



Woman-to-woman: Feasibility of a lay health advisor program for cervical cancer education in Grenada, W.I.

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ABSTRACT

Objective: The aim of this study was to evaluate the impact of Woman- to-Woman, a lay health advisor (LHA)-led educational intervention on cervical cancer and human papillomavirus (HPV) knowledge in a cohort of at-risk Grenadian women.

Methods: LHAs from high-risk parishes were trained in the administration of the intervention and administered the program to 78 local women. Participants completed a pre- and post-knowledge test and a session evaluation. LHAs participated in a process evaluation focus group.

Results: Sixty-eight percent (68%) of participants obtained higher knowledge scores following the educational intervention. The difference between the pre- and post-test scores was statistically significant ($p = 0.05$). Almost 94% agreed that they were taught new and useful information by credible, community informed and responsive LHAs. Ninety percent (90%) indicated great satisfaction and high motivation to recommend to others. LHAs reported on the intervention and their community interactions.

Conclusions: Results demonstrate that a LHA-led educational intervention significantly improved participants' knowledge of cervical cancer, HPV, Papanicolaou test and vaccination against HPV. Innovations: Researchers transcreated an evidenced based intervention originally designed for Latina women for Grenadian women. There is no evidence in the literature of previous LHA- cervical cancer education studies conducted in Grenada nor the Caribbean.

1. Introduction

Among women, cervical cancer is the fourth most common cancer worldwide with an incidence of 3.2% [1]. Cervical cancer accounted for an estimated 528,000 new cases worldwide and for 266,000 deaths in 2012 [2]. Alarming, more than 80% of cervical cancer cases occur in developing countries, of which the Caribbean region is a subset [3]. Cervical cancer is a consequence of a long-term infection with human papillomavirus (HPV) which can be found in 99.7% of cervical cancers [4]. Globally, cervical cancer is one of the most successfully controlled cancers because of the Papanicolaou test (Pap test). The Pap test is able to detect cervical cancer and precancerous lesions. However, many developing countries have not benefitted from these advances. Global incidence and mortality rates depend upon the presence of screening programs for cervical

precancer and cancer and of HPV vaccination, which are most likely to be available in developed countries. These interventions have led to a 75% decrease in the incidence and mortality of cervical cancer over the past 50 years in developed countries [5].

In developing countries, where access to cervical cancer screening and prevention programs is limited, cervical cancer remains the second most common type of cancer (15.7 per 100,000 women) and the third most common cause of cancer mortality (8.3 per 100,000) [3]. The effects of cervical cancer burden on women in their midlife are immeasurable; their most productive years are lost, and families are deprived of mothers and partners [6].

According to statistical data, over 85% of the impact and burden of cervical cancer is primarily concentrated in the Caribbean and in Latin America [7]. This creates a pressing disease burden on women's health in the Caribbean region. A joint report by PAHO and WHO indicated that

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Grenada has the highest incidence rate of cervical cancer in the non-Latin Caribbean [8]. This is of concern, because low cost Pap test screening is available country-wide in Grenada [9].

There is a need for a community engaged cervical cancer intervention to improve Grenadian's awareness and uptake of Pap testing. Results from a qualitative study of Grenadian women indicated that increasing education and knowledge of cervical cancer is the first step towards increasing the screening rates. Participants also stated that their preferred method of cervical cancer education was face-to-face and in small groups with open discussion and a facilitator. Participants wanted to be able to ask questions and get an immediate answer [10].

An important tenet on which healthcare delivery systems are designed and executed is the notion that behavior change is greatly influenced by our interaction with persons who we recognize as similar to ourselves. Lay health advisors (LHAs) are trained community members who are similar to the target population and in some cases are known and trusted members of the community [11]. LHAs are also known as community health aides, community health workers, community health advisors, peer educators, natural helpers, and peer outreach workers [12-16]. Research suggests that a reliance on LHAs and techniques that are part of a cultural competency model could theoretically improve the ability of healthcare providers to deliver appropriate services to diverse populations, helping to improve health outcomes and reducing health disparities [17].

