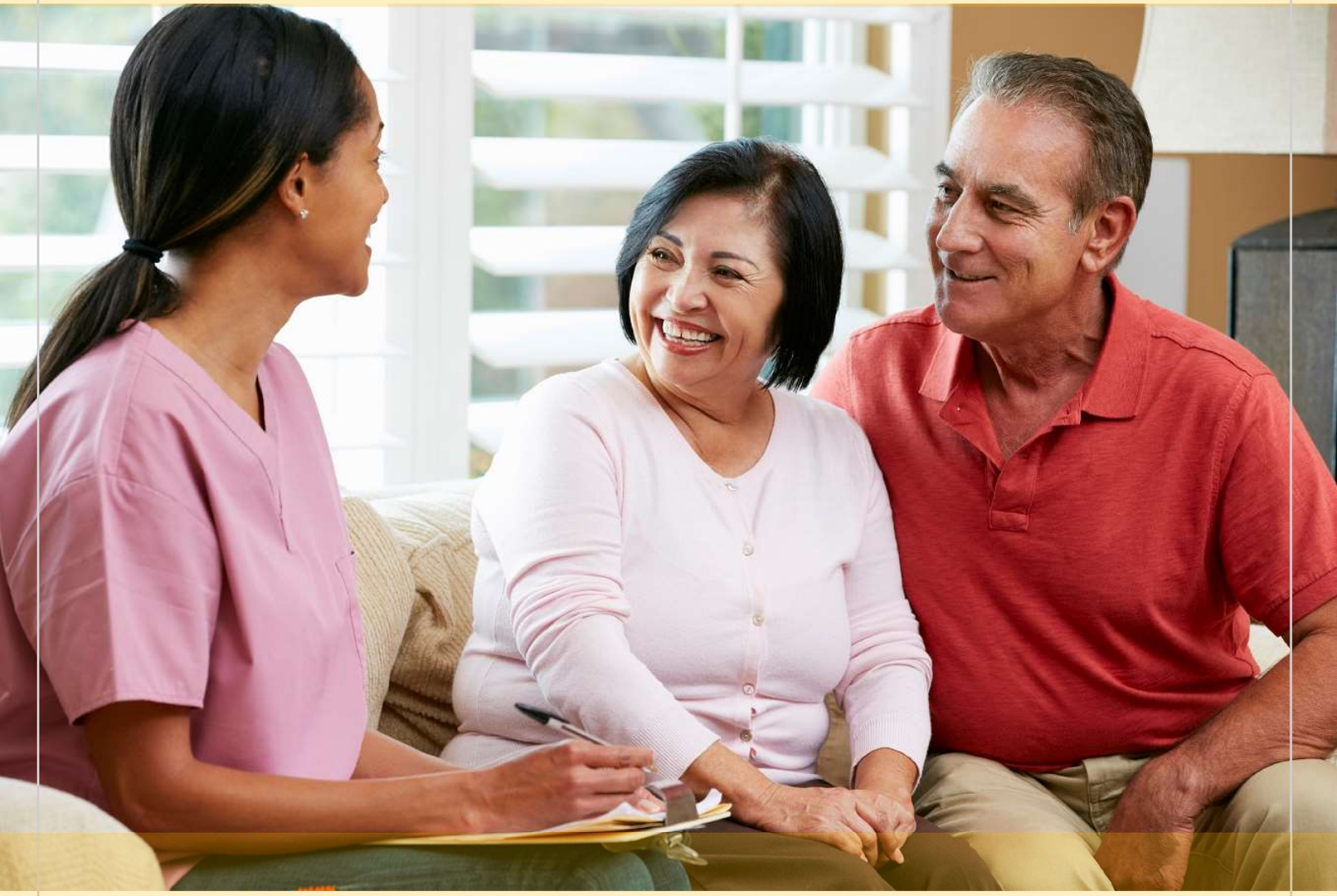
Addressing COVID-19 Health Literacy and Social Determinants of Health in Maricopa County



MCDPH Health Literacy Project

Maricopa County Public Health
WeArePublicHealth.org

Acknowledgments

This project was funded by a contract from the Office of Minority Health, provided by the Department of Health and Human Services to support the Health Literacy grant awarded to the Maricopa County Department of Public Health and an IGA to Arizona State University per Agreement Number PH NOI 21021

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Executive Summary

Purpose

Assess the MCDPH's Health Literacy project strategies to ensure vulnerable communities in Maricopa County have equitable access to essential health information and services, conducive to increased adherence to COVID-19 public health recommendations affected by social determinants of health.

Methodology

The methodology measured four pre-established outcomes: (1) Development of health literacy tools including use of text message data, (2) The network of community health workers as a safety net and patients' perceptions of community health workers, (3) Patients' increased adherence to COVID-19 prevention, treatment, and immunization, and (4) Identification and reduction of barriers that impact social determinants of health. Data were collected from Valleywise Health and Helping Families in Need (HFIN).

Findings

Overall, the health literacy and COVID vaccine material complied with CLAS Standards and reached 1,102 unvaccinated Valleywise patients who engaged in the message exchange from March to June 2022. The patient text survey showed that most patients have favorable perceptions of CHWs and adhere to local and national public health guidelines. Demographic data from Valleywise showed that most patients were white, middle aged, Hispanic/Latinos, and English speakers. More than two thirds were female, and 80% were overdue for their cervical cancer screening. HFIN reported a total of 20 confirmed vaccination appointments. Due to a low response rate (two responses) and to preserve confidentiality, the evaluation of the CHWs' survey was not performed for Year 1.

Recommendations

While the health literacy and COVID vaccine promotion campaign complied with CLAS Standards, tailored text messages and COVID-19 webpages must be revised to ensure accurate Spanish translations are in place. On the other hand, the evaluation of MCDPH's Health Literacy Project's efforts to lower COVID-19 infection rates among vulnerable populations in Maricopa County was limited by the low patient and CHW participation and technical difficulties with data reporting systems. However, developing new strategies to impress upon CHWs the importance of completing the survey and incentivizing patients to complete theirs via text messages will yield a robust dataset for Year 2 of the project.

Introduction

Since 2020 the ongoing COVID-19 pandemic has claimed the lives of more than six million people and infected more than six hundred million worldwide. In the United States, a quarter of the population has fallen ill, and more than a million have died (WHO, 2022). However, infection and death rates are not homogenous across all populations. Analysis of monthly data on COVID-19 infections and deaths from the Centers of Disease Control and Prevention and the National Center of Health Statistics showed disparities that widen by race and ethnicity. For example, cumulative data show that Black, Hispanic, American Indian, or Alaska Native (AI/AN), and Native Hawaiian or Other Pacific Islander populations have experienced higher rates of COVID-19 cases and deaths than white populations (Hill & Artiga, 2022).

Similar patterns have been observed in Arizona, a state that experienced one of the highest COVID-19 infection rates in the U.S. To date, the state has reported over two million cases and more than 30,000 deaths, with Hispanic or Latino, AI/NA, Black or African America, Asian or Pacific Islander, and other races accounting for 60.0% of COVID-19 deaths (ADHS, 2022). In Maricopa County, positive infection rates are the highest among poor, minority communities which represent 46.7% of the population (U.S. Census Bureau, 2022) and have limited English proficiency, curtailing access to culturally and linguistically appropriate health information. To address this access gap, the Maricopa County Department of Public Health (MCDPH) Health Literacy Project was established with the following goals:

- Improve adherence to COVID-19 public health practices among socially vulnerable Maricopa County populations through equitable health information distribution.
- Improve vulnerable communities' access to and ability to use essential health information and services, which are impacted by concurrent social determinants of health.
- Enable equitable distribution of appropriate health information to optimize adherence to health guidance, thus addressing health literacy and social determinants of health.

This report evaluates Year 1 of the MCDPH Health Literacy Grant project. The Southwest Interdisciplinary Research Center (SIRC) at Arizona State University was contracted as external evaluators for this project.

The report is sectioned by evaluation outcome findings and focuses on data reporting from one Federally Qualified Health Center (FQHC) working with MCDPH, Valleywise Health, and one Community Health Worker (CHW) organization, Helping Families in Need (HFIN).

Methodology

Evaluation Framework

The project evaluation measured the four distinct strategies and their outcomes: (1) Development of health literacy tools -including use of text message data, (2) The network of community health workers (CHWs) as a safety net and patients' perceptions of CHWs, (3) Patients' increased adherence to COVID-19 prevention, treatment, and immunization, and (4) Identification and reduction of barriers that impact social determinants of health.

Outcome 1: Development and Dissemination of Health Literacy Materials/Tools and Analysis of Text Message Data. The desired outcome was to develop health literacy tools available in the community that addresses the unique cultural, linguistic, and social factors of each community served. To measure this, evaluators from the Southwest Interdisciplinary Research Center (SIRC) proposed:

- The development of a customized rubric based on the standards of providing Culturally and Linguistically Appropriate Services (CLAS) to score the health literacy tools generated.
- A summative analysis of CHW and patients' interactions was used to evaluate CHWs and community organization outreach metrics.

