

A Secondary Data Analysis of Technology Access as a Determinant of Health and Impediment in Social Needs Screening and Referral Processes



Sara G. Bybee, PhD,¹ Nasser Sharareh, PhD,² Jia-Wen Guo, PhD,¹ Brenda Luther, PhD,¹ Ernest Grigorian, BS,¹ Ching-Yu Wang, MSN,¹ Bob Wong, PhD,¹ Andrea S. Wallace, PhD¹

Introduction: Although health systems increasingly integrate social needs screening and referrals into routine care, the effectiveness of these interventions and for whom they work remains unclear.

Methods: Patients (N=4,608) seen in the emergency department were screened for social needs (e. g., transportation, housing, food) and offered an opportunity to receive outreach from community service specialists.

Results: Among 453 patients with 1 or more social needs who requested assistance, outreach specialists connected with 95 (21.0%). Patients preferred to be contacted through their telephone ($n=21$, 60.2%), email ($n=126$, 28.0%), someone else's telephone ($n=30$, 6.7%), or first by telephone followed by email ($n=23$, 5.1%). Preferred contact method varied by patient age; endorsement of unmet transportation, housing, and utility needs; receipt of service outreach; and differences in emergency department utilization from the 6 months before the index visit to the 6 months after.

Conclusions: Because limited access to a stable telephone or internet connection may prevent patients from connecting with resource referrals, social needs interventions may not benefit the most underserved populations who are at the highest risk of negative health outcomes. Future research should investigate whether communication preferences are an important indicator of needs and how to adapt social needs screening and referral processes so that they are more accessible to populations who may experience more frequent disruptions in methods utilized for digital communication.

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INTRODUCTION

The environments in which people live contribute more to population health outcomes than medical care does, with some studies estimating that social factors account for 85%–90% of preventable mortality in the U.S.¹ With a focus on addressing social factors and reducing preventable disease, healthcare organizations have called for the integration of social needs screening into routine care.² Despite the increased adoption of social needs screening, the inability to connect patients who have

social needs to helpful service referrals impedes the improvement of population health outcomes.³ In fact, prior studies demonstrate that fewer than half of the

From the ¹College of Nursing, University of Utah, Salt Lake City, Utah; and ²Department of Population Health Sciences, School of Medicine, University of Utah, Salt Lake City, Utah

Address correspondence to: Sara G. Bybee, PhD, College of Nursing, University of Utah, 10 South 2000 East, Salt Lake City UT 84112. E-mail: sara.bybee@nurs.utah.edu.

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patients who request assistance with social needs end up connecting with services.^{4–6} Furthermore, social needs screening and referral processes assume that connecting patients to resources and addressing unmet social needs will actually improve health.

One potential barrier to connecting with resource referrals is the lack of access to technology. The digital divide—the gap between those who have access to the latest technologies and those who do not—has existed for over 2 decades.⁷ With the coronavirus disease 2019 (COVID-19) pandemic and resulting social distancing guidelines, digital connectivity became even more important because employees worked from home, children completed their education remotely, and coronavirus-related information was primarily accessible through telephone screening lines and online forums.⁸ Underserved, low-income, and previously vulnerable populations—those who most often experience health disparities—became even more disadvantaged without access to and maintenance of technology.⁹

Although >25% of Americans lack internet access in their homes, 56% of those with incomes <\$30,000 per year and 63% of those living in tribal or rural areas lack access.¹⁰ Black and Hispanic/Latinx adults are twice as likely as Whites to have canceled their internet services owing to financial constraints.¹⁰ Furthermore, although 97% of Americans own a cellphone, and 85% own a smartphone, the rates of those without a smartphone are higher among individuals who are Black (15%), individuals who are Hispanic/Latino (14%), individuals who live in rural settings (14%), and adults earning <\$30,000 per year (19%).¹¹ Further complicating these technological disparities, physical access to technology is insufficient to ensure continued connection. For low-income individuals, no-contract cellular telephone plans and the need to purchase additional minutes can result in intermittent disconnection.¹² Because technology such as smartphones and internet access have become central to healthcare delivery,⁸ dependence on this digital technology may inadvertently widen health disparities for those without access to or the ability to maintain connectivity to technology.^{12,13} Now more than ever, access to technology is a social determinant of health.⁸ UN Secretary-General António Guterres poignantly emphasized this fact: “The digital divide is now a matter of life and death for people who are unable to access essential health-care information.”¹⁴

