

## Intake Semi-Structured Interview Guide – Patients Alone

### **Before the first mockup:**

As you may recall, you completed a study about a year ago in which you wrote down the foods you ate and the IBS symptoms you experienced. We've analyzed your data, and have prepared a couple of ways of exploring it. We would like to hear your reactions to them. I want to make it clear right away that we're evaluating the visualizations, not you. You can't do anything wrong here; you don't have to worry about making mistakes.

### **If a provider is present:**

First, we want to take 40 min or so for you to explore the visualizations on your own. Afterwards, a healthcare provider will join us, and you'll have a chance to explore your data together.

### **If the participant requested no provider interaction:**

As you have requested, no provider will be joining us during this interview. You were not the only study participant who voiced their concern about having a provider be part of this interview. For us to better understand the barriers between sharing self-collected data with healthcare providers, would you share with us your concerns about this interaction? If you would prefer not to answer this question, we completely understand and can move on.

### **Everyone:**

We want to hear exactly what you think, so please don't worry that you're going to hurt our feelings. We want to improve it, so we need to know honestly what you think.

As we go along, I'm going to ask you to think out loud, to tell me what's going through your mind. This will help us.

If you have questions, just ask. We have not been able to fully develop a help system yet, and the visualizations are not as polished as a commercial product would be. Your time is very valuable to us and we don't want to waste it.

*[Note to interviewer: Counterbalance the order since we have two fairly developed prototypes]*

### **First Mockup---Tutorial**

We're going to begin the first visualization now. We have a short tutorial that will walk you through what it shows and how to use it. Feel free to stop it at any point and ask questions, or to let us know what you are thinking about it so far.

*[give tutorial animation on demo data]*

### **First Mockup---Data Exploration**

Do you have any comments or questions about the tutorial?

Now I'm going to turn this over to your data.

First, I'm just going to ask you to look at this screen and tell me what you think about it. What are your first reactions?

Again, as much as possible, it will help us if you can try to think out loud so we know what you're thinking about.

From here, go ahead and explore your data. Please continue to think out loud – what questions do you have? How would you try to answer them? What conclusions are you drawing?

*[after about 12 minutes]:* We're about halfway through our time, and we would like to show you the second visualization. If you're enjoying this visualization and you don't want to switch, that's fine---we can stay on this one.

### **After viewing the visualization:**

Now that you have had a chance to explore this visualization, I want to ask you about your overall reactions.

- 1) What conclusions would you make from this mock-up, if any?
- 2) Do you have confidence in these results?  
If not, why not?
- 3) What, if anything, was easy to understand?
- 4) What, if anything, was difficult to understand?
- 5) What, if anything, do you like about this mock-up?
- 6) How would you change this mock-up, if at all?
- 7) Would you change any of your eating behaviors after seeing the data in this mock-up?  
If so, how?  
If not, why not?

### **Second Mockup---Tutorial**

We're now going to look at the second visualization. Once again, we'll start with a tutorial. Feel free to stop at any point and ask questions about the tutorial.

*[show second tutorial]*

## **Second Mockup---Data Exploration**

Do you have any comments or questions about the tutorial?

From here, go ahead and explore your data. Again, as much as possible, it will help us if you can try to think out loud so we know what you're thinking about.

*[After the second data exploration, ask the same questions (in the "After viewing the visualization" section)]*

### **After both visualizations:**

- 1) After seeing these mock-ups, would you recommend going through this method of diary analysis and visualization to other IBS patients?
- 2) What problems do you think other people may experience while interpreting these mock-ups?
- 3) When would you feel the need to repeat this process (including journaling your foods and symptoms)?
- 4) Which of the two visualizations did you prefer, and why?
- 5) Do you have any final comments about either (or both) of the two visualizations?

### **If the participant requested no provider interaction:**

*[probably don't ask these if the patient seemed awkward or hesitant to talk about it]*

- 6) Now that you've seen the visualizations, do you think you would feel comfortable reviewing them with a provider?  
If not, why not?
- 7) Do you think it would be helpful to review these visualizations with a provider or dietitian?  
If so, why?  
If not, why not?

### **Otherwise:**

I am now going to bring in a healthcare provider who has experience with diet and IBS. They were just reviewing your data via the same visualizations you just saw in another room. It was also their first time seeing the visualizations. We are going to ask you both to simulate reviewing these results in a clinic appointment.

## Intake Semi-Structured Interview Guide – Providers Alone

### **While showing mockups.**

A patient with IBS completed a study about a year ago in which they recorded their foods and IBS symptoms in a paper diary---here's an example diary. We analyzed their data using linear regression analyses and have prepared a couple of ways of exploring it, and we'd like to hear your reactions to these visualizations. I want to make it clear right away that we're evaluating the visualizations, not you. You can't do anything wrong here; you don't have to worry about making mistakes.

