eMental Health for Depression Self-Management

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Presenter Disclosure

The presenters of this session have NOT had any relevant financial relationships during the past 12 months.

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Presentation Outline

Study 1

Self Management Tools for Primary Care

Study 2

Mobile Apps in Integrated Care and Patient Perspectives

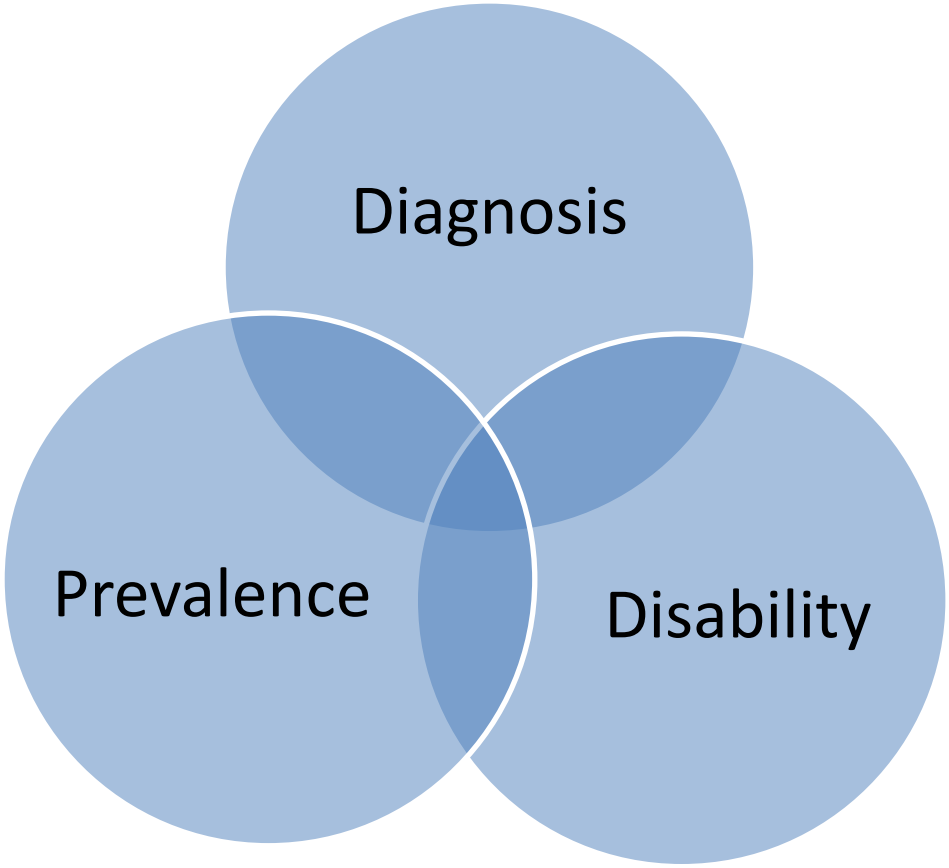
Study 3

Provider and Clinic Staff Perspectives

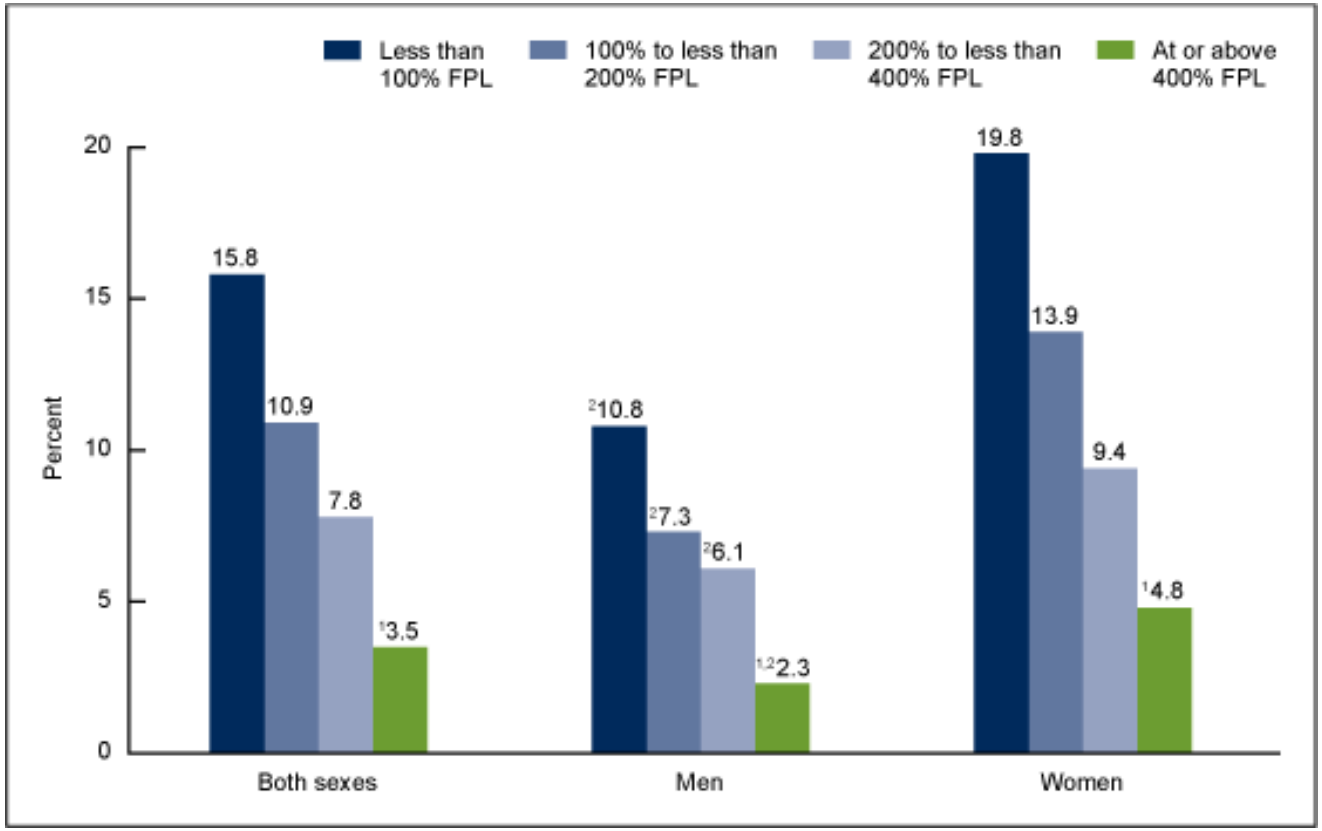
Future Directions

1) **Develop digital platform**
2) **Train digital navigator**
