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A Brief Report Describing Cancer Outreach Events in the Rural Midwest

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ABSTRACT

This brief report describes the findings of seven cancer prevention outreach efforts to rural locations in South Dakota and Minnesota with a specific focus on reaching agriculture workers and their families. The outreach events varied in size from a couple of hundred attendees to over 100,000 attendees. The purpose of these events also varied greatly from county fairs to health fairs. The goal of these outreach efforts was to connect with individuals in their communities in order to provide general cancer prevention and screening education and personalized cancer risk assessments. Methods used included one-on-one conversation between attendees and Avera Cancer Institute Navigation Center (ACINC) navigators as well as intake forms for individuals interested in personalized assessments. Findings showed the need for increased education on vulnerability to cancer and the need for cancer screenings. Moreover, findings indicated that smaller, focused, outreach events have the best outcomes in regards to the number of individuals directly receiving education on cancer screening and prevention.

KEYWORDS

Cancer prevention; outreach; rural; agricultural; cancer screening

Introduction

Research shows that farm and rural populations experience decreased access to health care in relation to affordability, proximity, and quality as compared with their nonfarm and urban counterparts.[1] Fostering a genuine connection to agricultural workers can influence their health-care choices. Previous research has focused on the principles of being accessible, personal, professional, linked in, and empathetic to encourage farmers and ranchers to seek help.[2] These principles align with Avera Cancer Institute's Rural Cancer Advisory Board's (RCAB), which comprises agricultural professionals across South Dakota and into neighboring states, urging the Avera Cancer Institute Navigation Center (ACINC) to travel to rural areas and connect personally with farmers, ranchers, and their families to get them connected to cancer screening and education.

Studies indicate that individuals living in rural populations are at a disadvantage when it comes to cancer care. In fact, cancer as a leading cause of death is higher in rural areas than in urban areas due to barriers to caring for this population.[3] Barriers include the inability for individuals to access routine care is difficult in a rural community. Increasing the knowledge of vulnerability to cancer and removing barriers is essential when working with rural populations.[4]

The purpose of the Navigating Cancer Prevention, Education and Detection for the Agricultural Worker project was for the ACINC to develop an impactful and sustainable community outreach program for the Avera Cancer Institute with a focus on the agricultural and rural population across ACINC's service area.

Specific objectives outlined and met through this project include:

(1) Develop a cancer outreach and education pilot program for farmers and farm families in South Dakota and Upper Midwest by:
   a. Identifying educational materials to use in the community related to cancer screening and prevention as well as to create awareness of ACINC's free navigation service.
   b. Developing a cancer screening intake document and a personalized cancer risk assessment.
(2) Pilot the cancer outreach and education events at a minimum of five locations with exposure to over 2,000 farmers and ranchers with follow up screening information to a minimum of 250 people.

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(3) Conduct participant surveys to assist with project evaluation and sustainability planning.
   a. Review the impact on participants in areas of education provided and barriers overcome, the number of people connected to services, and what outreach events are most conducive to this outreach.

Methods

This project was funded through a Central States Center for Agricultural Safety and Health (CS-CASH) pilot grant. All events included multiple vendors in a walk-through setting with vendor tables. The target audience was agricultural workers and their family members. A majority of individuals who attended were Caucasian and English-speaking. During outreach events, the ACINC had a table displaying educational materials related to cancer prevention and screening. Event attendees were not required to stop at the table, but those who did received information on ACINC services and educational materials. Specific information included, but was not limited to ACINC brochure, Your Guidelines to Cancer Screenings and Be Sun Smart brochures. Individuals also had the opportunity to complete an intake form requesting a personalized cancer risk assessment. Information collected on the intake document included gender, age, occupation in relation to the agricultural industry, and geographical location of residence. The form also included an area where individuals could request a follow-up phone call by the ACINC Navigator to provide them with personalized cancer risks based on family history and approved screening guidelines. Metrics gathered during the follow-up call, when applicable, included a category of caller, barriers to cancer screening, education, and screening service facilitation.

The framework for this project was guided by the CS-CASH Logic Model. The logic model indicates that outreach activities lead to outputs such as a presentation of findings to stakeholders. Intermediate outcomes are actions by stakeholders in reaction to CS-CASH outreach outputs (e.g. practice or policy changes) which lead to long-range outcomes such as social impact, economic impact and sustainability. Institutional Review Board approval was received for this project. A summary of the data collected during events is displayed in Table 1.

