2021 Community Engagement Studio Virtual Training Summit: Increasing the Diversity of Stakeholders Engaged in Research

Alecia Fair, DrPH - Vanderbilt University Medical Center, Nashville, TN

Leah Dunkel, MPH - Vanderbilt University Medical Center, Nashville, TN

Marquetta Frost - Calhoun County 4-H Creative and Expressive Arts Youth Program Coordinator, Michigan State University Extension, Calhoun County Community Health Worker, East Lansing, MI

Tiffany Israel, MSSW - Vanderbilt University Medical Center, Nashville, TN

Felicia Lane-MuMin -Women Inspired Neighborhood Network, Henry Ford Health, One Ford Place, Detroit, MI

Lexie Lipham, MPH - Vanderbilt University Medical Center, Nashville, TN

Devan Ray, BA - Vanderbilt University Medical Center, Nashville, TN

Meghan Spiroff, MHA - Department of Obstetrics & Gynecology, Michigan Institute for Clinical and Health Research , University of Michigan, Ann Arbor, MI

Brieanne Witte, BS - University of Utah, Salt Lake City, UT

Cathy Wolfsfeld, BEd - Utah Area Health Education Centers, Salt Lake City, UT

Yolanda Vaughn, MS - The Family Center, Nashville, TN

Stephania T. Miller, PhD, MS, MSCI - Meharry Medical College, Department of Surgery, Nashville, TN

Corresponding author: Stephania T. Miller, Phone: 1-(615) 327-5666, FAX 1-(615) 327-5579, E-mail:smiller@mmc.edu

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ABSTRACT

Background: There are few methods that focus on engaging racial and ethnic minorities in research. The Meharry-Vanderbilt Community Engaged Research Core partnered with the University of Utah, the University of Michigan, and community/patient partners to convene a virtual summit to share the Community Engagement Studio (CE Studio) model, a structured and widely-used approach that facilitates community engagement in research.
Objectives: The CE Studio Virtual Training Summit (Summit) goal was to prepare multi-stakeholder (e.g., researchers, community members) research teams to engage more racial/ethnic minorities in CE studios.
Methods: Summit planning included: 1) agenda development, including CE Studio training and a live CE Studio demonstration; 2) Summit advertisement across several networks, including minority-serving institutions; and 3) development of pre- and post-Summit evaluations.
Results: Among 50 registrants (76.7% academicians) that completed evaluations, over 65% planned to increase engagement of racial/ethnic minorities in research and implement CE Studios as a result of the Summit. Increased confidence in all CE training areas was reported, including in conducting an effective CE Studio planning meeting (32.1% pre-Summit/90.3% post-Summit) and identifying and preparing patient/community stakeholders for engagement as CE Studio experts (46.4% pre-Summit/93.6% post-Summit).
Conclusions: Virtual CE Studio training that includes multi-stakeholder planning partners can be an effective method for introducing the CE Studio model and preparing multi-stakeholder research teams to engage racial and ethnic minorities in CE Studios. This is particularly salient given that effective community engaged research methods and best practices are not currently being distributed through research programs at a pace consistent with the demands.

KEYWORDS: Research and Innovative Approaches, Community Engaged Research, Partnerships, Diversity, Health Equity, Community Engagement Studio

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Background

Despite numerous national and local health initiatives to end racial and ethnic disparities in healthcare and health outcomes, racial and ethnic minorities continue to experience the highest chronic disease burdens and lowest life expectancy[1-4]. Their underrepresentation in research is a persistent challenge; one that slows the development, translation, dissemination, and uptake of research findings that have the potential to mitigate racial and ethnic health disparities[5].

During the past decade, community and stakeholder engagement have emerged as essential approaches to accelerate the translation of research into practice. The National Academy of Medicine, formerly the Institute of Medicine (IOM), has called for translational research programs to *ensure community engagement in all phases of research*.[6] Folding community engagement into research, although challenging,[7-14] can enhance study design, increase public trust, participation, and improve uptake of research findings[15-18], all of which are critically important for advancing health disparities research. Key recommendations from the IOM report include 1) ensuring active and substantive community stakeholder participation in priority setting and decision making in all phases of research, 2) ensuring broad dissemination of best practices in community engagement, and 3) exploring opportunities and incentives to engage a more diverse community.[6,19] Currently, there are few opportunities to focus on this latter recommendation, particularly among racial and ethnic minorities historically underrepresented in research.

