

## Supplemental Information

**SUPPLEMENTARL TABLE 4** Patient Demographics of Clinical features of BRUE

	Overall	Preguideline	Postguideline	<i>P</i>
Discharges, <i>N</i> (%)	43 733	19 803 (45.3)	23 930 (54.7)	
Median age, mo (SD)	5 (2.1)	4.9 (2.2)	5.1 (2.1)	.141
Male gender, <i>n</i> (%)	23 491 (53.7)	10 511 (53.1)	12 980 (54.3)	.016
Race, <i>n</i> (%)				<.001
Non-Hispanic White	19 630 (44.9)	8 738 (44.1)	10 892 (45.5)	
Non-Hispanic Black	8 783 (20.1)	3 896 (19.7)	4 887 (20.4)	
Hispanic	10 404 (23.8)	4 868 (24.6)	5 536 (23.1)	
Asian American	927 (2.1)	377 (1.9)	550 (2.3)	
Other	3 989 (9.1)	1 924 (9.7)	2 065 (8.6)	
Insurance, <i>n</i> (%)				<.001
Public	27 356 (62.6)	12 808 (64.7)	14 548 (60.8)	
Private	13 203 (30.2)	5 802 (29.3)	7 401 (30.9)	
Other	3 174 (7.3)	1 193 (6)	1 981 (8.3)	
Region, <i>n</i> (%)				<.001
Midwest	13 112 (30)	5 828 (29.4)	7 284 (30.4)	
Northeast	4 112 (9.4)	1 584 (8)	2 528 (10.6)	
South	16 200 (37)	7 365 (37.2)	8 835 (36.9)	
West	10 309 (23.6)	5 026 (25.4)	5 283 (22.1)	
Socioeconomic status, <i>n</i> (%)				.040
<1.0 x FPL	2 570 (5.9)	1 209 (6.1)	1 361 (5.7)	
1.0–1.5 x FPL	26 762 (61.2)	12 125 (61.2)	14 637 (61.2)	
1.5–3.0 x FPL	11 201 (25.6)	5 032 (25.4)	6 169 (25.8)	
>3.0 x FPL	2 344 (5.4)	1 022 (5.2)	1 322 (5.5)	

FPL, federal poverty level.

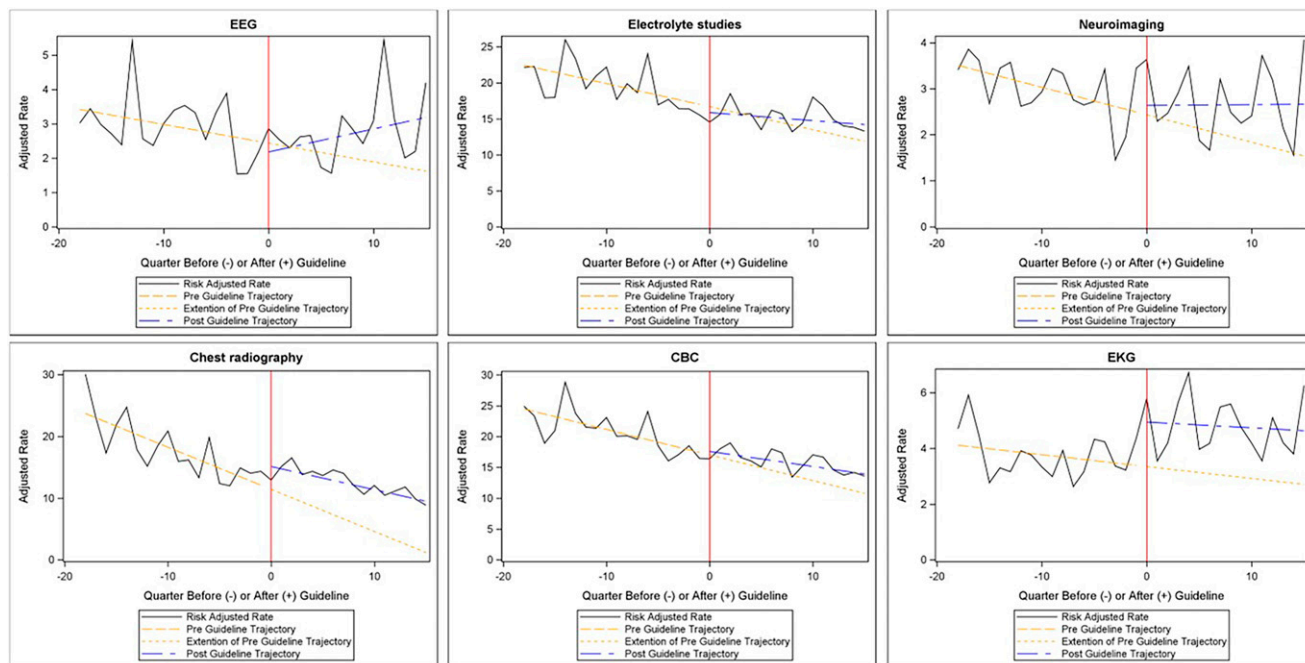
**SUPPLEMENTAL TABLE 5** Trends in Utilization of Resources in Cohort (Clinical Features of BRUE)

