***Formulating Research Questions – Part 1***

**Monday, May 19: 10:30pm-12:00pm**

**10:30-10:45pm: Ask,** audience for (1) example research question that could be modeled statistically and (2) example research question that could be modeled mechanistically.

* Ex: statistical model: *what are the risk factors associated with being TB+ across Madagascar?*
* Ex: mechanistic model: *how does the population prevalence of HIV impact the transmission rate of TB?*

**10:45-11:00pm: Brainstorm** *statistical model.* Highlight *response* variable and *predictor* variables. If relevant, discuss the *type* of data in the response variable (i.e. the *distribution/family* that the model will take).

**11:00-11:30pm: Brainstorm** *mechanistic model.* Highlight *populations* in your system, *states* that those populations can take and *processes* that describe how individuals can move between these states. Highlight how some *processes* are dependent on various *states.*

***Think of your own (1) statistical and (2) mechanistic question related to your research topic in time for tomorrow’s session, ‘*Formulating research questions for modeling – part 2’, *at 1:30pm***