A critical first step in meaningfully engaging racial and ethnic minorities in research is identifying effective methods. Given the unequal morbidity and mortality and the wide range of diseases and conditions affecting racial and ethnic minorities, methods, not related to specific diseases, are needed to increase the likelihood of widespread uptake and utilization. In 2009, the Community Engagement Studio (CE Studio) model (**Figure 1**), a , structured approach, not related to specific diseases,that

facilitates meaningful engagement of community and patient/patient stakeholders in all research phases,[17] was developed by the Meharry-Vanderbilt Community Engaged Research Core (MV-CERC). As a component of the Vanderbilt Clinical and Translational Science Award, MV-CERC is a collaboration between Meharry Medical College (MMC) and Vanderbilt University Medical Center (VUMC) that brings together academic and community stakeholders to conduct research aimed at eliminating racial and ethnic disparities in health and health outcomes.

[INSERT FIGURE 1 HERE]

The CE Studio process is a guided approach to patient and community engagement which allows researchers to obtain direct input from representative groups. Distinct from most methods of community engagement, the CE studio has a dedicated team with experience in patient and community engagement to recruit stakeholders, a CE Studio Navigator to prepare and coach the investigator, a CE Studio Facilitator to guide the interaction between the study team and community stakeholders during the CE Studio, and a CE Studio Scribe to take notes to capture community stakeholder feedback (**Figure 1**). To date, MV-CERC has conducted >320 CE studios, with the majority focused on diseases and conditions for which racial/ethnic minorities carry the highest burdens (e.g., breast cancer, kidney disease). In addition to CE Studios conducted for local investigators, CE Studios have been used by national initiatives including the National Children's Study, the Recruitment Innovation Center https://trialinnovationnetwork.org/ (30 CE studios), the Strengthening Translational Research In Diverse Enrollment (STRIDE) CTSA Collaborative Innovation Award (7 CE studios), and the national Precision Medicine Initiative, now called All of Us Research Program https://allofus.nih.gov/ (78 CE studios).

CE Studios have been used to obtain input on many topics including participant compensation, the cultural appropriateness of recruitment materials, participant retention strategies, informed consent,

survey design, ethical considerations, return of research results, and translation of research findings into practice. Of the 850 community members and patient/patient stakeholders that have participated in MV-CERC-facilitated CE Studios through 2021, 55% are racial and/or ethnic minorities and 99% of all CE Studio participants agreed to be contacted to participate in future CE studios.

In 2021, MV-CERC partnered with the University of Michigan, Michigan Institute for Clinical & Health Research (MICHR), and the University of Utah, two of the 40 institutions that have implemented and/or adapted CE studios at their institutions, to convene a "CE Studio Virtual Training Summit" (Summit). The goal of the Summit was to accelerate the transfer of knowledge surrounding CE Studios with a specific focus on preparing research teams, patients, communities and clinicians to meaningfully engage racial and ethnic minorities in research. A related goal, as highlighted in this manuscript, was to assess the impact of the Summit in this regard, including on attendees confidence across highlighted training areas and perception of Summit goal achievement. From a quality improvement standpoint, [20] the intent of publishing this work is to share a potentially effective model for CE Studio training given the widespread interest in use of CE Studios.[21-25]

Methods

Summit Partnership Overview. The Summit was planned, implemented, and evaluated by academic, patient, clinician, and community partners (Summit partners) representing MV-CERC, the University of Michigan, MICHR, and the University of Utah. The partnerships between MV-CERC and the University of Michigan and the University of Utah began in 2018 and 2015, respectively. Summit partners included those with experience conducting community engaged research, facilitating CE Studios, facilitating CE Studio trainings, serving as previous CE studio participants, and representing their local communities via service within numerous community-based organizations. Intentional efforts were made to ensure

racial/ethnic diversity among 25 planning partners, with 64% belonging to racial/ethnic minoritized groups.

Summit Planning.