For those without consistent access to technology, the likelihood of receiving requested service referrals may be lower. In the current landscape of health systems trying to find efficient methods of screening for and addressing social needs, those who do not report a stable means of contact may therefore represent the patients who could

benefit the most from connecting with community services.

This study was part of a larger parent study that developed and implemented social needs screening and referral processes.⁶ The purpose of this secondary data analysis was to examine any differences (in characteristics, unmet social needs, health service utilization, and service connections) for patients screened in the emergency department (ED) for social needs by patients’ preferred method of contact. We hypothesized that patients who preferred to be contacted on someone else’s telephone would report more unmet social needs, higher health service utilization, and lower rates of connecting with outreach efforts.

METHODS

All procedures were approved by the University of Utah IRB. In the parent study, a social needs screening instrument was administered in the ED upon patient registration. Patient names, social needs screening responses, and ZIP codes were shared through REDCap electronic data capture tools^{15,16} with Utah 211 community service outreach specialists who attempted to contact patients within 48 hours of ED discharge. Data on all successful and failed attempts (up to 3) to connect with patients were documented by Utah 211 in the Health Insurance Portability and Accountability Act of 1996—compliant ServicePoint (a software database)¹⁷ and extracted into REDCap electronic data capture tools.^{15,16}

Study Sample

In a series of studies started in 2018 by our team, all adult patients (aged ≥18 years) seen in a Level I Trauma Center Emergency Department in the Intermountain West were approached and invited to participate in this study. The parent study was a pragmatic trial informed by implementation science approaches, so all patients who met inclusion criteria were screened. Exclusion criteria included patients who were nonverbal or individuals who were residents of skilled nursing facilities or in the care of hospice. Data collection concluded in 2020. This secondary data analysis was conducted in 2023.

Measures

Participants who consented to the study were screened for their social needs using SINCERE,⁶ a psychometrically validated,¹⁸ 10-item instrument assessing patient-reported needs for transportation, medical expenses, medication expenses, food, material goods, utilities, rent/mortgage, housing, employment, and childcare/eldercare. Patients who indicated 1 or more social needs

and desired resource referrals were asked about their preferred method to be contacted, date of birth, and ZIP code (to identify community resources near their residence). *Contact between patients and Utah 211*—defined as a patient responding to either a telephone call, email, or text message—was extracted from ServicePoint.¹⁷ Differences in service utilization (ED visits, hospitalizations, and primary care provider [PCP] visits) were calculated by subtracting the mean number of visits 90 days before from the mean number of visits 90 days after the index visit. These data, along with demographic information, were extracted from enrolled patients’ electronic health records and a data warehouse.

Statistical Analysis

SPSS, Version 28,¹⁹ was used to analyze demographic, social needs, service utilization data, and contact with 211 through the use of descriptive statistics, chi-square tests of independence (for categorical variables), and ANOVA (for continuous variables). When ANOVA or chi-square omnibus tests resulted in a significant *p*-value (<0.05), posthoc tests were performed to identify significant differences between groups. For continuous variables, Tukey honestly

significant difference tests were utilized, maintaining a significance level of *p*<0.05. For posthoc tests of categorical variables in which multiple chi-square comparisons were conducted, the significance level was reduced to *p*<0.01 to minimize the possibility of Type I errors.

