Title: “Know Where You Work: Developing a Curriculum Focused on Community History and Current Medical Needs in Durham, North Carolina”

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Focused question: Can a required curriculum about community history and current medical needs of Durham, NC enhance community engagement and quality of care by medical residents, nursing students and physician assistant students?

Background: (including brief review of prior research): Provision of culturally competent care is a core mission of graduate medical education (1), and of the education of other health professionals. Cultural competency programs for health care providers are overall reasonably effective at improving health outcomes for patients who are culturally or linguistically diverse from their treating physicians (2). Trainees at Duke University Medical Center provide care for a racially, ethnically, and socio-economically diverse population, however our training programs are far less diverse than the population they serve. Additionally, a majority of trainees lack detailed knowledge of the historical and current conditions in Durham that affect the health of Durham County residents (personal communication). The most recent Institute of Medicine (IOM) report on graduate medical education proposes that medical education programs focus on training physicians that are able to care for the local population and provide the workforce necessary to lead in a changing healthcare environment (3). While the IOM report focuses on graduate medical education, special emphasis is made on interdisciplinary teams as a key driver in the success of our future healthcare system. Problems related to readiness to practice may stem from the nature of the sites where physicians are trained, or a lack of understanding of the population served by a practice location. Thus, programs designed to improve trainee understanding of the community and population they serve can be a catalyst towards the development of a capable and caring workforce that best serves the population.
While literature exists to demonstrate a variety of cultural competency and health disparity training programs (4), no academic institution has reported on development of a locally relevant cultural and community history curriculum. We propose to develop a module-based curriculum focused on the community history of Durham, NC and how that history relates to the current health status of Durham residents that can be shared by graduate medical education, nursing education and physician assistant training programs.

Our team began working together in January 2015 in a multi-disciplinary group charged with developing a response to the 2014 IOM Report “Graduate Medical Education That Meets the Nation’s Health Needs”. The idea for the proposed curriculum stemmed from this working group as we wrestled with the question of how to best prepare our trainees for practice in Durham, NC. Thus, we now aim to capitalize on the relationships and ideas generated from this working group and develop a useful product for our learners.

**Specific aims:**
1) Develop modular curriculum of community history of Durham, NC with focus on interactions of Duke Medicine with the citizens of Durham, NC.

2) Construct evaluation tools for curricular impact in short term (knowledge acquisition) and long term (community engagement by participants), including a proposal for a multi-disciplinary community engagement project curriculum.

3) Pilot curriculum in three distinct settings (Duke Graduate Medical Education, Duke School of Nursing and Duke University School of Medicine Physician Assistant Program), with refinement of curriculum based on feedback from pilot groups.

**Methods:**


Our primary deliverable will be a module-based curriculum about the history of Durham County, including the development of Durham from an agricultural to an industrial city to an information technology/academic city, the history of Durham’s racial and ethnic diversity, how the medical establishment (e.g. Duke and Duke Regional [formerly Durham County General]) interacted with the residents of Durham County, and the growth of the Hispanic population of Durham County. Additional information on health disparities and community engagement will be incorporated into the learning modules. We will use selected materials from the Durham County Public Library resources (Lynn Richardson, Durham County Historian; http://durhamcountylibrary.org/ncc.php), durham-nc.com, The Museum of Durham History, interviews with Pam Silberman (President/CEO, NC Institute of Medicine), Pilar Rocha-Goldberg (President/CEO El Centro Hispano), Elaine Hart-Brothers (President/CEO, Community Health Coalition) as well as freely available health disparities curricula from Brown University (Sept 2014; Rhode Island Medical Journal). These materials will be curated and adapted by our
Aim 2): Construct evaluation tools for curricular impact in short term (knowledge acquisition) and long term (community engagement by participants).

Assessment of curricular efficacy (short term) will require development of a pre- and post- knowledge and attitudes survey. We propose to adapt a previously validated survey of knowledge and attitudes regarding health disparities used by the Mayo Clinic Health Disparities Education Program (4) as well as the survey used by Brown University’s Health Disparities Curriculum (see attachment) (5) to include information specific to Durham as well as questions more tailored to nursing and physician assistant trainees. This survey would be administered to the participants in our pilot implementation, with additional ‘open-ended’ feedback queries regarding perception of curricular efficacy and assessment of whether the program inspired them to seek additional mentoring opportunities in community engagement and health disparities. We will utilize the results from this aim to refine our modular curriculum.

Assessment of curricular efficacy (long term) is beyond the immediate scope of the one-year proposal, but is an integral part of our plan to seek further funding and expansion of the program from a module-based learning exercise to a forum for interdisciplinary projects and community engagement. As part of Aim 2, our group will interview Mariah Rudd (administrator, GME Concentrations), Viviana Martinez-Bianchi (Program Director, Community and Family Medicine), Howard Eisenson (Director, Lincoln Community Health Center) and other relevant individuals identified from Aim 1 regarding construction of a community-engagement group as well as community field projects, similar to that of the highly successful GME Concentrations (sites.duke.edu/dukegmeconcentrations). Such a program exists at Brown University, providing an applicable model for an active learning community engagement curricula. In this curriculum, trainees are asked to perform activities such as mapping routes to health care centers from various areas of the city to identifying the SES markers of each area of the community. In personal communication with the leaders of the Brown University Curriculum, the community engagement activity was a pivotal part of the program’s success. A proposal to establish and fund this Multi-Disciplinary Trainee Community Engagement Team would be a second deliverable of Aim 2, with a goal to submit this proposal to relevant RFAs, including those from the GME Innovations Program, DIHI, DukeAHEAD and the School of Nursing.

