A Mobile Application for Locating Treatment and Support

Supplementary Materials

These are the *Supplementary Materials* for our Interactive Qualifying Project and was completed through the Worcester Polytechnic Institute Worcester Community Project Center. The project was completed in collaboration with the City of Worcester Department of Health and Human Services.

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Abstract

In collaboration with the City of Worcester Department of Health and Human Services, our team created an accessible directory of substance use treatment services and related resources through the creation of a functional mobile application. Prior to our project, there was a lack of communication between service providers and those seeking treatment. Through in-person visits, semi-structured interviews, focus groups with potential users, and a survey, our team collected information and received feedback related to app features and designs. We determined what features were most useful while keeping the app simple and user friendly. Our application will help those seeking treatment and support by easily communicating organizations and services in the City of Worcester.

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Application Data Entry and Translations	Michael/Kyle/Natasha	Michael
Supplementary Materials	Kyle	Kyle

Appendix A: Compiled Organization Information Spreadsheet

See spreadsheet file below for cataloged information regarding substance use, homelessness, and related services in Worcester, titled *"Updated Catalog of Resources in Worcester"*.

https://docs.google.com/spreadsheets/d/e/2PACX-1vRulU83PjJD-hoZUXJ-gPm1bsOswvDdmlblExNBXIJtB4z2OUQCPSMt_FVdhuP1zS1qFZNaUzu3BV4u/pubhtml

Appendix B: Ranking Sheet

Ranking Sheet – First Iteration

<u>Features and Layout for Mobile Application</u>

Rank the **information** in order of which you want to see first. Write a one (1) next to the information that should be at the top of the page, down to an eight (8) for what should go at the bottom of the page.

_____	Phone number
_____	Address, Map
_____	Parking situation
_____	Hours
_____	Services provided
_____	Payment/Insurance info
_____	Flags for special accomodations
_____	Pictures of location

Rank the **filtering** options in order of importance to you. Write a one (1) for the most important, two (2) for second most important, down to seven (7) for the least important.

_____	Treatment type
_____	Insurance Accepted/Payment Type
_____	Language
_____	Accessibility (wheelchair, other disabilities)
_____	Genders and ages served
_____	Special support for: Undocumented, LGBTQ+, veteran, trauma survivor, etc
_____	Hours (open now)

Choose three (3) features that are the most important to you.

- Save Filters OR Custom user profile
- Suggestions for what type of treatment to get
- Submit fixes or add information
- Share this listing with a friend
- Events Calendar
- Feedback system
- Message saying "You will be protected from prosecution if you call 911 to help someone." (Good Samaritan Law)
- Message saying "If you don't have insurance, these locations will help you sign up for MassHealth"

Ranking Sheet – Second Iteration

<u>Features and Layout for Mobile Application</u>

Rank the **information** in order of which you want to see first. Write a one (1) next to the information that should be at the top of the page, down to a ten (10) for what should go at the bottom of the page.

* "Special Support Services" are extra support for groups like: Undocumented, LGBTQ+, veteran, trauma survivor, formerly incarcerated, etc.

_____	Contact info	_____	Services provided
_____	Map	_____	Eligibility (age, gender, family, referral, etc.)
_____	Parking situation	_____	Accessibility (language, wheelchair, etc.)
_____	Hours	_____	Flags for special support services*
_____	Payment/Insurance info	_____	Pictures of location

Rank the **filtering** options in order of importance to you. Write a one (1) for the most important, two (2) for second most important, down to seven (7) for the least important.

_____Treatment types offered (Detox, Counseling, Medication, etc.)
_____Accepts MassHealth, takes clients with no insurance
_____Language

_____Wheelchair Accessibility
_____Genders and ages served
_____Special support services*
_____Hours (open now, open weekends)

List suggestions for a short app name: _____

Please list some common general questions clients ask you and the answers you give. They may be included in a FAQ section on the home page. Feel free to add more Q/As on the back of this sheet.

