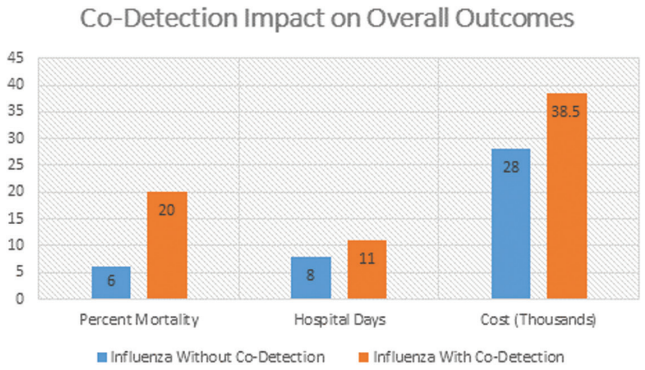
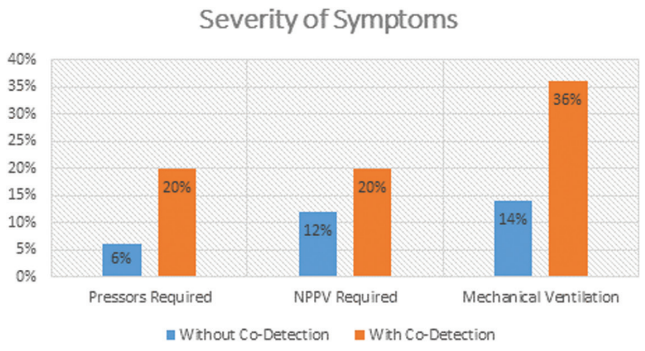
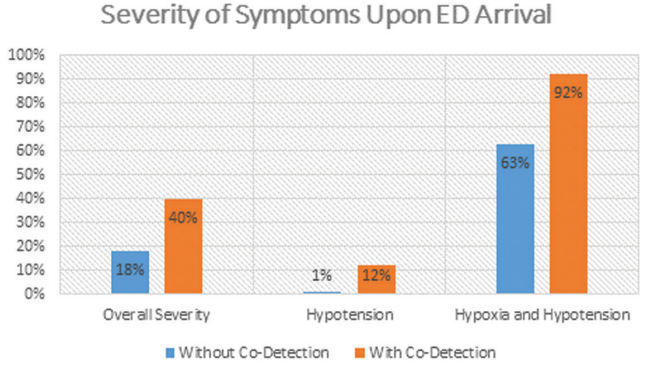
diagnosed in 85% of co-detections vs. 45%. H3N2 accounted for 68% of infections in the co-detected group vs. 58%. H1N1 in 8% vs. 16%. Influenza B was seen in 25% vs. 23%. MRSA was the most commonly detected bacteria (40%) and *Streptococcus pneumoniae* was 16%. In the co-detection group, only 24% of sputum cultures were positive with 100% concordance with PCR. Most common co-morbidities were DM 16% vs. 53%, COPD 24% vs. 19%, CKD 20% vs. 30%, CHF 20% vs. 37% in co-detections vs. influenza alone respectively. Co-detection patients needed pressor 12% vs. 4%, NPPV 20% vs. 12%, mechanical ventilation 36% vs. 14% and ICU admission 36% vs. 14%. Severe influenza was more common in the co-detection group 40% vs. 18%. Hypoxia and hypotension was seen in 92% vs. 63% and hypotension in 12% vs. 1% at ED arrival. Further, those with severe illness and co-detection, no predominant bacterial target was associated with severity. Those with co-detection had mortality of 20% vs. 6%. Average hospital LOS was 11 vs. 8 days.

Conclusion. Detection of bacterial pathogens common to the respiratory microbiota by multiplex PCR in patients with Influenza infection might predict the severity of illness, potential morbidity, and mortality. Further studies are needed to confirm the above findings.







Disclosures. **D. Stalons**, Diatherix: Employee, Salary. **M. Huff**, Diatherix: Research Contractor, Salary.

