

Supplementary material 1. PWD survey

Sanofi Toujeo Max Solostar Quant Patient Survey

We would like to assure you that we act in accordance with all relevant codes of conduct and legislation for confidentiality in market research. The aim of this market research is to gain your views and is not in any way promotional. Any information you disclose will be treated in the strictest confidence. You can withdraw from the survey at any time and withhold information as you see fit.

In order to participate in this study, you must acknowledge and agree to the following terms regarding study requirements and the information you will provide in this survey:

Respondent Data Integrity Policy

Important and costly decisions are made based on the data you and other respondents will provide in this survey. To ensure the high quality of our data we closely monitor the information respondents provide during this survey.

Note that we have incorporated quality control checks throughout this survey which will help us determine whether reasonable care has been taken in completing it. If at any point, we determine that a respondent has not taken reasonable care in completing the study, the survey will be terminated immediately, and we reserve the right to withhold all or partial payments for the respondent's research participation.

Confidentiality of Study Information Agreement

Please note that during this market research study you may be exposed to product information that is investigational in nature and may or may not be approved by the appropriate government agencies for use in clinical practice. The purpose of this research is purely to gain your feedback and in no way is a marketing or sales endorsement by this market research company or our sponsors. By participating in this market research study, you agree to hold confidential any information you may obtain through this research, and specifically agree not to discuss with others, or attempt to print, copy, or distribute any of the information contained herein.

- I have read the above Confidentiality of Study Information Agreement and respondent Data Integrity Policy and agree that if it is determined that I did not take reasonable care in completing this study, the distributor of the survey has the right to withhold all or partial payments for my research participation. IN WITNESS WHEREOF, the parties hereto have duly executed this [\[INSERT](#)

DATE AND TIME RESPONDENT IS TAKING THE SCREENER – FOR
EXAMPLE: April 1, 2020, 4:00pm]

Transparency Reporting

The market research that you will be participating in is being conducted as double-blind. What this means is that neither you nor the sponsor of the research will know the identity of the other party.

Payments or transfers of value made to Physicians for participation in double-blind market research are excluded from reporting under the Federal Sunshine Regulations; therefore, payments will NOT be reported for your participation in this research project.

However, in the unlikely event that your identity becomes known to the research sponsor, or the sponsor's identity becomes definitively known to you, and you are subject to Federal Sunshine Regulations, the payment will then become reportable. If you are a licensed professional not subject to Federal Sunshine Regulations, the study sponsor may require payments for your participation in this research project to be disclosed to them.

Please note that we conduct our research in a manner that will minimize the risk of the research becoming un-blind; but we want you to be aware that payment would be reportable if this were to occur.

Pharmacovigilance and Product Technical Complaints Reporting

We are required to pass on to our client details of adverse events and or product complaints pertaining to their products that are mentioned during the market research study. Although your responses will, of course, be treated in confidence, should your responses during the survey indicate an adverse event or product complaint in a specific or group of patients, we will need to report this even if it has already been reported by you directly to the company or to regulatory authorities.

In such a situation, you will be asked whether you are willing to waive the confidentiality given to you under the Market Research Codes of Conduct specifically in relation to that adverse event/product complaint. All other responses you provide during the survey will continue to remain confidential and you will still have the option to remain anonymous if you so wish.

Do you acknowledge and agree to the above terms and the information you will provide in this survey?

- Yes. I would like to complete the survey. [\[CONTINUE TO SURVEY\]](#)
- No. I do not agree and will not complete the survey. [\[TERMINATE\]](#)

Note:

All words highlighted in **yellow** will not be shown to respondents; it's for aiding survey questionnaire review only. All instructions in **blue** or blue boxes are for survey programming and understanding skips.

Sample target:

- T2D basal insulin only, 50+ units basal insulin/day (n=200)
- T2D basal insulin plus RAI, 50+ units basal insulin/day (n=200)

Inclusion Criteria:

- T2D on 50 units or more of long-acting insulin per day (50-80 units/day; 80+ units/day – no quota set)
 - PWD on long-acting Insulin using non-high-capacity pens (i.e. excluding Toujeo Max Solostar, Toujeo Solostar, Tresiba FlexTouch U-200)
 - PWD on long-acting insulin using syringes
- PWD on long-acting insulin for longer than 1 year

Panel data:

- Demographics
- Healthographics (e.g. A1c)
 - Diabetes Type
 - A1c
 - Duration of diabetes – age diagnosed
 - Current insulin brand(s) – long and rapid-acting (if using)
 - Other injectables, oral therapies and brand

Survey questionnaire flow:

1. Respondent Profile (+ Awareness of high-capacity pens)
2. Basal and RAI Insulin Use Characteristics (Part 1)
3. Conjoint Module
4. Concept Test (blinded)
5. Basal Insulin Use Characteristics (Part 2)
6. Challenges and Unmet Needs
7. Insurance status, OOPs, Other injectable therapies and OAD

Patient Quantitative Survey

Respondent Profile

[For your reference only; many of the following are already captured from our panel data.]

Duration of diabetes

How old were you when you were diagnosed with diabetes? Please type your diagnosis age in the box below.

___ years old

Basal Insulin and RAI Use Characteristics (Part 1)

[Note: This section will include a short list of use characteristics; more use characteristics questions will be asked after the “Conjoint” module and before with the “Challenges and Unmet Needs” module. This will preserve the integrity of the responses to the conjoint questions.]

Insulin (Yes/No)

Do you currently take insulin for your diabetes?

- ☐ Yes
- ☐ No **[screen out]**

Long-acting insulin

(Note: daily dose of long-acting insulin (units/day, injections/day, split injections); other aspects of dosing regimen will be asked after the conjoint questions)

The following questions will ask you about which injectable insulins you are currently taking. You may be taking more than one type of insulin: for example, one at bedtime and another at mealtimes. Please be careful to not confuse similar-sounding insulins, for example Humalog and Humulin, or Novolog and Novolin. You may want to take a look at your insulin pen, insulin vial or packaging to check the brand names.

Are you currently taking any of the following long-acting insulins?

- ☐ Basaglar
- ☐ Lantus
- ☐ Levemir

- ☐ Semglee
- ☐ Toujeo [screen out]
- ☐ Tresiba 100 units/mL
- ☐ Tresiba 200 units/mL [screen out]
- ☐ Soliqua (long-acting insulin combined with a GLP-1) [screen out]
- ☐ Xultophy (long-acting insulin combined with a GLP-1) [screen out]
- ☐ None of the above [screen out]

How long ago did you start taking [pipe-in: current long-acting insulin]?

- ☐ Within the past 12 months [screen out]
- ☐ 1 to 2 years ago
- ☐ More than 2 years ago

Which of the following best describes how you usually take your [pipe-in: current long-acting insulin]?

- ☐ I use a syringe only
- ☐ I use a pen only
- ☐ I use a pen and a syringe [screen out]

How many units of [pipe-in: current long-acting insulin] do you take in a typical day?

___ units [screen out if <50 units]

Approximately how long have you been taking your current dose of ___ units per day?

