that distinct approaches may be needed to develop effective prevention and early recognition of sepsis onset outside of the hospital and over half had chronic conditions. Our data suggest Pseudomonas aeruginosa (24%), and cardiovascular disease (20%). Patients with CUMC had a higher percentage of pulmonary disease (35%), hematologic/oncologic disease (31%), immune compromise (24%), and respiratory tract infection (14%); for 317 (43%) no infection was documented as a cause of sepsis. The most frequently identified pathogen was S. aureus (2008) no pathogen was identified as a cause of sepsis (table). The percentage of patients with no pathogen identified was similar between those with CUMC and those without.

Methods. We utilized the Emerging Infections Program (EIP) to collect comprehensive data via retrospective record review for patients with severe sepsis or septic shock. We conducted detailed medical record reviews to describe the epidemiology and clinical characteristics of children and young adults with sepsis to inform prevention and early recognition targets. We performed a descriptive analysis of these data. Among 734 patients hospitalized with sepsis, 92% were living in a primary residence 4 days before admission. Among these, 38% had an outpatient medical encounter in the 7 days before admission, 14% had sepsis onset after hospital day 3, and 11% died within 90 days of sepsis diagnosis. The most frequently identified infection was lower respiratory tract infection (14%); for 317 (43%) no infection was documented as a cause of sepsis. The most frequently identified pathogen was Staphylococcus aureus (10%); for 326 (44%) no pathogen was identified as a cause of sepsis. Among 394 (54%) patients with ≥ 1 chronic underlying medical condition (CUMC), the most common were pulmonary disease (35%), hematologic/oncologic disease (31%), immune compromise (24%), and cardiovascular disease (20%). Patients with CUMC had a higher percentage of their sepsis onset after hospital day 3, death within 90 days of sepsis diagnosis, and Pseudomonas aeruginosa as a cause of sepsis (table). The percentage of patients with no pathogen identified was similar between those with CUMC and those without.

Conclusion. In our large cohort of children and young adults with sepsis, most had sepsis onset outside of the hospital and over half had chronic conditions. Our data suggest that distinct approaches may be needed to develop effective prevention and early recognition strategies for children and young adults depending on the presence of chronic conditions.

Table 1. Clinical Characteristics of Children and Young Adults with Sepsis, Emerging Infections Program, 2014-2018

| Variable | One or more chronic underlying medical conditions | No chronic underlying medical condition | Total |
|----------|-----------------------------------------------|----------------------------------------|-------|
| Age (y)  | 136 (100%)                                     | 215 (100%)                             | 351   |
| Race      | 104 (100%)                                     | 209 (100%)                             | 313   |
| Gender    | 115 (100%)                                     | 207 (100%)                             | 322   |
| Location  | 64 (100%)                                      | 106 (100%)                             | 170   |
| Residence | 104 (100%)                                     | 209 (100%)                             | 313   |
| Acute care | 54 (100%)                                      | 96 (100%)                              | 150   |
| Rural     | 51 (100%)                                      | 97 (100%)                              | 148   |
| Other     | 2 (100%)                                       | 2 (100%)                               | 4     |
| Residency | 3 (100%)                                       | 6 (100%)                               | 9     |
| Prior to admission | 154 (100%) | 260 (100%) | 414 |
| Sepsis onset after hospital day 3 | 151 (99%) | 178 (100%) | 319 |
| Day within 30 days of sepsis diagnosis | 61 (44%) | 145 (100%) | 206 |
| Infections causing sepsis | 51 (14%) | 103 (100%) | 154 |
| Lower respiratory tract infection | 41 (13%) | 91 (100%) | 132 |
| Blood stream infection | 41 (13%) | 91 (100%) | 132 |
| Urinary tract infection | 31 (10%) | 104 (100%) | 135 |
| Sepsis associated with trauma | 21 (6%) | 104 (100%) | 125 |
| No infection documented | 102 (31%) | 91 (100%) | 193 |
| More than one infection | 16 (5%) | 104 (100%) | 120 |
| Undetermined | 23 (7%) | 104 (100%) | 127 |
| Other | 24 (7%) | 126 (100%) | 150 |
| Pathogen causing sepsis | 50 (100%) | 103 (100%) | 153 |
| Staphylococcus aureus | 35 (70%) | 91 (100%) | 126 |
| Streptococcus spp. | 20 (40%) | 104 (100%) | 124 |
| Escherichia coli | 22 (44%) | 91 (100%) | 113 |
| Other | 14 (28%) | 104 (100%) | 118 |
| Pseudomonas aeruginosa | 24 (48%) | 91 (100%) | 115 |
| Other | 27 (54%) | 91 (100%) | 118 |
| Influenza A | 11 (11%) | 104 (100%) | 115 |
| Respiratory virus | 11 (11%) | 104 (100%) | 115 |

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