Supplementary Table 3: Seasonal variation in characteristics of children admitted to one of 51 PHIS hospitals on a study date, 2017-2018

		Spring			Summer			Fall			Winter			Overall		
Characteristics		**Overall, N (%)**	**With Antibiotics[1], n (%)**	**With Broad-Spectrum[2] Antibiotics, n (%)**	**Overall, N (%)**	**With Antibiotics[1], n (%)**	**With Broad-Spectrum[2] Antibiotics, n (%)**	**Overall, N (%)**	**With Antibiotics[1], n (%)**	**With Broad-Spectrum[2] Antibiotics, n (%)**	**Overall, N (%)**	**With Antibiotics[1], n (%)**	**With Broad-Spectrum[2] Antibiotics, n (%)**	**Overall, N (%)**	**With Antibiotics[1], n (%)**	**With Broad-Spectrum[2] Antibiotics, n (%)**
Number of patients (N)		13055	4715 (36%)	1602 (12%)	12502	4642 (37%)	1637 (13%)	13127	4690 (36%)	1610 (12%)	14085	5127 (36%)	1726 (12%)	52769	19174 (36%)	6575 (12%)
Age	0-29 days	3934 (30%)	878 (19%)	228 (14%)	4237 (34%)	996 (21%)	280 (17%)	4033 (31%)	925 (20%)	239 (15%)	3945 (28%)	886 (17%)	229 (13%)	16149 (31%)	3685 (19%)	976 (15%)
	30-364 days	2021 (15%)	782 (17%)	227 (14%)	1663 (13%)	643 (14%)	198 (12%)	2014 (15%)	733 (16%)	207 (13%)	2488 (18%)	849 (17%)	236 (14%)	8186 (16%)	3007 (16%)	868 (13%)
	1-4 years	2269 (17%)	1047 (22%)	351 (22%)	1998 (16%)	965 (21%)	373 (23%)	2230 (17%)	1011 (22%)	373 (23%)	2526 (18%)	1193 (23%)	400 (23%)	9023 (17%)	4216 (22%)	1497 (23%)
	5-11 years	2230 (17%)	988 (21%)	386 (24%)	2132 (17%)	996 (21%)	364 (22%)	2226 (17%)	1015 (22%)	373 (23%)	2328 (17%)	1101 (21%)	421 (24%)	8916 (17%)	4100 (21%)	1544 (23%)
	12-17 years	2601 (20%)	1020 (22%)	410 (26%)	2472 (20%)	1042 (22%)	422 (26%)	2624 (20%)	1006 (21%)	418 (26%)	2798 (20%)	1098 (21%)	440 (25%)	10495 (20%)	4166 (22%)	1690 (26%)
Gender	Male	7002 (54%)	2592 (55%)	910 (57%)	6749 (54%)	2509 (54%)	905 (55%)	7073 (54%)	2553 (54%)	889 (55%)	7474 (53%)	2735 (53%)	926 (54%)	28298 (54%)	10389 (54%)	3630 (55%)
Race	White	6226 (48%)	2253 (48%)	228 (14%)	5945 (48%)	2226 (48%)	280 (17%)	6159 (47%)	2230 (48%)	239 (15%)	6700 (48%)	2400 (47%)	229 (13%)	25030 (47%)	9109 (48%)	976 (15%)
	Black	2517 (19%)	794 (17%)	227 (14%)	2341 (19%)	837 (18%)	198 (12%)	2617 (20%)	808 (17%)	207 (13%)	2667 (19%)	939 (18%)	236 (14%)	10142 (19%)	3378 (18%)	868 (13%)
	Hispanic	2463 (19%)	1000 (21%)	351 (22%)	2350 (19%)	952 (21%)	373 (23%)	2504 (19%)	1029 (22%)	373 (23%)	2770 (20%)	1105 (22%)	400 (23%)	10087 (19%)	4086 (21%)	1497 (23%)
	Asian	435 (3%)	168 (4%)	386 (24%)	410 (3%)	146 (3%)	364 (22%)	398 (3%)	137 (3%)	373 (23%)	452 (3%)	173 (3%)	421 (24%)	1695 (3%)	624 (3%)	1544 (23%)
	Other	1414 (11%)	500 (11%)	410 (26%)	1456 (12%)	481 (10%)	422 (26%)	1449 (11%)	486 (10%)	418 (26%)	1496 (11%)	510 (10%)	440 (25%)	5815 (11%)	1977 (10%)	1690 (26%)
Census region	Midwest	3699 (28%)	1201 (25%)	369 (23%)	3508 (28%)	1159 (25%)	406 (25%)	3777 (29%)	1206 (26%)	409 (25%)	3941 (28%)	1318 (26%)	443 (26%)	14925 (28%)	4884 (25%)	1627 (25%)
	Northeast	2008 (15%)	746 (16%)	242 (15%)	1836 (15%)	701 (15%)	254 (16%)	1950 (15%)	741 (16%)	290 (18%)	2056 (15%)	748 (15%)	260 (15%)	7850 (15%)	2936 (15%)	1046 (16%)
	South	4662 (36%)	1660 (35%)	558 (35%)	4578 (37%)	1719 (37%)	575 (35%)	4734 (36%)	1684 (36%)	553 (34%)	5054 (36%)	1888 (37%)	610 (35%)	19028 (36%)	6951 (36%)	2296 (35%)
	West	2686 (21%)	1108 (23%)	433 (27%)	2580 (21%)	1063 (23%)	402 (25%)	2666 (20%)	1059 (23%)	358 (22%)	3034 (22%)	1173 (23%)	413 (24%)	10966 (21%)	4403 (23%)	1606 (24%)
Type of encounter[3]	Medical	8132 (62%)	2395 (51%)	749 (47%)	7240 (58%)	2101 (45%)	700 (43%)	8034 (61%)	2314 (49%)	750 (47%)	9030 (64%)	2660 (52%)	821 (48%)	32436 (61%)	9470 (49%)	3020 (46%)
	Surgical	4923 (38%)	2320 (49%)	853 (53%)	5262 (42%)	2541 (55%)	937 (57%)	5093 (39%)	2376 (51%)	860 (53%)	5055 (36%)	2467 (48%)	905 (52%)	20333 (39%)	9704 (51%)	3555 (54%)
Infection diagnosis		4827 (37%)	2743 (58%)	1166 (73%)	4574 (37%)	2618 (56%)	1183 (72%)	4731 (36%)	2693 (57%)	1134 (70%)	5179 (37%)	3030 (59%)	1212 (70%)	19311 (37%)	11084 (58%)	4695 (71%)
Complex chronic condition (CCC)[4]		8253 (63%)	3388 (72%)	1352 (84%)	8222 (66%)	3416 (74%)	1413 (86%)	8307 (63%)	3392 (72%)	1348 (84%)	8618 (61%)	3646 (71%)	1468 (85%)	33400 (63%)	13842 (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."