- ☐ Less than 6 months [screen out]
- ☐ 6-12 months [screen out]
- ☐ More than 12 months

How many times do you inject your [pipe-in: current long-acting insulin] on a typical day?

- ☐ 1 [screen out if >80 units and only injecting once]
- ☐ 2
- ☐ More than 2

Display to those taking more than 1 injection of long-acting insulin per day

Which of the following best describes how you take your [pipe-in: current long-acting insulin] on a typical day?

- ☐ I take my injections one after another (a few minutes or less between injections)
- ☐ I space out my injections during the day

Display to those taking more than 1 injection of long-acting insulin per day

Please explain why you split your daily dose of [pipe-in: current long-acting insulin] into [pipe-in: two/more than 2] injections on a typical day. Think back to the conversation you may have had with your healthcare provider.

Hold time

Display to long-acting insulin pen users only, that is, exclude syringe users

How long do you usually hold the needle in your skin after you finish injecting your dose of [pipe-in: current long-acting insulin]? Please enter the time in seconds.

- ☐ ____ seconds [require number entry]
- ☐ I remove needle immediately after all the insulin is injected
- ☐ I don't keep track

Awareness of high-capacity pens

How familiar are you with high-capacity insulin pens? High-capacity pens hold more insulin than standard insulin pens. They are also able to inject more insulin in a single injection than standard pens.

- ☐ I've never heard of high-capacity insulin pens
- ☐ I've heard of high-capacity insulin pens, but don't know what they are
- ☐ I've heard of high-capacity insulin pens, and know a little about them
- ☐ I've heard of high-capacity insulin pens, and know a lot about them

Rapid-acting (mealtime) insulin

Are you currently taking any of the following rapid-acting (mealtime) insulins?

- ☐ Admelog
- ☐ Apidra
- ☐ Fiasp
- ☐ Insulin Aspart (generic)
- ☐ Insulin Lispro (generic)
- ☐ Humalog 100 units/mL
- ☐ Humalog 200 units/mL
- ☐ Lyumjev
- ☐ Novolog
- ☐ Other. Please specify:
- ☐ None of the above [exclusive]

How many times do you inject your rapid-acting (mealtime) insulin on a typical day?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ More than 6

Conjoint Module – Attributes Preamble

Today, we would like to get your perspective on long-acting insulin pens. Whether you know a lot or a little about them, let's get on the same page with the terms we use.

[Randomize display order for all attribute preambles]

Display “generic insulin pen” description to respondents using vial and syringe

An insulin pen is a reusable or disposable pen-like device that is used for injecting a desired dose of insulin.

For the purpose of today's survey, we'll focus on disposable pens. Disposable pens contain a prefilled insulin cartridge and are thrown away once the insulin has been used up.

When using any type of insulin pen, the needle must be replaced after each injection.

Unopened insulin and new insulin pens must be stored in the refrigerator. Once opened, insulin pens do not have to be refrigerated but should be kept at room temperature and out of direct sunlight. Insulin pens should never be stored with a needle attached.

Insulin pen vs. Vial and syringe



Dose dialing and injection

Insulin pens can vary in how the dose is dialed in and injected.

Some pens have a **dial extension** that will get longer as more units are dialed in. To inject, you push down on the top of the extended portion of the pen.

Other pens allow you to dial in the dose without extending the length of the pen. To inject, you push down on a button.

For both types of pens, the dose is displayed in the window next to the arrow.

Pen with dial extension

And push down



Pen with push button

no dial extension



Injection Volume and Concentration:

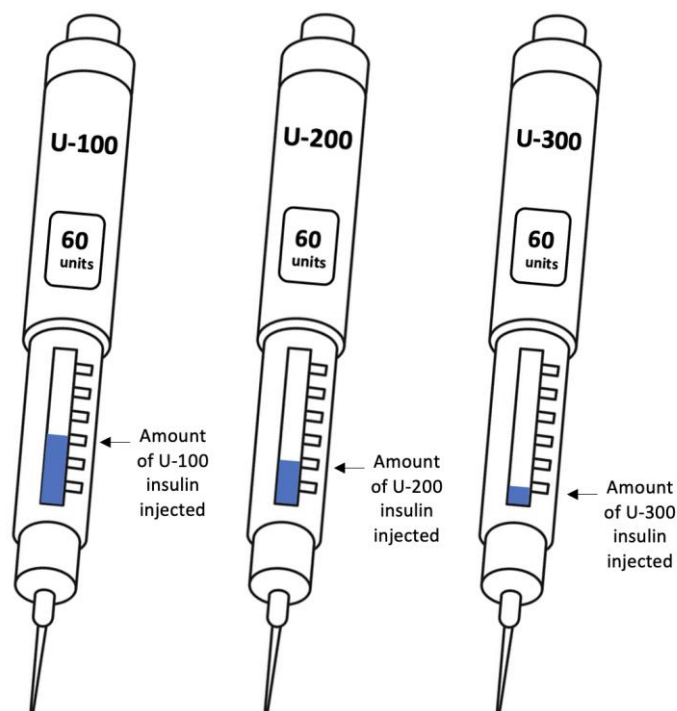
Different long-acting insulins can have different concentrations, or a different number of insulin units per mL. This means that the same number of insulin units can be delivered in a different injection volume (or amount of liquid) depending on the concentration of the insulin.

If insulin concentration is lower, a larger volume (more liquid) will be injected per dose.

If insulin concentration is higher, a smaller volume (less liquid) will be injected per dose.

The following are potential insulin concentrations along with their corresponding injection volumes (amount of liquid) compared to your [\[pipe-in current long-acting insulin brand\]](#):

Same number of units delivered in different amounts of liquid



- **U-100:** 100 units/mL - this is the concentration of your current long-acting insulin, [\[pipe-in brand\]](#)
- **U-200:** 200 units/mL - this concentration means you will need to inject **half the amount of liquid** compared to your [\[pipe-in current long-acting insulin brand\]](#)
- **U-300:** 300 units/mL - this concentration means you will need to inject **one-third the amount of liquid** compared to your [\[pipe-in current long-acting insulin brand\]](#)

Before we continue, we want to make sure we have described a few concepts clearly.

As a quick reminder, your current [\[pipe in current long-acting insulin brand\]](#) is a U-100, which means a concentration of 100 units per mL.

Is the following statement true or false?

“You will need one-third of the amount of liquid (volume) if you are injecting a U-300 long-acting insulin since the U-300 is 3 times more concentrated than your [\[pipe in current long-acting insulin brand\]](#).”

- ☐ Yes
- ☐ No [\[show previous preamble description again\]](#)
- ☐ I am not sure [\[show previous preamble description again\]](#)

Pen capacity:

Long-acting insulin pens can vary in their capacity, or how many insulin units they contain.

The long-acting insulin pens we are going to show you today can hold **300 units**, **450 units**, **600 units**, or **900 units**.

