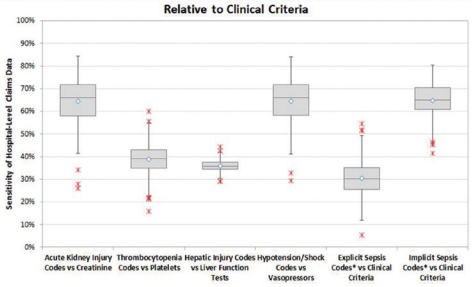
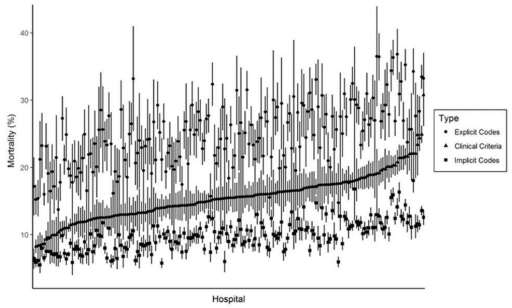
**Figure 1. Variation in the Sensitivity of Hospitals' Organ Dysfunction and Sepsis Codes Relative to Clinical Criteria**




*Explicit Sepsis Codes = Severe Sepsis (995.92) or Septic Shock (785.52) *(Primary Analysis)*
*Implicit Sepsis Codes = Infection AND Organ Dysfunction Codes *(Secondary Analysis)*

Boxes indicate the median hospital sensitivity (middle line), 25th quartile (lower box line), and 75th quartile (upper box line). Diamonds indicate the mean hospital sensitivity. Outliers are indicated by X (near outliers) and O (far outliers), as defined by values more than 1.5 times the interquartile range from the interior quartile boxes.

**Figure 2. Hospital sepsis mortality rates ranked by clinical criteria and compared to claims data**




Hospitals are ranked from left to right according to mortality rates for sepsis as defined by clinical criteria. For each hospital, the corresponding sepsis mortality by explicit sepsis codes (severe sepsis or septic shock – primary analysis) and implicit sepsis codes (infection + organ dysfunction codes – secondary analysis) is displayed. All mortality rates are reliability-adjusted.

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

### 1663. Marked Improvement in Pandemic H1N1 Component Shedding and Immunogenicity in 2017–2018 Russian-Backbone Live Attenuated Influenza Vaccine (LAIV) in Gambian Children

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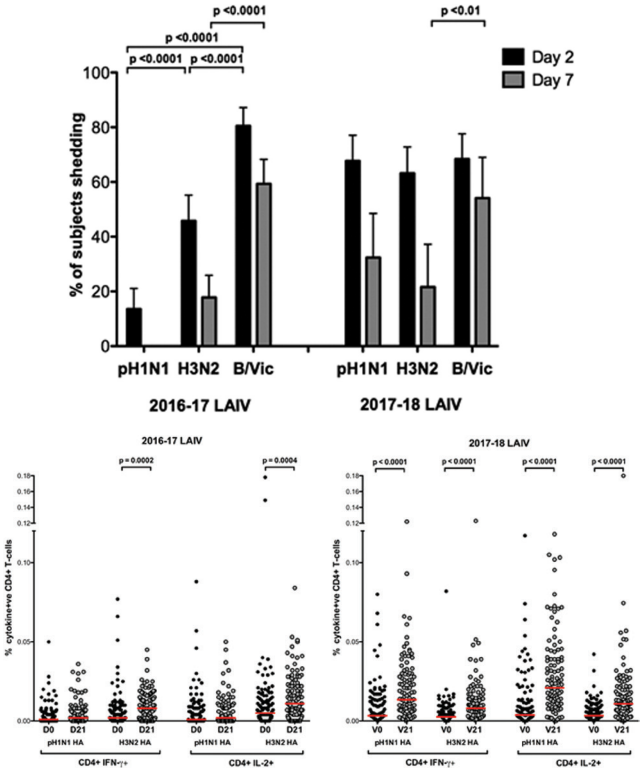
**Session:** 178. PIDS Featured Oral Abstract
*Friday, October 5, 2018: 3:30 PM*

