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Descriptive Report

# Development of a User-Informed Social Resource Guide to Improve Identification and Management of Psychosocial Concerns: A Model for the Free Clinic Setting

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## Abstract

**Background:** Resource guides, which consolidate information on community resources, are an important tool for linking vulnerable patients to social and health services. Many existing guides, however, are 1) out-of-date, 2) lack user-friendly design features, and 3) lack instructions for how to access services. We describe an effort to optimize a social resource guide for people experiencing homelessness, where the process may serve as a model for other free clinic settings.
**Methods:** From April 2021 to April 2022, we launched a phased social liaison volunteer program at HOMES Clinic, driving the development of a unique community-informed social resource guide. Specifically, we 1) collected and verified word-of-mouth data from the userbase of various social services (i.e. "street smarts"), and 2) designed a user-friendly interface with easy-to-use deliverables for patients.
**Results:** The HOMES Social Resource Guide facilitates care coordination in both the clinic and street settings. A key design feature is that information for each resource is condensed into a 3.5x2.0" card that fits easily into pockets or wallets. The front contains logistic information (e.g., hours, location, phone) and the back describes how to qualify for and access each service. Cards are organized into a binder and provided to patients by trained volunteers in a need-based manner. Since qualifying for many services is contingent upon first meeting other milestones, the guide includes algorithms to ensure we provide all necessary information to meet any identified need. Information is re-verified/updated every six months. The platform is cost-effective: the raw materials together cost $20.
**Discussion:** While resource guides are not a new invention, we propose that our increased emphasis on simplicity, user-friendliness, community participation, and meeting end-user needs offer clear advantages over other common design paradigms. These principles may be relevant to other free clinics in meeting the diverse needs of underserved populations.

## Introduction

The road to health equity is paved with a holistic approach that vigorously attends to the social determinants of health (SDoH) as much as the corporeal manifestations of disease. An adequate history for patients who are experiencing homelessness, for instance, elicits complex psychosocial concerns that constrain agency and adversely impact health.[1-3] These include food insecurity, exposure to environmental hazards, inability to secure possessions (e.g., medicines),

increased exposure to violence, inconsistent access to clothing and basic hygiene supplies (e.g., socks and shoes), and limited access to transportation. Despite the paramount importance of identifying and addressing such SDoH, medical students are often poorly equipped to do so in a medical management plan.[4-5] Missed opportunities to link vulnerable patients to needed social services and/or longitudinal primary care represent unacceptable, preventable gaps between optimal care and care ultimately received.[6-7]

Resource guides are a common way to link patients to social and health services in a variety of fields and settings.[8-10] Consolidating quality resources for people with housing insecurity, for instance, has been directly linked to the success of the healthcare for the homeless model.[11] In recent times, however, many resource guides have become outdated given the catastrophic damage COVID-19 has wrought on the non-profit sector.[12-14] As numerous service organizations have closed (some temporarily, many permanently) and others have experienced unpredictable restrictions in operating hours and service availability, resource guides are continually rendered out-of-date. Moreover, referral to a discontinued or low-quality service can exacerbate mistrust in health professionals and waste the limited time and resources of vulnerable patients.

Resource guides are difficult to navigate when they are structured as long, exhaustive lists of services without user-friendly design features[15-16] or specific information on how to access and qualify for the listed services. This includes, for example, the widely used Homeless Help Card[17] in Houston. At the time of its creation, the Help Card was a novel initiative that represented the best available attempt to consolidate existing resources in the city. In practice, however, its effectiveness is limited by: 1) missing key information (e.g. addresses are not provided for food banks), 2) providing no information on service relevance (e.g. if some clinics are tailored to certain demographics or health conditions), 3) providing no information on service quality, 4) providing no information on how to qualify for or access the service, 5) not being user-friendly for people with low-literacy, and 6) not being regularly updated (last updated 2014). It goes without saying that informal, end-user information on accessing local services (what could colloquially be called "street smarts") are likewise not found in existing resource guides. One study from The United Kingdom found that people with unstable housing "can feel alienated from health promotion materials, as these often require high levels of literacy".[18]

These challenges highlight a clear avenue for service improvement. Resource guides designed with emphasized concern for the end-user experience could better meet the diverse needs of underserved patients and better empower medical students to identify and manage psychosocial concerns. Here, we describe an effort to bridge this gap at HOMES (Houston Outreach Medicine, Education, and Social Services) Clinic[19], a student-managed clinic that operates under the umbrella of Healthcare for the Homeless-Houston[20] (HHH) and provides free primary healthcare to people experiencing homelessness. Our general services are summarized in Table 1. Despite the high prevalence of social issues among our patient population, and despite repeated attempts to recruit trained social workers, all care (including care coordination) is currently provided by medical and pharmacy students and professionals. While our patient population is niche, the process used to optimize our social resource guide may provide a model for other free clinic settings.

