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To: Wisconsin Clinicians, Infection Preventionists, Local and Tribal Health Departments, and
Laboratorians

From: Jeffrey P. Davis, M.D.
Chief Medical Officer and State Epidemiologist for Communicable Diseases

Potential Cluster of Viral Myocarditis in Wisconsin

PLEASE DISTRIBUTE WIDELY

At least 8 cases of viral myocarditis were diagnosed among Wisconsin residents during August 2017. Known patient illness onsets occurred during 8/6/2017 to 8/20/2017, and all patients were seen by clinicians in one health care system. Patients' ages ranged from 19 to 59 years (median: 36 years). All patients were hospitalized as a result of their illness and either reported a viral prodrome (i.e., cough, diarrhea, fever) or tested positive for coxsackie B virus; three patients had laboratory tests that were positive for coxsackie B virus. During the course of the continuing case investigation, three additional cases of myocarditis have been reported and the most recent known illness onset was 10/9/2017.

Because viral myocarditis is a relatively uncommon disease and these illness occurrences appear to represent a temporally and spatially related cluster of illness potentially caused by coxsackie B virus, the Bureau of Communicable Diseases (BCD), Wisconsin Division of Public Health is establishing surveillance to determine the extent of this recent occurrence of viral myocarditis in Wisconsin. Viral myocarditis is most often caused by enteroviruses (such as coxsackie viruses), parvovirus B-19, and human herpesvirus-6 but can also be caused by adenovirus, influenza virus, HIV-1, varicella virus, Epstein-Barr virus, arboviruses, respiratory syncytial virus, hepatitis C virus, mumps, or rubeola. We are requesting all potential cases of viral myocarditis with illness onsets occurring since July 1, 2017 to be reported to the BCD and that relevant laboratory specimens obtained from patients with potential myocarditis be sent to the Wisconsin State Laboratory of Hygiene.

Determine whether a patient might have viral myocarditis and report the potential case:

Please use the following criteria and definition of a case of viral myocarditis:

A case of viral myocarditis is defined as:

At least one of the following three criteria:

- evidence of myocarditis by electrocardiogram, echocardiogram, or cardiac catheterization, which indicates the presence of unexplained arrhythmia or decreased ejection fraction without apparent cause, **or**
- myocardial inflammatory infiltrates on tissue pathologic examination using the Dallas criteria, **or**
- detection of a virus known to cause myocarditis (e.g., coxsackie B, human herpes virus 6) in a myocardial tissue specimen,

AND at least one of the following two criteria:

- detection of a virus known to cause myocarditis in clinical specimens (e.g. nasopharyngeal/oropharyngeal swabs, rectal swab, stool sample, tissue or blood/serum), preferably by

PCR assay, culture, genomic sequencing, or serotype-specific antibody staining, although results of serologic assays should still be reported, **or**

- prodrome consistent with a viral illness (i.e., diarrhea, cough, sore throat, fatigue, fever, night sweats/chills)

AND the absence of a diagnosis of ischemic, alcoholic, postpartum, or chronic cardiomyopathy in a patient with an illness diagnosed in Wisconsin with an onset date occurring on or after July 1, 2017.

If your patient might have a potential case please contact Amy Schumacher at amy.schumacher@dhs.wi.gov or call 608-266-7338 to request the reporting form.

Send relevant laboratory specimens to the Wisconsin State Laboratory of Hygiene for further testing:

For patients who are either currently ill with potential myocarditis or patients whose illness onsets occurred within the past eight weeks, we request that available clinical specimens used for virologic diagnosis be sent to the Wisconsin State Laboratory of Hygiene for further testing. The specimens requested include serum, oropharyngeal/nasopharyngeal swab specimens, tissue samples, and stool samples. Please complete the Outbreak Enhanced Surveillance Requisition Form (<http://www.slh.wisc.edu/wcln-surveillance/surveillance/virology-surveillance/>), specifying the outbreak as “Myocarditis, WI.”

Please ship the specimens to:

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718
ATTN: Virology

If you have questions regarding specimen kits and shipping, please contact the WSLH Customer Service at 1-800-862-1013.

To obtain approval for testing or if you have questions regarding this memo, please contact any of the following numbers:

- Thomas Haupt, Wisconsin Influenza Surveillance Coordinator, 608-266-5326
- Amy Schumacher, Epidemic Intelligence Service (EIS) Officer, 608-266-7338
- Anna Kocharian, Epidemiologist, 608-267-9004
- Bureau of Communicable Diseases at 608-267-9003.
- For after-hours approval, call the 24/7 emergency number at 608-258-0099 and ask for the communicable disease epidemiologist on call.

Thank you for your assistance in this important matter.