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Background: A quantitative understanding of the impact of delays to concordant antibiotic treatment on patient mortality is important for designing hospital antibiotic policies. *Acinetobacter* spp are among the most prevalent pathogens causing multidrug-resistant hospital-acquired infections in developing countries. We aimed to determine the causal effect of delays in concordant antibiotic treatment on 30-day survival of patients with hospital-acquired *Acinetobacter* spp bacteremia in a resource-limited setting. **Methods:** We included patients with *Acinetobacter* spp-related hospital-acquired bacteremia (HAB) in a hospital in Thailand over a 13-year period. We classified patients into 4 groups: those with no delays to concordant antibiotic treatment; those with a 1-day delay; those with 2-day delays; and those with >2 days of delay. We adopted an analytical approach that aimed to emulate a randomized controlled trial and compared the expected potential outcomes of patients between the exposure groups using a marginal structural model with inverse-probability weightings to adjust for confounders and immortal time bias. **Results:** Between January 2003 and December 2015, 1,203 patients had HAB with *Acinetobacter* spp., of which 682 patients (56.7%) had ≥ 1 days of delay in concordant antibiotic treatment. These delays were associated with an absolute increase in 30-day mortality of 6.6% (95% CI 0.2%–13.0%), from 33.8% to 40.4%. Among the 1,203 patients, 521 had no delays to concordant antibiotic treatment (i.e. concordant therapy on the day of blood collection), 224 patients had a 1-day delay, 119 had a 2-day delay, and 339 had a delay of ≥ 3 days. The crude 30-day mortality was substantially lower in patients with ≥ 3 days of delay in concordant treatment compared to those with 1 to 2-days of delays. After adjusting for measured confounders and immortal time bias, the expected probability of dying in the hospital within 30-days of blood collection if patient had no delays in concordant therapy was 39.7% (95% CI: 32.3–47.2%), for a 1-day delay it was 42.7% (95% CI: 29.8–55.7%), for a 2-day delay it was 51.0% (95% CI: 38.9–63.2%), and for a ≥ 3 days was 40.9% (36.0–45.7%).

Conclusions: Delays to concordant antibiotic therapy are linked to increased mortality among patients with HAB due to *Acinetobacter* spp. Accounting for confounders and immortal time bias is necessary when attempting to estimate causal effects of delayed concordant treatment and, in this case, it helped resolve paradoxical results in crude data.

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Determinants of Protection Against Measles Infection in a Vaccinated Healthcare Worker

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Background: In 2019, a measles community outbreak resulted in a secondary case in a health care worker (HCW) working in a pediatric hospital in Montréal, Canada. Following the event, HCWs were screened to identify individuals susceptible to measles infection based on serology results. **Objective:** Our aim was to assess measles seroprotection rates and to evaluate vaccine responses of susceptible HCWs using commercial enzyme immunoassay (EIA) or enzyme linked immunosorbent assay (ELISA). **Methods:** Emergency department (ED) employees, including doctors, were screened for measles susceptibility as part of a post-outbreak measure by the hospital occupational health service. Demographic information was collected. Measles history and vaccination information were collected using a personal vaccination booklet, employee vaccination profile, or the Québec vaccination registry. According to the Quebec Immunization Protocol (PIQ), individuals born before 1970, or who have received 2 doses of a measles-containing vaccine are considered protected. Individuals with undetectable or equivocal antibody levels were considered at risk of measles infection. These individuals were offered vaccination and were tested for vaccine response 4 weeks after vaccination. **Results:** Anti-IgG measles antibody results, demographic information, and vaccination information were obtained for 257 employees. The results are currently available for 233 HCWs: 224 HCWs (96%) were seropositive, 7 (3%) were seronegative, and 2 were equivocal. Among seronegative individuals, 6 (85.7%) were born after 1980 and 3 (42.9%) had received 2 doses of a measles-containing vaccine. Of those with an equivocal result, 1 (50%) had received 2 doses and 1 (50%), born after 1970, did not confirm vaccination status. Finally, 9 (4%) of seropositive individuals were not vaccinated; of whom 8 (88.9%) were born before 1970. **Conclusions:** Our preliminary results suggest that the 95% immunity threshold that is usually required to prevent secondary transmission of measles has been reached in our ED HCW cohort. Even years after the second MMR dose, HCWs remain well protected. Relying on documented vaccination status is thus acceptable.

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Determining Antibiotic Use in Long-Term Care Facilities Across Tennessee

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Background: Antibiotic stewardship is an area of great concern in long-term care facilities nationwide. The CDC promotes 7 core