1135-92-1576 **Abdul-Aziz Yakubu*** (ayakubu@howard.edu), Department of Mathematics, Howard University, 2441 6th Street NW, Washington, DC 20059, and **Pauline Van den Driessche**. *Discrete-Time Infectious Disease Models.* Preliminary report.

We will focus on discrete-time infectious disease models in populations that are governed by constant, geometric, Beverton-Holt or Ricker demographic equations, and give a method for computing the basic reproduction number, R0. When R0 < 1 and the demographic population dynamics are asymptotically constant or under geometric growth (non-oscillatory), we prove global asymptotic stability of the disease-free equilibrium of the disease models. Under the same demographic assumption, when R0 > 1, we prove uniform persistence of the disease, and the existence of at least one endemic equilibrium (EE). We apply our theoretical results to specific discrete-time epidemic models that are formulated for SEIR infections and cholera in humans. Our simulations show that the unique EE of each of the two specific disease models is asymptotically stable whenever R0 > 1. (Received September 23, 2017)