3) **Randomized trial**

Major Depressive Disorder



Inverse Relationship Between Income and Depression Prevalence



https://www.cdc.gov/nchs/products/databriefs/db303.htm

Disparities in Mental Health Treatment

- Receipt of Treatment
- Education Differences
- Racial Differences

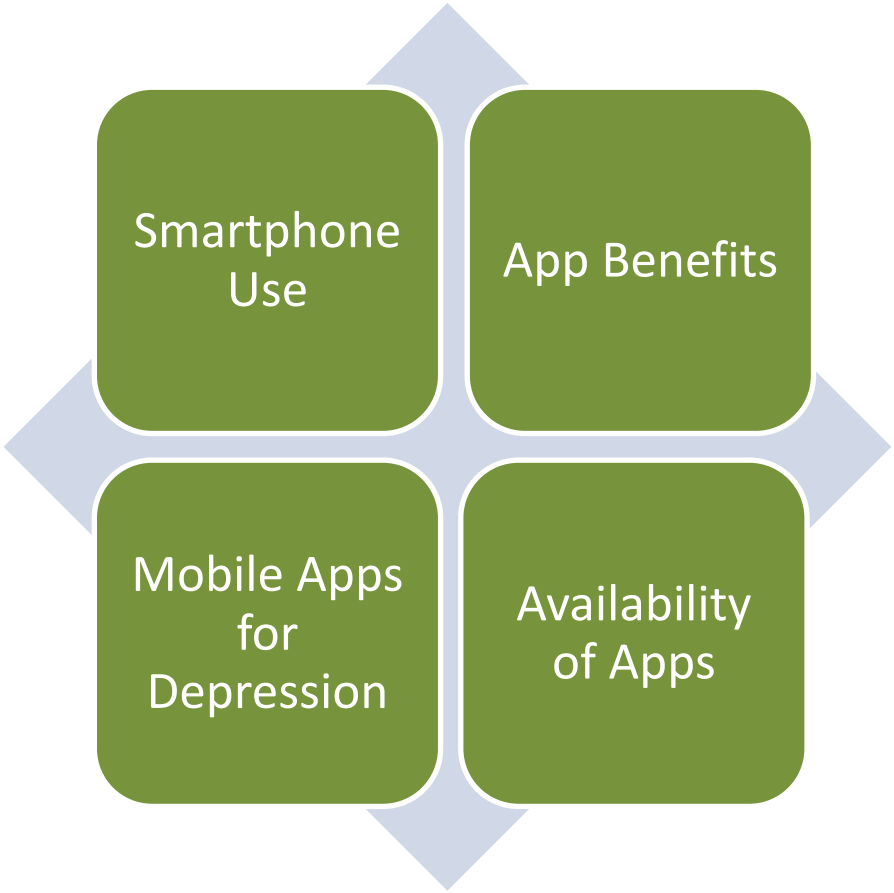
Integrated Care Challenges

Insurance Coverage

Appointment Attendance

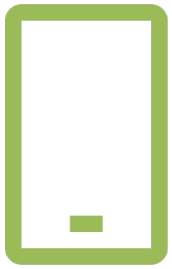
Phone Contact Limitations

Technology


Smartphone Use
App Benefits
Mobile Apps for Depression
Availability of Apps

App Screening & Selection

App Standardization



App Screening Methods

Study 1:

