Tosh joined the MU faculty in 2007. He served as the department director of pediatric obesity from 2007–2013 and was a key player in establishing the MU Adolescent Diabetes and Obesity (ADOBE) Clinic. ADOBE takes a family-focused, multidisciplinary approach to the treatment of children with diabetes, obesity and endocrine disorders. Working with medical doctors and dieticians, families learn how to incorporate physical activity and healthy food choices into their everyday lives. An impressive 80 percent of patients either lose or maintain their weight.

Tosh has conducted numerous studies in relation to childhood obesity. In one study, he and his team increased vitamin D intake in pre-diabetic children. Over time, insulin levels decreased — resulting in better glucose control despite no changes in body weight, dietary intake or physical activity. Tosh also investigates Adenovirus-36, a virus that has been linked with human obesity. He hopes to better understand how geographic region impacts research results and uncover more details about how the virus makes itself present in adolescent obesity.

In 2017, the International Association of Eating Disorder Professionals recognized Tosh as a certified eating disorder specialist.

Dr. Aneesh Tosh is an associate professor of clinical child health in the School of Medicine and a member of the MU Childhood Obesity Initiative.