ESP Project Description

**PROPOSED PROJECT TITLE**

Creation of a Longitudinal Curriculum in Scholarly Development

**PROPOSED PROJECT AIMS**

1. Increase resident knowledge of the methodology of research and other scholarly activities by enhancing our research curriculum

2. Improve resident comfort level and preparedness in the dissemination of scholarly work

3. Increase the scholarly output of residents

**Rationale for the Study and Feasibility**

The importance of research has been recognized by both the American Academy of Pediatrics (AAP) and the Accreditation Council for Graduate Medical Education (ACGME), with both organizations recommending training in research methodology for residents.1,2 Increased exposure and education regarding research methodology has been associated with residents entering fellowship training.3 The new individualized curriculum can provide additional time for residents to be exposed to research and foster interest in continuing scholarly pursuits after residency graduation.

The creation and evaluation of a longitudinal multidisciplinary curriculum incorporating all aspects of research from searching and critically appraising the literature to designing a project and reporting its results will be the core of this project. As Associate Director of the pediatric residency program I will have the opportunity and authority to implement this curriculum.

**Educational Significance**

Both the AAP and ACGME recommend that pediatric residents be exposed to and participate in scholarly activities. Our residency program currently has a curriculum designed to expose residents to scholarly work, however improvements need to be made. A recent needs assessment of our current residents (46% response rate) demonstrated that less than half (44%) of respondents felt they could search the literature proficiently, with a similar percentage for senior residents. Many (46%) senior resident respondents report being not at all comfortable in the creation and submission of an Institutional Review Board (IRB) proposal. Almost 40% of senior residents also do not feel comfortable at preparing a platform presentation. An enhanced curriculum regarding research methodology will help to improve comfort level of residents to participate in scholarly projects both during residency and in their future careers.

**Design and Methods**

**Aim 1. Increase resident knowledge of the methodology of research and other scholarly activities by enhancing our research curriculum**

Based on a recent needs assessment, many of our residents do not feel comfortable in several aspects of research methodology including literature searches, study design, and statistical analysis. I hypothesize that with the creation of an enhanced multidisciplinary, longitudinal curriculum comfort levels in these skills will improve. A curriculum designed to educate residents on the most important aspects of research will be offered to all residents including searching and appraising medical literature, research study design, preparing an IRB proposal, and collection of data.

For residents who are just beginning the research process, sessions early in the academic year will focus on the identification of a project idea, research question, and faculty mentor with similar scholarly interests. Those residents who have already started data collection, will participate in sessions to prepare them for data analysis, designing a platform presentation, and creation of scientific posters and manuscripts. These sessions will be part of our annual educational conference curriculum and will be held throughout the year with each one building upon the material discussed at the previous session. Each session will be presented by someone with experience in the area including physician faculty, statisticians, IRB specialists, and our pediatric reference librarian. This curriculum will culminate with a platform presentation at our annual Science Day where residents present their scholarly work to their faculty and peers. Each resident is required to present at this symposium at least once during his or her residency training.

**Aim 2. Improve resident comfort level and preparedness in the dissemination of scholarly work**

The new curriculum will include sessions geared toward preparation of data dissemination led by faculty who have been highly successful and productive in scholarly work. Preparation of a platform presentation, creation of a scientific poster, and writing of a manuscript will all be discussed. Residents who have been accepted to present their work via a platform presentation at a regional or national meeting will have the opportunity to present to faculty and peers 2-4 weeks prior to the meeting in order to practice and receive constructive feedback.

**Aim 3. Increase the scholarly output of residents**

During the 2014-2015 academic year, our pediatric residents had a total of 1 platform and 5 poster presentations at regional or national meetings. One case report and no scientific manuscripts were published by our residents. As part of updating the research curriculum, I plan on creating a Scholarly Activity Program where residents who complete the requirements over their residency training will be awarded a “Certificate of Excellence in Scholarly Activities” upon graduation. The requirements for this program will be to attend 70% of the research curriculum lectures offered during residency and to either submit a scientific manuscript for publication or give a platform presentation at a regional or national meeting.

**Evaluation Plan**

Aims 1 and 2: After implementation of the updated research curriculum, a survey will be sent to all residents annually to assess their comfort level and preparedness to participate in various aspects of research. These will include (but not be limited to) searching the literature, use of various statistical tests (ANOVA, t-test, etc), submission of an IRB proposal, and preparation of poster and platform presentations and scientific manuscripts. The responses will be compared to the recent needs assessment to see if comfort level and preparedness have improved.

Aim 3: As part of the annual program update to the ACGME, the number of platform and poster presentations along with scientific manuscript submissions will be collected from all of our residents. This scholarly output will be compared to that from years prior to the implementation of the new research curriculum to assess if the yearly number has increased after curriculum implementation. Post-residency career (general pediatrics or subspecialty fellowship) will be monitored for those residents who are awarded a Certificate of Excellence in Scholarly Activities. I hypothesize that residents completing this program will be more likely to pursue fellowship training.

References

1. AAP Committee on Pediatric Research. Promoting education, mentorship, and support for pediatric research. Pediatrics. 2001 Jun;107(6):1447-50. Re-affirmed 2011.
2. Accreditation Council for Graduate Medical Education. Program Requirements for Residency Education in Pediatrics (2015). <http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/320_pediatrics_07012015.pdf>. Accessed July 2015.
3. Cull WJ, et al. Research exposure during pediatric residency: Influence on career expectations. J Pediatr 2003;143:564-9.