

Table 1

Test	Reference Standard	Sensitivity (%) (95% CI)	Specificity (%) (95% CI)	PPV (%) (95% CI)	NPV (%) (95% CI)
Provider-selected antibiotic indication for CAP	Provider intention to treat pneumonia (HAP/VAP terminology excluded)	64.4 (59.9 – 68.9)	96.3 (94.6 – 98.1)	73.1 (68.9 – 77.2)	94.6 (92.5 – 96.7)
Provider-selected antibiotic indication for CAP	Provider intention to treat pneumonia (any terminology)	64.1 (59.6 – 68.6)	97.1 (95.5 – 98.7)	78.9 (75.0 – 82.7)	94.1 (91.9 – 96.3)
Presence of pneumonia ICD-10 code	Provider intention to treat pneumonia with HAP/VAP terminology excluded	61.0 (56.5 – 65.6)	95.3 (93.3 – 97.3)	66.7 (62.3 – 71.1)	94.0 (91.8 – 96.3)

CAP, community-acquired pneumonia; HAP, hospital-acquired pneumonia; VAP, ventilator-associated pneumonia; PPV, positive predictive value; NPV, negative predictive value

CAP, there are few reliable methods to identify such patients using the electronic health record (EHR). We conducted a retrospective study to assess the performance of provider-selected antibiotic indication in identifying patients being treated for CAP among a cohort of hospitalized adults. **Methods:** We randomly selected 440 patients from a cohort of patients who received at least 1 systemic antibiotic within 48 hours of admission between January 1, 2019, and December 31, 2021, at 3 acute-care hospitals. The reference standard for treatment of CAP was defined as intention to treat for pneumonia by inpatient provider(s) within 48 hours of admission, as assessed by chart review of provider notes. Treatment for pneumonia using any terminology except with “hospital-acquired pneumonia” (HAP) or “ventilator-associated pneumonia” (VAP) were counted. Provider-selected indication of CAP (in an antibiotic order) was compared against this reference standard; sensitivity, specificity, and positive and negative predictive values were calculated. Performance characteristics of *International Classification of Disease, Tenth Revision* (ICD-10) codes for pneumonia in identifying CAP patients were assessed against the same reference standard. A secondary analysis including terms HAP and VAP in the reference standard was performed. **Results:** Provider-selected antibiotic indication for CAP had a sensitivity of 64.4%, specificity of 96.3%, positive predictive value (PPV) of 73.1%, and negative predictive value (NPV) of 96.1%, giving comparable performance to ICD-10 codes (Table 1). Of those with 21 false-negative results, 13 (61.9%) had a healthcare-associated lower respiratory tract infection and 14 (66.7%) had sepsis indicated in at least 1 antibiotic order. **Conclusions:** Provider-selected antibiotic indication showed moderate sensitivity and high specificity for identifying CAP-treated cases. Importantly, use of this method can be deployed for real-time antibiotic stewardship interventions for CAP.

Disclosures: None

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Subject Category: Antibiotic Stewardship

Sources of antibiotics for acute respiratory infection in children aged <5 years children in South Asia: A multicountry study

Md Abdullah Al Jubayer Biswas ICDDR,B; Mohammad Riashad MonjurSouth Eastern Sydney Local Health District; Md. Zakiul Hassan ICDDR,B and Nusrat Homaira UNSW

Background: In South Asia, a region of almost 2 billion people across 8 countries, acute respiratory infections (ARIs) are associated with significant morbidity and mortality in children aged <5 years. Although ~80% of ARIs are due to viral etiology and are often self-limiting, they remain the single largest reason for antibiotic use in children aged <5 years in South Asia. We investigated the sources and dispensing pattern of antibiotics for ARIs in children aged <5 years in South Asia. **Methods:** We analyzed nationally representative, population-based, publicly available household survey data from 6 South Asian countries’ Demographic and

Health Surveys (DHS): Afghanistan, Bangladesh, India, Maldives, Nepal, and Pakistan. The outcome of interest was the source of antibiotics for children aged <5 years who reportedly had symptoms compatible with ARI (cough, fever, and runny nose) and had received antibiotics for the ARI episode in the 2 weeks preceding the survey. We used a generalized estimating equation with an exchangeable correlation structure to account for country-specific cluster-level correlation to estimate the odds of sources of antibiotics usage. Models were adjusted for age, sex, type of place of residence, wealth index, and parents’ education. To analyze the data, we used the sample weight supplied by the DHS to ensure that our results appropriately reflect the target population in each of the countries studied. **Results:** In total, across the 6 South Asian countries, 24,104 children aged <5 years had symptoms of ARI, 7,587 (31%; 95% CI, 30–33) from received antibiotics. A higher proportion of antibiotic usage for ARIs episodes occurred in Afghanistan (66%), followed by Maldives (53%), Pakistan (45%), and Nepal (43%). Regarding the source of antibiotics, a higher proportion of antibiotics was obtained from the private medical sector in India, followed by unqualified sources in Bangladesh, and the public sector in Afghanistan. Our adjusted multivariable analysis revealed that, in comparison to the public sector, participants were 2.6 times (aOR, 2.6; 95% CI, 1.6–4.3) more likely to receive antibiotics from private medical sector drug sources in Nepal and 1.3 times more likely (aOR, 1.3; 95% CI, 1.1–1.5) in Afghanistan. **Conclusions:** In South Asian countries, the private medical sector was the most common primary source of antibiotics for children with ARIs. Targeted efforts to create awareness around antibiotic dispensing and guidelines to improve practices may curtail the use of antibiotics for ARIs in children aged <5 years in South Asia.

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Fluconazole resistance in non-*albicans* *Candida* species in the United States, 2012–2021

Emily Jenkins; Meghan Lyman; Brendan Jackson; Shawn Lockhart; Hannah Wolford; Sujan Reddy and James Baggs

Background: *Candida* spp can cause a variety of infections known as candidiasis, ranging from severe invasive infections to superficial mucosal infections of the mouth and vagina. Fluconazole, a triazole antifungal, is commonly prescribed to treat candidiasis but increasing fluconazole resistance is a growing concern for several *Candida* spp. Although *C. albicans* has historically been the most common cause of candidiasis, other species

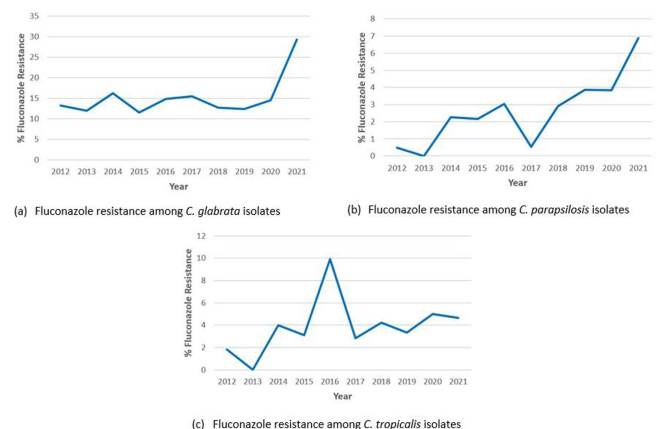


Figure 1. Fluconazole resistance among various *Candida* species isolates, 2012–2021