

Riverside County “Early Detect Me” Cancer Screening Guide

Melissa Rada

California Baptist University

### **Copyright Notice**

Copyright © 2020 by Melissa A. Rada  
All rights reserved. This paper or any portion thereof  
may not reproduced or used in any manner whatsoever  
without the express written permission of the author  
except for the use of brief quotation in a book review.

California Baptist University  
8342 Magnolia Avenue  
Riverside, CA 92504


[www.calbaptist.edu](http://www.calbaptist.edu)

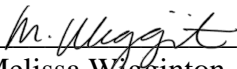
**Department of Health Science**

The graduate project of Melissa A. Rada, “Riverside County Early Detect Me Cancer Screening Guide (RCCSG),” approved by her Committee, has been accepted and approved by the Faculty of the Department of Health Science, in partial fulfillment for the degree of Master of Public Health.

Graduate Project Committee:

  
\_\_\_\_\_  
Dominick Sturz, DrPH

  
\_\_\_\_\_  
Janet Bonome, DrPH

  
\_\_\_\_\_  
Melissa Wigginton, DrPH

**08/23/20**

### **Acknowledgements**

I would like to express the deepest appreciation to my committee chair, Professor Dominic Sturz, DrPH, who has encouraged and advised me throughout my graduate project and the MPH program. His insight and experience in research provided for a thoroughly educational experience that is unmatched. Without his guidance and insights, this project would not have been possible.

I would like to thank my committee member Professor Melissa Wigginton, DrPH, for her evaluation and assistance in editing this project. Her assistance provided additional opportunities to improve the project set forth. I am so grateful to have had her guidance.

I would like to thank Professor Janet Bonome, DrPH, who has been a constant throughout my time at California Baptist University. Dr. Bonome was always available to provide guidance throughout the B.S.PH and MPH program. It is largely because of her encouragement that I felt the confidence to complete the MPH program. Her gracious heart for her students is unfound. I cannot thank her enough for being a rock for me through it all.

I would like to thank Michelle's Place Cancer Resource Center and our fearless leader Kim Gerrish, who allowed me to use the center's resources to complete this project. I am so blessed to have had the support of the entire MP Staff and the Executive Board.

Last, I would like to thank my loving family and friends who stood by me when many sacrifices had to be made. I am so fortunate to have such a loving and strong support system to help me through the good times and the challenging times.

### Abstract

**Background:** Cancer continues to be a leading cause of death in the United States. Screening is an important method to detect cancer before it advances toward late stage, which is more difficult to treat and often incurable. As California's tenth largest population, Riverside County is largely affected by cancer. Unfortunately, not enough residents are familiar with appropriate cancer screening methods available to them. **Purpose:** The purpose of this project was to develop an educational tool to promote awareness about screening recommendations. Improving education on this topic is an important aspect needed to promote early screening, as odds for remission are best when cancer is caught early. **Implementation:** Based upon information gathered from informal needs assessments and a review of secondary data, the Early Detect Me: Cancer Screening Guide was created. Guides are printed in English and Spanish and include information on how to conduct self-examination, signs, symptoms, and risk factors of cancer, screening recommendations, and resources available. The guides focus on three of the most common cancers affecting Riverside County residents: breast, skin, and prostate cancer. The guides will be promoted in physician's offices, health fairs and events, and cancer resource centers. **Conclusion:** Further education and awareness on cancer screening is necessary to promote early cancer detection. Those that obtain Early Detect Me will have the opportunity to better educate themselves, and their friends and family about cancer screening recommendations. The guides are expected to improve awareness and create dialogue between patients and their primary care physicians.

**Table of Contents**

Copyright Notice.....	2
Committee Signature Page.....	3
Acknowledgements.....	4
Abstract.....	5
Table of Contents.....	6
Chapter 1.....	8
Introduction.....	8
Statement of the Problem.....	8
Background and Significance.....	9
Description of the Project.....	12
Assumptions, Scope, and Limitations of the Project.....	15
Definition of Key Terms.....	17
Chapter 2.....	18
Review of the Literature.....	18
Chapter 3.....	30
Design and Methodology.....	30
Project Design.....	30
Project Participants.....	32
Instruments.....	34
Measurement.....	34
Chapter 4.....	37
Results.....	37

Chapter 5.....	45
Discussion.....	45
Conclusion.....	52
References.....	53
Appendix A.....	59
Appendix B.....	65
Appendix C.....	66
Appendix D.....	69

## **Chapter 1**

### **Introduction**

#### **Statement of the Problem**

Cancer screening is an important method to detect early stage cancer, which is generally more curable than late stage cancer. In adults aged over 55, this becomes even more important as age can indicate higher risk of cancer (American Cancer Society, 2020). If screening for a cancer that has identifiable external signs and symptoms, like breast and skin cancer, a self-examination can be performed. The different methods of screening include self-examination, clinical examination, and clinical testing. Each of these methods have a role in early detection. Unfortunately, screenings are underutilized, leading to increases in potentially preventable deaths. Underutilization of screenings may be due to several reasons, including lack of awareness, providers, and educators. This is especially true in Riverside County, California.

Riverside County is the nation's tenth largest county by population with over 2.4 million residents (County of Riverside, 2020). These residents are composed of 57.03% White, 23.01% Other, 6.66% Asian, 6.49% Black, 5.36% 2 + Races, 1.11% American Indian/Alaska Native, and 0.34% Native Hawaiian/Pacific Islander (SHAPE Riverside County, 2020). The ethnicities represented are 51.18% Hispanic/Latino and 48.82% non-Hispanic/Latino (SHAPE Riverside County, 2020). The population by sex is nearly equal with women as 50.3% of the population and men as 49.70% of the population (SHAPE Riverside County, 2020). In 2017, there were 170,784 new cases of cancer (392 cases per every 100,000) and 59,515 deaths (137 deaths per every 100,00) from cancer reported in Riverside County (Centers for Disease Control and Prevention, 2020).

In Riverside County, approximately 47,775 (9.1%) of locals are uninsured (LeComte-Hinely & Morin, 2018). These individuals are less likely to have regular screenings completed



than those who are insured. An additional challenge for residents seeking cancer screenings is that many parts of Riverside County are designated as primary care and registered nurse shortage areas (LeComte-Hinely & Morin, 2018). This creates a medically underserved population which is estimated to have 3,600 patients per primary care physician. Primary care providers are generally the first source of identifying cancer through screenings, and if there is a lack of providers available, it equates to challenges in receiving regular screenings and education surrounding early detection. According to LeComte-Hinely & Morin (2018), the lack of providers means many individuals are not being properly educated on signs, symptoms, and risk factors for cancer. This project aims to develop health educational tools that promote self-awareness and encourage cancer screening interventions within Riverside County.

Cancer still largely affects the lives of many, and there is still much left to be learned about screening and what steps are appropriate to take, which will vary among person to person. Therefore, education and informing oneself about the basics of cancer and how to perform self-examinations, or “screenings” is an important step for all to take. Cancer affects everyone, from children to the elderly, and everyone in between. It is a disease that can often be treated but can also lead to death. The amount of people that cancer affects each year is high enough to cause concern amongst all, especially those with limited access to care or other barriers to health care. Because there is no cure, it is the responsibility of individuals to stay educated and informed in ways they can prevent undue sickness caused by late-stage disease.

### **Background and Significance**

Screening as a methodology in disease prevention dates as early back to 1861, where British physician Horace Dobell proposed physical examinations, laboratory tests, and extensive knowledge of the patient’s medical history work in combination to discover the “earliest evasive periods of defect in the physiological state” (Croswell, Ransohoff, & Kramer, 2010, p. 223). It

was not until the 1920s that examinations for early disease detection became a component of general medicine practice. The American Medical Association led this movement by endorsing the new method (Croswell, Ransohoff, & Kramer, 2010). The advancement of cancer screening in today's climate has led to many early detections, but it is challenging to indicate whether they have led to a lower mortality rate (National Cancer Institute, 2018a).

Cancer continues to be the second leading cause of death in the United States, which equates to one in four deaths (Center for Disease Control and Prevention, 2020). The cancer mortality rate is higher for men (196.8 per 100,000) than women (139.6 per 100,000) (Centers for Disease Control and Prevention, 2020). When comparing groups among ethnicity, race, and gender, cancer mortality is highest in Black men at 239.9 per 100,000 (Center for Disease Control and Prevention, 2020). This discrepancy leads to further questioning on why Black men are disproportionately affected by cancer. It is believed that a myriad of factors, including culture, diet, stress, the environment, biology, and socioeconomic factors play a role in cancer prevalence (National Cancer Institute, 2019).

For people looking to understand their risks of cancer and what steps they can take in educating themselves, there are various options to consider including searching the internet, consulting with a physician, reading brochures, books, and magazines, and watching videos. The Healthy People 2020 initiative is a national effort based on scientific evidence to improve the health of all Americans. Included in this initiative are plans of action which include: (1) facilitate development and availability of affordable means of health promotion, disease prevention, and treatment and (2) provide data that is accurate, timely, accessible, and can drive targeted actions to address regions and populations with poor health or at high risk for poor health in the future (U.S. Department of Health and Human Services (USHHS), 2020). Part of this initiative is identifying that health starts in our communities, including homes, schools,

workplaces, and neighborhoods (UHHS, 2020). According to U.S. Department of Health and Human Services (2020), access to education can enhance quality of life and lead to significant influence on the health outcomes of a population. In alignment with these ideas and after surveying the needs of the community, it became clear that a community resource guide may be beneficial in bringing forth further education to the residents of Riverside County. Further, improved cancer care through increased awareness and screening resources can be provided through established community channels, such as local nonprofit organizations.

Nonprofit organizations play a major role in providing services, goods, and resources while addressing the social and economic well-being of the communities they serve (Arkansas State University, 2020). In America, there are an estimated 1.3 billion nonprofit organizations that serve to feed, provide shelter, educate, inspire, and nurture people, regardless of age, gender, race, and socioeconomic status (National Council of Nonprofits, 2019). Michelle's Place Cancer Resource Center is a nonprofit organization that empowers individuals and their families impacted by cancer by providing education and support services at no cost. Some of the resources provided include financial assistance, patient navigation, transportation to treatment, complementary therapies like reiki and yoga, art classes, and educational seminars. The vision of the organization is "no one should face cancer alone" (Michelle's Place, 2020). A major component of the work Michelle's Place does is through collaborating with medical professionals throughout the county to improve cancer care and health initiatives. Additionally, the organization seeks resources and partnering opportunities that will grow services and enrich the lives of Riverside County residents.

Early detection is the easiest way to reduce the morbidity and mortality that cancer can cause (Stefanut & Vintila, 2020). Educational interventions can increase the adoption of new behaviors, like breast self-examinations (BSE). Promoting BSE using a community tool, such as

a screening guide, is an appropriate response to better educate a large population. Without truly understanding the individual needs of a diverse population, the application of basic health education can be the first step at improving health knowledge and developing an understanding of further needs. Part of the process of adopting new behaviors is identifying which prevention level will be most successful for a group. Primary prevention is used to avoid the onset of disease, secondary prevention is used to detect disease at early stages, and tertiary prevention is used to rehabilitate from disease (Stefanut & Vintila, 2020). To prevent late-stage cancer diagnoses, education that focuses upon primary prevention tactics, such as self-examination, can be beneficial to the community.

### **Description of the Project**

The Riverside County “Early Detect Me” Cancer Screening Guides (RCCSG) were created as a community tool to promote self-awareness and encourage cancer screening interventions within Riverside County. These guides provide basic information on three of the most prevalent cancers in Riverside County, how and when to screen for them, signs, symptoms and risk factors, and resources for additional information. The guides have been made available for print at Michelle’s Place, health clinics, hospitals, and other community centers.

Additionally, it is a future goal of this project to create an electronic version of the guides. The goal of “Early Detect Me” is to help Riverside County residents understand local cancer risks and how they can take steps to educate themselves. It is meant to be a starting point for further conversation with primary care providers (PCP), and to bring awareness of cancer in a simple, easy to read way.

Breast, prostate, and skin cancer are three of the five most diagnosed cancers in Riverside County (LeComte-Hinely & Morin, 2018) and ranked in the top ten of new cancer cases nationwide (Centers for Disease Control and Prevention, 2020). The other two cancers that

compose the five most diagnosed cancers in Riverside County are lung and colon cancer (LeComte-Hinely & Morin, 2018). It was determined that for the sake of this project, focusing on breast, prostate and skin cancer would be most effective for a couple of reasons. First, breast cancer is the second most common cancer among women in the United States, with a nearly equal distribution between Black and White women (Centers for Disease Control and Prevention, 2020). The ability to promote self-examination is what sets breast and skin cancer apart from other cancers, such as lung and colon cancer. Second, while breast cancer generally affects more women than men (National Breast Cancer Foundation, 2019), skin cancer affects both men and women (Centers for Disease Control and Prevention, 2020). By focusing on cancers that disproportionately affects each sex (breast for females and prostate for males) and a cancer that affects both sexes (skin), an awareness for early detection can be created for both men and women of Riverside County. Additionally, breast and skin cancer can illicit action through self-examinations. This is an important component for the project in that it empowers action that can be taken immediately. Third, prostate cancer was designated because of its proclivity to be in the top ten cancers nationwide. Currently, the highest rates of diagnosis are experienced through ages 50 – 79 (Centers for Disease Control and Prevention, 2020). According to SHAPE (2020), 37.17% Riverside County male residents are 45 and over, which puts them in the high-risk population. Additionally, this is not to say that men aged 45-49 are not at risk for cancer, rather their risk increases as they reach age fifty.

