Conclusion. Patients with S. aureus AHOAI with a delay in source control, slow decline in CRP, prolonged fever or ICU admission are at higher risk of OC. While nonspecific, these findings suggest that such patients may warrant especially cautious clinical follow-up to identify sequelae early. Large multicenter studies are needed to better predict OC in this setting.

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920. A Sharp Fall in Antibiotic Use in Infants Is Correlated With a Population-Wide Reduction in Asthma Incidence for Children Under 5
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Background. Antibiotic use in infants <1 is associated with increased relative risk (~1.5) for childhood asthma in cohort studies. This may be mediated by removal from the infant microbiome of organisms shown to protect against asthma, a hypothesis supported by experiment. We launched this study to see whether reductions in antibiotic use at population level are associated with benefit by way of asthma reduction.

Methods. We obtained antibiotic prescribing data from BC PharmaNet, a population-based database that captures all outpatient prescribing for British Columbia, Canada (n = 4.7 million). We focused on prescriptions in children <1 and calculated prescription rate per 1,000 population per year. We obtained asthma incidence data from the BC Ministry of Health Chronic Disease Registry. Asthma case identification uses a standard case definition making use of community and hospital diagnostic codes as well as asthma drug data from BC's universal phy- sician billing, hospital and drug databases. We focused on age-stratified asthma incidence for children aged 1–4. The correlation between antibiotic prescription rate in children <1 and asthma incidence in the following year was estimated using the Spearman test.

Results. Antibiotic prescribing for all age groups fell 9.5% between 1999 and 2013. The rate for infants <1 dropped 58% from 1,014 to 427 prescriptions per 1,000 population/year. Between 2000 and 2014, asthma incidence (ages 1–4) fell 26% from 27.3 (95% CI: 26.5–28.0) to 20.2 (95% CI: 19.5–20.8) per 1,000 population/year. These trends were strongly correlated: Spearman’s rho = 0.81 (P = 0.0002). The magnitude of fall in asthma incidence is slightly greater than that predicted based on calculated population attributable risk for antibiotic exposure.

Conclusion. The population health benefit from antibiotic stewardship in infants may not be confined to slowing the emergence of resistance and could include a reduced risk of asthma. As this is a population-based ecological study, a reduction in other risk factors may also have contributed to the fall in asthma incidence. This prom...