Identify strategies for selecting appropriate and useful self-management technology tools for use in primary care

App research lags behind

Apps become out of date- not useable

Organization compliance standards differ

App-Finding Strategies

10 OR LESS

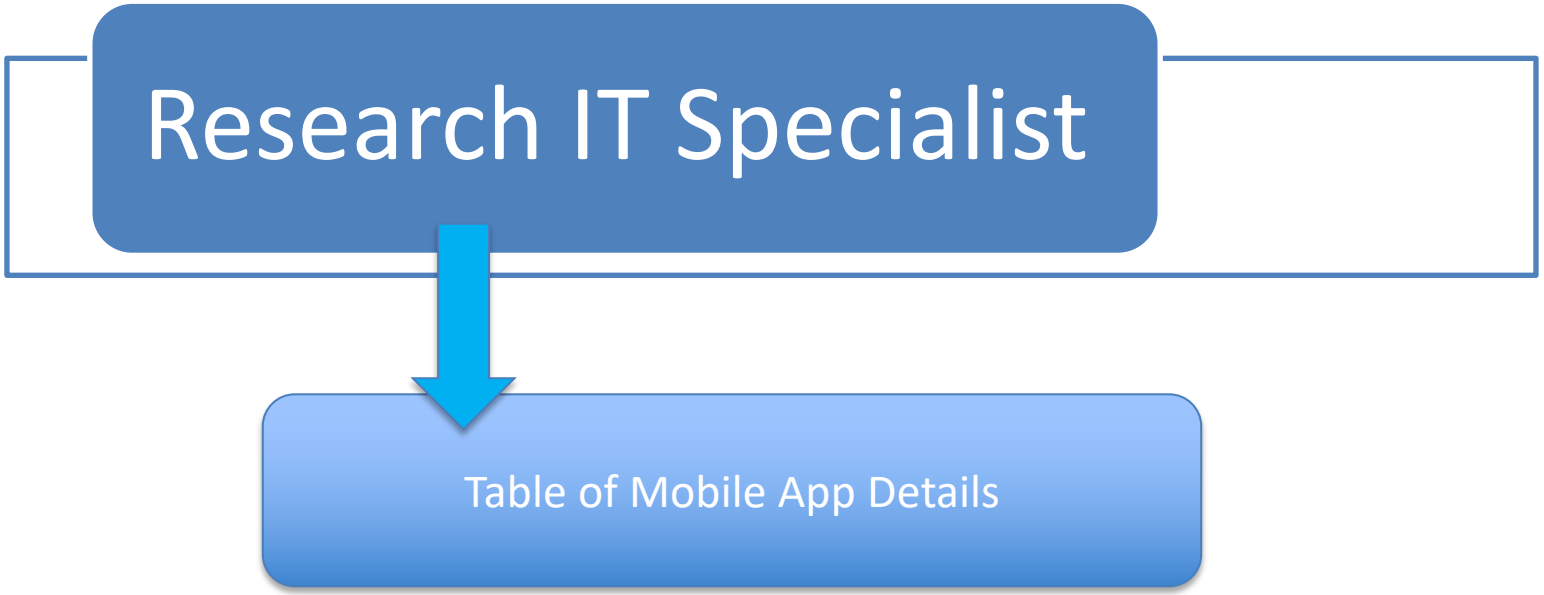
INTERNET SEARCH

GOOGLE STORE

APPLE STORE

APPS WITHIN APPS

Deeper Dive



Mobile Apps Used in Pilot

Initial List of Apps

Sanvello

Wysa

Woebot

Youper

Carezone

Headspace

Calm