Summit partners participated in one of three subcommittees.The committees were comprised of faculty, clinician-scientists, staff with public health, social work, health equity and community engagement expertise and community partners. The Oversight and Implementation Subcommittee co-generated materials with an emphasis on engaging underrepresented populations and identified the researchers to present at the demonstration CE Studio as well as panel speakers for the Expert Panel (co-authors TI, LD, DR, BW) (See Table 1 for the Summit Agenda). The Logistics Subcommittee (co-authors AF, LL, CW) handled messaging, registration, save-the-date creation, getting materials to attendees before and after the summit, uniform branding of Summit materials, and running the Summit via Zoom on both training days (co-authors AF, LL, CW). The Dissemination Subcommittee (co-authors YV, MS, MF, FL, SM) engaged marketing/media professionals to market the Summit across different platforms and deployed editing techniques to refine Summit materials (i.e., Twitter, video editing, etc.), devise questions to ask the Expert Panel members, and develop Summit evaluation tools (co-authors YV, MS, MF, FL, SM). Combined Subcommittee meetings were implemented at planning onset and convened bi-monthly. Individual Subcommittees met monthly. All meetings were conducted virtually and planning documents were housed in an online document portal accessible to all Summit Partners.

[INSERT TABLE 1 HERE]

The activities of the subcommittees resulted in consensus decisions and co-generated deliverables and actions needed to implement and evaluate the Summit: 1) date selection; 2) virtual meeting platform; 3) agenda development and finalization; 4) identification of potential Summit attendees with inclusion 51 unique institutions of which 9 were Historically Black College/Universities and Minority-serving

Institutions; 5) save-the-date development and dissemination; 6) registration database development and launch; 7) a run of show document to keep the flow of communication between the subcommittees and the larger group during the Summit; 8) development of CE studio training plan and required resources (e.g., PowerPoint presentations, pre-Summit review materials for attendees); 9) identification and preparation of Expert Panel speakers; 10) identification and preparation of researcher and community stakeholders to provide feedback (community experts) to participate in the live demonstration CE Studio; 11) development and implementation of Summit pre- and post-evaluation tools; and 12) development and dissemination of Pre-summit materials, including a recommended reading list. In addition, Summit partners from the various subcommittees co-generated ideas that were novel, engaging and interactive. The idea of a displaying a Red Carpet slideshow, prior to the start of Summit activities each day and likened to Red Carpets that precede premier events with celebrity attendees, came from a community stakeholder Summit partner. The Red Carpet had photos of the Summit subcommittee members, Expert Panel speakers, and the cities and surrounding areas representing Summit Partner locales and academic institutions. In light of the virtual format, a clinician stakeholder Summit Partner had the idea to provide gifts, which were mailed to Summit attendees prior to the Summit. Another community stakeholder partner had the idea of a prize drawing to thank Summit participants for completing post-Summit evaluations and donated personal, original pottery for this purpose.

Promotion and Communication. The conference was promoted by email, Clinical Translational Science Award websites at respective institutions, HBCU listservs, and social media. Targeted invitations were also sent to existing community engagement colleagues for distribution on their respective listservs. We encouraged these colleagues to also share this summit with their research teams. Research Electronic Data Capture (REDCap)[27-28] was used for registration purposes.

Conference Format and Final Agenda. The 1.5 day Summit was convened virtually using Zoom. Summit objectives were to: 1) demonstrate the importance of community engagement in research; 2) describe the CE Studio planning process; 3) demonstrate implementation of a CE Studio; and 4) describe the CE Studio evaluation process.

Major Summit activities (Table 1) included interactive training sessions covering different aspects of CE Studio planning and implementation. The educational section of the CE Studio Summit began with the emphasis on shifting to virtual engagement through identifying pros/cons and benefits/challenges of Virtual CE Studios. A deep dive into the logistics and implementation of CE Studios followed inclusive of recruitment of CE studio stakeholders, coaching the researchers on how to engage with the community experts, and how the CE studio team real-time scribes to capture the thoughts conveyed during the CE studio. A section was dedicated to CE Studio Data Tracking and Dissemination with applications of the CE Studio data to institutions and in the community. Best practices on CE studio close-out addressed compensation for the CE Studio experts and preparation of CE Studio expert recommendations for researchers. Interactive training sessions included a demonstration CE Studio in which Summit attendees viewed a live CE Studio and a Speaker Panel devoted to Community Expert/Researcher Perspectives on CE Studios. Breakout sessions on Recruitment, Facilitation, Scribing, Logistics & Planning and Miscellaneous/General Topics were included to facilitate deeper discussions on various topics.

