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Suzanne Lenhart* (1lenhart@math.utk.edu), University of Tennessee, NIMBioS, 1122 Volunteer Blvd. Suite 106, Knoxville, TN 37996-3410. *Modeling the spread of La Crosse virus in Knox County, Tennessee*. Preliminary report.

La Crosse virus (LACv) is an arbovirus found commonly in southern Appalachia, and is of particular public health concern because of its potential for negative health impacts on children. LACv transmission depends on mosquito population dynamics, which in turn depend on environmental factors such as temperature and precipitation; generally, higher temperatures and increases in accumulated precipitation correspond to greater mosquito population. We use a system of ordinary differential equations to investigate the role of temperature and precipitation on the dynamics of LACv vectors over a single season in Knox County, TN. We use locally-collected mosquito population data (in collaboration with R. Trout Fryxell) to parametrize our model. Some of this work is from an REU project. (Received September 20, 2017)