

Supplemental Materials: Informing Goal-Directed Self-Tracking to Support Chronic Condition Management

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Our supplemental materials include:

- [The semi-structured interview protocol for people with migraine](#)
- [The semi-structured interview protocol for providers](#)
- [The themes extracted in the affinity diagram analysis](#)
- [The full paper prototype we used in the interviews](#)

Protocol for People with Migraine

General/Initial Questions

Hi, thank you so much for taking the time to talk with me!

Is it ok if I record this conversation, so I can transcribe our conversation? The audio itself wouldn't be used in presentations; it just makes it easier for us to ensure we're quoting you accurately.

Great! First I'm going to ask you to read this consent form. Let me know if you have any questions!

Give them a copy of the form.

So to get started, I'm going to ask you a couple of questions about your demographics. Again, if there's any question you don't want to answer, it's totally fine for you to ask to skip it!

- Would you mind telling me your age?
- Occupation?
- Educational background?
- And finally, it's our policy not to ever make any assumptions about gender identity, just to make sure that we use the right pronouns when quoting people in the interviews. Can you confirm what gender you want to be listed as?

Thanks! Before we talk about the designs, I'm going to ask you a couple of questions about your experience with migraine.

- How often do you get migraines?
- Do you currently track any information related to your migraines?
 - If so, what kinds of information do you track?
 - Why do you track that information?
 - When do you track the information? (how frequently)
 - How do you track it?
- <if not>
 - Have you ever tracked in the past?
 - Why did you stop?
- Is there any information related to your migraine that you would like to track that you're not currently tracking?
 - If so, what information? What's preventing you from tracking that information!
- Have you ever consulted with a doctor about your migraines?
 - How did that consultation go?

- Did you bring any data that you had tracked related to your migraines to that consultation?
 - If so, did you find it helpful? Why or why not?
 - If not, why not?

Paper Prototype Walkthrough

Have them mark the “selections” they make, and write any text in the box. Small suggestions can go on the margins; larger or design-based suggestions can go on a blank phone screen.

Great! We’re working on designing a mobile and web app that can help people describe and pursue their migraine tracking goals. We have some really early design ideas, and we are hoping for feedback for those designs. You’ll notice that they’re currently extremely ugly visually, and don’t even really look like a phone app; we’re mostly looking for feedback about the functionality and the process, to make sure the system could help people with migraine if actually implemented. But if you do think of something visual that would help support the process, please share that as well!

We’ve printed sheets of paper with screens that represent the functionality we expect to support. I’m going to guide you through what we were thinking for each page. If you wouldn’t mind talking out loud about your initial reactions and the decision making you’re doing, that would be really helpful to us! We’re also going to have you write your input on the paper, and we can jot any feedback you have on the sides, so we can go back and review what you thought. Please do stop or interrupt me at any point if you have any questions or feedback. I have some blank phone screens printed out in case you want to sketch out any ideas that you have. Sound good? Any questions?

App Setup

So the first thing we’re going to go through is the setup process we envision for the app. We think this setup might happen collaboratively, maybe with a doctor. We don’t have a doctor here today, so you can let us know any questions you might ask your doctor if you were going through this process with them. If you think of any feedback that could help facilitate the collaboration, that would also be helpful!

And please keep in mind that I am in no way a medical professional, so none of what I say here should be taken as medical advice.

So let’s open the app and begin setup.

- The first thing you’ll see is a screen that lets you add new goals. We think that by starting with a goal, we can make sure that you and your doctor are on the same page, and help you track exactly and only what you need to track to achieve that goal.

- Do you have any initial comments about having that as the first thing you do?
- Now we're going to specify your primary goal for tracking migraine-related data.
 - <if they currently track, or want to>
 - What is your primary goal? <if they don't know, say it's fine if they don't have one and continue>
 - <if they don't currently track AND don't want to (i.e., don't have a goal)>
 - Can you think of a past goal that we could pretend you still have?
- <if they start talking about multiple>
 - If you have multiple we can talk about all of them, but we're just going to choose one to focus on for the rest of the interview. In the app you would be able to add more than one goal
 - <If they don't know their goal>:
 - That's fine! Would you like to skip it for now, or talk about it a little?
 - <If they know it/end up specifying one>:
 - Could you please write it down?
 - **Why** do you want to achieve that goal?
 - How **useful** do you think achieving goal would be?
 - How **achievable** do you think it is?
 - How much time would you be willing to spend pursuing that goal?
 - In general, how do you think you would approach that goal?
 - Do you have any questions or comments about that goal that you'd like to ask a doctor?
 - If your doctor suggested modifying your goal, how would you respond?
- Great! Now, which of these three categories do you think best describes why you want to collect data related to your migraines? Remember, we're just focusing on a single goal for now, but you would be able to add more goals later.
 - If they specified a goal:
 - How well do you think that category describes your goal?
 - Are any of the categories confusing, or do you have any other questions?
 - If not:
 - Now that you see these categories, do any of them sound right for you?
 - Are any of the categories confusing, or do you have any other questions?
- Now we're going to walk through how we would set up your tracking based on the goal you selected.

The ORDER will depend on the specific goals, but ask similar questions to those above. Show the "help me choose" options (yellow tab) if requested.

- <When configuring fields or adding via "help me choose">
 - Some fields that might make sense for you are <explain/show with the "example" tab on fields>. Can you think of any other fields you may want?
 - We expect the app to automatically suggest some fields. What fields do you think make the most sense to suggest? <suggest if they're stuck>
 - <for triggers>
 - How confident would you say you are that that's a trigger?

- <when “adding” anything>
 - Is there anything else you can think of that you would want to configure for this <trigger|symptom|treatment>?
 - When you’re tracking, would you want it to assume anything by default?
- <when configuring notifications>
 - Would you want any follow-up notifications, if you don’t respond?
- <when configuring automatically synced data>
 - Are there any other devices or data sources you would like to be able to automatically sync data from?
- <If they choose to track “acute medication” as a trigger>
 - <make sure to “automatically” select “acute treatment”>
 - What acute medication(s) do you take?

After Setup

- Overall, did anything about this setup surprise you?
- Did you find the order of the steps intuitive, or did the flow feel awkward to you?
- Was anything confusing, beyond what we talked about?
- Great! I want to talk a little about what you’d expect the actual tracking to look like after this setup.
 - What information would you be tracking, and when would you be tracking it? <if they seem stuck, prompt with what we think>
 - How do you feel about that tracking routine?
 - Is there anything you feel like you should track to achieve your goal that we didn’t set up?
 - Is there anything you feel like you’ve ended up tracking that you don’t want to track?
- What do you think about the prospect of setting up your goal with a doctor present?
 - Do you think it would be helpful?
 - Why/why not?
 - How do you think the process would be different if you went through the setup alone?
 - Would you be comfortable with doing this setup on your own, or would you want to do it with a health doctor?
 - Is there anything you would not want to set up with a doctor there?
- Do you have any other feedback about the app setup process?

App Tracking

Now we’re going to take a quick look at what the app may look like after you set up a goal.

The main page of the app would be a data collection page, so this is what you’d see when you open it after setting up a goal. <choose based on whether they have acute meds>

- First, we have these “quick trackers” for symptoms and acute medications so you can quickly indicate if you’re experiencing symptoms or took medication, without interacting much with the screen.
 - Would you be comfortable interacting with these “quick trackers” while experiencing symptoms?
 - Would you want to add any other “quick tracker”, or remove any of the ones here?
 - <if they’re tracking acute meds>
 - We indicate the number of acute meds. Is there anything else you think would be useful to indicate on that screen?
- We also have this option to track events. For example, you might want to indicate when you have doctor appointments, or when you’re on vacation or something.
 - Would you ever want to add any “events”?
 - <If so>
 - What sort of events do you think you might add?
 - Why do you think those events would be helpful?
 - Would you rather that be an option in the initial setup, related to goals somehow?
- We’d also have the screen on which you’d collect all of your goal-related information.
 - Here’s an example we made, based on this, YOUR tracking would look something like this <sketch it out!>:
 - Was this approximately what you were envisioning, as well?
 - Is there anything you would change about it?

We also have a calendar view where you could access and edit past data

- Would this information be useful for you?
- When and where do you think you might access this information?
- Can you see yourself using the information during a doctor’s appointment?
- What do you think about the calendar format?
 - Would you want any other format instead?

We thought it might also be useful to have a summary of your data within the past month. We thought it might be particularly useful when you have a doctor appointment, in which they ask you about your past migraines.

- Would this be something you think you would use?
 - Why (/why not)?
- What timeframe do you think would be most useful for this information?

In our previous studies, some people have wanted an app to suggest things that might make them feel better when they’re experiencing symptoms. We had this idea for a treatment flowchart, where people could go through and decide what treatments to try.

- Can you see yourself ever using a flowchart like this?
 - What kinds of treatments would you want to see?

We also have a frequently asked questions page

- What questions would you want to have answered in such a page?

We would have this view where you could add or edit tracking goals and see past goals.

- Do you think your goals would change much? Why or why not?

Finally, we'd have a way for you to take a break from tracking.

- Can you see yourself using that functionality?
 - If so, under what circumstances?

Overall:

- Is there anything the app doesn't seem to have that you wish it had? Any functionality it doesn't support that you think is important?
- Is there anything the app has that you think should be removed?
- Do you have any other feedback about the general app format?

Web

In addition to the mobile app, we are planning a website with some additional features. This website would be designed to be used mostly on a laptop, desktop, or tablet.

Data Edit.

Assume you won't be showing the edit page, unless they REALLY want to for some reason

We'd first have some simple functionality where you could edit your past data.

- Does that seem helpful, or do you think you'd want to do all of your data collection and editing on the mobile phone?

Data visualization:

See how they're doing for these; if they start to seem frustrated or confused, back off the interpretation questions. We don't want it to feel like a test

We'd also want to have visualizations of your data, to help you interpret it.

Before we show you our ideas, we were wondering what sorts of visualizations you think would be helpful for your goal.

- What would you want to be able to take away from a visualization?
- Do you know of any kind of graph that would help you find that out? <probe: describe what it is they'll be tracking. Probably pick TWO variables to focus on (symptoms plus factor), for learning. Ask "how would you imagine being shown a graph of your symptoms versus X". Be sure to say it's fine if they don't know!>
 - Would you mind sketching that out?

Great! The visualizations we've sketched out for your dashboard would look something like this.

Make sure to choose the visualization(s) that correspond both with the type of goal AND the type of data they chose (continuous vs categorical data), if it's a "learning" goal.

- <repeat for all visualizations>
 - <sketch out what it might look like for THEM>
 - Do you have any initial thoughts about this visualization?
 - What might you take away from this kind of visualization?
- <if there are multiple>:
 - Do you have a preference between them?
- Is there any other kind of visualization you would want?
 - Would you want that instead of or in addition to this?
 - Would you mind sketching it out?
- Would you ever want to show this data to your doctor?
 - If so, would this kind of visualization be useful in a collaborative setting?
 - If so, how?
 - If not, why not? What would make it better/what would you prefer?
 - Is there anything else you would want to bring your doctor?

Wrap Up

- Overall, can you see yourself using this system?
 - Why or why not?
- Thinking back to the goal you specified at the beginning:
 - Are you still happy with that as your primary tracking goal?
 - Would you want to modify it at all, or add any other goals?
 - Can you think of anything the system could do to better support the goal?
- Is there anything else we haven't talked about that you would change about the system?
Anything you would add or remove?
- <if they've tracked before>
 - How do you think the system would compare to other tracking methods you've used?

That's all of the questions we had. Is there anything else you think we should know?

The next step we're planning on taking is to go talk to doctors to see what they think of our ideas. We're hoping to share the perspectives we learned from people who get migraines. For example, we might discuss goals people wanted to pursue and talk about concerns they brought up. Is it ok with you if we use some anonymized quotes or materials from this interview?

Thank you so much again for participating!

Protocol for Health Providers

General/Initial Questions

Hi, thank you so much for taking the time to talk with me!

Is it ok if I record this conversation, so I can transcribe it? The audio itself wouldn't be used in presentations; it just makes it easier for us to ensure we're quoting you accurately.

First I'm going to ask you to read this consent form. Let me know if you have any questions!

Before we talk about the designs, I'm going to ask you a couple of questions about your background.

- How would you describe your clinical position?
- When did you get your degree?
- How often do you work with patients with migraine?
- Do you have patients with migraine track any data related to their migraine?
 - What kinds of data do you have them track?
 - How do you have them track that data?
 - Why do you have them track that data?
 - What do you do with the data after the patient has tracked it?
 - Can you describe any challenges you encounter when patients track migraine-related data?
 - Is there anything you would want to change about the way you currently have people track?

Paper Prototype Walkthrough

Thanks! So I'm working on designing a mobile and web app that can help people describe and pursue their goals for tracking migraine-related data. We've talked to some people with migraine about our ideas, and now want to see what health providers think of them. We have some very preliminary design ideas right now; you'll notice that they're currently extremely ugly visually, and don't even really look like a phone app. So we're mostly looking for feedback about the functionality, the flow, and the process, to make sure the system could help people with migraine and their health providers if implemented.

We've printed sheets of paper with screens that represent the functionality we want to support. I'm going to guide you through each page. If you wouldn't mind talking out loud about your reactions as we go through, that would be really helpful to us! Please do stop or interrupt me at

any point if you have any questions or feedback. I have some blank phone screens printed out in case you want to sketch out any ideas that you have. Sound good? Any questions?

App Setup

So the first thing we're going to do is walk through the setup process for the app, and we THINK that this setup process might sometimes happen collaboratively, with a health provider. So if you have any thoughts not just on the functionality, but also whether and how you think this kind of setup would fit into your workflow, that would be really helpful!

So when a patient downloads and opens the app for the first time, you would see this page, which encourages adding a goal. Like it says, we think that by explicitly beginning with a goal, we can help make sure you and the patient are on the same page and that the patient is collecting exactly and only what they need to be tracking to achieve their goal.

- Do you have any initial reactions to this as a starting point?

So we're going to go ahead and select "add goal" here. Now the first thing we're thinking about having is a place to state the goal kind of in your and the patient's own words.

- Can you think of a primary goal you think you would often have?
 - Why would you have that as a goal?
 - In what ways would this goal help you treat the patient?
 - In what ways would the goal help the patient help themselves?
 - How achievable do you feel like that goal is?
- Can you think of any other goals you might want to pursue?
- How much do the goals that you have depend on the particular patient?
- How would you feel if the patient had a different goal than you had?
- Can you think of a goal a patient might have that you WOULDN'T want them to pursue?
- Right now we just have one space for a goal; how do you feel about that, rather than having a separate place for you and your patient to state a goal?
- Some of the goals we've seen people with migraine stating include "track the frequency of different types of symptoms and antecedents (if something stands out)"; "Identify triggers that may cause a migraine for me"; and "Clue in on warning signs (ie, drink more water if migraine may be coming on)". What do you think about those goals?
 - Do they sound useful?
 - Do they sound achievable?

The next thing we would ask you to do is categorize your goal. We have these three primary categories, so I'm going to give you a second to look them over and tell me what you think.

- Do you feel like the goals you have fit well under any of these categories?
 - Which categories seem to best fit your goals?
 - Can you think of any goals you might have that does not seem to fit into any of these categories?
- Are any of the categories confusing?

- Are there any goal categories listed here that you wouldn't want a patient to pursue?
- Are there any that you would want a patient to only pursue under certain circumstances?
 - What circumstances?
- What would you want to happen if a patient wanted a different category than you?

So once a goal category was selected, the app would walk you through a setup based on that goal. I'm going to quickly walk you through our options, so you can get a sense of the similarities and differences.

First, within the goal of learning, we again have these three different categories of what people might want to learn. I'll give you a second to look them over.

- What do you think of these categories?
- Do you think you would ever have a goal that fits any of these categories?

So the first goal is identifying contributing factors.

Within each goal we have a description of the goal.

For this goal, we then configure any factors they want to automatically track; right now we can sync with Fitbit and with the weather

- Is there any other type of data you can think of that you would want patients to be able to automatically sync?
- Is there any type of data you can think of that you WOULDN'T want patients to be able to automatically sync?
 - Why?

Then we configure the contributing factors. We first have this popup telling people we recommend that they track acute medication overuse.

- What do you think about that recommendation?
- Is there anything else you would want us to recommend that they track here?
- Is there anything you wouldn't want them to track as a potential trigger?

We've also been thinking about having a list of suggestions, if they're stuck

- Would you WANT the app to have suggestions if you were setting it up with the patient, or would you want to configure everything yourself?
- What do you think of these suggestions?
- How would you feel if the app suggested something you didn't want your patient tracking?
 - If the patient wanted to track it after seeing it on the list, how would you respond?

After contributing factors, people select whether they want to track any as-needed or routine treatments. If they said yes to the popup, we assume they have as-needed medications to track.

- What kinds of treatments would you recommend a patient track?
 - Why?

Next we have symptoms

- What kinds of symptoms would you want patients to track?
 - Would it depend on the patient?
 - How would you feel if the patient wanted to track with <more/less> granularity?
- How would you want patients to track those symptoms? <show fields?>

Finally, we would have you set the tracking frequency.

- How frequently would you want patients to track?
- If they wanted to track <more/less> often than that, how would you feel about that?

So that's the entire setup process for the goal of identifying contributing factors.

- Is there anything that surprised you about the configuration process?
- How did the flow seem to you? Is there anything you would change?
- Overall, as you've seen, we've been leaning towards not having anything we MAKE people track; we have that one popup, and the lists people can access if they choose to. How do you feel about that?
- How would you feel about walking a patient through this process?
 - Would you have time for it during a consultation?
 - How could it be improved to better fit into your workflow?
 - Would you be comfortable if they set it up before a consultation, and then double checked it with you during one?

Now I want to quickly walk through the other goals we have. If anything jumps out at you that you think is missing or that you would want to change, please stop me and let me know!

For the goal of learning about the frequency of migraines or related data, we have patients choose categories they want to track, then walk through the configuration of those categories.

For the before/after test, we have people select the change or changes they're making, the symptoms they want to track, the tracking frequency, and the date on which they're planning on making the change. This is the only goal that does NOT have the acute medication overuse popup, as we assume people tracking for this goal are focused on the change they are making.

The predicting goal setup follows the same basic configuration as the identifying contributing factors setup; people select automatically tracked fields, contributing factors, treatments, then symptoms, and select how often they want to track.

Finally, the monitoring goal setup follows the same configuration as the "learning frequency" setup; people select the categories they want to track and are then walked through that.

So overall, the setup process would always include the initial goal setting and categorizing, and then walking through the appropriate configuration.

- Now that you've seen the different goal categories in a little more detail, is there anything you would want us to add, remove, or change?
 - Why?
- How would you feel about a patient going through this configuration alone, without a health professional?
- Is there anything you can think of that you'd want a patient to track that the app doesn't seem to allow?
- Is there anything you can think of that you wouldn't want a patient to track that the app seems to encourage?

App Tracking

Now we're going to take a really quick look at what the app may look like after you set up a goal.

The main page of the app would be the collection page. We'd let people quickly indicate that they're experiencing symptoms or taking an as-needed medication, and they'd be able to fill out their entire customized protocol.

- Do you think patients would be able to complete the configured tracking routines if they were supported like this?
- If patients didn't feel like tracking everything you configured on a given day, what would you want them to prioritize?
 - Why?

We've also been playing with the idea of event tracking, so people can track things like doctor appointments, vacations, or sick days

- Can you think of any events you would want a patient to track?
 - Why?
- Is there anything else you can think of that might be helpful information to have, that we didn't support setting up in the configuration process? (day-to-day vs abnormal)

We also have a couple of views of the data; first, we have this calendar view. They would be able to see an overview of past data, and go back and view or edit past reports.

- Do you think this information would be helpful for *you* to see?
- Do you think it would be helpful for a *patient* to see?
- Is there anything you would add or change?

We also have this data summary, based on the kinds of things people have mentioned that their doctors sometimes want to know

- Do you think this information would be helpful for *you* to see?
- Do you think it would be helpful for a *patient* to see?
- Is there anything you would add or change?

We also have this flowchart to help people decide how to treat symptoms when they start to experience them. We plan on suggesting things like going to bed early, going in a dark room, and (as a last resort) acute medication, as well as any custom treatments.

