



Evidence-based Strategies to Increase Breast and Cervical Cancer Screening Rates: Outcomes of a Targeted Funding Opportunity, 2016-2017

Each day 12 cases of cancer are diagnosed in residents of South Dakota. Female breast cancer is the second leading cause of death among women in South Dakota, with approximately 608 new cases diagnosed and 100 women dying from breast cancer in 2014.¹ Breast cancer represented 29% of the cancer cases diagnosed in South Dakota women in 2014. Likewise, cervical cancer continues to be a burden in South Dakota. In 2014, 36 cases of cervix uteri cancer were reported in SD.¹ Screening and early detection saves lives. According to the American Cancer Society, cervical cancer cases diagnosed at a localized stage have a 93% survival rate; however, when diagnosed at distant stage, the percentage of survival drops to 15% at five years.² Despite this fact, only 32% of cases reported in SD were diagnosed at localized stage compared to 46% nationally.¹

In March 2016, the SD Breast and Cervical Cancer Early Detection Program (SD BCCEDP) and SD Comprehensive Cancer Control Program (SD CCCP) released a funding opportunity aimed at addressing evidence-based strategies to increase breast and cervical cancer screening rates in South Dakota. The funding was targeted at healthcare facilities to implement client reminders for both breast and cervical cancer screening, as well as at least one provider-level intervention for both breast and cervical cancer screening. Applicants could request up to \$7,500 per facility or \$15,000 maximum per health system. Two health systems were awarded a total of \$22,662.50, including Horizon Health Care, Inc. and Platte Medical Clinic.

In addition to the funding for this project, the SD CCCP also provided technical assistance to support project implementation, share best practices, address questions, and share lessons learned between the grantees throughout the duration of the project period.

PROJECT SUMMARY

Horizon Health Care, Inc., a network of federally qualified community health centers, implemented project efforts at three clinic locations in SD. Platte Medical Clinic, part of the Avera health system, implemented project efforts at the Platte Medical Clinic as well as two satellite clinic locations in SD. Collectively, the potential project impact included over 1,000 women for breast cancer screening and nearly 1,500 women for cervical cancer screening. Moving forward in this report, outcomes and data will be de-identified and grantees will be referred to as Health System A and Health System B to provide confidentiality for reported results.

The two awarded health systems were required to implement client reminders for both breast and cervical cancer screening. Additionally, health systems were required to select at least one provider-level intervention for both breast and cervical cancer screening. Health System A chose to focus on

provider assessment and feedback, while Health System B chose to improve their provider reminder and recall system. In addition, Health System B also focused on reducing structural barriers for clients.

Client Reminders

As a required intervention, both awarded health systems enhanced their client reminder process by dedicating a staff member to conduct reminder processes including letters and phone calls. Clients at both health systems received more than one reminder if they did not schedule an appointment after receiving the first mailed reminder. An initial letter was mailed to clients, followed by a phone call if there was no response to the letter. A final reminder letter was mailed if there was no response to the secondary reminder phone call.

Awardees selected additional evidence-based interventions that were most feasible to implement and pertinent to the population served by the facility.

Provider Assessment and Feedback

Health System A improved their provider assessment and feedback system. Providers were notified monthly via email with details regarding the percent of patients seen that month that were compliant with breast and cervical cancer screenings. This information was placed in a secure shared drive where providers and support staff could access the percentages as well as the list of patients who remained due for screening. In addition, bi-annual meetings with providers and support staff were held to ensure that providers were reviewing their data.

Provider Reminder and Recall Systems

Health System B initially improved their provider reminder and recall systems by means of a temporary solution that involved the provider's staff printing a patient schedule the day before the appointments and making notes of which patients are due or overdue for a screening. This temporary solution was utilized for a short period of time until an EHR transition occurred that incorporated a systematic provider reminder tool, which included a provider reminder portal that provided quick and easy access to the cancer screening statuses of patients.

