

***Bordetella* DNA contamination investigation in Indiana**

The Vaccine Preventable Disease (VPD) Reference Centers in Minnesota and Wisconsin routinely receive clinical specimens for diagnostic testing and serotyping of *Bordetella pertussis*, *Haemophilus influenzae*, and *Neisseria meningitidis*. In late 2023, the Minnesota Department of Health (MDH) was contacted by the Indiana Department of Health (IN DoH) to investigate a cluster of suspicious *Bordetella pertussis* cases. The laboratory in Indiana was concerned with the number of positive cases submitted from one clinic in their jurisdiction and were hoping to get support from MDH to investigate the matter. In speaking with the IN DoH, the Minnesota laboratory became suspicious that the cases may have been linked to environmental contamination within the clinic. This suspicion arose because the positive specimens had unusually high Ct values, suggesting that the presence of vaccine materials in the clinic environment could be causing the positive results. MDH proposed conducting an environmental survey of the space using PCR to determine if there was contamination in the clinic.

MDH sent instructions to collect environmental 'swipe tests' using common collection swabs. Twenty-five swabs were collected and sent to MDH for testing. Thirteen of the 25 (13/25) samples had the *IS481* target detected using the *Bordetella* species PCR. MDH advised the IN DoH of the 'hot' locations where cleaning with bleach-based products would be needed to remediate the issue. Since the initial testing and remediation, MDH VPD Reference Center has received 17 clinical samples from the Indiana clinic through IN DoH, none of which have been positive for a *Bordetella* species. The laboratory evidence provided by MDH was essential in supporting behavior changes at the clinic. By demonstrating environmental contamination, the IN DoH was able to support the clinic in developing better clinical practices to avoid this issue in the future.

Through team efforts demonstrated by the public health agencies and the clinic, the cause of the suspicious cases was identified and rectified. The Reference Centers can be utilized to investigate suspicious or 'weird' cases. Clinics, laboratories and supporting public agencies are encouraged to maintain vigilance and flexibility in addressing these situations.

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