

Collaboration Across Campuses: The NCCU Clinical Research Sciences Program



A TRANSLATIONAL SCIENCE BENEFITS MODEL **CASE STUDY**

Program in a Nutshell

The lack of a diverse workforce in clinical research negatively impacts health outcomes and equity in clinical trials, healthcare, and medical practices.

The Clinical Research Sciences Program (CRSP) leveraged the partnership between North Carolina Central University and Duke University to create an environment for producing a highly trained and diverse workforce in clinical research.

Significance of the Program

People of color are underrepresented in the clinical research field due to institutional, structural, and systemic racism that can impede access to the education, training, and mentoring necessary for successfully achieving a career in this field. This lack of diverse representation has negative consequences in various respects, including for research rigor and equity. Increasing clinical research workforce diversity can improve the types of research questions asked, enhance the focus on health equity research, and potentially increase diverse participation in clinical trials resulting in more efficacious medical interventions.

In 2017, the Duke Clinical and Translational Science Institute (CTSI) formally established a collaborative partnership with its neighbor, North Carolina Central University (NCCU)—a Historically Black College and University (HBCU) with a more than 80% underrepresented student population. This partnership represents a strategic effort to

improve health outcomes, build new research teams, expand infrastructure to support underrepresented minority researchers, and create pathway programs to diversify the future clinical research sciences workforce.

Summary of the Program

In late 2016, faculty and staff from Duke and NCCU reviewed and assessed curricular needs around workforce development, resulting in the genesis of the [Translational Research Concepts and Careers \(TRECC\) online curriculum](#). TRECC, which came to fruition in 2022, was intended to provide NCCU students and others with an open-access, asynchronous introduction to the many fields and roles comprising this professional domain.

While the TRECC curriculum was under development, NCCU initiated the process of establishing degree and certificate programs in this subject area, resulting in the [Clinical Research Sciences Program \(CRSP\)](#). NCCU launched CRSP in 2019 to increase exposure of students from diverse educational, racial, and ethnic backgrounds to the field of clinical research, with a special focus on health equity. In addition to integrating the TRECC modules with its course content, CRSP adopted an academic curriculum established by the Consortium of Academic Programs in Clinical Research and based on the framework outlined by the [Joint Task Force for Clinical Trial Competency](#).

Results of the Program

CRSP currently includes a 2-semester certificate program (launched in 2019), a bachelor's degree program (launched in 2020), and a minor (launched in 2020).

As of May 2023, the certificate program has graduated 33 students, and the bachelor's program has trained 8 students. To date, 18 graduates

of the certificate program now hold positions as clinical research professionals. Seventeen of these graduates have been promoted in their jobs since graduating the CRSP program.

Duke continues to contribute to CRSP curricular offerings, providing tours of research facilities, guest speakers on a range of research-related topics, and a mechanism for placing NCCU students in Duke research settings for semester-long internships. Furthermore, the program provides opportunities for students to gain hands-on experience in clinical trial data collection through an ongoing partnership with East Carolina University's Office of Clinical Trials; it also offers networking, interview preparation, and mentoring for career advancement.

Duke CTSI is currently working with the Duke Health Foundation Relations & Strategic Partnerships Office to target several workforce development programs for philanthropic investment. Chief among those programs is CRSP, which has proposed using additional funds for CRSP tuition scholarships, stipends for paid internships, funding to link to post-graduate opportunities, and added infrastructure support to enhance training pathways between the two institutions.

Challenges and Strategies

Institutional & Cross-Institutional Infrastructure

This partnership underscored the bureaucratic challenges inherent to creating cross-institutional infrastructure to support our shared training goals. At the start, cross-listed courses were not possible, adjunct appointments were challenging to accomplish, and bringing non-Duke students into the Duke campus environment for internship experiences was legally fraught and logistically complicated. In addition to surfacing the

bureaucratic challenges, it also sensitized both institutions to the need for clear communication and consideration of institution-specific priorities. The relationship and partnership-building work done on CRSP was critical to the creation of new joint Duke-NCCU collaborations. For instance, CRSP-identified challenges in student access helped lay the foundation for a newly developed, university-wide onboarding process for interns. The Duke Clinical Research Internship Portal (CRISP) includes necessary contractual arrangements to allow for these experiences for NCCU students at Duke. These challenges also helped to solidify internal policies dictating what those experiences can and cannot entail to protect both the students and the universities.

