2015 Duke AHEAD Grant Proposal
Email to kristin.dickerson@duke.edu by August 21, 2015
(Limit 5 pages, does not include budget table or references)

Title: The Impact of Racial Bias in Medical Education: Let's Focus on the Educator.

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Focused questions:
1. Can we teach medical educators to become more aware of their own conscious and unconscious racial bias?
2. Will increase awareness have an impact on the educator teaching style?

Background:
Racial and ethnic health disparities are well documented in the medical literature. Further, the issue of health disparities and racial inequities was raised to a national priority after the published report from the Institute of Medicine's (IOM (*Unequal Treatment:* Confronting Racial and Ethnic Disparities in *Health Care,* 2003) (1). The IOM highlights extensive evidence on racial and ethnic disparities in health outcomes and health care access. These disparities exist despite the consumer's socioeconomic status suggesting that other factors, may be contributing to negative health care outcomes. While there are several hypotheses to consider, one that is gaining much attention in the literature is the "bias hypothesis." The "bias hypothesis" is widely quoted in the social psychology research in which bias can occur without recognition. Other studies have documented racial bias in health care delivery. Several publications have demonstrated provider bias pertaining to patient's race and weight (2-5).

Research exploring factors that contribute to racial health disparities have demonstrated that provider conscious and unconscious bias influence the way we treat and make medical decision while treating our patients (4,6). Unconscious bias refers to automatic and unconscious negative attitudes towards ethnic minority groups, particularly African Americans and Latinos. These racial bias influences behavior in unintentional but powerful and systematic ways, profoundly influencing clinical decision-making (7).

Understanding and addressing the impact of conscious and unconscious racial bias in health care delivery and medical education is critical. Therefore necessary step towards ameliorating the impact of racial bias and their impact on medical education are necessary. However, despite the increasing awareness of the impact of bias in medical education the vast majority of research conducted to date in this area has been focusing on medical students. For example, a recent study, examined the association between change in student implicit racial bias towards African Americans and student reports on their experiences with 1) formal curricula related to disparities

in health and health care, cultural competence, and/or minority health; 2) informal curricula including racial climate and role model behavior; and 3) the amount and favorability of interracial contact during school. The authors concluded that Medical school experiences in all three domains were independently associated with change in student implicit racial attitudes (7). Further, in a study published by Gonzalez et al in 2014, the authors report a study conducted to describe an educational intervention addressing both health disparities and physician implicit bias and the results of a subsequent survey exploring medical students' attitudes and beliefs toward subconscious bias and health disparities. They concluded that recognition of bias cannot be taught in a single session. Further, their experience supports the value of teaching medical students to recognize their own implicit biases and develop skills to overcome them in each patient encounter, and in making this instruction part of the compulsory, longitudinal undergraduate medical curriculum (8).

Lastly, one of the very few studies looking at the subject and medical educators was recently published by Hannah in 2015. In this study, the authors reports their experience conducting an one-semester Continuing Medical Education (CME) course offered to medical school faculty entitled ''Teaching Medical Students How to Reduce Unconscious Bias in Medicine.'' The course was developed to focus on the culture of health care providers and, specifically, sought to bring to conscious awareness providers' own biases. The course was volunteer and offered to those faculty interested in reducing health disparities. The authors reports their experience with educators and their own recognition and struggles with their own bias (6). Taking into consideration that students learn from their educators how to interact with their patients, focusing on the educator is important.

Specific aims:
The increasing shifts in the U.S. population related to race and ethnicity has been a major motivator for the increasing attention on diversity in medical education and health care. Institutions are addressing and incorporating diversity training into their health professions education curriculum. A much needed step is to increase the education and training of faculty in recognizing their own conscious and unconscious racial bias that might have an impact on their teaching styles. Unfortunately, the vast majority of faculty and health care educators are not trained to recognize their own racial bias.
The overall objective of this project is to develop a curriculum/program focused on the educators to further the recognition of conscious and unconscious racial bias and their impact on the educator teaching. Educators will learn techniques that will allow them to mitigate the impact of bias in their teaching. With the support of this award, we will develop a comprehensive curriculum targeting clinical faculty that are actively teaching, with close interaction with trainees, in the School of Medicine (SOM), School of Nursing (SON) and Duke Physician Assistant Program (PA). This work will be accomplished through the following aims
Aim 1: To conduct a series of interactive and small group presentations with Clinical faculty involved in education at the SOM, SON and PA program focusing on the importance and impact of racial bias in medical education and health disparities.
Aim 2: To provide the same group of educators with multimedia presentations and small groups discussions focused on how to recognize and create self-awareness of one's biases.
Aim 3: To provide multimedia presentations and small groups discussions with strategies to educators in order to avoid the impact of own bias on teaching.