- How do you feel about including a treatment flowchart like this?
- Is there anything you would want us to make sure to recommend?
- Is there anything you *wouldn't* want us to include?

<cut unless we have a ton of time> We'd have a migraine FAQ page

- Is there any information you would want us to be sure to include?

We would have this view where you could add or remove goals.

- How often do you think a patient's goals would change?
- How often do you think your goals for your patients would change?
- Would you want to explicitly check in on goals during a consultation?
- Is there any other goal-related information you would want to have here for an appointment?

Finally, we have this way to enable explicit breaks from tracking. For example, if the patient was taking vacation, had a stressful period at work, or was just feeling like they wanted to stop tracking for a bit, they could say that and stop all notifications.

- How do you feel about that kind of functionality?
- Would you ever encourage a patient to use it?
- Would you ever encourage a patient NOT to use it?

Web Interface

So the last thing I want to really quickly talk about is some goal-specific visualizations. Before we take a look at what we've been thinking about, we want to ask a couple questions about what you think would be useful

- Would you want to be able to access visualizations of your patient's data?
 - Why or why not?
- Would you want your patient to be able to access visualizations?
 - Why or why not?
- What kinds of information would you want to be able to take away from the visualizations?
 - How would having that information help you or the patient?
- Would you want to review them before a clinic appointment, during a clinic appointment, or both?
 - Why?

So these are the kinds of visualizations we've been thinking about including. For monitoring or learning frequency, we think things that emphasize symptoms over time would be useful. For

identifying contributing factors or predicting symptoms, we have plots of symptoms vs potential contributing factors. Finally, for the before/after tests, we would emphasize the differences before vs after making the change.

- What do you think of these types of visualizations, in general?
- Do you think they would be useful for you during a clinic appointment?
 - How so? What would you do with the information?
- Do you think they would be useful for you to review alone?
 - Why or why not?
- Do you think they would be useful for your patients to review alone?
 - Why or why not?
- Is there any other kind of visualization that you'd want to see that we haven't included?
- Like I mentioned, we've been thinking we'd base the visualizations you could access on the goal you've selected; do you think that makes sense or would you want to always have access to all of them?

Wrap Up

So that's what we've been envisioning for the system overall.

- How do you think the system would compare to current methods of tracking that your patient use?
- Can you see yourself suggesting that your patients use this system?
 - Why or why not?
- Do you think the system would be helpful to you, as a provider?
 - Why or why not?
 - Would it change anything about how you worked with patients with migraine? If so, how?
- Do you think the system would be helpful to people with migraine, if a health provider wasn't involved?
 - Why or why not?
- Is there anything you feel like the system could do to better support their migraine tracking or management goals?
- Thinking back to the goals you stated at the beginning [<list them>](#), do you still think those are the primary goals you would have? Can you think of any other goals you might have?
 - Would the system support those other goals?
- Anything else you would change, add, or remove from the system?
- Do you have any other feedback?

Themes Extracted in the Affinity Diagram Analysis

This list includes the final set of categories, themes, and subthemes (indicated by indentation level) extracted from the interviews (both with people with migraine and health providers).

- GOALS
 - I didn't have one until the app
 - Management goals
 - Simultaneous goal
 - Secondary goal
 - Future goal
 - Goal for taking action
 - Goal for awareness
 - Patient goal
 - Provider goal
 - Critical path between goals
- GOAL TYPES
 - Goal 1 (learning)
 - Learn Frequency
 - B/A Test
 - ID Patterns
 - Goal 2 (predicting)
 - Goal 3 (monitoring)
- MODEL
 - Deciding
 - Selecting
 - Collection
 - Reflection
 - Evolution/checkin/update
 - Non-binary lapsing
 - (Traditional) lapsing
- EDUCATION
 - App taught something
 - App changed my mind
 - App should educate
 - I lack necessary information
 - App helps me interpret
 - App suggestion
 - Flow chart helps
 - Wrong info would be bad

- Something I would have forgotten
- COLLABORATION
 - App/Data helps doc help patient
 - Doc helps app help me
 - Need to verify app
 - Doc verifies app
 - app verifies doc
 - App helps me avoid the doc
 - When to see a doc
 - Wants app and doc linked
 - Discomfort with collaboration
 - I want to collaborate
 - I want doc to decide
 - Provider disagrees with something
 - Provider thinks patient can use on their own
- OPPOSITES (/MISC)
 - Start narrow and widen
 - Start wide and narrow
 - Track all the things
 - Some things don't need to be tracked
 - Suggested something new
 - I know what I want tracked
 - Habit/routine is helpful
 - Depends on person
 - Better Burden/Value
 - Order based on management goal
 - App helps motivation
 - Happy with what patient wants
 - Streamline/prevent tracking too much
 - "Overuse" is too negative

Full Paper Prototype

PART 1:

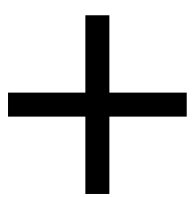
CONFIGURATION

INITIAL GOAL SELECTION

(Seen by all)

You don't have any
migraine tracking goals!

Writing down a goal can ensure you and
your health provider are on the same page
and allow you to track exactly and only
what you need to achieve that goal



Add Goal

What is your **migraine tracking** goal?

WHY do you want to collect migraine-related data?
You can add more goals later if you have multiple!

Back

Skip/
Continue

How would you categorize your migraine tracking goal?

LEARNING about your migraines or related factors

May be a good choice if: you're new to migraine tracking or you're making a change

Example: "I want to learn what factors may contribute to my symptoms", "I want to learn whether starting an exercise routine will improve my symptoms"

Likely requires **medium** effort

PREDICTING whether you're at risk for a migraine

May be a good choice if: you know what factors affect your symptoms, and are willing to track often so you know when those factors are accumulating

Example: "I want know whether I'm likely to experience symptoms today"

Likely requires **highest** effort

MONITORING your migraines and related factors

May be a good choice if: you just want to keep track of migraine-related data

Example: "I want to keep track of how often I exercise", "I want to know how often I experience symptoms"

Likely requires **lowest** effort

Back

Continue

LEARNING SUBGOAL SELECTION

(Seen if *learning* is selected)

What best describes what you want to learn about your migraines?

Learn what factors may affect your symptoms

May be a good choice if: you want to learn more about factors you think might affect your symptoms

Example: I want to know whether I tend to experience symptoms more often when I'm feeling stressed or not sleeping enough

Learn the frequency of your symptoms or related factors

May be a good choice if: you don't want to learn how things relate to each other; you just want to learn frequencies of symptoms or related factors

Examples: I want to know how often I get experience symptoms; I want to know how many times I take medication to stop my symptoms each month

Learn how a change affects your symptoms (before/after test)

May be a good choice if: you have a good idea of your current symptoms, and you want to make a specific change to try to reduce them

Example: I'm starting to exercise consistently and I want to see if it affects my symptoms; I used to avoid caffeine but I want to know whether I can add some back without affecting my symptoms

Back

LEARNING CONTRIBUTING FACTORS

(Seen if that goal type was
selected)

Learn what factors may affect your symptoms

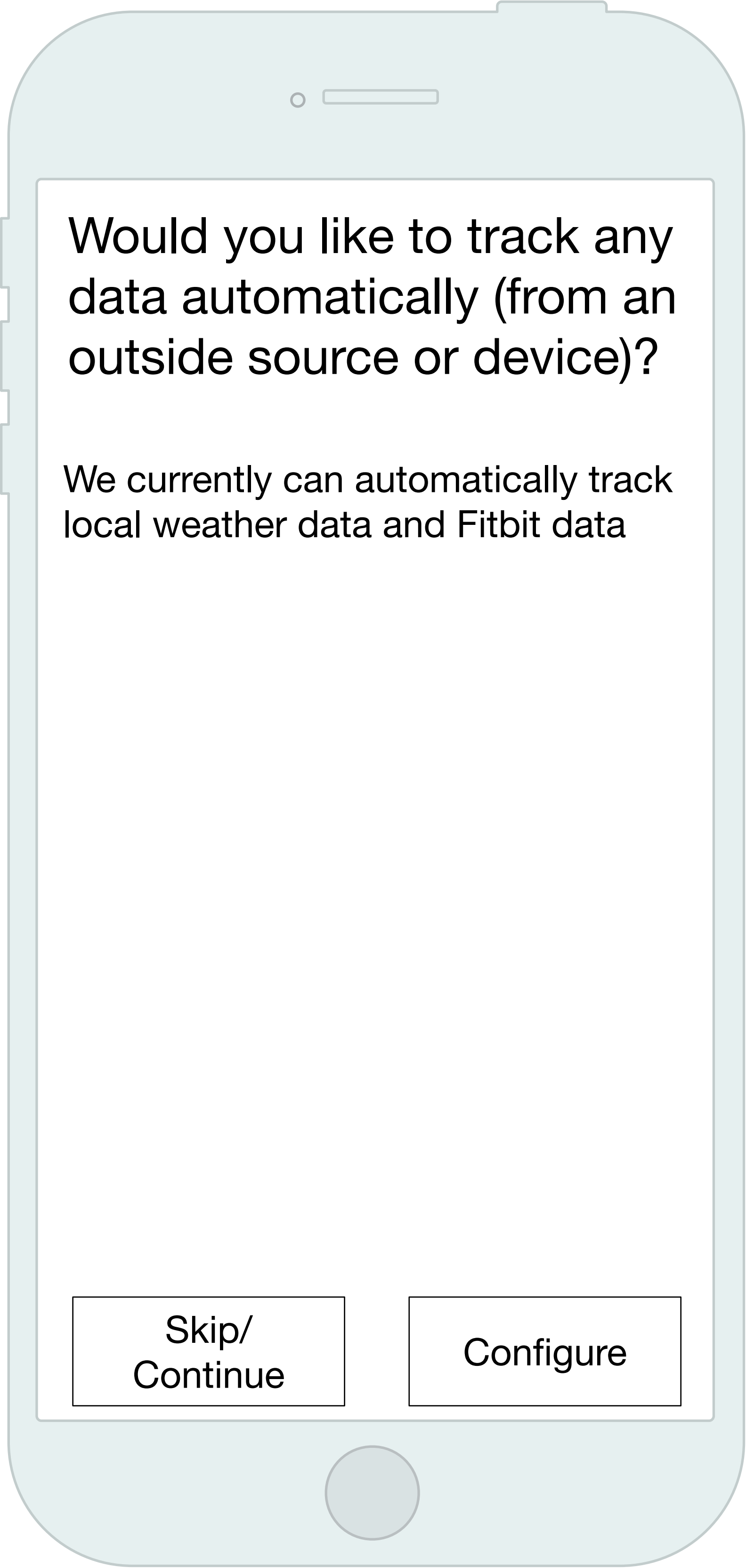
With this goal, you will explore **what** factors may contribute to your symptoms.

This setup will walk you through specifying the factors you would like to learn about, including any contributing factors (“triggers”) you want to explore, any treatments you want to explore, and any symptoms you want to examine.

As you collect data, your dashboard will provide visualizations of how your symptoms relate to the factors you’re tracking so you can explore those relationship.

Back

Continue

A light blue rounded rectangle representing a mobile app screen. At the top center is a small circle and a horizontal rectangle, resembling a notch. At the bottom center is a large circle, resembling a home button. A white rounded rectangle is centered on the screen, containing text and two buttons.

Would you like to track any data automatically (from an outside source or device)?

We currently can automatically track local weather data and Fitbit data

Skip/
Continue

Configure

Choose Data

Data from Fitbit:

Steps

Sleep

Active Minutes

Data from Local Weather:

Humidity

Atmospheric Pressure

Change in
Atmospheric Pressure

Temperature

Change in
Temperature

Your Data Sources

Fitbit

Requires: username,
password



Local Weather Information

Requires: GPS or ZIP code



+

Add Data Source

Back

Add

What possible contributing factors (e.g., “triggers”) do you want to track?

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications (e.g., advil)

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

No Thanks

Add

Learn More

Help me
choose

Skip/
Continue

What possible contributing factors (e.g., “triggers”) do you want to track?

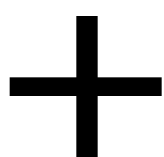
You’re currently tracking:

Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

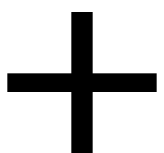


Add Trigger

Help me
choose

Continue

What possible contributing factors (e.g., “triggers”) do you want to track?



Add Trigger

Help me
choose

Skip/
Continue

Trigger Name:

Trigger Fields:

Confidence that it's a trigger:

not at all
confident

somewhat
confident

extremely
confident

Trigger Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

What types of treatments do you want to track?

As-Needed Treatments

Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Skip/
Continue

What types of treatments do you want to track?

As-Needed Treatments

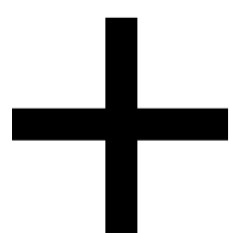
Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Continue

What **as-needed** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

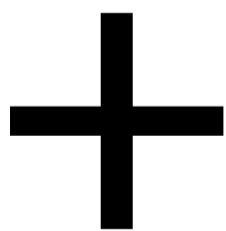
No

Configure

Back

Add

What **routine** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

What symptoms do you want to track?

 Add Symptom

Help me
choose

Continue

Symptom Name:

Symptom Fields:

Back

Add

How frequently are you willing to track to achieve your goal?

Daily

(e.g., every morning, every night)

Pros: more consistent/accurate data, which will help analysis

Cons: you'll spend more time tracking

Regularly, but not every day

(e.g., every few days, every week)

Pros: more consistent data than retroactively tracking, and less of a time commitment than daily tracking

Cons: you'll spend more time tracking than if you track retroactively but have less consistent data than tracking daily

**When you experience symptoms
(e.g., the day after you experienced symptoms)**

Pros: spend less time tracking

Cons: less consistent/accurate data

Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Continue

Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Continue

Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

NoYes

How long after indicating you're experiencing symptoms would you like to receive that notification?

Continue

LEARNING FREQUENCY OF SYMPTOMS/ RELATED FACTORS

(Seen if that goal type was
selected)

Learn the frequency of your symptoms and related factors

With this goal, you will explore how **often** you experience symptoms (or related factors).

This setup will walk you through specifying the types of data you would like to examine and configuring exactly what you want to track for each type.

As you collect data, your dashboard will provide visualizations of how often you experience symptoms or related factors.

Back

Continue

What factors do you want
to learn the frequency of?
select all that apply!

Symptoms

Exposure to Contributing
Factors (“triggers”)

Treatments

Other:

Continue

What factors do you want to learn the frequency of?

select all that apply!

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

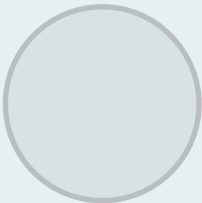
Confidence: somewhat confident

No Thanks

Add

Learn More

Continue



What symptoms do you want to track?

 Add Symptom

Help me
choose

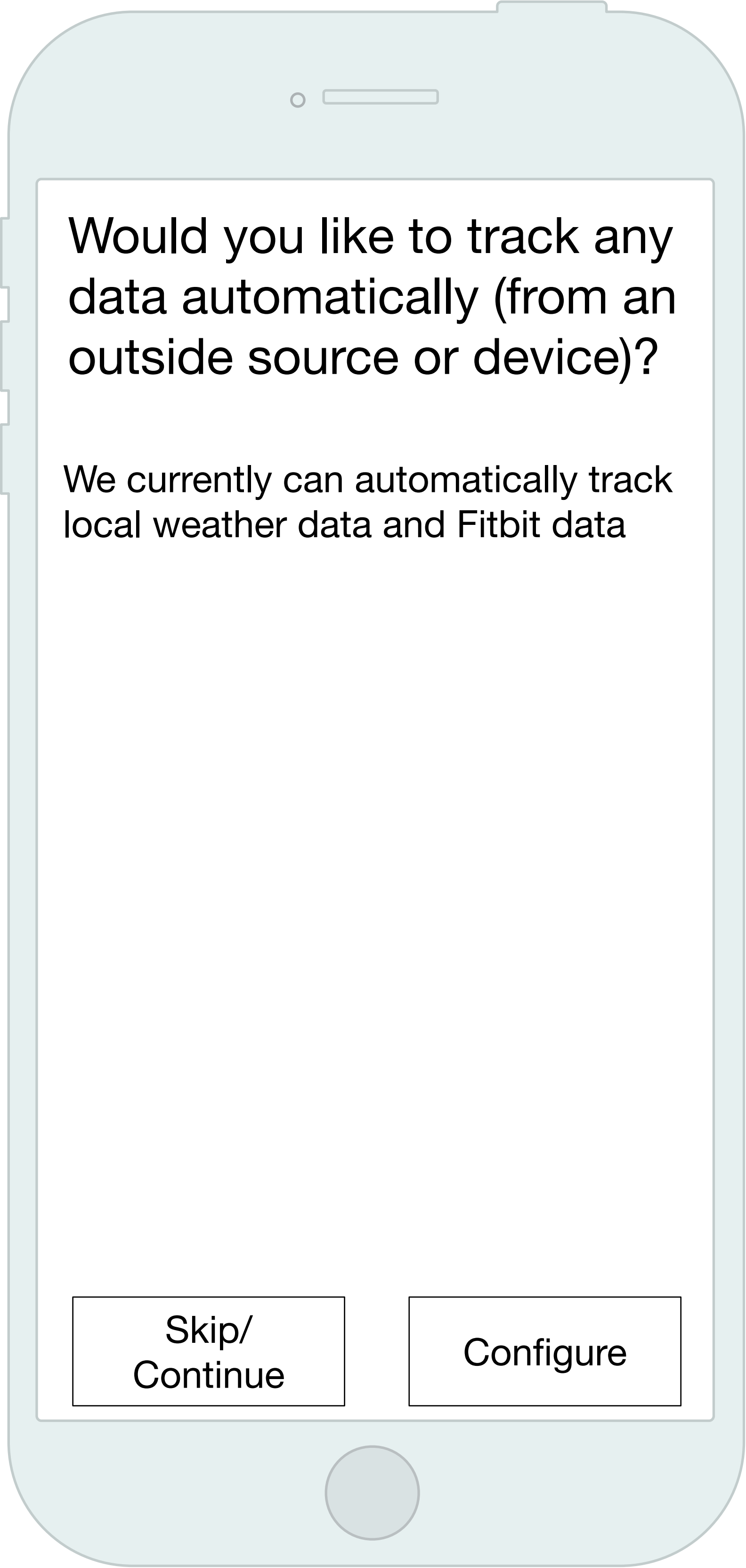
Continue

Symptom Name:

Symptom Fields:

Back

Add

A light blue rounded rectangle representing a mobile app screen. At the top center is a small circle and a horizontal rectangle, mimicking a notch. At the bottom center is a large circle, mimicking a home button. A white rounded rectangle is centered on the screen, containing text and two buttons.

Would you like to track any data automatically (from an outside source or device)?

We currently can automatically track local weather data and Fitbit data

Skip/
Continue

Configure

Choose Data

Data from Fitbit:

Steps

Sleep

Active Minutes

Data from Local Weather:

Humidity

Atmospheric Pressure

Change in
Atmospheric Pressure

Temperature

Change in
Temperature

Your Data Sources

Fitbit

Requires: username,
password



Local Weather Information

Requires: GPS or ZIP code



+

Add Data Source

Back

Add

What possible contributing factors (e.g., “triggers”) do you want to track?

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications (e.g., advil)

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

No Thanks

Add

Learn More

Help me
choose

Skip/
Continue

What possible contributing factors (e.g., “triggers”) do you want to track?

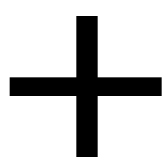
You’re currently tracking:

Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

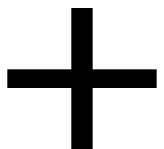


Add Trigger

Help me
choose

Continue

What possible contributing factors (e.g., “triggers”) do you want to track?



Add Trigger

Help me
choose

Skip/
Continue

Trigger Name:

Trigger Fields:

Confidence that it's a trigger:

not at all
confident

somewhat
confident

extremely
confident

Trigger Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

What types of treatments do you want to track?