Having Tracie Locklear, CRSP Program Director, as a dedicated partner at NCCU was key to overcoming institutional barriers and facilitating better understanding of the needs and resources in play. In addition, NCCU and Duke have created a Duke-NCCU Bridge Office, an entity dedicated to supporting mutually beneficial partnerships among Duke University and Health Care System, North Carolina Central University and the communities they serve. This further enabled collaboration across campuses and CRSP development; the Duke-NCCU Bridge Office has served as a dedicated partner working closely with leadership, faculty, and staff across both institutions.

Approach and Process

As with all new relationships, different institutional norms, cultures, and practices contributed to a lack of understanding going into the partnership. These obstacles were overcome, however, with candor and communication about how to leverage different institutional resources to accomplish shared goals. To address different institutional practices, Duke and NCCU prioritized

acknowledging each other's strengths and weaknesses, using the partnership to leverage and compensate as needed. Mutual respect demonstrated by all partners was critical to success; this

was nurtured by consistent and candid communication. In addition, a shared feeling of mutual responsibility and a shared vision of meaningful work with impactful results enabled success.

Program Leadership



Tracie Locklear, PhD,
CRSP Director,
North Carolina
Central University (NCCU)

Program Key Personnel and Collaborators

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Special Assistant to the Chancellor for
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Impact of the Program

Community and Public Health

By leveraging the partnership between Duke University and North Carolina Central University through the Clinical and Translational Science Awards program, these two institutions created an environment for producing a highly trained, competent, and diverse workforce in clinical research responsive to the call for increased diversity in clinical trial participation.

More diverse representation in the workforce will yield more impactful research in underserved populations, resulting in more efficacious treatments and improved health outcomes.

This collaboration could serve as a model by our peer institutions for partnerships between HBCUs and Predominantly White Institutions.

“I appreciate the care taken to retain underrepresented women in clinical research, which is paramount in this age to ensure diverse trials that accurately represent and advocate for all people to address health disparities. The Clinical Research Sciences Program enabled me to learn the industry and make valuable connections that have been integral to launching my career.”

— 2020 Graduate, CRSP Certificate

Workforce Development & Diversity

The intent of this Duke-NCCU partnership is to enhance the diversity of the clinical and translational science workforce through the provision of curricula designed to make students “job ready” in this domain. As of 2023, CRSP has graduated 33 students from the certificate program, with another 10 enrolled. The bachelor’s program has

trained 8 students, the first of whom will complete the degree program in 2024. Of all CRSP graduates, 18 have thus far become employed in clinical research careers post-graduation. All but one participant thus far has been from a minoritized racial/ethnic group.

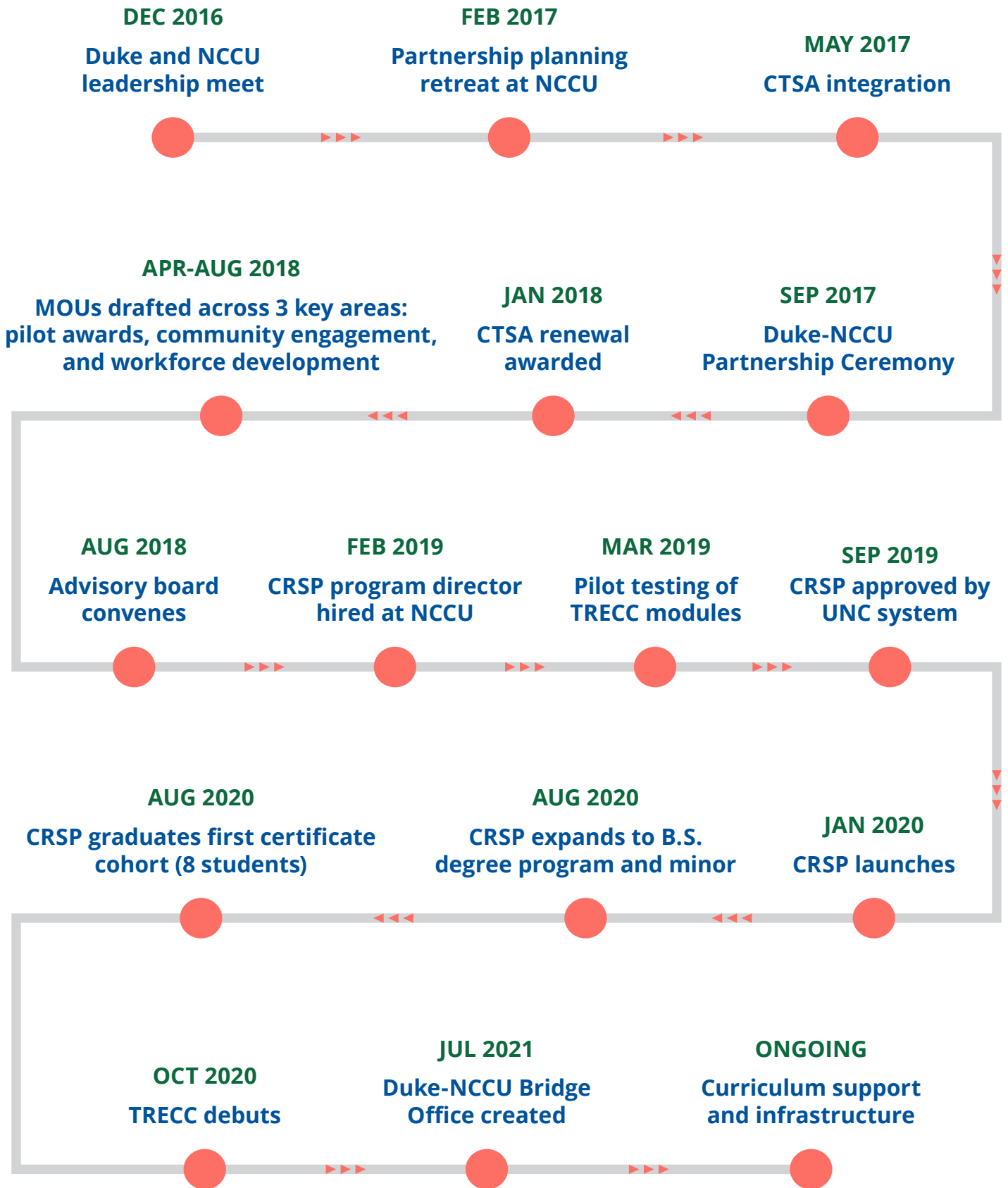
“I am thoroughly furnished with the knowledge and skills necessary for a successful career in clinical research. I was able to secure a clinical research coordinator position at a reputable organization barely two months post-graduation. Thank you!”

