

Appendix I

Surveying pharmacists' confidence in patient counseling on the safe use of regular U-500 (concentrated) insulin

The purpose of this questionnaire is to gather your perceptions of Humulin R regular U-500 (concentrated) insulin in your pharmacy practice setting. We ask that you please answer honestly – there are no right or wrong answers. This project is considered research. Completion of this questionnaire serves as informed consent to participate in this research project. The questionnaire will take approximately 10 minutes to complete. No external funding from any insulin manufacturers was used to support this research. If you have any questions or concerns, please contact Dr. Rick Hess (hessr@etsu.edu or 423-439-2075). Thank you in advance for your input! Your thoughts are valued!

For purposes of this questionnaire, please consider the following terms:

U-500 insulin: Humulin R® regular U-500 (concentrated) insulin

U-100 insulin: Humalog® (lispro), Novolog® (aspart), Apidra® (glulisine), Humulin R® (regular), Novolin R® (regular), Humulin N® (NPH), Novolin N® (NPH), Lantus® (glargine), Levemir® (detemir), Humulin 70/30®, Novolin 70/30®, Humalog Mix 75/25®, Humalog Mix 50/50®, Novolog Mix 70/30®

1. What is your gender? ☐ Male ☐ Female

2. What is your age? _____

3. What type of pharmacy setting do you practice in? If you worked in more than one setting over the past 12 months, answer for the setting that you worked the most hours.

- ☐ Ambulatory care clinic ☐ Independent ☐ Other (please specify) _____
☐ Chain ☐ Hospital/Institutional

4. What state do you currently practice in? _____

5. What year did you graduate pharmacy school? _____

6. How many years of additional post-graduate training (i.e., residency, fellowship) did you complete? _____

7. On a typical day, what is the average number of prescriptions your pharmacy fills? _____

8. How many times during each working day do you dispense U-100 insulin?

- ☐ 0 times ☐ 1-10 times ☐ > 10 times


9. How many times during each working day do you counsel on U-100 insulin?

- ☐ 0 times ☐ 1-10 times ☐ > 10 times

10. When counseling on U-100 insulin, which of the following items do you cover? (Mark all that apply)

- ☐ Checking blood sugar ☐ Insulin storage ☐ Weight gain
☐ Disposal of syringes ☐ Injection technique ☐ Treatment of hypoglycemia
☐ Insulin dose ☐ Symptoms of hypoglycemia ☐ Timing of insulin injection

11. Have you ever dispensed U-500 insulin? (if No, skip to question 12)

-  ☐ Yes
☐ No (skip to question 12)

10a. How many times, over the last 6 months, have you dispensed U-500 insulin? _____

10b. How many times, over the last 6 months, have you counseled on U-500 insulin? _____

10c. What type of syringe do your patients use to inject U-500 insulin?

- ☐ Insulin syringe ☐ Tuberculin syringe ☐ Unsure ☐ Both

10d. How often do prescribers include both units and volume on U-500 insulin prescription orders? Example: Inject 0.25 mL (125 units) insulin SQ TID before meals.

- ☐ Never ☐ Half of the time ☐ All of the time
☐ Seldom ☐ Most of the time

12. Does your pharmacy keep U-500 insulin stocked as part of your normal inventory? Yes ☐ No ☐ N/A ☐

On a scale of 1 (strongly disagree) to 5 (strongly agree), please indicate the extent to which you disagree/agree with each of the following statements

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please mark one number for each item	SD	D	N	A	SA
13. I feel confident in my ability to dispense U-100 insulin.	1	2	3	4	5
14. I feel confident in my ability to dispense U-500 insulin.	1	2	3	4	5
15. I feel confident in my ability to counsel a patient on how to accurately draw up the correct dose of U-100 insulin in an insulin syringe.	1	2	3	4	5
16. I feel confident in my ability to counsel a patient on how to properly draw up the correct units of U-500 insulin in an insulin syringe.	1	2	3	4	5
17. I feel confident in my ability to counsel a patient on how to properly draw up the correct units of U-500 insulin in a tuberculin syringe.	1	2	3	4	5
18. I feel confident in my ability to counsel a patient on proper injection technique for U-100 insulin.	1	2	3	4	5
19. I feel confident in my ability to counsel a patient on proper injection technique for U-500 insulin.	1	2	3	4	5
20. I feel confident in my ability to counsel a patient on storage of U-100 insulin.	1	2	3	4	5
21. I feel confident in my ability to counsel a patient on storage of U-500 insulin.	1	2	3	4	5
22. I feel confident in my ability to counsel a patient on the proper timing of a U-100 insulin dose.	1	2	3	4	5
23. I feel confident in my ability to counsel a patient on the proper timing of a U-500 insulin dose.	1	2	3	4	5
24. I feel confident in my ability to counsel a patient when (e.g., before each meal, fasting, 2 hours after eating, etc.) to check his/her blood sugar based upon U-100 insulin type to determine blood sugar control.	1	2	3	4	5
25. I feel confident in my ability to counsel a patient when (e.g., before each meal, fasting, 2 hours after eating, etc.) to check his/her blood sugar based upon U-500 insulin to determine blood sugar control.	1	2	3	4	5
26. I feel confident in my ability to counsel a patient on symptoms of hypoglycemia caused by U-100 insulin types.	1	2	3	4	5
27. I feel confident in my ability to counsel a patient on symptoms of hypoglycemia caused by U-500 insulin.	1	2	3	4	5
28. I feel confident in my ability to counsel a patient on how to treat hypoglycemia caused by U-100 insulin types.	1	2	3	4	5
29. I feel confident in my ability to counsel a patient on how to treat hypoglycemia caused by U-500 insulin.	1	2	3	4	5
30. I am more likely to call a physician office to clarify insulin dosing with a prescription for U-500 insulin compared to U-100 insulin.	1	2	3	4	5
31. Do you feel that it is easier, the same, or more difficult to counsel a patient safely on using U-500 insulin compared to U-100 insulin? <input type="checkbox"/> Easier <input type="checkbox"/> Same <input type="checkbox"/> More difficult					
32. Have you ever had a patient report an adverse effect (e.g., severe hypoglycemia) from using U-500 insulin? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure					
33. Multiple barriers can prevent a pharmacist from counseling patients on U-500 insulin. Listed below are 5 examples that could serve as barriers to counseling. Using each number only once, please rank the factors from 1 to 5 where 1 = biggest barrier and 5 = smallest barrier in counseling patients on U-500 insulin.					
_____ Job-related time constraints					
_____ Lack of personal knowledge on U-500 insulin					
_____ No patient counseling resources available					
_____ Prescriber already counseled patient					
_____ Patient refuses counseling					
34. When did you first receive education about regular U-500 insulin?					
<input type="checkbox"/> Pharmacy school classroom <input type="checkbox"/> Continuing Education Program <input type="checkbox"/> Rotation while in school <input type="checkbox"/> Self-taught <input type="checkbox"/> Post-graduate training (i.e., residency) <input type="checkbox"/> Never					