

Gretchen:

Title slide: Hello, my name is Gretchen and my name is Sarah. Today we are going to talk about the accessibility of breast cancer screenings and our solution to address why many older women don't receive breast cancer screenings before it's too late.

Sarah:

Mammography: A mammography is an x-ray device used to diagnose breast cancer, specifically for women without symptoms. In the U.S., mammography screenings have been shown to prevent many deaths in women over 40, using the assumption that the positive results are checked early enough into the diagnosis. Mammograms still have drawbacks, like false-positive/negative results, radiation exposure, or even overdiagnosis. Women with healthcare can receive mammograms check-ups covered every 1-2 years, however, we would recommend receiving one every year.

Gretchen:

Health concern (problem): In 2016, only 76% of women in Washington obtained a mammography. 24% not getting mammograms might not seem like a lot, but this percentage makes up around 1 million women. At this point in time, it is recommended that every woman over the age of 40 gets yearly mammograms, so why do so many women avoid it?

There are two main reasons that can be seen worldwide.

**1. Access to health care**

80% of women without healthcare do not get breast cancer screenings, while 46% of women WITH healthcare do not get breast cancer screenings.

**2. No recommendations from a physician**

Women over 65 are less likely to get a physician's recommendation than younger women. Younger women reported 'putting it off' as the main reason for not getting mammograms as compared to older women who reported they never felt the need to get one.

Sarah:

Equity aspect: In terms of access to mammograms and the costs to get a check-up, these opportunities target higher-earning groups over poorer and systematically oppressed demographics because of lack of care and not enough privileges or advertisement. These are especially seen with different families and their income levels. Moving on to neighborhoods, when people are born in communities that don't traditionally have access to healthcare in the U.S., it becomes hard to have that information spread throughout those places. Likewise, many older immigrants who move to the U.S. are also placed at a disadvantage as it's hard to learn the English language and converse with people to receive check-ups.

Gretchen:

Our goal (education): Our goal is to educate communities around us about receiving breast cancer screenings and in the end, increase accessibility to these appointments. When examining why women don't get yearly breast cancer screenings after they turn 40, it is hard to pinpoint specific reasons such as accessibility to these screenings or not enough knowledge about them, however, our goal is to make sure people see getting mammograms as cancer care and prevention tools. Other reasons for not acquiring screenings can be attributed to equity.

Sarah:

Addressing the concern: Our idea is to mail out vouchers yearly that provide low income women with free mammograms and contain information about where to get mammograms. This would most likely occur in October, as October is Breast Cancer Awareness Month. There is a measure already put in place by the Washington State Department of Health called "Breast, Cervical and Colon Health Program," which gives free mammograms ONLY to those eligible, and requires actively contacting an organization which makes it inaccessible for many. Studies have shown that simply reminding women without healthcare through telephones or radios to get a mammography does not greatly increase the percentage of women actually receiving one which is why we chose to opt out of this option.

Gretchen:

In a 2005 study, mammography vans and vouchers were found to be much more effective, so we thought that bringing these vouchers to Washington State could help increase the amount of women who get mammograms. In addition to this, we would provide vans and cars in different neighborhoods that go to and from the nearby testing sites. These vans would happen through churches or nursing homes, as those are the places where the most susceptible age group tends to be.

Gretchen:

Impact and legacy: Our hope is that widespread education can echo to the younger generations and increase awareness among the older generations. With our solution, we are perceiving a higher number of women with and without healthcare getting proper breast cancer screenings. A similar study in North Carolina showed that community-wide intervention increased the percentage of women ages 50-70 getting mammograms from 35% to 55% in the experimental community and 30% to 40% in the control community.

Sarah:

Special guest: Next, we have a brief interview with Rosalie Tucker and Jill Clymer, who has personally had breast cancer and has given a statement for us. We're going to play a couple of seconds now, but the audio is on the slides and so is a linked transcript. \*\*play audio\*\*

Sarah

Reflection: In the beginning, it was hard to choose a topic to research and we wavered between a few options before settling on breast cancer. Our approach to the solution was fairly easy, as we focused on using the data provided by WTN and applying our own research to those ideas. Some challenges we encountered were finding outside data that we could actually refer to, yet not quote from, and also thinking of profound solutions that would truly impact those in WA and those in the U.S.

Gretchen:

It was also hard to find time to work on the entire presentation together, as our schedules would frequently not line up and fluctuate depending on holidays or breaks. We also kept having

problems regarding the idea of healthcare, and how our solution would not be able to give healthcare to different communities. Finally, as you know, we have family friends who have been impacted by breast cancer, and it hasn't been the easiest. As shown by Rosalie Tucker, the impact on her family has been stressful and financially draining. I hope with our solution, we can lighten the load and emotional weight that is put on people, and I hope that we can positively impact those who have been affected and those who might be affected in the future.

Sarah:

And now, we have our bibliography and a note of continuous appreciation. We would just like to say thank you for giving high-schoolers the opportunity to strengthen their scientific knowledge and advance the ways in which they connect further with their community through this program!