The LHA concept came to recognition in the USA in the 1960s. It was born out of the belief that every community has people to whom others turn naturally for advice, help and support [18]. If these persons could be identified and trained, they could serve as major distributors of health information to others in their communities. In doing so, the overall health consciousness in the community is raised [18,19]. The concept was spurred by the passage in 1962 of the Migrant Act and in 1968 by the creation of the Indian Health Service's Community Health Representative Program. In the 1990s the Centers for Disease Control and Prevention reignited interest in the LHA model as a means of providing informal, community-based, health-related services and bridging the gap between the primary healthcare provider and persons in the community [20].

LHAs address a wide range of issues and are involved in varied activities. They also have an extensive geographic reach [21]. Roles range from information dissemination and health education to policy and community advocacy; and from negotiating agency services to providing preventive and curative care [11].

Salud es Vida (Health is Life), is an evidenced-based curriculum and intervention program that was developed for lay health workers, (promotoras), in the Hispanic community in response to the high prevalence of cervical cancer and HPV among Latina women in Georgia USA [22]. After successful implementation of *Salud es Vida* in the Latino community, researchers were interested in implementing a similar program in the Grenadian context given the high incidence of cervical cancer among Grenadian women. *Salud es Vida* was adapted to *Woman-to-Woman (W2W)* for the Grenadian context with support from the developers of the curriculum. Details of the curriculum development and LHA training are reported elsewhere [22,23]. The aim of this study was to report the feasibility of the evidenced-based lay health advisor delivered curriculum adapted to educate Grenadian women about cervical cancer and HPV. Feasibility studies enable researchers to assess whether the ideas and findings can be considered relevant and sustainable [24]. They also serve to determine whether an intervention is appropriate for further testing. Specifically, we present the community participants' change in knowledge and evaluation of the sessions and the LHA process outcomes obtained from a focus group discussion.

2. Methods

2.1. Setting

The state of Grenada includes the islands of Grenada, Carriacou, and Petite Martinique and covers a land area of 344 km². Grenada is located

at the southern end of the Windward Islands, about 100 miles north of Venezuela in the Southeastern Caribbean Sea. The current estimated population of Grenada was estimated 113,949 in 2022 [25]. Cervical cancer screening in Grenada is performed within each of the seven health districts, which consists of seven parishes with a health centre in each parish, 30 medical stations, private clinics, and the Grenada Planned Parenthood Association [26].

2.2. Lay health advisors (LHAs)

LHAs were selected because of their role as respected leaders in their communities. LHAs hailed from the four parishes with the lowest cervical cancer screening rates as determined by data from the Grenada Ministry of Health. These were St. David, St. Patrick, St. John and St. Mark. Two LHAs each were trained from St. David and St. Patrick, one each from St. Mark and St. John and an additional two advisors from a female focused organization, the Grenada National Organization for Women (GNOW), a community partner. LHAs were between the ages of 21 and 64, and a Grenadian citizen living on the island. Eight LHAs received intensive 10-h training in cervical cancer education over the course of two days in April 2017. Details on their training can be found in Richards et al., 2019 [23]. One LHA dropped out of the program without explanation, leaving seven LHA to educate their respective communities. Each LHA was charged with coordinating and leading community sessions and a goal of educating at least 20 female community members in each of the four parishes.

2.3. Intervention

A multicomponent intervention strategy was employed in this study. The W2W curriculum was adapted from *Salud es Vida*, (Health is Life), a theory-based curriculum developed for lay health workers (promotoras) to deliver cervical cancer education in the Hispanic community [22]. Adaptations were made to ensure the curriculum was cultural and language appropriate. Several strategies focused on increasing the participants' demand for screening services (reminders, incentives, and group education using small media-posters, booklets, and leaflets) as well as those which increase access to these services (through the provision of screening site addresses and phone numbers). This approach is consistent with the recommendations of the Community Preventive Services Task Force [27]. In addition to increasing screening for cervical cancer with the Pap test, this approach has been found to be cost-effective. The study was approved by the IRBs at Nova Southeastern University in Ft. Lauderdale, FL and St. George's University, St. George's, Grenada and informed consent was obtained from all participants.

LHAs were equipped with a toolkit containing: a flip chart, consent forms, poster paper, pre and posttest forms, writing utensils, session evaluation forms, sign-in sheets, and brochures. The flip chart was used to assist with the delivery of their educational message. The contents of the flip chart encompassed the following areas:

1. The female reproductive tract.
2. What is cancer?
3. How does cervical cancer occur (with a special focus on HPV)?
4. The stages of cervical cancer.
5. How to prevent cervical cancer.
6. The purpose of the Pap Test.
7. The nature of the Pap Test.
8. Preparing for the Pap test.
9. Expectations during the Pap Test.