Outcome 2: Network of Community Health Worker Safety Net and Patients' Perceptions of Community Health Workers. Develop a responsive network of safety-net health care providers partnered with CHWs to coordinate patient care responses to clinical needs, literacy level, and individual social determinants of health. To measure the success of the effort, evaluators proposed to:

- Document the network of CHWs and analyze it by role and sector.
- Survey the CHW network about the network's efficacy and determine individual member levels of engagement.
- Survey patients about the effectiveness of their interactions with CHWs.

Outcome 3: Patients Increased Adherence to COVID-19 Prevention, Treatment, and Immunization. Impact increased adherence among patients to COVID-19 treatment, prevention efforts, and immunization recommendations to reduce infection rates in Maricopa County.

- To evaluate this, MCDPH and Providertech proposed the creation of a short text message survey for patients accessible through their mobile devices.

Outcome 4: Identification and Reduction of Barriers that impact Social Determinants of Health. Collect and analyze data on social determinants of health to evaluate behavioral and structural changes contributing to lower COVID-19 infection rates in Maricopa County. To evaluate these changes, SIRC evaluators proposed to analyze:

- Geographic, demographic, or social characteristics of patients
- Reported unmet needs related to care, services, transportation, access, or other social determinants of health
- Number of patients:
    - at testing events
    - arriving for vaccine
    - arriving for testing
    - assisted with navigation
    - for needs related to social determinants of health and COVID (i.e. PPE, resources to mitigate food insecurity, maintaining quarantine precautions)
    - inquiring about a vaccination
    - registered to receive the vaccine the same day
    - followed up with post-tests results

Instruments Developed and Data Analysis

CLAS Standard Rubric. SIRC evaluators developed two customized rubrics based on the federal standard for public entities to provide Culturally and Linguistically Appropriate Services (CLAS) to measure the efficacy of a tailored health literacy text messaging tool in both English and Spanish (see Appendix A), and MCDPH's COVID-19 FAQs web pages. The text messages rubric was composed of five elements in the areas of Social Dynamics: Culture and Accessibility; Readability: Linguistic Accessibility and Literacy Level; and Achievement of National Institutes of Health (NIH) standards. Elements were measured on a scale of 1 to 4: 1- Insufficient, 2- Needs work, 3- Adequate, and 4- Ideal (Table 1).

Table 1

Text Message Evaluation Tool

Element	Ideal = 4	Adequate = 3	Needs work = 2	Insufficient = 1
SOCIAL DYNAMICS				
Culture	Message observably tailored to and addresses the cultural preferences of the target community	Messaging considers cultural identity, preferences of target community	Authors may or may not have considered the cultural relevancy and preferences	Authors did not consider cultural preferences, appropriateness, or relevancy
Accessibility	Multiple accessibility measures are included for disabled audiences (alt text, QR codes, auto-reply, hyperlinks)	Some accessibility measures were included	Accessibility may or may not have been considered	Accessibility elements are absent from the document
READABILITY				
Linguistic accessibility	Message has been translated to all languages for linguistically diverse local communities	Message has been translated into Spanish considering local dialect	Message has been translated generically	Translation has not been considered or completed
Literacy level	Message is tailored to the literacy level of a specifically targeted audience	Message is at a 7th grade reading level or lower	Message has not been adequately tested for literacy level	Message is above the target audience's appropriate reading level
NIH STANDARDS				
NIH Standards	The message is clear, simple, and action-oriented	The message is clear, simple, and passive	The message is simple, but the goal is unclear	The message is confusing
RUBRIC TOTAL: #/20	16-20	12-15	6-11	0-5

Social dynamics are pictured in the rubric in purple. The element of *Culture* considered how well the message was specifically tailored to a community, and to what extent the cultural preferences of each community were considered. *Accessibility* of all audiences to equitably benefit from the message was included in the rubric. This element specifically screened for

measures that made the message more accessible for action, such as the ability to reply and get a live person or hyperlinks to websites and phone numbers.

Readability is presented in blue and considers two separate elements. The first element is *Linguistic accessibility*, which evaluates the number of languages in which the messages can be read as well as the quality of their interpretation. Generic translations are not adequate; effective translations are customized to consider the dialect and culture of the local community. The other element of readability is the *Literacy level* of the material. Best practice for public messaging is a fifth-grade reading level or below, especially when talking about health information.

NIH Standards are presented in green and consist of only one element. NIH standards recommend all health messaging be "simple, clear, and direct." To achieve this standard, messages must have a high level of readability, be free of distraction and superfluous information, and be action-oriented. Information that does not provide the reader with a next step is less impactful.

The COVID-19 FAQs rubric comprised 17 elements focusing on Social dynamics: Culturally Appropriate, Culturally Relevant, and Accessibility; and Readability: Linguistic Accessibility, Literacy Level. The initial achievement of NIH standards was divided into thirteen elements, including Prioritization, Simplicity, Clarity-free of jargon, Clarity-readability, Action-oriented, Rationale, usage of Plain language, Consistency, and Readability (concerning the font, size, pictures, and colors). All rubric elements were chosen based on the project's goals, evidence-informed best practices, and the generally accepted federal approach to public health and measured on a scale of 1 to 4: 1- Insufficient, 2- Needs work, 3- Adequate, and 4- Ideal (see Appendix B).

Measured Health Literacy Tool: Outbound text messages. Twenty-three tailored text messages were developed by MCDPH and Providertech and conversations initiated with all unvaccinated Valleywise patients based on their individual health needs. Text messages engaged patients in health-related conversations, motivated them to schedule appointments, and encouraged them to get vaccinated (see Appendix A). For example, patients due for their annual well-woman examination were sent a reminder message specific to scheduling an annual pap exam; patients

reaching milestones in age were sent text messages about take-home colorectal screening tests. These outbound text messages were monitored for recipient response, and a live person used a decision tree of responses to schedule appointments and answer general questions. Recipients who did not opt-out and engaged in message exchange received a message specific to COVID-19 vaccines after their immediate and relevant needs were met. Patients could then schedule a vaccine or ask questions and receive evidence-based information about the vaccine.

After outbound text messages were distributed, data were collected by Providertech and securely sent to SIRC evaluators in an Excel spreadsheet and stored on a secured server. De-identified data were analyzed by two evaluation researchers who independently scored each text message in English and Spanish according to the rubric. After independent scoring, the SIRC team members met to audit their scores with the discussion focused on areas of divergence. SIRC evaluators reviewed each outbound text message, and when they disagreed on the score for any element, each provided rationale, and context for their specific score. In each case, an agreement was reached, and the two researchers were able to re-score the element at least within one point of one another.

Measured Health Literacy Tools: COVID-19 FAQs web pages. During their text message exchange with live Community Health Workers, patients were directed to the COVID-19 FAQs and the COVID-19 vaccine Facts & FAQs pages on the MCDPH website; this site was the primary source for COVID-related health information on this project. These pages were analyzed to assess their compliance with CLAS standards using an extended version of the five-element CLAS rubric developed to evaluate the text message strategy. The MCDPH COVID-19 pages were evaluated by a group of three bilingual SIRC evaluators and scored according to the rubric. SIRC evaluators gathered to review each webpage in English and Spanish and agreed on the score for each element by providing a rationale and context for their score.

Inbound Messages. Text message interactions between patients and Valleywise Community Health Workers (CHWs) were analyzed using qualitative coding to evaluate the themes among patients' responses. The data were cleaned and analyzed in Excel. A sample of the interactions of 100 patients was first analyzed through thematic coding to develop the codebook for the dataset. Each theme was

assigned a numeric value from 1-10 to identify themes in the data. Next, three SIRC evaluators independently reviewed and each coded a third of the interactions using the developed codebook.

CHWs survey instrument. To evaluate the CHW network, SIRC researchers developed and administered an eleven-question online survey used as a pre and post-retro-survey, hosted through a third-party platform on the university's secure server. The pre-survey was sent via email to CHWs at the advent of their project involvement. The pre-survey results served as a baseline measure for cultural and linguistic responsiveness and helped to develop the inventory of CHWs affiliated with safety-net providers for future urgent communications, such as public health emergencies. The post-retro survey is sent after 60 days to identify changes in the CHW network. The surveys included seven closed-ended questions, two Likert-type questions, and two open-ended questions. The target population for data collection was community health workers associated with Valleywise Health and HFIN. The pre-survey was sent to CHWs in June, and data were collected during July.

CHW training. SIRC evaluators developed a 15-minute PowerPoint training video to inform CHWs about the MCDPH Health Literacy project's goals and the evaluation process. The training was recorded in English and Spanish for the community health workers and explained survey administration, program fidelity, and translations.

Patient Network and Increased Adherence Survey. Patients' interactions with CHWs were measured via an eleven-question text survey in English and Spanish, developed by SIRC evaluators and administered by Providertech. Survey distribution began at the end of the second quarter in June 2022. The target population were unvaccinated Valleywise patients who replied to the tailored messages sent by Providertech and engaged in conversations with CHWs. The survey was sent to these patients via text message a week after their first interaction with the CHWs and is resent after 60 days. The survey included three closed-ended questions on patients' interactions with CHWs and four questions on patients' adherence to COVID-19 prevention, treatment, and immunization (three closed-ended questions and one multiple choice question). Data were collected during August. Additionally, a telephonic and in-person script was developed for CHWs to follow when administering the survey to patients (see Appendix C).