## Methods

In April 2021, we launched a phased social liaison (SL) program at HOMES Clinic (Figure 1). The goals of the SL program were twofold: 1) to improve medical student advocacy through enhanced identification, appreciation, and management of psychosocial concerns at HOMES Clinic, and 2) to create a social resource guide informed by community participation and user experience. Specifically, this resource guide would: 1) collect, verify, and codify word-of-mouth data from the userbase of various social services into a written record, and 2) be built upon principles of human factors design, using an easy-to-learn interface for volunteers and easy-to-use deliverables for patients.

Phase 0 reflected program creation. We designed a standardized volunteer training, ensured liability coverage for volunteers, and

***Table 1.*** Overview of services offered at HOMES Clinic

| Services Offered | Services NOT Offered |
|---|---|
| *For Patients* | *For Patients* |
| New patient evaluations | Social worker services |
| Chronic disease management | On-site clinical laboratory testing |
| Medication refill | Inpatient services |
| Specialty referrals | Other specialty services |
| Patient social services counseling | |
| Vaccine drives (influenza & COVID-19) | |
| Health fairs | |
| Care packages (e.g. socks, sunscreen) | |
| Ophthalmology services | |
| *For Students* | *For Students* |
| Supervised clinical experience | Wound care/other specialty care |
| Street medicine (SDoH) lectures | Social work student experiences |
| Healthcare administration experiences | Nursing, physician assistant student experiences |
| Interprofessional education experiences | |

*Every Sunday, HOMES Clinic provides free, comprehensive primary healthcare to people with unstable housing, striving to offer a preferable alternative to the emergency room. While active attempts to incorporate trained social workers into our volunteer pool are ongoing, all care, including community care coordination, is currently provided by medical and pharmacy students and our licensed preceptors.*
*HOMES Clinic: Houston Outreach Medicine, Education, and Social Services; COVID-19: coronavirus disease of 2019; SDoH: social determinants of health*

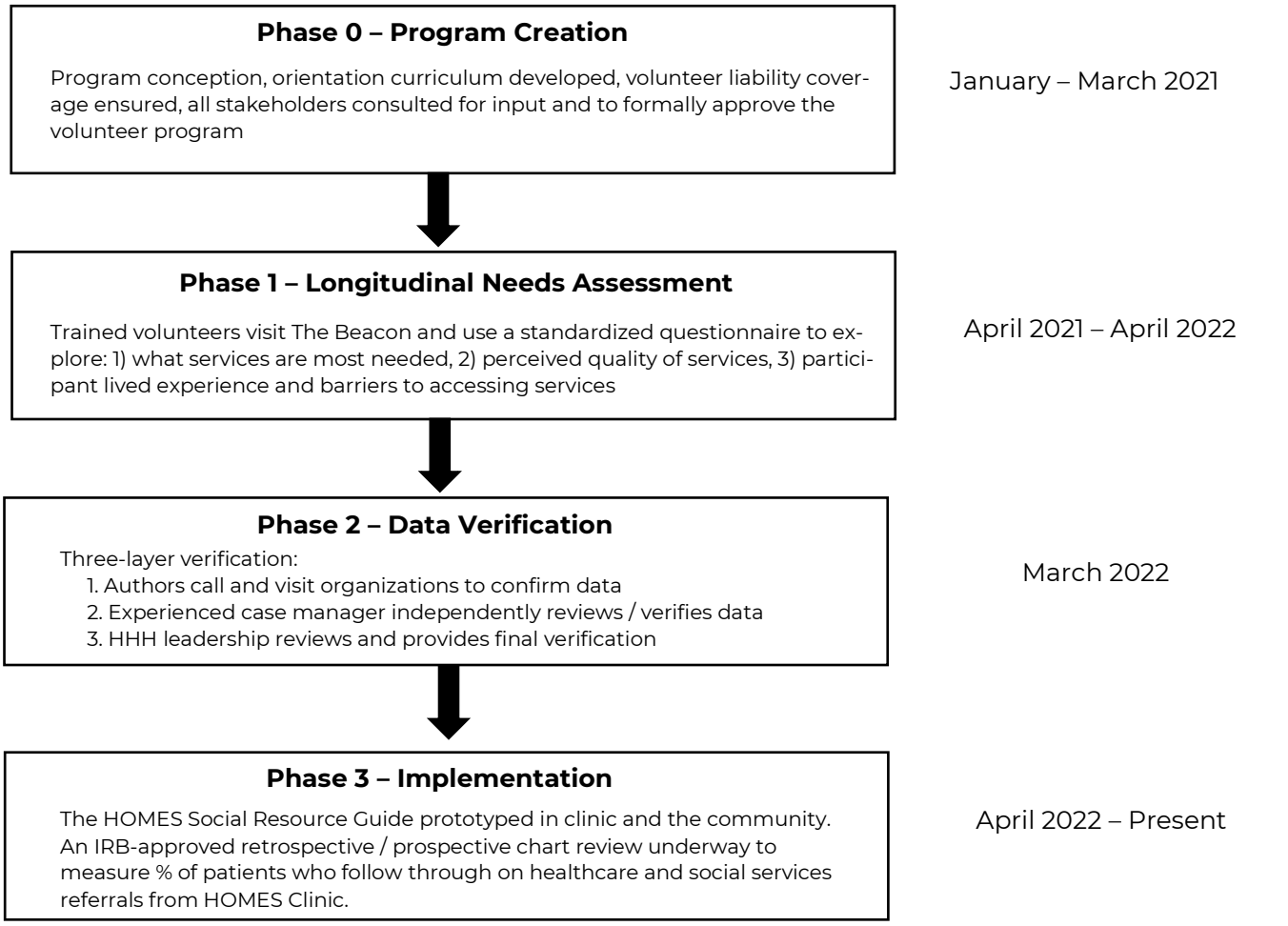
consulted numerous stakeholders to formally approve the process. The volunteer training included background information, (e.g. program purpose and aims), safety precautions, training for how to initiate conversations with prospective informants, and training to achieve detailed familiarity with community resources.