Discussion of the HPV Vaccine was limited because at the time of this study, the HPV vaccine was not available in public clinics in Grenada. The brochure included information on cervical cancer and screening along with addresses, contact information, and estimated cost for clinics that provide Pap testing.

2.4. Subject recruitment and procedure

LHAs recruited women ages 21–64 years of age to participate in a community session located at a convenient venue on a specific day and time. Each LHA used both direct and indirect community responsive methods of included both traditional (word of mouth, making announcements at community events or church service) as well as technology (WhatsApp, and Facebook) approaches. The size of the education sessions were decided by each LHA and ranged from a minimum of three to a maximum of 13 participants. For the first session, each LHA had a member of the research team accompany them to ensure fidelity of the curriculum and to assist until the LHA was comfortable. Once the LHA felt comfortable with the curriculum, they led the sessions solo or in pairs with another trained LHA.

2.5. Measures

The knowledge and delivery of the curriculum was evaluated through a 20-item pre and post-test instrument and a session evaluation form, administered by the LHAs. Data was entered in an Excel spreadsheet imported into SPSS Version 25 [IBM Corp. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.; 2017]. The Wilcoxon sign rank test was used to analyze the pretest-posttest scores. The open-ended portions of the written evaluations and the audio-recorded LHA focus group debriefing session were transcribed verbatim and analyzed via content analysis method. This method consists of reviewing the transcripts, developing codes and meaning, coding the text, refining the codes, and analyzing the results to create themes. In the last step, the focus group themes were reviewed with the LHAs to determine the validity and reliability of the resulting process and summative evaluation themes.

3. Results

3.1. Community sessions

Seventy-eight women participated in the community session. Their demographic characteristics are described in Table 1. The average age of the participants was approximately 35 (SD 13.1). The parishes of St. David and St. Patrick accounted for more than half of the community participants (51.3%). St. Andrew, the largest parish in Grenada, had the least number of participants (2). More than half (60.3%) of the participants were single, and 34.6% were either married or living in a committed relationship. Most of the women were employed outside the home, either on a full-time (43.6%) or a part-time (15.4%) basis. However, 37.2% of participants were unemployed/homemakers. Eleven percent of the participants were educated up to the university level, 45% attained a high school education, and 20% had less than a high school education. Almost 63% of these community participants self-reported having had a Pap test at some point in their life while 33.3% reported that they never had one.

Table 2 shows the comparison between baseline knowledge about cervical cancer, HPV infection and the Pap test and post-education intervention knowledge score. Most of the participants either scored higher (68%) or received a similar score (14%) after the lay health advisor-administered curriculum. Only 14 participants (18%) obtained a lower score post-intervention. This comparative difference was statistically significant ($p < 0.05$).

Sixty-six participants completed the post-session evaluation form. The lay health advisor-administered curriculum was viewed positively. Up to 90% of the women agreed that the training materials were useful and reported the instructors as knowledgeable of the subject matter (90.9%) and interesting and engaging (87.8%). Over 80% of the women rated the facility staff as being professional and reported that the training facility was comfortable and appropriate for the training exercise (86.3%). The results of the overall training sessions are provided in Table 3. Findings revealed that 89.4% of the participants felt the objectives were clear and understandable, and an equal percentage felt that the goals were accomplished. Also, 93.9% of the women agreed that the information provided

Table 1
Demographic characteristics of participants.

Variable	N (78)	Mean (SD) or %
Age	78	34.5 (13.1)
Parish of Residence		
St. Andrew	2	2.6
St. David	23	29.5
St. George	10	12.8
St. John	13	16.7
St. Mark	12	15.4
St. Patrick	17	21.8
Missing Data	1	1.3
Marital Status		
Single	47	60.3
Married	14	17.9
Divorced	1	1.3
Living Together	13	16.7
Widowed	1	1.3
Missing Data	2	2.6
Employment		
Full Time	34	43.6
Part-time	12	15.4
Unemployed	29	37.2
Missing Data	3	3.8
Education		
Primary	16	20.5
Secondary	29	37.2
Community College	21	26.9
University	11	14.1
Missing Data	1	1.3
Pap Smear History		
No	26	33.3
Yes	49	62.8
Not Sure	3	3.8

was new to them, and the majority felt satisfied (92.4%) and motivated (90.9%) to recommend it to other women in their community.