Academic partners representing MV-CERC, the University of Michigan- MICHR, and the University of Utah facilitated the training sessions and academic and community partners jointly facilitated or managed breakout sessions. YouTube videos of the interactive training sessions can be found here: Community Engagement Studio Virtual Training Summit - YouTube. Other training materials and resources are available on the funding agency's website at https://www.pcori.org/research-

results/2020/community-engagement-studio-summit-increasing-diversity-stakeholders-engaged-research

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Pre/post Summit Evaluations

All attendees were asked to complete both pre- and post-evaluation surveys to assess confidence (scale/response options; Not at all confident, Not very confident, Neutral, Somewhat confident, Extremely confident) in implementing various CE Studio Summit planning and implementation procedures. The latter two confidence categories were combined for data summaries. Descriptive statistics were generated to express evaluation results in percentages and frequencies to inform the planning of future summits. For post-evaluations, trainees rated achievement of Summit objectives, Speaker's Panel, and overall Summit planning and implementation procedures (scale/response options; Excellent, Very Good, Good, Fair, Poor) and identified ways that they would use training materials in their work. Very good and excellent ratings were combined for data summaries. Open text response options were available for all evaluation components. Pre-evaluations were sent 3 days in advance of the Summit and were available for completion up until the Summit began. Post-evaluations were sent immediately after the Summit and attendees had 30 days to complete them. Frequent completion reminders were sent for both pre- and post-evaluations. All surveys were administered electronically using REDCap[27-28].

Results

Fifty (50) individuals registered for the conference, including 9 MSI/HBCU institutions. Most represented academic roles/positions (76.7%) focused on community engagement and health disparities (91.5%). About 15% identified other roles, such as program coordinators or students. Other individuals represented government agencies (3.3%) or identified themself as a community member (3.3%) (**Table 2**).

[INSERT TABLE 2 HERE]

Pre/Post Confidence in CE Studio Planning, Implementation, and Evaluation Procedures

The percent of trainees reporting pre/post confidence in explaining the value of engaging communities in clinical and translational research was similar before (92.8%) and after (93.5%) the Summit. For all other areas, there were increases in confidence following the Summit with the greatest increases in the following: 1) describing best practices for scribing during a CE Studio (25.0% pre-Summit/ 93.6% post-Summit); 2) describing best practices for facilitating a CE Studio (25.0% pre-Summit/90.3% post-Summit); 3) conducting an effective CE Studio planning meeting with PIs and research team members (32.1% pre-Summit/90.3% post-Summit); and 4) identifying, recruiting, and preparing diverse patient/community stakeholders for engagement as CE Studio experts (46.4% pre-Summit/93.6% post-Summit). (**Table 3**).

[INSERT TABLE 3 HERE]

Post-Summit Evaluation of Objective Accomplishment, Speakers Panel, and Overall Summit Planning/Procedures

The percent of attendees reporting excellent/very good ratings for achievement of the Summit objectives ranged from 93.5 (describing the CE Studio evaluation process) to 100 (demonstrating implementation of a CE Studio) (**Table 4**). Attendees shared their thoughts in the open text questions including one attendee stating, *"The demonstration of the CE Studio was fantastic. It really showed us how to put the presentation into practice. It also gave me something to aspire toward".* One hundred percent of trainees rated the Speakers' Panel as excellent/very good. One attendee noted, *"I enjoyed hearing from community experts as well as researchers about their experiences and perceptions regarding the importance of community engagement in research."*

[INSERT TABLE 4 HERE]

Nearly all respondents (96.7% to 96.8%) gave excellent/very good ratings on the overall Summit format, coordination, pivot from face to face to Zoom platform (virtual) and the registration process using REDCap[27-28] (**Table 5**).

[INSERT TABLE 5 HERE]

Plans for Using CE Studio Training Materials

Over 65% of respondents identified increasing efforts to engage racial/ethnic minorities in research and implementing CE studios at their institution as ways they would leverage CE Studio training. Over a third of respondents planned to revise how they currently conducted CE Studios at their institution and to leverage this modality to improve their research. About 7%, of which 98% were affiliated with academic institutions as faculty, students, or staff, selected partnering with an academic institution as a future plan (**Table 6**).

[INSERT TABLE 6 HERE]

Discussion

During the past two decades, community and stakeholder engagement have emerged as essential approaches to accelerate the translation of research into practice. Many research programs have developed and implemented successful community engaged research programs, leading to a growing body of literature in this field.[29-30] Given widespread interest in the CE Studio model as an engagement approach [21-25] and its potential in enhancing community engaged research efforts among researchers [26], there is a related need to share effective CE training models.