In phase 1, medical student volunteers conducted a longitudinal community needs assessment at a community day center called The Beacon.[21] Volunteers were provided a standardized questionnaire comprising three key domains: 1) resources people needed the most, 2) perceived quality of accessible resources, and 3) participant's lived experience concerning enablers and barriers to accessing these services. The questionnaire assessed these domains across basic needs (e.g., shelter, food, clothing), social services (e.g., case management, state-issued IDs), and healthcare (e.g. dental, vision, substance use, intimate partner violence, women's health). Individuals were asked open-ended questions about resources they had difficulty accessing (Domain 1), followed by targeted questions about that need (Domains 2 and 3). Examples of questions assessing shelter needs included:

1) Current situation: "Where did you stay last night? How long have you stayed here? Why have you no not been able to stay at a shelter? Are you currently working with a case manager for housing assistance?"
2) Perceived quality: "What shelters, if any, have you stayed at before? What was it like? Would you recommend it to others?"
3) Enablers and barriers: "What steps did it take to secure a spot at that shelter?" Why did this organization decline to give you an appointment?"

Volunteers conducted interviews on a weekly basis for one year, after which their responses were collated. This yielded an initial list of resources with invaluable community insights. We also internally surveyed volunteers on their educational experience. We did not provide compensation to respondents. Many of our patients are clients at The Beacon, and vice versa. Our volunteers are a familiar presence at The Beacon and have good rapport there. We provided

***Figure 1.*** Phased progression of the social liaison program




*HHH: Healthcare for the Homeless- Houston; HOMES: Houston Outreach Medicine, Education, and Social Services; IRB: institutional review board;*

transparent, informed disclosure about the needs assessment. Participants understood we were asking these questions in a genuine effort to improve our services during the coronavirus pandemic and were often enthusiastic to help, fully informed there was no direct compensation for their participation.