Q:_____

A:_____
_____
_____

Q:_____

A:_____
_____
_____

Ranking Sheet Results

Information	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	Average Rank	Order
Phone number	3	2	1	6	3	1	2	2	1	1	4	1	5	1	6	-	1	3	7	3	2	2	3	1	2	4	1	3	2.63	2
Address, Map	4	5	2	4	2	2	3	4	2	2	5	2	4	2	7	-	2	4	1	4	3	4	2	3	4	1	3	4	3.15	3
Parking	2	6	6	8	6	8	7	7	6	8	8	5	8	8	5	-	8	7	6	7	7	8	8	7	6	8	4	8	6.74	8
Hours	1	4	3	5	4	3	5	5	3	4	6	4	3	4	4	-	4	5	3	5	6	5	4	8	5	7	2	5	4.33	4
Services Provided	5	1	4	1	1	4	1	1	4	3	2	6	6	6	3	-	3	1	2	1	1	1	1	2	1	2	5	2	2.59	1
Payment/Insurance Info	7	7	7	7	8	5	8	3	7	5	3	7	2	3	1	-	7	6	4	2	5	7	5	4	8	5	6	7	5.41	6
Special Accomodations	6	8	5	3	7	7	4	8	5	7	7	8	1	7	2	-	6	2	8	6	8	6	6	6	3	6	8	6	5.78	7
Pictures of Location	8	3	8	2	5	6	6	6	8	6	1	3	7	5	8	-	5	8	5	8	4	3	7	5	7	3	7	1	5.37	5

Filters	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	Average Rank	Order
Treatment Type	2	2	2	1	1	4	1	1	1	1	3	4	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.54	1
Insurance Accepted/Payment Type	4	6	3	2	7	5	7	2	2	7	1	5	2	3	4	2	6	4	7	2	2	2	5	3	5	2	5	3	3.86	3
Language	3	3	1	6	5	6	6	4	3	6	5	7	4	7	5	6	5	3	2	6	7	6	6	4	4	4	6	6	4.86	6
Accessibility	5	7	4	5	6	7	2	5	5	5	7	1	5	6	2	3	7	5	3	4	6	5	4	5	7	6	4	7	4.93	7
Genders/Ages Served	6	4	5	4	3	3	4	6	6	4	4	2	6	4	7	7	3	2	6	5	4	4	7	6	2	7	7	5	4.75	5
Accomodations	7	5	6	7	4	2	3	7	7	3	6	3	7	1	3	4	4	6	5	7	3	7	2	2	6	5	2	2	4.50	4
Open at Time	1	1	7	3	2	1	5	3	4	2	2	6	1	5	6	5	1	7	4	3	5	3	3	7	3	3	3	4	3.57	2

Features	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	Total	Order
Save Filters/Profile	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	-	0	0	0	0	1	0	0	1	1	1	0	-	7	4
Suggestions for Treatment	1	0	0	1	1	0	0	1	0	1	1	0	0	0	0	-	1	0	0	0	1	0	1	1	1	1	1	-	13	3
Submit Fixes	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	1	0	0	0	0	0	-	3	8
Share Listing	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	-	0	1	0	1	0	0	0	0	0	0	0	-	5	6
Events Calendar	1	1	0	0	1	0	0	1	1	1	0	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	0	-	20	1
Feedback System	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	-	0	0	1	0	0	0	0	0	0	0	0	-	4	7
No Arrest Message	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	-	0	0	0	0	0	0	0	0	0	0	1	-	6	5
Insurance Message	0	1	0	1	0	1	1	0	1	1	1	1	0	1	0	-	1	1	1	1	0	1	1	0	0	0	1	-	16	2

Appendix C: Organization Survey

Organization Basic Information

We are a consulting team from Worcester Polytechnic Institute working directly with the City of Worcester Department of Health and Human Services to create a mobile app to provide information for all substance abuse treatment centers and related resources in Worcester. We greatly appreciate you taking the time to provide this information to help the Worcester community.

* Required

1. **Organization Name:** *

   _____

2. **Organization Type** *
   Check all that apply.

   ☐ Non-Profit
   ☐ For-Profit

3. **Service Type** *
   Check all that apply.

   ☐ Inpatient Treatment Center
   ☐ Residential Treatment Center
   ☐ Outpatient Treatment Center (including counseling)
   ☐ Homeless Shelter
   ☐ Social Service Center
   ☐ Urgent Care
   ☐ Mental Health
   ☐ Other: _____

4. **Phone Number(s)** *

   _____

5. **Address** *

   _____

6. **Email Adress(es)**

   _____

7. **Business Hours:** *

Please be specific as this information will be included in the application. Include hours for holidays, different locations, and services as necessary.

_____

_____

_____

_____

_____

8. **Parking** *

Check all that apply.

☐ Free Lot

☐ Free Street

☐ Metered

☐ Paid Lot/Garage

☐ Not Available

Services Provided

9. **What services do you provide?** *

Check all that apply.

