

# Index

4-Stage Balance Test, 417 <sup>18</sup>F-florodeoxyglucose, 166 1135 waivers, ČOVID-19 pandemic and, 502-505 2021 AHA/ACC/ASE/CHEST/ SAEM/ SCCT/SCMR guideline, 167 2023 CPT documentation, 516 2023 PFS final rule, 518 Abbreviated Mental Test (AMT), 416 ABCD2 rule, 219-220, 219 ABCD2 TIA risk stratification score, 115 abdominal pain, 135, 348-350 abdominal pain order set, 759 diagnostic approach to, 303 disposition and, 359 emergency department admission and, 303 emergency department and, 348 initial diagnostic approach, 303 observation and, 305-306 policy, 691-692 threshold for testing, 303-305 abdominal pain (cholecystitis), 348, 350 academic centers, 74 Academy of Administrators in Academic Emergency Medicine (AAAEM), 88 acamprosate, 455 ACC Accreditation Services, 379 accountable care model, 98 Accreditation Council for Graduate Medical Education (ACGME), 74 acetaminophen, 370 acetaminophen poisoning, 369 activated PCC (aPCC), 285 activities of daily living (ADLs), acuity metrics, 64 acute abdominal pain acute appendicitis and, 344 cause of emergency department (ED) visits, 343 acute appendicitis, 304-305, 343 clinical risk scores, 344, 345 presentation of, 343

acute chest pain, 162, 163, 166-167, See also chest pains cardiac stress test and, 165 management, 167 stress testing in, 162 acute chest syndrome, 278 acute coronary syndrome (ACS), 306, 697 evaluation rate vs. ACS misdiagnosis rate, 114 management of, 138-139 risk of, 646 vs. ACS missed diagnosis rate, 113 acute cystitis, 330 Acute Decompensated Heart Failure National Registry (ADHERE), 142 acute heart failure, 141 diagnosis of in the emergency department, 141 emergency department treatment goals and, 142 entry criteria for the observation unit, 143 evaluation of, 142 history of and physical examination, 141 main outcome from observation, 160 management of in observation unit, 143 observation unit in an emergency setting, 142 acute intoxication order set, 692 acute medical units, in the United Kingdom, 117, 118 acute medicine development of, 637 in the United Kingdom, 117-118, acute pulmonary embolism, 128, 202 diagnosis of, 202-204 observation care and, 206-207 observation medicine protocol and, 738 patient selection for observation, 206 acute respiratory distress syndrome (ARDS), 287, 488

acute vestibular syndrome (AVS), 241 **Acutely Presenting Older Patient** (APOP) screening tool, 399 adenosine triphosphate (ATP), 173 ADHERE registry, 142 adjunctive therapy for acute pain, 364 for vaso-occlusive episodes, 281 administrative staff, 10 administrative support, 66 admission certification, 608 admission criteria, 328, 391 acute inpatient, 257 for the alcohol use disorder pathway, 452 for the induction of MAT, 445 guidelines, 617-620 observation units, 100 sickle cell disease and, 280 admission, vs. observation, 602-603 Adult Appendicitis Score, the, 346 adult observation medicine, differences between pediatric observation medicine and, 380 adult order sets allergic reaction/angioedema order set, 762-763 electrolyte abnormalities, 794 advance practice providers (APPs) reimbursement to, 89 Advanced Beneficiary Notice, 557 advanced practice providers (APPs), 9-10, 42, 43-44, 53, 88, 488, 570 cost to institutions, 89 in administrative/leadership roles, 89 in observation units, 88 observation units and, 90 responsibilities of, 9 training of, 355 advanced trauma life support (ATLS) guidelines, 356 Affordable Care Act (ACA), 102 Agency for Healthcare Research and Quality (AHRQ), 317 agitated patient, 432



## Index

AHA/American College of Cardiology Foundation (ACCF) guideline, 159 AIMS65 scoring system, 307 alcohol intoxication pathway, 454 alcohol use disorder, 451, 466 alcohol intoxication pathway, 454 cost of in the US hospital system, 451 management of, 452 medication for, 454 mild alcohol withdrawal pathway, 452-453 observation unit pathway, 456 outcomes of treatment, 456 patient selection/exclusion criteria, 452 patient selection/inclusion criteria, 452 treatment and, 456 treatment of, 454-456 alcohol withdrawal pathway, 454 Alexander v. Azar, 399 Alice Bers, 594 alkalosis, 271 allergy medications, 867 alloantibodies, 285 alpha 1 antitrypsin deficiency, 176 alternate (safe) disposition path, 410 alternate care facilities, 472-473 alternate care site (ACS), 473 alternate or acute care center (ACC), 473 COVID-19 pandemic, 476 setup of facilities, 475-476 staffing for, 476-477 used for during a disaster, 476 Alvarado score, the, 346, 634 Ambulatory Payment Classifications (APCs), 525, American Association for **Emergency Psychiatry** (AAEP), 432 American Association of Blood Banks (AABB), 283 American College of Cardiology (ACC), 33, 138, 145, 149, 158, 162, 379 Accreditation Services, 143 CP risk stratification guidelines, 115 American College of Chest Physicians (ACCP), 185 American College of Emergency Medicine website, 41 American College of Emergency Physicians (ACEP), 32, 131, 135, 219, 397, 407, 431, 446, 458 clinical policy, 182