RESULTS

A total of 4,608 patients were approached during ED visits (Figure 1 presents the CONSORT flow diagram). Of these patients, 1,660 (36.0%) were not screened using the SINCERE screener owing to their refusal (*n*=721, 43.4%), being too sick or unable due to the traumatic nature of their illness/injury (*n*=258, 15.5%), or some other reason (*n*=681, 41.0%). Reasons patients were not screened included that they left before the registrar could ask screening questions, they became too busy with providers or went to another department for diagnostic tests, they had a language barrier, they were unable to participate owing to fatigue or not having access to their reading glasses, or they were prisoners or lived out of state. An additional 127 patients (2.7%) did not complete the entire SINCERE screener.

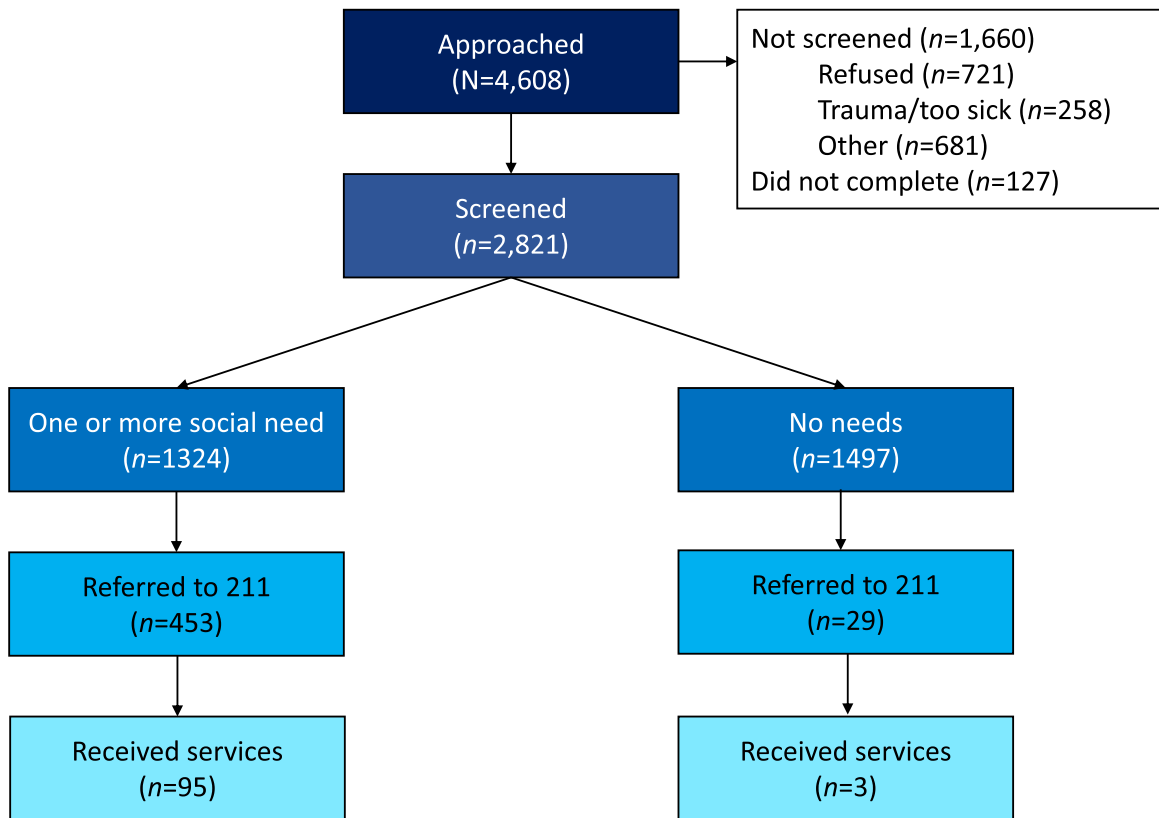


Figure 1. CONSORT flow diagram of participant screening.

Of the 2,821 participants who were screened and completed SINCERE, 1,324 (47.0%) indicated 1 or more social needs. From the sample of participants who reported 1 or more social needs, 453 (34.2%) wished to be contacted by Utah 211. Ultimately, Utah 211 was only able to connect with 95 (21.0%) of those who had at least 1 need and requested assistance in meeting these needs owing to patient nonresponse.

