I prefer not to answer

What is your first choice specialty for residency? If your specialty requires a transitional or preliminary year, please list both the prelim specialty and your final specialty of choice.

### Do you or did you:

- |  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| Have diabetes of any type?                                     | <input type="radio"/> | <input type="radio"/> |
| Have any close friends or relatives with diabetes of any type? | <input type="radio"/> | <input type="radio"/> |
| Ever take an elective course in endocrinology or diabetes?     | <input type="radio"/> | <input type="radio"/> |
| Participate in the endocrinology club?                         | <input type="radio"/> | <input type="radio"/> |

If you have any close friends or relatives with diabetes of any type, do/did you help care for them?

- ☐ Yes  
☐ No

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### How valuable were the following courses in teaching you about diabetes?

	Definitely not valuable	Not very valuable	Neutral	Somewhat valuable	Very valuable	Not applicable
Required MS1 course/lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Required MS2 course/lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diabetes SPECIAL elective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3rd year Clerkships in Internal Medicine and Family Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medicine or Family Medicine AI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Endocrinology/Diabetes elective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you wish to describe other courses or learning experiences that taught you about diabetes, please do so in the space provided:

### Please indicate your confidence levels for the following:

	Definitely not confident	Not very confident	Neutral	Somewhat confident	Very confident
How confident are you in diagnosing an adult with diabetes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How confident are you in prescribing/adjusting medications used to treat a person with Type 1 diabetes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How confident are you in prescribing/adjusting medications used to treat a person with Type 2 diabetes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How confident are you in managing diabetic ketoacidosis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How confident are you in diagnosing and treating diabetic nephropathy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How confident are you in setting individual goals for people with diabetes regarding glycemic control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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### To help us identify knowledge gaps, please answer the following:

- Which of the following supports the diagnosis of diabetes mellitus?
- ☐ hemoglobin A1c 6.8% and fasting glucose 110 mg/dL  
☐ hemoglobin A1c 6.5% and fasting glucose 132 mg/dL  
☐ hemoglobin A1c 6.3% and fasting glucose 136 mg/dL
- Gargine insulin is:
- ☐ long-acting  
☐ intermediate-acting  
☐ rapid-acting
- In general, a rapid-acting subcutaneous insulin injection has peak action at
- ☐ 0.5-3 hours  
☐ 4-8 hours  
☐ 6-10 hours
- Commercially available insulin pumps:
- ☐ need to be surgically inserted  
☐ are filled with NPH insulin  
☐ are filled with a rapid-acting insulin  
☐ use basal insulin only
- The definition of hypoglycemia is a blood glucose level less than:
- ☐ 50 mg/dL  
☐ 70 mg/dL  
☐ 80 mg/dL  
☐ 100 mg/dL
- The target blood glucose range for healthy adults with diabetes before a meal is:
- ☐ 80-180 mg/dL  
☐ 100-200 mg/dL  
☐ 80-130 mg/dL
- In order to avoid diabetic ketoacidosis, when a person with type 1 diabetes is NPO:
- ☐ discontinue all insulin  
☐ continue basal insulin  
☐ continue only sliding scale insulin
- When using multiple daily insulin injections, rapid-acting insulin is best used:
- ☐ to meet basal insulin requirements  
☐ to cover ingested carbohydrates  
☐ as a supplement to correct hyperglycemia  
☐ to cover ingested carbohydrates and as a supplement to correct hypoglycemia
- Diabetic ketoacidosis can develop in:
- ☐ type 1 diabetes only  
☐ type 2 diabetes only  
☐ both type 1 and 2 diabetes  
☐ none of the above
- A person with diabetic nephropathy is most likely to have an \_\_\_\_\_.
- ☐ urine albumin : creatinine ratio of  $\geq 30$  mg/G Cr and be prescribed losartan or ramipril  
☐ urinalysis with 2+ protein and hematuria and be prescribed losartan or ramipril  
☐ urine albumin : creatinine ratio of 15 mg/G Cr and be prescribed antidiabetic  
☐ all of the above
- GLP-1 receptor agonists are particularly helpful in adults with type 2 diabetes with:
- ☐ obesity  
☐ heart disease  
☐ pancreatitis  
☐ obesity and heart disease

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- A 58-year-old obese adult has type 2 diabetes treated with metformin and his hemoglobin A1c (A1c) remains above goal. His weight has not changed despite having met with a dietitian 3 months ago and having increased his physical activity. He wants help losing weight. You do the following:
- ☐ Add glipizide  
☐ Add basal insulin  
☐ Add semaglutide  
☐ Add sitagliptin
- A 36-year-old woman with type 1 diabetes takes insulin glargine daily and insulin aspart with meals. Glucose levels during the day and bedtime are acceptable but hypoglycemia at 3 a.m. is reported and awakens her from sleep. You advise her to:
- ☐ Decrease insulin aspart with dinner  
☐ Stop exercising  
☐ Decrease insulin glargine dose  
☐ Stop insulin glargine
- A 28-year-old man takes insulin glargine daily and insulin lispro with meals. He reports the following glucose levels (mg/dL):  
Before Breakfast (130)  
Before Lunch (121)  
Before Dinner (58)  
Bedtime (175)  
You advise him to:
- ☐ Decrease insulin glargine  
☐ Decrease insulin lispro with dinner  
☐ Decrease insulin lispro with lunch  
☐ Decrease insulin lispro with breakfast
- A 25-year-old woman is taking once daily insulin glargine and pre-meal insulin aspart. Her blood glucose levels throughout the day are  
Before Breakfast (80)  
Before Lunch (140)  
Before Dinner (124)  
Bedtime (250)  
You advise her to:
- ☐ Increase insulin glargine  
☐ Decrease insulin glargine  
☐ Increase insulin aspart with dinner  
☐ Decrease insulin glargine and increase insulin aspart with dinner
- Optional: What suggestions do you have for additional or better approaches to prepare medical students to provide care for adults with diabetes?