1994. Development of a Meningococcal Serogroup B Serum Bactericidal Assay Using Fetal Bovine Serum

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Background. The quadrivalent meningococcal conjugate vaccines do not target serogroup B meningococcus (MenB), an important cause of meningitis and sepsis. MenB vaccines have been recently developed and licensed for infants and young adults. Serum bactericidal activity serves as an immunological index for evaluating the immunogenicity of vaccines. However, there is no standardized serum bactericidal assay (SBA) for MenB owing to difficulty in selecting target strains and complement sources. Using fetal bovine serum, we developed a new SBA by modifying a previous SBA for meningococcal serogroups A, C, W135, and Y and applied it to clinical samples.

Methods. An isolate from an invasive disease and three reference strains were used as the target strains, and the genotypes of the antigens contained in the MenB vaccine (4CMenB) (Bexsero; GlaxoSmithKline) were determined. Non-specific killing was assessed by using baby rabbit serum, fetal bovine serum, and healthy adult serum as complement sources. Serum was obtained from clinical samples of six healthy adults before and 1 month after 4CMenB immunization.

Results. The isolate and the three reference strains all contained factor H binding protein (fHBP) peptide type 1.1, which was consistent with the fHBP antigens contained in 4CMenB. The bactericidal activity in the serum (complement source) of 30 healthy adults ranged from 53% to 90%. Non-specific killing in baby rabbit serum was greater than 80%. Considering the species specificity of meningococcal fHBP, non-specific killing (82% - 91%) was similar when human factor H was added. Non-specific killing was less than 50% in fetal bovine serum, which was used as the complement source for evaluation of clinical samples. After 4CMenB immunization, the serum bactericidal indices for all the test sera were increased 4 times or more.

Conclusion. We identified fetal bovine serum as a potential complement source for the MenB SBA assay. This method should be standardization using reference sera, and the putative protective SBA indices for fetal bovine serum should be determined.

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

1995. Implementation of *Helicobacter pylori* Stool Antigen Testing in a Large Metropolitan Centre: A Prospective Comparative Diagnostic Trial

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Background. Clinical guidelines for *H. pylori* screening and post-treatment testing endorse the use of urea breath test (UBT), *H. pylori* stool antigen test (HpSAT), and biopsy-related tests. Due to protracted wait times at our patient service centers and non-compliance in children and elderly with complications for the UBT, we sought to compare UBT and HpSAT in the city of Calgary, Canada with a population close to 1.4 million people.

Methods. To achieve this, a prospective diagnostic trial was performed comparing UBT to HpSAT in patients presenting with dyspepsia. A total of $N = 150$ patients agreed to undergo UBT (^{13}C-UBT kit, Helikit, Isodiagnostika Inc.) and consented to provide a stool specimen for simultaneous HpSAT testing (Diasorin LIAISON® XL H. pylori SA Monoclonal chemiluminescent immunoassay) in our centralized laboratory.

Results. Our data show that concordant results were obtained in 148/150 (98.7%) patients with a positivity rate of 17.4%. One of two discrepants (UBT positive/HpSAT negative) resolved after repeat testing. Using UBT as the gold standard, HpSAT had a sensitivity of 96.30% (95% CI; 81.03% to 99.91%) and specificity of 100% (95% CI; 97.05% to 100.00%). A positive predictive value of 100% and negative predictive value of 99.2% (95% CI; 94.73% to 99.88%) was obtained. For patients where drug information was available, 38/130 (29.2%) had received an antibiotic associated with *H. pylori* in the preceding 12 months, with UBT and HpSAT providing concordant results in 37/38 (97.4%) of these individuals. Of note, 6/130 (4.6%) patients had received a specific combination anti-*H.pylori* treatment, and all 6/6 (100%) had concordant negative results suggesting successful eradication. A post-implementation economic evaluation of labor and materials associated with testing demonstrates a cost-savings of approximately USD5.47 per specimen in this locale.

Conclusion. Our study confirms that HpSAT is a viable alternative to UBT for *H. pylori* screening in our jurisdiction with equivalent test performance and cost-savings. Pre- and post-implementation analysis of test compliance rates, waiting times, and test turn around times will also be presented.

Disclosures. **D. Pillai**, Diasorin: None, Educational grant.

1996. Addressing Pulmonary Nocardiosis Risk in Immunocompromised Patients: Development and Validation of a Commercially Available PCR

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