***Background.*** Recent observational studies in the United States have reported reduced effectiveness of the Ann Arbor-backbone live attenuated influenza vaccine (LAIV), coinciding with emergence of 2009 pandemic H1N1 (pH1N1). A recent RCT in Senegal of the Russian-backbone LAIV also showed no efficacy, with pH1N1 the predominant vaccine-matched strain circulating during the study. The reasons for this reduced effectiveness and efficacy are unclear but may involve pre-existing immunity or pH1N1 virus-specific factors. We explore these underlying reasons through an LAIV immunogenicity study in Gambian children across 2 influenza seasons.

***Methods.*** Gambian children aged 24–59 months ($n$ = 118) were given 2016–17 northern hemisphere Russian-backbone trivalent LAIV. Vaccine shedding, haemagglutinin inhibition (HAI) titre, influenza-specific T-cell responses, and mucosal IgA were measured using RT-PCR, HAI assay, flow cytometry, and ELISA, respectively. The following year, a further 127 children were given 2017–2018 formulation LAIV, where the pH1N1 strain was updated.

***Results.*** In 2016–2017, significantly less pH1N1 shedding (13.6% children) was seen compared with H3N2 (45.8%) and B/Victoria (80.5%). Similarly, poor pH1N1-specific HAI (5.1% seroconversion), mucosal IgA (18.6% responders) and T-cell responses (<10% responses to pH1N1 HA) were seen, whereas significantly greater responses in ≥1 immune compartments were seen to H3N2 and B/Victoria. pH1N1 shedding was not related to pre-existing immunity in 2016–2017. Vaccination with 2017–2018 LAIV showed improvement in pH1N1 shedding with no significant difference between strains: 67.7%, 63.2%, and 68.4% children shedding pH1N1, H3N2, and B/Victoria at day 2 post-LAIV (see Figure 1). This was matched by enhanced pH1N1 HA-specific T-cell responses, with 47.1% children showing a $CD4^+IFNg^+$ and 54.4% a $CD4^+IL2^+$ response (see Figure 2). HAI and mucosal IgA data for 2017–2018 are currently being generated and will be presented, as well as key interactions between the parameters measured.

***Conclusion.*** Our data suggest that poor pH1N1 A/California strain replication *in vivo* may explain recent suboptimal LAIV performance and suggest that an improvement can be expected with new pH1N1 strains included in current LAIV formulations.




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

### 1715. A Randomized, Double-Blind, Placebo-Controlled Multicenter Phase 2 Trial to Examine the Effects of DAS181 in Immunocompromised (IC) Patients With Parainfluenza Virus (PIV) Lower Respiratory Tract Infection (LRTI) on Supplemental Oxygen (SO)

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**Session:** 199. Clinical Trials that May Change Your Practice
*Saturday, October 6, 2018: 8:45 AM*

***Background.*** PIV infections are an important cause of morbidity and mortality in IC patients. DAS181, a sialidase fusion protein, has demonstrated activity in preclinical and clinical studies.

***Methods.*** Adult IC patients diagnosed with PIV LRTI on chest imaging and required SO ≥ 2 L/minute were randomized 2:1 (stratified by mechanical ventilation [MV] at baseline) to nebulized DAS181 (4.5 mg in 3.5 mL/day) or matching placebo for up to 10 days. The primary endpoint was the proportion of patients reaching clinical stability survival (CSS, defined as alive, resolution of SO requirement, and normalization of vital signs) by Day 45.

***Results.*** From 2014 to 2016, 110 patients were randomized and received study drug (74 DAS181 and 36 placebo). Median age was 57 years (range, 18–85). The majority were hematopoietic cell transplant (HCT) recipients (74), followed by hematological malignancy/solid tumor patients on chemotherapy (29), and lung transplant recipients (7). Day 45 CSS was achieved by 39.2% of DAS181-treated patients