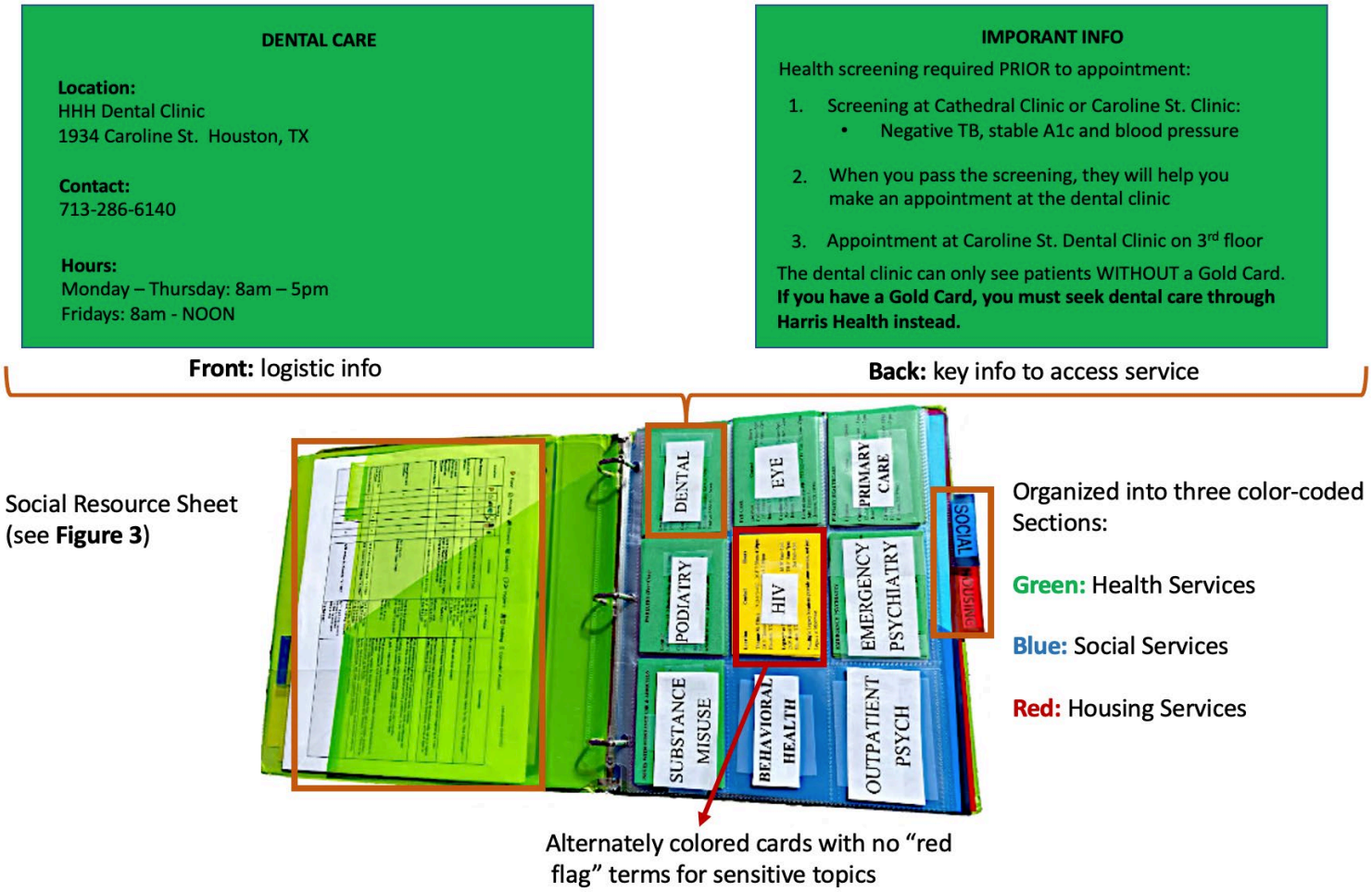
Phase 2 was data verification. First, we called and even visited some organizations to confirm service availability, hours of operations, and qualitative data from our participants. As a second layer of verification, the results were independently verified by an experienced case manager in Houston. As a third layer of verification, HHH leadership provided a final critical review and verification.

We received a waiver from the Baylor College of Medicine Institutional Review Board (protocol number: H-52337) under the classification, "Not Human Subject Research" to write this descriptive report of the resource guide rationale and design.

## Results

The HOMES Social Resource Guide was created in April 2022 (Figure 2). We used handheld binders as the platform for ease of mobility and ease of use in the clinic and street settings. The binders are stratified into three major, color-coded categories: health services (**Green**), social services (**Blue**), and housing services (**Red**). We included only high-quality resources as vetted through our three-level verification process

***Figure 2.*** The HOMES Social Resource Guide




*Each service is distilled to a 3.5x2.0" card that fits easily into pockets or wallets. The front contains logistic information and the back describes how to qualify for and/or access the service in question. All information is directly verified. Cards are color-coded: shown here are healthcare services printed on green cards. Resource cards for sensitive topics (e.g. HIV) are printed on alternatively color-coded cards (e.g. yellow) and do not contain any terms that could jeopardize participant safety or confidentiality. Cards are delivered in a need-based manner without extraneous information. When a desired service (e.g. mail privileges) are contingent on other services (e.g. state-issued ID, case management), the guide contains algorithms to direct volunteers to provide every needed resource card to fulfill a given service request. HOMES: Houston Outreach Medicine, Education, and Social Services; HHH: Healthcare for the Homeless- Houston; TB: tuberculosis; A1c: hemoglobin A1c (glycated hemoglobin); HIV: human immunodeficiency virus; Psych: psychiatry*

(described in Methods) for each service need in question.

