1109-92-84 **Glenn F Webb*** (glenn.f.webb@vanderbilt.edu), Mathematics Department, Vanderbilt University, Nashville, TN 37240, and **Cameron Browne**, Mathematics Department, Vanderbilt University, Nashville, TN 37240. *A Model of Ebola Incorporating Age of Infection.* Preliminary report.

A model of an Ebola epidemic is developed with infected individuals structured according to disease age. The transmission of the infection is tracked by disease age through an initial incubation (exposed) phase, followed by an infectious phase with variable transmission infectiousness. The removal of infected individuals is dependent on disease age, with three types of removal rates: (1) removal due to hospitalization (isolation), (2) removal due to reported mortality separate from hospitalization, and (3) removal due to unreported mortality or unreported recovery. The model is applied to the Ebola epidemics in Sierra Leone and Guinea. Model simulations indicate that successive stages of increased and earlier hospitalization of cases have resulted in mitigation of the epidemics. (Received January 23, 2015)