



## SURVEY OF PHYSICIANS' PERSPECTIVES ON DEINTENSIFYING DIABETES MEDICATIONS

Survey ID: **0000** Password: **[redacted]**

This is a survey designed by physician researchers at the Johns Hopkins School of Medicine. The survey will take approximately 10 minutes. **There is a \$10 Amazon gift card included** to thank you for your time.

We want to learn how physicians like you make decisions about deintensifying diabetes medications for older adults (aged 65 years or older) with type 2 diabetes. Deintensifying (also called deprescribing) is defined as stopping a medication, reducing the dose, or switching to an alternative medication with a better risk/benefit profile.

This survey is confidential and your individual responses will not be identifiable. Your information will only be seen by researchers at Johns Hopkins. There are no foreseeable risks or direct benefits associated with this research. Completion of this survey is entirely voluntary and will serve as your consent to take part in this research study. This study is approved by the Institutional Review Board of the Johns Hopkins University School of Medicine.

**Please return the completed survey in the enclosed stamped return envelope.** Alternatively, you can take this survey online by going to: **[www.survevdiabetes.com](http://www.survevdiabetes.com)** or scanning the QR code to the right, and entering the Password and Survey ID above.

QR Code – links to  
online survey



Thank you very much for your participation in this important study. Please contact me directly with any questions.

Sincerely,

Scott J. Pilla, MD MHS – Principal Investigator  
Division of General Internal Medicine, Johns Hopkins University  
Phone: (908) 768-0002 email: [spilla1@jhmi.edu](mailto:spilla1@jhmi.edu)  
Study No. IRB00273367

### Eligibility Questions

1. Have you completed training and are practicing medicine independently (e.g. not a resident or fellow)?  
 Yes  
 No → If No, you are **not eligible**. Please stop here and return the survey in the stamped return envelope.
2. In your practice, do you see older adults (aged  $\geq 65$  years) with type 2 diabetes in the outpatient setting?  
 Yes  
 No → If No, you are **not eligible**. Please stop here and return the survey in the stamped return envelope.
3. What is your primary clinical specialty?  
 Internal Medicine  
 Family Medicine / General Practice  
 Medicine-Pediatrics  
 Geriatrics  
 Endocrinology  
 Other specialty → If other specialty, you are **not eligible**. Please stop here and return the survey in the stamped return envelope.

***Please continue to the next page to start the survey →***

**PART 1. Clinical Scenarios**

We will describe 3 clinical scenarios. We will ask what changes you would make, if any, to the patient’s diabetes medications if you were the physician managing the patient’s diabetes. There is no right or wrong answer, please answer based on your clinical judgment.

**Scenario #1.** Mrs. C is a 79 year old woman who has type 2 diabetes, hypertension, and GERD. She lives independently and exercises daily. Her hemoglobin A1c (HbA1c) today is 6.3%. Her diabetes medications are the maximum dose of metformin and an intermediate dose of glimepiride (a sulfonylurea). She takes 3 medications for conditions other than diabetes.

For each row, please mark **the one action** that you would take for Mrs. C’s glimepiride.

Situation	Your recommendation				
	Make no changes	Increase glimepiride dose	Decrease glimepiride dose	Stop glimepiride	Switch glimepiride to another diabetes medication class
Mrs. C reports no recent hypoglycemia and no medication concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. C reports no recent hypoglycemia, and expresses a desire to take less medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. C reports no recent hypoglycemia, and expresses a desire to keep her blood sugar tightly controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. C had 3 episodes of hypoglycemia with mild symptoms and glucose readings of 55 to 65 mg/dl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. C had 1 episode of hypoglycemia causing confusion requiring her family member to assist her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. C had 1 episode of hypoglycemia causing somnolence resulting in an emergency department visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>For the following rows, we’re going to change some details about Mrs. C’s history. Assume the rest of the scenario is the same, and that Mrs. C reports no recent hypoglycemia or medication concerns.</i>					
If Mrs. C was 90 years old	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. C was taking more than 10 medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. C was recently diagnosed with metastatic breast cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. C could not afford another class of diabetes medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

If in any of the above situations you chose to switch glimepiride to another diabetes medication class, which medication class would you switch to? (**please select your one first choice**)

- Not applicable because I did not choose to switch glimepiride
- Thiazolidinedione (such as pioglitazone / Actos®)
- DPP-4 inhibitor (such as sitagliptin / Januvia®)
- GLP-1 receptor agonist (such as liraglutide / Victoza®)
- SGLT-2 inhibitor (such as empagliflozin / Jardiance®)
- Long-acting insulin (such as glargine / Lantus®)
- Other diabetes medication class
- Don’t know

**Scenario #2.** Mr. P is a 77 year old man who has type 2 diabetes, coronary artery disease with a prior myocardial infarction, chronic kidney disease stage 4 (serum creatinine 2.2, eGFR 34), and osteoarthritis which impairs his mobility. He lives with his daughter who helps him with housework, shopping, and transportation. His HbA1c today is 7.3%. His only diabetes medication is insulin glargine (long-acting insulin) 30 units nightly; he does not take metformin because of low kidney function. He takes 6 medications for conditions other than diabetes.