Display to pen users

300 units:

- Same number of full doses as your **[pipe in: long-acting insulin]** pen
- Same number of pens per refill as current
- 5 pens per box
- Same number of [trips to the pharmacy or online order] as current to get your **[pipe in: long-acting insulin]** pen

450 units:

- 1.5 times the number of full doses as your **[pipe in: long-acting insulin]** pen
- Same number of pens per refill as current
- 3 pens per box
- Potentially fewer [trips to the pharmacy or online orders] over the course of a year to refill your **[pipe in: long-acting insulin]**

600 units:

- 2 times the number of full doses as your **[pipe in: long-acting insulin]** pen
- Fewer pens needed
- 3 pens per box
- Potentially fewer [trips to the pharmacy or online orders] over the course of a year to refill your **[pipe in: long-acting insulin]**

900 units:

- 3 times the number of full doses as you **[pipe in: long-acting insulin]** pen
- Fewer pens needed
- 2 pens per box
- Potentially fewer [trips to the pharmacy or online orders] over the course of a year to refill your **[pipe in: long-acting insulin]**

A summary of the pens with different capacities:

	300 units	450 units	600 units	900 units
Number of full doses compared to [pipe in: long-acting insulin] pen	Same	1.5X	2X	3X
Number of pens per refill	Same	Fewer pens	Fewer pens	Fewer pens
Pens per box	5	3	3	2
Trips to pharmacy compared to current	Same	Potentially fewer	Potentially fewer	Potentially fewer

Display to syringe users

- **300 units:** The pen will provide [X] full doses.
- **450 units:** The pen will provide [1.5X] full doses.
- **600 units:** The pen will provide [2X] full doses.
- **900 units:** The pen will provide [3X] full doses.

[Number of full doses shown to each respondent will be calculated using their self-reported recommended dose.]

When there aren't enough units left in the pen to administer a full dose, you can either...

- Throw away the unused insulin OR
- Inject the remaining insulin and then take a second shot to complete the dose

Hold time:

When injecting insulin using an insulin pen, you need to press down the injection button and hold the pen at the injection site with the needle inserted for a certain number of seconds after you see "0" in the dose window (hold time). Hold times can either be **5 seconds**, **6 seconds**, or **10 seconds** long, depending on the pen.

Increment for dialing dose:

When dialing in your specific insulin dose, different pens allow you to set the dose at different increments.

- A pen with **1-unit increments** allows you to dial in any whole number of units for your dose (e.g. 51, 52, 53...).
- A pen with **2-unit increments** allows you to dial in any even number of units for your dose (e.g. 50, 52, 54...).

Maximum units per injection:

There is a maximum number of units that a long-acting insulin pen can deliver in a single injection. This limit can either be **80 units** or **160 units**, depending on the pen.

Shelf life:

Insulin pens must be stored in the refrigerator before they are opened. Once opened, insulin pens have a limited shelf life, and most should be stored at room temperature and out of direct sunlight. If the pen has reached the end of its shelf life, it should be disposed of properly, even if there is still insulin inside.

Shelf-life duration can vary. Opened long-acting insulin pens can have a shelf life of either **4 weeks (28 days)**, **6 weeks (42 days)**, or **8 weeks (56 days)**.

Conjoint Table -- For team's reference and programming only – not shown to respondents.

The conjoint design will cover the long-acting insulin pens below.

Attribute	Toujeo Max Solostar	Toujeo Solostar	Tresiba FlexTouch (U-200)	Lantus Solostar	Tresiba FlexTouch U-100	Levemir FlexTouch	Basaglar Kwikpen	Semglee Pen
Total number of units in each pen	900 units	450 units	600 units	300 units	300 units	300 units	300 units	300 units
Maximum units per injection	160	80	160	80	80	80	80	80
Hold time (in seconds)	5	5	6	10	6	6	5	10
Concentration/Injection volume compared to current	U-300; one-third of current	U-300; one-third of current	U-200; half of current	U-100; same as current	U-100; same as current	U-100; same as current	U-100; same as current	U-100; same as current
Does the dial extend when dialing dose	Yes	Yes	No	Yes	No	No	Yes	Yes

Shelf life once opened	8 weeks	8 weeks	8 weeks	4 weeks	8 weeks	6 weeks	4 weeks	4 weeks
Increment for dialing dose	2 units	1 unit	2 units	1 unit	1 unit	1 unit	1 unit	1 unit

For syringe users -- Openness to using insulin pens

Display to syringe users AFTER conjoint preambles and BEFORE conjoint module

With what you know about insulin pens, which of the following best describes your current thinking?

Please assume that using insulin pens would cost about the same as using syringes and they are recommended by your doctor.

[randomize list]

- ☐ I don't think insulin pens would ever be right for me. [skip conjoint module]
- ☐ I am open to trying insulin pens.
- ☐ I'm planning to switch to an insulin pen and thinking about which one would be right for me.
- ☐ I used to use an insulin pen and I would be open to using them again.
- ☐ I used to use an insulin pen and I would not use them again. [skip conjoint module]

Conjoint Module

In this part of the survey, we will show variations of insulin pens for dosing long-acting insulin, with different combinations of features. The variations presented to you may or may not be currently available in the market. Please assume that in all cases the insulin pens are recommended by your doctor and that the long-acting insulins themselves all work the same.

We will show you **X pairs of insulin pens** and their corresponding features side-by-side. Your job is to look at the features of each and select the one you would prefer to use for dosing long-acting insulin.

Please take your time and make sure you have made a thoughtful choice. Sometimes it can be a little tough weighing the pros and cons!

The selection buttons are at the bottom of the page.

Conjoint Questions

(1/X) Which of the following insulin pens would you prefer to get and use? [Repeat X number of times]

Concept Test

We would like your feedback on a specific long-acting insulin pen that is currently available in the market.

[\[Show the following reminder to respondents using insulin pens only.\]](#)

As a quick reminder, you have a total of 300 units in your [\[pipe in current long-acting insulin brand\]](#) pen at a concentration of 100 units/mL (U-100). You can give yourself a maximum of 80 units per injection.

	Insulin Pen X
Total number of units in each pen	900 units per pen Larger capacity means fewer pens per refill and longer pen life, so less storage space and potentially fewer refills would be required.
Maximum units per injection	160 units Those on more than 80 units of insulin per day may be able to take their full dose in one injection instead of two.
Hold time (in seconds)	5
Concentration/Injection volume compared to current	U-300 High concentration insulin means that the amount of liquid (volume) you inject would be reduced by 66%.
Does the dial extend when dialing dose	Yes
Shelf life once opened	8 weeks
Increment for dialing dose	2 units

How interested are you in this insulin pen for dosing long-acting insulin?

- ☐ Very interested
- ☐ Somewhat interested
- ☐ Not very interested
- ☐ Not at all interested

How likely would you be to switch to this insulin pen for dosing long-acting insulin?

Please assume for this question that your doctor agrees that this long-acting insulin and pen is an appropriate option, and that cost, health insurance coverage, and eligibility are not barriers.

- Definitely
- Likely
- Unlikely
- Definitely not

Why are you [pipe-in: definitely, likely, unlikely or definitely not] going to use/switch to this insulin pen? [open end]

Basal Insulin Use Characteristics (Part 2)

Now, we would like you to think about your [\[pipe in: current long-acting insulin\]](#) and dosing regimen.

