To the Editor—The Naval Health Research Center (NHRC) in San Diego, California, conducts febrile respiratory illness (FRI) surveillance in civilian and Department of Defense populations at multiple sites across the United States—detecting the first 2 documented cases of a novel, quadruple-reassorted A/H1N1 virus (pH1N1) in California in April 2009 [1]. The NHRC’s ongoing febrile respiratory illness surveillance at US military recruit training centers [2] through the initial weeks of the current influenza season suggests poor efficacy for the pH1N1 component of the seasonal live, attenuated influenza vaccine (LAIV).

During the initial 12 weeks of the 2010–2011 influenza season (weeks 40–52 of 2010), A/H3N2 and B viruses widely circulated in the United States, with few cases of influenza among the well-vaccinated recruit population. Centers for Disease Control and Prevention influenza surveillance in Region 4 exhibited minimal to high influenza activity [3], with 2 cases of influenza among 3 recruit training centers in this region.

In contrast, during January 2011 at the same 3 recruit training centers, among LAIV-vaccinated recruits, the NHRC recorded 67 laboratory-confirmed influenza cases (81% of which involved pH1N1, (Table 1), which were phylogenetically similar to A/California/07/2009. Region 4 influenza activity concurrently increased, as did the proportion of pH1N1-associated cases, although A/H3 and B remained prevalent. South Carolina reported widespread influenza activity and an increased proportion of pH1N1-associated cases. More specifically, Richland County—which contains Fort Jackson—had increased influenza activity during January, corresponding with an increased number of cases among recruits [4].

Influenza among military recruits mirrors that in the surrounding civilian population and tends to occur during the first 2 weeks of training because of universal vaccination at the time of arrival and early exposure to locally circulating virus. Influenza cases occur after the second week of training when a new influenza strain is introduced to an unprotected population (eg, strain mismatch). Table 1 shows that during January the median onset of influenza B and A/H3 cases occurred during training weeks 1 and 3, whereas for pH1N1-associated cases, it was week 7 ($P < .01$).

Universally vaccinated (with LAIV) recruits in region 4 have been predominately affected by pH1N1; this happened relatively late in training, despite significant cocirculation of A/H3 and B influenza viruses at the national, regional, and state level. This observation suggests that the current LAIV is protective in the recruit population against influenza A/H3 and B but has decreased effectiveness against circulating pH1N1. If this finding is confirmed, additional investigations into possible explanations must be undertaken, because there are implications for individual patient care as well as national vaccination policy.

Table 1. Number of Influenza Cases, by Type and Influenza A Virus Subtype, and Associated Week of Training During January 2011 for Select Recruit Training Centers (RTCs) in Centers for Disease Control and Prevention (CDC) Region 4

<table>
<thead>
<tr>
<th>Subtype</th>
<th>A/pH1N1</th>
<th>A/H3</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. (%) of subjects</td>
<td>Median wk of training</td>
<td>No. (%) of subjects</td>
<td>Median wk of training</td>
</tr>
<tr>
<td>CDC Region 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall RTC</td>
<td>348 (30)</td>
<td>NA</td>
<td>346 (30)</td>
</tr>
<tr>
<td>Overall RTC</td>
<td>54 (81)</td>
<td>7</td>
<td>7 (10)</td>
</tr>
<tr>
<td>Marine Corps Recruit Depot, Parris Island, SC</td>
<td>5 (63)</td>
<td>5</td>
<td>2 (25)</td>
</tr>
<tr>
<td>Fort Benning</td>
<td>12 (67)</td>
<td>5</td>
<td>4 (22)</td>
</tr>
<tr>
<td>Fort Jackson</td>
<td>37 (90)</td>
<td>7</td>
<td>1 (2)</td>
</tr>
</tbody>
</table>

NOTE. Region 4 comprises the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. NA, not available.

- CDC region 4 influenza subtype percentage distributions were extrapolated to account for 661 untyped influenza A cases that occurred during 2–29 January 2011.
- $P < .001$, compared with CDC region 4 influenza distribution, by $\chi^2$ test.
- $P < .01$, compared with non-pH1N1 influenza cases, by 2-sided Wilcoxon test.
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