☐ Alcohol and Drug Assessment

☐ Detoxification

☐ Crisis Intervention

☐ Inpatient Treatment/Rehabilitation

☐ NARCAN Training

☐ NARCAN Distribution

☐ Methadone Treatment

☐ Vivitrol Treatment

☐ Suboxone Treatment

☐ Intensive Outpatient

☐ Addiction Counseling

☐ Youth Counseling

☐ Mental Health Diagnosis and Prescription

☐ Individual Therapy

☐ Family Therapy

☐ Group Therapy

☐ Mental Health Counseling

☐ Housing/Shelter

☐ Food Bank

☐ Clothing Bank

☐ Insurance Advising and Activation

☐ Workforce Support

☐ Other: _____

10. **(Optional) Provide a more detailed description of services provided:**

_____

_____

_____

_____

_____

Insurance and Payment Options

11. **What payment plans do you offer? ***
Check all that apply.

☐ Sliding Fee Scale

☐ Treatment at no charge to clients who cannot afford to pay

☐ None of these

☐ Other: _____

12. **What insurance providers do you accept? ***

_____

_____

_____

_____

_____

Populations Served

13. **Ages Served ***
Check all that apply.

☐ Under 18 years old

☐ 18+ years old

☐ Other: _____

14. **Genders Served ***
Mark only one oval.

◯ Men only

◯ Women only

◯ All genders

15. **Are your location(s) accessible by wheelchair or other mobility devices? ***
Mark only one oval.

◯ Yes

◯ No

10

16. **In what languages does your organization offer services?** *
Check all that apply.

☐ English

☐ Spanish

☐ American Sign Language

☐ Braille

☐ Vietnamese

☐ Portuguese

☐ Chinese (Mandarin)

☐ Other: _____

17. **How do you provide services in languages other than English?**
Check all that apply.

☐ Print and Audio Resources

☐ Interpreter

☐ Staff Counselor

☐ Other: _____

18. **For what particular groups of people does your organization offer special support?**
For example: Undocumented clients, ex-convicts, trauma survivors, LGBTQ+ clients, Veterans, etc.

_____

_____

_____

_____

_____

19. **Please list those support services.**
For example: Staff training for specific issues, accessibility resources, minimal ID requirements, etc.

_____

_____

_____

_____

_____

Additional Information

20. **Does your organization have recurring events that you would like people to know about?**

_____

_____

_____

_____

_____

21. **Is there anything else you would like people to know regarding your organization?**

_____

_____

_____

_____

_____

Appendix D: Analysis Method

Feature	Benefits	Cost	Dangers	B	C	D	Development Time
Save Filters	- Access to previous searches - Saves having to reenter information	- Someone may want to start from cleared filters	-Loss of sensitive private info	4	2	3	2
Suggestions for Treatment	-Helps users who don't know what they're looking for	- Confusion regarding the difference between regular searching and "suggestion searching" - Takes up extra space in the app	-Loss of sensitive private info - Self selecting treatment is dangerous	4	5	6	4
Submit Fixes	- Keeps info up-to-date	- Someone has to approve/reject changes - Spam submitters would need to be banned from suggesting edits (requires authentication)	- People enter malicious/incorrect information that has to be reviewed by DHHS (often?)	6	3	2	3
Share Listing (text version)	- Easily share information with family - Professionals refer clients	N/A	N/A	3	N/A	N/A	1
Share Listing (app page link version)	- Easily share information with family - Professionals refer clients - Link to specific pages on the app	N/A	N/A	3	N/A	N/A	2
Feedback System	- Allow users to submit suggestions about the app in general	N/A	N/A	3	N/A	N/A	2
911/Good samaritan message	- Encourages users to call for help	- Screen space	- Liability if not worded correctly to account for loopholes - Safety of user if they fall into a loophole	6	1	2	0
Insurance Message	- Encourages treatment even if someone is uninsured	- Screen space	N/A	6	1	N/A	0
Admin panel/submission system (app version)	- Editing takes place in app	- iPhone users can't use it - Difficult to quickly enter information	N/A	3	6	N/A	5
Admin panel/submission system (web version)	- Easier to update on computer - No Android necessary (HHS has iphones)	- Web hosting - Cost of domain - Confusion of leaving the app to make submission	N/A	6	3	N/A	5

Appendix E: Interview Questions

Interview Questions for Medical Professionals and Employees in Treatment Centers and Homeless Shelters

Worcester Department of Health and Human Services - Mobile Application Project Team

- Counselors/therapists
- Nurses
- Doctors/psychiatrists
- Treatment center admins
- EMTs
- Police

Interview/Focus Group Questions

1. What kind of phone do you have?
2. What is the best way to make the Worcester community aware of this app? Would you tell your clients to download it? Why or why not?
3. Here are some filtering options that we are planning on adding to the application. Can you rank them from most to least important to you?
4. Here is some information we are going to include for each treatment center. Can you rank the information from most to least important to you?
5. Here is a list of features we may include. Can you choose 3 that are the most important to you?
6. What else would you like the app to do, for you and your clients?
7. Here are some mockup designs of the app. Do they seem too complicated or too simple? How does it compare to this other app (GetHelpNow)? What does a simple app look like to you?
8. Here is a mockup of a web interface for updating the app. What do you think is the best way to add/fix listings and events on the app? Should anyone be able to suggest edits that you or DHHS can approve/reject? What is the easiest way for you to make edits or updates?
9. What are some common questions you get that could be addressed in a Question & Answer section of the app?