How many full doses per pen

[\[To be calculated not specifically asked\]](#)

How many full doses do you typically get from one of your long-acting insulin pens?

[_ full doses](#)

Display to those who only inject long-acting insulin once per day

Do you ever miss a [\[pipe-in: long-acting insulin\]](#) dose?

- ☐ No, never
- ☐ Yes, once a month
- ☐ Yes, twice a month
- ☐ Yes, once a week
- ☐ Yes, more than once a week

Display to those who inject long-acting insulin more than once per day

Do you ever miss your first [\[pipe-in: long-acting insulin\]](#) dose of the day?

- ☐ No, never
- ☐ Yes, once a month
- ☐ Yes, twice a month
- ☐ Yes, once a week
- ☐ Yes, more than once a week

Display to those who inject long-acting insulin twice per day

Do you ever miss your second [\[pipe-in: long-acting insulin\]](#) dose of the day?

- ☐ No, never
- ☐ Yes, once a month
- ☐ Yes, twice a month
- ☐ Yes, once a week
- ☐ Yes, more than once a week

Display to those who inject long-acting insulin more than twice per day

Do you ever miss your third [pipe-in: long-acting insulin] dose of the day?

- ☐ No, never
- ☐ Yes, once a month
- ☐ Yes, twice a month
- ☐ Yes, once a week
- ☐ Yes, more than once a week

Display to those who skip sometimes or frequently

Please explain why you miss your [pipe-in: long-acting insulin] doses. [open end]

How they handle small amounts of leftover insulin (throw away, short dose)

Display to insulin pen users

You previously told us you inject [pipe in: long-acting units] units of [pipe in: long-acting insulin brand] per day.

Some people find that when their long-acting insulin pen is close to being empty, there isn't enough left in their pen for a full dose.

[for respondents taking more than one dose per day] If you are taking more than one injection per day, think about each individual dose.

Have you ever experienced this situation?

There is only a little [pipe in long-acting insulin brand] left in your pen. You don't inject it, but instead, you start a new pen to get a full dose with only one injection.

- ☐ No, this never happens [skip questions on frequency and units wasted]
- ☐ Yes, less than once a month [skip questions on frequency and units wasted]
- ☐ Yes, more than once a month

Display next 2 questions to those who select “Yes, more than once a month” to question re not using leftover insulin

You just told us when there is only a little [pipe in long-acting insulin brand] left in your pen. You don’t inject it, but instead, you start a new pen to get a full dose with only one injection,

On average, how many times a month does that happen?

_____times a month

How many units are typically left unused in the previous pen?

_____units

Here is a slightly different situation that might happen when your long-acting insulin pen is close to being empty.

Have you ever experienced this situation?

There isn’t enough [pipe in long-acting insulin brand] left in your pen for a full dose, you just inject what’s left. You don’t start a new pen to complete the dose with a second injection.

- ☐ No, this never happens [skip questions on frequency and units shorted]
- ☐ Yes, less than once a month [skip questions on frequency and units shorted]
- ☐ Yes, more than once a month

Display the following 2 questions to those who select “Yes, more than once a month” to question re shorting insulin

You just told us when you just inject what’s left in your pen and don’t start a new one to complete the dose.

On average, how many times a month does that happen?

_____times a month

How many units of [pipe in: long-acting insulin brand] do you typically inject?

_____units

Display to those who select “Yes, more than once a month ” to question re shorting insulin

Tell us why you just inject what’s left in your pen and don’t start a new one to complete the dose.

Please select all that apply.

- Changing pens is too much of a hassle
- I don’t always have a second pen available
- I don’t want to take a second injection because injections are painful
- I don’t want to take a second injection because of limited injection sites on my body
- I think it is sufficient for my glucose control when I am injecting an amount close to my complete dose
- Other (please specify):

Display to those who select “Yes” to questions regarding not using leftover and/or shorting insulin

Please indicate the extent to which you agree or disagree with the following.

When there isn’t enough [pipe in long-acting insulin brand] left in my pen, it is stressful when I realized I have to give myself two injections to complete my full dose.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Display to those who select “Yes” to question re wasting (not using leftover insulin)

When there is still some [pipe in long-acting insulin brand] left in my pen, it is stressful for me to throw it away.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Display to those who select “Yes” to question re shorting insulin

When there isn't enough [\[pipe in long-acting insulin brand\]](#) left in my pen for a full dose, it is stressful for me to inject only what's left in the pen and not complete my full dose.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Refill frequency/method

Where do you get your long-acting insulin pens?

- ☐ I pick them up at the pharmacy
- ☐ I get them through mail order
- ☐ Other (please specify): _____

How frequently do you refill your [\[long-acting insulin\]](#) prescription?

- ☐ Every 30 days
- ☐ Every 90 days
- ☐ Other (please specify): _____

Prior pen used and switching experience

Display to those who use a long-acting insulin pen

Did you use a different long-acting insulin pen before your current pen?

- ☐ Yes
- ☐ No

Display to those who used to use a different pen

Please tell us which pen you used to inject your [\[long-acting insulin\]](#) BEFORE you switched to your current long-acting insulin pen.

[\[Programming display logic will hide their current pen from the answer choices.\]](#)

- ☐ Basaglar KwikPen
- ☐ Levemir FlexTouch

- ☐ Lantus SoloStar
- ☐ Toujeo Max Solostar
- ☐ Toujeo Solostar
- ☐ Tresiba FlexTouch (100 units/mL)
- ☐ Tresiba FlexTouch (200 units/mL)
- ☐ Other (please specify): _____

Other injections/ GLP-1s

[# of injections are known by each of the GLP-1s; most are once weekly with the exception of Victoza and Adlyxin – once daily and Byetta twice daily. There should be no need to ask.]

Do you currently take any of the following injectable medicines for your diabetes?

- ☐ Adlyxin
- ☐ Bydureon
- ☐ Byetta
- ☐ Ozempic
- ☐ Tanzeum
- ☐ Trulicity
- ☐ Victoza
- ☐ Other. Please specify. _____
- ☐ None of the above **[exclusive]**

Are you currently injecting other medication(s) to treat conditions outside of diabetes?

- ☐ Yes
- ☐ No

[If “Yes” to other injections]

How many injections per week do you take to treat conditions outside of diabetes?

_____ injections per week

Challenges and Unmet Needs

Now we are going to ask for your feedback regarding your experience using your [pipe in current long-acting insulin brand].

Please indicate the extent to which you agree or disagree with each of the following statements regarding your [pipe in long-acting insulin brand] in general.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- Frequent trips to the pharmacy for long-acting insulin refills are burdensome for me [shown to those who refill at pharmacy]
- Frequent mail order refills for long-acting insulin refills are burdensome for me [shown to those who refill mail order]
- Throwing away leftover/unused long-acting insulin is a waste of money.
- I prefer calling my doctor's office less often to request refills for my long-acting insulin.

Display to insulin pen users

- My long-acting insulin pens take up too much space in the refrigerator.
- Carrying fewer long-acting insulin pens when I am traveling would be less burdensome.

