Edward Goldstein*, Department of Epidemiology, Harvard School of Public Health, Boston, MA. *Epidemiology of influenza strains: Competition, prediction, and associated mortality.

We use the US CDC regional outpatient surveillance data on influenza-like-illness (ILI) and virologic surveillance data to define a weekly incidence proxy for each of the three major influenza strains: A/H3N2, A/H1N1 and influenza B. We show that the cumulative seasonal incidence of each strain is affected by the early circulation of the other two strains and devise a prediction algorithm for the cumulative incidence of each strain in an evolving influenza season, calibrating its parameters against historical data. We relate the above incidence proxies to the weekly mortality data for various causes and in the process estimate the corresponding annual baselines for non-influenza associated mortality. (Received July 7, 2011)