Building Skills for Authentic Researcher-Community Collaborations: A Curriculum

Community & Cancer Science Network

MEDICAL COLLEGE OF WISCONSIN

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Background

Complex problems require a deep understanding and a collaborative approach to find sustainable solutions. Cancer disparities are complex and must be understood from a broad set of perspectives across academic research (basic science to policy) *and* non-academic sources (community members, community-based organizations, and policymakers).

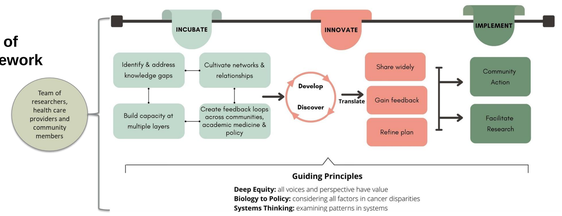
The **Community and Cancer Science Network** (**CCSN**) is a transdisciplinary network focused on addressing statewide cancer disparities through authentic and sustainable collaborations between academia and community in Wisconsin.

Our approach leverages academic and community expertise and is grounded in the principles of **deep equity**, **systems-change**, and the **integration of biology to policy**.

We bring diverse perspectives together through a three-phase model:

1) **Incubate –** co-learn among team members to build trust and knowledge, integrate diverse perspectives and create a shared vocabulary;
2) **Innovate –** use learnings to develop, prototype and pilot potential solutions;
3) **Implement –** execute scalable and sustainable solutions.

CCSN Theory of Change Framework



The Research and Community Scholars program introduces scholars to transdisciplinary collaboration via a curriculum and small-group project, where scholars are encouraged to seek both scientific and social outcomes that address cancer disparities locally. For more information, visit ccsnwi.org.

Methods

- We implemented a 9-month curriculum for community members (community scholars) and early/middle career basic science and clinical fellows (research scholars) to learn about cancer disparities, factors influencing disparities, and to communicate and collaborate in groups with different perspectives.
- Sessions were co-led by an academic and a community leader and employed adult learning principles.

Sample Curriculum

Session	Date	Topic	Objectives
2	10/9/24	**Models of Cancer Disparities in Wisconsin and Using Data to Inform Action in Systems Change:** Rehana Absar, MPP, Forward Change Kirsten Beyer, PhD, MPH, MCW	Scholars learn about the scale of breast and lung cancer disparities in Wisconsin; Scholars understand how to be critical of data and ask systems-level challenges
4	11/6/24	**Cancer Treatment** Adrienne Cobb, MD, MCW Dawn Shelton-Williams, MSW, Aurora Family Service	Scholars understand more about cancer treatments
6	12/4/24	**Root Cause Analysis of Cancer Disparities and Consensus on the problem:** Tobi Cawthra, MPH, MCW David Frazer, MPH, Center for Urban Population Health	Build skills for people to show up to a TD process and participate
9	1/22/25	**How to Work with in Effective Partnerships:** Jess Olson, PhD, MPH, MCW Equan Burrows, PhD, Milwaukee Area Technical College	Scholars can identify barriers to collaboration and examples of how to address

- To measure impact, scholars completed assessments at the beginning, mid-point and end of the program. At the final assessment, scholars answered qualitative questions to reflect on their understanding of disparities, relationships and partnerships, and developing new perspectives.

What is being measured?	When?
Collaboration readiness	Pre-test at start of curriculum, Post-test at end of curriculum
Understanding of curriculum content	Mid-way through curriculum, End of curriculum
Program satisfaction	Mid-way through curriculum, End of curriculum
Transdisciplinary collaboration skills	End of curriculum

Results

Research Community Scholar Participation

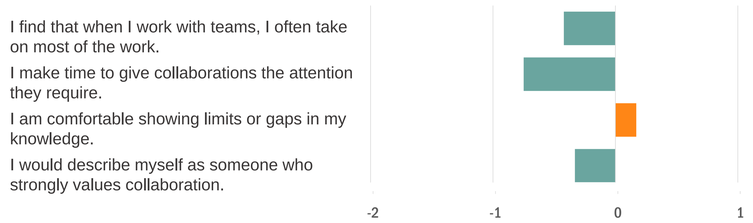
- 16 scholars participated: 8 community, 8 academic
- 14 completed the program: 6 community, 8 academic
- 13 – 16 completed evaluation surveys

Collaboration Readiness (completed at beginning and end of curriculum)

- Scholars completed a 12-item 7-point Likert scale (1- Highly Inaccurate to 7 Highly Accurate) assessment of collaboration readiness.
- At the end of the program, scholars reported a decrease in readiness for collaboration and a modest improvement in comfort in showing limits in knowledge.