Please indicate the extent to which you agree or disagree with each of the following statements regarding your [pipe in long-acting insulin brand] injections and dosing regimen.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- The volume (or amount of liquid) of long-acting insulin I am injecting is distressing to me.
- The number of units of long-acting insulin I am injecting is distressing to me.

Display to respondents with 2+ injections/day

- I would prefer to take one long-acting insulin injection every day.
- I find it challenging to be spontaneous in social situations when taking my second daily long-acting insulin injection.

Display to respondents on RAI, or GLP-1 or other non-diabetes injectables

- One less injection per day would make a meaningful difference to my diabetes injection burden [only for those RAI and/or GLP-1]

When using your current long-acting insulin, have you ever experienced any reaction(s) at your injection sites, including pain, bruising, knots and/or bumps?

- No
- Yes, some of the time.
- Yes, all the time.

Please indicate the extent to which you agree or disagree with each of the following statements regarding injection sites.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- Rotating injection sites is a hassle.
- Finding unused injection sites is challenging for me

Display to those with injection site reactions

- Injection site reactions to long-acting insulin, including burns, bruising and/or bumps, are bothersome for me

Display to respondents who skip doses

- Skipping or missing long-acting insulin injections is worrisome to me.
- Sometimes I miss taking a dose of long-acting insulin because injections are painful.
- Sometimes I miss taking a dose of long-acting insulin because the injection volume is too large.
- Sometimes I miss taking a dose of long acting insulin to save money.
- My blood glucose is not in good control because I skip or miss long-acting insulin injections.

Please indicate the extent to which you agree or disagree with each of the following statements regarding using your long-acting insulin pen.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- I prefer to use and dispose of fewer [pens/syringes], needles and packaging to be less environmentally wasteful.

Display to insulin pen users

- Pushing the injection button on my long-acting insulin pen is challenging for me.

OADs

Do you currently take any oral drugs for your diabetes?

- ☐ Yes
- ☐ No

Display to those taking oral drugs

The next question will ask about any oral drugs you may currently take for your diabetes. You might find it helpful to look at the packaging for your diabetes drugs to identify them correctly. Thank you for taking the time and trouble to do this.

Do you currently take any of the following oral drugs for your diabetes? Please select all that apply.

- Metformin (e.g., Glucophage, Glumetza, Fortamet, etc)
- Sulfonylureas (e.g., Diabeta, Dymelor, Glipizide, Glucotrol, etc)
- Oral GLP-1 receptor agonist (i.e., Rybelsus)
- SGLT-2 inhibitor (e.g., Invokana, Farxiga, Jardiance, etc)
- DPPIV inhibitor (e.g., Januvia, Janumet, Onglyza, Trajenta, etc)
- Other oral medication
- None of the above [\[exclusive\]](#)

Insurance status and OOP

Which of the following best describes what kind of medical/health care insurance helps pay for most or all of your diabetes-related care, medicines and supplies?

- ☐ Private health insurance, preferred provider organization (PPO plan)
- ☐ Private health insurance, health maintenance organization (HMO plan)
- ☐ Private health insurance, exclusive provider organization (EPO plan)
- ☐ Medicare only
- ☐ Medicare plus private insurance
- ☐ Medicaid
- ☐ VA, Military, Armed Forces
- ☐ Self pay (i.e. no insurance)

In a [\[typical month/90-day period\]](#), how much money do you pay out of pocket for your [\[long-acting insulin\]](#)?

For this question, if you are covered by an insurance plan, please assume your deductible has not yet been met.

Please enter a whole number below in dollars.

END OF SURVEY

Supplementary material 2. HCP survey

Sanofi Toujeo Max Solostar Quant HCP Survey

07/27/2021

Note:

All words highlighted in **yellow** will not be shown to respondents; it's for aiding survey questionnaire review only. All instructions in **blue** or blue boxes are for survey programming and understanding skips.

Sample target:

- Endocrinologist "Endo" (n=150)
- Primary Care Physicians "PCP" (n=150)

HCPs Inclusion Criteria:

- Specific practice setting and qualifications (see specific survey questions)
- Total patient volume of 150 or more per month (PCP assumption: 11% T2D patients)
 - Of T2D patients treated, $\geq 25\%$ are on insulin
 - Of T2D patients on insulin, $\geq 30\%$ taking 50 units or more of long-acting insulin per day

Survey questionnaire flow:

8. Respondent Profile (+ Awareness of high-capacity pens)
9. Patients' Basal Insulin Use Characteristics (Part 1)
10. Conjoint Module
11. Concept Test (blinded)
12. Patients' Basal Insulin Use Characteristics (Part 2)
13. Challenges and Unmet Needs

HCP Quantitative Survey Standard Disclosure and Consent

We would like to assure you that we act in accordance with all relevant codes of conduct and legislation for confidentiality in market research. The aim of this market research is to gain your views and is not in any way promotional. Any information you disclose will be treated in the strictest confidence. You can withdraw from the survey at any time and withhold information as you see fit.

In order to participate in this study, you must acknowledge and agree to the following terms regarding study requirements and the information you will provide in this survey:

Respondent Data Integrity Policy

Important and costly decisions are made based on the data you and other respondents will provide in this survey. To ensure the high quality of our data we closely monitor the information respondents provide during this survey.

Note that we have incorporated quality control checks throughout this survey which will help us determine whether reasonable care has been taken in completing it. If at any point, we determine that a respondent has not taken reasonable care in completing the study, the survey will be terminated immediately and we reserve the right to withhold all or partial payments for the respondent's research participation.

Confidentiality of Study Information Agreement

Please note that during this market research study you may be exposed to product information that is investigational in nature and may or may not be approved by the appropriate government agencies for use in clinical practice. The purpose of this research is purely to gain your feedback and in no way is a marketing or sales endorsement by this market research company or our sponsors. By participating in this market research study, you agree to hold confidential any information you may obtain through this research, and specifically agree not to discuss with others, or attempt to print, copy, or distribute any of the information contained herein.

- I have read the above Confidentiality of Study Information Agreement and respondent Data Integrity Policy and agree that if it is determined that I did not take reasonable care in completing this study, the distributor of the survey has the right to withhold all or partial payments for my research participation. IN WITNESS WHEREOF, the parties hereto have duly executed this **[INSERT DATE AND TIME RESPONDENT IS TAKING THE SCREENER – FOR EXAMPLE: April 1, 2020, 4:00pm]**

Transparency Reporting

The market research that you will be participating in is being conducted as double-blind. What this means is that neither you nor the sponsor of the research will know the identity of the other party.

Payments or transfers of value made to Physicians for participation in double-blind market research are excluded from reporting under the Federal Sunshine Regulations; therefore, payments will NOT be reported for your participation in this research project.

However, in the unlikely event that your identity becomes known to the research sponsor, or the sponsor's identity becomes definitively known to you, and you are subject to Federal Sunshine Regulations, the payment will then become reportable. If you are a licensed professional not subject to Federal Sunshine Regulations, the study sponsor may require payments for your participation in this research project to be disclosed to them.

Please note that we conduct our research in a manner that will minimize the risk of the research becoming un-blind; but we want you to be aware that payment would be reportable if this were to occur.

