Representative Contact Diaries for Modeling the Spread of Infectious Diseases in Taiwan


In this study we apply contact diaries and social surveys to epidemiological inquiries about how infectious diseases spread across socio-demographic groups. Using 3-stage systematic probability sampling and in-person household interviews in a national survey, we collected 1,943 representative 24-hour contact diaries. Nearly 70% of the 24,265 face-to-face contacts recorded in these diaries occurred outside of respondents’ households. The most active age group was 5–14, who averaged around 16–18 daily contacts, about 2–3 times as many as the least active age groups. From these contact patterns we derive key parameters of social mixing to modify a sophisticated national simulation system. While the realistic data help us better model and estimate how soon pandemic diseases may develop, the sampling design enables us to infer the findings to the whole population in Taiwan. Our research results should help implement more appropriate and effective strategies for controlling an emerging disease infection.