When analyzing the open-ended comments within the post-session evaluation, participants found the most useful areas to be the information about “getting tested early for cervical cancer and HPV” and “why a pap smear is important”. One member commented that the most useful areas were, “How cervical cancer is developed and things to do to prevent cervical cancer,” which ultimately is the goal of such interventions. Most community members commented that they, “found all the information useful and important”. There were no responses for the question about the least useful areas. In response to the question about additional topics of interest, breast cancer was the most requested additional topic, with several persons noting the need for discussions that provide information on women's health in general. Other requested topics included education on HIV/AIDS, sexually transmitted diseases, and other cancers that can affect both men and women.

3.2. LHA process feedback

Upon completion of the community sessions, LHAs participated in a focus group debriefing session to discuss lessons learned and suggestions for the improvement of the training. The post-session summative focus group discussion with the LHAs revealed four major themes that characterized the training experience: challenges, incentives, curiosity, and setting.

Table 2
Pre-test Score/Post-test Score Comparison.

Variable	N = 78% p-value: 5%
Higher Score	53 (68%)
Lower Score	14 (18%)
Same Score	11 (14%)

Table 3
Community participant's view of the lay health advisor- administered session.

Variable	N = 66	%
Overall Training Session		
The goals of this training session were accomplished		
Strongly agree	29	43.9
Agree	30	45.5
Not sure	4	6.1
Disagree	1	1.5
Strongly disagree	2	3.0
The objectives of this training session were clear/understandable		
Strongly agree	33	50.0
Agree	26	39.4
Not sure	3	4.5
Disagree	1	1.5
Strongly disagree	3	4.5
The training session provided me with new information on women's health		
Strongly agree	34	51.5
Agree	28	42.4
Not sure	3	4.5
Disagree	1	1.5
I would recommend this training to others		
Strongly agree	37	56.1
Agree	23	34.8
Not sure	3	4.5
Disagree	3	4.5
I am overall satisfied with this training session		
Strongly agree	33	50.0
Agree	28	42.4
Not sure	2	3.0
Disagree	1	1.5
Strongly disagree	2	3.0

A major challenge for all the LHAs was the scheduling of the sessions. Responses from LHAs included:

“Today is not a good day, tomorrow's not a good day, the timing. So, to getting that perfect timing that fits everybody was a bit challenging. But once we settled on something it was smooth sailing.” (LHA 2)

“...when you make a date, just go with it. Whoever show up, go with it. So one, two persons, go with it. You set a date just go with it and then the others gonna trickle in.” (LHA 1)

A few of the LHAs had issues with getting participants to complete the survey and evaluation documents.

“...persons were really excited to learn about the session. However, they find that ok, doing the survey they didn't want to participate. So I had a lot of persons who were in the sessions but did not complete the survey.” (LHA 5)

“I had maybe one or two of my sessions, I had persons that couldn't read that was there. So, you know they didn't want to do it because they couldn't read. And they didn't want to say it because it was as much an embarrassing thing. But just because of their age group I kinda figured out that you know maybe they don't know how to read.” (LHA 4)

Others did not find a problem with the paperwork. As one LHA stated, *“I didn't have issues with that. Prior they did the pretest, and we had no issues with that.”* (LHA 6).

In terms of incentives, the opinions were mixed.

“I think meals or snacks or something helps because at both of my sessions I had something to eat. A small snack, sandwich and so on, so that would help. Because two again, persons are coming from work; they are exhausted. So I kinda give it as a...to kinda help their attention span a bit.” (LHA 2)

“I didn't see that they needed incentive, like financial. To me they were more appreciative of the information than anything else.” (LHA 5)

LHAs were surprised by the curiosity and *“hunger for knowledge”* expressed by the participants. They stated that what stood out was the lack of knowledge about cervical cancer and HPV. As one LHA said,

“It was an eye opener for me because I didn't realize how hungry people are for the information, and they really appreciated it. And people who you expect, or think is knowledgeable about it, they were the bunch that probably asking the most set of questions and probing and wanting more. So, I really wish this could continue.” (LHA 3)

“The two sessions I had went overtime and persons still call back and asking questions. You know because they just want to find out things. Overall, it was really good. I really appreciate being a part of it, and I can do it again anytime.” (LHA 1)

Setting had to do with the size of the sessions, the intimacy, and the informal nature of the education session.