We want to hear exactly what you think, so please don't worry that you're going to hurt our feelings. We want to improve it, so we need to know honestly what you think.

As we go along, I'm going to ask you to think out loud, to tell me what's going through your mind. This will help us.

If you have questions, just ask. We have not been able to fully develop a help system yet, and the visualizations are not as polished as a commercial product would be. Your time is very valuable to us and we don't want to waste it.

*[Note to interviewer: Make sure provider viewing order is the same as patient viewing order!]*

### **First Mockup---Tutorial**

Now we're ready to begin the first visualization. We have a short tutorial that will walk you through what it shows and how to use it. Feel free to stop it at any point and ask questions, or to let us know what you are thinking about it so far.

*[give tutorial]*

### **First Mockup---Data Exploration**

Do you have any comments or questions about the tutorial?

Now, I'm going to turn this over to the patient's data. First, I'm just going to ask you to look at this screen and tell me what you think about it. What are your first reactions?

Again, as much as possible, it will help us if you can try to think out loud so we know what you're thinking about.

From here, go ahead and explore the patient's data. Please continue to think out loud – what questions do you have? How would you try to answer them? What conclusions are you drawing?

### **After viewing the visualization:**

Now that you have had a chance to explore this visualization, I want to ask you about your overall reactions.

- 1) What questions would you have for the patient about this data, if any?
- 2) What conclusions would you make from this mock-up, if any?
- 3) Do you have confidence in these results?  
If not, why not?
- 4) What, if anything, was easy to understand?
- 5) What, if anything, was difficult to understand?
- 6) What do you like about this mock-up?
- 7) How would you change this mock-up, if at all?
- 8) Do you think this mock-up or whole process could help you better manage IBS in your patients?
- 9) What specific recommendations, if any, would you make to the patient after seeing the data in this mock-up?  
If none, why not?
- 10) Would you want to go through this visualization with your patient during a clinic visit?  
[If yes]:
  - 1) Would you prefer to review the results before the appointment?
  - 2) Would you want your patient to review this visualization alone before the appointment?  
[If no]:
  - 1) Would you want your patient to review this visualization alone, before a clinic appointment?
  - 2) How would you integrate these results/visualizations into your clinic workflow, if at all?

### **Second Mockup---Tutorial**

We're now going to look at the second visualization. Once again, we'll start with a tutorial.

*[show second tutorial]*

## **Second Mockup---Data Exploration**

Do you have any comments or questions about the tutorial?

From here, go ahead and explore the data. Again, as much as possible, it will help us if you can try to think out loud so we know what you're thinking about.

*[After the second data exploration, ask the same questions (in the "After viewing the visualization" section)]*

### **After both visualizations:**

- 1) After seeing these mock-ups, would you recommend this method of diary analysis and visualization to other IBS providers?
- 2) What problems do you think other providers may experience while interpreting these mock-ups?
- 3) What problems do you think patients may experience while interpreting these mock-ups?
- 4) When would you feel the need to have your patient repeat this process (including journaling their foods and symptoms)?
- 4) Which of the two visualizations did you prefer, and why?
- 5) Do you have any final comments about either (or both) of the two visualizations?

I am now going to bring you to meet the study participant whose ACTUAL data we have just been reviewing. We are going to ask you both to simulate reviewing these results in a clinic appointment.

## Intake Semi-Structured Interview Guide – Provider + Patient

### While showing mockups.

Let me begin with introduction. <Mr./Mrs./Ms. patient's last name>, this is Dr. <provider's last name> and Dr. <provider's last name>, this is <Mr./Mrs./Ms. patient's last name>.

Now that you have seen the mockup separately, we would like to invite both of you to explore the same data together. We will then ask you both to share your reactions to this experience.

We want you to simulate what the first follow-up appointment would look like since <Mr./Mrs./Ms. patient's last name> has completed the paper diary. We will assume that both of you have already reviewed the results separately.

We want you to explore the data together, however you feel comfortable. If you liked one of the visualizations more than another, you are welcome to focus on that visualization. Remember that the tutorials are available at any time, and if you have any questions, just ask.

I want to remind you both that we're evaluating the visualizations, not you. You don't have to worry about making mistakes, and we want to hear exactly what you think. Please continue to think out loud and tell us what's going through your minds as we go along.

*[Allow at least 10 minutes for final questions]*

### Questions for the end of the patient/provider session

Next, we have a couple questions regarding the mockups that you just reviewed together.

- 1) What conclusions do you make from reviewing this mock-up *together*, if any?
- 2) What was *different* about reviewing this mock-up *alone*, if anything?
- 3) What was helpful when reviewing this mock-up *together*?
- 4) What was challenging when reviewing this mock-up *together*?
- 5) What would you change to help you review this mock-up together, if anything?
- 6) Did you find the chance to review the data separately helpful, or would you rather have reviewed the data together from the beginning?
- 7) Did reviewing the visualizations together change your mind about which visualization you preferred?