The critical design feature is that information for each resource is condensed to a 3.5x2.0" card that fits easily into pockets or wallets. The front contains logistic information (e.g., hours, location, phone number) and the back contains key information for how to qualify for and access the service if special considerations are present. Since many with housing insecurity do not have reliable internet access, and since >50% of this population are over the age of 50 years old[22-23] (associated with lower familiarity with technology[24-26]), handheld cards are an advantageous medium compared to strictly digital resources. Finally, the card system is individualized, enabling information to be transferred in a need-based manner at the time of the encounter, without extraneous information that is potentially overwhelming. Given safety and privacy concerns for providing resource cards on sensitive topics (e.g., HIV or intimate partner violence), these cards are alternatively color-coded and intentionally omit use of any terms that would tip-off other people about their purpose.

We found that qualifying for many services is contingent upon first completing other milestones. This presented unique design challenges. For instance, to qualify for mail privileges at a nearby organization, one must first have a state-issued ID. For those who do not have a state-issued ID, they can only apply for one if they have an established relationship with a case manager. To establish a relationship with a case manager at HHH, one must first be seen as a patient at HHH. Therefore, if a person only requested information about mail privileges, that resource card would not meet their needs. New volunteers, unfamiliar with these complex contingencies, may further perpetuate the dissemination of incomplete information. To mitigate this potential confusion, our resource guide includes built-in algorithms directing volunteers to provide all necessary information to meet any identified need. If a person asks about mail privileges, the volunteer is instructed to ask about a state-issued ID, and so on.

Some services did not conform neatly to the card format. (Figure 3). To keep the resulting table as simple as possible, we used only the highest-quality resources, as vetted through our three-level verification described in Methods. Again, we include key information for accessing said services. For instance, Myriam's Hostel officially opens at 3pm, but realistically, one must be in line at 2pm to access this service.

Finally, weekly volunteer feedback revealed that 1) volunteers often found it daunting to initiate a conversation about resource counseling, and 2) some individuals did not realize the breadth and relevance of services on offer and declined a conversation as they did not believe it would be helpful. In response, we introduced a simple and colorful "service menu" (Figure 4), instructing volunteers to show this when first approaching an individual about resource counseling. With this addition, we found that 1) volunteers felt initiating conversations was much easier, and 2) upon seeing the "menu," many people asked to speak with our volunteers, stating they did not realize we were able to discuss such a broad range of needs.

The guide is scheduled for repeat verification and updates every six months. In the most recent round of updates, we caught and corrected minor errors (e.g., updated operating hours), improved our algorithm for recommending appropriate housing agencies, and added additional resources for 1) LGBTQ+ individuals with housing instability, 2) alternative ID options for people with barriers to obtaining State-issued ID (e.g. undocumented individuals), and 3) began developing a "Technology" section to include organizations we were not previously aware of that provide free cell phones, cell service, and internet access.

## Discussion

Addressing social determinants of health is the bedrock of achieving health equity and remediating health disparities among vulnerable communities. When people experiencing homelessness, for instance, are put on a path toward housing, employment, and self-empowerment, the community is made better for everyone.[27-32] This is a complex process that involves consideration of numerous health and psychosocial factors. Despite the recent increased emphasis in medical school curricula to improve awareness of the social determinants of health,[33-34] it is questionable whether this awareness gets meaningfully