As-Needed Treatments

Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Skip/
Continue

What types of treatments do you want to track?

As-Needed Treatments

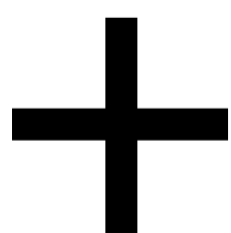
Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Continue

What **as-needed** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

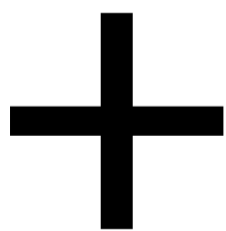
No

Configure

Back

Add

What **routine** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

How frequently are you willing to track to achieve your goal?

Daily

(e.g., every morning, every night)

Pros: more consistent/accurate data, which will help analysis

Cons: you'll spend more time tracking

Regularly, but not every day

(e.g., every few days, every week)

Pros: more consistent data than retroactively tracking, and less of a time commitment than daily tracking

Cons: you'll spend more time tracking than if you track retroactively but have less consistent data than tracking daily

**When you experience symptoms
(e.g., the day after you experienced symptoms)**

Pros: spend less time tracking

Cons: less consistent/accurate data

Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Continue

Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Continue

Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

No

Yes

How long after indicating you're experiencing symptoms would you like to receive that notification?

Continue

BEFORE/AFTER TEST

(Seen if that goal type was
selected)

Learn how a change affects your symptoms

With this goal, we will help you explore how a **change** will affect your symptoms.

This setup will walk you through specifying the change you're making and the symptoms you think may be affected by that change

As you collect data, your dashboard will provide visualizations showing the symptoms you experience before and after making the change.

Back

Continue

What are you changing?

I'm changing what I do on an **as-needed** basis to stop symptoms

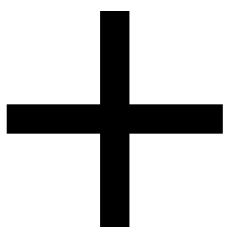
Examples: I'm going to start meditating when I'm starting to experience symptoms; I'm trying a new medication for when I'm experiencing symptoms

I'm changing what I do on a **routine** basis to prevent symptoms

Examples: I'm going to exercise regularly to see if helps me manage my migraines; I'm going to avoid something I think triggers my migraines; I'm trying a new preventative medication

Back

What are you changing
about what you do on an
as-needed basis?



Add Change

Skip/
Continue

Change Name:

Change Fields:

Change Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

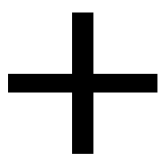
No

Configure

Back

Add

What are you changing
about what you on a
routine basis?



Add Change

Skip/
Continue

Change Name:

Change Fields:

Change Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

What symptoms do you want to track with respect to that change?

 Add Symptom

Help me
choose

Continue

Symptom Name:

Symptom Fields:

Back

Add

How frequently are you willing to track to achieve your goal?

Daily

(e.g., every morning, every night)

Pros: more consistent/accurate data, which will help analysis

Cons: you'll spend more time tracking

Regularly, but not every day

(e.g., every few days, every week)

Pros: more consistent data than retroactively tracking, and less of a time commitment than daily tracking

Cons: you'll spend more time tracking than if you track retroactively but have less consistent data than tracking daily

**When you experience symptoms
(e.g., the day after you experienced symptoms)**

Pros: spend less time tracking

Cons: less consistent/accurate data

Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Continue

Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Continue



Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

No

Yes

How long after indicating you're experiencing symptoms would you like to receive that notification?

Continue

When do you want to make the change?

Now

On this date:

Would you like to receive a notifications reminding you to make the change?

No

Yes

When would you like to receive the notification?

Continue

PREDICTING

(Seen if that goal type was
selected)

Symptom Prediction:

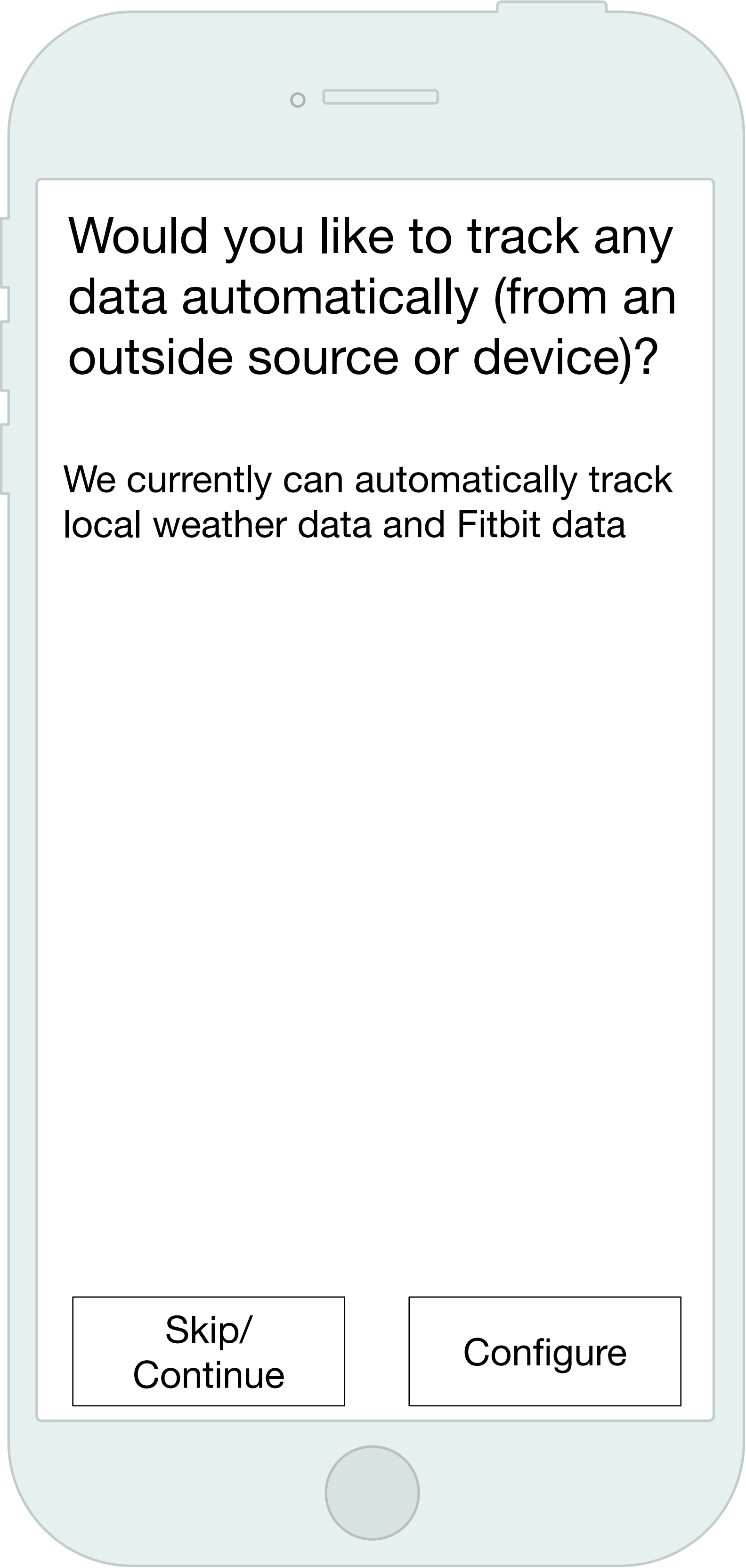
With this goal, the app will **predict** symptoms by taking into account your exposure to factors that may affect your symptoms and your confidence that those factors contribute to symptoms.

This setup will walk you through specifying contributing factors (“triggers”), treatments, and symptoms.

As you track factors and symptoms, the app will learn which factors are triggers and which treatments are successful, and therefore should get better at predicting future symptoms.

Back

Continue

A light blue rounded rectangle representing a mobile app screen. At the top center is a small circle and a horizontal bar, resembling a notch. At the bottom center is a large circle, resembling a home button. A white rounded rectangle is centered on the screen, containing text and two buttons.

Would you like to track any data automatically (from an outside source or device)?

We currently can automatically track local weather data and Fitbit data

Skip/
Continue

Configure

Choose Data

Data from Fitbit:

Steps

Sleep

Active Minutes

Data from Local Weather:

Humidity

Atmospheric Pressure

Change in
Atmospheric Pressure

Temperature

Change in
Temperature

Your Data Sources

Fitbit

Requires: username,
password



Local Weather Information

Requires: GPS or ZIP code



+

Add Data Source

Back

Add

What possible contributing factors (e.g., “triggers”) do you want to track?

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications (e.g., advil)

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

No Thanks

Add

Learn More

Help me
choose

Skip/
Continue

What possible contributing factors (e.g., “triggers”) do you want to track?

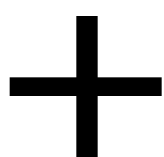
You’re currently tracking:

Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

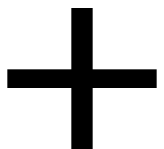


Add Trigger

Help me
choose

Continue

What possible contributing factors (e.g., “triggers”) do you want to track?



Add Trigger

Help me
choose

Skip/
Continue

Trigger Name:

Trigger Fields:

Confidence that it's a trigger:

not at all confident	somewhat confident	extremely confident
-------------------------	-----------------------	------------------------

Trigger Limit/Goal (if applicable):

max	per
min	per

Track Automatically?

No

Configure

Back

Add

What types of treatments do you want to track?

As-Needed Treatments

Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Skip/
Continue

What types of treatments do you want to track?

As-Needed Treatments

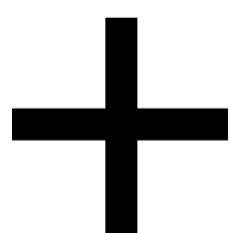
Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Continue

What **as-needed** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

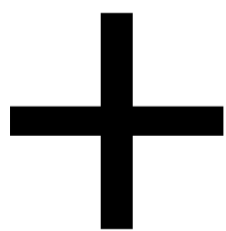
No

Configure

Back

Add

What **routine** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

What symptoms do you want to track?

 Add Symptom

Help me
choose

Continue

Symptom Name:

Symptom Fields:

Back

Add

How frequently are you willing to track to achieve your goal?

Daily

(e.g., every morning, every night)

Pros: more consistent/accurate data, which will help analysis

Cons: you'll spend more time tracking

Regularly, but not every day

(e.g., every few days, every week)

Pros: more consistent data than retroactively tracking, and less of a time commitment than daily tracking

Cons: you'll spend more time tracking than if you track retroactively but have less consistent data than tracking daily

**When you experience symptoms
(e.g., the day after you experienced symptoms)**

Pros: spend less time tracking

Cons: less consistent/accurate data

Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Continue

Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Continue



Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

No

Yes

How long after indicating you're experiencing symptoms would you like to receive that notification?

Continue

MONITORING SYMPTOMS/ RELATED FACTORS

(Seen if that goal type was
selected)

Monitor your migraines and related data

With this goal, you will **monitor** your symptoms (or any other related factors you wish to track).

This setup will walk you through specifying the types of data you would like to examine.

As you collect data, your dashboard will provide visualizations of your symptoms and related factors

Back

Continue

What factors do you want to monitor?

select all that apply!

Symptoms

Exposure to Contributing Factors (“triggers”)

Treatments

Other:

Continue

What factors do you want to monitor?

select all that apply!

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

- No Thanks
- Add
- Learn More

Continue

What symptoms do you want to track?

 Add Symptom

Help me
choose

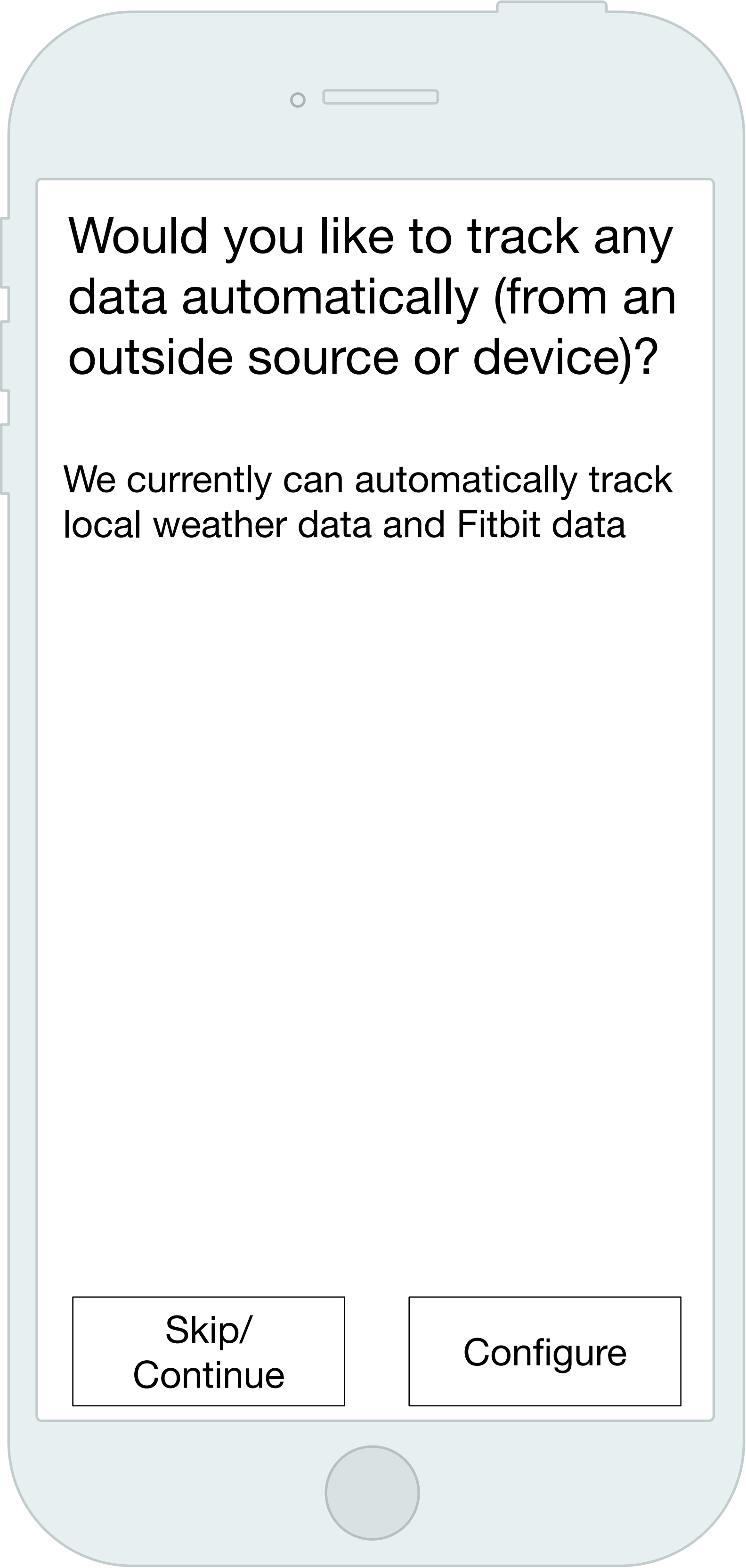
Continue

Symptom Name:

Symptom Fields:

Back

Add

A light blue rounded rectangle representing a mobile app interface. At the top center is a small circle and a horizontal rectangle, resembling a notch. At the bottom center is a large circle, resembling a home button. A white rounded rectangle is centered within the blue area, containing text and two buttons.

Would you like to track any data automatically (from an outside source or device)?

We currently can automatically track local weather data and Fitbit data

Skip/
Continue

Configure

Choose Data

Data from Fitbit:

Steps

Sleep

Active Minutes

Data from Local Weather:

Humidity

Atmospheric Pressure

Change in
Atmospheric Pressure

Temperature

Change in
Temperature

Your Data Sources

Fitbit

Requires: username,
password



Local Weather Information

Requires: GPS or ZIP code



+

Add Data Source

Back

Add

What possible contributing factors (e.g., “triggers”) do you want to track?

We recommend that anyone who takes as-needed medications (e.g., advil, prescription medication used to stop symptoms when they occur) track the following trigger:

Trigger: Overuse of as-needed medications (e.g., advil)

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

No Thanks

Add

Learn More

Help me
choose

Skip/
Continue

What possible contributing factors (e.g., “triggers”) do you want to track?

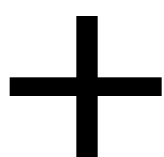
You’re currently tracking:

Overuse of as-needed medications

Field: taken (yes or no)

Limit: 5 times per month

Confidence: somewhat confident

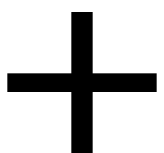


Add Trigger

Help me
choose

Continue

What possible contributing factors (e.g., “triggers”) do you want to track?



Add Trigger

Help me
choose

Skip/
Continue

Trigger Name:

Trigger Fields:

Confidence that it's a trigger:

not at all confident	somewhat confident	extremely confident
-------------------------	-----------------------	------------------------

Trigger Limit/Goal (if applicable):

max	per
min	per

Track Automatically?

No

Configure

Back

Add

What types of treatments do you want to track?

As-Needed Treatments

Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Skip/
Continue

What types of treatments do you want to track?

As-Needed Treatments

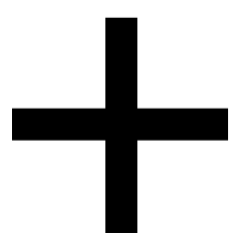
Examples: Taking medication when you're starting to experience symptoms; relaxing in a dark, quiet room to help you manage symptoms

Routine Treatments

Examples: Taking a daily preventative medication; exercising regularly and getting 8 hours of sleep per night to prevent symptoms

Continue

What **as-needed** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

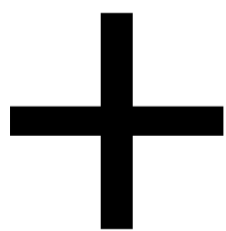
No

Configure

Back

Add

What **routine** treatments do you want to track?



Add treatment

Help me
choose

Skip/
Continue

Treatment Name

Treatment Fields:

Treatment Limit/Goal (if applicable):

max

per

min

per

Track Automatically?

No

Configure

Back

Add

How frequently are you willing to track to achieve your goal?

Daily

(e.g., every morning, every night)

Pros: more consistent/accurate data, which will help analysis

Cons: you'll spend more time tracking

Regularly, but not every day

(e.g., every few days, every week)

Pros: more consistent data than retroactively tracking, and less of a time commitment than daily tracking

Cons: you'll spend more time tracking than if you track retroactively but have less consistent data than tracking daily

**When you experience symptoms
(e.g., the day after you experienced symptoms)**

Pros: spend less time tracking

Cons: less consistent/accurate data

Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Continue

A light blue mobile app notification dialog with rounded corners. At the top center is a small circle and a horizontal bar, resembling a status bar. The main content is enclosed in a white box with a thin grey border. The title 'Regular Tracking Notifications' is in a large, bold, black font. Below it is a question in a standard black font. Two buttons, 'No' and 'Yes', are positioned side-by-side. Below these is another question. A large, empty rectangular box with a thin black border is provided for an answer. At the bottom of the white box is a 'Continue' button. At the very bottom of the light blue background is a grey circular home button.

Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Continue

Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

No

Yes

How long after indicating you're experiencing symptoms would you like to receive that notification?

Continue

HELP ME CHOOSE PAGES

(Seen if “buttons” are pushed)

Help Me Choose: Symptoms

Here are some common symptoms people with migraine experience. Remember that just because it's not listed doesn't mean it isn't one of your personal symptoms!

Select the symptoms you want to track. You can edit the fields on the next page.

Help Me Choose:

Contributing factors (“triggers”)

Here are some common triggers people with migraine experience. Remember that just because it’s not listed doesn’t mean it isn’t one of your personal triggers!