Mobile App Evaluation Tools Used for Study

- APA Evaluation Form
- MARS

The APA App Evaluation Form

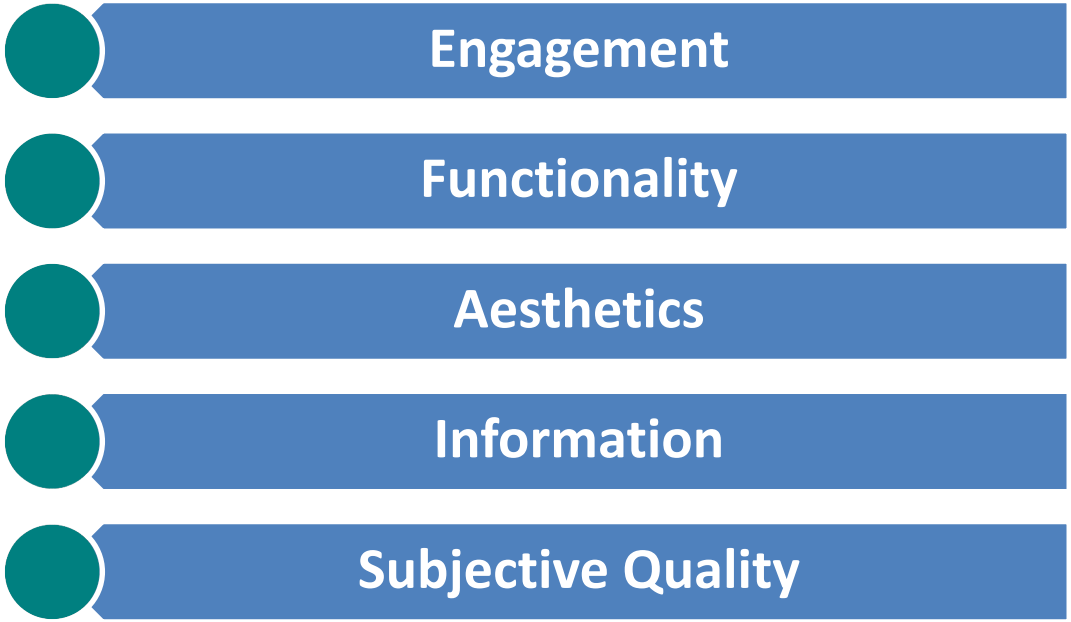
1) Safety/Privacy

2) Evidence (i.e., effectiveness)

3) Ease of Use (Usability)

4) Interoperability

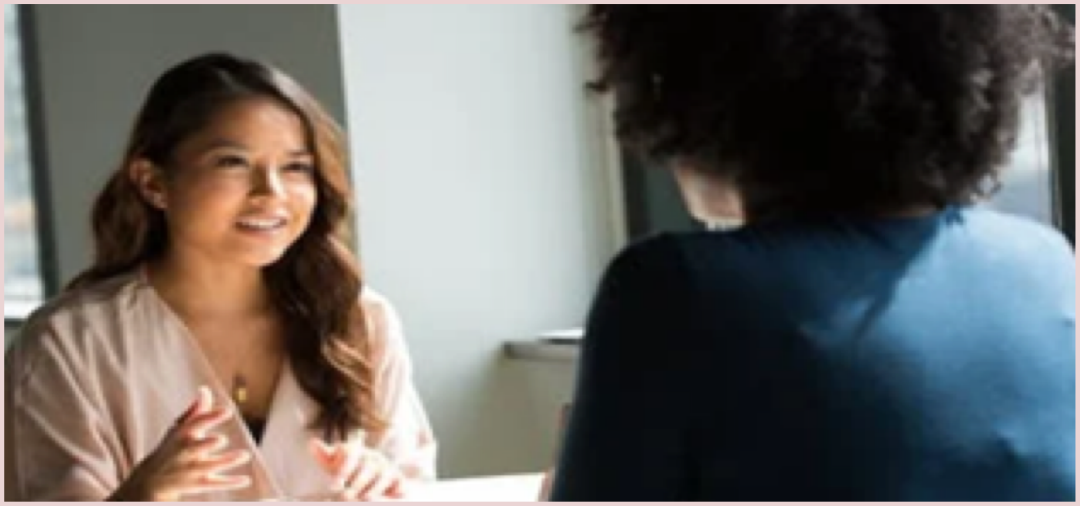
Mobile App Rating Scale (MARS)



Evaluation

APA: awaiting data

MARS: Cost played a factor



Study 2

Describe patient perspectives that are pertinent to the utilization of mobile apps in integrated primary care settings.