***Figure 3.*** Social resource sheet

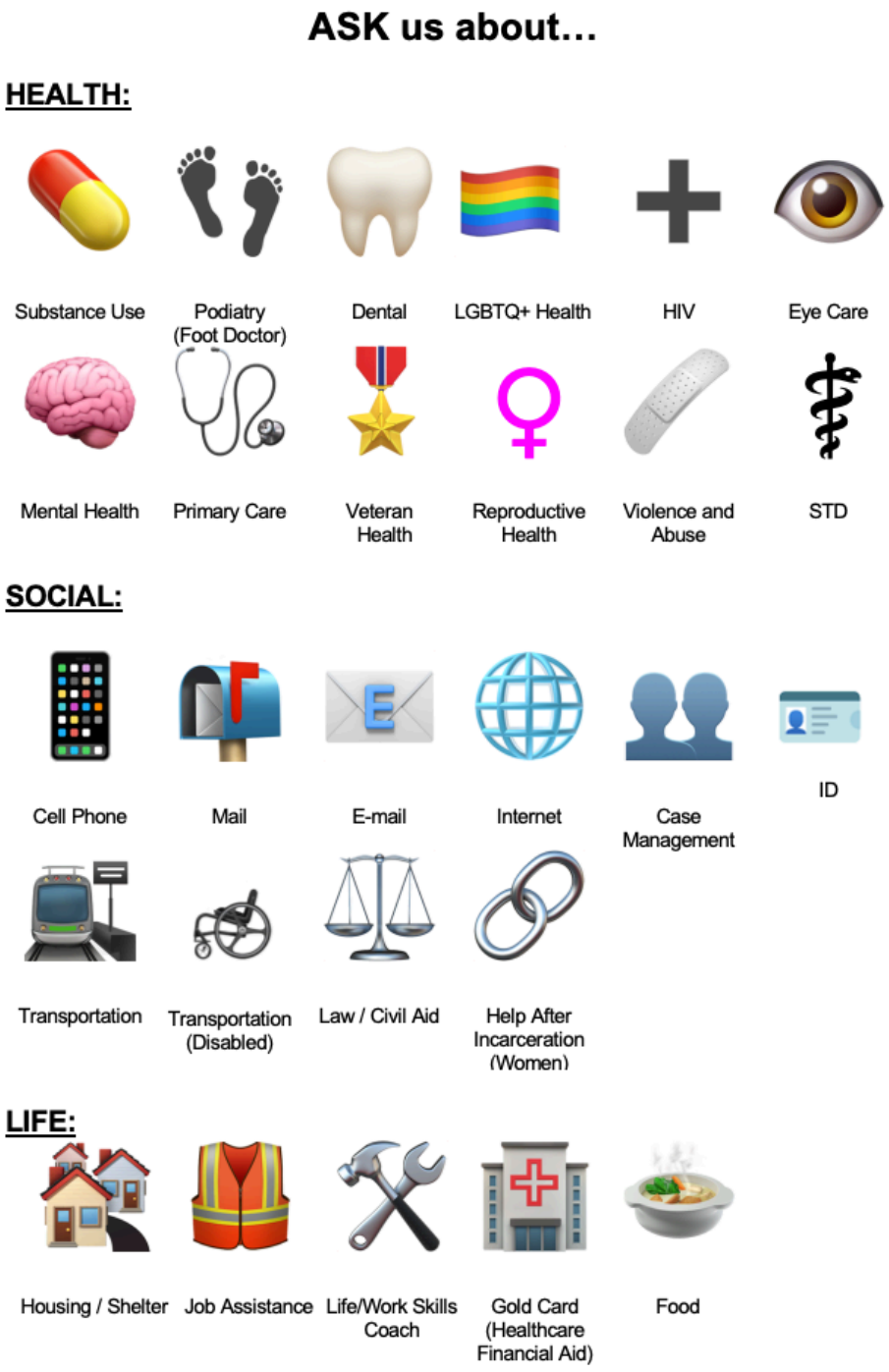
*Last updated 03/22/2022*

Food Housing Showers Laundry Hygiene Clothing Computer Access

| Location | Service | | | | | | | Location | Hours + Phone | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | Food | Housing | Showers | Laundry | Hygiene | Clothing | Computer Access | | | |
| **The Beacon** | x | | x | x | | | | 1212 Prairie St, Houston, TX 77002 | F - M: 7a - 3p<br>Tu: 9a - 8:15 pm<br>W: 9a - 5p | Th - M: Laundry, Showers, Hot lunches, intake 7a-12p, **first 120 people** |
| **Lord of the Streets** | x | | x | | x | x | | 3401 Fannin St, Houston, TX 77004 | M - Th: 8am - 12pm + Clinic until 2pm<br>Fri: 8am - 12 noon<br>(713) 526-0311 | Offer help with food stamps |
| **Loaves and Fishes Soup Kitchen / Magnificat Houses** | x | | | | | x | | 2009 Congress St, Houston, TX 77002 (east of Maid Park at the corner of Congress and Chartres street) | Tue-Sun<br>(713) 529-4231<br><br>Miram's Hostel<br>(713) 224-1373 | Lunch line begins forming around 10:30am for lunch beginning at 11am<br><br>**Myriam's Hostel (on 2nd floor): takes 12-15 women daily up to 3 nights for women only (no children). First-come first-serve, arrive at 2pm or earlier. Starts at 3pm.** |
| **Martha's Kitchen** | x | | | | | | | 322 S Jensen Dr, Houston, TX 77003 | M- F 11:30 - 12:30<br>(713) 224-2522 | |
| **Emergency Aid Coalition** | x | | | | | x | | 5401 Fannin<br>Houston, Texas 77004 | Food pantry/ grocery/ clothing (by appointment)<br>M-F: 9a-12p<br>Call: Call 713-343-3061<br><br>Lunch<br>M-Sat: 11a-1p<br>Sun 12:15-1p | Food pantry/grocery program: 2 grocery sacks, toiletries<br>**Requires current photo ID, proof of residence, birth certificates for kids<18yo, must meet federal poverty guidelines, 1x per month**<br><br>Clothing: 2 outfits, shoes, toiletries, underwear, 1x per 2 months.<br>**Requires current photo ID, birth certificates for kids<18yo**<br><br>Lunch: 1 bag lunch daily<br><br>Work shoes/boots: one-time service;<br>**Requires photo ID and current paystub or letter showing acceptance to new job**<br>Instructions: register for Boots To Work at the EAC, get a voucher, and then travel to Bellaire Redwing Store, 5407 Bellaire Blvd, Bellaire, TX, 77401 to be sized and pick up the boots. |
| **Crossroads At Park Place** | | | x | x | x | x | | 7843 Park Pl Blvd Houston, TX 77087 | Tue & Thu 7a-12p<br>(713) 252-3604 | Meals, hairdressing services, needs assessments, social services referrals, health screenings, and other supportive interactions |
| **Trinity Downtown** | x | | | | | | | 800 Houston Ave, Houston, TX 77007 | 9 - 11 am weekdays<br>(713) 224-0684 | Sack breakfast 9-11am on weekdays |
| **Impact Houston** | x | | x | x | | x | | 1704 Weber St. Houston, TX 77007 | Tue 8-9:30a, W 7-8p:<br>Food, clothing, supplies<br><br>M-Th 9a-2:30p: Laundry, showers, breakfast<br>11:30a hot meal (and bible study)<br><br>713-864-5667 | |