The following analyses are derived from the sample of 453 participants who reported 1 or more social needs and agreed to outreach from Utah 211 for assistance. To complete the statistical analyses, we separated preferred method of contact into the following 4 categories: telephone, email, someone else's telephone, and telephone followed by email. Responses from 3 participants did not fall into these categories and were excluded from further analyses, resulting in a sample size of 450 participants.

Approximately half of all participants were male ($n=228$, 48.4%), and the majority were non-Hispanic/Latino ($n=326$, 72.4%) and Caucasian ($n=289$, 64.2%) (Table 1). They were on average aged 42.7 (SD=14.5) years. When asked how they preferred to be contacted by 211 information specialists, 271 (60.2%) participants preferred to be called by telephone, 126 (28.0%) preferred contact by email, 30 (6.7%) preferred contact through someone else's telephone number, and 23 (5.1%) first wished to be contacted by their telephone followed by their email. There were approximately 5 needs (mean=5.1, SD=2.5) reported per participant. The most frequently reported needs were for clothing/furniture ($n=299$, 66.4%), rent/mortgage ($n=293$, 65.1%), food ($n=283$, 62.9%), and utilities ($n=282$, 62.2%). The difference in PCP visits and hospitalizations (calculated by subtracting the mean number of visits 90 days before from the mean number of visits 90 days after the index visit) was not statistically significant. However, the mean difference in ED visits was -0.4 (SD=1.8), indicating a statistically significant reduction in the number of ED visits across the total sample ($F[3]=2.93$, $p=0.033$).

Although there were no statistically significant differences between groups in sex, race, ethnicity, or insurance type, participants who preferred to be contacted through someone else's telephone had the highest proportion of males ($n=22$, 73.3%) (Table 2 shows the comparisons by preferred method of contact). Age was significantly different between groups ($F[3]=2.81$, $p=0.039$). Posthoc Tukey honestly significant difference tests revealed that the group who preferred someone else's telephone was statistically different from the group that preferred e-mail, with those who preferred being contacted using someone else's telephone being the oldest group (mean=48.6 years, SD=11.9 years) and those preferring

Table 1. Total Sample Characteristics

Characteristics	Total n (%) for categorical variables and mean (SD) for numerical variables
Age	42.7 (14.5)
Sex	
Female	208 (46.2%)
Male	218 (48.4%)
No answer	24 (5.3%)
Ethnicity	
Hispanic/Latino	97 (21.6%)
Not Hispanic/Latino	326 (72.4%)
No answer	2 (.4%)
Race	
American Indian and Alaska Native	5 (1.1%)
Asian	2 (.4%)
Black/African American	31 (6.9%)
Caucasian	289 (64.2%)
Native Hawaiian and other Pacific Islander	9 (2.0%)
Other, including multiracial	86 (19.1%)
No answer/chose not to disclose	28 (1.8%)
Insurance	
No insurance information	224 (49.8%)
Medicare federally funded insurances	28 (6.2%)
Medicare Advantage plans (HMOs)	17 (3.8%)
Medicaid/disability/state-funded plans	76 (16.9%)
Private, COBRA, workers compensation	50 (11.1%)
Specialty-based and behavioral health	29 (6.4%)
Self-pay	26 (5.8%)
Preferred method of contact	
Telephone	271 (60.2%)
Email	126 (28.0%)
Someone else's telephone	30 (6.7%)
My telephone, my email	23 (5.1%)
Social needs (yes)	
Clothing/furniture	299 (66.4%)
Rent/mortgage	293 (65.1%)
Food	283 (62.9%)
Utilities	280 (62.2%)
Doctor/medical visit	264 (58.7%)
Medication	225 (50.0%)
Employment	218 (48.4%)
Housing	196 (43.6%)
Transportation	155 (34.4%)
Child care/elder care	85 (18.8%)
Needs per participant	5.1 (2.5)

COBRA, Consolidated Omnibus Budget Reconciliation Act.

their email being the youngest (mean=40.3 years, SD=12.5 years; mean difference=8.24, $p=0.027$).

