**Supplementery Table 2: Characteristics of children admitted to one of 51 PHIS hospitals on a study date, 2017-2018 excluding healthy newborns**

| Characteristics | | Overall, N (%) | With Antibiotics[1], n (%) | With Broad-Spectrum[2] Antibiotics, n (%) |
|---|---|---|---|---|
| Number of patients (N) | | 51210 | 19097 (37%) | 6575 (13%) |
| Age | 0-29 days | 14590 (28%) | 3608 (19%) | 976 (15%) |
| | 30-364 days | 8186 (16%) | 3007 (16%) | 868 (13%) |
| | 1-4 years | 9023 (18%) | 4216 (22%) | 1497 (23%) |
| | 5-11 years | 8916 (17%) | 4100 (21%) | 1544 (23%) |
| | 12-17 years | 10495 (20%) | 4166 (22%) | 1690 (26%) |
| Gender | Male | 27500 (54%) | 10349 (54%) | 3630 (55%) |
| Race | White | 24379 (48%) | 9074 (48%) | 3149 (48%) |
| | Black | 9907 (19%) | 3365 (18%) | 1035 (16%) |
| | Hispanic | 9794 (19%) | 4066 (21%) | 1476 (22%) |
| | Asian | 1565 (3%) | 622 (3%) | 245 (4%) |
| | Other | 5565 (11%) | 1970 (10%) | 670 (10%) |
| Census region | Midwest | 14613 (29%) | 4863 (25%) | 1627 (25%) |
| | Northeast | 7551 (15%) | 2925 (15%) | 1046 (16%) |
| | South | 18421 (36%) | 6920 (36%) | 2296 (35%) |
| | West | 10625 (21%) | 4389 (23%) | 1606 (24%) |
| Type of encounter[3] | Medical | 30877 (60%) | 9393 (49%) | 3020 (46%) |
| | Surgical | 20333 (40%) | 9704 (51%) | 3555 (54%) |
| Infection diagnosis | | 19310 (38%) | 11084 (58%) | 4695 (71%) |
| Complex chronic condition (CCC)[4] | | 33370 (65%) | 13836 (72%) | 5581 (85%) |

[1]Antibiotics include any antibacterial antibiotic administered via the oral, intravenous, or inhalational route.

[2]Broad-spectrum antibiotics include vancomycin, daptomycin, cefepime, ceftaroline, ceftazidime-avibactam, ceftolozane-tazobactam, piperacillin-tazobactam, carbapenems, fluoroquinolones, and linezolid.

[3]Each patient encounter day is coded as either medical or surgical based on service line charge data.

[4]Complex chronic condition was defined per Feudtner et al. as “any medical condition that can be reasonably expected to last at least 12 months (unless death intervenes) and to involve either several different organ systems or 1 organ system severely enough to require specialty pediatric care and probably some point of hospitalization in a tertiary care center.”