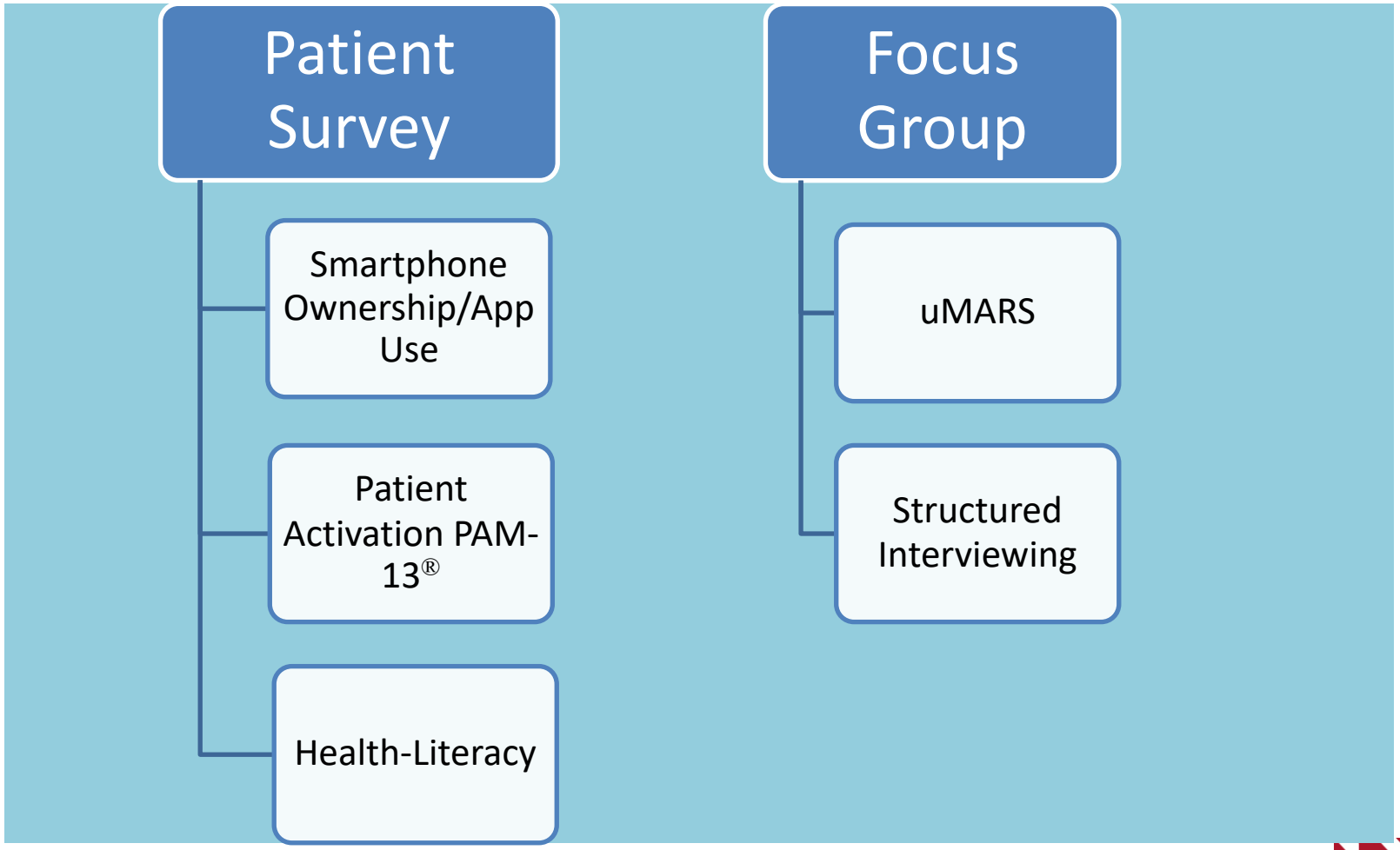
Care Beyond the Clinic Walls

Study Setting & Eligibility Criteria

Fontenelle & Midtown Clinic

Adult Patients with Depression

Data Collection



Results Demographics

Differences between two clinics:

- Gender: higher percentage of males at Midtown
- Age: Younger patients at Fontenelle
- Race: More African American patients at Fontenelle
- Ethnicity: More Hispanic patients at Midtown

Other notable points:

- Employment: 28.6% (Midtown) / 43.9% (Fontenelle)
- Lack of health literacy: 29.7% (Midtown) / 22.8% (Fontenelle)

Variable	Midtown (n=98)		Fontenelle (n=66)		P-Value
	Number	Percent	Number	Percent	
Gender					
Male	39	39.8%	15	22.7%	0.02
Female	59	60.2%	51	77.2%	
Age (years)					
19-39	20	20.4%	25	37.9%	0.06
40-59	47	48.0%	25	37.9%	
60+	29	29.6%	16	24.2%	
Missing	2	2.0%	0	0.0%	
Current Occupation					
Disabled	41	41.8%	23	34.9%	0.6
Employed	28	28.6%	29	43.9%	
Retired	13	13.3%	6	10.0%	
Unemployed	9	9.2%	4	6.1%	
Other	7	7.1%	4	6.1%	
Marital status					
Widowed	12	12.2%	4	6.1%	0.5
Divorced	27	27.6%	16	24.2%	
Not married	35	35.7%	28	42.4%	
Married	24	24.5%	18	27.2%	
Education					
<12th grade	13	13.3%	6	9.1%	0.96
High school/GED	27	27.6%	17	25.8%	
Some college – No degree	21	21.4%	18	27.3%	
Technical/Associate degree	25	25.5%	18	27.3%	
Bachelor’s degree or above	12	12.2%	7	10.6%	

