

eAppendix 1. Recruitment Letter



Center for Health Research

Dear Provider,

The Kaiser Permanente Center for Health Research is requesting your feedback regarding how data from patients' smart phones could be used in clinical practice.

You'll receive a follow-up email in a week that includes the survey link; or you can type it in to your browser and fill it out now: <https://is.gd/kpmobile>.

It will take about ten minutes and responses are anonymous.

Either way, this chocolate bar is yours to keep! Thank you for your time.

Sincerely,

Greg Clarke, PhD
Senior Investigator, Kaiser Permanente Center for Health Research



Center for Health Research

Hello,

The Kaiser Permanente Center for Health Research is requesting feedback from you and other KP clinicians regarding how data from patients' smart phones could be used in your clinical practice.

WHAT?

Please click this link or copy and paste into a new browser <https://is.gd/kpmobile> to complete a short one-time online survey (~10 mins of your time) to give us your input on using digital data from mobile apps in your practice.

WHY?

This is your chance to provide input on what type of smart phone data would be most useful to you in informing your treatment decisions.

HOW?

To participate in this one-time survey, please go here: <https://is.gd/kpmobile>

THANK YOU:

To show our appreciation for your time, all respondents will be entered in a drawing to receive one of 10 gift baskets, which will be delivered to your clinic work area in your name.

If you have questions, please email CHRmobilestudy@kpchr.org.

Sincerely,

Greg Clarke, PhD
Senior Investigator, Kaiser Permanente Center for Health Research

Kaiser Provider Survey

RESEARCH CONSENT FORM

The purpose of this research is to determine if clinicians involved in mental health treatment see a value in obtaining information from patient's smart phones that could inform treatment decisions, and the best mode of delivery for that information.

The responses from this survey will be used to help shape health apps, the information they collect, and how to best share this information with clinicians. We plan to collect data from 100 KPNW clinicians. The survey should take 8-10 minutes to complete. Ten respondents will be randomly selected to receive a gift basket, which would be delivered to your clinic in your name.

All data collected in this study is anonymous. There will be no link between your name and the data that you provide; however, participants will be asked to provide demographic information including age, gender, license, and years in practice. As research partners, both Kaiser Permanente Northwest and University of Washington will have access to the anonymous data collected through the survey. Your participation is voluntary, and you may stop at any time. If you have questions, concerns, or complaints, please contact Greg Clarke, PhD at 503-335-6673 or Greg.Clarke@kpchr.org.

If you're willing to participate, please click the button below and complete the one-time survey. If not, please exit the browser.

Would you like to participate in the survey?

Yes, I'd like to continue

Demographics

What is your gender?

- Man
- Woman
- Other (please specify)
- I prefer not to answer

Please specify:

What year were you born?

Are you of Hispanic, Latino, or Spanish origin?

- Yes
- No
- I prefer not to answer

What is your race? Please select all that apply:

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other
- I prefer not to answer

Please specify:

I hold a:

- MD
- PhD
- LCSW
- PA
- MA
- MS
- NP
- Other (please specify)

Please specify:

How many years have you been in practice?

Survey Questions

1. What kind of information do you currently gather from patients that informs your decisions about their mental health treatment?

2. What kind of information would you like to have to inform your clinical decisions, but do not currently ask? (examples: heart rate over the course of the day, daily activity, daily ratings of sleep quality).

3. In general, would you describe your attitude towards using digital tools, such as an app or a monitor, in your practice as:

- Positive
 - Slightly positive
 - Neutral
 - Slightly negative
 - Negative
-

4a. Do you currently use any apps to help with your clinical decision making?

- Yes
 - No
-

4b. Which apps?

5. What do you like or dislike about apps that you have tried, now or in the past, to help with your clinical decision making?

6a. Do you encourage your patients to use any particular apps that are available now?

- Yes
 - No
-

6b. Which apps?

6c. Why, or why not?

7a. Would you encourage a patient to use an app that tracked their progress and helped you stay informed about their treatment?

- Yes
 - No
-

7b. Why, or why not?

8a. Would you have any concerns about such an app?

- Yes
- No

8b. What concerns?

9. If there was a diagnostic app that could help determine which treatment a newly diagnosed patient would best respond to, what sort of information do you think the app should collect to be clinically useful?

10a. If an app existed that could collect information on a moment-by-moment basis about your patients' state of mind, would you think this was useful? Yes No

10b. Why, or why not?

11a. Would the use of this app cause you any concerns? Yes No

11b. What concerns?

12a. If an app could accurately tell you that one of your patients will need a change in treatment, would you want that information? Yes No

12b. Why, or why not?

13. What would you need to know (either about the app or the patient) before deciding to use such an app with a patient?

14a. If you could receive information from a patient-used app that could augment your clinical decision making, how/where would you want that information delivered? Clinical notes EPIC staff message Outlook email message Other

14b. Please specify: _____

15. How often would you like to receive that information?

eTable 1. Provider concerns regarding the use of a clinical decision support app

Provider Concerns	Example quote 1	Example quote 2	Example quote 3
Patient burden/wellbeing	<i>“It may be too much information and may in some patients take too much effort or could increase their anxiety.”</i>	<i>“Sometimes focusing on symptoms so much makes them worse (ie pain journal makes people focus more on pain)”</i>	<i>“Sometimes too much information is more anxiety provoking. Information must be clear & easily presented so patient doesn’t need my interpretation to benefit.”</i>
Data issues (i.e. security, accuracy, etc.)	<i>“Privacy of the app, who besides the patient will have the data, and what will be done with the data.”</i>	<i>“Yes [I would encourage a patient to use an app] - however, there is significant concern about HIPAA and digital privacy.”</i>	<i>“I am not sure, it really depends on the quality of the info. I have my doubts about that an app could be that accurate”</i>
Provider burden/liability	<i>“Until proven, I don’t have any more time in my day to consider additional input/data that might require my action.”</i>	<i>“If it requires signing into a different system, it’s not going to happen.”</i>	<i>“If patients express higher risk, I would be concerned about who and how soon someone might follow-up with them. It could raise liability issues if there’s an expectation that providers be the ones who regularly follow-up on information provided in the app...”</i>

eTable 2. Provider recommendations of what to address before use of a clinical decision support app

Provider Recommendations	Example quote 1	Example quote 2	Example quote 3
Ensure app's data accuracy	<i>"Accuracy validation - how do we know it works, to what extent do I trust it?"</i>	<i>"How accurately the patient reports. How accurate and reliable the app is."</i>	<i>"Accuracy. relationship of data to what we are making decisions about"</i>
Ensure app is clinically tested and vetted	<i>"App should have been used on large number (10000+) of patients in real world setting (not beta testing phase) with corresponding data/feedback from providers and clinicians"</i>	<i>"I would like to know if that app was vetted in regard to the patient, I would just simply want them to know if they were comfortable using technology"</i>	<i>"Results of trials in clinical populations for efficacy and acceptance"</i>
Ensure app is evidence-based	<i>"Would want to know it's evidence based and that the patient has managed expectations with it."</i>	<i>"Research results: Is it safe, unobtrusive, free from observation bias, cost effective and actionable? All 'yes' = ready to try it!"</i>	<i>"How info was being collected and recorded - ie. what questions were being asked, whether this was based off of validated questionnaires related to mood"</i>