Pharmacovigilance and Product Technical Complaints Reporting

We are required to pass on to our client details of adverse events and or product complaints pertaining to their products that are mentioned during the market research study. Although your responses will, of course, be treated in confidence, should your responses during the survey indicate an adverse event or product complaint in a specific or group of patients, we will need to report this even if it has already been reported by you directly to the company or to regulatory authorities.

In such a situation, you will be asked whether you are willing to waive the confidentiality given to you under the Market Research Codes of Conduct specifically in relation to that adverse event/product complaint. All other responses you provide during the survey will continue to remain confidential and you will still have the option to remain anonymous if you so wish.

Do you acknowledge and agree to the above terms and the information you will provide in this survey?

- ☐ Yes. I would like to complete the survey. [\[CONTINUE TO SURVEY\]](#)
- ☐ No. I do not agree and will not complete the survey. [\[TERMINATE\]](#)

HCP Quantitative Survey

Respondent Profile

Practice Setting

What is your primary clinical specialty?

- ☐ Endocrinology
- ☐ Cardiology [Screen out]
- ☐ Primary care
- ☐ Nurse practitioner [Screen out]
- ☐ Physician assistant [Screen out]
- ☐ Other [Screen out]

Are you Board-Certified or Board Eligible in your specialty?

- ☐ Board-Certified
- ☐ Board-Eligible [Screen out]
- ☐ Neither/Unsure [Screen out]

Which category best describes your practice location? If you work at multiple locations, please select the location where you treat the majority of your patients.

- ☐ Rural
- ☐ Urban
- ☐ Suburban

How many years have you been in medical practice post-residency?

- ☐ Less than 2 years [Screen out]
- ☐ 2 to 10 years
- ☐ 11 to 20 years
- ☐ 21 to 35 years
- ☐ More than 35 years [Screen out]

Which of the following best describes your primary practice setting (the setting where you spend 50% or more of your professional time)?

- ☐ Community hospital [Screen out]
- ☐ Teaching/Academic hospital [Screen out]
- ☐ Private general hospital [Screen out]
- ☐ Office-based practice or clinic
- ☐ Private group practice
- ☐ Private solo practice
- ☐ Other type of practice [Screen out]

Are you currently employed and/or paid by a pharmaceutical or biopharmaceutical company or a healthcare manufacturer as a clinical investigator conducting clinical trials or providing services in the area of diabetes?

- ☐ Yes **[Screen out]**
- ☐ No

Do you work for Kaiser Permanente?

- ☐ Yes **[Screen out]**
- ☐ No

In the past month, how many patients have you personally treated?

- ☐ Less than 100 patients per month **[Screen out]**
- ☐ 100 to 149 patients per month **[Screen out]**
- ☐ 150 to 199 patients per month
- ☐ 200 or more patients per month

For the past month, how many patients with type 2 diabetes on the following therapies have you personally treated? If you do not see patients on specific therapies, you can leave it blank or write zero.

[Screen out if: Total T2D <50 for PCP; Total T2D <80 for Endo OR T2D on insulin is less than 25% of total T2D patients]

- ___ Oral diabetes medications (no injectables)
- ___ GLP-1s (no insulin)
- ___ Long-acting insulin (basal)
- ___ Long-acting insulin (basal) + mealtime insulin
- ___ Other

Thinking about your patients with type 2 diabetes on long-acting (basal) insulin, what percent of them are on the following dose per day?

[Screen out if less than 30% of patients on 50 units or more basal insulin]

- Less than 50 units _____
- 50 to 80 units _____
- More than 80 units _____
- 100%**

Patients' Basal Insulin Use Characteristics (Part 1)

For your patients with type 2 diabetes who are taking more than 80 units of long-acting (basal) insulin per day, roughly what percent are taking one, two and more than two injections on a typical day?

- _____ percent taking one long-acting (basal) insulin injection per day
 - _____ percent taking two long-acting (basal) insulin injections per day
 - _____ percent taking more than two long-acting (basal) insulin injections per day
- 100%

[ASK following question if “two” or “more than two” injections per day is not empty]
Of your [INSERT X%, add two AND more than 2 injections per day from prior question] type 2 diabetes patients taking more than 80 units and are injecting 2 or more times per day, roughly what percent are using Lantus, Levemir, Basaglar or Semglee? Please provide your best estimate.

_____percent

[ASK following question if “two” or “more than two” injections per day is not empty]
What percent of your type 2 diabetes patients who are taking more than 80 units of Lantus, Levemir, Basaglar or Semglee are taking their 2 or more injections one immediately after the other? That is, Not spaced out during the day (e.g., one injection in the morning and one in the evening).

_____percent

Training

Roughly what percent of your patients with type 2 diabetes using a long-acting (basal) insulin pen are trained on using the pen?

- _____ percent of my patients are trained on using their basal insulin pens
- I am not sure whether my patients are trained on using their basal insulin pens

Hold time

Roughly what percent of your patients with type 2 diabetes using a long-acting (basal) insulin pen comply with the “hold time” as recommended by the insulin pen manufacturer?

The hold time is the number of seconds patients need to press down on the injection button and hold the pen at the injection site with the needle inserted after they see “0” in the dose window.

- _____ percent of my patients comply with the hold time for their basal insulin pen
- I am not sure whether my patients comply with the recommend hold time

Conjoint Module – Attributes Preamble

Today, we would like to get your perspective on long-acting insulin pens. Let's get on the same page with the terms we use.

[Randomize display order for all attribute preambles]

Dose dialing and injection

Insulin pens can vary in how the dose is dialed in and injected.

Some pens have a **dial extension** that will get longer as more units are dialed in. To inject, one pushes down on the top of the extended portion of the pen.

Other pens allow you to dial in the dose without extending the length of the pen. To inject, one pushes down on a button.

For both types of pens, the dose is displayed in the window next to the arrow.

Pen with dial extension
And push down



Pen with push button
no dial extension



Injection Volume and Concentration:

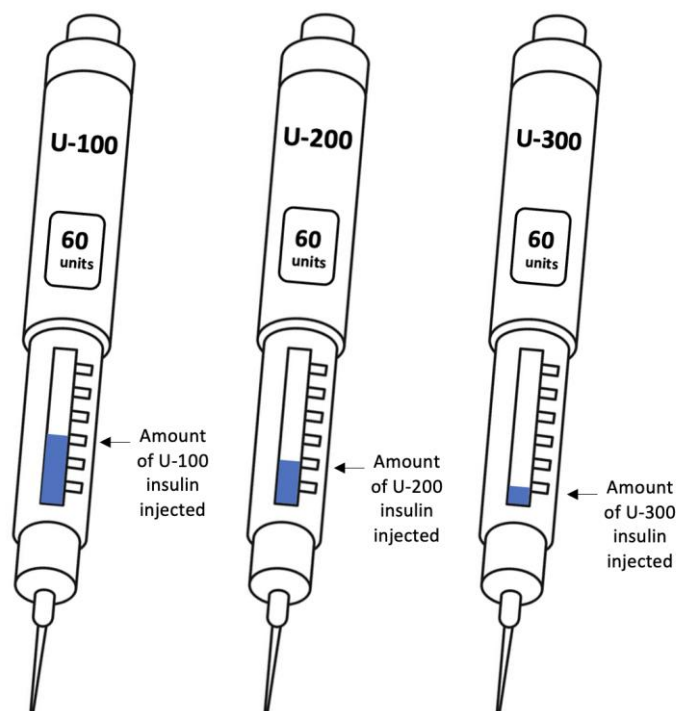
Different long-acting insulins can have different concentrations, or a different number of insulin units per mL. This means that the same number of insulin units can be delivered in a different injection volume depending on the concentration of the insulin.