Select the triggers you want to track. You can edit the fields and confidences on the next page.

acute medication overuse

interruption in routine

stress

inappropriate amount of sleep

caffeine

changes in weather

exposure to bright light

exposure to loud sound

alcohol

dehydration

menstruation

None of These

Add

Help Me Choose: **As-Needed** Treatments

Here are some common treatments that can help people experiencing migraine symptoms. Remember that just because it's not listed doesn't mean it can't help

Select the treatments you want to track.
You can edit the fields on the next page.

over-the-counter medication (e.g., advil)

prescription medication

caffeine

sleep

relaxing in a dark, quiet room

warm/cold compress on head or neck

warm/cold shower

meditation

hydration

None of These

Add

Help Me Choose:

Routine Treatments

Here are some common routine treatments that can help people experiencing migraine symptoms. Remember that just because it's not listed doesn't mean it can't help

Select the treatments you want to track. You can edit the scales on the next page.

exercise

regular sleep

improving diet

daily medication

daily supplements

stress management

meditation

yoga

None of These

Add

FIELD OPTIONS

(Seen when configuring/
selecting data types)

Field Examples

Field Type: Time

Example Use:

Time symptoms first occurred: 6:30pm

Field Type: Time Range

Example Use:

Symptom duration: 6:30pm — 8:30 pm

Field Type: Binary

Example Use:

Experienced symptoms:

Field Type: Choice on Scale

Example Use:

Severity of Stress:

Field Type: Number on Scale

Example Use:

Symptom severity: 5/10

Field Type: Threshold

Example Use:

Sleep last night: < 8 hours

Field Type: Number

Example Use:

Symptom duration: 2 hours

Field Type: Number over Time

Example Use:

Severity over time:

Field Type: Text

Example Use:

The pain was throbbing more than usual

EXAMPLE SETUPS

(Just for if interviewees got
stuck; never actually used)

Symptom Name:

Head Pain

Symptom Fields:

Severity (Choice on Scale: None,
Mild, or Severe)

Duration (Time range)

Back

Add

Trigger Name:

Red Wine

Trigger Field:

Glasses (Number)

Confidence that it’s a trigger:

not at all confident

somewhat confident

extremely confident

Trigger Limit/Goal:

max1perday

minper

Track Automatically?

No

Configure

Back

Add

Treatment Name

Cold Compress on Head

Treatment Fields:

Minutes (Number)

Treatment Limit/Goal:

max per

min per

Track Automatically?

No

Configure

Back

Add

Treatment Name

Exercise

Treatment Fields:

Minutes (Number)

Treatment Limit/Goal:

max

per

min

90

per

week

Track Automatically?

No

Configured

Back

Add



Daily Tracking Notifications

Would you like to receive notifications reminding you to track daily?

No

Yes

When would you like to receive them?

Before I go to bed

Continue



Regular Tracking Notifications

Would you like to receive notifications reminding you to track regularly?

No

Yes

When would you like to receive them?

Every 3 days

10:00pm on weekdays

11:30pm on weekends

Continue

Post-Symptom Tracking Notifications

Would you like to receive notifications reminding you to track after indicating you're experiencing symptoms?

No

Yes

How long after indicating you're experiencing symptoms would you like to receive that notification?

The next day

Continue

PART 2:

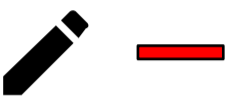
APP FEATURES

COLLECTION PAGES

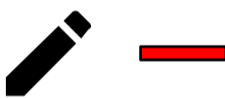
(Always seen, though main
page depends on configuration)

Data Collection

I'm experiencing symptoms now

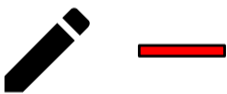


I took as-needed medication



You've tracked as-needed medications **3** of your target **5** times this month

+ Add Event



+ Track Other Data

View Data Calendar

View Data Summary

View/Edit Treatment Flowchart

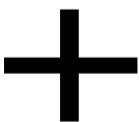
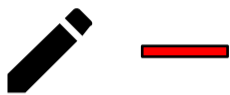
Migraine FAQ

View/Add Goals

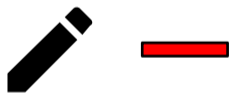
Take a Break from Tracking

Data Collection

I'm experiencing
symptoms now



Add Event



Track Other Data

View Data
Calendar

View Data
Summary

View/Edit
Treatment
Flowchart

Migraine
FAQ

View/Add
Goals

Take a
Break from
Tracking

Track Event

Event Name:

Event Description:

Event Dates:

Back to
Tracking Home

Track more
data


EXAMPLE! WOULD
BE CUSTOMIZED!

Track Data:
< 5/16/18 >


Skip Today

Symptoms

Head Pain  

5/16/2019 5:00pm — 5/16/2019 10:00pm 

Peak severity /10

Severity over time: 

Dizziness  

None

Mild

Severe



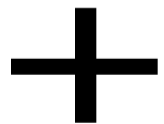
Add Symptom

As-Needed Treatments

Advil

No

Yes



Add Treatment

Preventative Treatments

Topamax

No

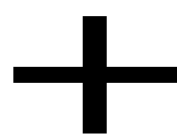
Yes

EXAMPLE! WOULD
BE CUSTOMIZED!

Exercise

minutes:

Note: you’ve tracked **30** minutes of exercise this week. Your goal is **90**.

 Add Treatment

Triggers

stress  

red wine

glasses:

mensturation  

red wine

glasses:

mensturation  

medication overuse:

You’ve tracked medication when experiencing symptoms **3** days this month. Your target is **5**.

Medications taken today: **no**

 Add Trigger

SYMPTOM PREDICTION

(Seen by those pursuing that
goal type)

EXAMPLE! WOULD
BE CUSTOMIZED!

Migraine Prediction

You may be at risk for
symptoms

You've been exposed to 3
factors you are fairly
confident can trigger
symptoms:

a (confidence x)

b (confidence y)

c (confidence z)

Do you want to go through
flowchart of treatment
possibilities?

Yes

No




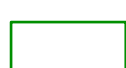

DATA VIEWS

(Seen by all)

Data Calendar

◀ May 2018 ▶						
S	M	T	W	T	F	S
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

You reported 3 days with symptoms in May 2018

-  Symptoms
-  As-Needed Treatment
-  Routine Treatment
-  Trigger
-  Other

Data
Collection
Page

View Data
Summary

View/Edit
Treatment
Flowchart

Migraine
FAQ

View/Add
Goals

Take a Break
from
Tracking


EXAMPLE! WOULD
BE CUSTOMIZED!

Track Data:
< 5/16/18 >


Don't Use
This Data

Symptoms

Head Pain  

5/16/2019 5:00pm — 5/16/2019 10:00pm 

Peak severity /10

Severity over time: 

Dizziness  

None

Mild

Severe

 Add Symptom

As-Needed Treatments

Advil

No

Yes

 Add Treatment

Preventative Treatments

Topamax

No

Yes

EXAMPLE! WOULD
BE CUSTOMIZED!

Track Data:
< 5/16/18 >

Use This
Data

Symptoms

Head Pain



5/16/2019 5:00pm — 5/16/2019 10:00pm



Peak severity /10

Severity over time:



Dizziness



None

Mild

Severe



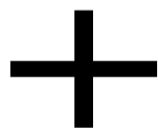
Add Symptom

As-Needed Treatments

Advil

No

Yes



Add Treatment

Preventative Treatments

Topamax

No

Yes

Data Summary

-90
Days

Date range:
< 2/18/18 - 5/19/18 >

+90
Days

Symptom days:
Total: 27 days with symptoms (avg. 9/month)
 ▼ 10% since previous 90 days
63 symptom free days (avg. 20/month)
 ▲ 5% since previous 90 days

Symptom severity:
9 days (33%) mild symptoms
18 days (66%) severe symptoms
About the same since previous 90 days

As-Needed Medications tracked in the
past 90 days:

Total: 15 days (avg. 5/month)
 ▲ 10% since previous 90 days

Routine medications taken in the
past 90 days:

Total: 90 (avg. 30/month)

- View Data
Calendar

Data
Collection
Page

View/Edit
Treatment
Flowchart

Migraine
FAQ

View/Add
Goals

Take a
Break from
Tracking

TREATMENT FLOWCHART

(Seen by all)

Treatment Flowchart

Go to Flowchart

View Previous Plan

Edit Flowchart
Recommendations

View Data
Calendar

View Data
Summary

Data
Collection
Page

Migraine
FAQ

View/Add
Goals

Take a
Break from
Tracking

Would this treatment
work today?

Go to a dark, quiet
room to relax

Yes

Not now

Don't suggest again

Would this treatment
work today?

Go to bed early
tonight

Yes

Not now

Don't suggest again

Would this treatment
work today?

custom treatment:

*treatment name
(links to external
source)*

Add to Plan

Not now

Don't suggest again

Would this treatment
work today?

As-Needed Medication

You've tracked taking
as-needed medications
on **3** of your target **5**
times per month.

Add to Plan

Not now

Don't suggest again

The image shows a mobile application interface on a light blue rounded rectangle. At the top, there is a status bar with a small circle and a horizontal bar. Below this, a white rounded rectangle contains the main content. The content starts with a large heading 'Your plan for today:'. This is followed by two lines of text: 'Go to a dark, quiet room to relax' and 'Go to bed early tonight'. Below these is a line of italicized text 'treatment name' followed by a link placeholder '<link>'. At the bottom of the white rectangle is a button with the text 'Exit'. At the very bottom of the light blue rectangle is a grey circle representing a home button.

Your plan for today:

Go to a dark, quiet
room to relax

Go to bed early tonight

treatment name

<link>

Exit

EXAMPLE! WOULD
BE CUSTOMIZED!

Edit Treatment Flowchart

The treatment flowchart helps
you build a customized plan for
what to do when you're
experiencing symptoms

Go to a dark, quiet room to relax

Never
Suggest

Last
Resort

Always
Suggest

Take an as-needed medication

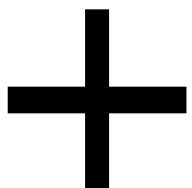
Never
Suggest

Last
Resort

Always
Suggest

☒

Display reported as-needed
medication use this month, as
well as monthly limit



Add Recommendation

Back to
Flowchart Home

Custom Treatment Recommendation

Recommendation Name: ⓘ

Recommendation Description: ⓘ

Recommendation URL: ⓘ

Sometimes
Suggest

Always
Suggest

Cancel

Add

FAQ PAGE

(Seen by all)

Migraine FAQ

What are common migraine symptoms?



What factors may contribute to (“trigger”) symptoms?



What **as-needed** treatments might help stop symptoms?



What **routine** treatments might help prevent symptoms?



View Data
Calendar

View Data
Summary

View/Edit
Treatment
Flowchart

Data
Collection
Page

View/Add
Goals

Take a
Break from
Tracking

GOAL CONFIGURATION PAGE

(Seen by all)

Active Migraine Goals

Goal Notes:



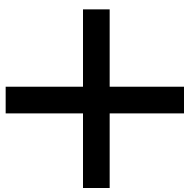
Tracking Goals:



Goal Category: Learning



Set: May 18th 2018



Add Goal

View Deactive Goals

View Data
Calendar

View Data
Summary

View/Edit
Treatment
Flowchart

Migraine
FAQ

Data
Collection
Page

Take a
Break from
Tracking

Deactive Migraine Goals

Past Goal Notes

Tracking Goals:

i

Goal Category: Learning

Set: May 18th 2018

Set a date to resume:

+

Add Future Goal

View Active Goals

LAPSING PAGE

(Seen by all)

Why are you taking a break from tracking?

This information might be helpful for you and your provider to look back on in the future

Do you want us to send you a notification asking whether you want to resume tracking in the future?

No, I don't want any notifications

Yes, I want to resume tracking on this date:



I'm not sure; ask me again in the future

View Data
Calendar

View Data
Summary

View/Edit
Treatment
Flowchart

Migraine
FAQ

View/Add
Goals

Data
Collection
Page

PART 3:

WEB FEATURES

DATA EDIT

(Seen by all)

Select Date:

◀

May 2018

▶

S	M	T	W	T	F	S
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3


- Symptoms
- As-Needed Treatment
- Routine Treatment
- Trigger
- Other

< Thursday, >
5/18

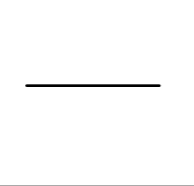

Don't Use This
Day's Data

Symptoms

Head Pain  

5/16/2019 5:00pm — 5/16/2019 10:00pm 

Peak severity /10

Severity over time:  

Dizziness  

None

Mild

Severe

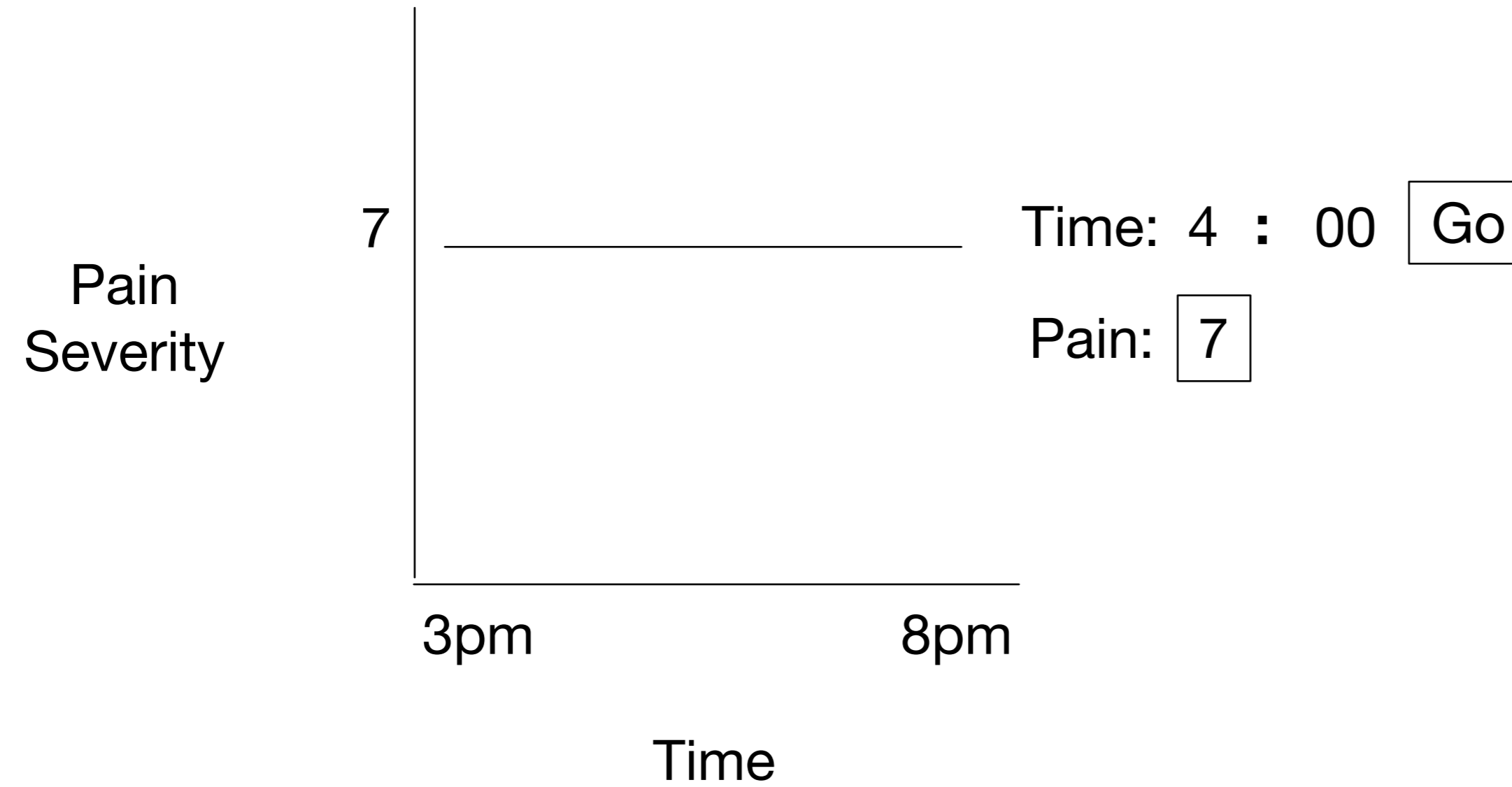
Date modified: 5/18/2018

 Add Symptom

Go To:
Triggers
Treatments
Events

Head Pain:
Severity Over Time

< Thursday, 5/18 >



CONTRIBUTING FACTOR VISUALIZATIONS

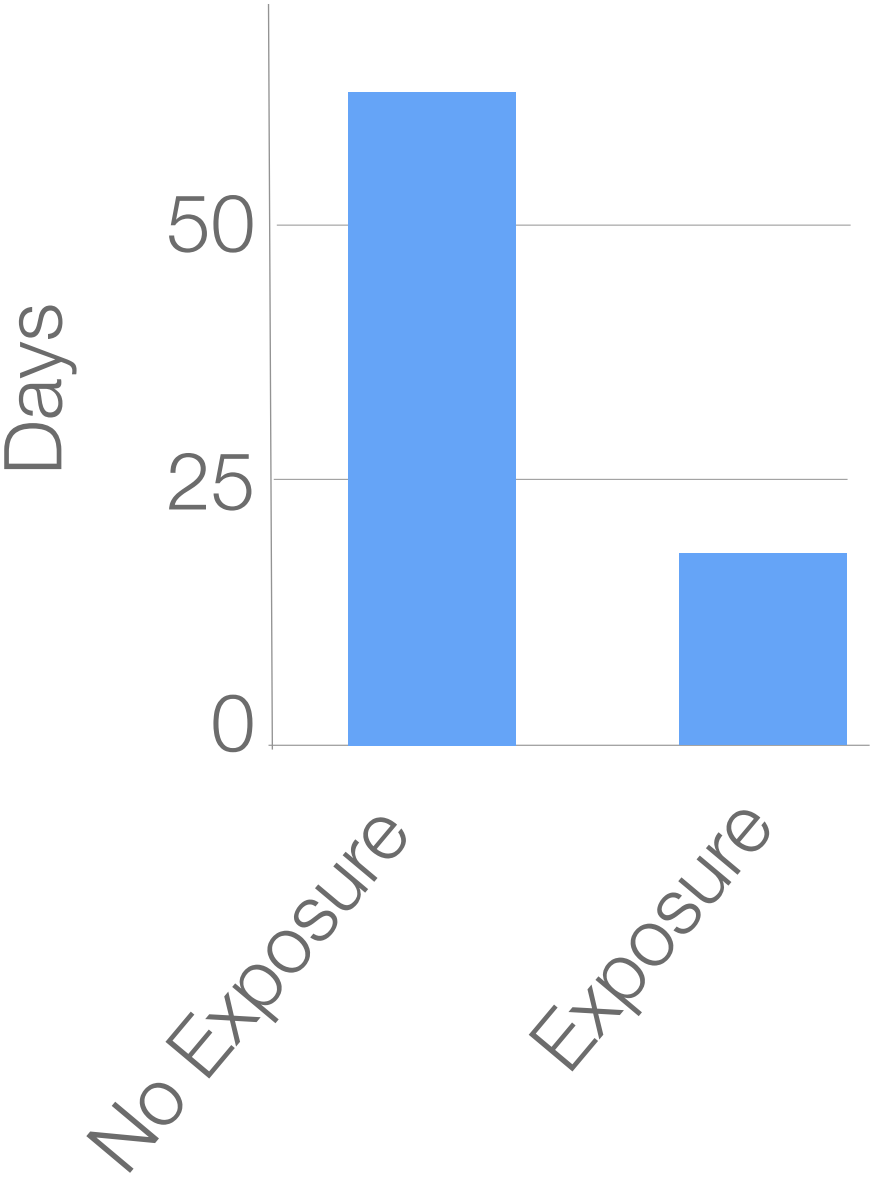
(Seen by anyone pursuing the
goals of *identifying contributing
factors or predicting*)