By convening the Summit, we moved innovative community engaged research forward by using presentation and discussion formats that facilitated interactive learning, collective problem solving, and enhanced the reach and impact of the scientific developments emerging from pioneering work in community engagement. Specifically, the results show that focused training opportunities in this

area can be helpful in preparing research teams to engage these groups. For example, beyond increased confidence in planning and implementing CE Studios, attendees reported increased confidence in engaging racial and ethnic minorites in CE Studios and the majority planned to take steps to increase their engagement racial and ethnic minorities in research overall. These findings are particularly salient given reported challenges related to engaging racial and ethnic minorities across different disease and conditions for which they carry the heaviest burdens.[31] Our Summit planning process is consistent with other work in the inclusion of community partners in the development, implementation and dissemination [32-33] and further highlights the value of community-academic research partnerships.

Future directions

Since the majority of CE Studios that are held include adult populations, there is a need to expand CE Studio training and implementation efforts that are focused on youth. Summit Partners representing community stakeholders recommend deliberate efforts to work pediatric populations, including seeking partnerships with individuals and youth organizations and subset populations (e.g., teens that are HIV positive) to be inclusive of all types of youth. To build relationships with pediatric and adolescent populations, communications with pediatricians and parents for permissions, and involvement of parent-child dyads are also highly recommended.

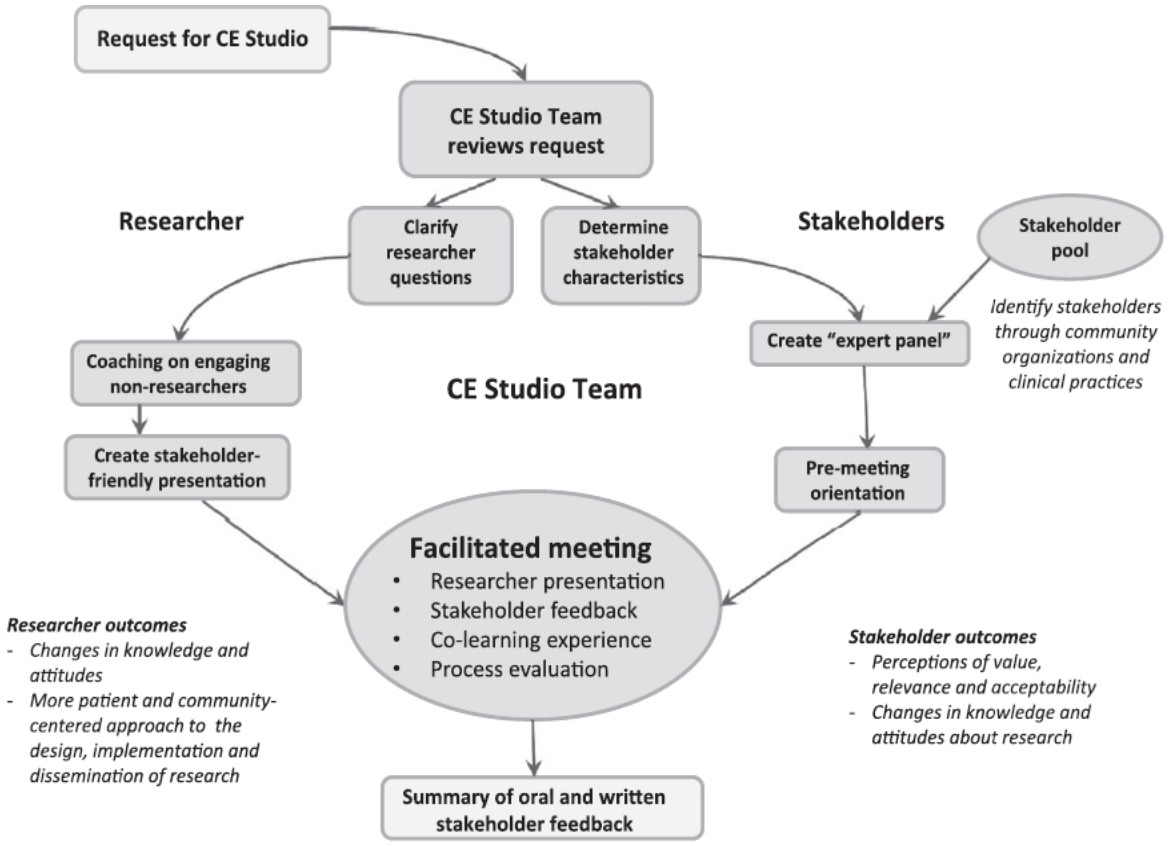

Figure 1 The process for requesting and implementing a Community Engagement Studio (CE Studio). A CE Studio, developed by the Meharry-Vanderbilt Community-Engaged Research Core in 2009, is a structured process facilitating project-specific input from community and patient stakeholders to enhance research design, implementation, and dissemination.