— 2020 Graduate, CRSP Certificate

“I’ve gained a lot of networking opportunities and a better understanding of clinical research and clinical trials, and all my expectations of learning the history of clinical trials and understanding the regulations and guidelines were met. Great program!”

— 2020 Graduate, CRSP Certificate

Program Milestones to Date



Translational Science Benefits Summary

By developing a diverse and competent workforce, NCCU's Clinical Research Sciences Program has the potential to impact all TSBM domains. Select highlighted benefits include:



COMMUNITY

Health Education Resources:

Creation of a minor, bachelor's and post-baccalaureate certificate program. As of 2023, 51 students completed or enrolled in CRSP offerings. (Demonstrated)

Health Care Accessibility:

As representation in the workforce increases, some barriers to health care accessibility should decrease. (Potential)

Disease Prevention & Reduction:

Better representation in the workforce promotes more use of and faith in the health system among traditionally marginalized and under-served communities. (Potential)

Health Care Quality:

More diverse representation in the workforce will yield more impactful research in underserved populations, resulting in more efficacious treatments and improved health outcomes. (Potential)



ECONOMIC

Career Access:

The clinical research industry is a rapidly growing field, contributing more than \$1 billion to North Carolina's economy. CRSP focuses on workforce development for careers in clinical research. (Demonstrated)

CTSA Resources Used

Core	Type of Service
Biostatistics, Epidemiology, and Research Design (BERD)	Consulted for creation of TRECC online curriculum.
Regulatory Affairs	
Team Science	
Community Engaged Research Initiative (CERI)	
Equity in Research	
The Duke Office of Clinical Research	

Other Institutional Resources Used

Group	Type of Service
Duke Advancing Scientific Integrity, Services and Training (ASIST) Office	ASIST provided subject-matter expertise in the creation of the TRECC module concerning research ethics.
Duke-NCCU Bridge Office	The Bridge Office supports cross-campus collaboration for all CRSP-related activities (TRECC module creation, campus visits, internships, etc.).

For More Information

References:

Locklear T, Dickerson KC, Dzirasa K. A more diverse biomedical and healthcare workforce is within our reach. *Modern Healthcare*. January 2, 2023. Available online at: <https://www.modernhealthcare.com/opinion/biomedical-healthcare-diverse-workforce-development-core-duke>.

Locklear T, Lewis R, Calhoun F, Li A, Dickerson KC, McMillan A, Davis LP, Dzirasa K, Weinfurt KP, Grambow SC. Advancing workforce diversity by leveraging the Clinical and Translational Science Awards (CTSA) program. *J Clinical Sci*. 2023;7(1):e30. doi:10.1017/cts.2022.489