Examine a Factor

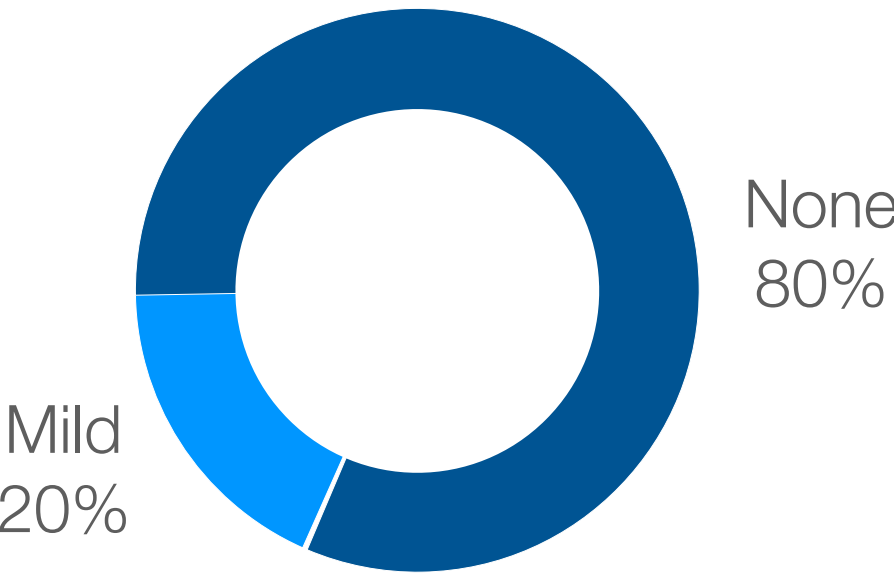
Choose a factor:

Factor

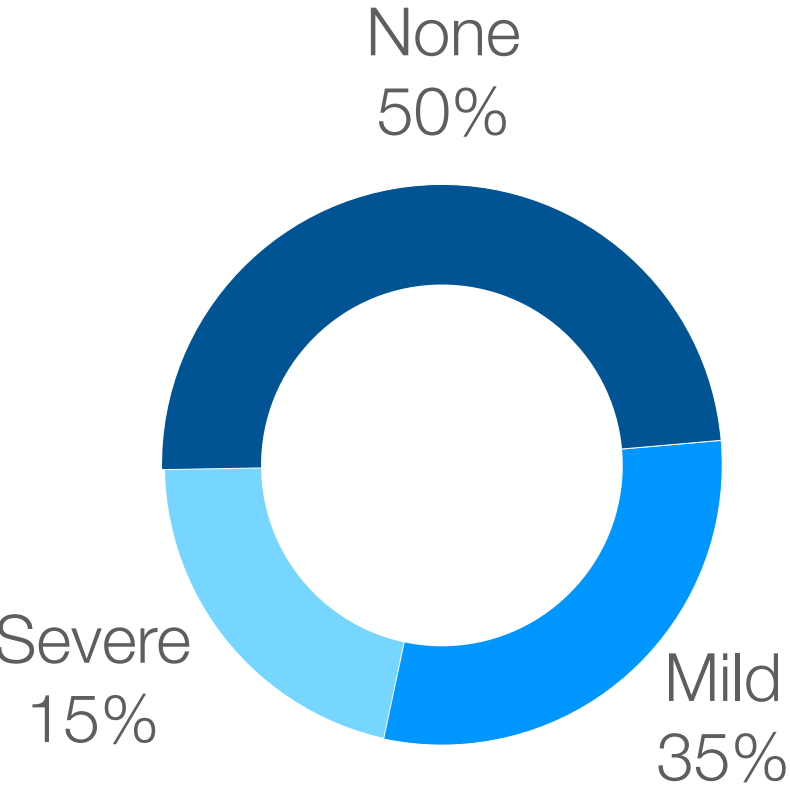
Exposure to Factor



Symptom Severity,
No Exposure

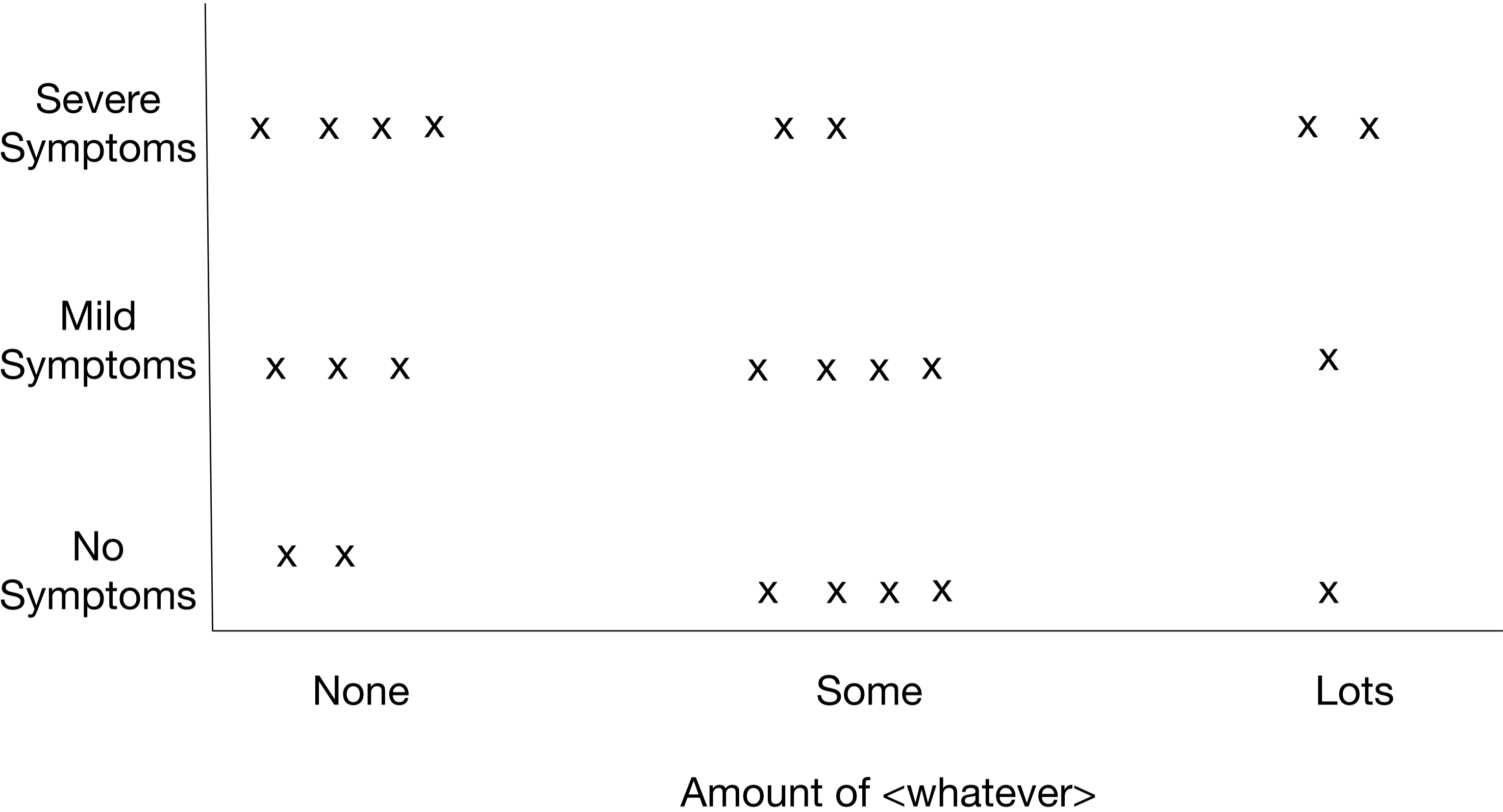


Symptom Severity
With Exposure



Your data indicates that <factor> is <not | a weak | a moderate | a strong> contributor to your symptoms

Symptom Severity vs Exposure to <whatever>

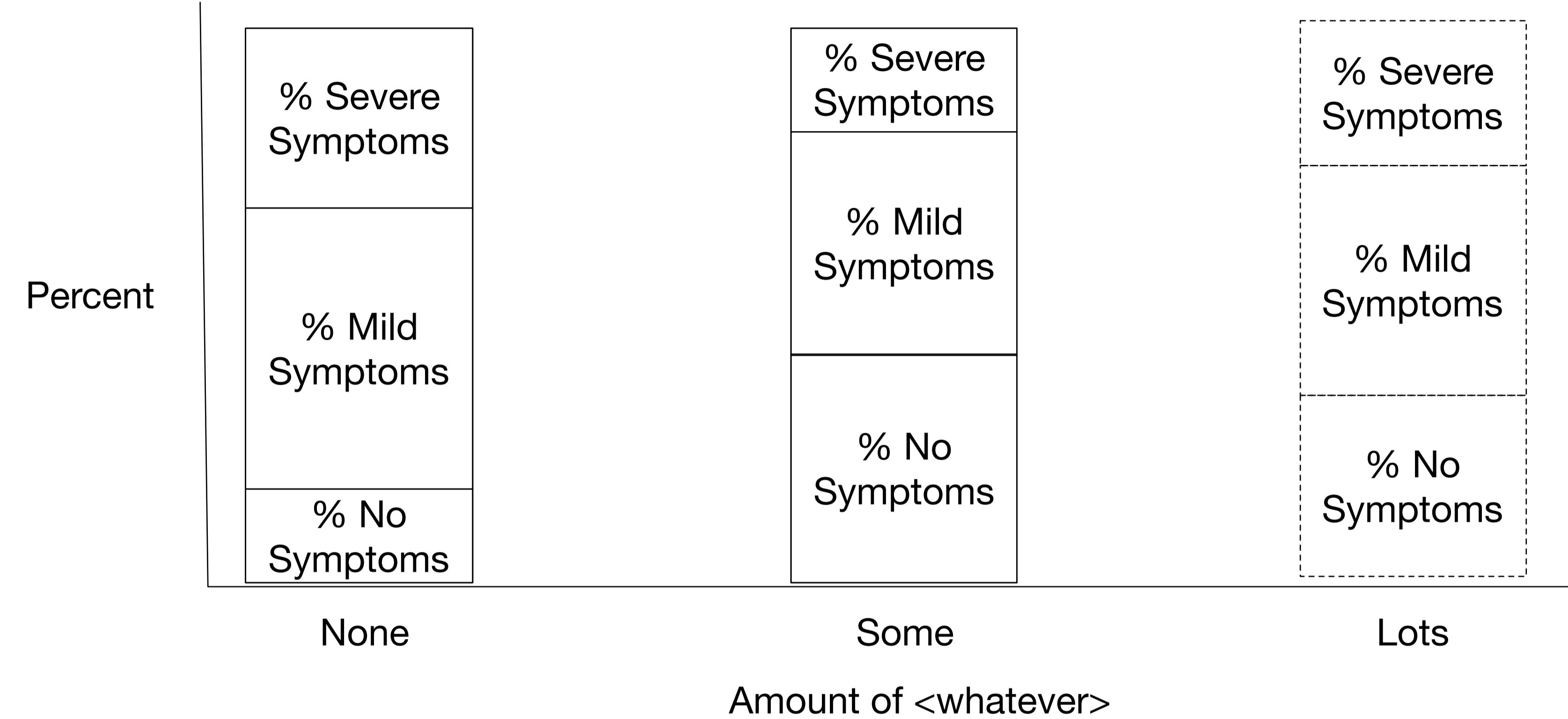


“You tracked <x> days with no exposure
Of those <x> days, you had <a (b%)> days without symptoms,
<c (d%)> with mild symptoms, and <e (f%)> with severe symptoms.

You tracked <y> days with lots.
Of those <y> days, you had <g (h%)> days without symptoms,
<i (j%)> with mild symptoms, and <k (l%)> with severe symptoms.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Symptom Severity vs Exposure to <whatever>

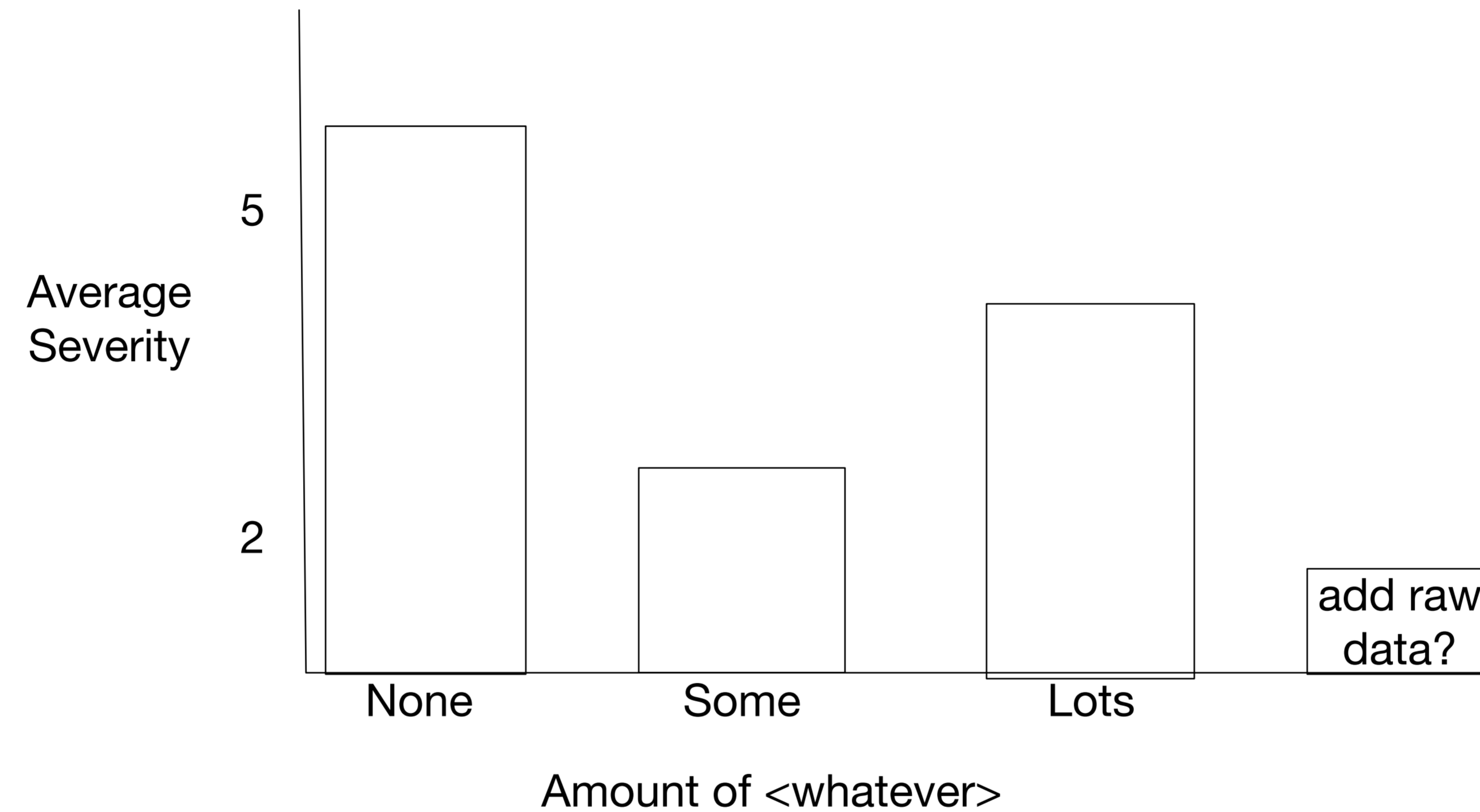


“You tracked <x> days with no exposure
Of those <x> days, you had <a (b%)> days without symptoms,
<c (d%)> with mild symptoms, and <e (f%)> with severe symptoms.

You tracked <y> days with lots.
Of those <y> days, you had <g (h%)> days without symptoms,
<i (j%)> with mild symptoms, and <k (l%)> with severe symptoms.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity with No, Some, and Lots of Factor



“You have tracked for <l> weeks.

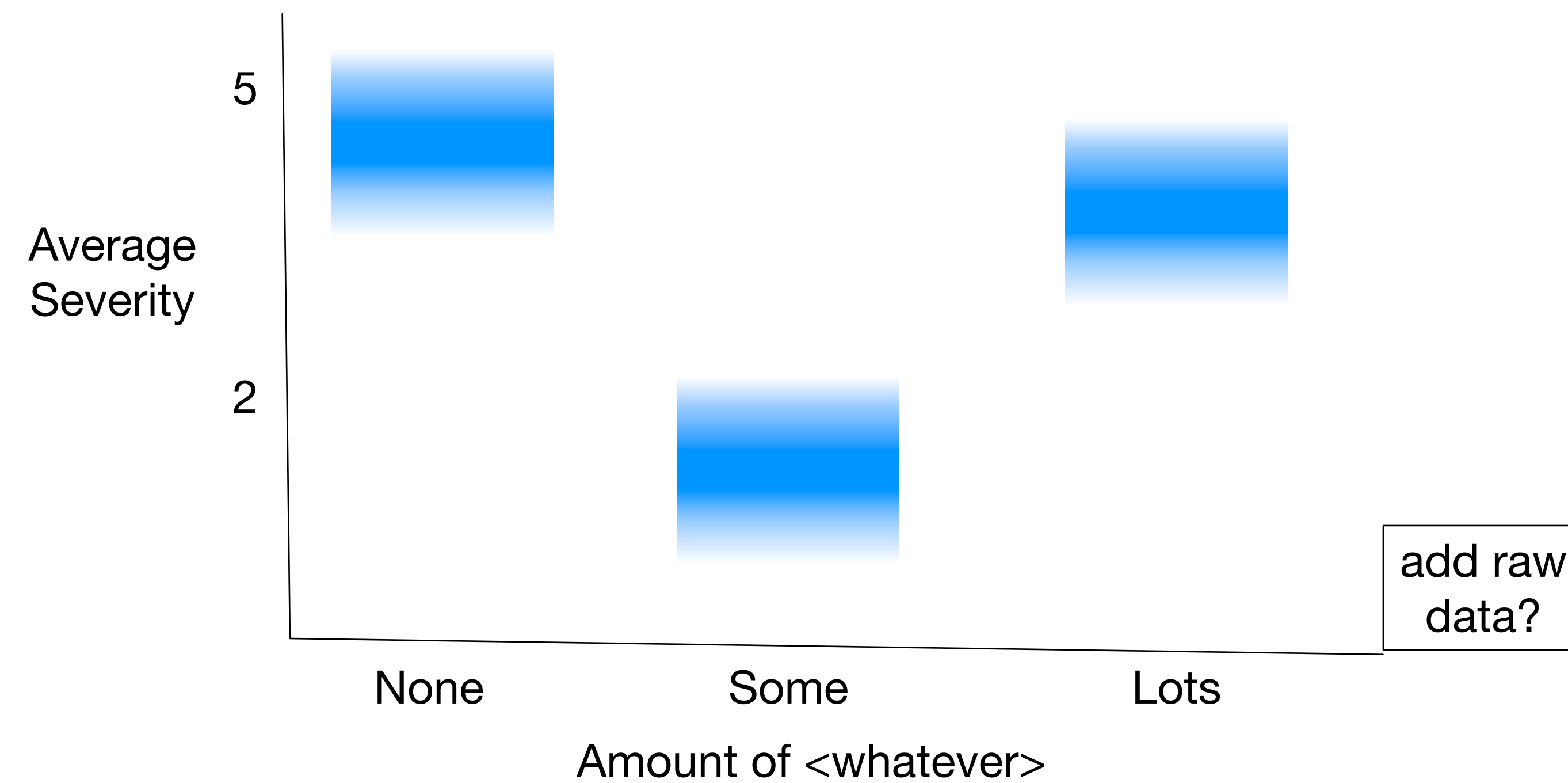
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity with No, Some, and Lots of Factor



“You have tracked for <l> weeks.