Interview Questions for Patients/Clients in Treatment Centers and Homeless Shelters

Worcester Department of Health and Human Services - Mobile Application Project Team

Clients Individual Interview Questions:

1. Do you have a smartphone or access to one? What kind? Do you have a data plan or access to the internet?
2. What is the best way to make the Worcester community aware of this app?
3. Here are some filtering options that we are planning on adding to the application. Can you rank them from most to least important to you?
4. Here is some information we are going to include for each treatment center. Can you rank the information from most to least important to you?
5. Here is a list of features we may include. Can you choose 3 that are the most important to you?
6. What else would you like the app to do?
7. Here are some mockup designs of the app. Do they seem too complicated or too simple? How does it compare to this other app (GetHelpNow)? What does a simple app look like to you?

Appendix F: Project Verification Letter

Edward M. Augustus, Jr.
City Manager

CITY OF WORCESTER

Matilde Castiel MD
Commissioner

To Whom It May Concern,

The City of Worcester Department of Health and Human Services (HHS) is working directly with a consulting student team from Worcester Polytechnic Institute (WPI) to create a mobile application that will serve as a directory for all available substance use, homelessness, and other related resources in Worcester. This application will include listings of all relevant resources in the city of Worcester and each listing will include basic information regarding the specific organization.

The consulting team consists of Kyle Foley (email: kjfoley@wpi.edu), Michael Kola (email: mkola@wpi.edu), Natasha Honcharik (email: nhoncharik@wpi.edu), and Walker Christie (email: wschristie@wpi.edu).

We would greatly appreciate you taking the time to complete a quick questionnaire that includes questions that confirm basic information, services provided, and more. The form consists of 5 sections: basic information, services provided, insurance and payment options, populations served, and additional information regarding the organization. This information will be provided to those in search of help and will give them all necessary information regarding different treatment centers, homeless shelters, and more.

Please do not hesitate to contact us with any questions or to participate in a focus group regarding the design aspects of the application.

Sincerely,

Dr. Matilde Castiel
Commissioner of Health and Human Services
City of Worcester
Castielm@worcesterma.gov
Mobile 508-269-2428
Office 508-799-8486

Kelsey Hopkins
Academic Health Collaborative Coordinator
Worcester Division of Public Health/Central MA Regional Public Health Alliance
Hopkinsk@worcesterma.gov
Mobile 508-868-1091

