

Table: Comparison of Enterovirus A71 and Enterovirus D68-Associated Acute Flaccid Myelitis Cases Presenting to Children's Hospital Colorado 2013-2018

	Enterovirus A71 AFM Cases (n=10)	Enterovirus D68 AFM Cases 2013-2018 (n=8)	p-value
Demographics			
Age (median months; IQR)	19.3 (12.9-22.9)	100.2 (41.6-74.8)	0.033
Male sex	10 (100%)	6 (75%)	0.18
White Race	8 (80%)	6 (75%)	1.00
Hispanic Ethnicity	1 (10%)	2 (25%)	0.56
Prodromal Illness			
Fever	10 (100%)	7 (88%)	0.44
Irritability	8 (80%)	1 (13%)	0.015
Hand, Foot, or Mouth Lesions	6 (60%)	0 (0%)	0.013
Respiratory Illness	3 (30%)	8 (100%)	0.004
Vomiting	8 (80%)	3 (38%)	0.14
Days from Symptom Onset to Neurologic Onset (median, IQR)	1 (0 - 3)	5.5 (3 - 6)	0.011
Associated Neurologic Signs and Symptoms			
Cranial Nerve Dysfunction	1 (10%)	3 (38%)	0.27
Myoclonus	9 (90%)	0 (0%)	0.0004
Ataxia	9 (90%)	1 (13%)	0.0029
Autonomic Instability	3 (30%)	1 (13%)	0.59
Urinary Retention	6 (60%)	5 (63%)	1.00
Limb Findings			
Hyperreflexia/Hypertonia at Presentation	1 (10%)	0 (0%)	1.00
Hyporeflexia/Hypotonia at Presentation	3 (30%)	6 (75%)	0.15
Limbs with Weakness (median, IQR)	2.5 (1 - 4)	3 (1.5 - 4)	0.71
Sensory Findings	0 (0%)	1 (13%)	0.44
Laboratories			
CSF Pleocytosis (WBC>10)	10 (100%)	8 (100%)	1.00
WBC (median, IQR)	125 (84 - 430)	59.5 (49 - 86.5)	0.093
EV Detected in Cerebrospinal Fluid	1/10 (10%)	0/5 (0%)	1.00
EV Detected in Oropharyngeal Swab	9/9 (100%)	1/6 (17%)	0.002
EV Detected in Nasopharyngeal Specimen	4/9 (44%)	8/8 (100%)	0.029
EV Detected in Rectal Swab	10/10 (100%)	0/6 (0%)	<0.0001
Magnetic Resonance Imaging			
Supratentorial Lesion	3 (30%)	1/7 (14%)	0.60
Cranial Nerve Enhancement	4 (40%)	1/7 (14%)	0.34
Cerebellar Lesion	8 (80%)	3/7 (43%)	0.16
Brainstem Lesion	10 (100%)	7/7 (100%)	1.00
Pons	2 (20%)	6/7 (86%)	1.00
Midbrain	2 (20%)	1/7 (14%)	1.00
Medulla	7 (70%)	7/7 (100%)	0.23
Cervical Spinal Cord Lesion	10 (100%)	7 (88%)	0.44
Thoracic Spinal Cord Lesion	5/9 (56%)	7 (88%)	0.29
Lumbar Spinal Cord Lesion	4/9 (44%)	6 (75%)	0.33
Spinal Cord Nerve Root Enhancement	6/10 (60%)	4 (50%)	1.00
Course			
Intubation	0 (0%)	2 (25%)	0.18
Supplemental Feeding Support	3 (30%)	4 (50%)	0.63
Length of Stay (median, IQR)	5.5 (5 - 12)	32 (11 - 58.5)	0.023
Full Recovery of Limb Strength at 1-2 Month Followup	9 (90%)	1 (13%)	0.0029
Death	0 (0%)	0 (0%)	1.00

Disclosures. All Authors: No reported Disclosures.

1890. Missed Clinical Opportunities to Prevent Infections and Treat Substance Use Disorder (SUD) in People Who Inject Drugs (PWID)

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Background. The age-adjusted rate of drug overdose deaths in the United States tripled from 1999 to 2016. Public health surveillance data indicate that an increasing proportion of infections due to bacterial and fungal pathogens is associated with injection drug use (IDU). We describe healthcare encounters (HCEs) of PWID as potential opportunities to prevent infections related to IDU by identifying risks and treating SUD, including with medication-assisted treatment (MAT) for opioid use disorder.