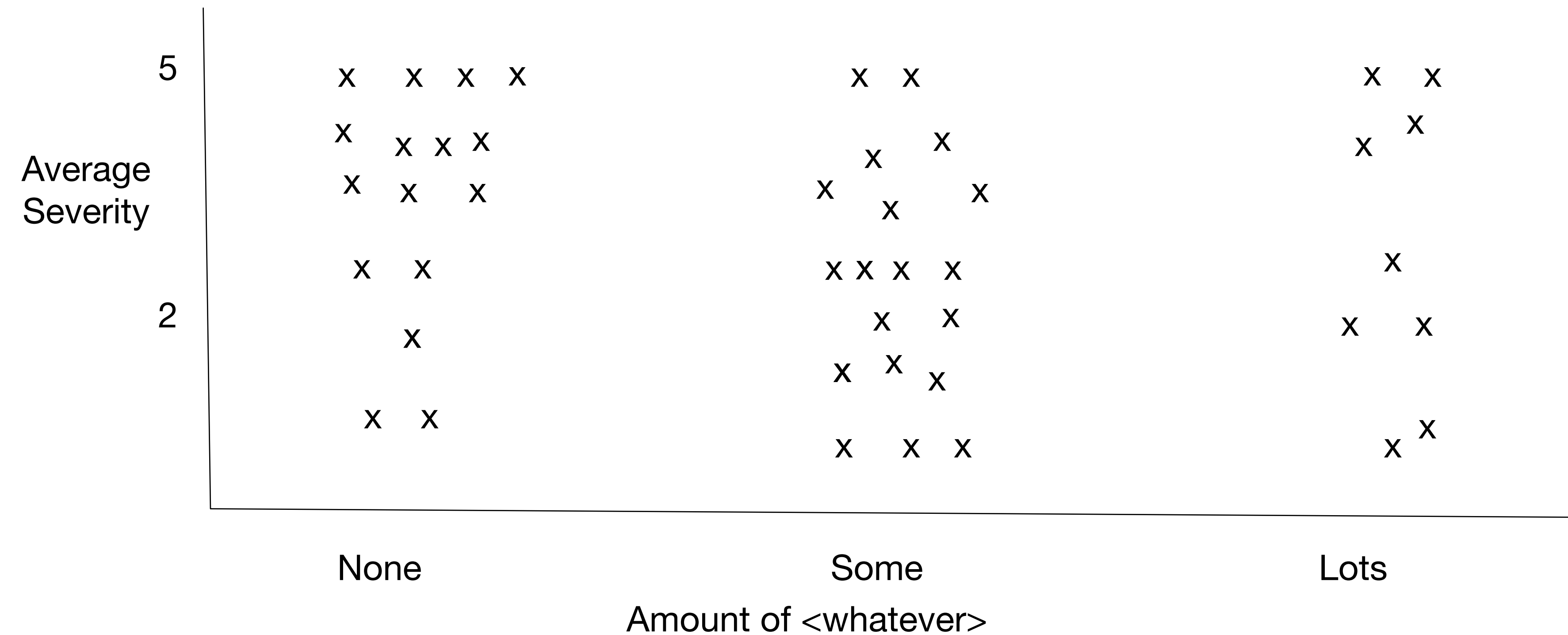
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity with No, Some, and Lots of Factor



“You have tracked for <l> weeks.

You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

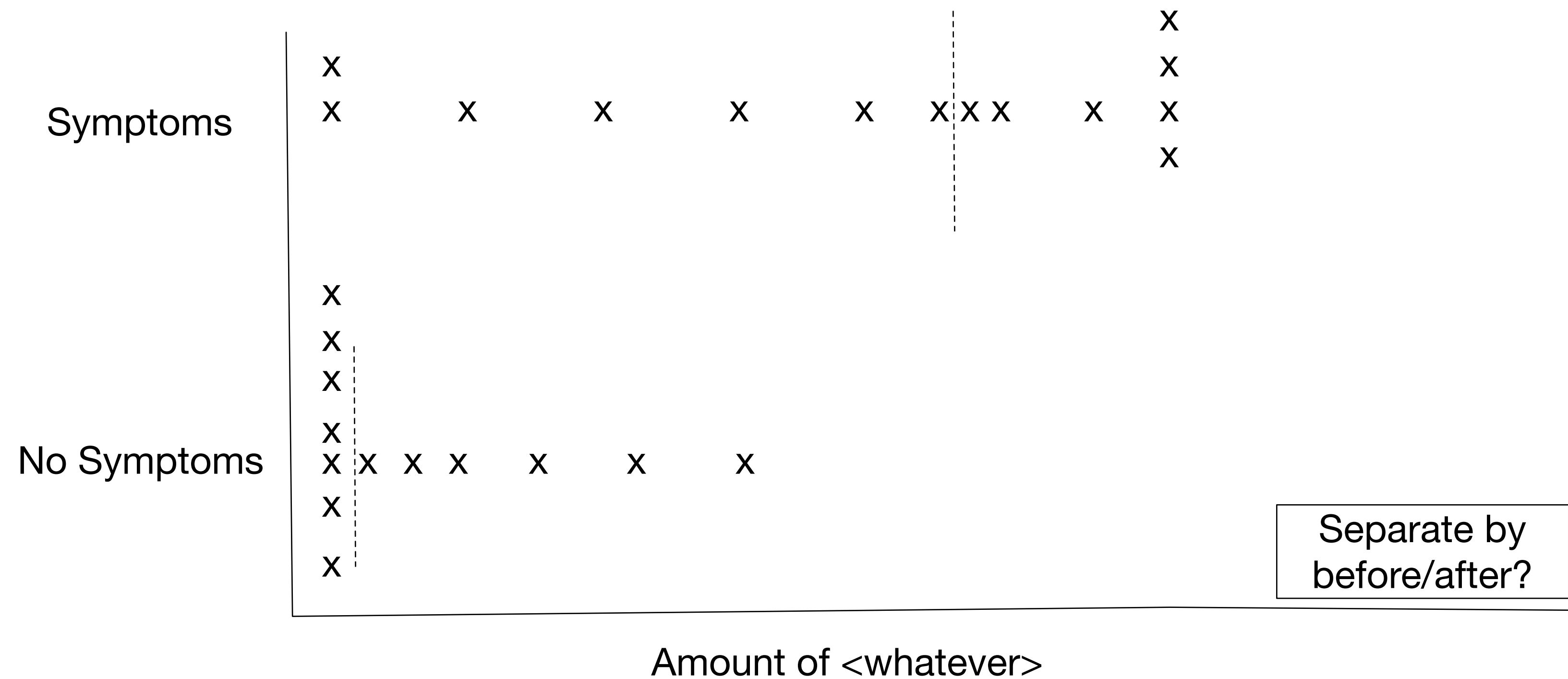
Average Severity with No, Some, and Lots of Factor



“You have tracked for <l> weeks.
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.
You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>
You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

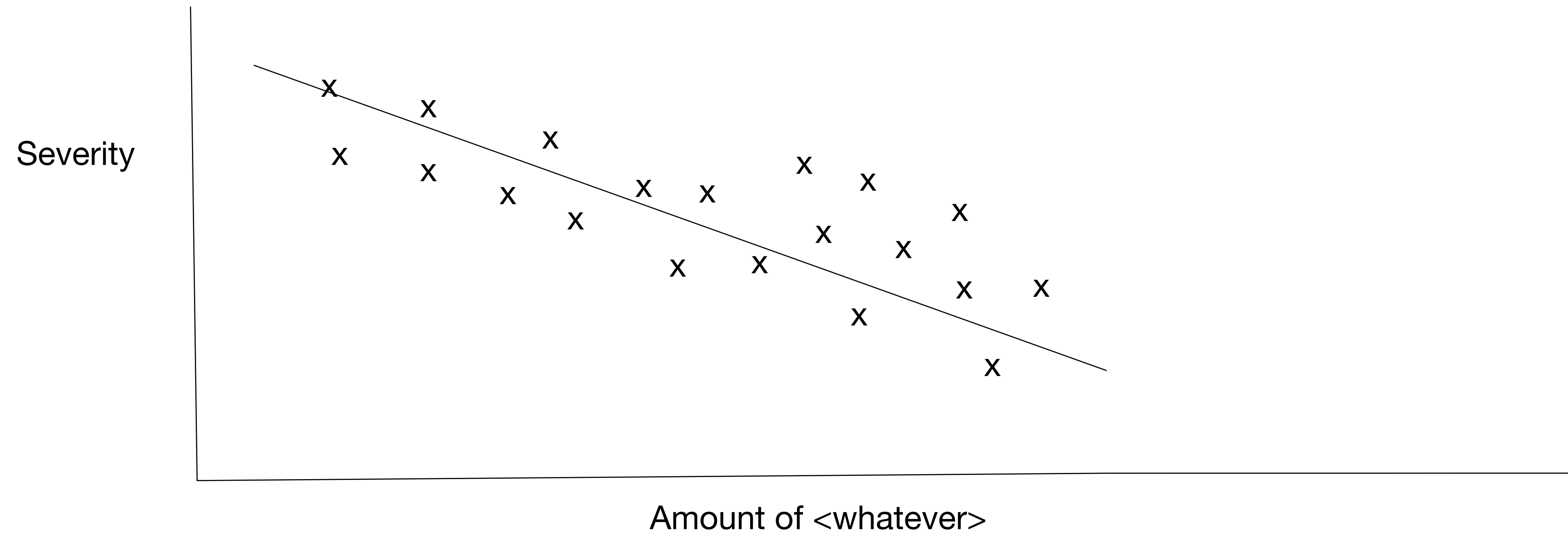
Days of Symptoms with Different Amounts of <whatever>



“When you have more <whatever>, you tend to get symptoms more often.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Symptom Severity with Different Amounts of <whatever>

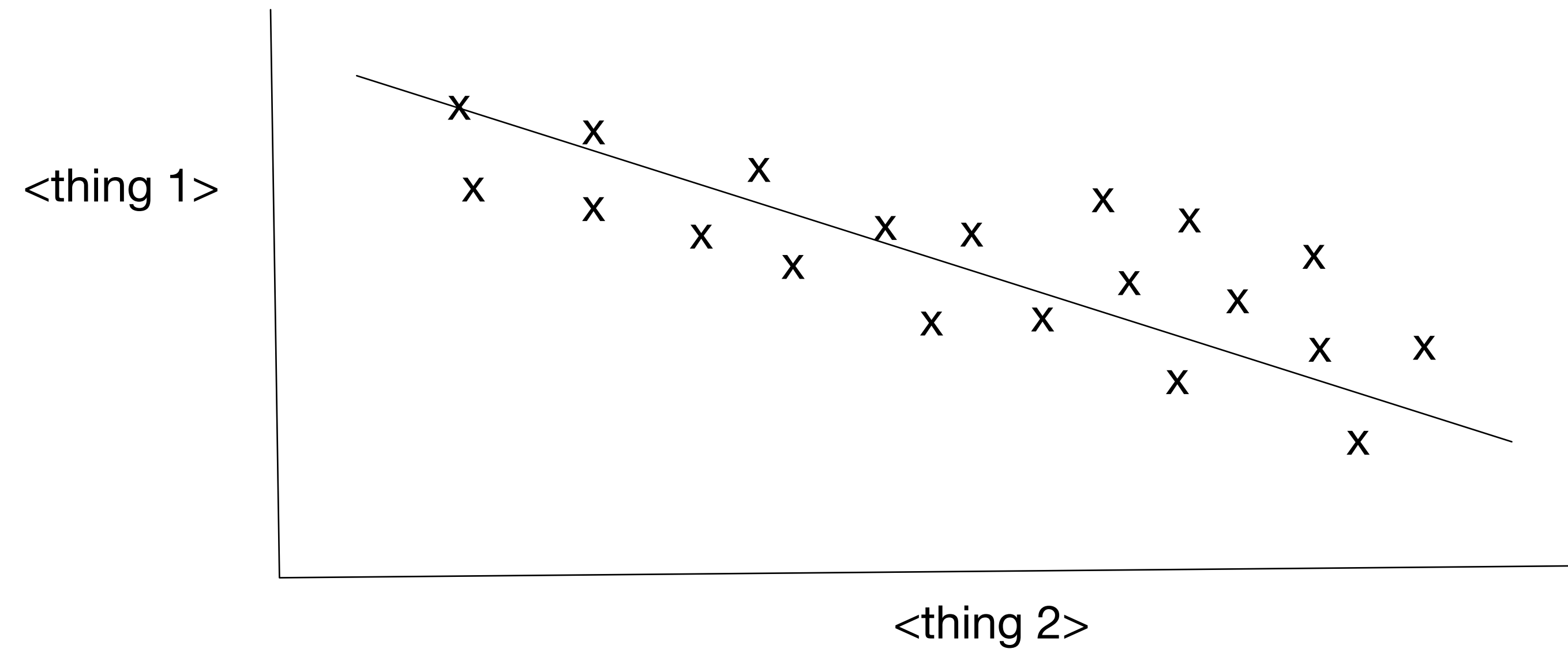


“When you have more <whatever>, you tend to have less severe symptoms.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Examine Other Correlations

<thing 1> vs <thing 2>



Drag and Drop:

Triggers: ✓

Treatments: ✓

Symptoms: ✓

“When you have more <thing 1>, you tend to have less <thing 2>.”

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

MONITORING VISUALIZATIONS

(Seen by anyone pursuing the goals of *learning the frequency of migraines or contributing factors or monitoring*)

Summary Information

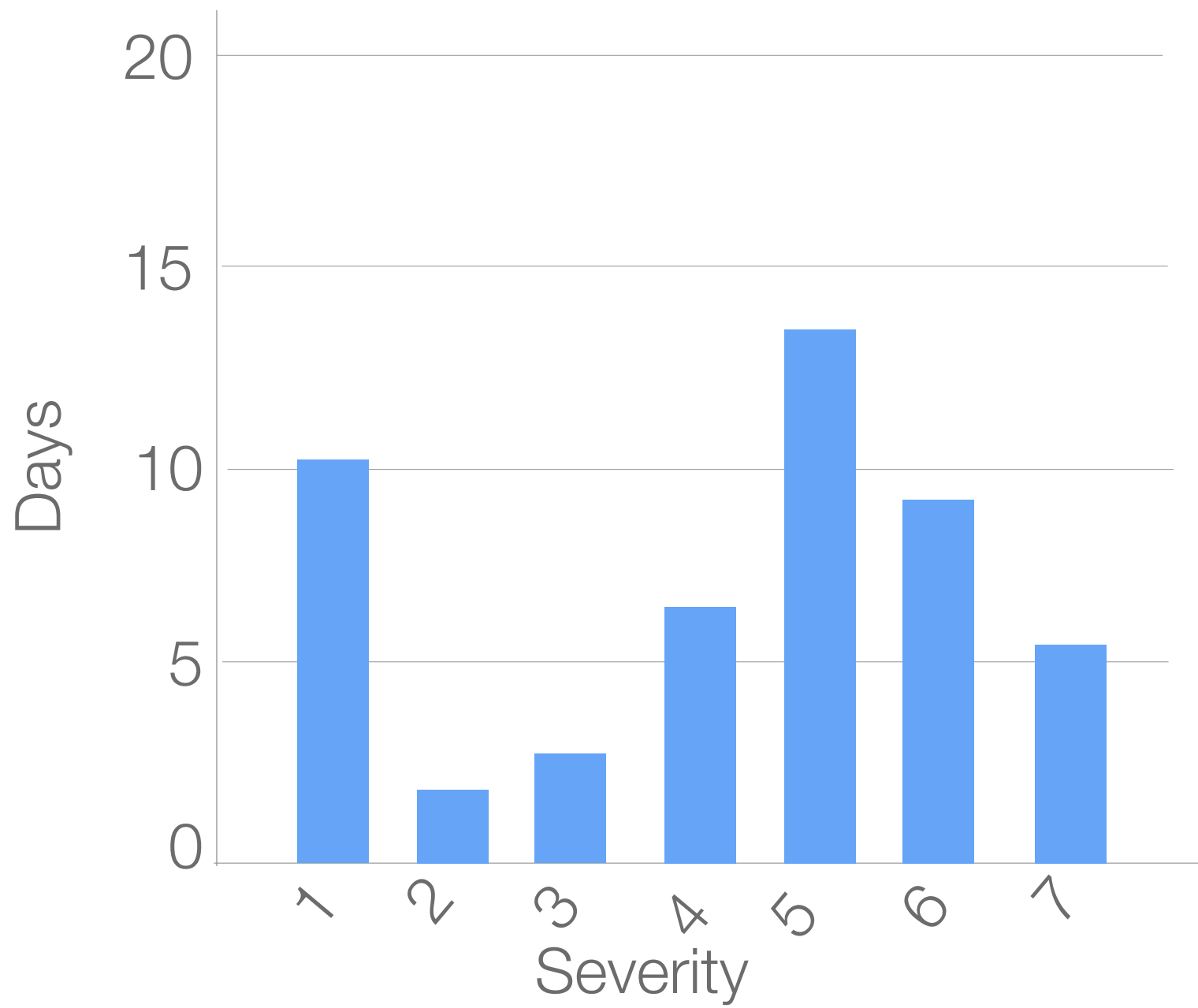
Select date Range:

First Report

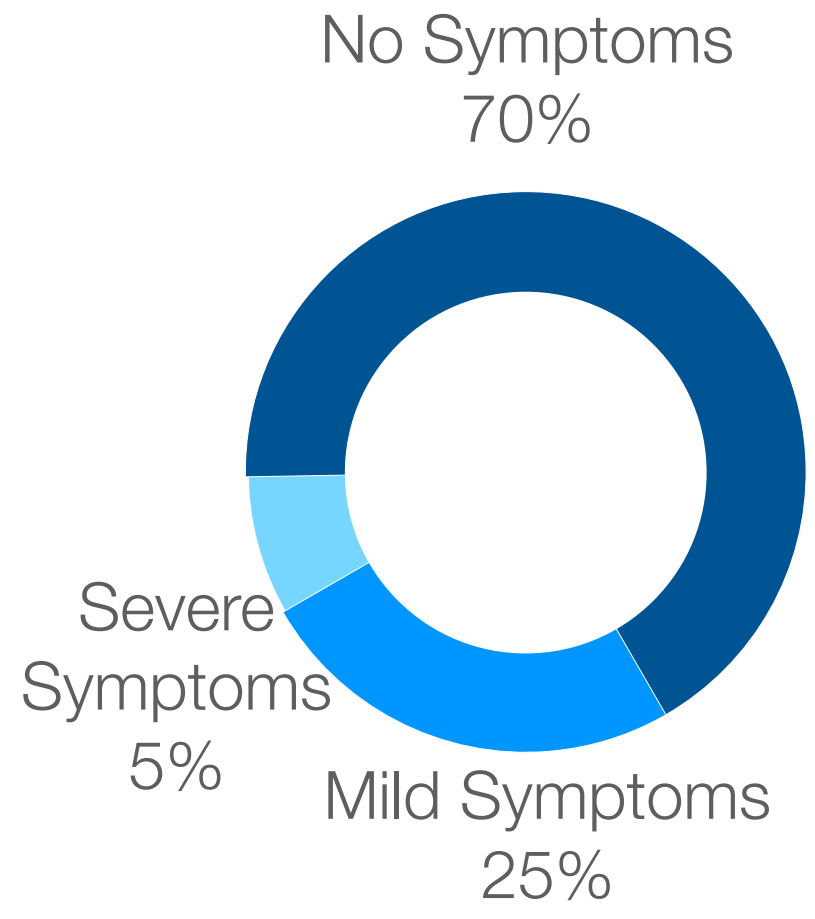
Jan 5 2018 — May 5 2018

Today

Since May 5th, 2018, you have reported an average of 2 migraines per week (or a total of 10 migraines).