For each row, please mark **the one action** that you would take for Mr. P’s insulin glargine.

Situation	Your recommendation				
	Make no changes	Increase glargine dose	Decrease glargine dose	Stop glargine	Stop or decrease glargine and add another diabetes medication class
Mr. P reports no recent hypoglycemia and no medication concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mr. P reports no recent hypoglycemia, and expresses a desire to take less medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mr. P reports no recent hypoglycemia, and expresses a desire to get his blood sugar under better control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mr. P had 3 episodes of hypoglycemia with mild symptoms and glucose readings of 55 to 65 mg/dl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mr. P had 1 episode of hypoglycemia causing confusion requiring his family member to assist him	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mr. P had 1 episode of hypoglycemia causing somnolence resulting in an emergency department visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>For the following rows, we’re going to change some details about Mr. P’s history. Assume the rest of the scenario is the same, and that Mr. P reports no recent hypoglycemia or medication concerns.</i>					
If Mr. P was 90 years old	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mr. P was taking more than 10 medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mr. P had worsening kidney function and started hemodialysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mr. P could not afford another class of diabetes medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

If in any of the above situations you chose to stop or decrease glargine and add another diabetes medication class, which medication class would you add? **(please select your one first choice)**

- Not applicable because I did not choose to switch glargine
- Thiazolidinedione (such as pioglitazone / Actos®)
- Sulfonylurea (such as glipizide / Glucotrol®)
- DPP-4 inhibitor (such as sitagliptin / Januvia®)
- GLP-1 receptor agonist (such as liraglutide / Victoza®)
- SGLT-2 inhibitor (such as empagliflozin / Jardiance®)
- Other diabetes medication class
- Don’t know

**Scenario #3.** Mrs. R is a 78 year old woman with type 2 diabetes and advanced Alzheimer’s dementia. She lives with her husband who is her primary caregiver and provides assistance with bathing, dressing, household tasks, and manages her medications. She is able to eat a consistent diet and her weight has been stable. Her HbA1c today is 7.7%. Her diabetes medications are the maximum dose of metformin and an intermediate dose of glipizide (a sulfonylurea). She takes 3 medications for conditions other than diabetes.

For each row, please mark **the one action** that you would take for Mrs. R’s glipizide.

Situation	Your recommendation				
	Make no changes	Increase glipizide dose	Decrease glipizide dose	Stop glipizide	Switch glipizide to another diabetes medication class
Mrs. R and her husband report no recent hypoglycemia and no medication concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. R and her husband report no recent hypoglycemia, and express a desire for her to take less medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. R and her husband report no recent hypoglycemia, and express a desire to get her blood sugar under better control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. R had 3 episodes of hypoglycemia with mild symptoms and glucose readings of 55 to 65 mg/dl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. R had 1 episode of hypoglycemia causing confusion requiring her family member to assist her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the past month, Mrs. R had 1 episode of hypoglycemia causing somnolence resulting in an emergency department visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>For the following rows, we’re going to change some details about Mrs. R’s history. Assume the rest of the scenario is the same, and that Mrs. R and her husband report no recent hypoglycemia or medication concerns.</i>					
If Mrs. R was 90 years old	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. R was taking more than 10 medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. R initiated home hospice care for progressive cognitive decline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Mrs. R could not afford another class of diabetes medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

If in any of the above situations you chose to switch glipizide to another diabetes medication class, which medication class would you switch to? **(please select your one first choice)**

- Not applicable because I did not choose to switch glipizide
- Thiazolidinedione (such as pioglitazone / Actos®)
- DPP-4 inhibitor (such as sitagliptin / Januvia®)
- GLP-1 receptor agonist (such as liraglutide / Victoza®)
- SGLT-2 inhibitor (such as empagliflozin / Jardiance®)
- Long-acting insulin (such as glargine / Lantus®)
- Other diabetes medication class
- Don’t know

## PART 2. Your Practices

1. Think about your patients aged 65 years or older for whom you manage their type 2 diabetes that you have seen in the last 3 months. How often did you reduce or stop a diabetes medication for these patients in the last 3 months?