	Preslope	<i>P</i>	Level Shift	<i>P</i>	Change in Slope	<i>P</i>	Postslope	<i>P</i>
Admission rates	−0.64	<.001	5.90	<.001	0.36	.014	−0.29	.013
Cardiopulmonary evaluation								
Electrocardiogram	−0.04	.094	1.60	<.001	0.02	.501	−0.02	.355
Echocardiography	−0.01	.000	−0.03	.493	0.02	<.001	0.01	.037
Chest radiography	−0.68	<.001	3.69	<.001	0.31	<.001	−0.37	<.001
Polysomnogram	0.00	.276	0.00	.365	0.00	.447	0.00	.868
Neurologic evaluation								
Neuroimaging	−0.06	.000	0.20	.349	0.06	.009	0.00	.921
EEG	−0.05	.003	−0.26	.288	0.12	<.001	0.07	.003
Infectious disease evaluation								
CBC	−0.41	<.001	0.57	.454	0.17	.047	−0.24	.001
Blood culture	−0.06	.002	0.23	.257	0.03	.255	−0.03	.061
CSF analysis	−0.04	.001	0.02	.814	0.01	.284	−0.03	.002
Urinalysis or culture	−0.19	<.001	0.62	.053	0.11	.004	−0.08	.004
Pertussis testing	0.07	<.001	−0.16	.094	−0.10	<.001	−0.04	.000
Viral respiratory screen	−0.16	<.001	−0.35	.424	0.23	<.001	0.07	.074
GI evaluation								
UGI series	0.00	<.001	0.00	.758	0.00	.001	0.00	.966
pH study	0.00	.043	0.00	.433	0.00	.019	0.00	.221
Endoscopy	0.00	.017	0.00	.471	0.00	.118	0.00	.999
Swallow studies	0.00	.623	0.11	.020	0.01	.007	0.01	.005
Metabolic evaluation								
Blood gas	−0.06	.002	0.23	.257	0.03	.255	−0.03	.061
Electrolyte studies	−0.32	<.001	−0.83	.256	0.21	.021	−0.11	.100
Serum ammonia	0.00	.039	0.01	.573	0.00	.606	0.00	.269
Blood lactate	−0.01	.070	0.05	.448	0.00	.568	−0.01	.264
Serum amino acid	0.00	.013	0.02	.121	0.00	.574	0.00	.157
Serum acylcarnitine	0.00	.207	0.01	.176	0.00	.412	0.00	.999
Acid suppression	−0.10	<.001	0.28	.015	0.04	.005	−0.05	<.001
Revisits (ED or readmission)								
7-d revisits	0.00	.534	0.05	.448	−0.01	.046	−0.01	.036
30-d revisits	0.03	.122	0.32	.192	−0.10	.000	−0.07	.000
60-d revisits	0.09	.006	0.97	.029	−0.29	<.001	−0.20	<.001