The Riverside County “Early Detect Me” Cancer Screening Guides is beneficial to the community for several reasons. Clients who visit Michelle’s Place are able to take home simple, easy to read literature for themselves and their families. The guides can help families better understand their risk as related to their family history of disease. Community agencies, such as hospitals, physician offices, wellness centers, and other health-based practices will be able to

handout a tangible item to people who are curious about when and if they should start screening. Education is often the front line of disease prevention, which is why the guides were created. These guides may help bring awareness of early cancer detection methods and serve as a reminder of the importance of self-awareness and advocacy. “Early Detect Me” includes cancer screening recommendations by age, method of screening, and includes resources one may connect with should additional questions arise (Appendix A).

The target population for this project includes adult residents of Riverside County (aged 18 and older), who can benefit from education on cancer prevention. Some of the key stakeholders include primary care physicians, public health officials, health care providers, and community leaders who will be disseminating the guides. This project will be used to better understand how our community can improve cancer care. Cancer care involves all spectrums of the cycle including detection, diagnosis, treatment, and post-treatment or “survivorship”. By addressing the first step in cancer care, detection, the rest of the care cycle will also be impacted.

Using the guides, physicians and other health care providers will be able to inform their patients on how to conduct a self-examination as well as any signs, symptoms, or risk factors to be aware of. The guides will be a conversation piece that health care workers can easily have with their patients, while not overwhelming them with unnecessary medical jargon and lengthy printed documents. Additionally, the guides will be shared with community members at health fairs, events, and community meetings at which representatives of Michelle’s Place are in attendance. By making the guides widely available throughout Riverside County, the message can be easily communicated to many people. “Early Detect Me” will create awareness and a better educated community.

The community tool can be accessed in-print and will be made widely available to providers throughout the county. The guides will be delivered in person or via mail, depending

on the location. To establish use within medical offices, an introduction letter will be included with the screening guides (Appendix B). The letter will serve as an introduction to the program and the guides and will help to educate the providers on the proper use of the guides. The letter includes data compiled from the findings of this project, including information regarding the county's most prevalent cancers along with identified barriers to access of care. A full report will be made available to Providers upon request. Also included, will be a business card with contact information should the providers want more information or would like to schedule an in-service presentation to learn more about the program and the guides.

### **Assumptions, Scope, and Limitations**

It is assumed that "Early Detect Me" will provide basic education about specified cancers to all users. Additionally, it is assumed that a wide range of healthcare providers are willing to display the educational guides where community members have access to them. Limitations include a potential lack of distribution to communities that have limited access to healthcare. If there are limited primary care providers in an area, there is a possibility of a community being medically underserved. This creates a challenge in accessing these community members who are already medically underserved. Another limitation is keeping the tool relevant. To keep it relevant, any changes to screening recommendations included on the guides will be followed and adjusted as needed. For example, referring to the original sources of information for the guides, like the American Cancer Society and conducting periodic research on cancer screening recommendations. On the back of the guides, the version number of the card will be noted to keep track of each edit.

It is also expected that some providers may not want to use the guides to promote self-examination or screening recommendations. Depending on what their beliefs/education is regarding screening, they may decide they do not agree with the information contained on the

guides or may prefer other methods to educate their patients. One way to address this is to provide the evidence portrayed in this paper to the practitioners who have more questions or want to learn why this guide is beneficial for their patients. Additional limitations include adequate assessment representing each gender and race. Without specifically targeting race and gender in the informal needs assessment, it is challenging to obtain an equal distribution of the various groups being represented. An assessment by Smith (2008) found trends in study participation. It was concluded that, in general, women are more likely to participate in online surveys than men; younger people are more likely to participate than older people; White people are more likely to participate than non-White; and more affluent people are more likely to participate than less educated/affluent people (Smith, 2008).



### **Definition of Key Terms**

**Breast Self-Examination (BSE):** A screening method used to detect early breast cancer. The method involves the individual looking at and feeling each breast for possible lumps, distortions or swelling.

**Primary Care Provider (PCP):** A physician who provides both the first contact for a person with an undiagnosed health concern as well as continuing care of varied medical conditions, not limited by cause, organ system, or diagnosis.

**Self-Examination:** The action of examining one's own body for signs of illness.

**Screening:** Cancer screening aims to detect cancer before symptoms appear. This may involve blood tests, urine tests, DNA tests other tests, or medical imaging. The benefits of screening in terms of cancer prevention, early detection and subsequent treatment must be weighed against any harms.

**Mammography:** Mammography is the process of using low-energy X-rays to examine the human breast for diagnosis and screening. The goal of mammography is the early detection of breast cancer, typically through detection of characteristic masses or microcalcifications

**Prostate Specific Antigen Test:** The PSA test is a blood test used primarily to screen for prostate cancer. The test measures the amount of prostate-specific antigen (PSA) in your blood. PSA is a protein produced by both cancerous and noncancerous tissue in the prostate, a small gland that sits below the bladder in men.

**Metastasis/Metastasized:** The development of secondary malignant growths at a distance from a primary site of cancer.

**Local/Localized Cancer:** Limited to the place where it started, with no sign that it has spread.

## **Chapter 2**

### **Review of the Literature**

According to the American Cancer Society (2020b), an estimated 42% of cancer cases and 45% of cancer deaths in the United States are attributable to potential modifiable risk factors. Additionally, with limited knowledge regarding the complexities of cancer care, many individuals experience delays in diagnosis. Currently, cancer accounts for one in every six deaths worldwide, and by 2040, the disease burden is expected to reach 27.5 million new cases and 16.2 million deaths. These estimates do not consider modifiable risk factors such as smoking, poor diet, and physical inactivity. Furthermore, communication barriers and the assumptions that exist between providers and patients can cause miscommunication, affecting the timeliness of early diagnosis (American Cancer Society, 2020b). Eliminating disparities in the cancer burden, like barriers to preventive care and early detection, can reduce the rate of late-stage diagnosis thus increasing survival rates. Other disparities that exist include low health literacy; financial, structural, and personal obstacles to health care; and delays in dissemination of early detection.

### **Frequently Diagnosed Cancers in Riverside County**

#### ***Breast Cancer***

In women, breast cancer is the world's most diagnosed cancer and a significant global public health threat (Seamen, et al., 2018). In Riverside County, from 2012-2016 there were over 113 breast cancer cases for every 100,000 women (SHAPE Riverside County, 2020). In the most recent reported data for Riverside County, incidence rate of mammography screening dropped 0.6% from 2014 to 2015 while breast cancer diagnosis rates increased by 0.8 % (SHAPE Riverside County, 2020). Some studies, like the one reviewed by Seamen et al., (2018), claim most women do not understand the benefits and harms of screening, specific to

mammography. In one study, 32% of women were not aware of the chance of false positives in mammography screening (Seamen, et al., 2018). Because mammography screening targets healthy women, the need to establish a basis for when mammography screening should be conducted is essential. According to Planned Parenthood (2016), 84% of women surveyed stated they understood when and how often women should be checked for breast cancer. However, only 10% correctly answered the current recommendation of every 1-3 years, depending on family history (Planned Parenthood, 2016). Additionally, 50% of women incorrectly answered that the average 21-39 women should be checked for breast cancer every year (Planned Parenthood, 2016). This lack of understanding and confusion in mammography screening indicates there needs to be further education on screening, including the distinction between the self and clinical examination.

**Breast Screening.** Breast self-examinations are a form of secondary prevention, where an individual will examine their own breasts for abnormalities. If an individual were aiming to eliminate risk of disease, tactics for primary prevention would include exercise, a healthy diet, avoiding tobacco products, and conducting self-examinations. There are three types of screening methods for breast cancer, including self-examination, clinical examination, and mammography (Stefanut & Vintila, 2020). Mammography is an x-ray procedure that detects breast cancer at an early stage (American Cancer Society, 2020b). As with other screening procedures, it is not fool proof and can produce false positives and false negatives. While mammography may not be appropriate for all women, breast self-examination or BSE is a viable option for all women aged as young as 20 (Stefanut & Vintila, 2020). The benefit of BSE is the ability to conduct at home therefore eliminating cost and invasive procedures (Stefanut & Vintila, 2020).

According to the Mayo Clinic (2020), breast self-examinations helps individuals to better understand the look and feel of their breasts. This awareness enables individuals to detect

changes or abnormalities to further consult with a physician. The use of BSE is not to diagnose breast cancer, but to maintain awareness of one's body and feel empowered to express concerns to a licensed healthcare professional. While there are many reasons why breast tissue may change, many women report that a lump or change in the breast was their first indicator of breast cancer. From 1975-2017, early detection and improvement in breast cancer treatments have led to decreased mortality rates by 15%, (The American College of Obstetrics and Gynecologists, 2017).

In the review by Stefanut & Vintila (2020), a significant finding is the use of educational materials to promote increased BSE in populations. Other studies also concluded BSE is important education for women to know in preventing breast cancer (Suh, et al., 2012; Jemebere, 2019; Stefanut & Vintila, 2020; Alsaraireh & Darwad, 2018). This is a collective agreement by researchers all over the world, and not simply limited to the ideas of the United States. Education on how to complete a BSE helped to reduce incidence of late stage breast cancer, regardless of the various ways the education was delivered.

It is significant to note that over 40% of breast cancer diagnoses stem from women using early detection methods such as BSE and CBE, or clinical breast examinations (Kratzke, Vilchis, & Amatya, 2013). While there are many beliefs on whether BSE has a meaningful impact on detecting breast cancer, BSE is a convenient and no-cost tool that can be performed on a regular basis and at any age. Breast self-examinations can be performed in the shower, in the mirror, or lying down. The individual will examine their breasts in each position by feeling and visualizing their breasts (National Breast Cancer Foundation, 2020). While BSE can be used as early detection, it is not meant to be used as a way to diagnose (Kratzke, Vilchis, & Amatya, 2013; Suh, et al., 2012; Jemebere, 2019; Stefanut & Vintila, 2020; Alsaraireh & Darwad, 2018).

According to John Hopkins University (2020), BSE should be done at the same time each month

to avoid normal hormonal fluctuations a women's body experiences. For premenopausal women, BSE should be conducted towards the end of the menstrual period, and for postmenopausal women, a specific day should be designated and performed the same day every month.

Any findings of knots, thickening, lumps, swelling, or discharge should be reported to a primary care physician, who can further examine the breast tissue and assess whether further screening, like a mammogram, should be ordered. Mortality rates have declined significantly since the widespread use of mammography (Pandey, 2014). For women aged 50-74 years, the use of mammography has been identified in reducing mortality rates, with women aged 60-69 seeing the most benefits (Pandey, 2014). In contrast, women aged 40-49 saw little benefit from the use of mammography and had a higher potential of receiving false positives, unnecessary procedures, and psychological harm (Pandey, 2014). Mammograms vary greatly from BSE and are conducted in a facility by a licensed professional, using technology to capture images of the breast tissue. Depending on a women's risk and hereditary background, mammography may be appropriate at a younger age (Kratzke, Vilchis, & Amatya, 2013).

**Current Recommendations.** The United States Preventive Services Task Force (USPSTF) (2016a) makes recommendations about the effectiveness of specific preventive care services for patients without obvious related signs or symptoms. The recommendations are based off evidence of both benefits and harms of the service. The USPSTF recognizes the benefits in mammography as it reduces breast cancer mortality in women aged 40 to 74 years. Women aged 40 to 49 years present with the least benefit, while women aged 60 to 69 years benefit the most. However, there is no current evidence that shows the benefits of mammography for women aged 75 and older. In women aged 40 to 74 years, harms include false-negative and false-positive results and unnecessary treatment of noninvasive and invasive cancer. According to the USPSTF, false positives lead to unnecessary follow up testing which

can leave both physical and psychological harm. Likewise, a false negative may provide false reassurance. The most harmful of these is the issue of diagnosis and treatment on invasive or noninvasive breast cancer that would have never presented signs or symptoms, thereby not threatening the patient's health.

With this data, the USPSTF concludes with moderate certainty that the net benefit of mammography in women aged 50 to 74 years is moderate. With women aged 40 to 49 years, there is a small, positive net benefit of mammography, and women aged 75 or older, evidence is inconclusive. Many of the studies that presented data were performed in Europe and participants were white women aged 70 and younger. Conversely, it is recognized that trial data is too limited to resolve which screening options are best and how clinicians can tailor strategies for the individual.

### ***Prostate Cancer***

In the United States, prostate cancer is one of the most prevalent cancers diagnosed and the second leading cause of death for men (Vane, 2019). According to SHAPE Riverside County (2020), there are 101.7 incidences of prostate cancer per every 100,000 men. Black men are disproportionately affected by prostate cancer with an incidence rate of 146.8 cases per every 100,000 men in Riverside County. Because of these incidence rates, it is important to better educate men on the risk factors for prostate cancer and what types of screening are available. In Vane (2019), the most significant risk factor is having one or more first degree relatives (e.g. father, brother) with a history of the disease. In the United States, Black men have the highest mortality rates from prostate cancer (39.9%). As compared to Black men, mortality rates for other ethnicities include non-Hispanic (19.8%), Alaska Native/Native American (19.8%), Caucasian (18.2%), Hispanic (16.2%), and Asian/Pacific Islander (8.8%). This disparity cannot currently be determined between ethnicities; the disparity exists in lack of education and

knowledge and barriers to access to health care. This information is revealing in that like breast cancer, there is a lack of education especially amongst those that are disproportionately affected.