If insulin concentration is lower, a larger volume will be injected per dose.

If insulin concentration is higher, a smaller volume will be injected per dose.

The following are potential insulin concentrations along with their corresponding injection volumes:

Same number of units delivered in different amounts of liquid



- **U-100:** 100 units/mL
- **U-200:** 200 units/mL - this concentration means one will need to inject **half the volume** compared to a U-100 insulin.
- **U-300:** 300 units/mL - this concentration means one will need to inject **one-third the volume** compared to a U-100 insulin.

Before we continue, we want to make sure we have described a few concepts clearly.

Is the following statement true or false?

“Patients will need one-third of the volume if they switch from a U-100 long-acting insulin to a U-300 long-acting insulin.”

- ☐ Yes
- ☐ No [\[show previous preamble description again\]](#)
- ☐ I am not sure [\[show previous preamble description again\]](#)

Pen capacity:

Long-acting insulin pens can vary in their capacity, or how many insulin units they contain.

The long-acting insulin pens we are going to show you today can hold **300 units**, **450 units**, **600 units**, or **900 units**.

Hold time:

When injecting insulin using an insulin pen, one needs to press down the injection button and hold the pen at the injection site with the needle inserted for a certain number of seconds after one sees “0” in the dose window (hold time). Hold times can either be **5 seconds**, **6 seconds**, or **10 seconds** long, depending on the pen.

Increment for dialing dose:

When dialing in one’s specific insulin dose, different pens allow one to set the dose at different increments.

- A pen with **1-unit increments** allows one to dial in any whole number of units for the dose (e.g., 51, 52, 53...).
- A pen with **2-unit increments** allows one to dial in any even number of units for the dose (e.g., 50, 52, 54...).

Maximum units per injection:

There is a maximum number of units that a long-acting insulin pen can deliver in a single injection. This limit can either be **80 units** or **160 units**, depending on the pen.

Shelf life:

Insulin pens must be stored in the refrigerator before they are opened. Once opened, insulin pens have a limited shelf life, and most should be stored at room temperature and out of direct sunlight. If the pen has reached the end of its shelf life, it should be disposed of properly, even if there is still insulin inside.

Shelf-life duration can vary. Opened long-acting insulin pens can have a shelf life of either **4 weeks (28 days)**, **6 weeks (42 days)**, or **8 weeks (56 days)**.

Conjoint Table -- For team's reference and programming only – not shown to respondents.

The conjoint design will cover the long-acting insulin pens below.

Attribute	Toujeo Max Solostar	Toujeo Solostar	Tresiba FlexTouch (U-200)	Lantus Solostar	Tresiba FlexTouch U-100	Levemir FlexTouch	Basaglar Kwikpen	Semglee Pen
Total number of units in each pen	900 units	450 units	600 units	300 units	300 units	300 units	300 units	300 units
Maximum units per injection	160	80	160	80	80	80	80	80
Hold time (in seconds)	5	5	6	10	6	6	5	10
Concentration/Injection volume	U-300	U-300	U-200	U-100	U-100	U-100	U-100	U-100
Does the dial extend when dialing dose	Yes	Yes	No	Yes	No	No	Yes	Yes
Shelf life once opened	8 weeks	8 weeks	8 weeks	4 weeks	8 weeks	6 weeks	4 weeks	4 weeks

Increment for dialing dose	2 units	1 unit	2 units	1 unit	1 unit	1 unit	1 unit	1 unit
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Conjoint Module

[Programming: Endos and PCPs will randomly split into 2 groups respectively, with half answering the conjoint questions based on a patient profile of 50-80 units of long-acting insulin/day; the other half, a patient profile of 80+ units long-acting insulin /day.]

In this part of the survey, we will show variations of insulin pens for dosing long-acting insulin, with different combinations of features. The variations presented to you may or may not be currently available in the market.

Please assume that in all cases the long-acting insulin formulas all work the same in regards to efficacy and safety.

We will show you **10 pairs of long-acting insulin pens** and their corresponding features side-by-side. Your job is to look at the features of each and select the one you would prefer to prescribe for [pipe in after randomly assigned: patients on 50 to 80 units/ 80 units or more] of long-acting insulin per day.

Please take your time and make sure you have made a thoughtful choice. Sometimes it can be a little tough weighing the pros and cons!

The selection buttons are at the bottom of the page.

Conjoint Questions

(1/10) Which of the following insulin pens would you prefer to prescribe? [Repeat 10 times]

Concept Test

We would like your feedback on a specific long-acting insulin pen that is currently available in the market.

	Insulin Pen X
Total number of units in each pen	900 units per pen Larger capacity means fewer pens per refill and longer pen life, so less storage space and potentially fewer refills would be required.
Maximum units per injection	160 units Those on more than 80 units of insulin per day may be able to take their full dose in one injection instead of two.
Hold time (in seconds)	5 seconds
Concentration/Injection volume	U-300 High concentration insulin means that the amount of liquid (volume) one injects would be reduced by 66% compared to a U-100 insulin.
Does the dial extend when dialing dose	Yes
Shelf life once opened	8 weeks
Increment for dialing dose	2 units

Thinking about your patients currently dosing 50-80 units of long-acting insulin per day.

How likely would you be to prescribe this insulin pen?

Please assume for this question that cost, health insurance coverage, and eligibility are not barriers.

- ☐ Definitely
- ☐ Likely
- ☐ Unlikely
- ☐ Definitely not

Why are you [pipe-in: definitely, likely, unlikely or definitely not] going to prescribe this insulin pen for your patients currently dosing 50-80 units of long-acting insulin per day? [open end]

Now, I want you to think about your patients currently dosing more than 80 units of long-acting insulin per day.

How likely would you be to prescribe this insulin pen?

Please assume for this question that cost, health insurance coverage, and eligibility are not barriers.

- ☐ Definitely
- ☐ Likely
- ☐ Unlikely
- ☐ Definitely not

Why are you [\[pipe-in: definitely, likely, unlikely or definitely not\]](#) going to prescribe this insulin pen for your patients currently dosing more than 80 units of long-acting insulin per day? [\[open end\]](#)

Tell us the characteristics of your T2D patients currently dosing 50 units or more of long-acting insulin per day that would be suitable and benefit the most from the previously described insulin pen.

That is, in terms of how patients are doing in their diabetes management, including but not limited to lifestyle, compliance, and other health factors.

Patients' Basal Insulin Use Characteristics

[Randomize the order of appearance for “skipping/missing”, “shorting”, and “wasting” questions.]