“I believe that one on one, that group setting, that contact, physical contact, this is important. For my sessions I felt they needed that person, that ear to listen to the questions and somebody to tell them directly.” (LHA 7)

“The pressure is off, and they just sit down, they have an interactive session, they learn. People are open to that, and they would actually learn because you know, you don't have that pressure. You don't have that authoritarian kinda approach, you know it's kinda informal. They get to just speak and be themselves, they are open to that.” (LHA 4)

“... And I am saying well what happen to the clinics? What happen to the clinics? They going to the clinics, but they don't get that kinda talk. And then from these sessions a lot of other questions came up that doesn't even relate to cervical cancer but generally your health, your well-being. Questions that individuals would be kinda fearful to ask in an open setting or....so they... all of them use that opportunity” (LHA 5)

The LHAs agreed that the sessions should not go beyond 10 participants,

“Otherwise, if you don't have that support of another person, you can feel overwhelmed with the amount of questions that coming at you. Try not to go beyond ten.” (LHA 2)

4. Discussion and conclusions

4.1. Discussion

The findings from this study revealed that most community participants scored higher after the LHA-delivered curriculum, demonstrating a significant increase in community participants' knowledge of cervical cancer, HPV infection, Pap testing and HPV vaccination. The community participants were satisfied with the LHA-administered curriculum and its delivery as demonstrated in the post session evaluations. Most participants felt that the goals and objectives were met, and they were eager to recommend it to others in their communities. This positive response is important for the sustainability of such initiatives.

The LHAs in the current study gave positive feedback on the Woman-to-Woman intervention and their overall interaction with the community members. Focus groups held with LHA revealed four major themes including: Challenges, Incentives, Curiosity, and Setting. Some advisors commented on the difficulty in getting groups together at one equally convenient time and hence the need for several smaller sessions. However once scheduled, the sessions were found to be successful. This may be due to the intimate setting of the sessions and personal attention given by LHAs. It has been found that a protocol that is responsive to participants, such as flexible scheduling, frequent contacts, and creation of a nurturing relationship, can encourage participation [28]. Group size also may have played a role in the success of each session. LHAs suggested that small groups of not more than ten participants were most effective because they were able to get through the material and answer all questions. This is consistent with the Centers for Medicare and Medicaid Services (CMS) which recommended a group size of 2–20 members, with an average of 10 participants for patient education [29].

A few advisors thought improvements could be made through incentivized sessions with food and or small items like T-shirts. Research has found

that payment affirms participants' value and the importance of their participation. It can also equalize the burden placed on participants in terms of time and cost to participation [30]. In contrast other LHAs felt that incentives were not necessary and felt that participants were happy to receive the information about cervical cancer. This result is consistent with that of a qualitative study of 58 church-attending African American women which revealed that the personal meaningfulness of the research would affect their decision to participate in research related to breast cancer [31]. The use of incentives will have to be weighed on the ability to provide them and the importance that it has for participation and retention in the intervention. It should be noted that the LHAs received nominal compensation for their time, travel, and costs associated with the sessions.

LHAs were surprised with the "hunger for knowledge" that the participants displayed in the sessions. This demonstrates a positive response to the W2W curriculum. Consistent with what the LHAs reported, almost 94% of the women who completed the posttest study evaluation conveyed that the information they were taught in W2W was new to them. This is evidence of the need for cervical cancer education in a country that was found to have the highest rates of cervical cancer in the non-Latin Caribbean [8].

The primary prevention of cervical cancer with Pap testing with or without HPV testing and vaccination against common HPV serotypes, remain cornerstone interventions in reducing the incidence and mortality of cervical cancer [32]. Therefore, addressing disparities in the incidence and mortality of cervical cancer in Grenada, relative to developed nations, requires a critical examination of the barriers to screening in the Grenadian context as demonstrated in two previously published studies [9,10]. Researchers investigated the barriers to screening from the perspective of the providers of healthcare (gatekeepers) and from the perspective of members of the at-risk population (women between the ages of 21 and 64). While access to screening, as impacted by both monetary and non-monetary factors, was highlighted as an important barrier, knowledge deficit and cultural barriers were shown as important factors that limited access to screening services and contributing to the disparities in cervical cancer. Additionally, it was found that women's preferred means of receiving information was face-to-face contact where questions can be asked, and clarifications made [9]. The LHA method used in this study addressed these findings.