HEALTH AND HUMAN SERVICES
City Hall
455 Main Street
Worcester, MA 01608

Worcester
All-America City

Appendix G: Screenshots of the Mobile Application

1)   Home Screen
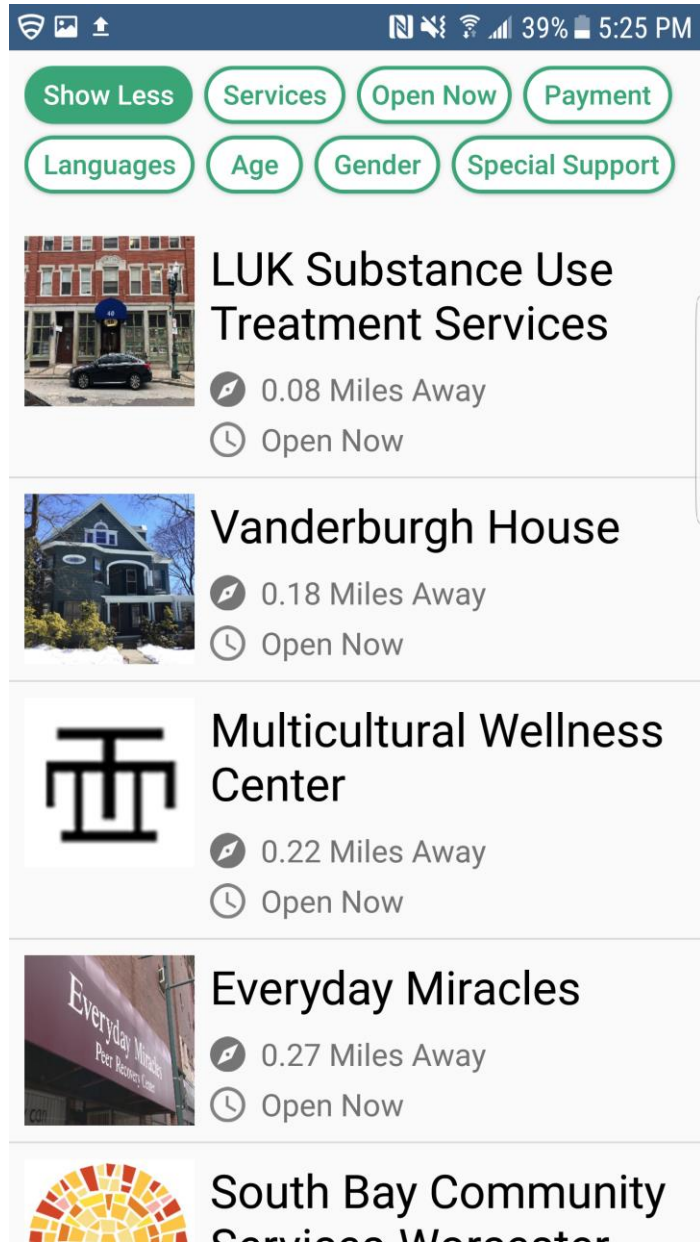
2)   Listings Page

3) Listings Page (Expanded Filters)

4) Organization Page

Stigma Free Worcester   ⋮

Email(s):   Front Desk:
                        frontdesk@veteransinc.org

Hours of   Business hours:
Operation: M T W Th F 7:00AM-7:00PM
                               Food Pantry:
                   M T W Th F 10:00AM-4:00PM

Eligibility: Veterans
                           Families of veterans

Insurance: Accepted:
                               MassHealth
                                     MBHP
                            HNE Be Healthy
                             MBHP & HNE
                                Be Healthy
                    Tufts Commericial Plans
                                      BMC
   Commonwealth Care Alliance
                                    Fallon

Payment   Health Insurance

4)   Organization Page (Continued)

Stigma Free Worcester ⋮

Payment Options:	Health Insurance Based pay
Support Services:	Case Management, Employment & Training, Educational Benefits, Rental Assistance, Substance Use Treatment
Languages:	English Spanish Albanian Offered through: Interpreter Staff Counselor
Wheelchair Accessible:	Yes
Parking:	Free street Metered

4)   Organization Page (Continued)

Stigma Free Worcester
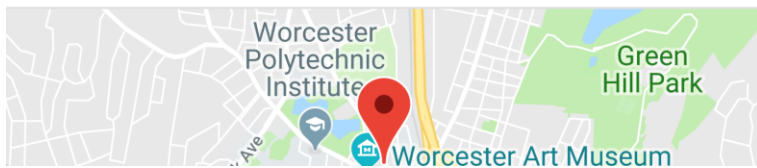
Languages:	English
	Spanish
	Albanian
	Offered through:
	Interpreter
	Staff Counselor

| Wheelchair Accessible: | Yes |

| Parking: | Free street |
| | Metered |

To update the page of an agency you own, contact the Department of Health and Human Services at hhs@worcesterma.gov

4)   Organization Page (Continued)

