

Ross County Health District – Chillicothe, OH

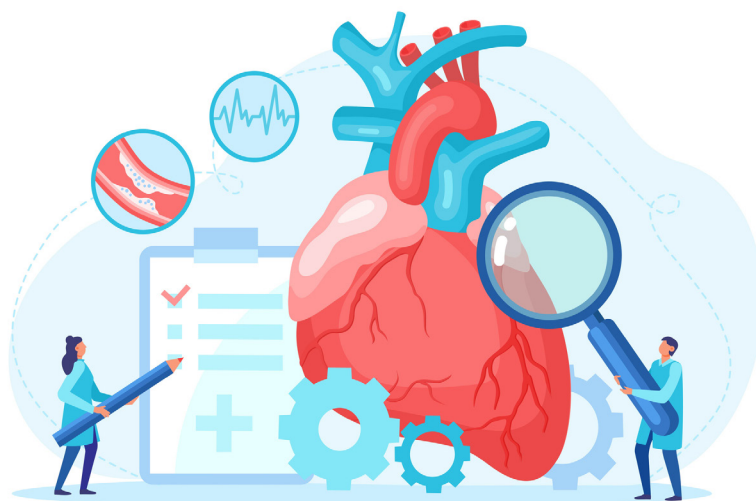


Synopsis

Since 1979, the Ross County Health District (RCHD) has been serving Ross County through a variety of health district programs and services. In November 2020, the RCHD became a nationally accredited health district demonstrating the agency’s conformity to the standards and measures of the Public Health Accreditation Board (PHAB) which focus on an application of the CDC’s *10 Essential Public Health Services*. RCHD is proud to serve its community in many ways by ensuring it is committed to delivering the foundational public health services for the following: communicable disease control, chronic disease prevention, injury prevention, environmental public health services, maternal/child/and family health, as well as access and linkage to clinical care. RCHD also values opportunities to expand its foundational public health services through grant funds and projects to help support community-specific programs and services. Through delivery of extensive public health services, RCHD aims to address health inequities, gaps, and barriers within its community to help lead to better health outcomes of the community we serve. In partnership with NACCHO, RCHD is committed to expanding its efforts to positively impact cardiovascular health risk factors through providing evidence-based practices to eliminate barriers to heart healthy behaviors.

Challenge

Located within the Appalachian Region, Ross County has several health disparities including heart disease and poverty. Heart disease is the leading cause of death in Ohio and Ross County.^{1,2} The CDC’s *Stats of the State’s Heart Disease Mortality Report* confirmed that Ohio’s 2020 age-adjusted mortality rate was 196.9 per 100,000, or



30,547 deaths, with the 11th highest mortality rate.³ The Ohio Department of Health reports that the burden of heart disease is experienced at higher rates for residents with lower incomes.⁴ The *2019 Ross Community Health Assessment* indicated that the heart disease death rate was 206 deaths per 100,000 people. The same report determined from the *Adult Public Survey* that 26.2% of adults had high cholesterol, and 39.6% reported high blood pressure (BP).¹

The Appalachian Regional Commission (ARC) noted the Region’s heart disease mortality rate of 204 per 100,000 is 17% higher than the national rate of 175 per 100,000. In addition, rural Appalachian counties have a heart disease mortality rate that is 27% higher than urban counties. The ARC explained the more rural an area, the more impoverished it is likely to be.⁵ County Health Ranking’s 2021 data identified 58.7% of Ross County as rural. ARC found economically-distressed communities’ heart disease mortality rate is 29% higher than non-distressed communities.

ARC defines a distressed community as one where, “the median family income is no greater than 67% of the U.S. average and the poverty rate is 150% of the U.S. average or greater.” ARC has determined five communities within Ross County that meet this designation.

This North Central Appalachian Region has a household poverty rate of 18.2%.⁶ The *2021 State of Poverty in Ohio Report* concluded that Ohio's poverty rate is 15.2%, where 10,803 individuals are living in poverty.⁷ *Healthy People 2030* supports the linkage amongst poverty, socioeconomic status, and health outcomes, finding that poverty increases the risk for disease and premature death.⁸

By implementing the team-based care approach and integrating community health workers (CHWs), RCHD will address the impact that poverty has on rural patients. Providing a comprehensive care team will address clinical health concerns and social determinants of health that are hindering positive health outcomes. The CDC confirms the evidence of effectiveness for integrating CHWs in clinical care teams to improve cardiovascular health, and health disparities often associated with populations who are underserved and experience barriers to care.

Solution

RCHD partnered with the Chillicothe Farmers Market, Hopewell Health Centers (HHC), and Ross County's Ohio State University Extension Office's SNAP-Ed Program to implement a heart healthy pilot initiative that incorporated the evidence-based strategies of team-based care, CHWs, nutrition education, and self-measured BP monitoring. Providers from HHC completed referrals of patients who met the criteria of being high-risk for heart disease (showing high BP, a sedentary lifestyle, and poor nutrition) to the program. HHC, like RCHD, serves the entire county thus, any HHC client residing within Ross County and meeting the criteria listed above was eligible to enter the program. However, this initial program captured participants that all live in Chillicothe.

Referred participants were connected with a CHW through RCHD's Pathways HUB. The Pathways HUB program utilizes CHWs to connect patients and providers with the goal of improving all aspects of health by addressing social determinants of health like access to healthy food choices, transportation, and

barriers to care. Within this program, CHWs assist their clients in identifying health needs and risks, as well as addressing these risks through targeted pathways. This pilot program served as a capacity building process to develop and strengthen the client base and provider relationships for the Pathways HUB program within the health district.