Men's health is assessed and taught differently than women's health, mainly because men receive information differently. In the study by Al-Khashan, et al. (2012) when given health information about oneself, 85.8 % of women reported finding the information helpful while only 78.9% of men found the information helpful. Additionally, 34.8% of men surveyed admitted to needing more information about. The two highest reported educational interventions requested by men were one-on-one (72.7%) and written materials (18.6%), while women requested one-on-one (67.9%) and written materials (19.0%) (Al-Khashan, et. al., 2012). The method men and women varied on the most was the desire for group-based education, with only 12.3% of men wanting group-based education and 17.6% of women preferring group-based education (Al-Khashan, 2012). The reasoning for the finding is the belief that women naturally like to socialize more than men (Al-Khashan, 2012).

**Prostate Screening.** Unlike with breast cancer, prostate self-examination is not currently a method used to diagnose prostate cancer. Instead, it is recommended to have clinical examinations by a primary care provider (Vane, 2019). There are various screening techniques that can be used to search for early signs of prostate cancer. Prostate Specific Antigen (PSA) is a protein made in the prostate gland and can be measured within the blood (American Cancer Society, 2019). By testing the levels of PSA in the blood, higher levels can be an indication of prostate cancer (American Cancer Society, 2019). For example, men that fall between the borderline range of 4-10 ng/mL of blood have a 1 in 4 chance of developing prostate cancer. This test is by no means a diagnosis but can be an indicator for further testing.

The lack of consensus on the benefit-to-risk ratio of the PSA leads many physicians to question whether screening is the appropriate measure to take (Matti & Zargar-Shoshtari, 2020).

Many studies focus on how to avoid the PSA testing through educating yourself on signs, symptoms, and risk factors (Zhang, et al., 2020.). The use of various educational models, including technology, can be created so as to gain the attention of a target audience (Owens, et al., 2019; Zhang, et al., 2020.; Vane, 2019).

**Current Recommendations.** According to the USPSTF (2018), the primary goal of screening for prostate cancer is to identify cancer that is localized and therefore can be treated. If the cancer is identified as high-risk and has not metastasized, treating it is an option to prevent further morbidity and mortality associated with prostate cancer. However, screening also presents potential harms. The current recommendations do not promote screening unless the patient has been briefed on both the benefits and risks. Cancers present differently in all cases. Autopsy studies reported that 20% of men (aged 50-59) died of other causes but were found to also have prostate cancer, and more than 33% of men (aged 70-79 years) were found to have prostate cancer. The median age of death in men with prostate cancer is 80 years old.

The harms associated with the PSA screening test can be experienced immediately, or years after testing. Potential harms include false-positive results and psychological and physical harms. The diagnostic procedure can present painful complications from the prostate biopsy, including hematospermia (blood in the semen or ejaculate) and infection. Notably, over 1% of prostate biopsies end in complications which require hospitalization. Also present is the issue of overdiagnosis, which is the process of screening and diagnosing men who may never present symptoms, with treatment only causing harm. Significantly, randomized trials have shown that 20% - 50% of men have been over diagnosed with prostate cancer (USPSTF, 2018). Additionally, there are harms associated with treatment, which include erectile dysfunction, urinary incontinence, and bothersome bowel movements. Approximately 2 in 3 men will



experience long-term erectile dysfunction. The USPSTF therefore recognizes the harms associated with overdiagnosis and treatment as moderate.

The USPSTF does not currently recommend screening unless the patient fully understands the harms and benefits associated with screening and treatment. With moderate certainty, the USPSTF concludes the net benefit of PSA testing for men aged 55 to 69 years is small for some men. This leaves the decision up to the patient to decide how the benefits and risks align with their own values. Additionally, for men 70 years and older, it is with moderate certainty that the potential benefits of the PSA screening do not outweigh the harms. While there are other methods of prostate cancer screening, there is insufficient evidence to support one method over another.

### ***Skin Cancer***

Self-examinations for skin cancer are an easy way to catch cancer at an early stage. As recommended by The Skin Cancer Foundation (2020), growths, spots, moles, or open sores all must be monitored in their growth and appearance changes. As a deadly form of skin cancer, malignant melanoma can often be treated if caught at an early stage (Johansson, et. al., 2019). Skin cancer disproportionately affects people with lighter skin tones, lighter hair, and lighter eyes (Johansson, et al., 2019.). These traits, along with additional risk factors such as UV exposure, all lead to an increased risk of developing skin cancer. By educating communities on the importance of sunscreen and limited UV exposure, cases of skin cancer can be reduced (Johansson, et al., 2019). Like breast cancer screening, there are ways to conduct a self-examination and monitor changes in skin in an effort reduce late-stage diagnosis (The Skin Cancer Foundation, 2020).

According to Johansson, et. al., (2019), in addition to traditional self-examination methods, mobile applications have been developed to help people detect changes that they

should be concerned about. There is a need for an increase in education for skin cancer prevention in areas that are considered higher risk (Johansson, et al., 2019.; Grahmann Parsons, et al., 2018). According to Grahmann Parsons, et al., (2018), only 18.9% of Americans are receiving Total Body Skin Examinations (TBSE). Additionally in the United States, skin cancer is the most diagnosed cancer (Grahmann Parsons, et.al., 2018). It is because of this data the Surgeon General has made a priority for educational programs to be developed for communities that are at high risk for skin cancer (Grahmann Parsons, et. al., 2018).

According to the American Cancer Society (2020b), the most diagnosed skin cancers are basal and squamous skin cancer which both start in the top layer of the skin and often are due to sun exposure. Squamous cells are the flat cells located in the upper part of the epidermis, and basal cells are in lower part of the epidermis. As the basal cells divide and form new cells, the new cells move towards the skins surface and become squamous cells. Melanocytes make the brown pigment, melanin, that gives the skin color and act as a natural sunscreen. It is in melanocytes where melanoma skin cancer forms.

Basal cell carcinoma, or basal cell skin cancer, accounts for 8 out 10 diagnosed skin cancers. This type of cancer is slow growing and can be observed on sun-exposed areas such as the face, head, and neck. These cells must be completely removed to stop reoccurrence. About 2 out of 10 skin cancers are squamous cell carcinoma, or squamous cell skin cancer, which develops on sun-exposed areas such as the face, ears, neck, lips, and back of hands (American Cancer Society, 2020b). While squamous cells can be removed, they are more likely than basal cells to grow into the deeper layers of the skin.

**Skin Cancer Screening.** According to Tsao, et al., (2015), the field of public health has long endorsed the mnemonic of ABCD(E) to detect early melanomas. ABCD (asymmetry, border irregularity, color variegation, and diameter >6mm) was published in 1985, and the letter E (evolution) was added in 2014 in recognition that rapidly changing appearance of moles may indicate melanoma. This mnemonic was created as a simple tool for practitioners to use in examinations and is not meant to be a comprehensive assessment of potential skin cancers. Further, the presence of skin cancer may not be indicated by all the characteristics of the mnemonic, but the more characteristics that are seen, the higher potential of skin cancer. The benefit of this method is the education it provides for primary care physicians in identifying moles or lesions to be recommended for a dermatological examination. In a study using a training session as indication for accuracy of dermatologic referral, a formal ABCDE training for family medicine practitioners increased accuracy referral from 46.8% (pre-training) to 76.2% (post training) (Tsao, et al., 2015).

**Current Recommendations.** Current recommendations by the USPSTF (2016b) for skin cancer screening conclude that there is inadequate evidence that early detection of skin cancer by visual examination reduces morbidity or mortality. However, the evidence is adequate to conclude that visual examination by a clinician has modest sensitivity and specificity for detecting melanoma. The harms associated with early detection by a clinician are small, but without sufficient data, the magnitude of harms is inconclusive. Therefore, the USPSTF concludes current evidence in skin cancer screening is insufficient and cannot draw conclusions for the benefits or harms in asymptomatic adults.

### **Community Needs Assessment**

The cancer field is broad and contains many studies on many different topics, from early diagnosis to end-of-life care. By focusing on one aspect of cancer care, it can be determined

what the needs are of a community in improving the health of those affected by cancer, and how to best communicate them. Communication has been reported in studies as the largest downfall in disseminating health information (Breslau, et al., 2015). Evidence-based interventions can improve the health of a community (both physically and fiscally) and reduce health disparities. To help understand how a particular community may be affected by cancer, needs assessments are often an invaluable resource.

One such needs assessment was conducted by the Southwest Riverside County Cancer Care Task Force, in which a third-party organization, HARC (Health Assessment and Research for Communities), created a survey to be distributed to residents of Riverside County. The Regional Cancer Treatment Task Force was created in 2016 to assess cancer care in Riverside County by bringing together the county's cancer care practitioners and stakeholders. Together, they discussed the strengths and weaknesses of the current systems and developed ways to promote care and attract additional resources to the area (LeComte-Hinely & Morin, 2018).

The group developed a needs assessment survey, which was distributed to cancer patients, survivors, and caregivers; a second survey was distributed to healthcare practitioners who worked in cancer prevention and treatment (LeComte-Hinely & Morin, 2018). A total of 533 participants for the caregiver, survivor, and patient survey was collected, and 44 participants for the healthcare practitioner survey (LeComte-Hinely & Morin, 2018). Three of the most diagnosed cancers were breast (44.9%), skin (14.3%), and prostate (8.8%) (LeComte-Hinely & Morin, 2018). These meetings ultimately brought increased awareness toward specific areas of concern; alongside some potential steps a community may take to further improve cancer care within a region.

**Enhanced Screening Resources**

Education for communities to address disease prevention can be received in many ways, including in-print, in-person, online/email, and in group-based activities. Studies show that while men and women receive information differently, both parties prefer to receive health information one-on-one or through written materials (Al-Khashan et al., 2012). Current literature has validated the need for basic information that can educate a wide and varied population. A study by Bashir et al., (2019) found that developing educational materials for cancer screening should primarily focus on available resources and the goals looking to be met, e.g. early detection. Public health has long sought to reduce incidence and prevalence of cancer; however, many individuals still lack requisite knowledge until it is too late. For continued decline in mortality rates due to cancer, it is imperative that education grow and evolve to benefit the population it is serving.

## **Chapter 3**

### **Methodology**

#### **Introduction**

The Riverside County Early Detect Me: Cancer Screening Guide (RCCSG) is composed of three guides with information on the front and back. The front of the first breast screening guide entails screening guidelines on breast examinations and breast cancer self-examination on the back. The prostate screening guide contains information on prostate screening guidelines and prostate cancer signs and symptoms on the back. The skin screening guide contains information on the presentation of skin cancer and a skin cancer self-examination on the back. The guides are meant to be an educational tool to teach the reader how to conduct self-examinations and what signs, symptoms, and risks to look for. Also included on the card are resources to visit for more information. The guides are meant to be a conversation starter for anybody who is interested in learning more about these cancers. Breast, skin, and prostate are three of the most diagnosed cancers in our study population, Riverside County, which is why they were designated as the three cancers to feature.

#### **Project Design**

In 2018, Michelle's Place executed an expansion to serve all cancers. Naturally, the community started asking what kind of information was available regarding other cancers. By attending the Southwest Riverside County Cancer Care Task Force (SWRCCCTF) meetings, information was obtained detailing how Riverside County was impacted by cancer. The idea behind attending these meetings was to gain a better understanding of what the communities needs were in relationship to cancer care. The goal of the SWRCCCTF was to "ease the burden of those suffering from cancer in the region by promoting comprehensive cancer treatment options, resources, and support services closer to home" (Le-Comte Hinely & Morin, 2018, p. 5).

Through the SWRCCCTF, a needs assessment was created to survey cancer patients, caregivers, and health care workers of Riverside County. The needs assessment shed light on some of the biggest issues facing care. While this was insightful, it did not provide a format for residents who had not yet been diagnosed with cancer. By surveying residents who had not been diagnosed by cancer, a better understanding on their knowledge in screening and early detection could be developed.

This project was first incepted while representing Michelle's Place Cancer Resource Center at a health fair. In utilizing a sign-in sheet to gather data on the attendees, it was learned that many of the attendees had no previous experience with cancer. Because early detection for cancer is so important, it became necessary to find a way to grab this audience's attention. In researching other resources that provide basic information, such as early detection and screening for cancer, the educational materials found were complex and long-winded. Additionally, it is assumed that many people would prefer to pick-up a small card over a large sheet of paper. It became evident to target a different audience, one that had not been touched by cancer, there needed to be a small card that grabbed the reader's attention and was not bogged down with unnecessary medical jargon.

The 5x7 inch guides were designed using Canva, an online graphic design program. The guides include images to help demonstrate the suggested movements and areas to self-examine. The card for breast cancer is geared more towards women, featuring purple and pink; men will also find value in the information as they can share the information with their female loved ones. While it is not common, men can also develop breast cancer (less than 1% of cases are reported for men) (National Breast Cancer Foundation, 2019). The card for prostate cancer is geared towards men and features colors that are appealing to them, like blue, grey, white, and black. Last, the card for skin cancer is unisex, featuring teal, white, purple, and black.