5)   "Share Listing" and "Suggest an Edit" Options
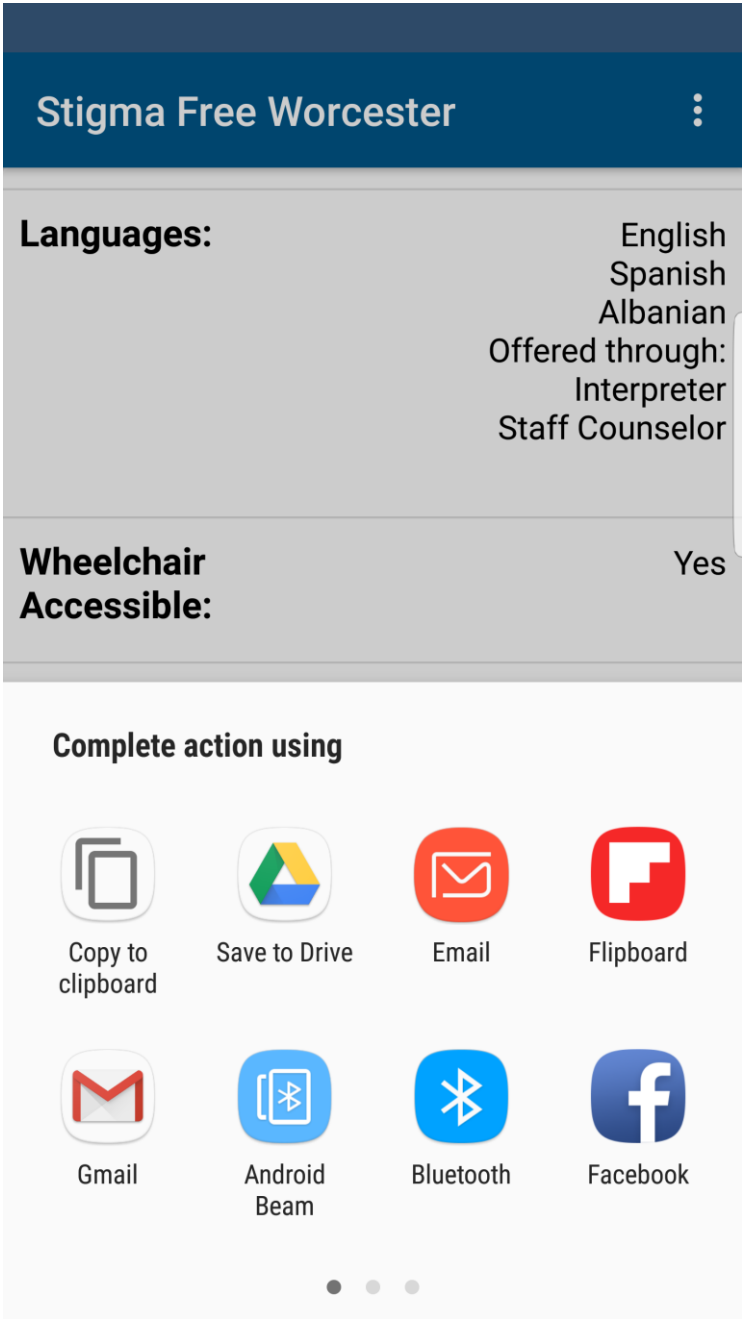
6)   "Share Listing" Menu
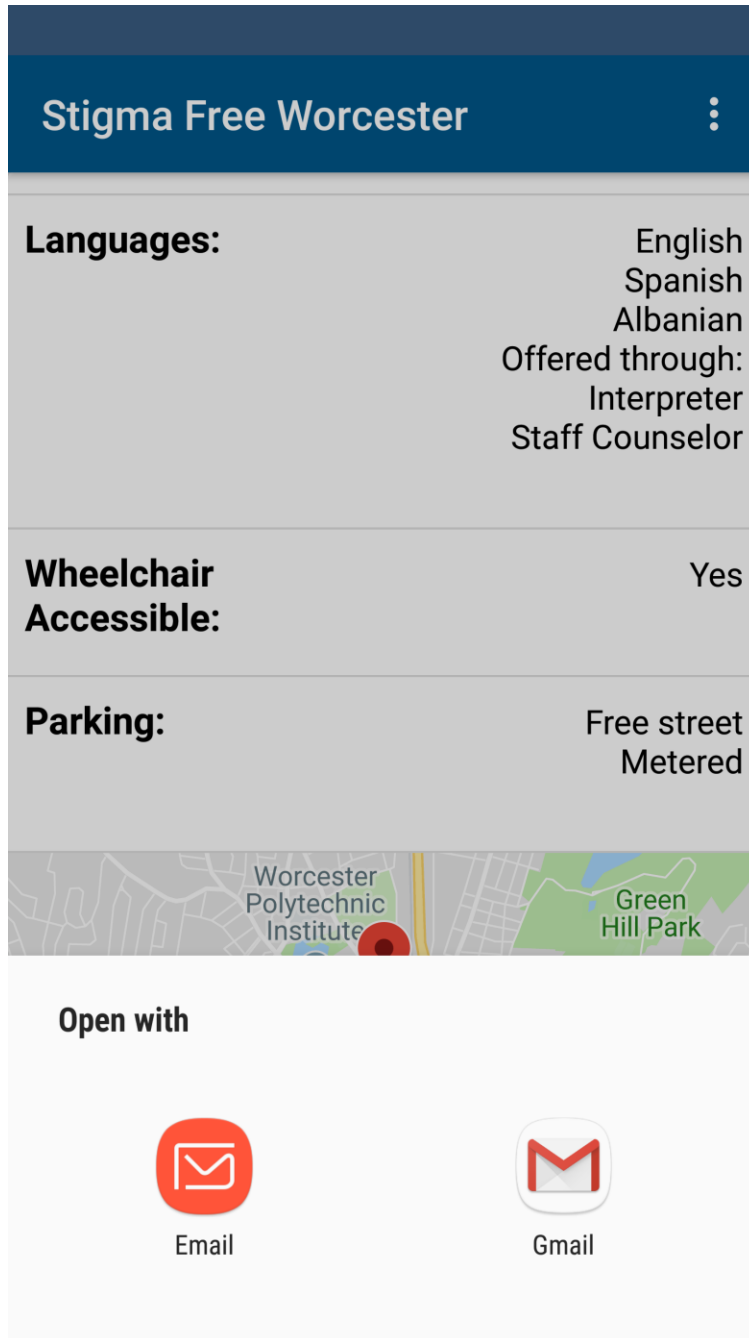
7)   "Suggest an Edit" Menu – Email HHS