Results

ACINC participated in seven agricultural events across regions of South Dakota and one in Southwest Minnesota. Based on attendance at these events per the event administrators, there were over 375,000 total attendees at the events. While much of the feedback regarding the events is anecdotal information from the navigators who facilitated the outreach, approximately 1%–2% of the total attendees engaged with navigators for education and screening information at the five larger events that hosted greater than 15,000 attendees. This estimation of attendees was based on the number of educational materials provided during the event time period. The two smaller events that hosted less than 400 attendees were perceived to be more successful for the navigators based on attendee engagement. One event focused on women in agriculture and one was held on a reservation. These two events had approximately 80–90% of attendees stop by the outreach both for education and screening

Table 1. Summary of data collected during events.

Name of Event	Estimated Attendance	Estimated # of people engaged at the booth	Number of Risk Assessments Completed	Number of Successful Follow-up Calls
KCCR Farm and Home Show	15,000	300	10	7
Women in Ag Day	230	207	20	5
Fort Thompson Health Fair	339	305	18	5
Vermillion Farm Show	24,000	300	1	0
Brown County Fair	279,451	2,794	23	8
DakotaFest	29,000	580	5	3
FarmFest	30,000	600	9	4

information. Thirty-one percent of successful outbound cancer risk assessment calls came from the two smallest events.

There were 32 total successfully completed cancer risk assessment follow up calls out of 86 completed intake documents. Of these, 28 were female and 4 were male; 22 were between the ages of 50 and 69, which are ideal ages for cancer screening. Of the participants, 26 classified themselves as non-agricultural workers; 13 participants considered themselves to reside in town, while 19 considered themselves to reside out of town. Of the participants, 22 fit the criteria for normal cancer screening guidelines based on age, while 12 participants fit criteria for enhanced cancer screening based on personal or family history. During the follow-up call, the ACINC navigator utilized a barrier log to identify specific barriers preventing individuals from receiving cancer screenings. Barriers assessed included, but were not limited to, transportation, location of healthcare facility or provider, financial, or knowledge deficit related to cancer screening guidelines. There were 35 barriers to screening identified during the follow-up calls, and 20 of 32 individuals indicated their barrier to screening was lack of education and care coordination provided by their medical care provider. This was the most common barrier indicated by individuals. Referrals for varying types of cancer screenings were facilitated by the navigator. There were nine participants who had specific concerns related to cancer they wanted to discuss during the follow-up call.

Discussion

This project sought to identify ways to provide education and screening information to individuals in agriculture. Our findings suggest that it would be most beneficial to provide the personalized screening information and referral at the time an attendee stops at the booth since providing this information during a follow-up phone call yielded extremely low success rates. During the completed follow-up phone calls, a majority of respondents indicated that a lack of referral for cancer screenings was the biggest reason they had not received the preventative care.

Three important findings have been identified by this effort. The first finding is that smaller outreach events have greater impact related to the number of individuals reached with cancer education and screening information. Based on the small percentage (37%) of successful follow-up calls, the education and screening activity should be completed during the event. The second finding is that women are more likely than men to accept further information related to their personalized cancer risk. Understanding that women may be more inclined to attend events and seek information is key to developing the next steps. Utilizing women as the health-care leaders in their families can be a strategy for spreading information on cancer screening and education to the males within the family as well. The third finding is the lack of referral and guidance from Primary Care Providers (PCP), which is a barrier in relation to routine cancer screenings. It is unknown what causes this lack of referral, and additional efforts should be focused on arming PCPs with the tools they need to encourage individuals to seek preventative cancer screenings.

Conclusions

To successfully provide the most effective cancer prevention and screening education, it is best to focus on events that have fewer than 300 attendees. The lower number of attendees offers a more focused opportunity for discussion with individuals. To address the barriers identified during this project, cancer screening recommendations and referrals should be made at the time the individual presents at the event table. Findings also suggest that providing actual screening tests at the events, such as a Fecal Immunochemical Test (FIT) for colorectal cancer, may be beneficial. Based on the low number of participants who considered themselves to be agricultural workers, further research on how to directly reach agricultural workers to provide cancer prevention education is needed.

Disclosure statement

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