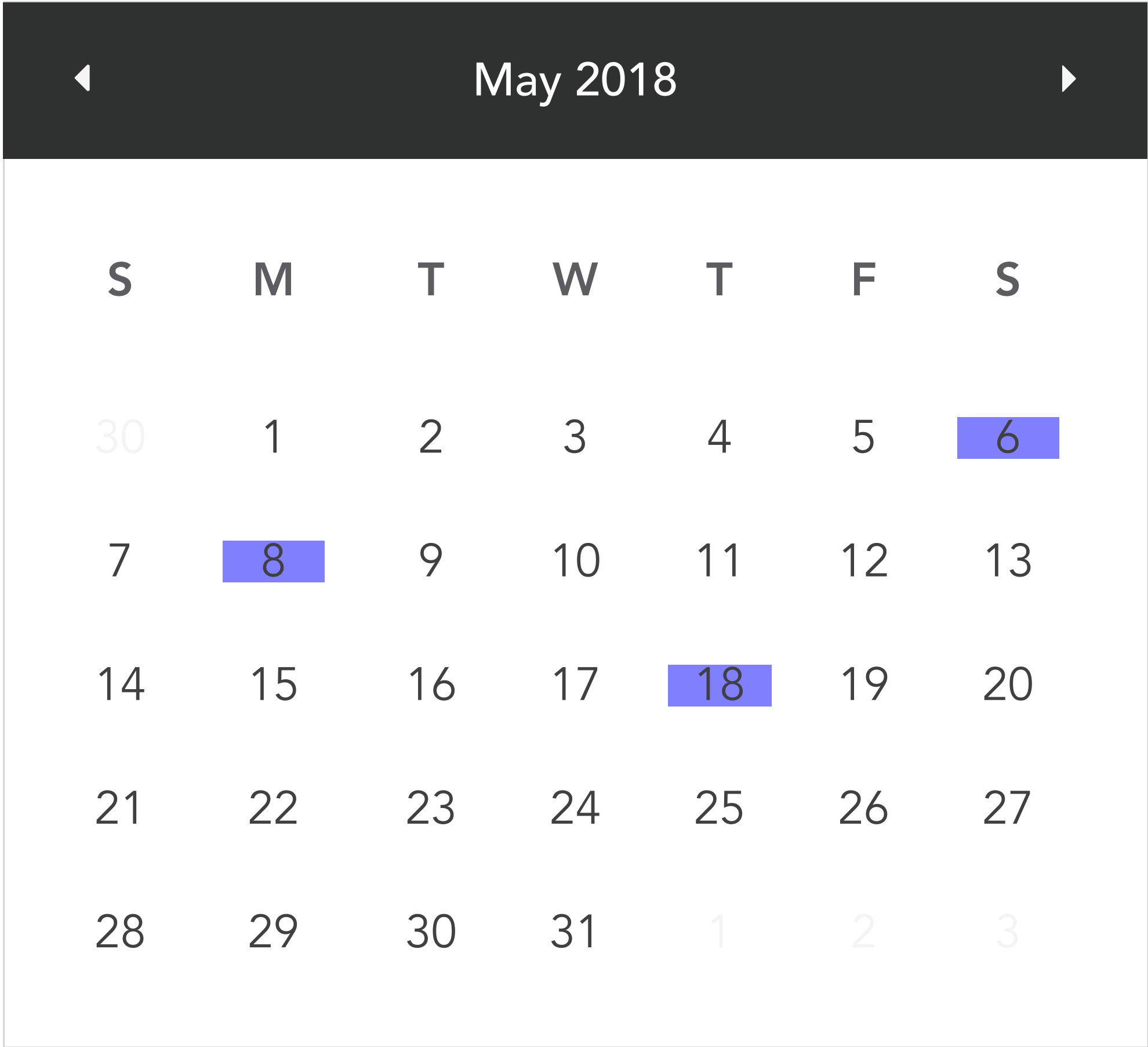
Your average severity has been 5.5.



You did not report any symptoms on 70% of the days in the time range

Tracking Calendar

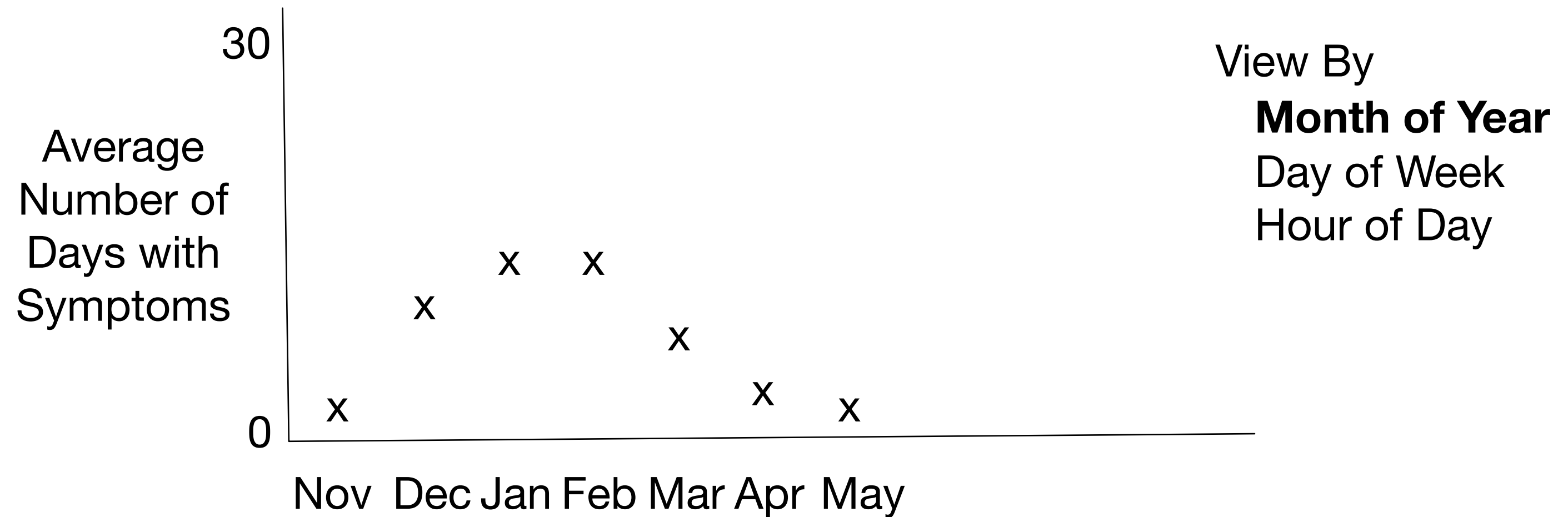
Select Date:



- Symptoms
- As-Needed Treatment
- Routine Treatment
- Trigger
- Other

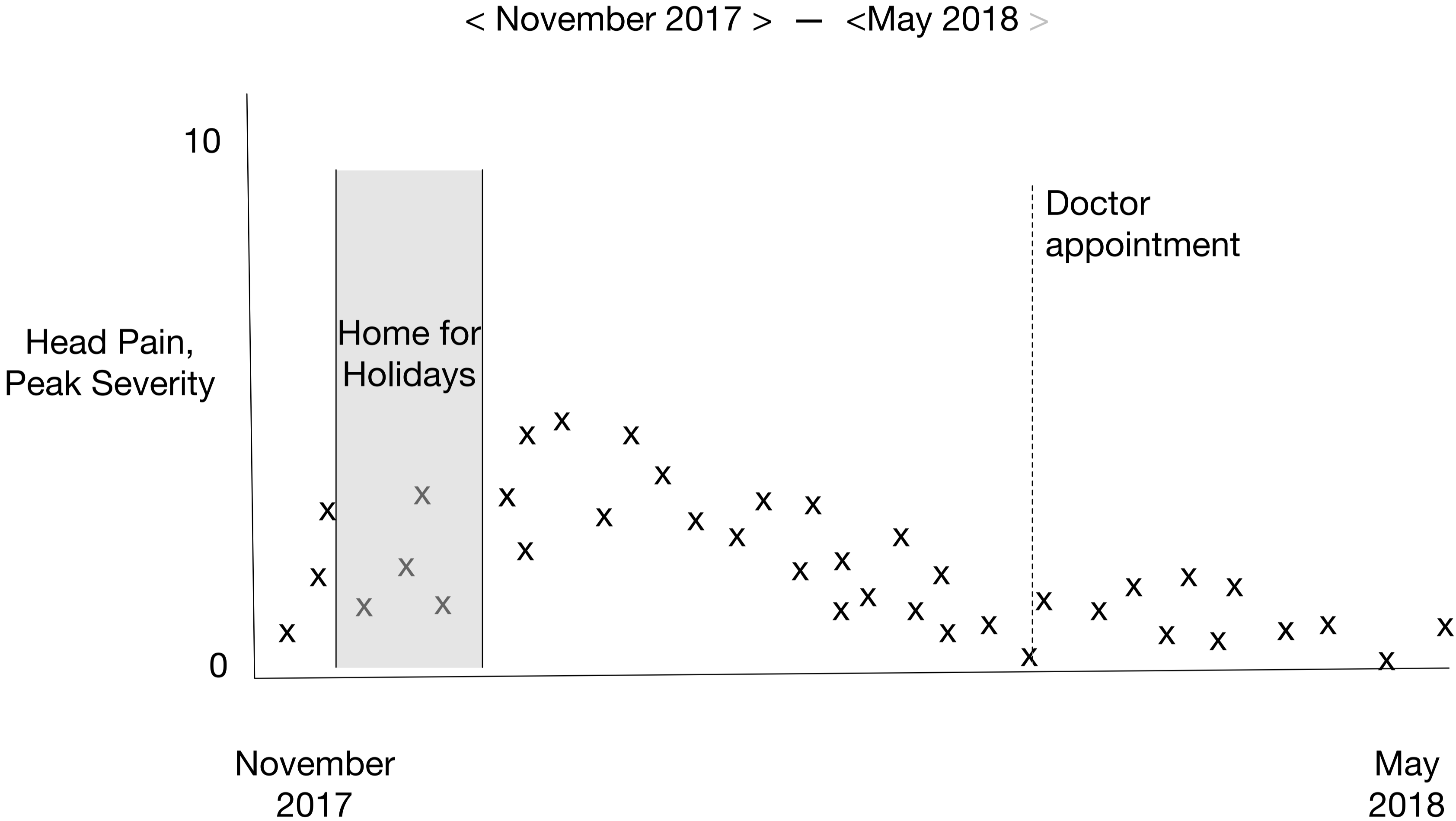
You tracked 3 days with symptoms in May 2018.

Migraines per Month:
< November 2017 > — < May 2018 >



You had fewest migraines in November,
and most migraines in May

Peak Severity Over Time



Color By:

Triggers: ▼

Treatments: ▼

Annotate Events:

April 5-13: Travel for work

March 5th, 2018: Doctor appointment

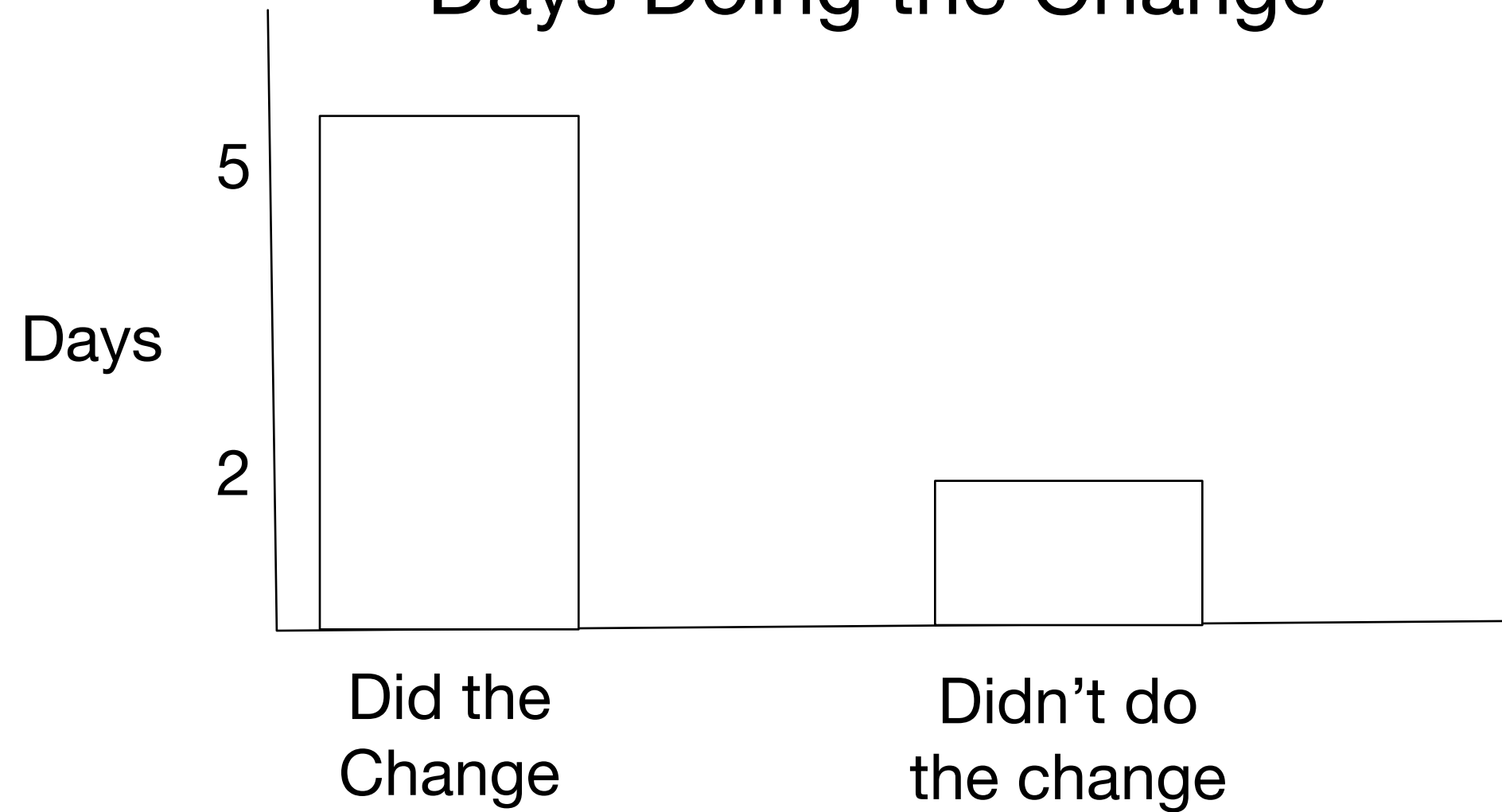
December 23-31, 2017: Home for Holidays

+ Add Event

BEFORE/AFTER TEST VISUALIZATIONS

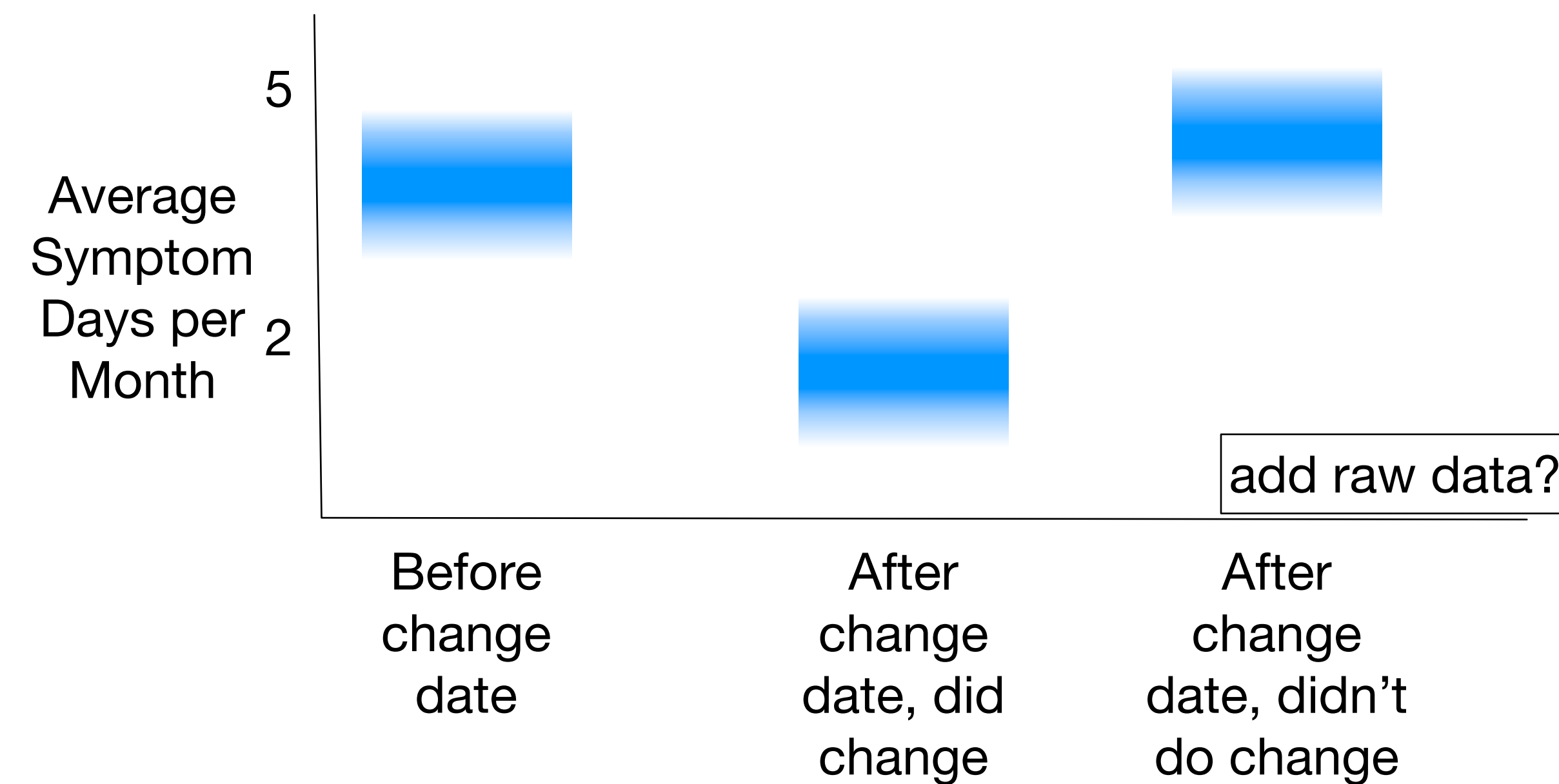
(Seen by anyone pursuing the
goals of *seeing how a change
affects symptoms*)

Days Doing the Change



Since <change>, you have tracked for <m> weeks.
You <did the change> on <o> weeks, and you did
not do the change on <p> weeks

Symptom Days per Month Before and After Change



“Before deciding to <change> on <date>, you had tracked for <n> weeks.

In those <n> weeks, you had an average of <x> migraines per month.

Since <change>, you have tracked for <m> weeks.

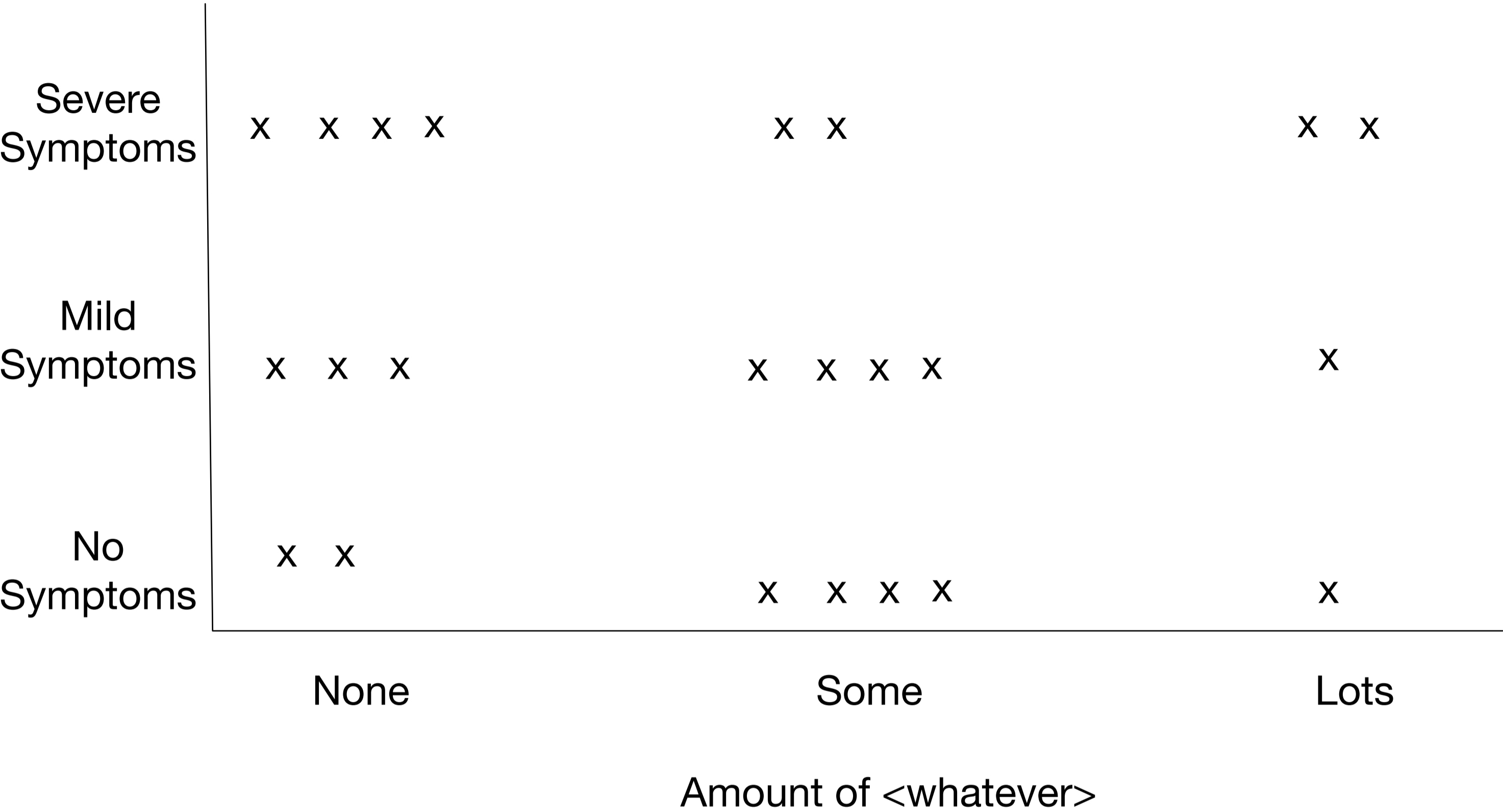
You <did the change> on <o> weeks, and had an average of <y> migraines per month

You did not do the change on <p> weeks, and had an average of <z> migraines per month

You therefore tend to have <more | similar | fewer> migraines when you <change>.