Variable	Midtown (n=98)		Fontenelle (n=66)		P-Value
	Number	Percent	Number	Percent	
Race					
White	59	60.2%	28	42.4%	0.02
Black/ African American	29	29.6%	31	47.0%	
American Indian/ Alaska Native	5	5.1%	0	0.0%	
Asian / Pacific Islanders	1	1.0%	1	1.5%	
More than one race	4	4.1%	6	9.1%	
Hispanic, Latino/Latina or Spanish origin					
Yes	12	12.2%	1	1.5%	0.01
No	85	86.7%	65	98.5%	
Missing	1	1.0%	0	0.0%	
How well you speak English					
Very well	84	85.7%	60	90.9%	0.25
Well	13	13.3%	5	7.6%	
Not well	0	0.0%	1	1.5%	
Missing	1	1.0%	0	0.0%	
Primary language used at home					
English	94	96.9%	63	96.9%	0.25
English & Spanish	1	1.0%	2	3.1%	
Karen	1	1.0%	0	0.0%	
Spanish	1	1.0%	0	0.0%	
How often do you have someone help you read written materials from your doctor or pharmacist?					
Never	46	46.9%	40	60.6%	0.51
Rarely	23	23.5%	11	16.7%	
Sometime	18	18.4%	10	15.2%	
Often	3	3.1%	2	3.0%	
Always	8	8.2%	3	4.6%	

Results: eMental Health

PHONE OWNERSHIP

DATA PLANS

WILLINGNESS TO USE APP

Variable	Midtown (n=98)		Fontenelle (n=66)		P-Value
	Number	Percent	Number	Percent	
Own a smart phone					
Yes	77	78.6%	60	90.9%	0.07
No	21	21.4%	6	9.1%	
Type of smartphone					
Apple/ios	15	15.3%	17	25.8%	0.09
Android	62	63.3%	41	62.1%	
Other	7	7.1%	1	1.5%	
Missing	14	14.3%	7	10.6%	
Type of phone plan					
Prepaid	16	16.3%	8	12.1%	0.65
Monthly plan	67	68.4%	50	75.8%	
Monthly capped plan	2	2.0%	2	3.0%	
Missing	13	13.3%	6	9.1%	
Unlimited plan					
Yes	62	63.3%	49	74.2%	0.45
No	28	28.6%	12	18.2%	
Missing	8	8.2%	6	7.6%	
Smartphone use for health information/ issues					
Yes	58	59.2%	51	77.3%	0.006
No	36	36.7%	11	16.7%	
Missing	4	4.1%	4	6.1%	
Past 12month app use for health improvement					
Yes	36	36.7%	33	50.0%	0.09
No	62	63.3%	33	50.0%	

Variable	Midtown (n=98)		Fontenelle (n=66)		P-Value
	Number	Percent	Number	Percent	
Current app use for health improvement					
Yes	25	25.5%	23	34.8%	0.21
No	72	73.5%	43	65.2%	
Missing	1	1.0%	0	0.0%	
Reasons for downloading an app					
Concerned about health	19	19.4%	15	22.7%	0.54
Family member recommendation	6	6.1%	1	1.5%	
Friend/coworker/acquaintance recommendation	4	4.1%	1	1.5%	
Missing	44	8.2%	39	9.1%	
A health care provider recommendation	8	7.1%	6	6.1%	
Other	7	44.9%	4	59.1%	
Easy app learning					
Yes	80	81.6%	53	80.3%	0.38
No	18	18.4%	8	12.1%	
Missing	0	0.0%	5	7.6%	
Willingness to use data for depression self-management					
Yes	75	76.5%	57	86.4%	0.005
No	23	23.5%	4	6.1%	
Missing	0	0.0%	5	7.6%	
Believe an app can help in symptoms management			5		
Yes	65	66.3%	48	72.7%	0.31
No	33	33.7%	17	25.8%	
Missing	0	0.0%	1	1.0%	

Variable	Category 1		Category 2		Category 3		Category 4		P-Value
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Gender									
Male	12	24.0%	5	10.0%	22	44.0%	11	22.0%	0.11
Female	10	9.9%	18	17.8%	50	49.5%	23	22.8%	
Age group									
19-49 years	12	17.1%	10	14.3%	34	48.6%	14	20.0%	0.78
50 years+	10	12.5%	13	16.3%	37	46.3%	20	25.0%	
Education									
High School or Lower	9	16.1%	10	17.9%	24	42.9%	13	23.2%	0.80
Some college and Higher	13	13.7%	13	13.7%	48	50.5%	21	22.1%	
Race									
White	11	13.1%	11	13.1%	42	50.0%	20	23.8%	0.75
Other Race	11	16.4%	12	17.9%	30	44.8%	14	20.9%	
How well do you speak English?									
Very well	16	12.0%	18	13.5%	67	50.4%	32	24.1%	**0.02**
Other	6	33.3%	5	27.8%	5	27.8%	2	11.1%	
Health Literacy									
How often do you have someone help you read written materials from your doctor or pharmacist?									
Never - Rarely	11	9.8%	15	13.4%	57	50.9%	29	25.9%	**0.01**
Sometimes-Always	11	28.2%	8	20.5%	15	38.5%	5	12.8%	

