2014 Duke AHEAD Grant Proposal
Email to kristin.dickerson@duke.edu by October 2, 2014

Title: Chief Resident Immersion Training in the Care of Older Adults (CRIT)

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Focused question: Does case-based geriatrics education, professional development in education and leadership, and subsequent project participation (education or quality improvement) by chief residents enhance their performance as educators and the quality of the care provided to older adult patients?

Background: In graduate medical education (GME), the Chief Resident (CR) traditionally occupies a prominent and influential position as an educator. CR's are selected for their clinical and teaching skills and academic productivity. As recent or soon-to-be graduates, they understand the culture and logistics of training and serve as accessible mentors and role models for trainees and students. As future leaders of their discipline, they become essential agents for improvement and innovation. For the past two years with grant funding from the Hearst Foundation we have implemented a program in geriatrics for Chief Residents at Duke Hospital according to a curriculum developed at Boston University (Levine, 2008). This weekend event includes an intensive curriculum in care of older adults, leadership and teaching skills, and faculty mentorship on design of CR-initiated projects. The program is taught by geriatricians, surgeons, an anesthesiologist, nurses, a pharmacist, and a PhD trained educator. Of note, faculty have also included program directors, the Chief Medical Officer for DUHS, the Chief Operations Officer and Associate Chief Nurse of Duke Hospital. The interprofessional, multidisciplinary collaborative faculty of this program spans professions, schools, departments and hospital administration. Their work over the last two years has led to implementation of a variety of new curricula and academic projects aimed at improving care of older adults at DUHS.

Specific aims

1) To develop geriatrics expertise among Duke Hospital Chief Residents and "Chief Resident Equivalents" from other training programs.
2) To provide participants with leadership skills needed to become excellent educators, administrators and health system change agents.
3) To promote participants to lead interdisciplinary, interprofessional projects in the health system that will improve care for older adults.

With Duke AHEAD funding, we plan to not only continue this program but to enhance the design and delivery. We will obtain input from hospital administration and program directors to ensure that it meets the local needs of our hospital, health system and training programs, and thus attracts local funding. Importantly, we will seek greater participation from future leaders from other professions—i.e. "Chief Resident Equivalents" in nursing, physical therapy and physician assistant programs---to expand the reach of the program within the health system.

Methods

Formation of a Steering Committee: This will include stakeholders who are willing to consider funding CRIT on an annual basis. These stakeholders will represent GME, the departments of medicine and surgery, and Duke Hospital.

The steering committee will review the geriatrics program content, cases, professional development sessions, the structure for the CRIT projects and participant feedback. The steering committee will set goals, review the current participant surveys and determine what changes to make to ensure that CRIT outcomes are specific to the goals. Our steering committee will establish themes or emphases that will be supported by the Medical Center and mesh with current areas of need. We have received the endorsement of Mary Klotman, MD, Chair of Medicine and Allan Kirk, MD, PhD, Chair of Surgery. Aimee Zaas, MD, the program director of internal medicine and John Migaly, MD, the program director of general surgery have agreed to serve on our steering committee. Catherine Kuhn, MD, Associate Dean of GME, has also agreed to serve on this committee and to participate in teaching program modules. We are in the process of recruiting hospital leaders as well, such as Tom Owens, Kevin Sowers and Yvonne Spurney, all of whom have been instructors in the program. We anticipate the steering committee will find synergism in health system priorities such as patient safety, and patient-centered care, and will value clinical interprofessional and interdisciplinary projects that influence both quality of care and depth of geriatrics education.

Aim 1: To develop geriatrics expertise among Duke Hospital Chief Residents and “Chief Resident Equivalents” from other training programs.

We plan to expand our reach to embrace future leaders other professions starting with 3-4 advance practice nursing students from Duke School of Nursing and a physical therapy geriatrics resident at the Durham VA.

The initial educational intervention will be delivered over two days, including:

1) Case discussion: An unfolding case of a geriatric patient hospitalized with acute abdominal pain and in need of surgical intervention. The learners break out into small groups to discuss multiple aspects of the case. Three small group sessions are each led by two faculty members from different disciplines or professions.

2) Mini-lectures: Following each small group session, there are specific short lectures (15-30 minutes) related to the topics discussed. Topics include recognizing and managing delirium and dementia, conducting a functional assessment of an older patient, assessing and reducing risk for falls, polypharmacy, managing opioid use in the elderly, comprehensive care of the hospitalized patient, principles of geriatric rehabilitation, and "never" events for hospitalized older adults. Additional topics include assessing the adequacy of the patient’s social support/living arrangements, assessing decision-making abilities of older patients, discharge planning, post-acute care services (including home care services), and understanding implications of insurance coverage for older patients.

Aim 2: To provide participants with leadership skills needed to become excellent educators, administrators and health system change agents.