Regarding unmet social needs, there was a statistically significant difference at the $p<0.05$ level in the number of patients who reported unmet transportation needs

Table 2. Differences by Preferred Method of Contact

Characteristics	Preferred method of contact				p-value
	My telephone (n=271)	My email (n=126)	Someone else's telephone (n=30)	My telephone, my email (n=23)	
Age, years, mean (SD)	43.1 ^{a,b} (15.1)	40.3 ^{b,c} (12.5)	48.6 ^a (11.9)	42.8 ^{a,b,c} (18.0)	0.039*
Race	63.9% White, 24.7% other, 7.8% Black or African American	73.9% White, 13.4% other, 6.7% Black or African American	83.3% White, 16.7% other, 0% Black or African American	61.9% White, 14.3% Black or African American, 9.5% other	0.059
Ethnicity	25.5% Hispanic/Latino	19.3% Hispanic/Latino	23.3% Hispanic/Latino	17.4% Hispanic/Latino	0.815
ZIP code, mode (%)	84116 (7.0%)	84119 (8.7%) and 84101 (8.7%)	84101 (20%)	84111 (17.4%)	0.88
Sex, n (%)	Male: 128 (47.2) Female: 127 (46.9)	Male: 59 (46.8) Female: 67 (53.2)	Male: 22 (73.3) Female: 8 (26.7)	Male: 9 (39.1) Female: 12 (52.2)	0.080
Insurance	46.9% no insurance information, 18.1% Medicaid, disability and state, 12.9% private, 7.7% Medicare	54.0% no insurance information, 11.1% Medicaid, disability and state, 10.3% private, 10.3% specialty-based, and BH	63.3% no insurance information, 23.3% Medicaid, disability and state, 6.7% specialty-based, and BH	43.5% no insurance information, 26.1% Medicaid, disability and state, 8.7% private, 4.3% Medicare, 4.3% specialty-based BH	0.20
Mean sum of needs	4.9 (SD=2.4)	5.3 (SD=2.7)	5.8 (SD=2.6)	5.5 (SD=2.6)	0.189
Basic needs, n (%)	240 (88.6)	112 (88.9)	25 (83.3)	21 (91.3)	0.806
Transportation, n (%)	86 ^{b,c} (31.7)	42 ^{b,c} (33.3)	19 ^a (63.3)	8 ^{a,b} (34.8)	0.009*
Doctor/medical, n (%)	154 (56.8)	75 (59.5)	20 (66.7)	15 (65.2)	0.680
Medication, n (%)	131 (48.3)	69 (54.8)	13 (43.3)	12 (52.2)	0.208
Food, n (%)	168 (62.0)	79 (62.7)	20 (66.7)	16 (69.6)	0.644
Clothing/furniture, n (%)	177 (65.3)	84 (66.7)	21 (70)	17 (73.9)	0.608
Utilities, n (%)	169 ^a (62.4)	84 ^a (66.7)	15 ^{a,b} (50)	12 ^{a,b} (52.2)	0.002**
Rent/mortgage, n (%)	177 (65.3)	84 (66.7)	17 (56.7)	15 (65.2)	0.901
Housing, n (%)	103 ^b (38)	61 ^a (48.4)	22 ^a (73.3)	10 ^{a,b} (43.5)	≤0.001**
Employment, n (%)	121 (44.6)	62 (49.2)	21 (70)	14 (60.9)	0.146
Child care/elder care, n (%)	47 (17.3)	24 (19.0)	6 (20)	7 (30.4)	0.471
Received 211 outreach, n (%)	78 ^a (28.8)	10 ^{b,c} (7.9)	5 ^{a,b} (16.7)	2 ^{a,b,c} (8.7)	≤0.001**
PCP difference ^d , mean (SD)	0.3 (1.8)	-0.1 (0.7)	0.1 (0.5)	-0.1 (1.1)	0.178
Hospitalization difference, mean (SD)	0.1 (0.7)	0.1 (0.7)	-0.1 (0.8)	-0.1 (0.4)	0.387
ED difference, mean (SD)	-0.5 ^{a,b,c} (2.0)	-0.1 ^{b,c} (1.6)	-1.0 ^a (1.4)	-0.6 ^{a,b} (1.4)	0.033*