Services

- [ ] Inpatient Treatment/ Rehab
- [ ] Residential Treatment
- [ ] Intensive Outpatient
- [ ] Peer Recovery
- [ ] Alcohol & Drug Assessment
- [ ] Detoxification
- [ ] Crisis Intervention
- [ ] NARCAN Training
- [ ] Methadone Treatment
- [ ] Vivitrol Treatment

CANCEL   DONE

Mental Health Clinic
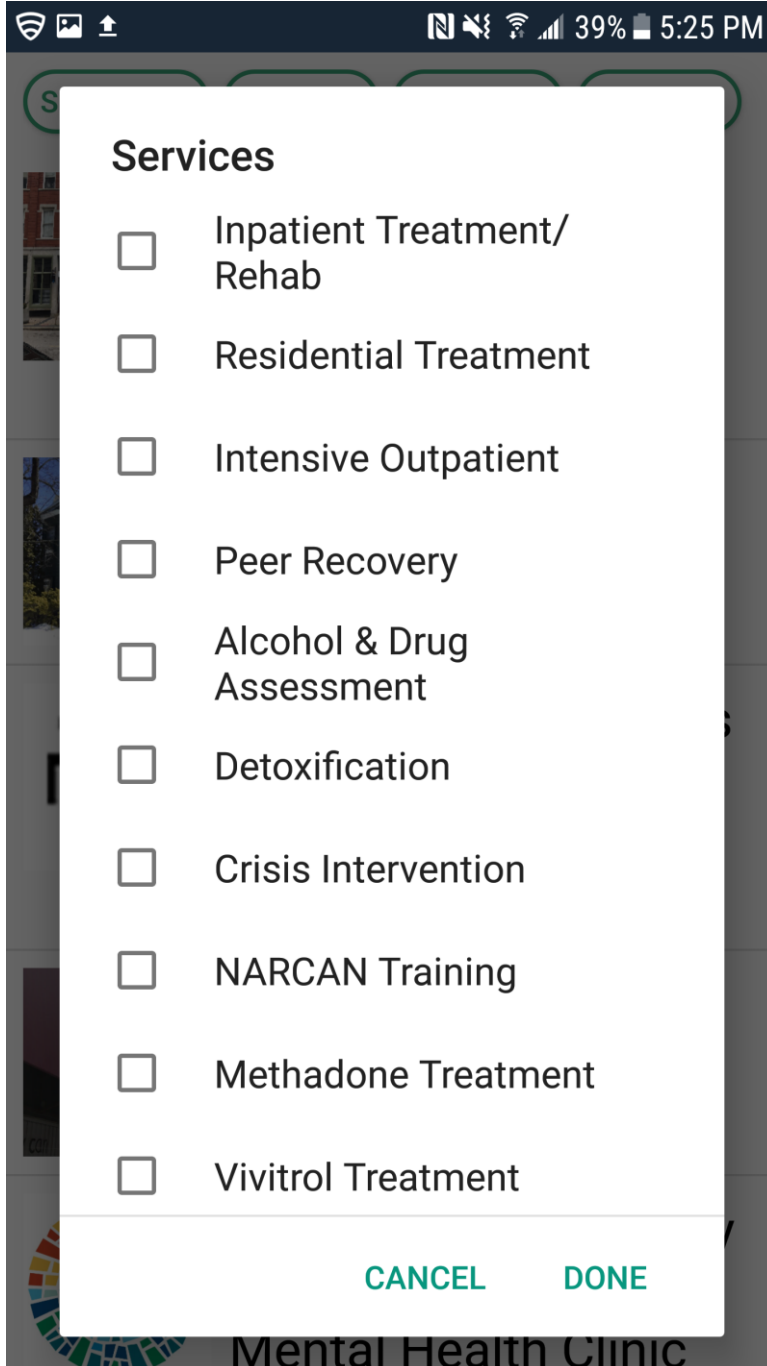
8)   "Services" Filter Options

