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## **An age-dependent mathematical model and vaccination strategies for 2009 A/H1N1 influenza in the Republic of Korea**

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In this talk, we will present a mathematical model of 2009 A/H1N1 influenza considering age structure in the Republic of Korea and suggest vaccination strategies for mitigating the epidemics. There were 750,000 confirmed cases of 2009 A/H1N1 influenza from May 2009 and August 2010. Because influenza viruses are spread through close contact, contact pattern plays an important role for the disease spread. We developed an age-dependent SEIAR model. The total population is divided into five subgroups and age-specific transmission rates are estimated based on laboratory confirmed data from Korea Centers for Disease Control and Prevention (KCDC). Vaccination policies is important to minimize the number of infected individuals especially when the vaccine supply is limited. Using mathematical model, we could assess the impact of the age-dependent vaccination priority on transmission dynamics.

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