Quest Diagnostics, the world’s leading diagnostic testing company, is uniquely positioned to provide insights into the impact of the 2009 H1N1 influenza virus on Americans. Quest Diagnostics is the only company in the U.S. that performs H1N1 laboratory testing and, through its Focus Diagnostics business, provides two H1N1 test kits that the FDA has authorized for emergency use by other complex molecular labs.*

In this Quest Diagnostics Health Trends™ Report, we summarize analyses of de-identified data from five laboratories that perform H1N1 flu testing. Our H1N1 tests, first introduced to physicians on May 11, 2009, report whether a patient’s specimen is positive for influenza A and/or the 2009 H1N1 influenza virus.

Our analysis may supplement CDC reporting of influenza provided at: www.cdc.gov/flu/weekly/

The report that follows is based on 100 percent of our testing volume up until the seven days ending Tuesday, November 3, and about 95 percent of our testing volume for the seven days ending Tuesday, November 10, 2009. Please note weeks ending July 5 and September 13 include one holiday when testing volumes were reduced.

*These H1N1 tests have not been FDA cleared or approved. These H1N1 tests have been authorized by FDA under an Emergency Use Authorization (EUA). These H1N1 tests are only authorized for the duration of the declaration of emergency under section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1). The declaration of emergency will expire on April 26, 2010, unless it is terminated or revoked sooner or renewed.

Test Volume Provides Evidence H1N1 Pandemic May Have Peaked in October
As the graphic below indicates, demand for our test has grown considerably since we introduced it to physicians in early May, with the most significant growth occurring in September and the first half of October. Yet, during the two weeks since October 27, demand has declined – providing evidence that the H1N1 pandemic may have peaked in October in the U.S.

Our test data does not provide the basis for identifying the factors driving the recent decline in testing demand, although several possible explanations exist. These include previous infection of millions of Americans with this influenza virus as well as H1N1 vaccinations, which may have reduced the number of susceptible patients, and changes in physician test-ordering practices, among others.

Despite the declines, demand for the company’s H1N1 testing services continues to be well above average compared to historical rates of influenza testing during the time period investigated. We have tested more than 142,000 patient specimens for H1N1 over approximately the past six months (between May 11 and November 10, 2009). About 42 percent of these specimens were tested over approximately the past four weeks ending November 10.

More than 75,000 – about 53 percent – of the total number of specimens tested to date were positive for H1N1.

Our H1N1 test reports whether a specimen is positive or negative for H1N1 and/or a different influenza A virus, such as a seasonal flu virus. About 99 percent of positive influenza A specimens tested also tested positive for H1N1. The continued strong demand for H1N1 testing, coupled with the predominance of H1N1 over other influenza A strains, suggest the pandemic virus continues to be the predominant circulating influenza strain and a potential source of illness in the U.S.
H1N1 Positivity Drops in All Age Groups – Except the Elderly

As school resumed across the nation in late August and early September, children ages 10 to 14 experienced a sharp increase in positive H1N1 results, according to our test data. Positive cases among adults and pre-school age children then increased – consistent with the behavior of past influenza viruses, which often spread from schools to the larger community.

As the graphics below indicate, the positivity rates of H1N1 began to decline in most age groups since approximately the middle of October, with the sharpest declines in school-age children. The lone exception to this trend is adults 65 years of age and older. For these Americans, the positivity rate has tripled, rising from 4.5 percent during the seven day period ending November 10 to 14.1 percent during the seven day period ending September 1.

Despite the recent declines, the data also show that positivity rates continue to be high – the highest being about 70 percent in children ages 5 to 14 and nearly 60 percent in young adults ages 15 to 24. These data suggest Americans are at continuing risk of infection with the H1N1 virus.
H1N1 Positive Test Results Drop Nationally – Except in Northeast

As the map below suggests, the number of positive test results for H1N1 has declined in recent weeks in most regions, with the exception of the Northeast. In this part of the country, the number of positive results more than doubled during the two weeks ending November 10 compared to approximately the last two weeks of October. Regional differences may be due to factors that include differences in test ordering practices by physicians and hospitals as well as changes in the spread of the virus.

Our regional analysis is limited by our study’s size: While most regions included thousands of specimens, regions VIII and X reflect results of fewer than 500 specimens tested. In addition, our regional analysis is based on approximately 86 percent of our total data.

The regions characterized below are based on regional breakdowns provided by the U.S. Department of Health & Human Services. For more information, please refer to: www.hhs.gov/about/regionmap.html.

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