Reducing Structural Barriers for Clients

Health System B also expanded on services provided at an evening clinic held one night a week. At the time of application, the health system was encouraging women to utilize this clinic for their health care needs, including cervical cancer screening. This project allowed the clinic to add mammography services to the evening clinic to ensure women did not have to make a separate appointment during business hours to complete a mammogram.

OUTCOME DATA

Grantees were asked to provide facility-level data on a quarterly basis. The data presented in this section was compiled as provided in these grantee reports. Efforts were made by program staff to aid

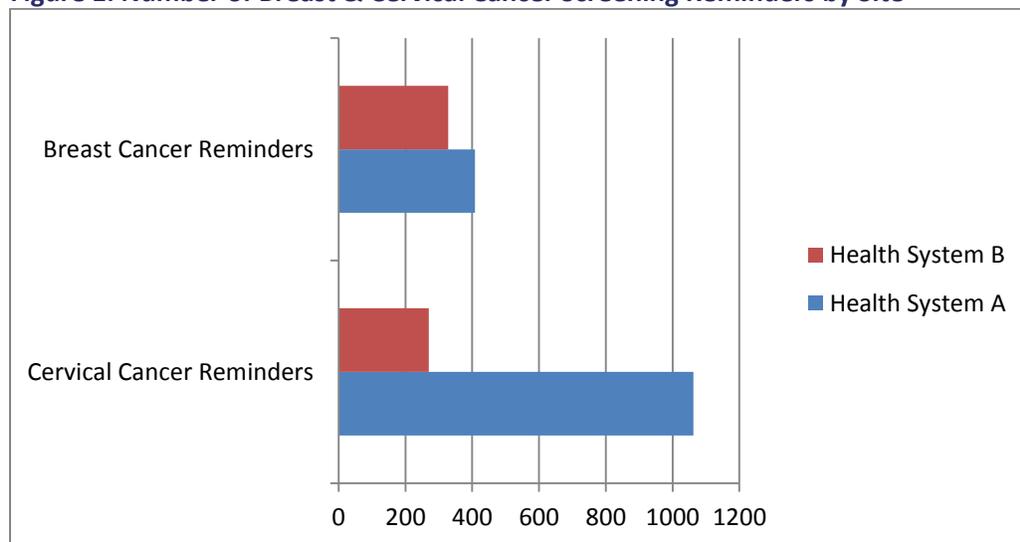
sites in providing accurate data reporting; however, accuracy is not guaranteed. This quantitative data was examined as *one* aspect of the impact of this funding.

Facilities were asked to provide baseline and quarterly data on the total number of women screened for breast and cervical cancer and the number and type of client reminders distributed. Health System A provided their screening rate for breast and cervical cancer utilizing internal CQI and UDS measures, respectively. Health System B reported their screening rate for breast and cervical cancer utilizing CMS measures. Health System B extended their project period for an additional month to complete efforts; however, data is limited to the initial 12 month project period for comparison purposes.

Client Reminders

Both health systems dedicated a portion of the funding toward personnel to conduct mail and phone client reminder processes for breast and cervical cancer screening. In total, between the two health systems sending reminders for each cancer screening type, nearly 2,000 client reminders were sent, as depicted in Figure 1.

Figure 1. Number of Breast & Cervical Cancer Screening Reminders by Site



Project Impact on Breast and Cervical Cancer Screening Rates

The intended overall impact of these system and policy-level changes is sustained improvement in breast and cervical cancer screening rates. Table 2 demonstrates the impact on screening rates seen by both health systems during the implementation period compared to baseline. There was variability in the patient population eligible for inclusion. While both health systems chose women aged 21-65 as their primary population of focus for cervical cancer screening, Health System A targeted women aged 50-74 for breast cancer screening, while Health System B chose women aged 40-74 as their target population. In addition, there was variability in baseline reporting periods as well as project period reporting. Due to differences in EHR capabilities, Health System A pulled a baseline screening rate from July 1, 2015 – June 30, 2016, while Health System B pulled a baseline screening rate from the previous

calendar year, January 1, 2015 – December 31, 2015. Lastly, due to an EHR transition at Health System A, data was only able to be compared through March 31, 2017, while Health System B data runs through June 30, 2017.