Community Health Workers Training

The purpose of the training was to provide Community Health Workers (CHWs) with an overview of the MCDPH Health literacy project goals, evaluation process, and best practices when administering surveys. The training covered:

- The rationale for the evaluation services provided by Southwest Interdisciplinary Research Center (SIRC).
- The importance of fidelity in the project to assure all patients received the same information and gained the same level of accessibility to all health literacy materials, and that CHWs administered surveys in the same manner.
- An overview of the evaluation process including the development of the CHWs and patients' surveys and guidelines on survey administration.

Findings by Evaluation Outcomes

Outcome 1: Development and Dissemination of Health Literacy Materials/Tools and Analysis of Text Message Data

Analysis of Outbound Message Campaign

CLAS Analysis. Twenty-three tailored text messages were developed by MCDPH and Providertech and sent to all unvaccinated Valleywise patients based on their health needs. The results of this evaluation showed that the average score for all 23 outbound text messages was 16.26 out of 20 with higher scores more positive. Text messages in English and Spanish were provided with a sequential identification number for evaluation (see Appendix A). Table 2 displays the audited scores for each message by identification number. Table 3 shows the average score for each of the elements.

Overall, the outbound text messages sent by Providertech to thousands of Valleywise patients scored well on the health literacy assessment. The average score for all elements was in the highest quadrant (16.26 out of 20). The outbound text messages scored highest in the elements of Culture and meeting NIH Standards. The area the messages scored the lowest was Linguistic Accessibility. English and Spanish texts scored the same across all elements.

Table 2

Outbound Text Messages Health Literacy Rubric Scores

ID #	Culture	Accessibility	Linguistic Accessibility	Literacy Level	NIH Standards	TOTAL/20
1	4	3	3	4	4	18
2	4	3	3	3.5	4	17.5
3	3.5	4	3	3	4	17.5
4	4	3	3	4	3.5	17.5
5	4	3	2	4	4	17
6	4	3	3	4	3	17
7	4	3	3	3	4	17
8	4	4	3	3	3	17
9	4	3	3	3	4	17
10	4	3	2.5	4	3.5	17
11	4	3	2	3.5	4	16.5
12	4	3	2	3.5	4	16.5
13	4	3	3	3	3.5	16.5
14	4	3	3	3	3.5	16.5
15	4	3	3	3	3.5	16.5
16	4	3	2	3	4	16
17	4	3	2.5	3	3.5	16
18	4	3	2	3.5	3	15.5
19	3.5	3	2	3	4	15.5
20	3.5	3	2.5	4	2	15
21	3.5	3	2	3	3	14.5
22	3.5	3	2	2	3	13.5
23	4	3	2.5	2	1.5	13

Table 3

Average Health Literacy Score for Outgoing Text Messages by Element

Culture	Accessibility	Linguistic Accessibility	Literacy Level	NIH Standards	TOTAL/20
3.89	3.09	2.57	3.26	3.46	16.26

Culture. Text messages sent out by Providertech to Valleywise patients scored very well in the area of Culture, with an average score of 3.89 out of 4. Most messages scored a 4, the scoring

category of "Ideal." Messages #3, 19, 20, and 22 scored a 3.5, because the topic area of COVID-19 vaccines is potentially sensitive to talk about, and permission was not asked to breach these subjects.

Accessibility. The set of 23 text messages scored an average of 3.09 in the area of Accessibility. Most messages scored a 3 because they only had one accessibility measure, which was the ability for the recipient to text back and get a human response. This is a great accessibility measure for persons with a variety of disabilities because they can use the voice-to-text function. There were two messages (#3 and 8) that also provided a clickable web link, which met the "Ideal" category and a score of 4.

Linguistic Accessibility. Text messages were sent out in English and Spanish, therefore none of the messages met the "Ideal" category of translation into multiple languages. Eleven of the 23 messages scored a 3, and the remaining twelve messages scored a 2 or 2.5. The messages that fell into the category "Needs Work" (#5, 10, 11, 12, and 16-23) did not score "Adequate" for several reasons. Many of the Spanish messages in the category "Needs Work" had minor grammatical errors, specifically in the areas of masculine and feminine subject agreement, verb conjugation agreement, and incorrect use of articles. Some messages used older, more traditional Spanish dialects, as opposed to Sonoran colloquial language of the current generation.

Literacy Level. The literacy level was quite appropriate for most of the outbound text messages. The average Literacy Level score was 3.26 out of 4. Six messages scored "Ideal," and four messages scored a 3.5. There were eleven messages that scored a 3 out of 4. These messages (#3, 7, 8, 9, 13-17, 19, and 21) were scored "Adequate" because they used more complicated words, such as "colorectal," "schedule," or "vaccine." Message #22 scored a 2 because the use of the shorthand "2x" is confusing, and not necessarily understood by all audiences.

NIH Standards. Most messages met the NIH Standards of simple and clear language, and the messages scored an average of 3.46 out of 4 in this element. Messages #6, 8, and 22 were not actionable, and therefore scored "Adequate." Message #18 was vague and unclear as to what it pertains; message #21 is too long and generic, so both #18 and 21 scored "Adequate." Message

#20 was non-sequitur and potentially off-putting. Message #23 scored a 1.5 because it asks two separate questions and is confusing for readers.

Analysis of Online COVID-19 Informational Material

FAQs Websites: CLAS Analysis. MCDPH COVID-19 FAQs online pages were the primary source for COVID-related health information on this project. A CLAS analysis of their content and format showed that the average score for the two information webpages in English and Spanish was 34.6 and 32.8 out of 44, respectively. Table 4 displays the audited scores for the English version of the COVID-19 FAQs and the COVID-19 Vaccine FAQs pages, and the average score for each element. Table 5 displays the same information for the Spanish versions.

Table 4

Audited Scores for English Version of Online Materials

	MCDPH COVID-19 Information Webpage		
CLAS Element	COVID-19 FAQs	COVID-19 Vaccine FAQs	Average
Culturally Appropriate	3	3	3
Culturally Relevant	3	3	3
Accessibility	4	4	4
Linguistic accessibility	4	4	4
Literacy Level	1	1	1
Prioritization	1	2	1.5
Simplicity	2	2	2
Clarity - Jargon	1.5	1.5	1.5
Clarity - readability	2	2	2
Action-oriented	2	2	2
Rationale	2	2	2
Plain language	1.5	1.5	1.5
Consistency	1	1	1
Readability - font	1.5	1.5	1.5
Readability - size	2	2	2
Readability - pictures	0.5	1.5	1
Readability - colors	2	2	2
TOTAL/44	34	36	35

Table 5

Audited Scores for Spanish Version of Online Materials

	MCDPH COVID-19 Information Webpage		
CLAS Element	COVID-19 FAQs	COVID-19 Vaccine FAQs	Average
Culturally Appropriate	3	3	3
Culturally Relevant	3	3	3
Accessibility	4	4	4
Linguistic accessibility	2	2	2
Literacy Level	1	1	1
Prioritization	1	2	1.5
Simplicity	2	2	2
Clarity - Jargon	1.5	1.5	1.5
Clarity - readability	2	2	2
Action-oriented	2	2	2
Rationale	2	2	2
Plain language	1.5	1.5	1.5
Consistency	1	1	1
Readability - font	1.5	1.5	1.5
Readability - size	2	2	2
Readability - pictures	0.5	1	0.75
Readability - colors	2	2	2
TOTAL/44	32	33.5	32.8

Overall, the English versions of the MCDPH webpages on COVID-19 FQAs and COVID vaccine FAQs scored well on the health literacy assessment; however, the Spanish versions need to be revised and updated. While the average score for all elements in the English versions fell in the highest quadrant (35 out of 44), the average score for all elements in the Spanish version was at the top of the third quadrant (32.8 out of 44). The English versions of the FAQs scored highest in the elements of Accessibility, Linguistic Accessibility, and several NIH elements. The Spanish versions scored highest in these elements, except for the Linguistic Accessibility element. The English and Spanish versions scored the lowest in the areas of: Literacy levels, Consistency, and Readability Pictures.

Culturally Appropriate, Culturally Relevant, and Accessibility. The MCDPH webpages on COVID-19 and COVID-19 FAQs scored very well in the areas of Culturally Appropriate, Culturally Relevance, and Accessibility, with the highest average score of 4 out of 4 in Accessibility. However, English and Spanish versions scored "Adequate" in the Culturally Appropriate and Culturally Relevant elements as their technical content does not necessarily address multiple cultural preferences.

Linguistic Accessibility. The MCDPH website offers translations of its content in over one hundred languages; thus, the English versions of the FAQs pages scored "Ideal" for translation into multiple languages. However, due to programming difficulties accessing the correct information in Spanish, Spanish versions of the FAQs received a score of 2, falling in the "Needs Work" category. The content on the webpage when toggling from English to Spanish was not the same, and the website seemed to upload an outdated version.