Note: Boldface indicates statistical significance (*p<0.05 and **p<0.005 [2 tailed]).

^aUsing posthoc analysis, groups with the same superscript are not significantly different.

^bUsing posthoc analysis, groups with the same superscript are not significantly different.

^cUsing posthoc analysis, groups with the same superscript are not significantly different.

^dDifference refers to the mean number of visits in the 90 days after the index visit subtracted by the mean number of visits in the 90 days before the index visit.

BH, behavioral health; ED, emergency department; PCP, primary care physician

depending upon their preferred contact method (chi-square=16.97, $p=0.009$). Posthoc tests found significant differences at the $p<0.01$ level between the group that preferred to be contacted using someone else's telephone and the group that preferred their telephone (chi-square=13.06, $p=0.001$) as well as between the group who preferred someone else's telephone and the group who preferred email (chi-square=14.24, $p<0.001$).

Omnibus chi-square tests of independence found that there was also a statistically significant difference in the number of patients endorsing utility needs between groups (chi-square=20.58, $p=0.002$). Posthoc tests found significant differences at $p<0.01$ between the group that preferred their telephone followed by their email ($n=12$, 52.2%) and those who preferred their telephone ($n=169$, 62.4%; chi-square=10.25, $p=0.006$). There was also a significant difference between the group preferring their telephone followed by their email and the group preferring their email ($n=84$, 66.7%; chi-square=11.78, $p=0.003$).

Omnibus testing also found a statistically significant difference in the number of patients endorsing unmet housing needs by group (chi-square=28.86, $p<0.001$). Posthoc comparisons indicated statistically significant differences (at $p<0.01$) between those preferring their telephone and those preferring someone else's telephone (chi-square=113.95, $p<0.001$) and between those preferring email and those preferring telephone followed by email (chi-square=11.11, $p=0.004$).

The average number of needs reported was 5.8 (SD=2.6) for those preferring to be contacted through someone else's telephone, 4.9 (SD=2.4) for those preferring their telephone, 5.30 (SD=2.7) for those preferring their email, and 5.5 (SD=2.6) for those preferring their telephone followed by email; however, these differences were not statistically significant ($F[3]=1.60$, $p=0.189$). Patients who preferred to be contacted by their telephone were the most likely to receive requested outreach from 211 information specialists ($n=78$, 28.8%) compared with those who preferred to be contacted through someone else's telephone ($n=5$, 16.7%), telephone followed by email ($n=2$, 8.7%), and email ($n=10$, 7.9%). Posthoc analyses demonstrated that the group preferring their telephone was statistically different from the group preferring their email (chi-square=21.66, $p<0.001$), whereas there was no significant difference between the other groups.

Regarding differences in health service utilization, those who preferred someone else's telephone had a mean difference of -1.0 (SD=1.4) ED visit, whereas those who preferred telephone, email, or telephone followed by email had mean differences of -0.5 (SD=2.0), -0.1 (SD=1.6), and -0.6 (SD=1.4) ED visits, respectively. Posthoc Tukey

tests demonstrated that the groups preferring email and someone else's telephone were the only groups that were statistically different (at $p<0.05$) from one another (mean difference=0.37, $p=0.046$). Changes in the number of hospitalizations ($F[3]=1.01$, $p=0.387$) and PCP visits ($F[3]=1.65$, $p=0.178$) were not statistically significant between the 4 different groups (own telephone, email, someone else's telephone, and telephone and email).

