The 2009 pandemic strain of H1N1 influenza was back in Canada this year, despite an effective vaccine and very little mutation in the virus, researchers say. Instead, they point to a low level of seroprotection in adults aged 40 to 65 as the likely culprit.

Lack of previous exposure and of vaccination have probably combined to create a “pocket of residual susceptibility,” says Dr. Danuta Skowronski, epidemiology lead for influenza and emerging respiratory pathogens at the BC Centre for Disease Control. Skowronski and colleagues at The Canadian Primary Care Sentinel Surveillance Network published the findings earlier this month in Eurosurveillance and presented them at a World Health Organization (WHO) meeting on influenza vaccine in Geneva, Switzerland, Feb. 20.

An estimated 90% of influenza strains detected in Canada in the 2013/14 season to date are H1N1, according to the study, which used a case–control design to analyze 792 isolates from patients with respiratory illness presenting at sentinel surveillance sites in the five most populous provinces.

Skowronski says she was “pleasantly surprised” that this year’s flu vaccine was 75% effective, according to the study’s calculations. “We have found high rates of protection in those over 80 years of age, even before the pandemic,” thanks to their exposure to a similar virus that circulated in the 1930s, says Skowronski. As well, children have high seroprotection rates, probably as a result of high rates of exposure and vaccination in 2009.

But middle-aged adults have only a 30% seroprotection rate. “We don’t know the vaccination or infection history of patients in the serologic survey, explains Skowronski, but she thinks that the virus is now “working its way through adult contact networks.”

However, rates of hospitalization and death due to H1N1 this season “pale in comparison with 2009,” Skowronski hastens to point out, as a result of greater overall immunity in the population. Patients hospitalized this season tend to have underlying chronic conditions, including obesity, as a risk factor. “These patients are disproportionately affected,” she says, “We want to get our immunization message to them.” — Carolyn Brown, Ottawa, Ont.

Low rates of immunity in adults behind H1N1 resurgence

The answer to that question, according to John Tse, is that it allows drugstores to target tobacco users and offer them assistance from pharmacists and literature on quitting. Tse is the vice-president of pharmacy for London Drugs, which sells tobacco products in all its BC stores. If it stopped selling cigarettes, he says, smokers would simply buy them elsewhere, likely in locations without health professionals or smoking-cessation products.

Tse says London Drugs has distributed about 250 000 pamphlets with information on how to quit smoking. He says tobacco products are not a “money maker” for London Drugs, and though it might be a good public relations move to stop selling them, the company sees itself as having a role to play in the fight against tobacco use.

“Our position, and our belief, is that we want do everything we can to stop smoking and to help people quit,” says Tse. “Our goal is to actually stamp out smoking.”

But according to renowned tobacco control expert Simon Chapman, handing smokers tips on how to quit isn’t effective. “I know of no evidence that passing pamphlets to smokers while selling them cigarettes has any impact whatsoever,” Chapman, a professor of public health at the University of Sydney, in Australia, writes in an email. “Moreover, I’d be astonished if the rate at which such interactions occurred would be more than 1%.” — Roger Collier, CMAJ

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Middle-aged adults have only a 30% seroprotection rate against H1N1, but vaccination and infection history are not known.