Sample Collaboration Readiness Change

Change in mean collaboration readiness scores from pre-test to post-test, N=13

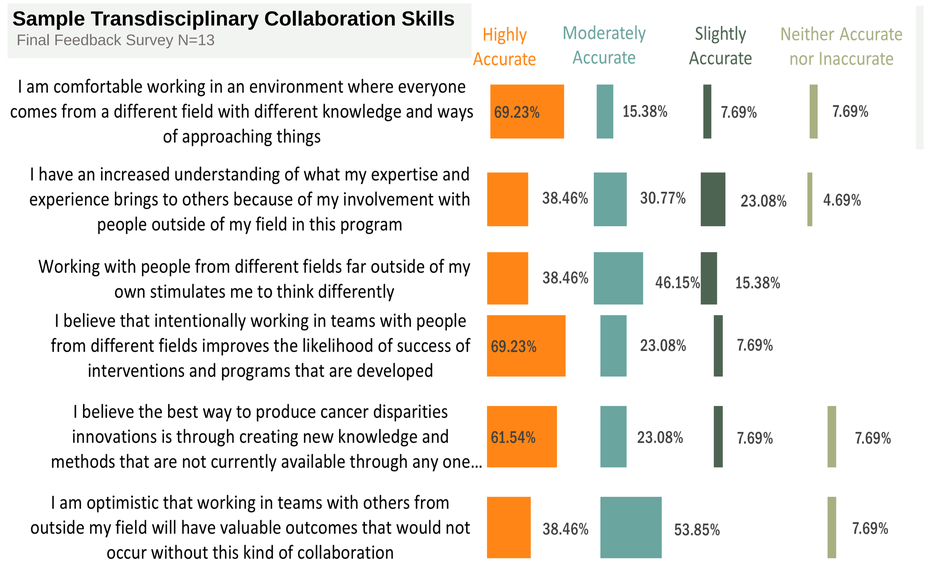


Transdisciplinary Collaboration Skills (completed at end of curriculum)

- Scholars completed a survey that included an 18-item 7-point Likert Scale (1- Highly Inaccurate to 7 Highly Accurate) survey.
- Scholars left the program with a greater appreciation of the skills, intentionality, and promise of transdisciplinary collaboration with those whose perspectives differ.
- They also see transdisciplinary collaboration as necessary to solve complex cancer disparities and are encouraged to pursue this type of work in the future.

Sample Transdisciplinary Collaboration Skills

Final Feedback Survey N=13



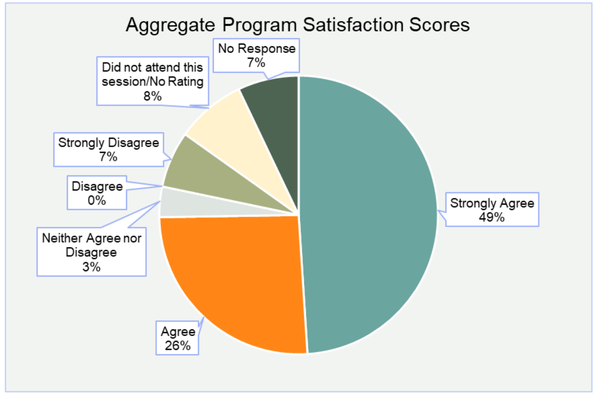
Understanding Curriculum Content (End of semester 1 and semester 2

- Scholars responded to a 7-item 5-point Likert scale survey (1 Strongly Disagree to 5 Strongly agree). One additional item was asked in Semester 2.
- Agree or Strongly Agree responses were high in Semester 1 and most measures showed a modest improvement in Semester 2.

	Agree/Strongly Agree	
	Semester 1 N= 16	Semester 2 N=14
1) I am more aware of how cancer science influences cancer disparities	69%	78%
2) I am more aware of how environmental & social factors influence cancer disparities	69%	78%
3) I can identify ways in which biomedical research & community could come together to address cancer disparities	87%	93%
4) I can see ways to apply what I am learning outside of this course	88%	93%
5) I have shared what I am learning with others outside of this course	82%	74%
6) I feel I am able to understand a viewpoint that is different than my own as a result of this course.	88%	86%
7) I feel that I succeeded in this course.	94%	86%
8) I would recommend this course to my peers.	n/a	86%

Program Satisfaction (End of semester 1 and semester 2)

- 16 (semester 1) and 13 (semester 2) scholars completed a Program Satisfaction survey which included a 6-point Likert scale (1 Strongly Disagree-5 Strongly disagree, 6 - Did not attend/No rating) for each of the curriculum sessions in addition to 5 qualitative questions.
- Overall scholars were satisfied with the content and provided valuable insights into the content and acknowledged the value and challenges in collaboration.



*Coming together under the CCSN model is important for acknowledging the realities of the scars of injustice and patient burden, but also for **changing the narrative: collective action leads to tangible improvements** in holistic community health overall.*
– 2023-2024 Research Scholar

*Collaboration is a time commitment…. **I need to have the expectation that I'm going to have to commit time to it.** Knowing that now & being able to communicate & plan for that is really valuable. Through this experience I learned more about how to do this.*
– 2023-2024 Research Scholar

Conclusion: The skills required to collaborate with those from different perspectives and disciplines need to be mentored and developed. This program is successful in introducing researchers and community members to the complexities of transdisciplinary collaboration and preparing them to establish authentic partnerships. Scholars recognized collaboration is challenging and time-consuming, but beneficial. At the same time, Scholars acknowledged feeling less ready for collaboration at the end of the curriculum, perhaps indicating a more realistic understanding of the challenges. The data regarding scholar collaboration readiness give the program leadership team useful insight on changes we can make to better support transdisciplinary collaboration for future cohorts of the program.

This initiative is funded by:

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