Table 1. Agenda for Community Engagement Studio Virtual Training Summit

Day 1	Day 2
Opening remarks and summit learning objectives	***Welcome and Introductions***
CE Studio Shift to Virtual Engagement -CE Studio Overview and Success Stories -Pros/Cons of Virtual CE Studios	***Structured Demonstration CE Studio Debrief***
CE Studio Logistics -CE Studio Planning and Preparation -Scribing – Notetaking During a CE Studio -Introduction to Demonstration CE Studio	***CE Studio Data Tracking and Dissemination*** -Key Data Points/Databases -Applications of data with the institution and in the community -How to adapt the studio model to individual institutions
Demonstration CE Studio -Supportive/palliative care communication and supports for chronic kidney disease patients	***Speakers panel: Perspectives on CE Studios*** -Community Expert Perspectives -Researcher Perspectives
Interactive CE Studio Training -Recruitment of CE Studio Stakeholders -After CE Studio Logistics - Compensation and Recommendations -CE Studio Facilitation	***Facilitated Dialogue to Connect and Ask Questions*** *(breakout format)* -Recruitment -Facilitation -Scribing -Logistics & Planning -Miscellaneous & General
Summary of First Day and closing remarks	**Closing remarks**

Table 2. Description of CE Studio Summit attendees	
Number of attendees	**N=50**
Academic job title/role (%)	76.7
Community member (%)	3.3
Government job title/role (%)	3.3
Other job title/role (e.g., program coordinator, student) (%)	15
Prior experience engaging diverse populations (e.g., racial/ethnic minorities) in research (%)	91.5
Prior CE Studio awareness/experience	66.7

* 50 unique attendee institutions; 9 attendees represented Historically Black Colleges/Universities/ Minority Serving Institutions.

Table 3. Pre/Post Confidence in CE Studio Summit Training Areas

Training Area	Pre-Summit Evaluation (n=28); % Somewhat/Extremely Confident	Post-Summit Evaluation (n=31); % Somewhat/Extremely Confident
Explain the value of engaging community in clinical and translational research	92.8	93.5
Explain where the CE Studio model fits on the continuum of engagement.	57.1	93.6
Conduct an effective CE Studio planning meeting with PIs and research team members	32.1	90.3
Identify, recruit, and prepare diverse patient/community stakeholders for engagement as CE Studio experts	46.4	93.6
Describe best practices for facilitating a CE Studio.	25	90.3
Describe best practices for scribing during a CE Studio.	25	93.6
Develop a tracking system to document CE Studio activities and outcomes.	32.2	74.2
Help researchers better communicate with community members	78.6	90.3
Provide researchers with guidance and resources to act on community member feedback.	67.9	90.4

Table 4. Perceptions about How Well CE Studio Summit Objectives Were Met (n=31)	
Summit Objective	**% Excellent/Very Good Ratings**
Demonstrate the importance of community engagement in research.	96.8
Describe the CE Studio planning process.	96.8
Demonstrate implementation of a CE Studio.	100
Describe the CE Studio evaluation process	93.5

Table 5. Overall Perceptions of CE Studio Summit (n=31)

Summit Component	% Excellent/Very Good Ratings
Overall format: training, speaker panel, demonstration CE studio	96.7
Demonstration CE Studio	100
Selected speaker panel members	100
Overall summit coordination	96.8
Zoom meeting platform	96.8
Registration process	96.8

Table 6. Plans to Use CE Studio Summit Training (n=31)

Plans	% Planning Use in this Area*
Find ways to partner with academic institutions to provide my expertise as a community stakeholder	6.5
Implement CE Studios at my institution	64.5
Revise how we currently conduct CE Studios at my institution	38.7
Leverage CE Studios to improve my research	38.7
Increase efforts to engage racial/ethnic minorities in research	67.7

*Attendees could select more than one plan

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Competing Interest

The authors declare that they have no competing interests

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Ethics approval and consent to participate

Not applicable

Availability of data and materials

The information used in this publication was extracted from the final report of the conference, which is available by request from the Summit Organizing Committee.

Authors' contributions

The Summit Partners conceived and planned the Summit. SM and AMF wrote the first draft of the manuscript. All authors contributed to subsequent manuscript drafts and approved the final draft for publication and agreed to be accountable for all aspects of the work.

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