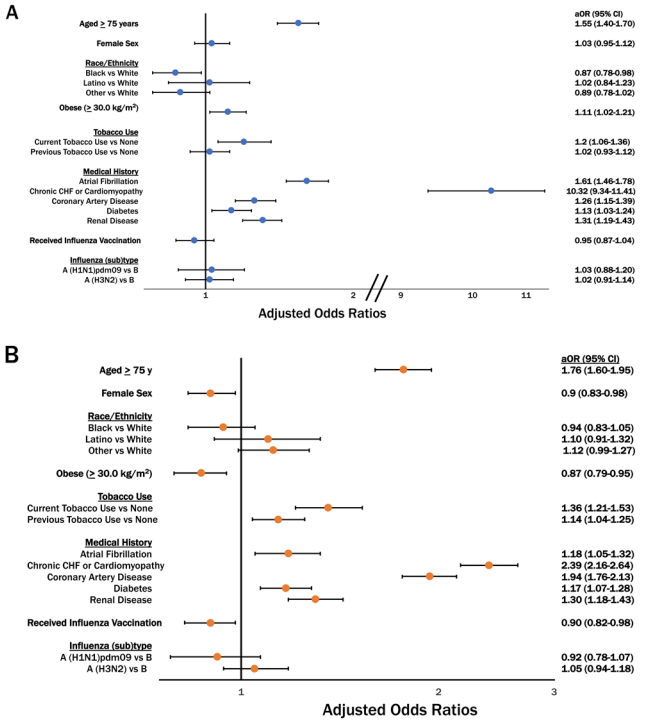
Background. Influenza virus infection most commonly causes acute respiratory tract illness, however may also lead to non-respiratory complications including acute cardiovascular (CV) events. We describe the frequency of and risk factors for acute CV events in adults hospitalized with influenza in the United States.

Methods. We included adults aged > 18 years hospitalized during influenza seasons 2010–2011 through 2017–2018 in FluSurv-NET, a multi-state population-based surveillance system that includes detailed medical chart review of patients hospitalized with laboratory-confirmed influenza. We defined acute CV events by International Classification of Diseases (ICD) primary and secondary discharge diagnosis codes for acute heart failure (aHF), acute ischemic heart disease (aIHD), hypertensive crisis, cardiogenic shock, acute myocarditis, acute pericarditis and cardiac tamponade. We calculated the frequency of acute CV events and used multivariable logistic regression among the 87% treated with influenza antivirals to identify independent factors associated with aHF and aIHD, the two most common diagnoses.

Results. Of 80,374 adults hospitalized with laboratory-confirmed influenza, 12% had > 1 acute CV event. We found that aHF (46%) and aIHD (42%) were the most common, followed by hypertensive crisis (8%), cardiogenic shock (3%), acute myocarditis (0.7%), acute pericarditis (0.4%) and cardiac tamponade (0.2%). Compared with treated patients without an acute cardiovascular event, treated patients with aHF (Figure A) and aIHD (Figure B) were more likely to be older, currently/formerly use tobacco and have underlying conditions including cardiovascular disease, diabetes mellitus, and kidney disease.

Conclusion. Among adults hospitalized with laboratory-confirmed influenza, acute CV events are common, particularly among those with prior cardiovascular disease. During the influenza season, clinicians should consider influenza virus infection in hospitalized adults who present with acute CV events. Non-respiratory complications, specifically aHF and aIHD, may be an under-recognized contributor to the burden of influenza.

Figure: Factors Associated with (A) Acute Heart Failure and (B) Acute Ischemic Heart Disease Among Adults Hospitalized with Influenza, 2010-2018 (N=69,758)



Disclosures. **All authors:** No reported disclosures.

1622. Clinical and Environmental Surveillance of *Legionella pneumophila* in a Tertiary Healthcare Center in India

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Session: 163. Public Health
Friday, October 4, 2019: 12:15 PM

Background. Legionellosis is a form of pneumonia caused by Gram-negative bacilli belonging to the *Legionella* genus. In India, sporadic cases of legionellosis have been reported, but the incidence of this infection is still believed to be underestimated. We conducted a proactive clinical–environmental surveillance in a tertiary healthcare center to determine the frequency of legionellosis, and to identify the pathogen in the hospital water systems.