To create the guides, several methods were employed, including a review of secondary literature, an informal needs assessment, and a focus group. The academic resources and journals that were reviewed focused on the effectiveness of educational materials in increasing frequency of self-examinations. Many studies found that short and efficient educational materials were best in educating populations to implement the intervention (Al-Khashan, et al., 2012; Alsaraireh, & Darawad, 2018; & Bresalau et al., 2015). For this reason, small, portable, easy to read guides that state relevant information in a neat and organized format were created. The grade level of the guides was assessed using the SMOG assessment and were deemed to be at an 8<sup>th</sup> grade level (Readability Formulas, 2020). In contrast, when visiting the USPSTF website, which is geared towards healthcare professionals, literature used to explain recommendations was calculated to have a readability score of 16.1 on the SMOG index, which equates to a college level readability (Readability Formulas, 2020). By simplifying the language, the guides are more easily understood by Riverside County residents. This is important as the guides are a form of educating the community on ways they can take their health into their own hands.

### **Project Participants**

The target project participants are adults aged 18 and older who reside in Riverside County. The goal is to have the guides present in primary care facilities, where individuals go for annual checkups and illness visits. Additional forms of distribution will include doctor's offices, treatment centers, hospitals, college campuses, resource centers, town halls and senior citizen facilities. Undoubtedly, there will be additional methods of distributing the guides at events throughout the year, such as health fairs, conferences, and seminars.

### ***Needs Assessment Participants***



The needs assessment targeted residents of Riverside County, specifically adults aged 18 and over who had access to Facebook. The ages of the participants ranged from 18 to over 70. The survey was sent to two groups on Facebook, including “Temecula Talk” and “Murrieta Talk”. Temecula Talk is composed of 71,718 members and Murrieta Talk is composed of 42,660 members. Using Google Forms, 131 individuals completed the survey, with 118 of them as Riverside County residents. Fourteen individuals that completed the survey, but were not residents of Riverside County, were eliminated from the data. Of the remaining 117 participants, 7.69% were men and 92% were women. Ethnicities were identified as 75% White, 1.7% Black/African American, 0.85% American Indian/Alaska Native, 4.27% Asian, 1.7% Native Hawaiian/Pacific Islander, 11.97% Hispanic/Latino, and 4.27% preferred not to say. This sample, based on ethnicity, was representative of the community at large. For comparison, the Riverside County Census (2019) reported the following ethnicities: 79.6% are White, 7.3% are Black/African American, 1.9% are American Indian/Alaska Native, 7.2%, are Asian, 0.4% are Native Hawaiian/Pacific Islander; 50% Hispanic/ Latino; 34.1% are White alone, not Hispanic or Latino. The age groups represented in the sample were 40-49 (29.05%), 50-59 (26.49%), 30-39 (18.80%), 18-29 (17.09%), 60-69 (16.23%), 70+ (4.27%).

### ***Focus Groups Participants***

A focus group composed of four patient navigators was also assessed. The patient navigators work at Michelle’s Place Cancer Resource Center and provide education, support, and resources to individuals impacted by cancer. Cumulatively, their experience totals to over 30 years of providing guidance and assistance to cancer patients. Of the patient navigators, two are White and two are Hispanic/Latino, and they range in age from 53-70. Because of the variance of their schedules, the focus group was conducted by asking the four patient navigators seven questions through an online portal. The questions asked about their comfort level in providing a

resource that gave basic education on cancer screening and self-examinations and what stage of cancer was the most vital to better educate a community on. The participants responses were recorded and shared with the group.

### **Instruments**

Findings from the informal needs assessment and the focus group helped guide the topics that would be included on the guides. The needs assessment instrument, an 11-question survey (Appendix C), was shared through Facebook, which gave community members an opportunity to share their knowledge about cancer screening. Needs assessment questions were designed to ascertain what information Riverside County citizens already knew about and what topics they desired more information on. The focus group instrument consisted of seven semi-structured, open ended questions (Appendix D), which were presented to expert patient navigators that work directly with the target population. Focus group questions were designed to understand whether a need existed for cancer screening guides and if those working with cancer patients see the benefit in using them. Additionally, the questions aimed to gather information that the navigators saw value in.

While information gathered from our survey instruments were used to determine need and scope of the project, content specific information used in the development of the screening guides were gathered from data of the American Cancer Society, The Skin Cancer Foundation, and The National Breast Cancer Foundation. Each of these organizations are reputable, have long standing history in communities, and are appropriate references for cancer education.

### **Measurement**

One hundred and thirty-one responses were collected from the informal needs assessment using Microsoft Forms, an online program that was accessed by providing the link to participants. Using social media, specifically Facebook, responses were recorded and organized

in an Excel spreadsheet. The cancer knowledge needs assessment was created to ask questions regarding previous experience with cancer, education on screening, and learning preference.

The first question asked if the individual was a resident of Riverside County. This was important to collect because the project is aimed at this specific population. The next three questions asked about gender, race/ethnicity, and age. These three questions were created to give a breakdown of who was answering the questions. It gave insight as to the populations reached through the medias used to output the survey. One of the most telling questions was question number five, that asked if the individual had ever been diagnosed with cancer. This was an important question because it helped guide the project towards the appropriate population.

The sixth question asked if the individual had ever been screened for cancer. This question helped paint a picture of what types of screenings, if any, were commonly experienced. The seventh question asked if they had not been screened for cancer, what was the reason. This question aimed to grasp the feelings surrounding cancer screenings and seek to understand if there were any barriers experienced. The final four questions were dedicated to learning about the participants educational preferences. Question eight asked how they would like to learn about health topics such as screening. Question nine asked the participant to rate their current level of knowledge in conducting a breast or skin examination. Question ten asked if at a health fair or doctor's office, would the participant be likely to pick up a small card that included cancer screening information. Last, question eleven asked what type of cancer screening information would the participant like more information on. The survey can be found in Appendix C.

After assessing the findings from the needs assessment, a focus group was designed to gain insight from individuals who work closely with the targeted population. The focus group of four patient navigators was solicited through Michelle's Place where the patient navigators work. Five patient navigators were sent a link to the survey which included seven questions. The four

respondents answered questions that asked, “With your experience, which stage of cancer do you see as most important to provide education to a community on?” and “Do you believe a small card that educates on early detection/screening for cancer would be beneficial for a community? Why?”. The questions were all open ended which allowed the participants to input a more detailed answer. Other questions asked about their comfort level in providing an educational card that explained cancer screening, what (if any) hesitations or fears they had in using educational materials, and if they believed a cancer screening card would be beneficial in educating a community on early detection. The questions were designed to help understand experiences that patient navigators had with early detection as a form of education.

Finally, using the California Baptist University Anne Gabriel Library search engine, many secondary educational reviews and studies were found and reviewed. Topics searched included the following search terms: cancer screening, cancer self-examination, prostate cancer, skin cancer, breast cancer, cancer educational tools, cancer screening recommendations, and attitudes in cancer screening. Searches returned thousands of peer-reviewed articles and reviews, which were further narrowed down by limiting the search to include only peer-reviewed articles and a date range of 2012-2020.

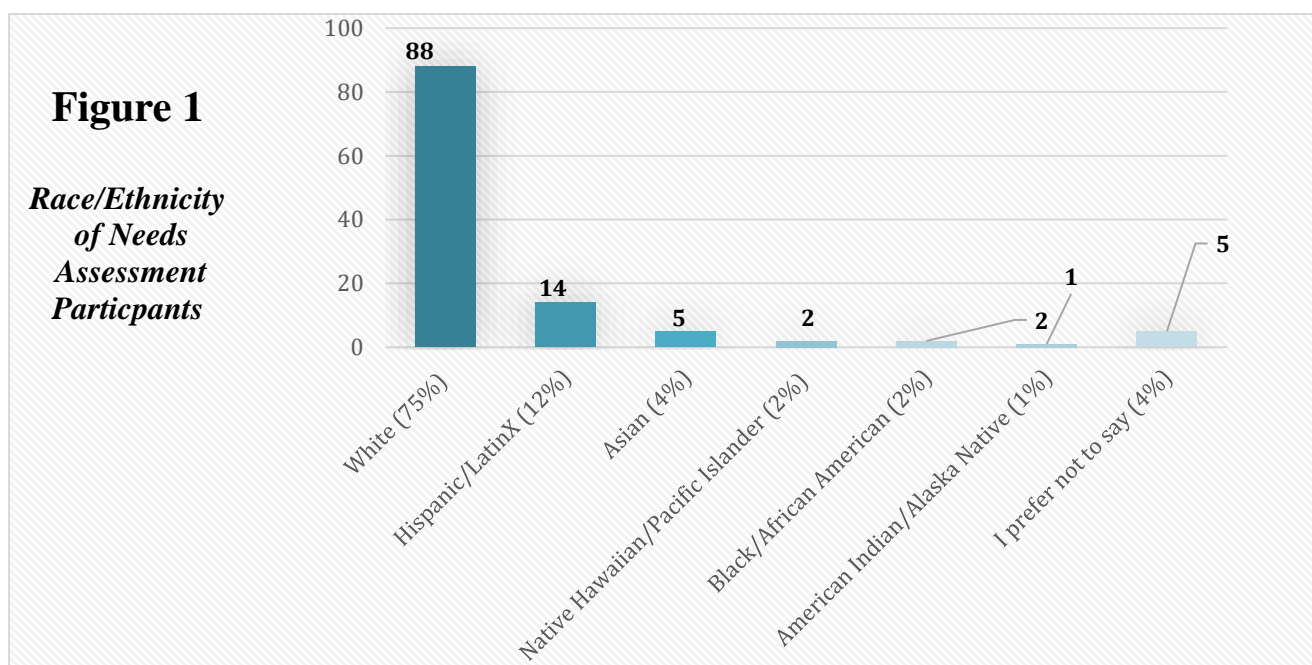
In addition to the research poured into creating the guides, the guides were also translated to Spanish. This was an important feature of the guides due to Hispanic representation of the population. The information contained in the guides was put into a word document and sent to an independent Spanish translator. The information was then transferred from the word document to each of the screening guides. The guides were sent to Spanish speaking patient navigators for review and approval prior to publishing.

## Chapter 4

### Results

#### *Needs Assessment*

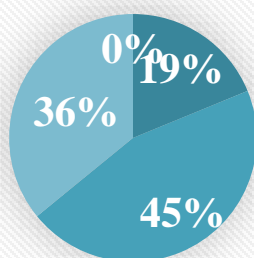
A survey was created to measure the beliefs and attitudes of community members regarding cancer screening. The needs assessment was conducted online utilizing social media. The survey was also posted on a personal page and solicited residents of Riverside County to complete the 11-item survey based on cancer knowledge. Participants were notified that all personal information, including name and email, would be kept confidential and not used for the assessment. There was a total of 11 questions which were aimed to measure cancer knowledge. Figure 1 below breaks down the race/ethnicity of the needs assessment respondents. The majority of respondents reported that their ethnicity was White (75%), which is representative of the population at large.



When asked “Have you ever been diagnosed with cancer?” (figure 2), 53 responded ‘no’ and 42 responded ‘no, but a closed loved one has’; only 22 responded ‘yes’. Interestingly, when asked “Have you ever been screened for cancer?” (figure 3), 51 replied ‘yes’, 74 replied ‘yes, mammogram’, and 53 replied ‘yes, ultrasound’. For men, 4 answered ‘yes, PSA testing (prostate)’. In contrast, 21 replied ‘no’ and one replied ‘unsure’. One of the most telling questions asked, “if you have not been screened for cancer, what is the reason?” Nineteen respondents stated, ‘I figured my doctor would conduct a screening if needed.’