definition of clinical ultrasonography, 119 guideline, 159 survey, 427 American College of Gastroenterology, 308 American College of Nuclear Cardiology, 33 American College of Obstetrics and Gynecology (ACOG), 340 American College of Physicians clinical policy, 142 American College of Radiology, 138 American Community Survey, 497 American Diabetic Association, 609 American Geriatric Society, 407 American Heart Association (AHA), 149, 158, 162 cardiac testing recommendations of, 135 American Medical Association (AMA), 472, 565 Relative Value Update Committee (RUC), 517 American Psychiatric Association, 428 American Society for Hematology (ASH), 278 American Thoracic Society and the Infectious Disease Society of America (ATS/IDSA) guideline, 181 analgesia guidelines, 278-280 analgesics, 842 pelvic inflammatory disease medications, 798 pharyngitis/peritonsilar abscess medication, 839 pneumonia/acute bronchitis medication, 861-862 analgesics/antipyretics, 862 anatomical imaging, 138 andexanet alfa (Andexxa®), 193 angioedema order set, 762-763 angiotensin receptor blockers (ARBs), 269 angiotensin-converting enzyme (ACE) inhibitors, 107, 269 Ankara University Ibni-Sina Hospital, 646 Anthonisen criteria, 176, 177, 179 antibiotics, 864 administration of antibiotic treatment, 183 for appendicitis, 344 antibiotics, oral pneumonia/acute bronchitis order set, 802 anticoagulation, 224 oral, 210 antidiuretic hormone, 273 antiemetics, 340-341, 844

pelvic inflammatory disease medication, 798 antiplatelet agents, 223 antipyretics, 184 anxiety, 428 anxiolytics/sleeping pills, 867 APACHE II score, 177 apical pneumothoraces/ pneumothorax, 186 discharge advice and follow-up, 188 management/intervention for, 186-188 pre-admission criteria checklist for, 740 workflow for, 741 apixaban (Eliquis\*), 193 appeals against denial of health care insurance, 563-565 appendicitis acute clinical risk scores, 345 acute abdominal pain and, 344 AIR score, 346 Alvarado score and, 346 complicated, 344 CT for, 343 discharge from the emergency department/observation unit, 348 emergency department/ observation unit guidelines and, 348 emergency department/ observation unit management of, 348 emergency/observation unit criteria, 347 non-operative management, 344 treatment with antibiotics, 344 Appendicitis Acuta (APPAC) trials, 344 Appendicitis Inflammatory Response (AIR) score, 346 appendicitis score, 304, 305 adult, 346 before and after observation, 305 appendicitis, acute, 304-305, 343 acute abdominal pains and, 344 presentation of, 343 Ardent Health Services, 76 area deprivation indexes, 408 arrhythmogenic right-ventricular cardiomyopathy, 159 aspirin, 750 aspirin, strokes prevention and, 223 aspirin/dipyridamole, strokes prevention and, 223 Assistant Secretary for Preparedness and Response

(ASPR), 472



Index

Association of Academic Chairs of **Emergency Medicine** (AACEM), 88 asthma acute exacerbation order set, 766 COPD medications, 775 cost of caring for, 171 discharge instructions for patients with, 174 emergency room visits and, 171 failure to respond to treatment, 173 - 174inclusion and exclusion criteria, 171, 172 maintenance metered-dose inhalers, 174 management of, 171 medications for, 173, 385, 765, 869 policy, 693-694 risk factors for death in, 174 severity chart, 172 treatment in the observation unit, 172, 174 atrial fibrillation, 149 ED OUs, 152 management, 150-152 observation unit interventions, pathophysiology/classification, 149-150 policy, 694-695 at-risk older adults, 407 Atrium Health System, 483 avian flu, 473 back pain, 365 acute low, 365 low, 544-545 Balanced Budget Act (1997), 79 barbiturates, 453 benchmarks, 65 Beneficiary and Family Centered Care Quality Improvement Organizations (BFCC QIOs), 27, 590 benzodiazepines, 248, 365, 371, 428, anti-psychotic medication with, 432 first line treatment for seizures, 238 for withdrawal and seizures, 797 overdose, 764 reversal of, 797 use disorder, 446 withdrawal from, 452 beta-adrenergic agonists potential side effects of, 173 bicarbonate therapy, 260 billing, 524-527 biomarkers, 136

