It has been widely reported that recent H1N1 epidemics and pandemics have had relatively mild impacts in elderly individuals, who would normally be at the highest risk of death or severe disease from influenza [CITE]. Many existing studies note that elderly individuals are likely to be protected against H1N1 because of cohort effects; individuals who are now over age 65 would have been repeatedly exposed to H1N1 during childhood, and may now enjoy protection against H1N1 because of these early immune experiences.

These cohort effects have clear epidemiological consequences. A side-by-side comparison of the age distributions of H3N2 and H1N1 cases shows that H3N2 has a much greater impact in elderly cohorts than H1N1 (Fig. 1). These patterns are highly consistent across time (Fig. 1subpanel), and space (Fig. 1subpanel).

Given ##the above##, surprisingly little is known about the specific, underlying drivers of these cohort effects. A number of hypotheses could explain observed differences in age distribution of H1N1 and H3N2:

* First exposure
* Multiple childhood exposures
* Multiple childhood exposures + high diversity of H1N1
* Subtype-specific protection
* Group-level protection

**Discussion**

Surprisingly few studies have compared age distributions of infection from H1N1 and H3N2, and to our knowledge this is the first study that provides a comparison of single-year age distributions from across multiple locations and influenza seasons. One major obstacle to this research has been the difficult of obtaining epidemiological data resolved to single year of age. ##STATEMENT ABOUT WHO AND CDC DATA##

To our knowledge, this is the first study to compare

specific underlying drivers of this apparent protection against H1N1.