Methods. At six hospitals in western New York, we abstracted medical records from hospital admissions and emergency department (ED) visits for PWID (i.e., IDU in the preceding year) who had positive cultures for *Staphylococcus aureus* (any clinical specimen, April–July 2017), group A *Streptococcus* (invasive specimens, all of 2017) or *Candida* spp. (blood specimens, all of 2017). We reviewed hospital admission and ED records for 1 year preceding the positive culture to identify visits during which opportunities to prevent infection and treat SUD by addressing SUD and IDU were missed.

Results. We identified 99 PWID with positive cultures. The median age was 33 years (range 19–68) and 61 were female. Sixty-nine had a skin and soft-tissue infection, 44 had a bloodstream infection, and 20 had both. Thirty-one PWID left against medical advice during a hospital admission or an ED visit. Seventy-nine PWID were hospitalized, of whom 4 died. Ninety-five used opioids and 71 used cocaine in the preceding year. Seventy-five PWID had an HCE in the 12 months prior to the index visit, with a median of two HCE per person (interquartile range 1–4); 53 of PWID had a previous HCE for infection and 28 for opioid overdose. SUD was documented during a prior HCE at the same

hospital for 61 PWID, but only 10 (16%) were offered MAT during any prior HCE and for 24 (39%) there was no documentation that any form of treatment for SUD was offered.

Conclusion. In this cohort, PWID frequently had one or more healthcare encounters documented at the same hospital in the year prior to a serious bacterial or fungal infection. These prior HCEs were often for infections or overdose that signaled the need for MAT, demonstrating that there are critical missed opportunities to identify risks, prevent infection, and treat SUD.

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1891. Invasive Group A Streptococcus Infections Among Residents of Multiple Nursing Homes—Denver, Colorado, 2017–2018

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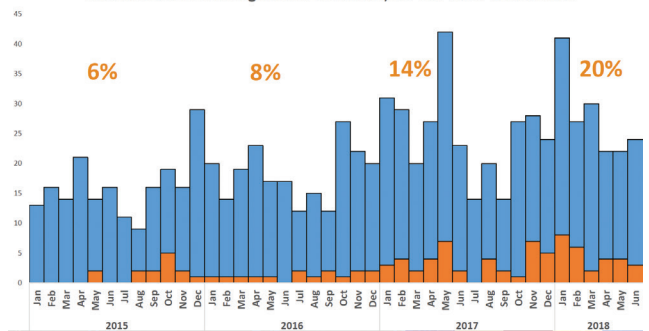
Background. Older adults residing in nursing homes (NH) are at increased risk for invasive group A *Streptococcus* (GAS) infections due to advanced age, presence of wounds, and comorbidities; approximately one-third of infected patients die. Beginning in 2015, increasing numbers of GAS infections in NH residents and several NH clusters were reported from the Denver metropolitan area. Colorado Department of Public Health and Environment (CDPHE) and CDC investigated to characterize cases and assess if outbreaks resulted from interfacility transmission.

Methods. We reviewed data from Active Bacterial Core surveillance (ABCs) in the 5-county Denver area from January 2017 to June 2018. We defined a case as isolation of GAS from a normally sterile site in an NH resident. GAS isolates underwent whole-genome sequencing (WGS) at CDC's *Streptococcus* Laboratory to determine *emm* types for genotyping. Among isolates with the same *emm* type, pairwise single-nucleotide polymorphism (SNP) distances were calculated using Nucmer software. In October 2018, a CDPHE-CDC team assessed infection control at NHs with cases of the most common *emm* type.

Results. Over 18 months, among >100 NHs in the Denver area, ≥1 GAS case was identified in 29 NHs, with 6 having ≥3 cases. During this period, 68 cases in NH residents were identified. WGS identified 17 *emm* types among isolates from these cases; most common was *emm*11.10 (34%, n = 22), a rare subtype in ABCs. All *emm*11.10 isolates had nearly identical genomes (average pairwise SNP distance: 3.2), and were isolated from 10 NHs, with 2 NHs having ≥ 4 cases. Multiple infection control lapses were noted during site visits to 8 NHs.

Conclusion. Multiple outbreaks due to GAS were noted in 5-county Denver area NHs in 2017–2018. WGS of surveillance isolates identified a rarely seen *emm* subtype 11.10 from multiple facilities with temporal and genomic clustering suggesting interfacility GAS transmission.

Invasive GAS in nursing homes in Denver, CO has been on the rise.



Geospatial map shows the geographical distribution and proportion of GAS emm 11.10 cases in nursing homes in Denver, CO.

