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Tim Clayton* (clayton@math.utk.edu). *Optimal Control of an ODE Model for Rabies in Raccoons with a Birth Pulse*. Preliminary report.

An SEIR model using a system of ordinary differential equations describes a raccoon population infected with the rabies virus. This model includes seasonal births and the dynamics of the vaccine. The goal is to find optimal strategies for distributing vaccine packets to minimize the infected population and the cost of implementing the control. The effect of seasonal birth pulse on this strategy is investigated. (Received August 13, 2008)