NIH Standards. The English and Spanish versions of the FAQs met several of the NIH standard based elements. The pages scored "Adequate" in Simplicity, Clarity-readability, Action-oriented, Rationale, Readability-size, and Readability-colors. However, due to programming difficulties, both FAQs pages scored "Insufficient" in Readability-pictures as the English and Spanish versions displayed different information and formats. For example, while the English version presented a video on "COVID-19 Vaccines - How do we know they are safe?" the Spanish translation displayed pictures and a detailed table on government-approved vaccines. While the exact content may not be available in both languages, the information should be equivalent in all languages.

Summative Analysis of Outbound Messaging

Outbound Messages: Valleywise. As part of Strategy 1, to develop and disseminate a Text Message Campaign, a total of 11,963 tailored messages were sent from March to June 2022 to unvaccinated Valleywise patients based on their health needs concerning cancer and HBA1C screenings, and Well Woman exams (Figure 1). No messages were sent during to the month of May due to technical issues. During these outreach efforts, patients were able to schedule health exams, request test kits, and schedule a COVID-19 vaccine appointment. Messages were sent in English and Spanish, but this distinction was only recorded during June. The results showed that 60.0% of messages sent in June were the English version (Figure 2).

Figure 1

Monthly Total Patients Outreached via SMS (total outbound, n=11,963)

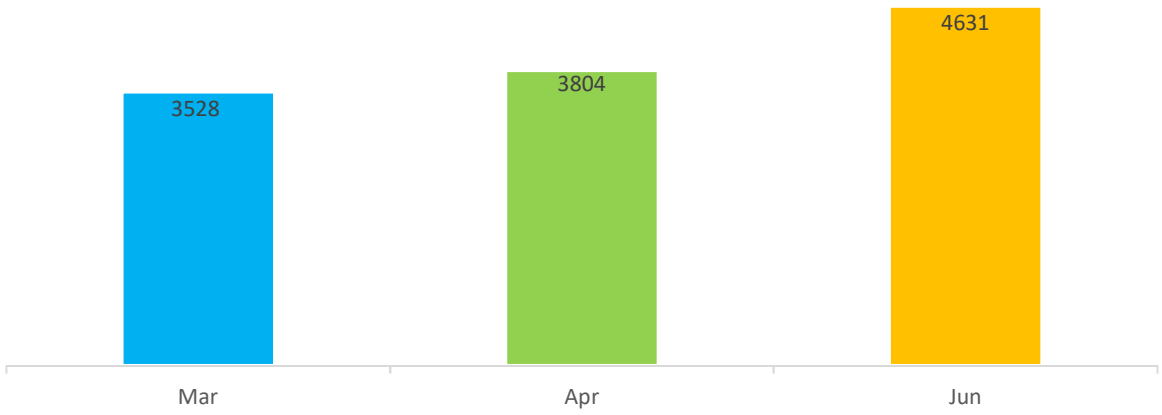
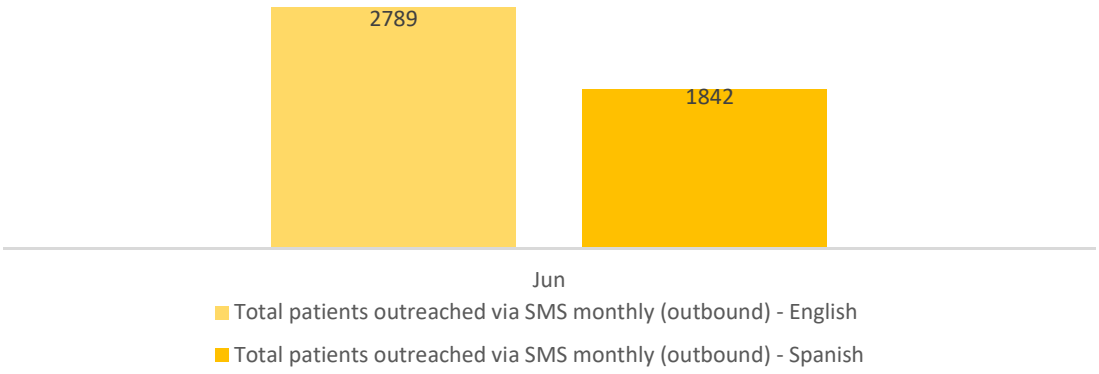


Figure 2

Monthly Total Patients Outreached via SMS, English/Spanish for June



A total of 1,102 patients were engaged in the message exchange from March to June (Figure 3), with most interactions taking place in April and June. Figure 4 shows the number of English and Spanish speakers engaged via text messages in June.

Figure 3

Total Number of Patients Engaged via Text Monthly (inbound responsive via text)

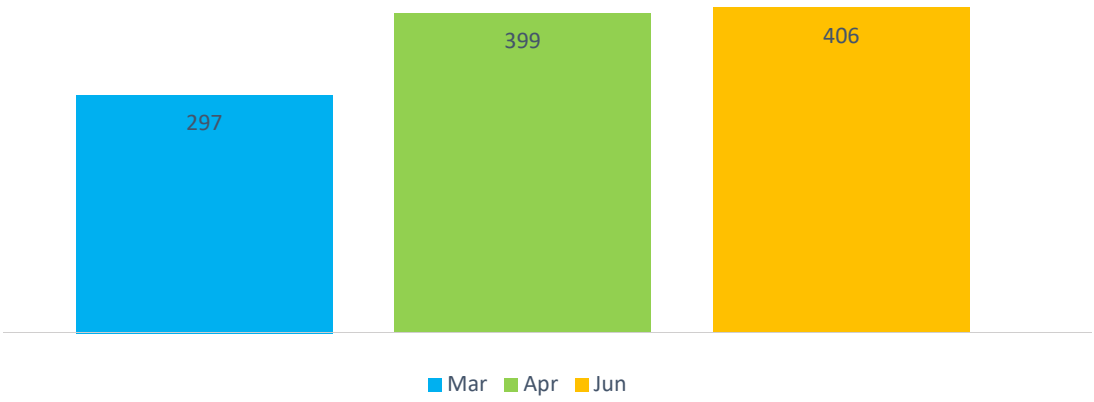
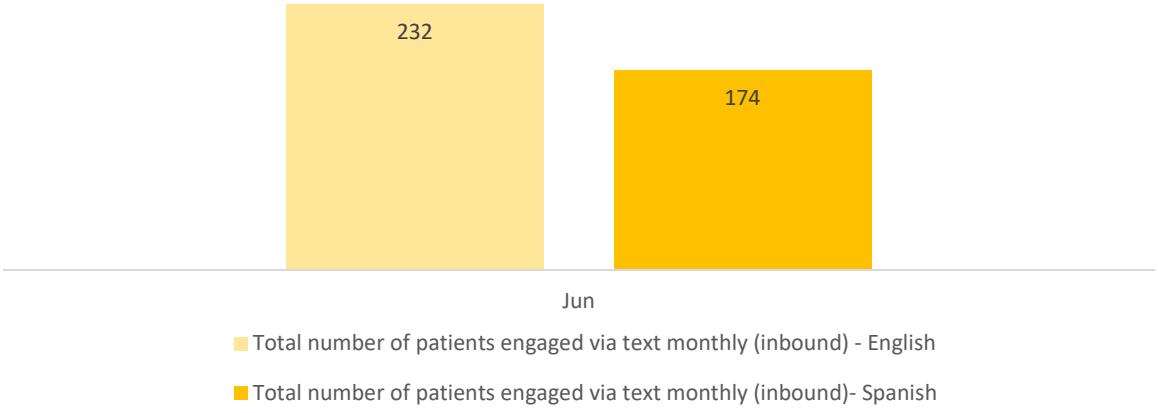


Figure 4

Total Number of Patients Engaged via Text Monthly (English/Spanish)



Messages regarding information about Colorectal Cancer Screening (CRC) and referrals to the Well Woman Clinic were also sent. The results showed that distribution of CRC information was very low during May (Figure 5), and on average, 35 more referrals were sent in Spanish per month for the Well Woman Clinic compared to the English version (Figure 6). In addition, appointments scheduled for Pap and Hemoglobin A1C (HBA1C) are shown in Figures 7 and 8.

