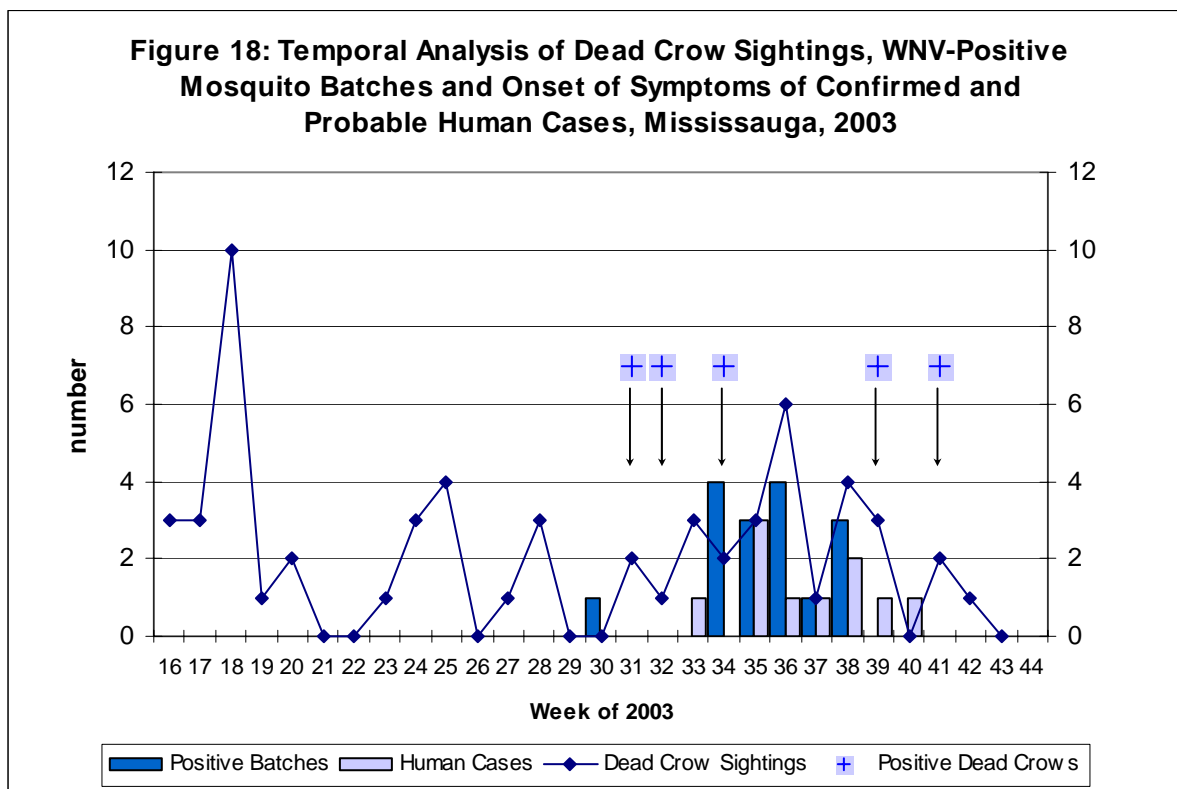




Comparison of the Timing of Dead Crow Sightings, Positive Mosquito Batches and Human Cases in Mississauga

It has been suggested that one of the key surveillance factors which serves as a predictor of potential human infection is the reporting of dead birds of the crow family.^{15,38} A U.S. study using data from 2001 and 2002 found that areas where a WNV-infected bird had been found early in the season were several times more likely to also report a human case than were areas that did not find infected birds early in the season.⁴⁰

Figure 18 shows dead crow sightings, crows positive for WNV, positive mosquito batches and onset of human WNV confirmed and probable cases by week in Mississauga. Dead crow sightings began to occur during week 16, the first WNV-positive mosquito batch was collected during Week 30, the first WNV-positive crow was collected in Week 31 and the first human case of WNV occurred during Week 33. The initial peak in dead crow sightings preceded the 'peak' of positive mosquito batches by approximately 16 weeks, but as suggested earlier, this increase may have been due to reasons other than WNV.





Cases of human illness are not always reported to Peel Health according to their date of onset of symptoms. The first report of a confirmed human case in Peel had a symptom onset date during Week 35. The second case to be reported had an earlier onset date during Week 33, which was three weeks after the first positive mosquito batch occurred in Mississauga. After a slow start to the WNV surveillance season, the first reports of human cases were preceded by an increase in the number of positive mosquito batches, with four occurring during Week 34, and two dead crow sightings reported in the same week.

The period of sustained and high rates of WNV infection in mosquitoes also coincided with human illness from WNV. The first WNV positive mosquito batch seemed to precede the first human cases by about three weeks, showing the value of this monitoring system.

There was no clear increase in dead crow sightings during this period of WNV infection in mosquitoes and humans. Given the impacts of WNV on the crow population, a large increase in dead crow sightings as observed in 2002 may not reoccur as the crow population has been substantially reduced. This means that the testing of crows for WNV throughout the season may be more important than before as an indicator of WNV activity in a given area.