Skipping/missing

What percent of your type 2 diabetes patients currently dosing 50 units or more of long-acting insulin per day are skipping or missing doses?

- _____ percent of are skipping or missing doses
- I am not sure whether my patients are skipping or missing doses

[ASK IF, “I am not sure whether my patients are skipping or missing doses” is not selected.]

Roughly, what percent of your type 2 diabetes patients currently dosing 50 units or more of long-acting insulin per day are skipping or missing doses with the following frequency?

- _____ once a month
 - _____ twice a month
 - _____ once a week
 - _____ more than once a week
- 100%

[ASK IF, “I am not sure whether my patients are skipping or missing doses” is not selected.]

Why are your type 2 diabetes patients currently dosing 50 units or more of long-acting insulin skipping or missing doses? [Open-end]

Shorting

What percent of your type 2 diabetes patients currently dosing more than 50 units of more of long-acting insulin per day are doing the following?

There isn't enough long-acting insulin left in the pen for a full dose, the patient just injects what's left. The patient doesn't start a new pen to complete the dose with a second injection.

- _____ percent of patients are doing the above
- I am not sure whether my patients are doing the above or not

[ASK IF, “I am not sure whether my patients are doing the above or not” is not selected.]

Think of your type 2 diabetes patients currently dosing 50 units or more of long-acting insulin per day who just inject what’s left in the pen and don’t start a new one to complete the dose. What percent are doing so with the following frequency?

- _____ once a month
 - _____ twice a month
 - _____ once a week
 - _____ more than once a week
- 100%**

[ASK IF, “I am not sure whether my patients are doing the above or not” is not selected.]

Why are your type 2 diabetes patients currently using 50 units or more of long-acting insulin per day just injecting what’s left in the pen and don’t start a new one to complete the dose?

Please select all that apply.

- Changing pens is too much of a hassle
- Patients don’t always have a second pen available
- Patients don’t want to take a second injection because injections are painful
- Patients don’t want to take a second injection because of limited injection sites on the body
- Patients think it is sufficient for their glucose control when they are injecting an amount close to their complete dose
- Other (please specify):

Wasting

What percent of your type 2 diabetes patients currently dosing more than 50 units of more of long-acting insulin per day are doing the following?

There is only a little long-acting insulin left in the pen. The patient doesn’t inject it, but instead, starts a new pen to get a full dose with only one injection.

- _____ percent of patients are doing the above
- I am not sure whether my patients are doing the above or not

[ASK IF, “I am not sure whether my patients are doing the above or not” is not selected.]

Please think of your type 2 diabetes patients currently dosing 50 units or more of long-acting insulin per day who don't inject what's in the pen when there is only a little long-acting insulin left, but instead start a new pen to get a full dose with only one injection.

What percent are doing so with the following frequency?

- _____ once a month
 - _____ twice a month
 - _____ once a week
 - _____ more than once a week
- 100%

Agree/Disagree statements (#1 set)

Please indicate the extent to which you agree or disagree with the following.

(On a scale of strongly disagree, somewhat disagree, somewhat agree, strongly agree)

When there isn't enough long-acting insulin left in the patient's pen, it is stressful to the patient when they realize two injections are needed to complete the full dose.

When there is still some long-acting insulin in the patient's pen, it is stressful for the patient to throw it away.

When there isn't enough long-acting insulin left in the patient's pen for a full dose, it is stressful for the patient to inject only what's left in the pen and not complete the full dose.

Other injections/ GLP-1s

What percent of your type 2 diabetes patients on 50 units or more long-acting insulin per day is also taking other injectable medication for their diabetes? Injectable medication includes rapid-acting insulins, and GLP-1s.

_____ percent

Challenges and Unmet Needs

Now we are going to ask for your feedback regarding your patients who are currently dosing 50 units or more of long-acting insulin per day.

Indicate the extent to which you agree or disagree with each of the following regarding long-acting insulin in general.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- Throwing away leftover/unused long-acting insulin is a waste of money.
- Frequent trips to the pharmacy for long-acting insulin refills are burdensome for patients.
- Frequent mail order refills for long-acting insulin refills are burdensome for patients.
- Patients prefer calling my office less often to request refills for their long-acting insulin.
- Long-acting insulin pens take up too much space in patients' refrigerators.
- Carrying fewer long-acting insulin pens when patients are traveling would be less burdensome.

Please indicate the extent to which you agree or disagree with each of the following statements regarding patients' injections and dosing regimens.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- The volume (or amount of liquid) of long-acting insulin patients are injecting is distressing to them.
- The number of units of long-acting insulin patients are injecting is distressing to them.

Think about patients who are currently taking more than one long-acting insulin injection every day.

- Patients would prefer to take only one long-acting insulin injection every day.
- I would prefer patients to take only one long-acting insulin injection every day.
- Patients find it challenging to be spontaneous in social situations when taking their second daily long-acting insulin injection.

Think about patients who are currently injecting mealtime insulin, a GLP-1 and/or other non-diabetes injectable medications in addition to their long-acting insulin.

- One less injection per day would make a meaningful difference to patients' diabetes injection burden.

What percent of your patients injecting 50+ units of long-acting insulin per day experience injection site reactions, including pain, bruising, knots and/or bumps? Please use your best estimate.

_____ % patients experience injection site reactions.

Please indicate the extent to which you agree or disagree with each of the following statements regarding your patients and injection sites.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- Rotating injection sites is a hassle for patients.
- Finding unused injection sites is challenging for patients.

Display to HCPs reporting >0% patients experiencing injection site reactions

- Injection site reactions to long-acting insulin, including burns, bruising and/or bumps, are bothersome for patients.

Think about patients who skip or miss long-acting insulin doses.

- Skipping or missing long-acting insulin injections is worrisome to patients.
- Patients skipping or missing long-acting insulin injections is worrisome to me.
- Sometimes patients miss taking long-acting insulin doses because injections are painful.
- Sometimes patients miss taking long-acting insulin doses because the injection volume is too large.
- Sometimes patients miss taking long-acting insulin doses to save money.
- Patients' blood glucose is not in good control because they skip or miss long-acting insulin injections.

Please indicate the extent to which you agree or disagree with each of the following statements regarding your patients using their long-acting insulin pens.

[Statements randomized]

[4-point scale: Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree]

- Patients prefer to use and dispose of fewer pens, needles and packaging to be less environmentally wasteful.
- I would prefer my patients to use and dispose of fewer pens, needles and packaging to be less environmentally wasteful.
- Pushing the injection button on long-acting insulin pens is challenging for patients.

High-Capacity Pens

We have one final question regarding your experience with specific long-acting insulin pens. Please check the appropriate option for each of the insulin pens below.

[\[Randomized order of pens\]](#)

	Never heard of it	Heard of it, but never prescribed it	Tried it, but not prescribing it	Currently prescribing it
Toujeo Max Solostar				
Toujeo Solostar				
Tresiba FlexTouch U-200				
Tresiba FlexTouch U-100				
Lantus Solostar				
Levemir FlexTouch				
Basaglar Kwikpen				
Semglee Pen				

END OF SURVEY