## Figure 2

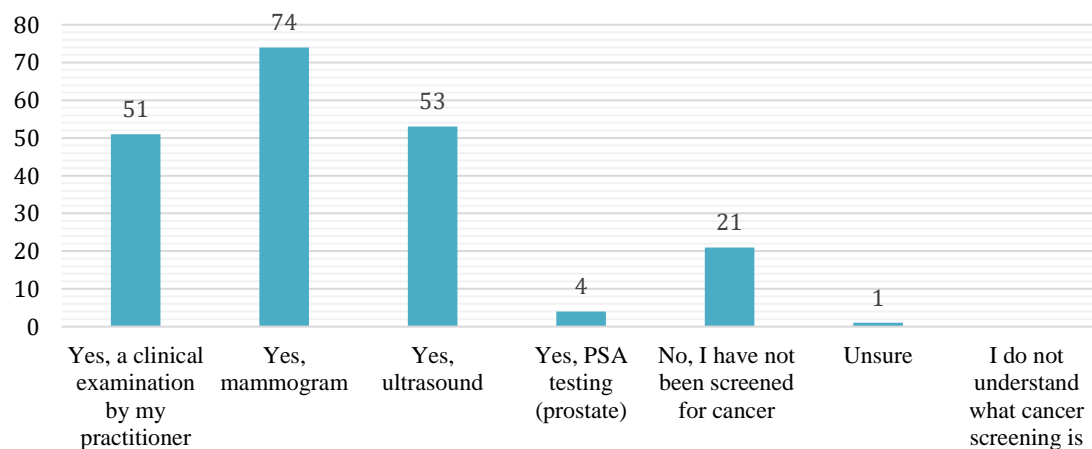
*Question 5: Have you ever been diagnosed with cancer?*



- Yes
- No
- I have not. But a close loved one has
- I prefer not to say

## Figure 3

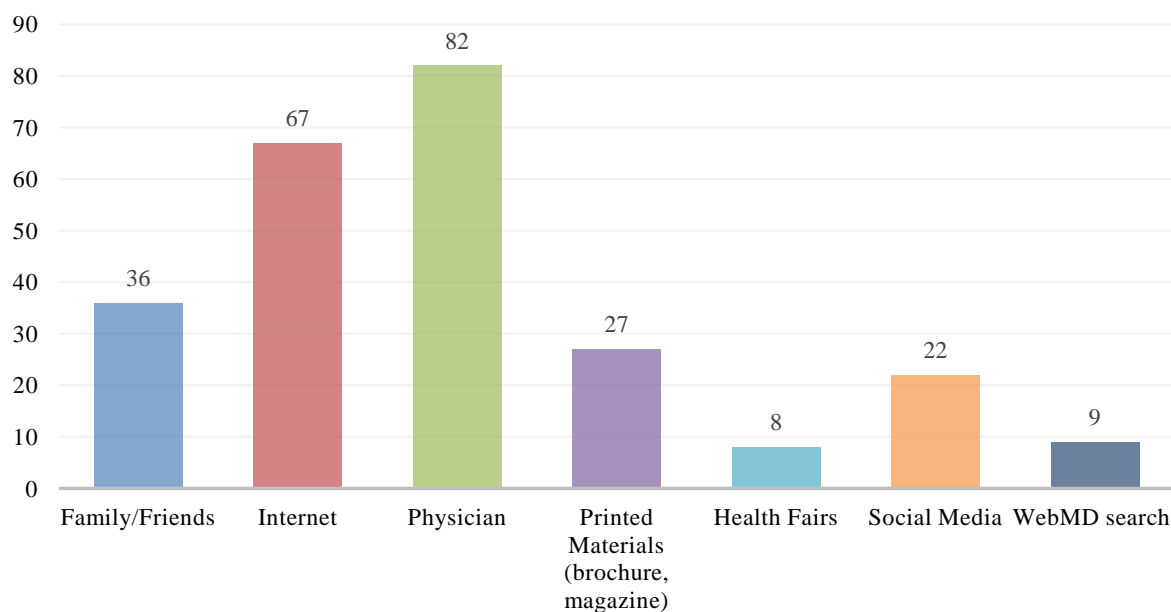
*Question 6: Have you ever been screened for cancer?*



Another question that had some interesting results aimed at understanding how people learn best asked “in learning about health subjects, like cancer screening, how do you learn best?” (figure 4). Eighty-two respondents replied, ‘my physician’, 67 replied ‘internet search’, 32 replied ‘family and/or friends’, 27 replied ‘printed materials’, 22 replied ‘social media’, nine replied ‘WebMD’, and eight replied ‘health fairs’. In asking participants to rate their current level of knowledge with how to conduct a breast or skin self-examination (figure 5), 60 replied ‘fairly confident’, eight replied ‘I have heard about self-examinations, but haven’t learned how to do them’, five replied ‘I could learn if I wanted to, I just haven’t looked into it’, and 4 replied ‘I do not know how to conduct a self-examination’.

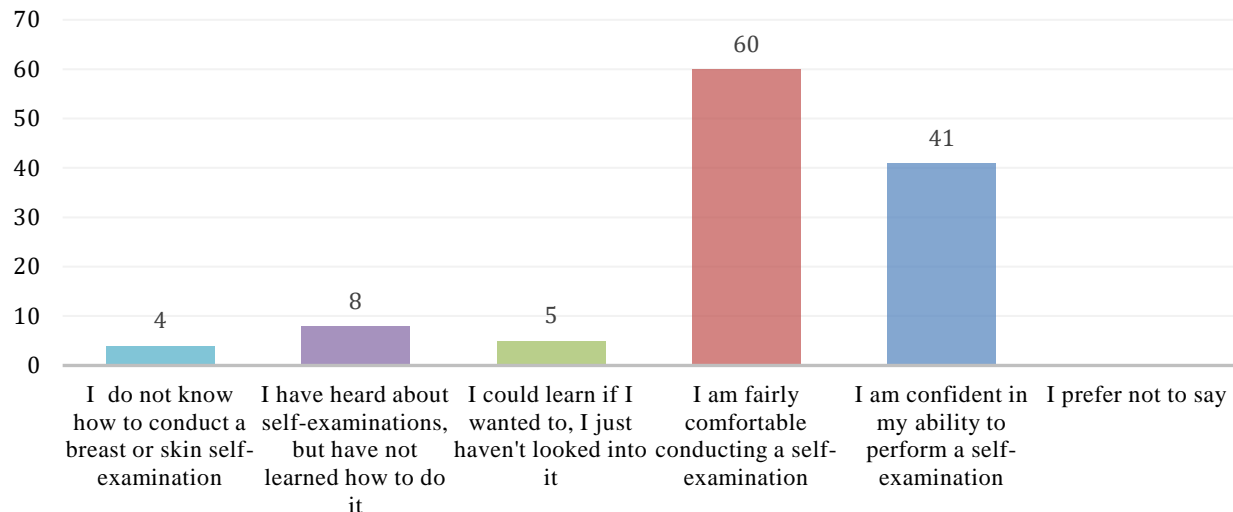
**Figure 4**

***Question 8: In learning about health subjects, how do you learn best? (select all that apply)***



**Figure 5**

**Question 9: What would you rate your current level of knowledge with how to conduct a breast or skin self-examination? (men & women)**

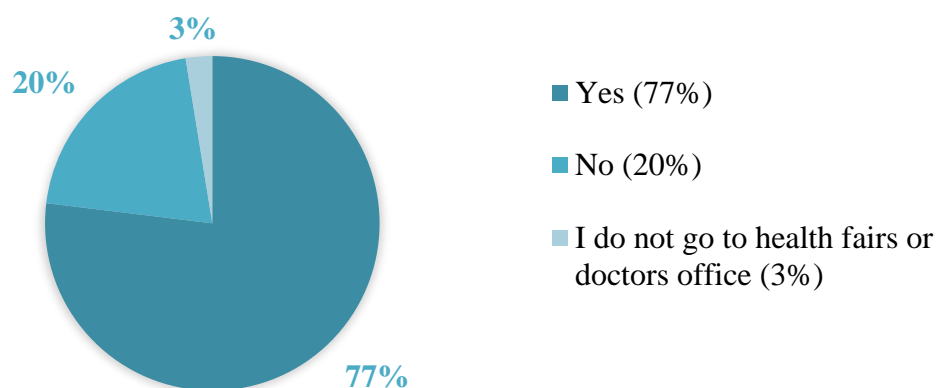


The last two questions were specific to the cancer screening card and what information they would like to be included on them. Interestingly, when asked “if attending a health fair or at a doctor’s office, would you pick up a 5” x 7” card with cancer screening information? (figure 6)”, 90 respondents answered ‘yes’. Also, when asked what topics they would want to see on the card (figure 7), 91 responded ‘signs, symptoms, and risks’, 56 replied ‘resources’, 57 replied ‘age’, and 40 replied ‘how to conduct a self-examination’.

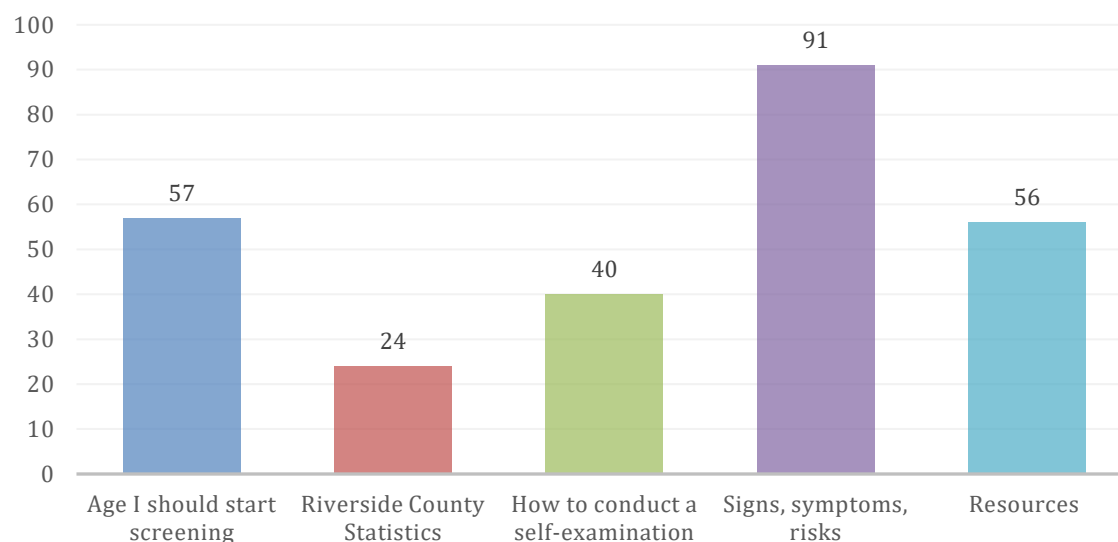


**Figure 6**

**Question 10: If attending a health fair or at a doctors office, would you pickup a small 5" x 7" card with cancer screening information?**

**Figure 7**

**Question 11: What type of cancer screening information would you like to know more about? (select all that apply)**



In addition to the needs assessment survey, a focus group was conducted with four patient navigators who work at Michelle's Place. When asked "with your experience, which stage of cancer do you see as most important to provide education to a community on?", three answered 'early detection/screening' and one answered 'other: stage 0'. When asked "what are your hesitations/fears in promoting early detection/self-examination/screening?", all four

navigators answered ‘none’. The figures below represent both the open-ended questions and the multiple-choice respective responses from the focus group survey.

<b>Table 1</b>	
<i><b>Question #1: How long have you been a cancer patient navigator?</b></i>	
Respondent 1	15 years
Respondent 2	4 years
Respondent 3	4 years
Respondent 4	7 years

<b>Table 2</b>	
<i><b>Question #2: With your experience, which stage of cancer do you see as most important to provide education to a community on? (select one only)</b></i>	
Responses	Multiple Choice Options
3	Early Detection/Screening
0	In-treatment
0	Recurrence/Metastasis
0	Survivorship
1	Other

<b>Table 3</b>	
<i><b>Question #3: Do you believe a small card that educates on early detection/screening for cancer would be beneficial for a community? Why?</b></i>	
Respondent 1	Somewhat. Most people might read it but if they are not inclined to go for screening it probably will not impact their thinking. However it would make people aware of the need to have testing done.

Respondent 2	Yes, it would be beneficial because of its size. It is convenient and could be placed almost anywhere.
Respondent 3	Everyone needs a reminder.
Respondent 4	Yes, you do not know, what you do not know. This may start the conversation.

**Table 4**

*Question #4: Would you feel comfortable handing out a small card that talks about self-examination, sign/symptoms, and resources to community members at a health fair?*

Respondent 1	Yes
Respondent 2	Yes, I would
Respondent 3	Yes
Respondent 4	Yes

**Table 5**

*Question #5: What are your hesitations/fears in promoting early detection/self-examination screening?*

Respondent 1	None, education, information, and awareness are vital
Respondent 2	none
Respondent 3	none
Respondent 4	none

<b>Table 6</b> <i>Question #6: Do you believe a small card educating early detection/screening would help bring awareness to cancer prevention and detection?</i>	
Respondent 1	Yes it would start people thinking about it. I think speaking to someone about the importance might be more effective.
Respondent 2	Yes
Respondent 3	Yes
Respondent 4	Yes, if they read the card or see them at a health fair or medical facility.

<b>Table 7</b> <i>Question #7: Are there any additional thoughts or ideas you have on promoting early detection/screening to a community?</i>	
Respondent 1	TV/Social Media advertisement and making it easy to get the tests done, especially if uninsured
Respondent 2	start education at an early age - high schools, specialty stores (VS), gyms
Respondent 3	It should be part of health education for teenagers in school to learn.
Respondent 4	Getting the word out & getting their interest to pick up the card is a tough assignment.

The survey and focus group helped develop an understanding of potential ways a cancer screening guide may help residents of Riverside County. Further investigation should include field studies of various rural communities who are otherwise challenging to reach. The data collected however, can be used as a starting point in better educating a community and helping to bring much needed awareness. With limited research on cancer knowledge within Riverside County, these data collection methods will help to further investigate ongoing needs and begin a dialogue regarding potential community education improvements.

## **Chapter 5**

### **Discussion**

As the tenth most populous county in California, the need for continuing health education in Riverside County is vital. Further, due to the diversity of Riverside County, creating educational materials that will appeal to different groups is critical in the quest to better educate communities. While some communities may be well versed in the importance of screening for cancer, it would be irresponsible to assume all members of a community feel confident in their knowledge of this topic. The purpose of the current project was to create educational materials based on the needs of a community that can inspire residents to have more self-awareness with regard to cancer prevention and early detection.

The goal of this project was to create educational tools that will increase awareness among residents and empower them to ask their providers about options in cancer screening. The cancer screening guides are meant to be an educational tool for providers to use with their patients. They are also a conversation starter that Riverside County residents can have with each other, to help educate their friends and loved ones. Because recommendations set forth by the USPSTF may differ from those of various other organizations (e.g. American Cancer Society, American College of Obstetricians and Gynecologists, International Agency for Research on Cancer, and American College of Physicians), the guides encourage readers to make joint decisions with their providers regarding appropriate options that fit individual situation and need.

