

1116-92-1759 **Patrick Davis*** (davis1pt@cmich.edu), Central Michigan University, 214 Pearce Hall, Mount Pleasant, MI 48859. *Effect of Delayed Dispersal in an Infectious Disease Model of a Large Metapopulation*. Preliminary report.

Basic compartmental models for an infectious disease like the Kermack-McKendrick model take into account various properties of the disease, but ignore the effect of the underlying population spatial configuration. Consequentially, some disease models have been developed where the population is divided and movement is permitted between distinct subpopulations; however, these models fail to adequately address real-life dispersal dynamics which may include delays. We propose and analyze a model of infectious disease in a large metapopulation that uses delay differential equations to account for delayed dispersal. (Received September 21, 2015)