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IN RESPONSE

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Medicare claims, including those for HZ, have been available in an electronic format for research purposes since 1980 (1). Therefore, initial increases in HZ incidence during the first few years of our study cannot be an artifact of a start-up phase of a new system for recording claims data.

Mixing with children does decrease in older age groups; however, mixing patterns do not vary substantially by age among adults older than 65 years (2). Between 1992 and 2010, HZ incidence increased at a similar rate in all age groups and did not accelerate in any age group. To confirm this factor, we tested a 3-way interaction among calendar year, varicella vaccination implementation period, and age group in the Poisson model as Drs. Ogunjimi and Beutels suggest, but our findings were not statistically significant.

Drs. Ogunjimi and Beutels correctly note that the findings in our study apply only to adults older than 65 years and cannot exclude the possibility of an effect in younger age groups, which previous mathematical models have predicted. However, previous studies in the United States (3) and Canada (4) have not shown an acceleration in HZ incidence in adults younger than 65 years after implementation of childhood varicella vaccination programs.

Although few U.S. state health departments collected data on varicella incidence during the period of our study, Zhou and colleagues (5) used MarketScan databases to evaluate the effect of childhood varicella vaccination coverage on varicella incidence between 1994 and 2002 as reported by the National Immunization Survey. They found that decreases in varicella incidence were significantly greater and faster in those living in 11 states with consistently high varicella vaccination coverage than in those in 19 states with consistently low coverage. We and Leung and associates (3) subsequently found that rates of HZ did not differ in states with high and low varicella vaccination coverage.

The HZ vaccine was introduced in 2006 with 1.9% uptake in 2007 that increased to only 14.4% in 2010; we therefore expect the effect of the HZ vaccination, with 51% vaccine efficacy, on overall HZ incidence to be small. Results of an additional analysis limited to the period before introduction of the HZ vaccine (1992 to 2006) were essentially the same as those for the entire study period (1992 to 2010); implementation of the childhood varicella vaccination program did not lead to increases in HZ incidence compared with the period before introduction of the varicella vaccine.

Disclosures: None. Forms can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum3M13-1026.

In conclusion, we agree with Drs. Ogunjimi and Beutels that it is impossible to confirm from our study that widespread varicella vaccination does not influence HZ incidence in certain persons. However, although studies of the effect of exposure to varicella on individual risk for HZ have shown conflicting results, recent studies on the effect of decreasing childhood varicella incidence on adult HZ incidence provide reassurance that the varicella vaccination program has not resulted in population-level increases in HZ rates.

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