Impact: The implementation of this project will help determine the extent in which conscious and unconscious racial bias contributes to the education of health care learners. The proposed project will lay the foundation for future studies and innovative approaches including interventions aiming to decrease the impact of racial bias in medical education with the long term goal to ameliorate health disparities. Further, with the implementation of this project we will position the Duke School of Medicine, Nursing and Physician Assistant programs in a lead position that can serve as model for other medical institutions and health care systems.

Methods:

The proposed project will assess the potential impact of one's bias conscious and unconscious on one's teaching style. Prior to providing the educational modules, unconscious bias will be measured using the computer-based Implicit Association Test (IAT). The IAT has been widely used since the introduction of the instrument in 1998 (9). In addition, we will measure self -perception, and look for change by doing a post-then-pre design.
http://www.uwex.edu/ces/pdande/resources/pdf/Tipsheet27.pdf

To achieve the aims proposed above, we will be developing several modules to target clinical faculty with teaching roles in the SOM, SON and PA program as our initial target professional group. The curriculum and program will incorporate a combination of multimedia presentations and small group sessions. The multimedia will be develop to incorporate key concept pertaining to racial bias in medical educations such as: 1) definition of conscious and unconscious bias, 2) impact of racial bias in medical education and patient care, 3) impact of bias in teaching styles, 4) exposure to stereotyped groups, 5) techniques to mindfulness, 6) techniques on adaptation and acceptance, 7) techniques on avoiding inference of bias on teaching style.

The small group sessions will follow the multimedia presentation. Each session will consist of 45 minutes of multimedia presentation followed by 45 minutes of small group discussion. The small group discussion will be led by an experience moderator to facilitate group discussion. The discussion will be designed to allow a safe and open discussion while avoiding dominating, rigid, judgmental or other negative expression for those expressing their own experience and biases.

Further, the curriculum/program will be develop taking into consideration the following concept pertaining to individual ability to recognized and manage conscious and unconscious bias. (**Figure 1**)

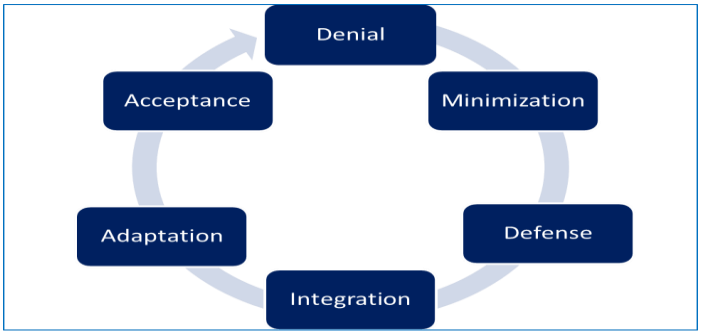

Figure 1. Framework for intervention/program development. Adapted from Teal, et al. (10).

Outcomes and measures:
Data management and analysis: we will use REDCap or Qualtrics for all data management. Basic demographic characteristics of participants will be collected in a brief survey. Data will be presented in mean values ± SD. Group sessions will be recorded and the small group discussion data will be managed using the qualitative analytic software program, Atlas.ti (Scientific Software, 2012). Analysis of interview transcripts and observational field notes will be review to extract core themes. Pre and post survey will be conducted with multiple choice questions and using the instruments mentioned above. Data will be summarized in a table format with percentage.

IRB status: The proposed project is not currently approved by the IRB. However, the PI of the project has extensive experience working with the Duke IRB and the collaborator from the School of Nursing listed on this

grant is a member of the IRB. Therefore, the IRB submission will take place once the award announcement is received. Considering this type of proposal, we anticipate that we will get approval from the IRB in a timely fashion.

Challenges: There are several challenges that will need to be considered in performing the proposed study: 1) Engaging faculty into a new curriculum and program; 2) The subject of bias is very sensitive and personal; 3) Testing the impact of the program and curriculum in the educator teaching style. However, these limitations are mitigated by several factors: 1) the increasing awareness of bias in medical educations makes this proposal a very attractive topic for faculty involve in teaching; 2) the increase support from the School of Medicine in subjects related to race and health disparities will allow us to recruit enough faculty to participate in the project; 3) the program/curriculum will be developed taking into consideration the sensitive nature of the subject in order to avoid potential discomfort for those conducting and participating in the program; 4) testing the impact of any new program and curriculum is challenging not only for the proposed project, but for must program, we will develop a post -test survey that will allow participant to report how the program impact their teaching. We anticipate that a project addressing this issue will be a logical next step after completing the proposed project.

