

Title: Epidemiology and burden of illness of seasonal influenza among the elderly in Japan: A systematic literature review and meta-analysis

Name: Kiyosu Taniguchi[1], Shunya Ikeda[2], Yuriko Hagiwara[3*], Daisuke Tsuzuki[3], Yasushi Koizumi[3], Marwa Klai[4], Yoko Sakai[5], Bruce Crawford[5], Joshua Nealon[4]

[1]Department of Clinical Research, National Mie Hospital, Tsu, Japan; [2]Graduate School of Public Health, International University of Health and Welfare, Tokyo, Japan; [3]Sanofi Pasteur, Tokyo, Japan; [4]Sanofi Pasteur, Lyon, France; [5]Syneos Health, Tokyo, Japan

Background: Elderly populations are particularly vulnerable to influenza and often require extensive clinical support. In Japan, nationwide passive sentinel surveillance monitors seasonal influenza but does not capture the full disease burden. We synthesized existing evidence on epidemiology, vaccine effectiveness (VE) and costs of seasonal influenza in the elderly population aged over 50yrs.

Methods: PubMed, EMBASE, and ICHUSHI search for articles describing seasonal influenza in Japan, published between 1997 - 2018, in English or Japanese. Grey literature was also assessed. A random-effects meta-analysis characterized VE of standard dose vaccines among studies reporting this information.

Results: Of 1,147 identified articles, 143 met inclusion criteria. Reported incidence rates varied considerably depending on study design, season, study setting and, most importantly, case definition. In nursing homes, influenza attack rates were as high as 55.2% and aged persons suffered significant influenza disease burden, hospitalizations, and mortality. Renal diseases were the most commonly-reported comorbidity. Most hospitalizations were in people aged >60. In meta-analysis, overall VE was 19.1% (95% CI: 2.3% - 33.0%) with high heterogeneity (I^2: 89.1%). There was a trend of lower VE in older people (40.1% in the <65 group; 12.9% in those ≥65; p = 0.21). Additional healthcare costs were partially mitigated by vaccine administration.

Conclusions: Despite differences between studies that make comaparisons challenging, the influena burden in elderly Japanese is significant. Influenza VE and related socioeconomic outcomes data were limited and lack generalizability. Further research on influenza management for this population is warranted with an emphasis on characterizing the benefits of prevention.

(250 words)

Biography

Dr Kiyosu Taniguchi has completed his MD in 1984 from Schoolf of Medicine, National Mie Univeristy. He is the Director, Department of Clinical Research, National Mie Hospital, Japan. He was the former Head of 1st Division, Infectious Disease Surveillance Center, National Institute of Infectious Diseases. He also served at World Health Organization headquarters, and worked for

international infectious disease surveillance and control program. Dr. Taniguchi is a board of councilors of Japanese Association for Infectious Disease, editorial board for Japanese Society for Vaccinology. In addition, he is a member of the pandemic preparedness committee of MHLW. (up tp 100 words)

Presenting author details

Full name: Dr Kiyosu Taniguchi. MD., PhD (depends on availability, Sanofi to present)
Contact number: +81-80-7822-4753*
Session name/ number:Track 16 (Viral Vaccines)
Category: Oral presentation.