There were several strengths of this study. The culturally relevant adaptations made to the curriculum and recruitment protocol piqued women's interest in the study, supported recruitment efforts and encouraged participation. This was evidenced by the relatively large sample size from the parishes with the lowest cervical cancer screening rates which allowed for representation of the most at-risk and underserved women. The mixed method evaluation employed both quantitative and qualitative measures, allowing perspectives from the community and the LHAs which are important for refinement and sustainability. Despite the many strengths, there were several limitations that are inherent to feasibility studies and pre-test post-test design, that should be noted. Selection bias may be a factor as participants were not randomly selected and voluntarily joined the study after being approached by the LHA. Self-selected participants may have been more motivated to learn, resulting in higher post-test scores. However, feasibility studies are designed to test an intervention in a limited way and may be conducted in a convenience sample [24]. Though it was found that 63% of the study participants stated that they had a Pap test previously, determination if whether the frequency was guideline appropriate (i.e. within the last three years) was not ascertained. Additionally, researchers did not assess changes in screening behavior upon completion of the intervention. The W2W feasibility study was designed to be conducted in a limited way with intermediate rather than final outcomes and with a shorter follow-up [24].

4.2. Innovation

In most of the Caribbean islands including Grenada, reaching an adequate screening rate is problematic despite wide availability and accessibility of the Pap test [33,34]. The use of culturally competent programs and

lay health advisor (LHA)-led interventions in communities with low screening participation rates were found to be effective in improving screening rates [35,36]. Although several studies have shown the effectiveness of lay health advisors in increasing knowledge and screening for cervical cancer in many different at-risk populations, to the authors' knowledge, the current study is the first to have been conducted in the Grenadian setting [37-39]. Additionally, no research on theory-based educational interventions for CC screening were reported in the literature.

The current study approach is innovative in that the *Salud es Vida* (Health is Life) educational intervention, a curriculum and theory-based program developed for lay health advisors (LHA) to deliver an educational intervention in the Latina community [40] was culturally trancreated for Grenadian women. Researchers, partnered with LHAs and made modifications to ensure cultural and linguistic appropriateness. Effective health promotion requires that messages and information reflect the cultural and linguistic capacities of the target group. The approach used in this study assures that the community is engaged and that health promotion efforts are anchored in the values, beliefs and perspectives of the target community [41].

4.3. Conclusion

The curriculum administered by adequately trained lay LHAs significantly improved community participants' knowledge of cervical cancer, HPV infection, Papanicolaou screening and vaccination against HPV. The curriculum proved to be a feasible intervention to educate women in the at-risk and underserved Grenadian setting. The participants were pleased with the structure and delivery of this tailored curriculum indicating high acceptability among this population. Women enjoyed meeting face-to-face with knowledgeable instructors who made them feel comfortable asking and subsequently answering all their questions.

This study paved the way for follow-up interventions focused on positive screening behavior, a desired outcome of the W2W curriculum; as well as trials assessing its cost-effectiveness compared to the management of cervical cancer. Policy makers will need to explore the integration of this model to improve the rates of cervical cancer screening and ultimately decrease the burden of the disease on the healthcare system and society. The results of this study are important for building the evidence base for the practicality and effectiveness of the LHA model in the Caribbean. The success of W2W also demonstrates its potential use by public health practitioners to improve health literacy in similar communities with minor cultural and language adaptations. Future research should include implementation in additional Caribbean settings and a randomized controlled trial that measures knowledge retention and screening behavior post intervention.

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CRediT authorship contribution statement

Kamilah B. Thomas-Purcell: Funding acquisition, Conceptualization, Visualization, Methodology, Supervision, Writing – original draft. **Samantha Patterson:** Writing – review & editing. **Andrew N. McIntosh:** Writing – review & editing. **Christine Richards:** Project administration, Investigation. **Marva Primus-Joseph:** Visualization, Investigation. **Donnie J. Purcell:** Software, Formal analysis, Validation. **Kimlin Ashing:** Writing – original draft.

Declaration of Competing Interest

The Author(s) declare that there is no conflict of interest.

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