Figure 5

Number of CRC Information Distributed

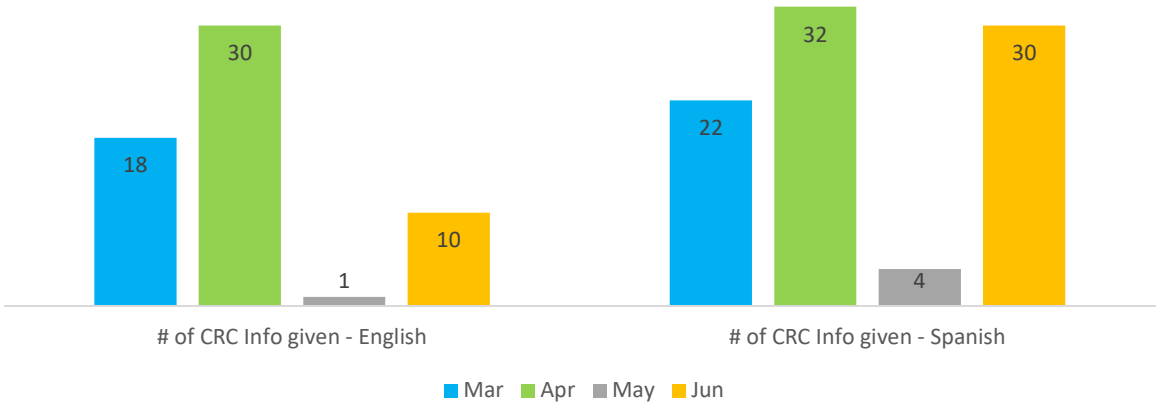


Figure 6

Number of Referrals to Well Woman Clinic

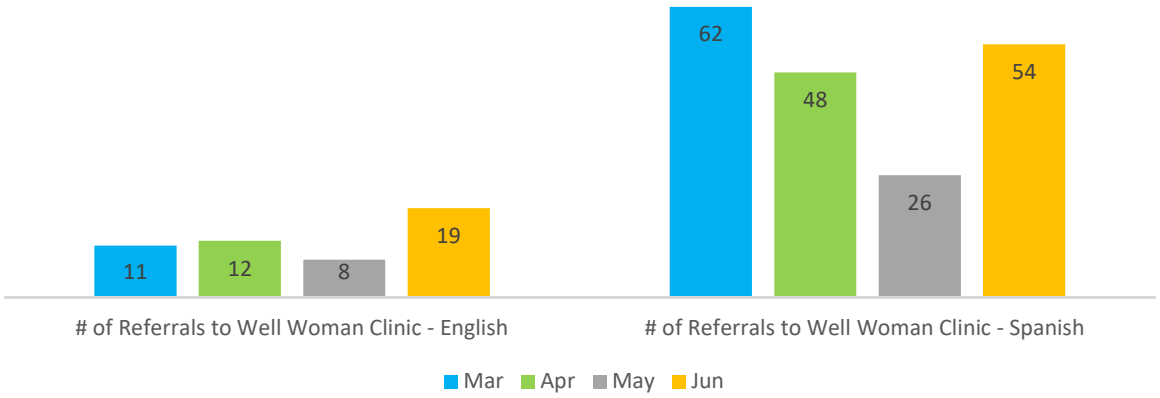


Figure 7

Number of Pap Appointments Scheduled between March to June 2022 (n= 173)

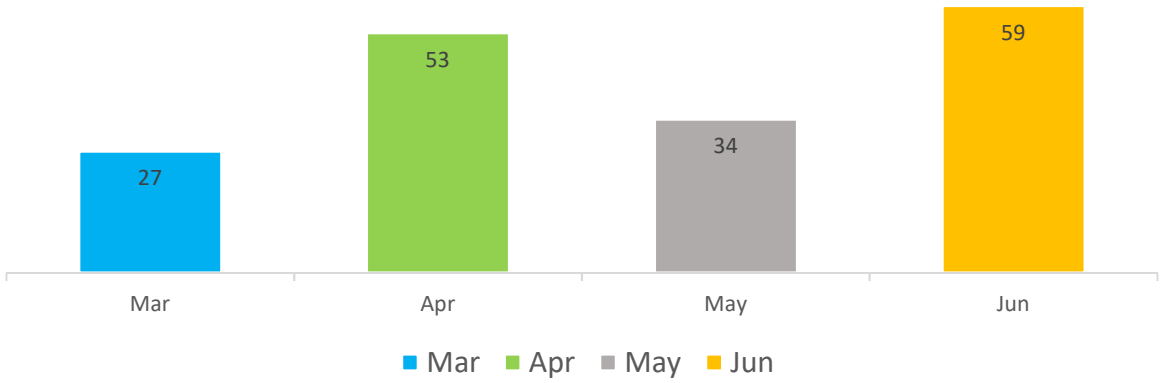


Figure 8

Number of HBA1C Appointments Scheduled between March to June 2022 (n=48)

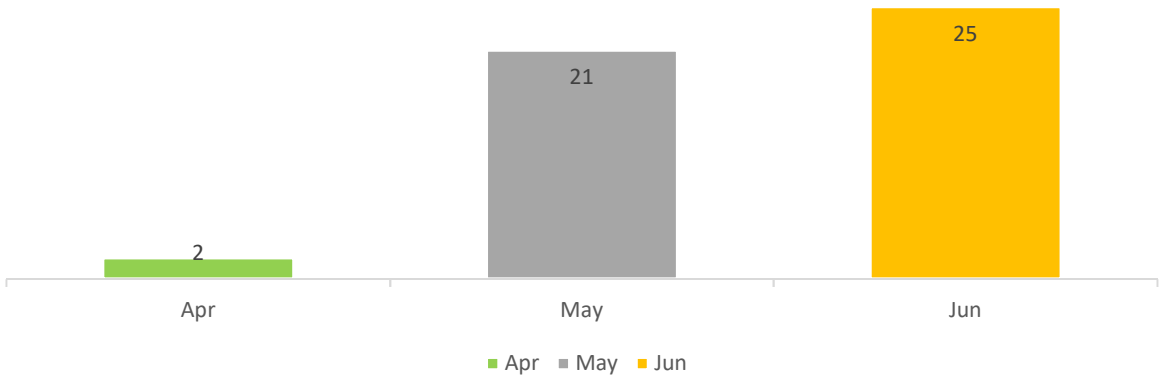


Table 6 shows the impact of the text message campaign from March to June 2022. During this period, fourteen patients received the COVID-19 vaccine, 59 received a Well Woman Exam, and 24 CRC screenings were completed.

Table 6

Impact of the text message campaign from March to June 2022

	COVID-19 Vaccination	Well Woman Exam	CRC
Scheduled/Given	21	123	26
Complete/Returned	14	59	24
Not Completed/Not Returned	6	64	12

Analysis of Inbound Messages

Valleywise Health. Data provided by Valleywise Health showed that 635 patients engaged in 1,119 interactions with CHWs from March 17, 2022, to June 9, 2022. Table 7 lists and describes the general themes that emerged from patients' interactions with CHWs associated with Valleywise.

Table 7

Inbound Responses Coded Themes

General Themes	Description
Appointment	Patients inquired or scheduled an appointment for themselves or a family member.
COVID-19 Vaccine	Refers to vaccination status, including booster status. It accounts for patients that identified as vaccinated or who rejected the vaccine.
NA	Refers to usually one short interaction without a relevant context. For example, some patients only recorded interactions were the words “Okay” or “Yes.”
No longer a patient	Identifies patients who have moved out of the state or are deceased.
Opt Out	Patients who have dis-enrolled from the messaging system.
Test kits	Inquiries about CRC or HbA1C or requests for test kits
Other	Refers to conversations not relevant to the study
Unspecified	Refers to conversations without a context to be understood

Summary and Recommendations

Overall, the health literacy and COVID vaccine promotion campaign has been consistent with best practices and CLAS Standards. The campaign reached 1,102 unvaccinated Valleywise Health patients who engaged in the message exchange from March to June, 2022. Although all patients were encouraged to schedule a COVID-19 appointment, data on completed vaccinations was limited as only 14 completed vaccinations were reported. There are several insights and recommendations offered in support of process improvement and evaluation:

- Ensure the audience engaged is ready to benefit from a sensitive health message; take an opportunity to ask permission first, which increases adherence.
- Ensure that the messages distributed are equitable and translated content is consistent with the native English context, not just the literal English message.
- Consider adding additional opportunities to provide hyperlinked websites and phone numbers to increase accessibility.
- Use a professional interpreter whose native language is Spanish to edit and conduct a final review of Spanish-translated text messages before distribution.
- Use simple words whenever possible. Avoid acronyms, shorthand, and abbreviations. Try to find alternatives to long, complicated words. For example, “make an appointment” is better than “schedule an appointment.” “See your doctor” may be most appropriate in some cases. Define terms when there is an opportunity to educate patients, or provide embedded links to medically accurate definitions.
- Whenever possible, create action-oriented text messages.
- In collaboration with the SIRC team, create a checklist of items for each text message for the MCDPH, Providertech, and interpreter team to use before distribution. Application of the health literacy rubric may be helpful for members of the team beyond SIRC.

Outcome 2: Network of Community Health Worker Safety Net and Patients' Perceptions of Community Health Workers

CHW Network Survey.

The pre-survey link was distributed to all CHWs associated with Valleywise and HFIN at the beginning of the third quarter in July 2022. Unfortunately, to date (reporting August 2022), only two responses have been recorded. Therefore, this report does not include an evaluation of this goal to preserve confidentiality.

Patients' Perceptions of CHWs.

Providertech started surveying Valleywise Health patients at the end of the second quarter in June 2022. To date, (reporting August 2022) only nine responses have been recorded, three from English speakers and six from Spanish speakers. Below is a summary of each question and the responses, including the number of responses for each option and percentages. It is important to note that based on the response size these results are not generalizable.

The first question asked patients “Were you able to understand the information the [location] care team gave to you?" This was a multiple-choice question with the following options “Yes,” “Sometimes,” or “No.” The results showed that except for one Spanish speaker, most patients understood the information provided by the care team (Table 8).

Table 8

“Were you able to understand the information [location] care team gave to you?”