Interspersed between the didactic sessions, we will develop professional skills such as: 1) providing effective feedback; 2) resolving conflict; 3) managing challenging learners; and 4) promoting interprofessional collaborative practice. This last point will be a new addition to the program. CRs are in a unique and powerful position of authority amongst their resident peers who will notice their ability to work across disciplinary boundaries, and to promote effective interprofessional communication. We want them to step out as educators to promote professional development and mentor trainees and medical students to become effective team players in the patient-centered care of their older patients.

Aim 3: To promote participants to lead interdisciplinary, interprofessional projects in the health system that will improve care for older adults.

With mentoring from program faculty, participants undertake projects of their own design that may entail clinical quality improvement (QI) or educational enhancement projects. Over the past two years projects have included outcomes in kidney transplant patients over 65 years (clinical evidence based medicine), documentation of advance directives in the family medicine clinics (quality improvement) and developing a geriatrics-focused lecture series for neurology residents/medical students (education). The faculty mentoring team will be comprised of one geriatrician and members of other professions with the appropriate expertise to assure the project’s success.

Outcomes and measures

Preliminary Data: The 2013 CRIT in the Care of Older Adults at fourteen different institutions nationwide provided an effective forum for raising Chief Resident (CR) awareness and interest in geriatrics issues, enhancing skill sets, building confidence for work as a CR, and reinforcing the importance of interdisciplinary approaches in the care of older patients. CRIT provided the opportunity for CRs to network and laid the groundwork for interdisciplinary connections. Follow-up at six months and one year, will provides evidence of the lasting impacts of CRIT including completion of action plans, teaching geriatrics, application of knowledge and skills to medical practice, collaboration with others, and confidence in leadership skills.
We have the advantage of starting with a robust program evaluation from the original funding source. We plan to expand the evaluation in three areas.

A: Outcomes from assessment of participating CRs and health profession student leaders: We plan to rigorously assess the impact of CRIT on performance as clinicians, educators and leaders, using a variety of measures including personal reflection, self-assessment, scope and number of educational activities.

Baseline Evaluation (which will inform our curriculum):

1. Responsibility: We will evaluate their understanding of their responsibilities and readiness as CRs in terms of the following: percentage of time teaching, providing clinical care and completing research/QI, self-rating of their role as teachers, leaders and “change agents”, and confidence in their knowledge and skills in care of older adults.
2. Spectrum of geriatric issues taught: We will determine how often in the six months prior to CRIT, CRs were likely to have taught about recognizing delirium in older patients, managing delirium in older patients and reviewing medications for evidence of poly-pharmacy. Do they have knowledge of "never" events for hospitalized older adults, incorporate the principles of geriatric rehabilitation into practice and understand Medicare; issues they will need to teach.

Pre/Post Surveys: Chief residents (and student leaders) will complete surveys before and after CRIT, evaluating their confidence in the following areas:

1. Assessment of Confidence in Ability to Apply and Teach Geriatrics Skills and Knowledge: ability to apply clinical problem-solving skills to the care of older patients, the ability to teach others clinical problem solving skills and the ability to incorporate geriatrics issues into formal/informal teaching.
2. Confidence in Chief Resident Skills: CRIT will provide formal opportunities to learn about essential skills necessary in the practice of a chief resident. The skills include the ability to hold small group sessions, give feedback, connect with a reluctant learner, resolve conflict, teach using a case-based interactive approach, and carry out work as Chief Resident.

B: Outcomes from assessment of Program Directors: We will request that the program directors evaluate our program, to gain their input and their perspective on how the program is influencing the performance of their chiefs and residents. We will ask them about their perspective on the role and responsibilities of chief residents and about their curriculum for trainees in geriatrics.

C: Completion and merit of quality improvement and educational projects: We will seek ways to measure the impact of CRIT on the delivery of care in our health system with quality improvement and educational project outcomes and measures (Leenstra, 2007).

Data management and analysis

Our participant evaluations are accessed on-line through REDCAP, a secure data management system. The data is compiled and kept in a secured folder. We anticipate updates and modifications to our evaluation tools. Data analysis will be primarily descriptive, as we assess changes in attitudes, knowledge and skill over time to determine if they are sustained.

IRB status

We have Duke IRB approval for the program as it currently exists. We will submit a continuing review with the request for annual renewal. Submission of amendments is based on our plans to adjust the program with the guidance of our steering comittee.

Challenges

Offsite immersion vs. Local, practical and accessible location: The originators of the CRIT program emphasize the importance of holding the conference away from the medical center so that the chief residents are not distracted by concurrently taking call or trying to fulfill clinical duties during the weekend curriculum. Yet traveling significant distance does tend to increase cost and limit the number of participants. The first two CRIT conferences were held in Winston Salem. We are going to try holding the CRIT weekend closer to the medical center so that faculty do not need to stay overnight. This will allow more faculty to participate and will increase our interprofessional involvement.