Methods. During February 2015–February 2019, we enrolled 533 cases (310 males, 223 females) with a diagnosis of pneumonia; a respiratory secretion was collected from each patient and tested for *L.pneumophila* by using a real-time PCR targeting *mip* gene. To identify *Legionella* spp. present in hospital water systems, we collected 201 hospital water samples and were analyzed by cultivation in BCYE agar. Legionella speciation and identification of Lp1 was done by real-time PCR assay.

Results. Among 533 cases, 11(2.1%) [6 male, 5 female] tested positive for *L.pneumophila* by real-time PCR. Of these, all were community-acquired sporadic cases not associated with a cluster or outbreak. Risk factors including smoking, alcohol use, malignancy, underlying respiratory disease, hypertension were identified in 8 (72.7%) cases. The duration of hospitalization for *Legionella* patients was 8–24 days; 5/11 (45.5%) patients were admitted to intensive care units. Of 11 patients 8 (72.7%) survived, and 3(27.3%) died. Among the 201 water samples tested, 38 (18.9%) tested positive for *L.pneumophila* by culture. The presence of Lp1 was detected in 25 (12.4%) water samples. *Legionella* spp. was recurrently isolated from patient areas, cooling towers, residential areas, and other areas inside the hospital campus.

Conclusion. The study indicates a low prevalence of legionellosis in this region. Even though *Legionella* colonization was detected in the hospital water system, no cases of hospital-acquired legionellosis were discovered during the study period. However, considering the risk of nosocomial legionellosis to patients we formulated *Legionella* control strategies in this hospital. Point-of-use filters were installed to the potable water units from where *Legionella* was isolated and repeat sampling from these sites were found to be negative for the contagion.

Disclosures. **All authors:** No reported disclosures.

1623. Implementation of Electronic Readmission Alert for Discharged Patients Reduces Risk of Secondary Measles Exposure Events

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Session: 163. Public Health
Friday, October 4, 2019: 12:15 PM

Background. Measles is a highly infectious illness that is causing increased numbers of outbreaks in the United States. Patients involved in a healthcare measles exposure and who have been discharged before identification of exposure are at risk of becoming infectious in the community, and may seek healthcare within their infectious window, creating a secondary exposure risk for healthcare systems. A measles exposure in an integrated healthcare system occurred, resulting in patient exposures in multiple locations at three campuses, including two community-based emergency departments and three inpatient units. There were 159 patients who were included in the exposure group; 123 were exposed in an ED, and 36 were exposed in an inpatient setting. Ninety-four percent (149/159) of the patients had been discharged at the time of measles case identification and were in the pre-infectious phase of illness. Of those, 36 percent (54/149) presented back to the healthcare system within the potentially infectious window; these 54 patients had 97 individual healthcare contacts in the potentially infectious period following the exposure event. Sixty-one of the 97 return visits (63%) were within the window in which the exposed patients were potentially infectious. Return locations included the three exposure facilities and inpatient and outpatient locations at 10 other system campuses.

Methods. An alert system was developed within the electronic medical record that identified patients that were involved in the exposure, and guided clinicians to mask and place in airborne isolation until measles immunity was verified.

Results. The alert activated 13 days after the exposure was identified, and identified 100% of returns to healthcare at all sites within the system, representing 48% of all potential secondary exposure events (29 /61). No secondary exposures or transmission occurred.

Conclusion. Measles exposures are an enormous burden on healthcare organizations and public health systems. When exposures occur, healthcare organizations need systems to rapidly identify discharged patients who may return within the potentially infectious window. Rapid development of electronic readmission alerts can help standardize identification and reduce the risk of subsequent exposure.

Disclosures. **All authors:** No reported disclosures.

1624. Primary Care Physician Knowledge, Attitudes, and Diagnostic Testing Practices for Norovirus and Acute Gastroenteritis

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Session: 163. Public Health
Friday, October 4, 2019: 12:15 PM