	Number			Percent
	English	Spanish	Total	
Yes	3	5	8	88.8
No	0	0	0	0
Sometimes	0	1	1	1.1

The second question asked patients, “Did the care team understand you?” Again, this was a multiple-choice question with the options “Yes,” “Sometimes,” or “No.” The results showed that all patients agreed that the care team understood them in their native language (Table 9).

Table 9

"Did the care team understand you?"

	Number			Percent
	English	Spanish	Total	
Yes	3	6	9	100.0
No	0	0	0	0.0
Sometimes	0	0	0	0.0

The third and last question asked patients, "Did the Valleywise care team check that you understood your health care takeaways?" This multiple-choice question had the following options "Yes," "I'm not sure," or "No." The results showed that most patients agreed that the Valleywise care team made sure they understood their healthcare takeaways. Only two patients were unsure (Table 10).

Table 10

"Did Valleywise care team check that you understood your health care takeaways?"

	Number			Percent
	English	Spanish	Total	
Yes	2	5	7	77.8
No	0	0	0	0.0
I am not sure	1	1	2	22.2

Summary and Recommendations

Due to the limited number of participants in the CHWs survey, an evaluation of the results was not possible for Year 1. Moreover, only nine patients completed the patient text survey, but the results showed that most patients had favorable perceptions of CHWs. Several insights and recommendations offered in support of process improvement and evaluation include the following:

- CHWs may not understand that the survey is connected to the project and that completion is required.
- CHWs may not know the program's benefits and potential to improve others' lives through participating in evaluations.
- CHWs may have flagged the email as SPAM or non-essential in their email accounts.
- The pre-survey will need to be administered to CHWs once again.

- Communications between MCDPH and CHWs will ideally come through multiple channels: email, text, and verbally through intentionally circulated word-of-mouth messaging. SIRC can offer additional training as needed to impress upon participants the importance of the evaluation. However, the network of CHWs is highly trained and likely already grasp these concepts; a new communication approach will likely provide the intended response rate for the CHW pre-surveys.
- Given the low rate of patient's responses, offering compensation to patients for completing the survey might help increase the response rate. One option, if feasible, could be offering a $5 gift card.

Outcome 3: Patients Increased Adherence to COVID-19 Prevention, Treatment, and Immunization

Survey Results

SIRC evaluators created a short survey for patients accessible through their mobile devices, and was distributed to patients by Providertech. It is important to note that based on the small response size (n=9), these results are not generalizable, and not all participants answer every question.

The first question asked patients, "Which of the following actions do you take to avoid getting COVID-19?" This was a multiple-choice question that encouraged patients to choose all the actions they take. All participants agreed with the statement "I regularly wash my hands with soap and water for at least 20 seconds or use hand sanitizer that is at least 60% alcohol" and "I avoid close contact with people who are sick." Crowd avoidance rated the lowest in the set, with 77.8% of patients stating they take this action (Table 11); however, this is only a difference of two participants

Table 11

Which of the following actions do you take to avoid getting COVID?

	Number			Percent
	English	Spanish	Total	
I stay at least 6 feet away from others that do not live with me.	3	5	8	88.9
I wear a face covering in public.	3	5	8	88.9
I avoid crowds.	3	4	7	77.8
I avoid indoor events and closed-air spaces.	3	5	8	88.9
I regularly wash my hands with soap and water for at least 20 seconds or use hand sanitizer that is at least 60% alcohol.	3	6	9	100.0
I avoid close contact with people who are sick.	3	5	9	100.0

The second question asked patients, “Have you been tested for COVID?” with “Yes,” and “No” as the response options. The results showed that about half of the participants have been tested for COVID-19 (Table 12).

Table 12

Have you been tested for COVID?

	Number			Percent
	English	Spanish	Total	
Yes	2	3	5	55.6
No	1	3	4	44.4

The third question asked patients, “Will you stay at home for at least 5 days if you have COVID symptoms but have not tested for the virus?” This question also had “Yes” and “No” choice options. The results showed that all participants agreed they will isolate themselves if they have COVID-19 symptoms (Table 13).

Table 13

Will you stay at home for at least 5 days if you have COVID symptoms but have not tested for the virus?

	Number			Percent
	English	Spanish	Total	
Yes	3	6	9	100.0
No	0	0	0	0

The last question asked patients, "Have you received or are you planning to receive the COVID-19 vaccine?" This multiple-choice question had the following options *"*Yes," "I'm not sure," or "No.*"* According to the results, more than half of the participants received or planned to receive the COVID-19 vaccine (66.6%) (Table 14).

Table 14

Have you received or are you planning to receive the COVID vaccine?

	Number			Percent
	English	Spanish	Total	
Yes	2	4	6	66.6
No	1	1	2	22.2
I am not sure	0	1	1	11.1

Summary and Recommendations

The third goal of the MCDPH's health literacy project was to increase adherence among patients to COVID-19 treatment, prevention efforts, and immunization recommendations to reduce infection rates in Maricopa County. The patient text survey showed that most patients adhere to local and national health guidelines for COVID-19. However, only nine patients completed the survey. One recommendation to increase the response rate is to offer an incentive to patients for completing the survey, if feasible, such as a $5 gift card.

Outcome 4: Identification and Reduction of Barriers that impact Social Determinants of Health

Only Valleywise Health reported results related to social determinants of health, and those data were limited, i.e., demographic data. HFIN provided data on confirmed attendance to monthly vaccine events via SMS. This section reports on the data available from these two organizations.

Valleywise Health Patient Demographics

From March to June Valleywise Health sent tailored messages to 4,012 patients who were "overdue" or "due soon" for their Hemoglobin A1C, Colon Cancer, and Cervical Cancer screenings and were identified as unvaccinated for COVID-19. Although Outcome 4 determined the barriers around social determinants of health, these data, in conjunction with COVID-19 vaccination statuses data, to date are not available for evaluation. This section summarizes the available patient demographics and health screening statuses.

The results of the evaluation showed that 81.3% of patients reported being White (Table 15). As to their gender identity, 66.3% selected female (Table 16) and 79.8% indicated their sex as female (see Table 20). English is the most prevalent language among patients (62.4%), followed by Spanish (31.6%, Table 17). A majority of patients identified as Hispanic/Latino (65.4%, Table 18), and 45.0% were between 45 and 64 years of age at the time of service (Table 19). Almost half of the patients' households were comprised of one or two individuals (47.0%, Table 21), and 48.6% of patients indicated a household income below $20,000 (Table 22). Pertinent to health screenings, the results showed that just 17.8% and 33.4% of patients are overdue for their Hemoglobin A1c and colon cancer screenings, respectively (Table 23 & Table 24), in contrast to 82.6% of female patients who are overdue for their cervical cancer screening (Table 25).

Table 15

Race (n=4,012)

Race	Number	Percent
American Indian or Alaska Native	30	0.7
Asian	68	1.7
Black American	508	12.7
Native Hawaiian	1	0
Other Pacific Islander	22	0.5
Refused to Report/ Unable to answer	123	3.1
White	3,260	81.3

Table 16

Gender Identity (n=4,012)

Gender Identity	Number	Percent
Female	2,361	66.3
Male	634	15.8
Other	1	0.0
Chose not to disclose	9	0.2
Blank	707	17.6

Table 17

Language (n=4,012)

Language	Number	Percent
English	2,503	62.4
Spanish	1,266	31.6
Spanish/English	193	4.8
Arabic	12	0.3
Vietnamese	5	0.1
Swahili/Kiswahili	5	0.1
Hindi	3	0.1
Other	25	0.6

Table 18

Ethnicity (n=4,012)

Ethnicity	Number	Percent
Hispanic/Latino	2,622	65.4
Non-Hispanic/Latino	1,382	34.4
Refuse to Report/Unable to answer	7	0.2
Unknown	1	0.0

Table 19

Age at Time of Visit (n=4,012)

Age	Number	Percent
Under 17	3	0.1
18-24	377	9.4
25-34	743	18.5
35-44	763	19.0
45-54	1,025	25.5
55-64	803	20.0
66+	256	6.4
Blank	42	1.0

Table 20

Sex (n=4,012)

Sex	Number	Percent
Female	3,200	79.8
Male	812	20.2

Table 21

Household Size (n=4,012)

Family Size	Number	Percent
2 or less	1,885	47.0
3 - 4	1,345	33.5
5 - 6	515	12.8
7+	112	2.8
Blank	155	3.9

Table 22

Household Income (n=4,012)

Household Income	Number	Percent
Under 10,000	1,279	31.9
10,000-19,999	670	16.7
20,000-29,999	622	15.5
30,000-39,999	535	13.3
40,000-49,999	283	7.1
50,000-59,999	107	2.7
60,000-69,999	110	2.7
70,000-79,999	66	1.6
Above 80,000	161	4.0
Blank	179	4.5

Table 23

Hemoglobin A1C Due Status

Hemoglobin A1C Due Status	Females		Males		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
To date	2,735	85.5	442	54.4	3,177	79.2
Due Soon	69	2.2	52	6.4	121	3.0
Overdue	396	12.4	318	39.2	714	17.8
TOTAL	3,200	100.0	812	100.0	4,012	100.0

Table 24

Colon Cancer Screening Due Status

Colon Cancer Screening Due Status	Females		Males		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
To date	2,413	75.4	257	31.7	2,670	66.6
Due Soon	2	0.1	0	0.0	2	0.0
Overdue	785	24.5	555	68.3	1,340	33.4
TOTAL	3,200	100.0	812	100.0	4,012	100.0

Table 25

Cervical Cancer Screening Every 3 Years Due Status (n=3,200)

Cervical Cancer Screening	Number	Percent
To Date	443	13.8
Overdue	2,757	86.2

Table 26

Last day of Service by Year (n=4,012)

Last day of Service by (Year)	Number	Percent
2020	548	13.7
2021	1,968	49.1
2022	1,496	37.3

Helping Families in Need (HFIN)

Vaccination Appointments. Confirmed appointments to receive the COVID-19 vaccine at the monthly vaccination event were highest during April for HFIN's patients. Table 27 shows a continual drop in confirmations at the start of the summer months.