DISCUSSION

Although well intentioned, the adoption of social needs screening and referral processes in healthcare settings may not adequately meet the needs of the majority of patients receiving care in the ED. As discovered in our initial screening process, although almost half of the patients who completed SINCERE indicated 1 or more social needs ($n=1,324$, 47%), only 453 (34.2%) wished to be contacted by 211 to address their unmet needs. Ultimately, 95 of those who had at least 1 need and requested assistance connected with 211, meaning that 79% who requested assistance did not receive referrals. This voltage drop in patients from initial screening to the acceptance of contact and to the receipt of resource referrals indicates a breakdown at some point in this process.²⁰ Husk and colleagues²¹ identify 3 key stages to the success of social needs screening and referral or social prescribing: enrollment, engagement, and adherence. Although this study did not investigate adherence (patients' follow through with resource referrals), we identified how communication preferences or inability to maintain connection may adversely impact engagement in a social needs referral process that, if successful, requires enrollment, engagement, acquisition, and resolution (Figure 2 presents a visualization of this process).

This study found statistically significant differences in age, unmet transportation, utility, and housing needs; the rate of contact with 211 information specialists; and the difference in ED utilization from 3 months before to 3 months after the index visit on the basis of patients' preferred contact method. Contrary to our initial hypothesis, patients who preferred to be contacted using someone else's telephone were not statistically different in terms of the number of unmet needs or the likelihood of receiving 211 referrals. The receipt of resource referrals from 211 was only significantly different between those who preferred to be contacted by their telephone and those who preferred their email, a finding that may be explained by larger sample sizes in these groups. However, our initial hypothesis was confirmed because there was a statistically significantly higher number of patients in the group who preferred someone else's telephone that endorsed transportation and housing needs.

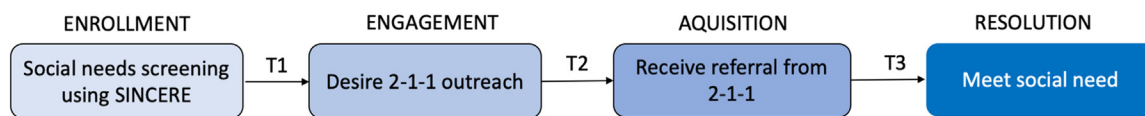


Figure 2. SINCERE screening and referral process with potential times disengagement may occur (T1, T2, and T3).

Although not statistically significant, this group also demonstrated the lowest number of patients endorsing utility needs. The low rate of unmet needs in the area of utilities combined with high rates of housing and transportation needs may suggest that these individuals are living in temporary housing situations in which they are not responsible for paying utilities (such as in a shelter or couch surfing). Although those who preferred to be contacted using someone else's telephone had a statistically significant decrease in ED utilization compared with those who preferred to be contacted by their email, because only 16.7% connected with outreach specialists, it is unlikely that the SINCERE screening and referral process was responsible for this reduction in ED visits over the 6-month period. Given that the group who preferred to be contacted through someone else's telephone started out with higher rates of ED visits than the other groups, one potential explanation for this observed reduction in ED visits is regression to the mean.²²

Patients who preferred to be contacted by their telephone followed by their email were unique because they had higher odds of reporting utility needs than both the telephone and the email group. However, this group was not statistically different from the group that preferred to be contacted on someone else's telephone. Providing a telephone number and an email or listing the telephone number of someone else may indicate that these patients recognized their potential for future technological disconnection and, as such, provided a secondary means of contact. Thus, ascertaining an individual's ability to maintain technology may be equally important to asking whether they have access to technology. For some, access may be the issue, but for others, they may have access to a mobile or smartphone but lack the finances to maintain its connection. In a study conducted with clients at free health clinics, a mobile phone was considered just as essential as other utilities. For these clients, "Staying connected was a priority, but it involved costs to other social and material resources, reflecting the interdependency of digital scarcity with other aspects of poverty."¹² Our findings align with those of prior research demonstrating that those without access to or ability to maintain technology may be those who are already disadvantaged owing to racial/ethnic discrimination, SES, and other social risk factors.^{8,12} Black, Hispanic, and low-income individuals report

lower rates of cell phone ownership and home broadband internet than White individuals.^{23,24}