### **Strengths**

In creating the cancer screening guides, it was recognized that much of the material that is currently available is dry and not attention-grabbing. For example, when visiting the USPSTF website, the information provided is geared more towards the scientific research and is meant for healthcare professionals rather than educating the general population. Many healthcare providers

look to the USPSTF for screening recommendations to share with their patients. The guides display this information, but in language the general public can understand. Another strength of the cancer screening guides is their ability to grab attention through bright, fun colors. Another strength of the guides is the compact size, making them easier to carry around. Additionally, the guides are available in both English and Spanish. This was important for the project because over 50% of the population is estimated to be of Hispanic origin (SHAPE Riverside, 2020).

### **Limitations**

The limitations present in this project include the demographics that were surveyed. Based on time restraints and limited access to resources, not all cities within the county were surveyed. Only members of two communities within Riverside County were reached (Murrieta and Temecula). It is important to note that the communities of Murrieta and Temecula differ from other rural communities within the county. The rural communities have a more diverse ethnic population and less access to healthcare. It is not well understood how these demographics would change the project's direction. Further investigation of these unique communities is needed. The project aims to reach adult residents throughout Riverside County, which includes communities that are medically underserved or lack access to medical services. These populations may not have been fully represented in the needs assessment. Without access to health care, it becomes challenging to properly educate the importance of screening.

As with all self-reported information, response bias was likely present. The study participants may not have fully understood the questions as they were intended to be. Additionally, the wording of the questions may have been misleading, or the content may have been unfamiliar. While the survey aimed at eliminating fatigue by limiting the survey to eleven questions, some may still have experienced fatigue and not answered truthfully or to the best of

their ability. Last, some of the questions require recall of certain events, which relies on the memory of the participant and can represent recall bias.

One of the survey questions was later identified as double barreled. This creates an issue in properly discussing the results. The needs assessment question number nine featured in figure 5 states ‘What would you rate your current level of knowledge with how to conduct a breast or skin self-examination? (men & women)’. This can create confusion because the question asks about two separate concepts, breast and skin self-examination, but only allows for one answer. This was an important bias to identify because it renders the validity of the question and whether there was response bias present. However, it was necessary to include this finding in the project so as to identify better ways to ask similar questions. The data analyzed from this question did not dictate the creation of the guides but served as an indication on areas to improve upon in cancer screening education.

### **Key Findings**

The needs assessment displayed that many respondents had not personally been diagnosed with cancer yet were willing to learn more about screening. This indicates that people are willing to learn more about early detection and screening prior to being affected by cancer. This is important to identify because it is the premise of this project, to bring awareness of cancer prior to a diagnosis. Engaging a population with health education requires a variety of educational tools and methods. The needs assessment allowed identification of desired health education methodologies. Identifying the educational outlets most desired within in a community creates opportunity to improve health outcomes. The development of Early Detect Me: Cancer Screening Guides aims to grab the attention of a large portion of the population. And, with the results from the needs assessment, 77% of respondents replied they would pick up a small 5” x 7” card that explains cancer screening methods. Additionally, the patient navigator

focus group reinforced the notion that the cancer screening guide would be of benefit to the community. Each of the four patient navigators stated they had no fears or hesitations in handing out guides that promote cancer screening/early detection. These findings further support the importance of educational tools to engage and empower a community.

According to the CDC (2019), an effective health education curriculum provides opportunity to reinforce skills and positive health behaviors. Because half of respondents in figure 5 replied being ‘fairly comfortable’ with conducting breast or skin self-examinations, the results reinforced that additional education could be supplemented to increase confidence levels. Another finding of the needs assessment was the desire to learn more about the signs, symptoms, and risks associated with cancers. This was significant because the initial focus of the guides was education regarding self-examinations. Due to the large preference in knowing ‘what to look for’ (77% of respondents), signs, symptoms and risks were integrated into the guides. This is especially important for the prostate screening guides because many practitioners will educate men to know the signs, symptoms, and risk factors as opposed to relying solely on PSA testing.

The needs assessment also drew correlation between other studies in which it was determined that women are more likely to answer online surveys than men. Research by Smith (2008) found that men are less likely to complete an online survey. This finding echoed the needs assessment in which in a sample size of 117 residents, only nine men participated. As evidenced by Smith (2008), there are numerous factors that govern the likelihood to respond to a survey which include focus of the study, contact methods, survey question wording, and survey fatigue. These patterns demonstrate the challenges associated with having equal male representation. And, without the male perspective, finding ways to engage them in the educational process becomes even more challenging. For these reasons, the prostate cancer card was developed to attract the female population as well. The reasoning for this is that many



women will be the voice of reason when it comes to their male partners health. In fact, it has been clinically proven that women live longer than men, with more than half of American women older than 65 as widows (Harvard Health Publishing, 2019). Interestingly, men are also more likely to be burdened by chronic illnesses at a younger age than women. Additionally, even though women visit doctors more often than men, medical care for men beyond 65 costs more. These findings are not well understood, yet they have a major impact on the way our health care systems function. Through the needs assessment and reviewing secondary literature, it is evident that men need to be targeted differently. Therefore, with appealing to both women and men, there is a greater chance that the guides will be beneficial for the population.

Using Early Detect Me as a community tool will help to eliminate disparities in the cancer burden. Disparities include low health literacy, financial, structural, and personal obstacles to health care, and delays in early detection education. With these guides, barriers to preventive care and early detection are addressed. By providing education that is readily available and appropriate for the population, less late stage diagnosis will occur, and survival rates will increase. Further, the guides will address the issue of limited primary care providers in the county. Because providers are vastly outnumbered in Riverside County (3600 patients per 1 provider), the guides educate patients when providers are limited on time. Early Detect Me addresses the complexities in cancer care through simplifying the identification of cancer.

### ***The Importance of Early Detect Me***

The main goal of the cancer screening guides is to bring awareness to adult residents in Riverside County about the importance of cancer screening. Early Detect Me was created as a community tool that will prompt both residents and their providers to have a dialogue about their options for cancer screening. As part of the Health People 2020 initiatives, a goal is to increase the availability and effectiveness of community-based programs to prevent disease and injury,

improve health, and enhance quality of life. To maximize impact while utilizing minimal resources, the guides will be available in a variety of health care settings. Non-profit organizations, doctor's offices, clinics, hospitals, and community centers will be primary destinations for the guides. The goal in disseminating the guides in multiple places is to reach the most people.

Early Detect Me will change the way patients speak with their providers. Armed with a card that provides basic information, patients will have confidence in asking their providers about their risks of cancer and reinforce the methods of self-examination. Providers can review the guides with their patients, modeling the appropriate way to conduct a self-examination. As evidenced by (Suh, et al., 2012; Jemebere, 2019; Stefanut & Vintila, 2020; Alsaraireh & Darwad, 2018), education on BSE reduced incidence of late stage breast cancer. The guides, as an expansion of cancer awareness, will provide this community the opportunity to improve health outcomes. As a result of increased cancer awareness, there will hopefully be an increase in cancer screenings, addressing the issue of cancer screening underutilization.

### **Implications**

The lack of awareness present in cancer screenings stems from limited resources that are developed specifically for a community (Alsaraireh & Darwad, 2018). By creating a cancer screening guide that is centralized on the needs of Riverside County residents, awareness of this topic can be improved. This ultimately leads to a better educated community which can lead to improved health outcomes due to decreased incidence of late-stage cancer diagnosis. This goal is consistent for many public health practitioners—to create better educated communities. Developing educational tools assists public health practitioners and clinicians to better communicate with communities they serve.

***Future Research***

Research is an ongoing need for public health, as a communities health needs evolve. For this project, a follow up study post-implementation could develop a better understanding on the successes of the cancer screening guides. Additionally, a study could help to refine the guides and determine the limitations of the guides. The guides will be documented as they are given out, in quantities of twenty-five. Each month there will be a call or visit scheduled to document how many guides were taken. This is one way to test the guides effectiveness in grabbing the reader's attention. Next, a survey will be developed that will question the effectiveness from the providers point of view, in which they could include comments or suggestions. These surveys will be distributed quarterly to the providers who display the guides. In addition to these surveys, there is potential for other assessment models to be implemented to better understand the response of the audience. From the providers perspective, it will be enlightening to know whether patients are asking them more questions. A major component of the guides is to empower patients to speak with their providers about the guides and which options they should consider. Should the guides be well received, there is an option to expand the guides to include two of the other top cancers in Riverside County, lung and colon cancer.

A component that is not well understood is the effect these guides will have on rural, medically underserved communities. There is a difficulty in reaching individuals in these areas. Additional research and surveillance need to be completed to understand the best way to reach these communities. Speaking engagements that provide refreshments are an option to bring the much-needed education to medically underserved communities. Another idea is to partner with health-minded organizations and bring mini health fairs to these communities. The thought behind these ideas is to entice members of the community with complimentary giveaways freebies to improve outreach efforts.

**Conclusion**

Early Detect Me Cancer Screening Guide is the epitome of a community based educational tool. Not only will it engage a community, it will also empower residents to act, ask questions, and advocate for their health. The guides were created to improve cancer knowledge and early detection. Screening is the beginning of finding disease, and the guides provide viable, easy-to-read information to assist in that education. Because cancer has no cure, it is vital to spread awareness on the importance of knowing one's body and what risk factors are associated with this disease. The strength of the guides is that they further promote the validity of public health and the work that goes into creating educational tools that help improve community health outcomes. The guides will increase awareness, utilization of screening, and save lives.

## References

- Al-Khashan, H. I., Almulla, N. A., Galil, S. A., Rabbulnabi, A. A., & Mishriky, A. M. (2012). Gender differences in health education needs and preferences of Saudis attending Riyadh Military Hospital in the Kingdom of Saudi Arabia. *Journal of Family & Community Medicine*, 19(3), 172–177. <https://doi.org/10.4103/2230-8229.102317>
- Alsaraireh, A., & Darawad, M. W. (2018). Breast cancer awareness, attitude, and practices among female university students: A descriptive study from Jordan. *Health Care for Women International*, 39(5), 571–583. <https://doi/10.1080/07399332.2017.1368516>
- American Cancer Society. (2019). <https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/tests.html>
- American Cancer Society. (2019b). About basal and squamous cell skin cancers. <https://www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer/>
- American Cancer Society. (2020). American cancer society guidelines for the early detection of cancer.
- American Cancer Society. (2020b). Cancer facts & figures. <https://www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2020.html>
- Arkansas State University. (2020). The role of nonprofits in society. <https://degree.astate.edu/articles/public-administration/role-of-nonprofits-in-society>.
- Bashir, N. Y., Moore, J. E., Buckland, D., Rodrigues, M., Tonelli, M., Thombs, B. D., Bell, N. R., Isaranuwachai, W., Peng, T., Shilman, D. M., & Straus, S. E. (2019). Are patient education materials about cancer screening more effective when co-created with patients?

- A qualitative interview study and randomized controlled trial. *Current Oncology (Toronto, Ont.)*, 26(2), 124–136. <https://doi.org/10.3747/co.26.4621>
- Breslau, E. S., Weiss, E. S., Williams, A., Burness, A., & Kepka, D. (2015). The Implementation road: Engaging community partnerships in evidence-based cancer control interventions. *Health Promotion Practice*, 16(1), 46–54. <https://doi.org/10.1177/1524839914528705>
- Center for Disease Control & Prevention (CDC). (2010). Cancers diagnosed at late stages despite available screening tests. <https://www.cdc.gov/media/pressrel/2010/r101124.html>
- Center for Disease Control & Prevention (CDC). (2020). United States cancer statistics: Data visualizations. <https://gis.cdc.gov/Cancer/USCS/DataViz.html>
- County of Riverside. (2020). Riverside County open data. <https://data.countyofriverside.us/>
- Croswell, J. M., Ransohoff, D. F., & Kramer, B. S. (2010). Principles of cancer screening: lessons from history and study design issues. *Seminars in Oncology*, 37(3), 202–215. <https://doi.org/10.1053/j.seminoncol.2010.05.006>
- Harvard Health Publishing. (2019). Harvard medical school: Mars vs. Venus: the gender gap in health. [https://www.health.harvard.edu/newsletter\\_article/mars-vs-venus-the-gender-gap-in-health](https://www.health.harvard.edu/newsletter_article/mars-vs-venus-the-gender-gap-in-health)
- Grahmann Parsons, B., Gren, L. H., Simonsen, S. E., Harding, G., Grossman, D., & Wu, Y. P. (2018). Opportunities for skin cancer prevention education among individuals attending a community skin cancer screening in a high-risk catchment area. *Journal of Community Health*, 43(2), 212–219. <https://doi.org/10.1007/s10900-017-0406-8>
- Jemebere, W. (2019). Practice of breast self-examination and associated factors among female nurses of Hawassa university comprehensive specialized hospital, South Ethiopia in 2018. *International Journal of Caring Sciences*, 12(3), 1457–1466.