Table 2. Breast and Cervical Cancer Screening Rates by Health System

	Baseline Breast Cancer Screening Rate	Project Period Breast Cancer Screening Rate	Baseline Cervical Cancer Screening Rate	Project Period Cervical Cancer Screening Rate
Health System A	51% ¹	63% ²	34% ¹	55% ²
Health System B	63% ³	73% ⁴	52% ³	75% ⁴

¹Baseline Reporting Period: July 1, 2015 – June 30, 2016

²Project Period Reporting Period: July 1, 2016 – March 31, 2017 (Due to an EHR transition, data was only able to be compared through March 31, 2017.)

³Baseline Reporting Period: January 1, 2015 – December 31, 2015

⁴Project Period Reporting Period: July 1, 2016 – June 30, 2017

SUCSESSES AND BARRIERS

Both health systems saw an improvement for breast and cervical cancer screening rates during the project period compared to baseline data. Over the course of the nine month reporting period, Health System A saw the rate of cervical cancer screening increase from 34% to 55%, and the rate of breast cancer screening increase from 51% to 63%. Health System B’s breast cancer screening rate increased from 63% to 73% by the end of their twelve month project period, and the cervical cancer screening rate increased from 52% to 75%. Health System B reported that updating records to document hysterectomy status appropriately and obtaining results for patients who completed screenings with other providers was a large contributor to the rate increase for cervical cancer screening.

As previously stated, Health System B worked to reduce structural barriers for clients. The clinic faced a barrier in getting the word out about the availability of mammography services during the evening clinic hours, and therefore few women utilized this service. However, Health System B saw an impressive increase in mammograms completed after the addition of a 3D mammography unit. At the start of the fourth and final quarter of the project period, Health System B installed and certified a 3D mammography unit in their radiology department. In the two months following the addition of the 3D mammography unit, the department completed 89 mammograms, which was an increase from the 45 mammograms that were completed during the same time period one year prior. In addition, Health System B identified a barrier early on in the project period with the established client reminder workflow. Originally, the health system had appointed one CMA to make all reminder phone calls to patients who did not respond to the initial letter that was mailed out. Patients identified feeling uneasy speaking with a CMA they were unfamiliar with, and therefore were choosing not to follow-up on these phone calls. The health system changed the protocol to instead assign each doctor’s nurse to make the reminder calls to their own patients. The feedback from this change was very positive and improved follow-up rates from patients.

In addition, Health System A implemented monthly provider feedback reports that included details regarding the percentage of patients seen that month who were compliant with breast and cervical

cancer screenings. By the end of the project period, Health System A had developed a spreadsheet for tracking all quality measures, ensuring that provider assessment and feedback reports continue beyond the grant period. In addition, Health System A developed a streamlined release of information form to ensure timely completion of requests for records from outside providers.

SUMMARY

The SD BCCEDP and SD CCCP provided funding and technical assistance to two health systems to implement evidence-based strategies and system changes to increase breast and cervical cancer screening rates. Strategies chosen by awarded health systems included patient reminders, provider reminders, provider assessment and feedback systems, and reduction of structural barriers. Nearly 2,000 patient reminders were distributed between the two health systems. Provider reminders were integrated into EHR systems, and provider assessment and feedback systems were developed and disseminated monthly to track provider-specific screening rates. Workflows were also established by both health systems to ensure sustainability of these efforts beyond project funding. Due to these efforts, Health System A increased their cervical cancer screening rate from 34% at baseline to 55% at project completion, and breast cancer screening rate from 51% to 63%. Health System B increased their breast cancer screening rate from 63% to 73%, and cervical cancer screening rate from 52% to 75%.

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1. Cancer in South Dakota, 2014. Department of Health, Pierre, SD. May 2017. Available at: <http://getscreened.sd.gov/registry/data/2014CancerReport.aspx>
 2. American Cancer Society, 2015. Available at <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-survival>