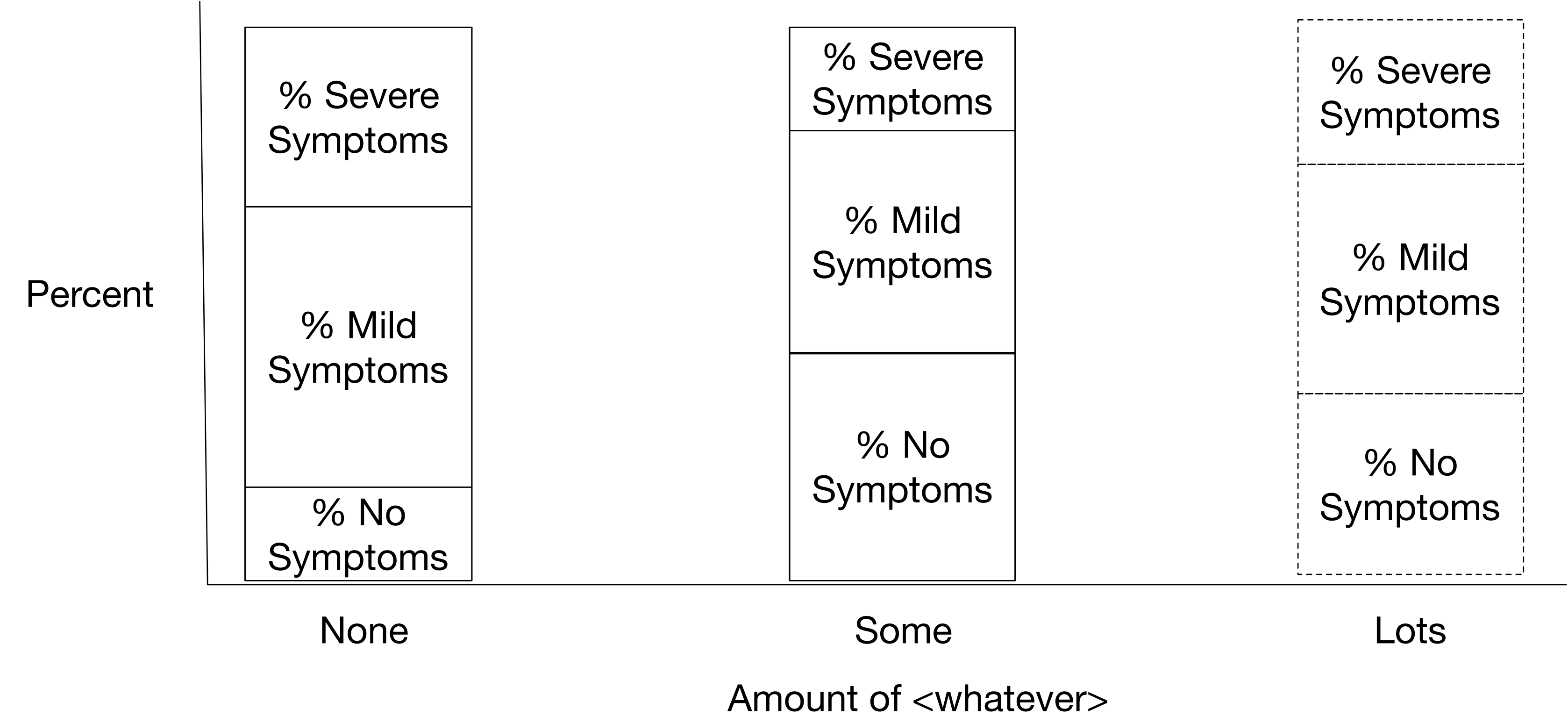
Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Symptom Severity vs Exposure to <whatever>



“You tracked <x> days with no exposure
Of those <x> days, you had <a (b%)> days without symptoms,
<c (d%)> with mild symptoms, and <e (f%)> with severe symptoms.
You tracked <y> days with lots.
Of those <y> days, you had <g (h%)> days without symptoms,
<i (j%)> with mild symptoms, and <k (l%)> with severe symptoms.
Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be
coincidental to some other unknown factor!”

Symptom Severity vs Exposure to <whatever>

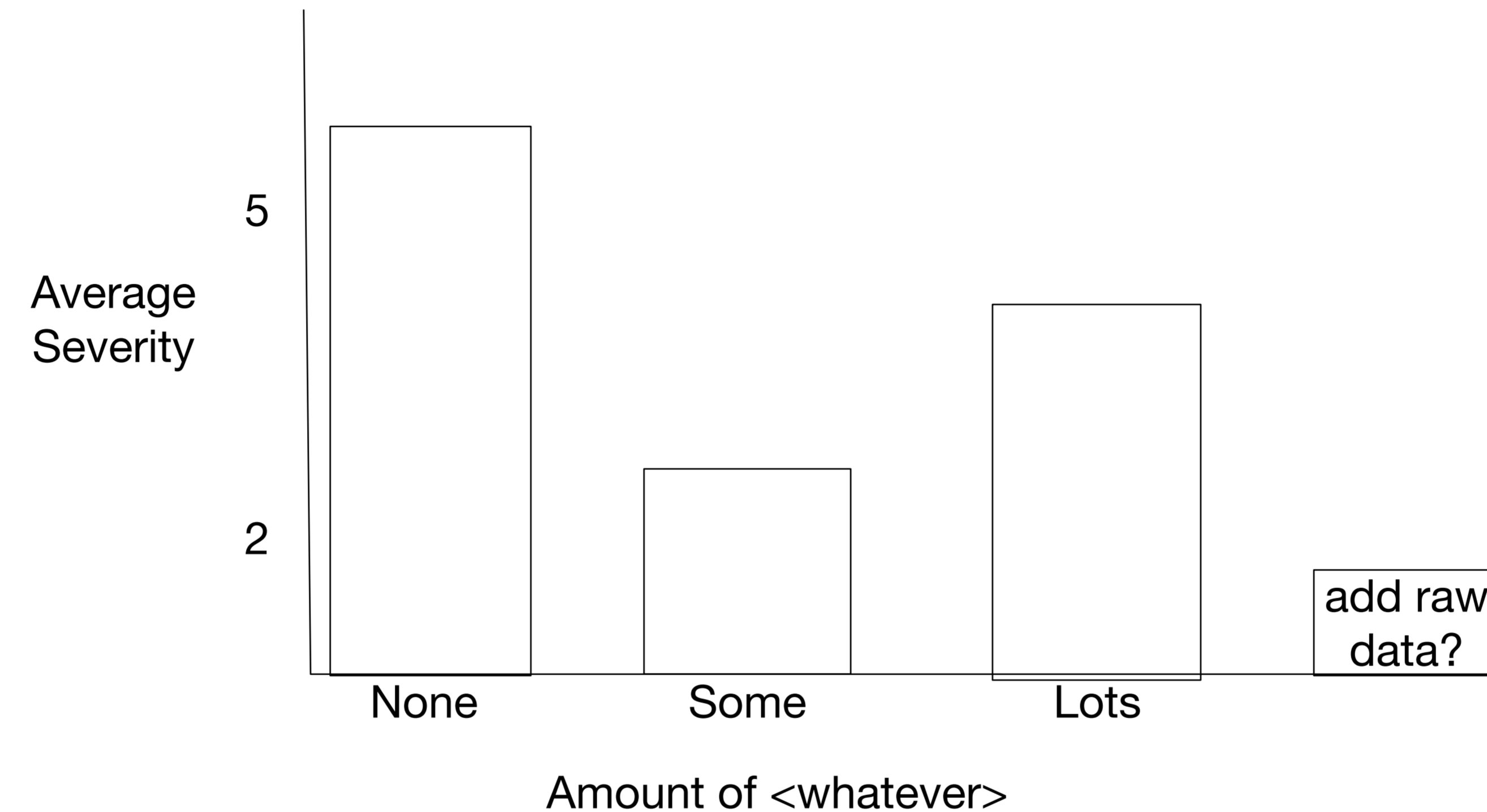


“You tracked <x> days with no exposure
Of those <x> days, you had <a (b%)> days without symptoms,
<c (d%)> with mild symptoms, and <e (f%)> with severe symptoms.

You tracked <y> days with lots.
Of those <y> days, you had <g (h%)> days without symptoms,
<i (j%)> with mild symptoms, and <k (l%)> with severe symptoms.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity since Change with No, Some, and Lots of Factor



“Since <change>, you have tracked for <l> weeks.

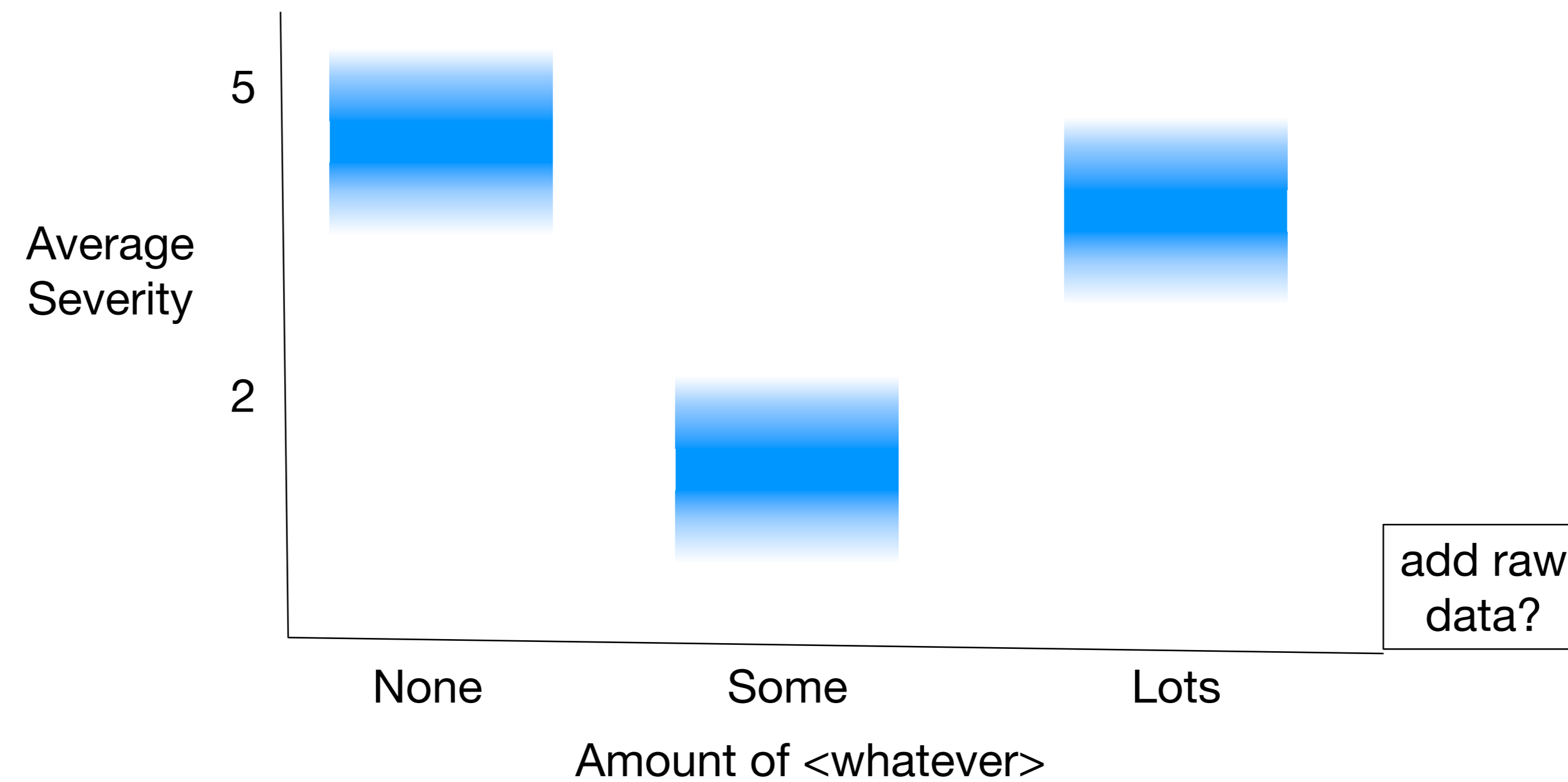
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity since Change with No, Some, and Lots of Factor



“Since <change>, you have tracked for <l> weeks.

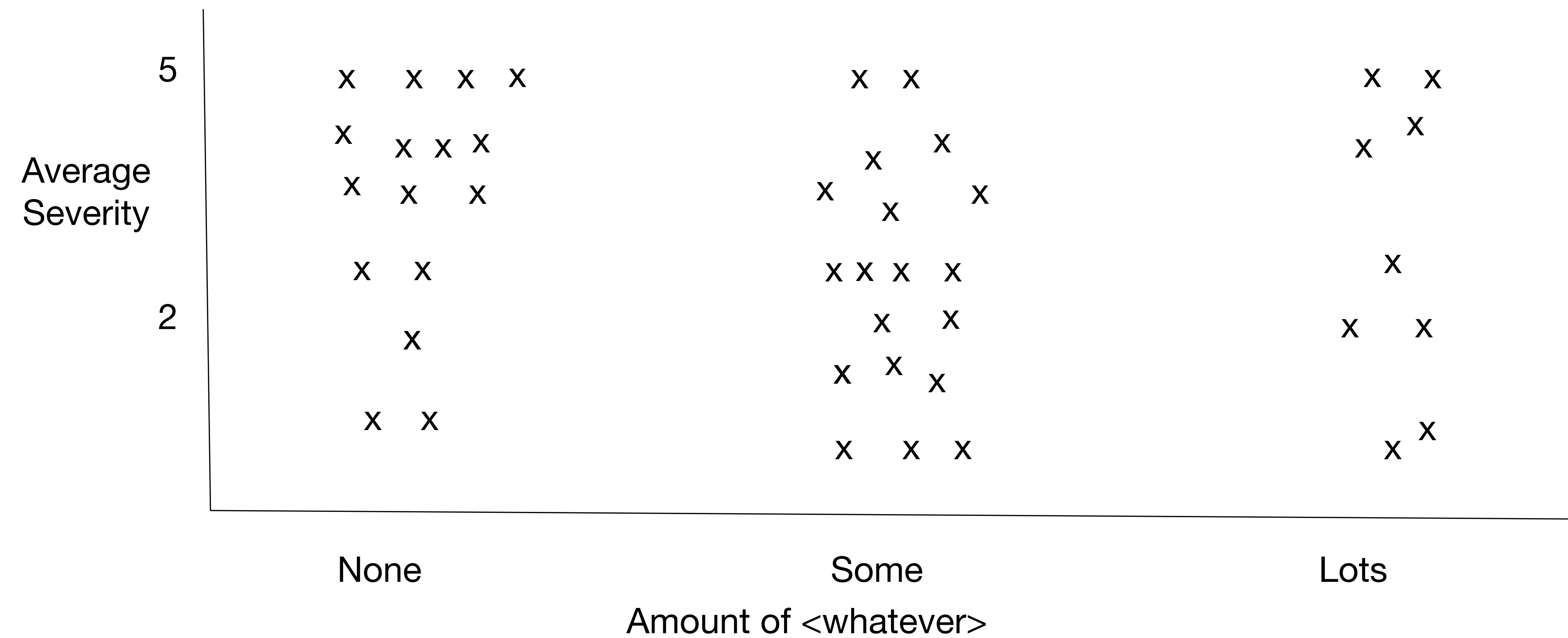
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity since Change with No, Some, and Lots of Factor



“Since <change>, you have tracked for <l> weeks.

You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.

You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>

You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Average Severity since Change with No, Some, and Lots of Factor



“Since <change>, you have tracked for <l> weeks.
You had no exposure to <whatever> on <m> weeks, and had an average severity of <x>.
You had some exposure to <whatever> on <n> weeks, and had an average severity of <y>
You had lots of exposure to <whatever> on <o> weeks, and had an average severity of <z>

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

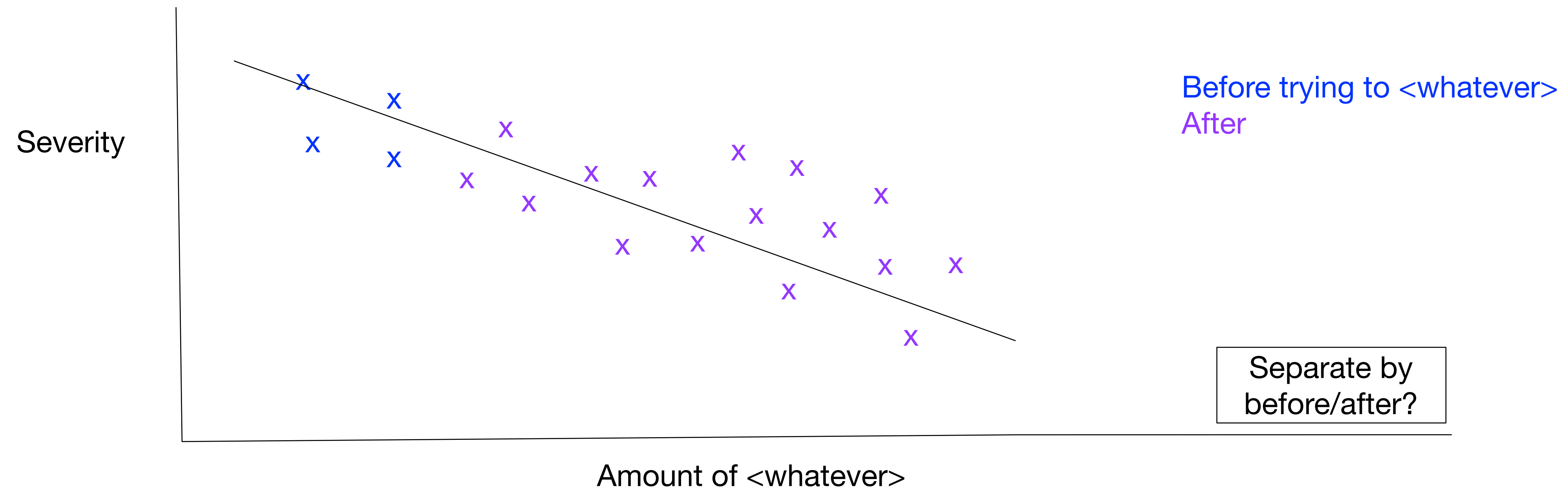
Days of Symptoms with Different Amounts of <whatever>



“When you have more <whatever>, you tend to get symptoms more often.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”

Symptom Severity with Different Amounts of <whatever>



“When you have more <whatever>, you tend to have less severe symptoms.

Remember that contributing factors often much accumulate for symptoms to occur, so the changes seen may be coincidental to some other unknown factor!”