Focus Group Results

uMARS

Focus Groups

Study 3

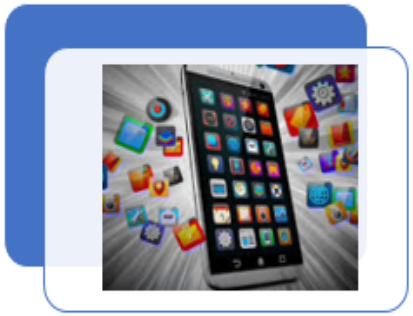
Describe provider and clinic staff perspectives regarding the use of depression related mobile app technology within integrated primary care settings.

Focus Group Results (cont'd)

PROVIDERS

STAFF

General Study Implications



Future Directions

Educational Materials

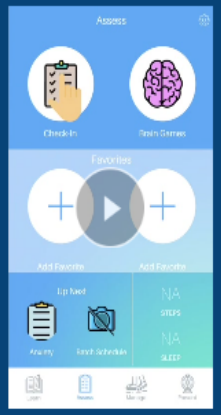
Communication

Training

Development of Digital Platform

- Collaboration with Harvard Digital Lab

The App



The LAMP smartphone app collects multiple, customizable data streams from a user.

Active Data

Includes information collected when the individual is using the app.

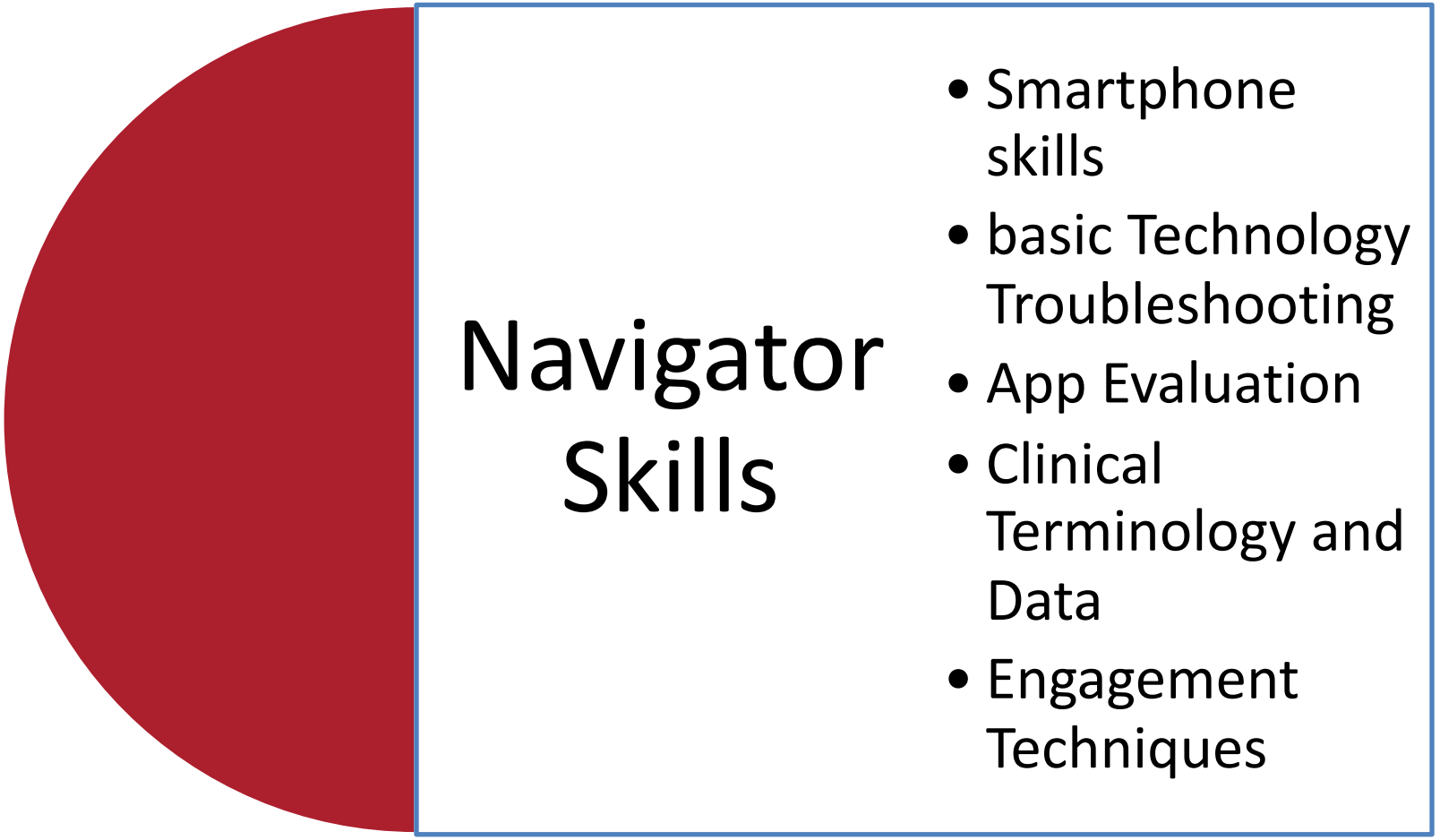
- Surveys
- Cognitive Tests
- Environment Tagging