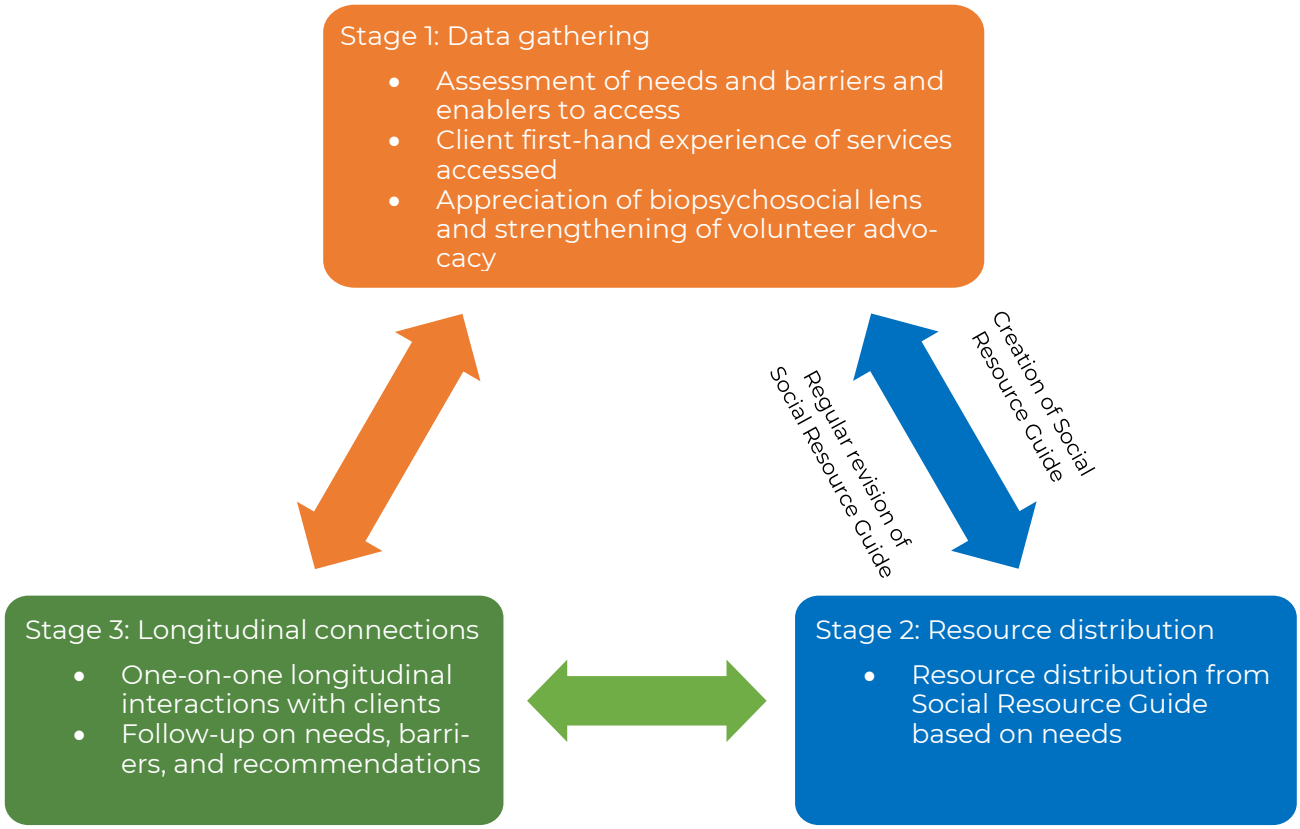
*Some organizations offered multiple services. This was not neatly reducible to a playing card and was instead formatted as a table. To preserve simplicity, we listed only the highest quality and most vetted services so that all content fit on one page*
*ID: identification; EAC: Emergency Aid Coalition*