Table 27

Confirmed for Monthly Vaccine Events via SMS

Confirmed for Monthly Vaccine Events via SMS	Number	Percent
April	10	50.0
May	6	30.0
June	4	20.0

Summary

The goal of Outcome 4 was to identify social determinants of health to eliminate barriers and encourage behavioral changes that can contribute to lower COVID-19 infection rates in Maricopa County. However, due to the changing context of the pandemic and the availability of at-home COVID-19 diagnostic tests, it was difficult to collect data on the proposed indicators; nevertheless, additional indicators may still be tracked as data becomes available.

For Year 1, limited data were reported by Valleywise Health and HFIN on social determinants of health. Valleywise Health reported demographic data that showed that most patients were White, middle age, Hispanic/Latinos whose primary language is English, and have a median income of $20,000. Further, 66.3% reported their gender identity as female, 79.8% said their sex was female, and 80.0% of respondents are overdue for their cervical cancer screening. HFIN reported on confirmed vaccination appointments totaling 20 confirmed appointments for the last quarter.

General Insights

The first year of this Health Literacy project showed that the goals and strategies were feasible and doable, with much of the implementation coming to fruition. Further, these efforts show promise of achievable outcomes that are measurable. However, while the health literacy and COVID vaccine promotion campaign complied with CLAS Standards, tailored text messages and COVID-19 webpages

must be revised to ensure accurate Spanish translations are in place. On the other hand, the evaluation of MCDPH's Health Literacy Project's efforts to lower COVID-19 infection rates among vulnerable populations in Maricopa County was limited by the low patient and CHW participation, and technical difficulties with data reporting systems. However, the development of new strategies to impress upon CHWs the importance of completing evaluative tools and possibly incentivizing patients to complete surveys via text messages might yield a robust dataset for the project's second year. In addition, the integration of new FQHCs, Wesley Health Center and Valle del Sol, and new CHW organizations, including the Asian Pacific Community in Action, and a new standardized reporting system for these centers, will allow for a more comprehensive analysis of MCDPH's achievements in future reports.

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Appendix A

Table 28

Outbound Text Messages

ID #	English	Spanish
1	[FirstName], diabetes can be tough but Valleywise can help with an A1c test to check your blood sugar control. Text to schedule STOP=OptOut	[FirstName], la diabetes puede ser difícil, pero Valleywise puede ayudarlo con una prueba de A1c para controlar su nivel de azúcar en la sangre. Texto para programar STOP=OptOut
2	[FirstName], Putting off a colonoscopy? Valleywise offers an easy at-home option for colorectal screenings. Text us for your kit. STOP=OptOut	[FirstName], ¿Aplazando una colonoscopia? Valleywise ofrece una opción fácil en el hogar para exámenes colorrectales. Envíenos un mensaje para obtener su kit STOP=OptOut
3	Have you thought about getting the vaccine? Here is some info on why it is recommended: https://www.maricopa.gov/5686/COVID-19-Vaccine-Facts-and-FAQs	¿Has pensado en ponerte la vacuna? Aquí hay información sobre por qué se recomienda: https://www.maricopa.gov/5686/COVID-19-Vaccine-Facts-and-FAQs
4	If you have other questions about receiving the vaccine, you can reach back out to us via text anytime	Si tiene otras preguntas sobre cómo recibir la vacuna, puede comunicarse con nosotros por mensaje de texto en cualquier momento.
5	[FirstName] it's Valleywise. It's time for your well woman visit. Text us to schedule. STOP=OptOut	[FirstName] es Valleywise. Es hora de tu consulta de control de mujer sana. Envía un mensaje de texto para programar. STOP=OptOut
6	[FirstName], your A1c provides clues to your overall blood sugar control. We can check it at your next Valleywise visit. Text us today STOP=OptOut	[FirstName], su A1c proporciona datos sobre su control general de azúcar en la sangre. Podemos comprobarlo en su próxima visita a Valleywise. Envíanos un mensaje hoy mismo STOP=OptOut
7	I can schedule you for [date] anytime between [time 1]and [time 2]. What do you prefer?	Puedo programarte para [date] en cualquier momento entre [time 1] y [time 2]. ¿Qué prefieres?
8	Happy to shis some information about the vaccine if that would be helpful. Here are some frequently asked questions https://www.maricopa.gov/5488/COVID-19-FAQs	Feliz de compartir información sobre la vacuna si eso puede ser útil. Aquí hay algunas preguntas frecuentes https://www.maricopa.gov/5488/COVID-19-FAQs

9	We look forward to seeing you tomorrow at Valleywise Avondale for your COVID vaccine [FirstName]. Please reply Y to confirm your [insert time] appointment.	Esperamos verlo mañana en Valleywise Avondale para su vacuna COVID [FirstName]. Responda S para confirmar su cita [insert time].
10	Great news! How are you feeling?	¡Enhorabuena! ¿Cómo te sientes?
11	[FirstName], even symptom free, you may still be at risk. Pick up a home colorectal screening kit. Questions? Simply reply to this message STOP=OptOut	[FirstName], incluso sin síntomas, aún puede estar en riesgo. Elija un kit de detección colorrectal para el hogar. ¿Preguntas? Simplemente responder a esta mensaje STOP=OptOut
12	Hi [FirstName] it's Valleywise. We have not heard from you to schedule your well woman visit. Text us to schedule today. STOP=OptOut	Hola, [FirstName], soy Valleywise. No hemos tenido noticias tuyas para programar tu visita de control de mujer sana. Envíenos un mensaje de texto para programar hoy.STOP=OptOut
13	No problem [FirstName]. We have this vaccine clinic every Wednesday at Valleywise. You can message us to schedule	No hay problema. Tenemos esta clínica de vacunas todos los miércoles en Valleywise. Puedes enviarnos un mensaje para agendar
14	Great, we will see you then! Please let us know if you need help with transportation	¡Genial, nos vemos entonces! Háganos saber si necesita ayuda con el transporte.
15	Sorry this date/time did not work for you. Can you help you reschedule for another day?	Lo sentimos, esta fecha/hora nestá disponible. ¿Podemos ayudarte a reprogramar para otro día?
16	[FirstName], Valleywise offers an easy at-home option for colorectal screenings. Pick up a home test kit today. Reply with any questions. STOP=OptOut	[FirstName], Valleywise ofrece una opción fácil en el hogar para exámenes colorrectales. Recoja un kit de prueba casero hoy. Envíanos de texto si preguntas STOP=OptOut
17	Great news! Please send a pic of your vaccine card to update your medical records. You can also bring it to your next appt	¡Enhorabuena! Envíe una foto de su tarjeta de vacunción para actualizar sus registros médicos. También puede llevarla a su próxima cita.
18	[FirstName], Hi it's Valleywise, you are due for an important screening. Would you like to learn more? Please text us today STOP=OptOut	[FirstName], Hola, soy Valleywise, debe asistir a una evaluación importante. ¿Te gustaría aprender mas? Envíenos un mensaje de texto hoy mismo STOP=OptOut
19	Great, I have you scheduled for [date and time]. I also wanted to let you know that we have a COVID vaccine clinic here each Wednesday. Can I help get you scheduled to receive your vaccine?	Genial, te tengo agendado para [date and time]. También quería informarles que tenemos una clínica de vacunas COVID aquí todos los miércoles. ¿Puedo ayudarlo a programar su vacunación?
20	Hello [FirstName], it's your Valleywise team checking in on you. Did you receive your vaccine?	Hola, [FirstName], es su equipo de Valleywise que se está comunicando con usted. ¿Recibiste tu vacuna?
21	Thank you for your message! If this is a medical emergency, please dial 911 or go to your nearest emergency room.	¡Gracias por tu mensaje! Si se trata de una emergencia médica, marque el 911 o vaya a la sala de emergencias más cercana.

