

# Avian-human influenza epidemic model with pulse vaccination

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Avian influenza has high virulence for birds, and sometimes it spreads from birds to humans. Avian influenza cannot be transmitted among humans yet. However, the influenza virus easily mutates, and it is possible that in the future a mutant variant of avian influenza will be able to spread among humans. As a control measure, for the human population we apply vaccination at discrete times with equal intervals. Our mathematical model interprets the spread of avian influenza and mutant avian influenza with pulse vaccination. We construct the eradication solution of the impulsive system, and obtain conditions on the parameters for the local and global stability of this infection-free solution.