- Never                       Rarely (<5% of patients)                       Sometimes (~25% of patients)  
 About half the time (~50% of patients)                       More than half the time

2. In these same patients, how often did you switch one diabetes medication to another for a better risk/benefit profile in the last 3 months?

- Never                       Rarely (<5% of patients)                       Sometimes (~25% of patients)  
 About half the time (~50% of patients)                       More than half the time

3. How important is reducing or stopping diabetes medications to the clinical care of older adults with type 2 diabetes?

- Not at all important                       Low importance                       Neutral                       Important                       Very important

4. How important is switching diabetes medications due to their risk/benefit profile to the clinical care of older adults with type 2 diabetes?

- Not at all important                       Low importance                       Neutral                       Important                       Very important

5. Physicians might consider reducing or stopping diabetes medications for many reasons. Which of the following do you think are important reasons to consider reducing or stopping a diabetes medication for an older adult with type 2 diabetes? **(select all that apply)**

- To reduce the risk for hypoglycemia  
 To reduce the risk for medication side effects other than hypoglycemia  
 To reduce the burdens of administering medications, such as injections or blood glucose self-monitoring  
 To reduce the total number of medications the patient is taking  
 To reduce the cost of medications to the patient  
 The patient is not taking the medication as prescribed  
 The patient's HbA1c is lower than the target recommended in guidelines  
 The patient has a limited life expectancy (<5 years)  
 Another reason (please specify): \_\_\_\_\_

6. Reducing or stopping diabetes medications may be challenging for many reasons. Which of the following do you think are important barriers to reducing or stopping a diabetes medication for an older adult with type 2 diabetes? **(select all that apply)**

- Reducing/stopping could increase the risk for clinically significant hyperglycemia in the short-term  
 Reducing/stopping could increase the risk for diabetes complications in the long-term  
 There is insufficient time or competing clinical demands in patient visits  
 Reducing/stopping could negatively affect diabetes quality metrics  
 Reducing/stopping could cause a negative patient outcome with medico-legal implications  
 Reducing/stopping may interfere with another provider's treatment plan  
 There are not clear practice guidelines for when and how to reduce/stop diabetes medications  
 Patients and/or their family are reluctant to change the medications they're currently taking  
 Patients and/or their family are reluctant to let their blood sugar run higher  
 Reducing/stopping could cause patients and/or their family to feel that you have given up on them  
 Another barrier (please specify): \_\_\_\_\_

7. For the following types of community-dwelling older adults with type 2 diabetes, what HbA1c target do you typically recommend in your practice?

Description of adult aged ≥65 years with type 2 diabetes	Your recommended HbA1c target							No specific target	Don't know
	<6.5%	<7.0%	<7.5%	<8.0%	<8.5%	<9.0%			
<u>Healthy</u> : few coexisting conditions, intact cognition, fully functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Complex health status</u> : multiple coexisting chronic illnesses, impaired instrumental activities of daily living, and/or mild-to-moderate cognitive impairment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Very complex or poor health status</u> : end-stage chronic illness, impaired activities of daily living, or moderate-to-severe cognitive impairment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART 3. Information About You**

8. What is your gender?

- Male       Female       Other: \_\_\_\_\_

9. What is your ethnicity?

- Not Hispanic or Latino       Hispanic or Latino

10. What is your race? (select all that apply)

- American Indian or Alaska Native       Asian       Black or African American  
 Native Hawaiian or Other Pacific Islander       White       Other: \_\_\_\_\_

11. What is your age? \_\_\_\_\_ years

12. How many years has it been since you graduated residency? \_\_\_\_\_ years

13. On average, how many hours per week do you spend in outpatient face-to-face or telemedicine patient interaction (do not include supervision of trainees or precepting)?

- <15       15-19       20-24       25-29       30-34       35-39       40+

14. Which description best matches your primary practice?

- Private solo or group practice  
 Practice or outpatient department affiliated with hospital or large health entity  
 Health maintenance organization or other prepaid practice (e.g., Kaiser Permanente)  
 Non-federal government clinic (e.g., state, county, city, etc.)  
 Family planning clinic (including Planned Parenthood)  
 Federal government operated clinic (e.g., VA, military, etc.)  
 Community health center (e.g., Federally Qualified Health Center)

15. In what type of setting is your primary practice located?

- Urban       Suburban       Rural

16. In general, what is the insurance breakdown of your patients?

- \_\_\_\_\_ % Private insurance  
 \_\_\_\_\_ % Medicare  
 \_\_\_\_\_ % Medicaid, Medicaid/Medicare dual eligible, or other state-based program  
 \_\_\_\_\_ % Uninsured or self-pay

**END OF SURVEY - Please return the survey in the stamped return envelope. Thank you!**