- Johansson, M., Brodersen, J., Gøtzsche, P. C., Jørgensen, K. J., & Johansson, M. (2019). Screening for reducing morbidity and mortality in malignant melanoma. *Cochrane Database of Systematic Reviews*, 6.  
<https://doi.org/10.1002/14651858.CD012352.pub2>.
- Kratzke, C. Vilchis, H. & Amatya, A. (2013). Breast cancer prevention knowledge, attitudes, and behaviors among college women and mother-daughter communication. *Journal of Community Health*, 38(3), 560–568. <https://doi.org/10.1007/s10900-013-9651-7>
- LeComte-Hinely, J. & Morin, C. (2018). Southwest Riverside County cancer care needs assessment. <https://harcddata.org/wp-content/uploads/2018/04/SW-Riv-Co-Cancer-CHNA-Report-1-25-18-No-Open-Ends.pdf>
- Matti, B., & Zargar-Shoshtari, K. (2020). Opportunistic prostate cancer screening: A population-based analysis. *Urologic Oncology: Seminars and Original Investigations*, 38(5), 393–400. <https://doi.org/10.1016/j.urolonc.2019.12.009>
- Mayo Clinic. (2020). Breast self-exam for breast awareness.  
<https://www.mayoclinic.org/tests-procedures/breast-exam/about/pac-20393237>
- Michelle’s Place. (2020). Cancer Resource Center. [www.michellesplace.org](http://www.michellesplace.org)
- National Breast Cancer Foundation. (2020). Early detection: Breast self-exam.  
<https://www.nationalbreastcancer.org/breast-self-exam>
- National Breast Cancer Foundation. (2019). Male breast cancer.  
<https://www.nationalbreastcancer.org/male-breast-cancer>
- National Cancer Institute. (2018a). Crunching numbers: What cancer screening statistics really tell us. <https://www.cancer.gov/about-cancer/screening/research/what-screening-statistics-mean>

National Cancer Institute. (2018b). Cancer statistics. <https://www.cancer.gov/about-cancer/understanding/statistics>

National Cancer Institute. (2019). Cancer disparities. <https://www.cancer.gov/about-cancer/understanding/disparities>

National Cancer Institute. (2020). Cancer screening overview. <https://www.cancer.gov/about-cancer/screening/patient-screening-overview-pdq>

National Council of Nonprofits. (2019). Nonprofit impact in communities. <https://www.councilofnonprofits.org/nonprofit-impact-communities>

Owens, O. L., Felder, T., Tavakoli, A. S., Revels, A. A., Friedman, D. B., Hughes-Halbert, C., & Hébert, J. R. (2019). Evaluation of a computer-based decision aid for promoting informed prostate cancer screening decisions among African American men: iDecide. *American Journal of Health Promotion*, 33(2), 267–278.

Pandey, T. S. (2014). Age appropriate screening for cancer: Evidence-based practice in the United States of America. *Journal of Postgraduate Medicine*, 60(3), 318–321. <https://doi/10.4103/0022-3859.138813>

Planned Parenthood. (2016). National survey of women’s knowledge of recommended screenings for breast and cervical cancer. [https://www.plannedparenthood.org/files/1314/7076/0158/cancer\\_survey\\_results\\_onepagerFINAL.pdf](https://www.plannedparenthood.org/files/1314/7076/0158/cancer_survey_results_onepagerFINAL.pdf)

Readability Formulas. (2020). Text readability consensus calculator. <https://readabilityformulas.com/freetests/six-readability-formulas.php>

Seaman, K., Dzidic, P. L., Castell, E., Saunders, C., & Breen, L. J. (2018). A systematic review of women’s knowledge of screening mammography. *Breast*, 42, 81.



SHAPE Riverside County. (2020). Disparities dashboard.

<http://www.shaperivco.org/indicators/index/dashboard?alias=disparities>

Smith, W. (2008). Does gender influence online survey participation? A record-linkage analysis of university faculty online survey response behavior.

[https://scholarworks.sjsu.edu/elementary\\_ed\\_pub/4/](https://scholarworks.sjsu.edu/elementary_ed_pub/4/)

Stefanut, A. M., & Vintila, M. (2020). Interventions aimed to prevent breast cancer by promoting self-examination: A systematic review of literature. *Journal Plus Education/Educatia Plus*, 26(1), 423–435.

Suh, M. A. B., Atashili, J., Fuh, E. A., & Eta, V. A. (2012). Breast self-examination and breast cancer awareness in women in developing countries: a survey of women in Buea, Cameroon. *BMC Research Notes*, 5, 627. <https://doi/10.1186/1756-0500-5-627>

Tsao, H., Olazagasti, J. M., Cordoro, K. M., Brewer, J. D., Taylor, S. C., Bordeaux, J. S., Chren, M.-M., Sober, A. J., Tegeler, C., Bhushan, R., & Begolka, W. S. (2015). Early detection of melanoma: reviewing the ABCDEs. *Journal of the American Academy of Dermatology*, 72(4), 717–723. <https://doi-/10.1016/j.jaad.2015.01.025>

The American College of Obstetrics and Gynecologists. (2017). ACOG practice bulletin: Breast cancer risk assessment and screening in average-risk women.

<https://www.acog.org/-/media/project/acog/acogorg/clinical/files/practice-bulletin/articles/2017/07/breast-cancer-risk-assessment-and-screening-in-average-risk-women.pdf>.

The Skin Cancer Foundation. (2020). Early detection. <https://www.skincancer.org/early-detection/>

U.S. Department of Health and Human Services (USHHS). (2020). Healthy people 2030 framework. <https://www.healthypeople.gov/2020/About-Healthy-People/Development-Healthy-People-2030/Framework>

United States Preventive Service Task Force (USPSTF). (2016a). Breast cancer screening. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening>

United States Preventive Services Task Force (USPSTF). (2016b). Skin cancer. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/skin-cancer-screening>

United States Preventive Services Task Force (USPSTF). (2018). Prostate cancer. <https://www.uspreventiveservicestaskforce.org/uspstf/document/RecommendationStatementFinal/prostate-cancer-screening#bootstrap-panel--6>

Vane, S. (2019). Prostate cancer screening: A Review of current recommendations. *Urologic Nursing*, 39(3), 133–138. <https://doi/10.7257/1053-816X.2019.39.3.133>

Zhang, Y., Zhang, F. B., Huang, Y. X. R. Tian, Y., & Zeng, N. (2020). How to make clinical decisions to avoid unnecessary prostate screening in biopsy-naïve men with PI-RADs v2 score  $\leq 3$ ? *International Journal of Clinical Oncology*, 25(1), 175–186. <https://doi/10.1007/s10147-019-01524-9>

## Appendix A

Front:

## EARLY DETECT ME: Cancer Screening Guide

*Breast Cancer*

The goal of self-screening for breast cancer is to find it before it causes symptoms (like a lump that can be felt)

*Guidelines*

Women aged 40-44 have the option to start screening with a mammogram every year.

Women aged 45-54 should get mammograms every year.

Women 55 and over can switch to a mammogram every other year.

Women considered "high risk" should have a breast MRI and mammogram every year, typically starting at age 30.

Check with your provider to see what your risk level is.

*Types of Screenings*

Self-examination

Ultrasound

Mammogram

Ask your provider which option is best for you

*Resources***Local**

[www.michellesplace.org](http://www.michellesplace.org)

[www.pink.rchf.org](http://www.pink.rchf.org)

**National**

[www.nationalbreastcancer.org](http://www.nationalbreastcancer.org)

[www.cancer.org](http://www.cancer.org)

*Michelle's Place*  
Cancer Resource Center

Back:

**How to** *Self-exam*

Recommendations by the  
National Breast Cancer Foundation

**In the Shower**

With the pads/flats of your 3 middle fingers, check the entire breast and armpit area pressing down with light, medium, and firm pressure. Check both breasts each month feeling for any lump, thickening, hardened knot, or any other breast changes.

**In the Mirror**

Visually inspect your breasts with your arms at your sides. Next, raise your arms high overhead. Look for any changes in the contour, any swelling, or dimpling of the skin, or changes in the nipples. Next, rest your palms on your hips and press firmly to flex your chest muscles. Left and right breasts will not exactly match—few women's breasts do, so look for any dimpling, puckering, or changes, particularly on one side.

**Lying Down**

When lying down, the breast tissue spreads out evenly along the chest wall. Place a pillow under your right shoulder and your right arm behind your head. Using your left hand, move the pads of your fingers around your right breast gently covering the entire breast area and armpit. Use light, medium, and firm pressure. Squeeze the nipple; check for discharge and lumps. Repeat these steps for your left breast.

Front (Spanish):

**DETECTARME TEMPRANO: Guía de detección del cáncer***Cáncer de mama*

El objetivo de la auto-detección del cáncer de seno es encontrarlo antes de que cause síntomas (como un bulto que se puede sentir)

*Pautas*

Las mujeres de 40 a 44 años tienen la opción de comenzar examen de detección con una mamografía todos los años

Las mujeres de 45 a 54 años deben tener mamografías todos los años.

Las mujeres de 55 años o más pueden cambiar a un mamografía cada dos años.

Las mujeres consideradas de "alto riesgo" deben tener un MRI y mamografía de seno cada año, típicamente a partir de los 30 años

Consulte con su proveedor para ver cuál es su nivel de riesgo es.

*Tipos de proyecciones*

**Autoexamen**

**Ultrasonido**

**Mamografía**

Pregunta tu proveedor que la opción es mejor para ti

*Recursos***Local**

[www.michellesplace.org](http://www.michellesplace.org)

[www.pink.rchf.org](http://www.pink.rchf.org)

**National**

[www.nationalbreastcancer.org](http://www.nationalbreastcancer.org)

[www.cancer.org](http://www.cancer.org)

*Michelle's Place*  
Cancer Resource Center

Back (Spanish):

*Cómo auto-detección*

Recomendaciones de la Fundación  
Nacional del Cáncer de Mama

**En la ducha**

Con las almohadillas / pisos de tus 3 dedos medios, verifique todo presionar el área de los senos y las axilas abajo con luz, medio y presión firme. Revise ambos senos cada mes sintiendo cualquier bulto, engrosamiento, nudo endurecido o cualquier otro cambio en los senos.

**En el espejo**

Inspeccione visualmente sus senos con tus brazos a los costados. A continuación, elevar tus brazos en lo alto. Cualquier cambio en el contorno, cualquier hinchazón o hoyuelos de la piel, o cambios en los pezones. Próximo, descansa tus palmas sobre tus caderas y presione firmemente para flexionar el pecho músculos. Los senos derecho e izquierdo no coincide exactamente: pocas mujeres los senos sí, así que busque cualquier hoyuelos, arrugas o cambios, particularmente en un lado.

**Acostada**

Al acostarse, el seno el tejido se extiende uniformemente a lo largo. La pared del cofre. Colocar una almohada debajo de su hombro derecho y tu brazo derecho detrás de tu cabeza. Usando su mano izquierda, mueva el almohadillas de tus dedos alrededor de tu pecho derecho cubriendo suavemente el toda la zona del pecho y la axila. Presión ligera, media y firme. Aprieta el pezón; comprobar secreción y bultos. Repetir estos pasos para su seno izquierdo



Front:

**EARLY DETECT ME: Cancer Screening Guide***Prostate Cancer*

In Riverside County, California from 2013-2017, there were 6,116 new cases of Prostate Cancer. For every 100,000 men, 100 Prostate Cancer cases were reported.

*Guidelines*

Men ages 45 to 49 should have a baseline PSA test.

Men ages 50 to 59 should have their PSA level checked.

Men ages 60 to 70 should have their PSA level checked.

Men ages 71 and older should talk with their doctor about whether to have a PSA test. This decision should be based on past PSA levels and the health of the man.

*Resources***Local**

[www.michellesplace.org](http://www.michellesplace.org)

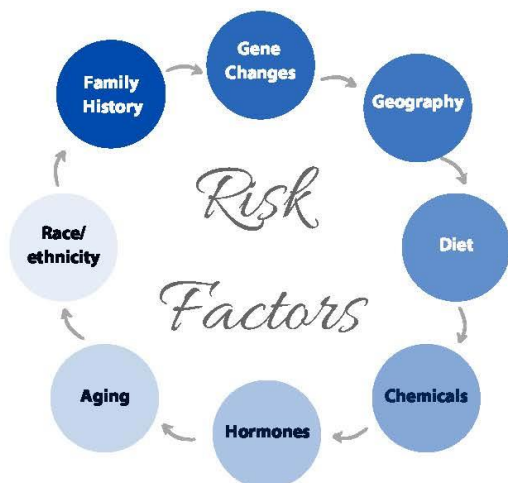
**National**

[www.zerocancer.org](http://www.zerocancer.org)

[www.cancer.org](http://www.cancer.org)



Back:

*Signs & Symptoms*

- Frequent urination
- Weak or interrupted urine flow or the need to strain to empty the bladder
- The urge to urinate frequently at night
- Blood in the urine
- Blood in the seminal fluid
- New onset of erectile dysfunction
- Pain or burning during urination, which is much less common
- Discomfort or pain when sitting, caused by an enlarged prostate

*Types of Screening***Prostate-specific antigen (PSA)**

A protein produced by both cancerous (malignant) and noncancerous (benign) prostate tissue. A small amount of PSA normally enters the bloodstream. An elevated level could suggest the presence of cancer.

**Digital rectal examination (DRE)**

A DRE is a test in which the doctor inserts a gloved, lubricated finger into a man's rectum and feels the surface of the prostate through the bowel wall for any irregularities.

Front (Spanish):

**DETECTARME TEMPRANO: Guía de detección del cáncer***Cáncer de próstata*

En el condado de Riverside, California, de 2013 a 2017, hubo 6.116 nuevos casos de Cáncer de próstata. Por cada 100,000 hombres, 100 casos de cáncer de próstata fueron reportado.