***Figure 4.*** The Social Resource Guide "Service Menu"




*The "service menu" is the first page of the resource guide and was added after pilot testing. When approaching an individual about resource counseling, volunteers show the menu and ask if they are interested in learning about any of the services displayed above. This generates more positive responses than our previous approach of having volunteers only verbally ask people if they needed help with resources. This figure is not meant to suggest what resources should be included in a guide. Additionally, while some terms such as "STD" have justifiably fallen out of favor, we include them on this document as they are more familiar to our patient population than newer terms like "STI."*
*LGBTQ+: lesbian, gay, bisexual, transgender, and queer; HIV: human immunodeficiency virus; STD: sexual transmitted disease; ID: identification*

***Figure 5.*** The Health Advocate Program




*The Social Liaison program has matured into the Health Advocate program. which is a multi-stage, multi-direction longitudinal initiative*.

translated into improved ability among clinicians to manage psychosocial concerns.[35-37] Additionally, existing resource guides are not only outdated in the era of COVID-19, many use substandard design features that leave clear room for improvement. A major design gap is omitting critical data for end-users such as how to qualify for and/or access certain services. This report describes an effort at HOMES Clinic to bridge this gap with a phased social liaison volunteer program and a unique, community-informed social resource guide.

The HOMES Social Resource Guide was introduced in April 2022. We use it during both clinical encounters at HOMES Clinic and during community outreach by sending volunteers to The Beacon community day center. Volunteer enthusiasm for the social liaison role has increased dramatically since introduction of the resource guide, evidenced by a 31% increase in volunteer sign-ups. It has since been renamed the "Health Advocate" role to reflect its shift from data collection to actively sharing resources in the community (Figure 5).

Though the contents of our guide are specific to HOMES Clinic, we propose the process of optimizing our guide may find application in other free clinic settings. Holistic care for the LGBTQ+ community, for instance, must be responsive to SDoH by connecting patients to identity-affirming healthcare and appropriate support for victims of violence, discrimination, and hate crimes.[38-41] As another example, improving health outcomes for immigrant communities includes integrating resources for language barriers, financial barriers, racism, and legal / documentation issues.[42-43] While social resource guides are not a new invention, we propose that our increased emphasis on simplicity, user-friendliness, community participation, regular updating, and using vetted information to help patients navigate the complex landscape of accessing social services together offer clear advantages over existing design paradigms. Additionally, the

platform is extremely cost-effective: the raw materials (e.g., binder, cardstock, plastic sheets to hold cards) together cost approximately $20.

Our descriptive report has a few key limitations. First, while providing resource cards in a need-based manner represents the most individualized approach, it requires a live volunteer to provide counseling which is limited by available human resources. Therefore, we are also adapting these resources to a digital format for our website, www.homesclinic.org so that this information may be more broadly accessible. Second, we do not describe quantitative outcome measures here. As our resource guide was developed for HOMES Clinic and is not directly generalizable to other free clinics, we elected to share the overarching principles of its development, which we suggest are transferable to a variety of settings. We are currently leading an IRB-approved combined retrospective/prospective chart review to investigate outcome measures; however, the different methodology and results necessitate a separate manuscript. Third, we cannot share the data of our volunteer survey. This information was collected for internal quality improvement and does not fall under our IRB waiver. Even then, it is well-established in existing literature that volunteering with underserved communities is positively correlated with sustained volunteering during residency and beyond.[44-46] It meets the standard of "face validity" that repeatedly discussing, researching, and referring people to local social services should reasonably be expected to correlate with increased knowledge of these services.[47] To date, we have hosted over 200 medical student volunteers in the social liaison/health advocate program.

## Conclusion

Providing health services in a vacuum is not responsive to the full range of psychosocial concerns experienced by vulnerable patients, and missed opportunities to identify and address these concerns ultimately fragment care and produce sub-standard health outcomes. Increased attention to end-user needs, such as simplicity, user-friendly design, and providing vetted information on how to access and qualify for needed services may offer improvements to existing resource guide design paradigms. These principles may be relevant to other free clinics in meeting the diverse needs of underserved populations. Future directions at HOMES Clinic include invigorated efforts to integrate trained social workers into our volunteer pool and formal studies to measure volunteer learning outcomes, patient satisfaction, and longitudinal outcomes of our social service referrals.

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**Disclosures**

The authors are affiliated with HOMES Clinic, a student-managed clinic in Houston which provides free healthcare and social services to people experiencing homelessness.

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