When the World Health Organization (WHO) announced the emergence of a novel influenza virus in April 2009, little was known about how many people the virus would infect and the efficacy of preventive measures.

Together with collaborators from the Singapore Armed Forces, Defense Science Organisation, Tan Tock Seng Hospital, long-term care facilities, NUS researchers took serial blood samples and surveyed 4 groups of adults from June 22, 2009, to October 15, 2009. These included about 800+ members of the general public, 1200+ military personnel, about 550 healthcare staff from an acute care hospital, as well as 300 staff and residents from long-term care facilities. Blood samples were tested with the help of the WHO Collaborating Centre for Reference and Research on Influenza.

Blood samples from these groups were compared to inform about baseline immunity and transmissibility of the virus. We estimated that infection rates with the pandemic virus were highest among the military personnel (29.4%), followed by general public (13.5%), hospital staff (6.5%) and long-term care facility participants (1.2%). Individuals in households where at least one member was known to be infected also had a higher risk of infection. Similar to other studies, we found that older people were less likely to be infected.

Our study was the first to directly measure influenza infection rates during a pandemic by following up individuals for evidence of infection using serial blood samples. It provided direct evidence that military personnel were at increased risk of infection from the H1N1 pandemic virus, but that healthcare staff and those working and staying in long-term facilities were not at any greater risk that the general public. Additional works on the same groups of individuals recruited in our study (published in follow-up papers) have provided insights into factors driving the transmission of the pandemic virus and the efficacy of various preventive measures.

The study was also presented to the World Health Organization pandemic influenza epidemiology working group.

Please refer to [http://jama.ama-assn.org/content/303/14/1383.long](http://jama.ama-assn.org/content/303/14/1383.long)