1106-92-639   **Laurel A Ohm*** (`laurelohm@gmail.com`). *Supplemental immunization activities: a mathematical model for measles control in Kenya.*

Though sustained progress has been made, measles continues to pose a serious health concern during early childhood in many developing countries. Sub-Saharan Africa alone accounted for nearly 40 percent of measles mortality in 2010 (about 50,000 deaths). Elimination of the disease within the next fifteen to twenty years represents a major goal for the World Health Organization. In this paper, we present an SEIR model for measles transmission in Kenya based on historical and projected demographic data as well as recorded immunization activities. We explore the effects of routine infant vaccination and periodic mass-vaccination campaigns for the under-five population on the persistence of the disease thirty to fifty years into the future. We show that, in the case of Kenya, given a certain level of routine measles vaccination, we can determine the corresponding SIA periodicity and coverage necessary for measles control, allowing for exploration of the tradeoffs in feasibility and cost-effectiveness between sustained routine coverage and periodic SIAs. (Received September 03, 2014)