*Pautas*

Los hombres de 45 a 49 años deberían tener una prueba de PSA de referencia.
Los hombres de 50 a 59 años deberían tener su nivel de PSA verificado.
Los hombres de 60 a 70 años deben tener su PSA nivel verificado
Los hombres mayores de 71 años deben hablar con sus médico sobre si debe hacerse una prueba de PSA. Esta decisión debe basarse en el pasado niveles de PSA y la salud del hombre

*Recursos***Local**

[www.michellesplace.org](http://www.michellesplace.org)

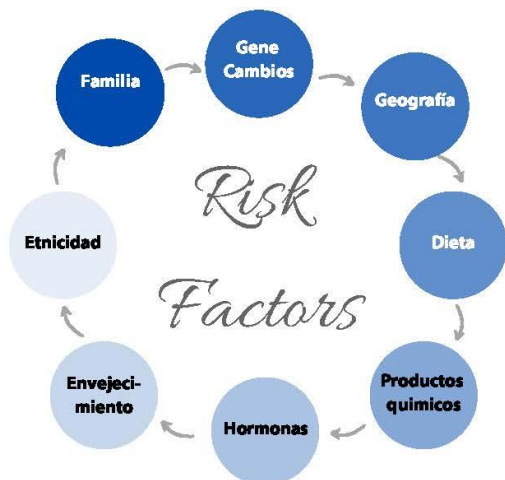
**National**

[www.zerocancer.org](http://www.zerocancer.org)

[www.cancer.org](http://www.cancer.org)

*Michelle's Place*  
Cancer Resource Center

Back (Spanish):

*Signos y Síntomas*

- Micción frecuente
- Flujo de orina débil o interrumpido o la necesidad colar para vaciar la vejiga
- La necesidad de orinar frecuentemente por la noche.
- Sangre en la orina- Sangre en el fluido seminal
- Nueva aparición de disfunción eréctil
- Dolor o ardor al orinar, que es mucho menos común
- Molestias o dolor al sentarse, causado por una próstata agrandada

*Tipos de Cribado***Antígeno prostático específico (PSA)**

Una proteína producida por ambos cancerosos(maligno) y no canceroso (benigno) tejido prostático Una pequeña cantidad de PSA normalmente entra al torrente sanguíneo. Un nivel elevado podría sugerir la presencia de cáncer.

**Examen rectal digital (DRE)**

Un DRE es una prueba en la cual el médico inserta un dedo enguantado y lubricado en el recto de un hombre y siente el superficie de la próstata a través del pared intestinal para cualquier irregularidad

Front:

**EARLY DETECT ME: Cancer Screening Guide***Skin Cancer*

You don't need x-rays or blood tests to find skin cancer early  
– just your eyes and a mirror.

*Skin Cancers Can Appear As:*

A growth that increases in size and appears pearly, transparent, tan, brown, black, or multicolored.

A mole, birthmark or brown spot that increases in size, thickness, changes color or texture, or is bigger than a pencil eraser.

A spot or sore that continues to itch, hurt, crust, scab or bleed.

An open sore that does not heal within three weeks

*Types of Skin Cancer*

- Basal cell carcinoma (BCC)
- Squamous cell carcinoma (SCC)
- Melanoma
- Merkel cell carcinoma (MCC)
- Precancer actinic keratosis (AK)

*Resources***Local**

[www.michellesplace.org](http://www.michellesplace.org)

[www.stagefreemelanoma.org](http://www.stagefreemelanoma.org)

**National**

[www.skincancer.org](http://www.skincancer.org)

[www.cancer.org](http://www.cancer.org)



Back:

**How to** *Self-exam*

Recommendations by  
The Skin Cancer Foundation



**Examine your face**  
nose, lips, mouth and ears — front and back. Use mirrors to get a clear view.



**Inspect your scalp**  
use a blow-dryer & mirror to expose each section to view. Get a friend or family member to help, if you can.



**Check your hands**  
Palms and backs, fingers and fingernails. Continue up the wrists to examine both the front and back of your forearms.



**Scan your arms**  
Standing in front of the full-length mirror, begin at the elbows and scan all sides of your upper arms. Don't forget the underarms.



**Inspect your torso**  
focus on the neck, chest and torso. Lift the breasts to view the undersides.



**Scan your upper back**  
With your back to the full-length mirror, use the hand mirror to inspect the back of your neck, shoulders, upper back and any part of the back of your upper arms you could not view in step 4.



**Scan your lower back**  
Still using both mirrors, scan your lower back, buttocks and backs of both legs.



**Inspect your legs**  
Sit down; prop each leg in turn on a stool or chair. Use the hand mirror to examine the genitals. Check the front and sides of both legs, thigh to shin. Then, finish with ankles and feet, including soles, toes and nails



Front (Spanish):

**DETECTARME TEMPRANO: Guía de detección del cáncer***Cáncer de piel*

No necesita radiografías ni análisis de sangre para detectar el cáncer de piel temprano- Solo tus ojos y un espejo

*Los cánceres de piel pueden aparecer como:*

Un crecimiento que aumenta de tamaño y parece perlado, transparente, tostado, marrón, negro o multicolor.

Un lunar, marca de nacimiento o mancha marrón que aumenta de tamaño, espesor, cambia de color o textura, o es más grande que un borrador de lápiz

Una mancha o llaga que continúa picando, lastimando, costra, costra o sangrar.

Una llaga abierta que no cicatriza en tres semanas

*Tipos de cáncer de piel*

- Carcinoma de células basales
- Carcinoma de células escamosas
- Melanoma
- Carcinoma de células de Merkel
- Queratosis actínica precancerígena

*Recursos***Local**

[www.michellesplace.org](http://www.michellesplace.org)

[www.stagefreemelanoma.org](http://www.stagefreemelanoma.org)

**National**

[www.skincancer.org](http://www.skincancer.org)

[www.cancer.org](http://www.cancer.org)

*Michelle's Place*  
Cancer Resource Center

Back (Spanish):

**Cómo autoexamen**

**Examina tu cara**  
nariz, labios, boca y orejas - frente y de regreso.  
Utilizar espejos para conseguir un vista clara.



**Inspecciona tu cuero cabelludo**  
usar un secador de pelo y espejo para exponer cada sección para ver.  
Consigue un amigo o miembro de la familia a ayuda, si puedes.



**Revisa tus manos**  
Palmas y espaldas, dedos y uñas.  
Continúa por las muñecas para examinar tanto el anverso y reverso de su antebrazos.



**Escanea tus brazos**  
De pie frente a la espejo de cuerpo entero, comenzar en los codos y escanear todos los lados de tus brazos superiores. No olvida las axilas.



**Inspecciona tu torso**  
centrarse en el cuello, pecho y torso. Levanta los senos para ver el parte inferior.



**Escanea tu espalda superior**  
De espaldas al máximo espejo de longitud, usa la mano espejo para inspeccionar la espalda de tu cuello, hombros, parte superior de la espalda y cualquier parte de la parte posterior de su parte superior brazos que no podías ver en paso 4.



**Escanea tu espalda baja**  
Sigo usando ambos espejos, escanea tu baja de la espalda, las nalgas y espaldas de ambos piernas



**Inspecciona tus piernas**  
Siéntate; apuntalar cada pierna encender un taburete o silla. Utilizar el espejo de mano para examinar los genitales. Revise el frente y los lados de ambas piernas, muslo a la espinilla. Luego, termina con los tobillos y pies, incluidas las suelas, dedos de los pies y uñas.

Recomendaciones de  
El Skin Cancer Foundation



## Appendix B



41669 Winchester Road #101  
Temecula, CA 92590  
P: (951)-699-5455  
F: (951) 699-3631  
[www.michellesplace.org](http://www.michellesplace.org)  
[info@michellesplace.org](mailto:info@michellesplace.org)

Dear provider,

Thank you for taking the time to learn more about the educational tools provided to you for community-based health education. In this packet are three cards that will help community members better understand their risks for cancer. The three cancers these cards represent are breast, skin, and prostate, which are also three of the most frequently diagnosed cancers in Riverside County. As a provider, you are on the front lines of educating your patients on their health risks. These cards are meant to be an educational tool for you to use in creating awareness. The cards can be used to help people understand their risks and what steps they can take in monitoring their health.

Cancer is the second leading cause of death in the United States yet is curable if caught in early stages. According to the CDC, in 2017 there were 170,784 new cases of cancer (392 cases per every 100,000) and 59,515 deaths (137 deaths per every 100,000) from cancer reported in Riverside County. And, it has been estimated that nearly 10% of residents are uninsured? This, paired with a medically underserved population (which is estimated to have 3,600 patients per primary care physician) creates a challenge in properly educating patients about their risks for cancer.

The goal of these cards is to promote early detection and self-awareness. The cards can be placed in the waiting room or in the examination rooms for patients to read. They can take them home and share with their loved ones and friends. The hope is that awareness for self and others can create a healthier community, which is something we all would like to see.

I hope this information I have provided helps you better understand how these cards can help our community. Please contact me with any questions. I am available to do an in-service presentation to better educate your providers and staff on how to use these cards. Additionally, if you would like to see the research behind this project, that can be provided to you. I appreciate your support in our vision that no one should face cancer alone.

**Melissa Rada**  
**Program Manager**  
[melissa@michellesplace.org](mailto:melissa@michellesplace.org)

### Mission Statement:

Empowering individuals and families impacted by cancer through education and support services.  
Michelle's Place is a 501 C3 – Tax ID #33-0951216

## Appendix C

### Cancer Knowledge: Riverside County Residents

This survey aims to understand current knowledge of cancer screening in Riverside County residents. In this model, "Screening" refers to being examined by a physician, mammography or ultrasound, or prostate testing (PSA).

"Self-examination" refers to the act of taking steps to examine your own body for any signs or symptoms associated with cancer. This survey focuses on Breast, Skin, and Prostate cancer.

Thank you for taking the time to participate in this survey!

- Melissa Rada, candidate for MPH

\*The findings for this survey will be included in my graduate thesis paper for California Baptist University. All personal information will be kept confidential, with only the answers being presented. If you have any questions, please email me at [MelissaA.Rada@calbaptist.edu](mailto:MelissaA.Rada@calbaptist.edu).

---

1. Are you a resident of Riverside County?

- ☐ Yes
- ☐ No

2. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ I Prefer not to say

3. What is your race/ethnicity?

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander

- ☐ Hispanic or Latino
- ☐ - I prefer not to say

4. What is your age group?

- ☐ 18-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 +
- ☐ I prefer not to say

5. Have you ever been diagnosed with cancer?

- ☐ Yes
- ☐ No
- ☐ I have not. But a close loved one has.
- ☐ I prefer not to say

6. Have you ever been screened for cancer? (select all that apply)

- ☐ Yes, a clinical examination by my practitioner
- ☐ Yes, mammogram
- ☐ Yes, ultrasound
- ☐ Yes, PSA testing (prostate)
- ☐ No, I have not been screened for cancer
- ☐ Unsure
- ☐ I do not understand what cancer screening is

7. If you have NOT been screened for cancer, what is the reason? (select all that apply)

- ☐ I have been screened
- ☐ I didn't know about screening
- ☐ I figured my doctor would conduct a screening if needed
- ☐ I do not see a doctor on a regular basis
- ☐ I am too young and have no family history
- ☐ Other \_\_\_\_\_

8. In learning about health subjects, like cancer screening, how do you learn best? (select all that apply)

- ☐ Internet search (Google, Yahoo)
- ☐ My physician
- ☐ WebMD

- ☐ Health Fairs
- ☐ Social Media
- ☐ Family and/or Friends
- ☐ Printed Materials (Guides, Brochures, Magazines, Flyers, etc.)

9. How would you rate your current level of knowledge with how to conduct a breast or skin self-examination? (men & women)

- ☐ I do not know how to conduct a breast and/or skin self-examination
- ☐ I have heard about self-examinations, but have not learned how to do it
- ☐ I could learn if I wanted to, I just have not looked into it
- ☐ I am fairly comfortable conducting a self-examination
- ☐ I am confident in my ability to perform a self-examination
- ☐ I prefer not to say

10. If attending a health fair or at a doctor's office, would you pick up a small 5" x 7" card with cancer screening information?

- ☐ Yes
- ☐ No
- ☐ I do not go to health fairs or doctor's office

11. What type of cancer screening information would you like to know more about? (select all that apply)

- ☐ Age I should start screening
- ☐ Riverside County Statistics
- ☐ How to conduct a self-examination (breast and skin cancer)
- ☐ Signs, symptoms, and risks
- ☐ Resources

## Appendix D

### Patient Navigator: Thoughts on Early Detection/Screening

1. How long have you been a cancer patient navigator?
2. With your experience, which stage of cancer do you see as most important to provide education to a community on?
  - Early detection/Screening
  - In-treatment
  - Recurrence/Metastasis
  - Survivorship
  - Other
3. Do you believe a small card that educates on early detection/screening for cancer would be beneficial for a community? Why?
4. Would you feel comfortable handing out a small card that talks about self-examination, sign/symptoms, and resources to community members at a health fair?
5. What are your hesitations/fears in promoting early detection/self-examination/screening?
6. Do you believe a small card educating early detection/screening would help bring awareness to cancer prevention and detection?
7. Are there any additional thoughts or ideas you have on promoting early detection/screening to a community?