FAMILY HEALTH HISTORY
February 2017

Tip of the Month

It is possible for a disease to run in a family but skip a generation. For example, a grandfather may have been affected with a certain condition, but none of his children (3 daughters) are affected. But then a grandson is diagnosed with the same condition. In this case, the disease appears to only affect males. Although females may carry the affected gene, they will not show symptoms of the disease and thus, it appears to have “skipped” a generation.

Collaboration between Duke and Duke-NUS: Piloting of MeTree in Singapore Biobank Study

CAGPM faculty Drs. Lori Orlando (Associate Professor of Medicine and Associate Director of the Center for Applied Genomics and Precision Medicine, Duke University) and Ryanne Wu (Assistant Professor, Health Services and Systems Research Program, Duke-NUS Medical School) will soon begin a project to pilot the MeTree family history collection and risk assessment tool within a Singaporean population. This is the first collaboration between CAGPM, the National Heart Center of Singapore (NHCS) and SingHealth Duke-NUS Institute of Precision Medicine (PRISM).

The initial phase of the collaboration will involve integration of Duke’s MeTree family health history software in an NHCS study called the “Molecular and Imaging Studies of Cardiovascular Health and Disease” (or Biobank study), which is collecting targeted genomic panels, clinical, and environmental data on a large cohort of Singaporean volunteers. De-identified data from the Biobank study is being stored in a healthy population data repository. Healthy individuals undergo whole genome sequencing and lipid profiling within PRISM, where the molecular information is integrated with clinical and environmental data. The Biobank study has already enrolled 1,000 healthy subjects and will continue enrollment over the next year and possibly beyond. Current and newly enrolled subjects will be invited to use the MeTree tool to provide their family history.

As part of the study’s goals, Drs. Orlando and Wu will evaluate the feasibility and effectiveness of implementing MeTree in the larger Singaporean context. Cultural views and practices about sharing family history data will likely warrant new approaches to implementing the MeTree tool in Singapore compared to current projects with patients based in the U.S. According to Dr. Wu, in preparation for the launch of the study, her team has learned that a lot of terms and relationships need to be more clearly defined to insure that the correct information would be captured. For example, the phrase ‘blood relative’ or standard family relationships like aunt or uncle may be unclear (in Asia, individuals older than the patient are frequently called “Auntie” or “Uncle” as a term of politeness). In some Asian cultures, medical problems may not be openly discussed between family members, posing a challenge to collecting a three-generation health history. To account for these differences, the research team has revised their training approaches to incorporate some of the family dynamics and public understanding of terms typically used in MeTree. Thus, the study will likely uncover some important yet unanticipated issues that may impact implementation of the family history tool that will be quite valuable for a health system-wide implementation.