Aim 3): Establish 3 distinct forums for curriculum application: Duke Graduate Medical Education, Duke School of Nursing and Duke University School of Medicine Physician Assistant Program.

Our project team will identify small groups of trainees in each of the above-mentioned programs to pilot our curriculum. Trainees will take the pre-surveys, complete the curriculum, and the post-surveys. We aim to enroll 15 trainees from each of the 3
programs. Data from their experience will be evaluated by our project team, and the program modules adapted per the feedback of trainees.

In parallel with the pilot group, we will work with leadership in GME, the School of Nursing and the School of Medicine Physician Assistant Program to identify the appropriate venue and timing to introduce the modular curriculum to incoming and current trainees. As an example, orientation for new GME trainees in July 2016 would be an appropriate time to capture the incoming resident and fellowship trainees. While we cannot require each group to use the curriculum or prescribe when the groups would use the curriculum, we aim to provide a useful and practical means to introduce key concepts to trainees, and a means to address stated aims of the Accreditation Council on Graduate Medical Education’s Clinical Learning Environment Review (CLER) program. As members of the project team are leaders in GME and in the Physician Assistant’s Program, we have the ability to advocate for adoption of curricula among our stakeholders.

Outcomes and Measures: Our pilot outcomes will illustrate learner knowledge acquisition as well as self-assessment of attitudes regarding community engagement and health disparities. We are most interested in measuring these outcomes for larger groups when the curriculum is implemented, as well as assessing attitudes of trainees regarding engagement in group work that stems from the module-based program. While this project is designed to be a one-year cycle, our group is committed to post-award work that would measure the number of trainees who seek involvement in ongoing community projects, and a description of the multi-disciplinary teams and projects that result from this work.

Part of the funding will support a Duke Office of Clinical Research (DOCR) research assistant. Data will be stored on password-protected Duke computers. There is no PHI related to this project. Finally, IRB exemption will be sought for this project.

Challenges: A primary challenge identified is in the long term assessment of curricular impact. While we can identify potential outcomes of interest, we will not be equipped to evaluate the longer term success of this project in the timeframe of one year.

Sustainability: Modular curricula, once developed, can be utilized on an ongoing basis, with planned periodic updates for content. The cost of maintaining is felt to be minimal, and the dissemination is hoped to be integrated into the ongoing orientation process for trainees. The sustainability of our ‘reach’ goal of impacting community involvement for trainees in an interdisciplinary fashion pends the ongoing commitment of mentors for trainees in pursuing community projects. As part of our pilot year, we hope to discuss ‘ownership’ of the multi-disciplinary community engagement groups with leaders in DukeAHEAD, Graduate Medical Education, the School of Nursing and the Physician Assistant’s Program.

Opportunities for subsequent scholarship: To our review, there is no literature to date on a curriculum focused on community history for medical trainees. Thus, we
envision an initial manuscript describing the curriculum, its implementation and the results of the short term (knowledge acquisition) survey data. If anticipated projects arise that trace their genesis to this program, further scholarship would be likely, as would be scholarship regarding the community engagement program itself.

**Broader Impacts:** The Chancellor has outlined a goal to make Durham the healthiest county in North Carolina. Training our future attending physicians, nurse clinicians and physician assistants regarding the history of Durham, and the impact of this history on the health of Durham can lead to enhanced engagement by Duke health care providers in Durham. This fulfills a key mission of the IOM report, as well as the goals set forth by the ACGME to train health care providers.

**Timeline:**
- **Q1:** Ongoing background research regarding history of Durham, including accessing archives, interviews with key community leaders. Gathering background data for short and long term assessments.
- **Q2:** Writing goals and objectives for curriculum; content development; construction of short term (knowledge acquisition) survey via adapting prior validated surveys.
- **Q3:** Trial of curriculum with pilot groups from SOM, SON and SOM-PAP. Refine curriculum based on feedback. Develop team of possible long term project mentors. Plan for sustainability of long term project team (apply for additional funding to create mentoring group for community engagement projects).
- **Q4:** Revise curriculum based on feedback from Q3 groups. Plan to begin curriculum for AY 2016 orientation. Ongoing discussions with DukeAHEAD, GME, School of Nursing and Physician Assistant Program leadership regarding establishing a multi-disciplinary community engagement program.

**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.

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<th>PI Effort</th>
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References


Horat L; Horey D; Romios P; Kis-Rigo J. Cultural competence education for health professionals. Cochrane Database Syst Rev 2014; 5:CD009045


Erlich M; Blake R; Dumenclo L; White J; Dollase RH; George P. Health disparity curriculum at the Warren Alpert Medical School of Brown University. RI Med J 2013; 97(9):22-5.