9) Events Calendar

10) Event Page

11) Spanish Version

12) Albanian Version
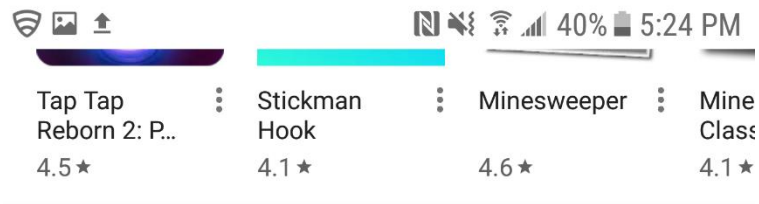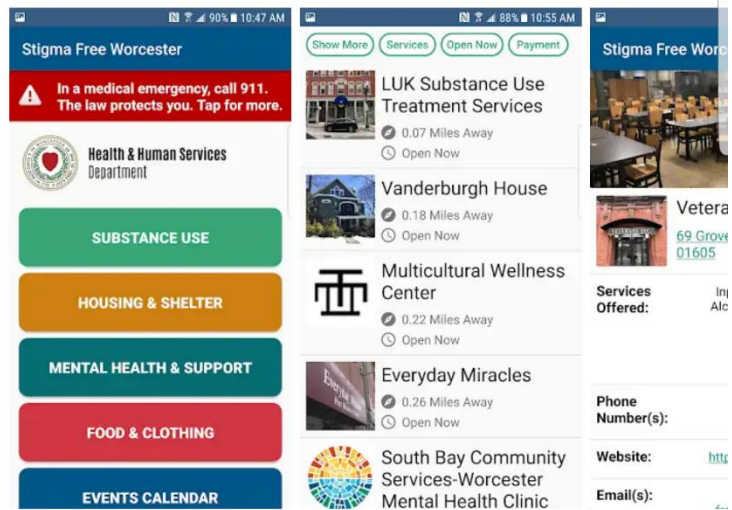
13) App on Google Play Store

13) App on Google Play Store (Continued)

Stigma Free Worcester

Access treatment in the city of Worcester for substance use disorders and mental illness. Find resources for nutrition, shelter, and permanent housing.

View information about organizations and sort them by the services they offer, the insurance they accept, when they are open, their distance from you, and their eligibility requirements to find the resource that's best for you.

View upcoming events for food and clothing giveaways, volunteering opportunities, and other city events.

Easily refer clients by sharing an agency's contact information by email or text message.

This app was researched and developed by Worcester Polytechnic Institute students Walker Christie, Natasha Honcharik, Kyle Foley, and Michael Kola in collaboration with the City of Worcester Department of Health and Human Services.

13) App on Google Play Store (Expanded Description)

Appendix H: How to Update Information

Stigma Free Worcester:
How to Update Information

Log In:

1. Go to the Update Manager website at http://stigmafreeworcester.com and log in using the email address hhs@worcesterma.gov and the password _____.

2. If the password has been changed and you don't remember it, click "Forgot Password" and follow the instructions to reset the password.

3. After logging in, you will see the Home Page of the website, which says "View Listings and Events" at the top. Under the heading "Events," you can see the name of every event currently shown in the mobile application. Under the heading "Listings" you can see the name of every organization currently shown in the mobile application.

Add a New Listing or Event:

1. To add an entirely new listing or event to the mobile app, click either "New Listing" or "New Event" in the upper right corner. You will then see the "Add New Listing" page or the "Add New Event" page.

2. Fill the appropriate information into the text fields and select the appropriate checkboxes. Click the "Preview Address on Map" button to see whether the address you entered appears in the correct place on the map. Make sure that the "other text" fields (for example "other services") are entered as lists of items separated by commas to ensure they display in the proper format in the mobile app.

3. At the bottom of the page, you can upload images that will display as profile images and in the gallery for the listing or event. Be sure the profile image you upload is a square.

4. Click "Submit" at the bottom of the page to add the new listing or event.

Edit a Listing or Event:

1. To edit the information of one of the existing events or listings, click "Edit" to the right of its name on the home page. Then make any desired changes to the Edit Listing page or the Edit Event page in the same way as described above.

2. Click the "Submit" button at the bottom of the page to update that listing or event with the new information. Alternatively, click the "Delete" button to remove the listing or event from the app. You will be asked if you are sure you want to delete the listing or event.

3. Occasionally, when editing a listing or event, the server will save the new version you entered, but fail to delete the old version. If this happens, the listing or event will appear twice on the home page and on the app. To fix the issue, simply click "Edit" to the right of the old version, scroll to the bottom, and click "Delete" and "Okay."