	Unfortunately, it is currently outside of business hours. We will do our best to respond to you as soon as possible during our regular business hours (M-F 8:30am-12p, 1-4:30pm)	Desafortunadamente, O bien estamos fuera de nuestro escritorio o es actualmente después del horario de trabajo. Haremos todo lo posible para responderle lo antes posible durante nuestro horario comercial habitual (M-F 8:30am-12p, 1-4:30pm)
22	Checking your A1c 2x/year helps manage your diabetes [FirstName]. At Valleywise, we can check it during your visit. Text us today STOP=OptOut	Controlar su A1c 2 veces al año ayuda a controlar su diabetes [FirstName]. En Valleywise, podemos verificarlo durante su visita. Envíenos un mensaje de texto hoy STOP=OptOut
23	Great, I can help you get scheduled for that. Do you have a preference of morning or afternoon? I have [date 1] or [date 2]. Which is better for you?	Genial, puedo ayudarte a programar eso. ¿Tiene preferencia de mañana o de tarde? Tengo [date 1] o [date 2]. ¿Cuál es mejor para ti?

Appendix B

Table 29

Health Literature Evaluation Tool

	Ideal = 4	**Adequate = 3**	**Needs work = 2**	**Insufficient = 1**
Element	Elements addressing cultural preferences of target community are observable	Elements addressing cultural preferences of target community are considered	Authors may or may not have considered the cultural preferences	Authors did not consider cultural preferences or appropriateness
Culturally relevant	The literature is culturally tailored to a specific audience	Some elements of cultural relevance are present	Authors may not have considered cultural relevancy	Authors did not consider if the literature is culturally relevant
Accessibility	Multiple accessibility measures are included for disabled audiences (alt text, QR codes hyperlinks)	Some accessibility measures were included	Accessibility may or may not have been considered	Accessibility elements are absent from the document
Linguistic accessibility	Literature has been translated to all languages for linguistically diverse local communities	Literature has been translated into Spanish considering local dialect	Literature has been translated generically; programming issues are present	Translation has not been considered or completed for the document
Literacy level	Document is tailored to the literacy level of a specifically targeted audience	Document is at a 7th grade reading level or lower	Document has not been adequately tested for literacy level	Document is above the target audience's appropriate reading level
Element	**Ideal = 2**	**Adequate = 1.5**	**Needs work = 1**	**Insufficient = 0.5**
Prioritization	The most important information or message is presented first	The most important information is near the beginning of the document	Not clear what the most important information may be	Most important information is buried or not prioritized
Simplicity	Only one idea is presented at a time throughout document	One idea is presented at a time with minimal exception	Multiple ideas presented simultaneously	Ideas are presented haphazardly or out of order

Clarity - jargon	Document narrative does not rely on statistics or acronyms	Document use of acronyms and stats is sparse and defined	Document use of stats and acronyms is common and defined	Document use of stats and acronyms is common and undefined
Clarity - readability	Document does not use symbols or extra punctuation marks	Document uses symbols or unneeded punctuation marks sparingly	Document uses symbols OR punctuation marks that are not needed	Document uses symbols AND punctuation marks that are not needed
Action oriented	The literature includes an action-oriented directive for readers	Literature includes a directive that may not be action oriented	Desired action of the reader is not clear	Desired action of the reader is not present
Rationale	Document describes specifically the benefits of doing the action	Document suggests the benefits of doing the action	Document suggests the action is beneficial but does not describe how	Document does not describe if or how the action will be beneficial
Plain language	Literature is written as if speaking to a friend	Written as if speaking to a colleague or peer	Document seems formal in some areas	Document is awkward or overly formal
Consistency	Vocabulary used is plain language AND defined and consistent	Vocabulary used is plain language OR defined and consistent	Vocab is heavy and needs definition	Vocabulary use is inconsistent
Readability - font	Use of serif text for narratives, sans-serif for headlines, and two fonts or fewer	Serif/non-serif text is not specifically placed, and use of two fonts or fewer	Serif/non-serif fonts are not considered, and more than two fonts employed	Font use is sporadic and inconsistent
Readability - size	14 point font or larger and appropriate use of bold font, avoidance on underlines	12 to 14 point font and appropriate use of bold	A minimum 12 point font is used	Font sizing is too small and use of bold and underline is not consistent
Readability - pictures	Pictures AND graphics with alt text are included in the literature to increase understanding	Pictures AND graphics are included in the literature to increase	Pictures OR graphics are included in the literature to increase understanding	Literature does not include pictures nor graphics for increased understanding

		understanding but may lack alt text		
Readability - colors	Creative design avoids the use of distracting backgrounds, loud presentation, font colors are visible, avoids contrasting colors common in color blindness	Literature design has minor room for improvement in structure and coloring but is generally pleasing and clear	Literature design is not intentional, use of color is random	Literature is difficult to read, see, and/or the background is distracting
Rubric TOTAL: /44				

Appendix C

Telephone Survey Script

Hello, may I speak to _____.

Hi, I'm _____ calling from [LOCATION], about your recent care appointment. We are doing a quick survey to learn about your experience with the clinic. The survey is just 7 questions and you can skip any questions you want. Your identity will be kept confidential.

Your answers are important and will be used to improve public health practices in Maricopa County.

May I ask you a few questions?

IF NO, SAY:

Thank you for your time and for choosing [LOCATION] for your health care. Have a good rest of your day.

IF YES, BUT

- **RESPONDENT CAN'T TALK AT THE MOMENT, SAY:**
    - Thank you. When would be a better day and time to call back?
    - **RECORD NEW CALL TIME IN EXCEL SPREADSHEET.**
- **RESPONDENT INDICATES THAT THEY ARE WILLING TO TALK BUT THEY ARE DRIVING, SAY:**
    - I'm sorry, but for your safety, we cannot continue while you´re driving. When would be a better day and time to call back?
    - **RECORD NEW CALL TIME IN EXCEL SPREADSHEET.**

- **RESPONDENT IS HEARING IMPAIRED SAY:**
  - Is there a family member or friend next to you who knows about your recent health care appointment that could answer my questions?
    - **IF NO SAY:**
      - Thank you for your time and for choosing [LOCATION] for your health care. Have a good rest of your day.

    - **IF YES, SAY:**

      Hi, I'm _____ calling from [LOCATION], about [PATIENT'S NAME] recent care appointment. We are doing a quick survey to learn about your experience with the clinic. The survey is just 7 questions and you can skip any questions you want. Their identity will be kept confidential. Their answers are important and will be used to improve public health practices in Maricopa County.

      May I ask you a few questions?

      [FOLLOW PREVIOUS PROTOCOL FOR ANSWERS]

Recommendation: for rescheduling in an Excel spreadsheet log in patient's name, date, and time of call, new time day and time for the call, and CHW's name

IF YES, SAY:

Thank you.

I will start by asking you three questions about your experience with [location].

1. Were you able to understand the information [location] care team gave to you?
   - Yes
   - No
   - Sometimes

2. Did the care team understand you?
   - Yes

- No
- Sometimes

3. Did [location] care team check that you understood your health care takeaways?
    - Yes
    - No
    - Not sure

Now I will ask you four questions about COVID care

1. Which of the following actions do you take to avoid getting COVID? (Choose as many actions that you personally take.)
    - I stay at least 6 feet away from others that do not live with me.
    - I wear a face-covering in public.
    - I avoid crowds.
    - I avoid indoor events and closed air spaces.
    - I regularly wash my hands with soap and water for at least 20 seconds or use hand sanitizer that is at least 60% alcohol.
    - I avoid close contact with people who are sick.
2. Have you been tested for COVID?
    - Yes
    - No
3. Will you stay at home for at least 5 days if you have COVID symptoms but have not tested for the virus?
    - Yes
    - No
    - Not sure
4. Have you received or are you planning to receive the COVID vaccine?
    - Yes
    - No
    - Not sure

These are all the questions I have for today.

Thank you for your participation in this survey and for choosing [location] for your health care. Have good rest of your day.

[END OF SURVEY]

In-person Survey Script

Hi, I'm _____ with [LOCATION]. We are doing a quick survey to learn about your experience with the clinic and COVID. The survey is just 7 questions and you can skip any questions you want. Your identity will be kept confidential.

Will you like to participate?

IF NO, SAY:

Thank you for your time and for choosing [LOCATION] for your health care. Have a good rest of your day.

IF YES, SAY:

Thank you.

I will start by asking you three questions about your experience with [LOCATION].

1. Were you able to understand the information [location] care team gave to you?
    - Yes
    - No
    - Sometimes

2. Did the care team understand you?
    - Yes
    - No
    - Sometimes

3. Did [location] care team check that you understood your health care takeaways?
    - Yes
    - No
    - Not sure

Now I will ask you four questions about COVID care

4. Which of the following actions do you take to avoid getting COVID? (Choose as many actions that you personally take.)
    - I stay at least 6 feet away from others that do not live with me.
    - I wear a face-covering in public.
    - I avoid crowds.
    - I avoid indoor events and closed air spaces.
    - I regularly wash my hands with soap and water for at least 20 seconds or use hand sanitizer that is at least 60% alcohol.
    - I avoid close contact with people who are sick.

5. Have you been tested for COVID?
    - Yes
    - No

6. Will you stay at home for at least 5 days if you have COVID symptoms but have not tested for the virus?
    - Yes
    - No
    - Not sure

7. Have you received or are you planning to receive the COVID vaccine?
    - Yes
    - No
    - Not sure

These are all the questions I have for today.

Thank you for your participation in this survey and for choosing [LOCATION] for your health care. Have a good rest of your day.

[END OF SURVEY]