
From: Wells, Eden (DHHS)
Sent: Tuesday, October 06, 2015 12:57 PM
To: Lyon, Nick (DHHS)
Cc: Moran, Susan (DHHS); Miller, Corinne (DHHS); Grijalva, Nancy (DHHS)
Subject: Fw: Time period of comparison

Importance: High

Nick,
 Here are the results using absolute numbers, which is difficult to pull out from the statistical modeling they did. See my highlights.

From: LyonCallo, Sarah (DHHS)
Sent: Tuesday, October 6, 2015 12:51 PM
To: Wells, Eden (DHHS); Miller, Corinne (DHHS)
Cc: McKane, Patricia (DHHS)
Subject: Time period of comparison

Dear Eden –

I am sorry the answer to a simple question is taking so long. The “number of excess cases” is derived from the Poisson regression formula, which controls for age and season as well. If we use the available data as our comparison period, the model picks up the excess in cases for the high risk zip codes in Flint, but not for the remaining city. If limit the comparison period to immediately prior to water switch (Jan 2013- March 2014), which is similar but not identical to the Hurley time period, the model identifies excess cases in both geographies.

Comparing to January 2010 thru March 2014:

In the high risk zip codes of Flint, there were 20 more positive tests in the period after the switch to Flint River Water (April 2014-August 2015) than expected from the January 2010 - March 2014 pattern. (Each quarter accrues 3 additional positive tests.)

During the post period, 7.65% of tests were positive each quarter (controlling for age and season). In the period before the switch (January 2010-March 2014), 6.43% of tests were positive each quarter.

For the remaining Flint zip codes, no excess in positive tests were detected by the model. The positive test rate prior to and after the switch to the Flint water system are similar (4.85% and 4.47%), although significantly higher than the remainder of Genesee county.

Comparing to January 2013 thru March 2014:

In the high risk zip codes of Flint, there were 38 more positive tests in the period after the switch to Flint River Water (April 2014-August 2015) than expected from the January 2013- March 2014 pattern. (Each quarter accrues 6 additional positive tests.)

During the post period, 8.46% of tests were positive each quarter (controlling for age and season). In the period immediately before the switch (January 2013-March 2014), 6.17% of tests were positive each quarter.

In the rest of Flint, there were 11 more positive tests in the period after the switch to Flint River Water (April 2014-August 2015) than expected from the testing from January 2013-March 2014. (Each quarter in the post period has 2 more positive tests than expected)

During the post period, 4.78% of tests were positive each quarter. In the period before the switch to Flint River water, 4.39% of tests were positive each quarter.

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