In the current landscape in which health systems are trying to find efficient methods of screening for and addressing social needs—often through the use of internet-mediated patient portals—those who do not report consistent technology access and connection may represent the most at-risk patients who could have the greatest benefit from connecting with community services. Ascertaining communication preferences may be an efficient tool for identifying those who would benefit from additional outreach efforts such as in-person contact and/or an opportunity to provide multiple methods of contact should their telephone number become disconnected. With providers' short appointment times per patient, an initial 1-question assessment such as *Do you have the ability to maintain consistent access and or connection to a telephone or to the internet?* could be beneficial in identifying those individuals who should be offered additional assistance. Utilizing the listing of a contact number as a proxy measure for the ability to access and/or maintain connection questions may overestimate the number of individuals who have reliable connections. If implemented universally, this first question in the social needs screening process could also ensure that individuals conducting screening do not single out individuals who they believe may have social needs.^{6,20}

Limitations

Our sample contains missing insurance information for nearly half the participants—a limitation of our original data set, which contained information inputted during clinical encounters and subsequently extracted by our study team. However, given that the focus is on patient-reported needs (versus using insurance as a proxy for needs), this should have little impact on our findings. The majority of participants in this study self-identified as non-Hispanic/Latino White, with small sample sizes in some racial and ethnic groups—although representative of the Utah population,²⁵ the findings from this study may not be generalizable to other states. However, the robust analysis may provide an accurate idea of what systems may see on a large scale. Patients were asked to identify how they preferred to be contacted by United Way 211 of Salt Lake, and therefore not providing a

telephone number or preferring to be contacted first by telephone followed by email does not necessarily indicate the lack of a stable telephone number. Thus, this study may overestimate those who cannot maintain access to technology. This study did not ask patients who reported social needs but refused service referrals why they did not want resource referrals, which could produce a biased sample of individuals who were willing to engage with community services.

CONCLUSIONS

Despite headway in screening for social needs in health-care settings, service referrals may do little to meet the needs of patients who never utilize the referrals or who cannot access them owing to limited or interrupted connectivity. Access to technology (e.g., internet, cellular telephone) is a social determinant of health, which likely impacts social risk factors such as food and housing insecurity because those with limited access to technology often must choose which services to prioritize. Patients with reduced access to and maintenance of technology are more likely to already experience economic disparities and racial/ethnic discrimination.⁸

Therefore, current social needs screening and referral processes may fail historically marginalized and underserved populations. Given that many of the populations that tend to experience significant health disparities will comprise a majority of America's population in the near future,²⁶ it is critical to prioritize these communities by adapting our methods for social needs screening and referrals so that these communities will have an equal opportunity to access needed services. Programs such as the Federal Communications Commission's Lifeline, which helps to make communication services more affordable for low-income individuals, offer an opportunity to narrow the digital divide.²⁷ Perhaps future social needs screening should explicitly ask individuals about unmet needs regarding access to and maintenance of digital connectivity and then be prepared to assist individuals in applying to programs such as Lifeline. Other potential adjustments to social needs screening and referral processes could include contingency plans for how to address unmet needs of individuals who report potential interruptions in digital connectivity—resources could be offered to patients before they complete their index visit, or patients could choose to report alternative contacts. Overall, resource referrals will not help to address unmet social needs nor benefit individuals' health if they cannot be accessed. To be equitable after all is to recognize that individuals have "different circumstances and allocate the exact resources and opportunities needed to reach an equal outcome."²⁸ Thus, the

communication of available resources needs to be tailored for specific communities and circumstances to deliver this information in the most relevant and appropriate manner.

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CREDIT AUTHOR STATEMENT

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