

For the academic year 2012 – 2013 the Pediatric Resident Research Committee (PRRC) has initiated a critical appraisal curriculum which runs throughout the academic year. In past years, the critical appraisal curriculum has been implemented on a 2 year cycle. In order to ensure continuity of topics, and to encourage evidence based practice of pediatric medicine, the PRRC has encouraged the continuous exposure of residents to critical appraisal skills throughout the academic year. In the past, journal clubs took place after hours and were not part of protected teaching time for the residents.

The curriculum is comprised of basic epidemiologic principles, critical appraisal skills, study design and methodology, and introductory statistics. Journal Clubs are an integral part of this curriculum and serve to complement the teaching sessions which occur on academic half days. The PRRC aims to have teaching sessions on academic half days which are a combination of didactic and problem based learning. The topics to be covered during academic half days range from: how to pose a research question, ethics of conducting research, and basic epidemiologic principles, critical appraisal and statistics. Journal clubs occur now during protected teaching time. Journal clubs, which are held on Tuesday mornings will focus on topics discussed at the previous academic half day. For example, if residents were introduced to principles of diagnostic and screening tests, the journal club would focus on critically appraising two research articles related to diagnostic or screening tests and calculating sensitivity, specificity, PPV, NPV and likelihood ratios.

Currently, pediatric residents have a total of 4-5 AHD sessions on critical appraisal/research per year. The goal of PRRC has been to try and increase this time, however the PRRC recognizes the difficulty in scheduling all the academic sub-specialties during AHD. During the 2012-2013 and 2013-2014 Academic years, the following topics have been addressed:

- Introduction to Epidemiologic Principles
- Introduction to Statistics
- Approach to Critically Evaluating a Scientific Article
- Asking the Question
- What Research Design Do I Use?
- What Statistical Tests Should I Use?
- Evaluating Screening and Diagnostic Tests
- Introduction to the McMaster Resident Research/critical Appraisal Curriculum
- How to Prepare a Research Grant
- How to Give a Presentation

The PRRC has successfully scheduled 4 Journal clubs for the 2013 – 2014 academic year that are dedicated solely to the learning of Pediatric residents. In addition, Residents are also encouraged to attend the monthly journal clubs hosted by the Division of General Pediatrics where pediatric research articles are critically appraised.

Work in Progress Sessions for Pediatric Residents occur on the first Tuesday of the month. Residents are expected to present at minimum, on one occasion during their academic training. The residents may present a research idea, a study in progress or a summary of their findings. The purpose of WIP rounds are to encourage scholarly, constructive feedback and encourage critical appraisal skills.

The goals of the PRRC critical curriculum are to ensure that pediatric residents acquire:

- a) Critical appraisal skills as they apply to the medical research literature to encourage and foster the development of evidence based medicine.
- b) Basic epidemiologic principles to assist with the assessment, interpretation and application of research studies.
- c) Principles for basic design and conduct of scholarly projects to be completed throughout the course of the pediatric residency program.

The PRRC has implemented in July 2014, a Resident Research Tracking Tool (RRTT). The purpose of the tool is to help guide residents and supervisors in the necessary steps of conducting a scholarly project (developing a question, drafting proposal (methods, statistics, ethics application) with direct links to grants/ funding applications, REB and other resources. The RRTT will be brought to all meetings with: 1) resident and research supervisor, 2) meetings with resident research chair, and 3) residents meetings with Dr. Ladhani. The RRTT will be included in the resident's dossier.