Passive Data

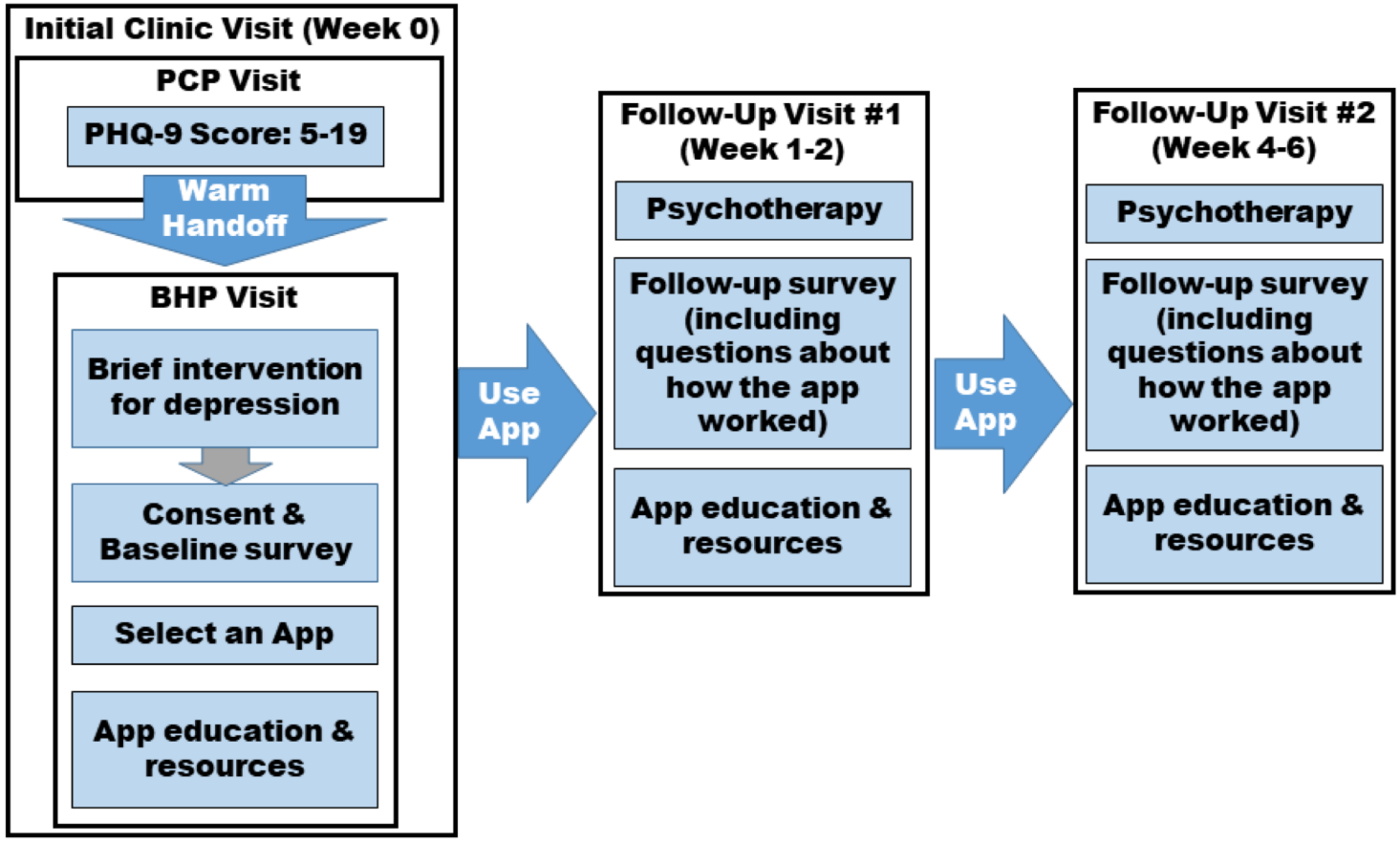
Information collected in the background even if the user is not using the app.

- GPS
- Call and Text Logs
- Exercise information

Digital Navigator



Clinical Trial



Questions?