Upon entering the pilot program, participants were provided with materials to help them successfully improve their heart health outcomes. These items included cooking preparation materials, an electronic physical activity and heart monitor, a digital blood pressure monitor, and a \$50 farmers market voucher. Each participant was taught how to accurately use the blood pressure monitor and was required to report their BP levels throughout the course of the program. Likewise, participants were asked to wear their activity monitors and record their daily steps. In addition to receiving CHW communication and home visits, participants completed five virtual nutrition education videos. These videos specifically comprises the SNAP-Ed program to adhere to a heart healthy diet. The program concluded with participants attending two final in-person activities. The first activity was a cooking demonstration facilitated by the SNAP-Ed program educator. Lastly, participants met at the Chillicothe Farmers Market and conducted a tour of the market, and were provided with heart healthy recipes and produce and food storage information. During the market, participants were able to use their provided vouchers to purchase healthy food items.

Results

Overall, the program served the purpose of expanding RCHD's Pathways HUB program and increasing the health monitoring and nutrition knowledge of participants. Through RCHD's Pathways HUB program, the health district is dedicated to addressing the underlying factors that foster poor health outcomes.



Through this pilot program, RCHD was able to increase awareness of the Pathways HUB and showcase its ability to connect individuals to resources throughout the community to address health needs and risk factors.

Aside from the knowledge obtained from the participants, the largest positive impact this program achieved was the growth of community partnerships. From this program, we have been able to strengthen these relationships to the extent that the participants and the associated partner agencies are wanting to expand the initiative into a continued nutrition education series with the local SNAP-Ed program.

Although BP rates were not improved in this short pilot period, participants were more aware of their BP, and more likely to monitor their BP on their own by having access to a personal BP monitoring system and knowledge on how to operate the machine correctly. Additionally, participants were provided nutrition education and will have the capacity to select healthier food choices to meet their health needs.

Additionally, daily steps taken were monitored for each participant using an activity tracker. The entire daily total steps for half of the participants averaged between 5,000 and 7,000 steps. In 2019 the National Institute of Health reported on a Harvard Medical School study that followed the daily activities of older women for a four-year period. The average age of individuals within this study was 72. Of the participants who walked at least 4,400 steps a day, they were 41% less likely of dying within that four-year monitoring period than the females who only walked 2,700 steps a day. Using these findings as a frame of reference, half of the participants in the RCHD pilot program were meeting the 4,400 steps a day standard. It should be noted that all the participants in our program were female and 65 years of age and older.

Lessons Learned

As with any program, this initiative allowed RCHD insight to barriers for access to care and good health within the community RCHD serves. Additionally, it allowed the health district to identify issues within the initial program design that can be addressed to improve the Pathways HUB effectiveness in the future. The major flaws of this pilot program were the limited time frame of the program, accurate data collection, and staffing capacity. With this being a six-month program, RCHD was limited on the amount of time to recruit participants and implement the program. For this reason, data was

only obtained from late March to early May, and was implemented with five participants.

This transitions into data limitations, in that significant health improvements may not be achievable in this limited timeframe. Also, the small number of participants within the program is not representative of the population, nor will there be complete confidence in the data due to the self-reporting nature of the data collection methodology. Furthermore, the Pathways HUB program is in its infancy at RCHD. Upon initially receiving this funding opportunity, RCHD had one full-time CHW to oversee this pilot program. However, towards the final weeks of the program, this position was left unfilled, leading to another RCHD staff member fulfilling these responsibilities. This turnover led to a capacity issue that is likely to be a contributing factor to this program not producing substantial quantitative findings. With that said, once a fully-staffed Pathways HUB program is achieved, and an extended timeframe is allowed, the methods implemented within this pilot program can be replicated and are backed by data-driven strategies indicating a favorable likelihood for improved heart health outcomes.

- 1 Jones, S K, Dennis, K, Powell A. Partners for a Healthier Ross County's 2019 Community Health Assessment. 2019.
- 2 National Center for Health Statistics, Ohio. Centers for Disease Control and Prevention. 2022. <https://www.cdc.gov/nchs/pressroom/states/ohio/oh.htm>.
- 3 National Center for Health Statistics. Heart Disease Mortality by State, Ohio. Centers for Disease Control and Prevention. 2020. https://www.cdc.gov/nchs/pressroom/sosmap/heart_disease_mortality/heart_disease.htm.
- 4 Heart Disease. The Ohio Department of Health. <https://odh.ohio.gov/know-our-programs/heart-disease>.
- 5 Investing in Appalachia's economic future. Appalachian Regional Commission. <https://www.arc.gov/>.
- 6 Classifying Econmic Distress in Appalachian Counties. Appalachian Regional Commission. <https://www.arc.gov/classifying-economic-distress-in-appalachian-counties/>.
- 7 State of Poverty in Ohio. Ohio Associations of Community Action Agencies. 2019. https://oaca.org/wp-content/uploads/2022/02/SOP-Report-2021_final-low.pdf.
- 8 Healthy People 2030: Economic Stability. Office of Disease Prevention and Health Promotion. U.S. Department of Health and Human Services. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability>.

Contact: Ciara Fox, MPH
Email: cmartin@rosscountyhealth.org
Phone: 740.779.9652
LHD: Ross County Health District
City, State: Chillicothe, Ohio
Website: www.rosscountyhealth.org