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Early Detection and Timely Reporting of Non-Mumps Etiologies of Parotitis: An Example in Developing Clinical and Public Health Partnerships

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Background. Parotitis, or inflammation of the parotid gland, is most notably known as a characteristic symptom of mumps virus infection. Although instances of parotid inflammation with a variety of non-mumps viral etiologies have been described in medical literature, parotitis is a rarely reported complication of influenza virus infection. Ongoing communication between the clinical community and public health partners was essential for the early detection and reporting of the increased occurrence of parotitis cases associated with non-mumps etiologies.

Methods. On 10 December 2014, a university health center notified the Indiana State Department of Health (ISDH) regarding a case of parotitis in a patient fully vaccinated with measles/mumps/rubella (MMR) vaccine. On 22 December 2014, the ISDH was notified of two additional cases of parotitis in pediatric patients who tested positive for influenza A and were fully vaccinated with MMR. Recognizing that parotitis may be an unusual symptom associated with circulating 2014-2015 respiratory viruses, the ISDH contacted the Centers for Disease Control and Prevention (CDC) on 22 December 2014 and other Midwest states on 8 January 2015 to determine whether cases of parotitis associated with respiratory viral infection were occurring outside of Indiana. There was interest among the Midwest states to pursue case finding, which resulted in a multi-state investigation of parotitis cases spearheaded by CDC.

Results. Between December 2014 and February 2015, 20 cases of parotitis in Indiana were confirmed positive for respiratory viral etiologies other than mumps, namely influenza A, parainfluenza 2 and 3, adenovirus, enterovirus/rhinovirus, coronavirus OC 43 and herpes simplex virus 1.

Conclusion. The early detection and timely reporting of unusual occurrences of parotitis and the

subsequent case finding efforts are indicative of well-developed communication between clinical and public health partners. Partnerships among the clinical community, state health departments and the CDC are critical to exploring novel disease presentations.

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