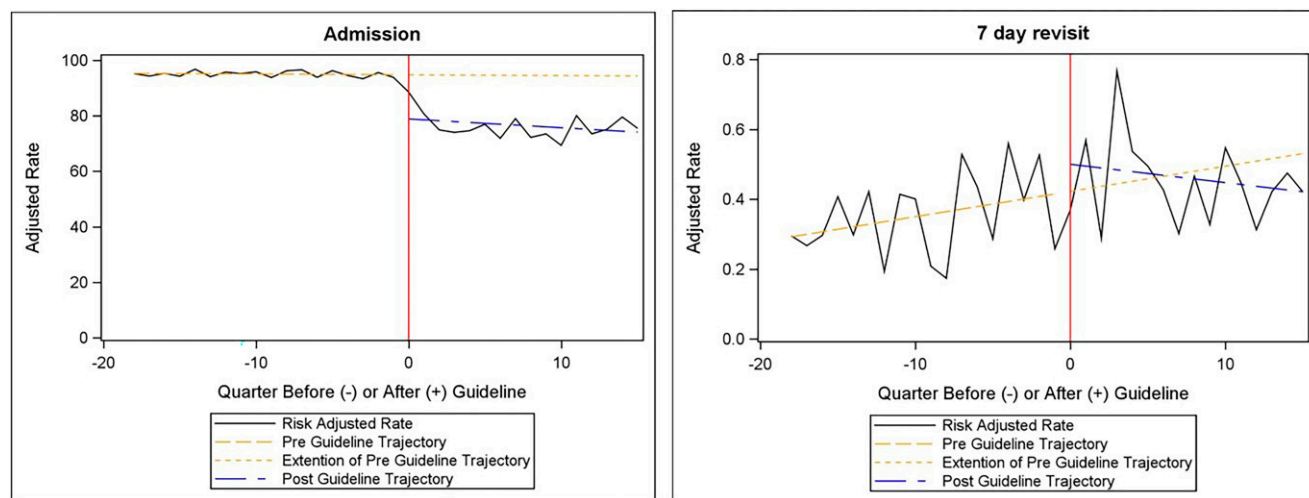
UGI, upper gastrointestinal.

**SUPPLEMENTAL TABLE 6** ICD-10 Codes for the Identification of BRUE and Clinical Features of BRUE

Code	Description
Group 1: BRUE/ALTE	
R6813	ALTE
Group 2: clinical features of BRUE	
R55	Syncope
R0681	Apnea
P283	Primary sleep apnea of newborn
G4731	Primary central sleep apnea
G4733	Obstructive sleep apnea adult pediatric
P289	Respiratory condition of newborn unspecified
P284	Other apnea of newborn
R400	Somnolence
R401	Stupor
R404	Transient alteration of awareness
M6281	Muscle weakness generalized
R29818	Other symptoms and signs involving the nervous system
R29898	Other symptoms and signs involving the musculoskeletal system
R2990	Unspecified symptoms and signs involving the nervous system
R2991	Unspecified symptoms and signs involving the musculoskeletal system
R259	Unspecified abnormal involuntary movements
R230	Cyanosis
P282	Cyanotic attacks of newborn
P611	Polycythemia neonatorum
R232	Flushing
R231	Pallor
R0689	Other abnormalities of breathing
T17310A	Gastric contents in larynx causing asphyxiation, initial encounter



**SUPPLEMENTAL FIGURE 3** Comparison of sexual history documentation and STI testing pre- and postimprovement by sex, race, and age. Improvement is defined by special cause variation in SPC starting May 2019 for sexual history documentation and December 2019 for STI testing. A, sexual history documentation by sex; B, STI testing by sex; C, sexual history documentation by race; D, STI testing by race; E, sexual history documentation by age; and F, STI testing by age.



**SUPPLEMENTAL FIGURE 4** Comparison of sexual history documentation and STI testing pre- and postimprovement by sex, race, and age. Improvement is defined by special cause variation in SPC starting May 2019 for sexual history documentation and December 2019 for STI testing. A, sexual history documentation by sex; B, STI testing by sex; C, sexual history documentation by race; D, STI testing by race; E, sexual history documentation by age; and F, STI testing by age.