ABSTRACT: Human influenza viruses cause regular epidemics and occasional pandemics with a substantial public health burden. Household studies have been used to study influenza epidemiology for decades, with the Tecumseh Study being one of the most famous. A recent development is the use of household transmission (case-ascertained) studies with short-term follow-up rather than follow-up over an entire influenza season in household cohort studies. In this talk, I will first describe this study design and review results from previous household transmission studies. I will then present analyses of a household transmission study conducted in Hong Kong. I studied the role of two biological variables on transmission, specifically antibody titers measured by hemagglutination-inhibiting (HAI) assays and viral shedding measured by reverse-transcription polymerase chain reaction (PCR) test. The association between an HAI titer of 1:40 and protection was substantially less than 50% in households, perhaps due to the intense and frequent contacts among household members. Viral shedding was at most weakly correlated with infectivity in households, and other correlates of infectivity should be examined in future studies. I will also talk about potential uses of this study design to obtain information and insights on influenza epidemiology.

Seminar Sponsors:

To arrange a meeting with Dr. Tsang,
Contact: Stephanie Shadbolt / sshadbolt@fredhutch.org or Rebecca Allen / rebecca@fredhutch.org
206.667.7754