Appreciation vs. Fiscal responsibility: Providing a retreat type atmosphere allows the chiefs to get to know each other both professionally and personally. Including families and allowing free time in the program places value on the development of our chiefs as human beings who must balance both professional and personal lives. Providing time for CRs and faculty to enjoy socializing emphasizes that chiefs are emerging colleagues. A dinner reception for participants and their families with opening remarks, introductions (faculty, keynote speaker and our guest geriatric patient) and informal networking has been valuable. We are committed to keeping costs moderate and sustainable.

Inclusion across professions vs. Focus on chief residents. Inclusion of advance trainees and future leaders from other professions may present logistical challenges. As this is a major innovation, we will likely focus on the professions of nursing and physical therapy as a pilot program with careful assessment of the impact on the dynamics of the existing program. We expect this expansion of the program to be extremely successful and to merit an adjustment to the name of the program such as Immersion Training in the Care of Older Adults for Emerging Healthcare Leaders.

Sustainability

We have already and will continue discussing with our stakeholders and steering committee a plan for long-term viability of this program. Our goal is to enhance the care of older adults, improve the professional development and performance of chief residents, and promote quality, consistency and safety in our practices. We propose that funding should come from multiple departments of the school of medicine and the hospital. We will continue to solicit philanthropic support. We anticipate that our stakeholders will see fit to provide specific funding for project development.

Opportunities for subsequent scholarship

There are many ways that CRIT will provide opportunities for scholarship. The quality improvement and educational projects will be obvious opportunities for scholarship including papers and posters that will be both interdisciplinary and interprofessional as we will continue to encourage participants to work together in groups. Posters may be presented at national meeting or at our local Duke AHEAD or Quality and Safety Conferences. These publications may appear in research, education, administrative or quality and safety journals. They will also be appropriate for on-line learning repositories. Faculty from varying disciplines and professions will also work and learn together – they will participate in projects but may also develop working relationships amongst themselves that lead to scholarly collaborative products.

Broader Impacts

Chief residents and future leaders in medicine and nursing are our primary targets for this program; their knowledge about older adults and how to care for them; their professional activity and performance as educators; their ability

to work effectively within our health system to provide patient-centered evidence-based care to older adults. But in so doing we also know we will touch many residents, medical, nursing, physician assistant and physical therapy students. We can envision adapting this curriculum in ways that could provide income to sustain the program. For example, the curriculum might be adapted to provide continuing medical education—Immersion Training in the Care of Older Adults for surgeons, hospitalists, or practicing interdisciplinary care teams.

Timeline

January—Assemble steering committee, determine date for the CRIT weekend, invite faculty
February—Decide Duke specific objectives for CRIT, develop themes to direct QI/education projects.
March—Modify curriculum and evaluations to meet Duke specific objectives; IRB modifications.
April—Recruit chief residents, advanced nursing students, physical therapy resident and program directors to participate in CRIT
May/June—Sign consent, complete baseline evaluations, hold the CRIT weekend event.
July/August—Schedule follow up project mentoring sessions. Plan for three meetings with each project group, review pre-post CRIT weekend data with steering committee.
Sept/Oct—Continue with project meetings, complete 6 month follow-up surveys.
Nov/Dec—Program directors of participating chiefs and other professional student leaders to complete CRIT impact survey, review 6 month data, review budget and plan with steering committee for financial subsequent viability.
Jan/Feb 2016—Participants present projects to DUHS stakeholders at scheduled, publicized reception.
April/May 2016--Final surveys from chiefs and student leaders will be completed.

References

Leenstra JL, Beckman TJ, et al. Validation of a Method for Assessing Resident Physicians' Quality Improvement Proposals. J Gen Intern Med. 2007 Sep;22(9):1330-4.

Levine S, Chao SH, et al. Chief Resident Immersion Training in the Care of Older Adults: An Innovative Interspecialty Education and Leadership Intervention. J Am Geriat Soc 2008;56 (6): 1140-45.

Budget	Description	Estimated Cost
PI Effort	Dr. White and Dr. Lagoo-Deenadayalan (salary and fringes)	$ 5,000.00
Consultant Costs	Susanne Harris (administrative salary and fringe for 1yr)	$ 2,750.00
	TBD (statistical support)	$ 1,500.00
Equipment		$ 0
Computer	Hardware ($1500/laptop)	$ 0
	Software	$ 0
Supplies	Costs for flip charts, pens, paper	$ 350.00
Travel	(1,000/trip)	$ -0
Other Expenses:	Cost of conference site, meals, and overnight stay for 30 chief resident/student leaders	$ 9,000.00
	Meals for 6 month follow up event for project presentations	$ 1,500.00
Total Costs for Proposed Project		$ 20,100.00