Sustainability: we anticipate that the proposed project will be successfully developed and implemented and that we will be able to incorporate this curriculum as part of our faculty development and training going forward. After completing the grant the more detailed and final program will be completed and this can be easily implemented school wide without the need of significant amount of resources other than those needed to support the facilitator of the small group discussions.

Opportunities for subsequent scholarship: the proposed project has the potential to generate information that will allow us to compete to future grant in order to implement this type of curriculum/program to the broader audience.

Broader Impacts: The proposed project addresses a critical and very important issue in medical and nursing education that has not been extensively explored or addressed. We anticipate that the proposed project will serve as the foundation for the development of future programs and curriculum addressing this important area of medical education. Further, this project has the potential to impact medical education at a larger scale as well as patient care. The long term impact of this project will be the opportunity to advance the way we teach the next generation of health care provider.

Timeline:
Table 1. Grant activities and project timeline.

	Year 1*			
	1	**2**	**3**	**4**
Protocol/curriculum development/implementation				
IRB submission	**X**			
Development of survey, curriculum, and materials for presentations and small group discussions	**X**			
Aim 1: To conduct a series of interactive and small group presentations with Clinical faculty involved in education at the SOM, SON and PA program that will focus on describing the importance and impact of racial bias in medical education and health disparities		**X**		
Aim 2: To provide the same group of educators with multimedia presentations and small groups discussions		**X**		

focused on how to recognize and create self-awareness of one's biases				
Aim 3: To provide multimedia presentations and small groups discussions with strategies that will allow the educator to avoid the impact of own bias on their teaching.			**X**	
Post curriculum/program evaluation survey/future grant applications/manuscript preparation				**X**

* year divided in quarters.

Resource needs and budget:
Funding will be available for a 12-month period. Please fill in the table below and provide justification/description for each item below. Also, where requested, please provide an estimate of the time/effort you will expend on this project.

		Estimated Cost
PI Effort (max 25% of total requested)	Requesting 5 % effort	$4,057.8
Consultant Costs	Presentation and material development, outcomes measurements	$3,500
Equipment	None how are you going to capture the data from small group discussion?	$0.00
Computer	Hardware *($1500/laptop)*	$0.00
	Software	$0.00
Supplies	Food, materials for presentations/small group discussion	$2440.00
Travel	*1,000 (for presentation)*	$0.00
Other Expenses	misc/sundry items $200.00	$0.00
Total Costs for Proposed Project		**$9,997.8**

BUDGET JUSTIFICATION:

Personnel:

Leonor Corsino, MD, MHS, FACE. Principal Investigator (effort = 5% in year 1)
Dr. Corsino is currently an Assistant Professor in the Department of Medicine, Division of Endocrinology, Metabolism, and Nutrition. She completed her Endocrinology fellowship and Master of Health Science in Clinical Research at Duke University. She has a strong interest in health disparities.

MATERIALS, SUPPLIES, AND OTHER COSTS.

Consultant cost: we are requesting a total of $3,500 dollars to cover consultation fees for the development of the multimedia presentations, data base management, and curriculum development.

Supplies: Food, office supplies (batteries, paper, ink, writing utensils, white board) materials including handouts for the faculty participating in the proposed project.

References:

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3. Cooper LA, Beach MC, Johnson RL, Inui TS. Delving below the surface. Understanding how race and ethnicity influence relationships in health care. J Gen Intern Med. 2006 Jan; 21 Suppl 1:S21-7.
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6. Hannah SD, Carpenter-Song E. Patrolling your blind spots: introspection and public catharsis in a medical school faculty development course to reduce unconscious bias in medicine. Cult Med Psychiatry. 2013 Jun;37(2):314-39.
7. van Ryn M, Hardeman R, Phelan SM, PhD DJ, Dovidio JF, Herrin J, Burke SE, Nelson DB, Perry S, Yeazel M, Przedworski JM. Medical School Experiences Associated with Change in Implicit Racial Bias Among 3547 Students: A Medical Student CHANGES Study Report. J Gen Intern Med. 2015 Jul 1. [Epub ahead of print].
8. Gonzalez CM, Kim MY, Marantz PR. Implicit bias and its relation to health disparities: a teaching program and survey of medical students. Teach Learn Med. 2014; 26(1):64-71.
9. Greenwald AG[1], McGhee DE, Schwartz JL. Measuring individual differences in implicit cognition: the implicit association test. J Pers Soc Psychol. 1998 Jun; 74(6):1464-80.
10. Teal CR[1], Gill AC, Green AR, Crandall S. Helping medical learners recognize and manage unconscious bias toward certain patient groups. Med Educ. 2012 Jan;46 (1):80-8.