cardiac, 135, 137-138, 142, 143, 303 serial, 137 bipolar disorder, 428 black widow spider envenomation, 374-375 bladder malignancy, suspected, 729 bladder mass protocol, 729-730 Blatchford risk stratification score, 307, 308 BLEED study, 314 bleeding risk, warfarin and, 211-212 blood product transfusions monitoring in observation in, 283 blood transfusions, 337, 390, 524 reactions, 286-287 Blue Cross Blue Shield, 563 blunt abdominal trauma, 358 ED OU disposition, 359 ED OU interventions, 358-359 patient selection for the ED OU, 358, 359 bone mass protocol, 730-731 brain imaging carotid artery duplex ultrasound, MRI, 221 noncontrast CT imaging, 221 vascular imaging, 222 brain injury guideline (BIG) classification, 358 brain natriuretic peptide (BNP), 192 breastfeeding women, factor Xa inhibitors and, 193 Brief Alzheimer's Screen, 416 Brief Psychiatric Rating Scale, 436 British Committee for Standards in Haematology, 284 British Thoracic Society (BTS) guidelines, 185 Brugada syndrome, 159 B-type natriuretic peptide (BNP), buprenorphine (Subutex), 446 Buprenorphine and naloxone (Suboxone), 449 buprenorphine initiation, 374 buprenorphine-induced respiratory depression, 449 business plan, 11-13 CAD Consortium Basic/Clinical score, 162 calcium, 270 low levels of, 271

calcium electrolyte replacement,

California Bridge Program, 451

nonvariceal UGIB, 309

Canadian Registry, data on

818 - 823

California rule, 219

Canadian Syncope Risk Score, 155, 157, 158, 160 cancer. See also oncology dehydration protocol, 292-293 diarrhea protocol, 292 emergency department of patients with, 293 observation units, 290 PRN medications, 293, 294 vomiting protocol, 292 capsule endoscopy, 309 video, 308 carbon monoxide, 372 cardiac biomarkers, 137-138, 142, 303 as risk-stratification tools, 143 cardiac imaging tests performance of, 165 transient ischemic attacks and, 222, 224 cardiac MRI, 138, 166 cardiac medications, 869 cardiac POCUS, 126 cardiac stress tests comparison of, 165 imaging, 163, 165 induction, 163 cardiac tamponade, 128, 135 assessing for, 128 cardiac troponin, 142 cardioembolism, 224 cardiogenic embolism, 222 cardiovascular disease (CVD), 177 cardioversion, 150 care coordinator (case manager), 681 care management, 58 developing protocols for, 621 expedited quality, 100 physician advisor and, 621 resources, 418 transitional, 530 care measure, transition of, 534 care mindset, developing culture of, 624 care, access to, 106 caregiver stress, 409 carotid artery duplex ultrasound, carotid artery stenosis, 222, 225 carotid endarterectomy (CEA), 225 carotid interventions, for ischemic strokes, 225 carve-out states, psychiatric observation units and, 438 case management, 530 Case Management Society of America (CMSA), 530 case management, ED OUs, 418 Cedars-Sinai Medical Centre Predictive Index, 307 Census Reporter, 497



## Index

Center for Medicare Advocacy, 594 Centers for Disease Control and Prevention (CDC), 328, 415 Centers for Medicare and Medicaid Services (CMS), 5, 28, 33, 80, 86, 97, 102, 130, 407, 417, 513, 520, 558, 568, 587, 599, 607 Hospital Readmission Reduction Program, 533 InterQual criteria and, 555 QIOs, 590 rule changes and, 15, 16 status assignment and, 527 central nervous system (CNS) shuntspose diagnostic, 255 cerebellar strokes, 242 statistics on, 249 cerebral blood circulation, disorder of, 252 cerebral edema, 259, 260, 274, 869 preventing, 260 cerebrospinal fluid (CSF), 252 analysis, 229 diversion pathophysiology, 252-253 removal of, 230 shunt placement with, 252 cerebrovascular accident/ thromboembolic event, 151 CERT methodology, 558 CGS (Celerian Group), 20 CHA<sub>2</sub>DS<sub>2</sub>-VASc score, 150-151 CHADS<sub>2</sub> score, 151 challenges during the COVID-19 pandemic, 510 in observation medicine in Singapore, 633, 634 inpatient staffing, 100 managing infrastructural, 484 of acute care medicine, 56 charge nurse, 658-659 charging, observation, 521-524 Charlson Comorbidity Index, 289 Charlson score, 104 CHEST guidelines, 195 chest pain centers accreditation, 139, 379 quality improvement, 139 chest pains acute, 162, 165, 167 diagnostic testing and, 162 facts for test selection, 167 management of in observation units, 139 non-traumatic complaints and, 135-136 pathophysiology of, 136 pre-test and, 162, 163

chest radiograph (CXR), 141, 185 admission criteria for abdominal pain and hyperglycemia, 392-395 rapid treatment units (RTUs), 394-395 children's hospitals, 671 observation units in, 390 rapid treatment units (RTU), 394-395 cholecystectomy, 348 cholecystitis acute, 348 management in the ED OU, 351 modifiable risk factors for, 349 nonmodifiable risk factors for, 349 cholecystitis, acute clinical risk scores for, 349-351 inclusion/exclusion criteria in the emergency department, 351 chronic bronchitis, 180 chronic obstructive pulmonary disease (COPD), 176, 180, admission as inpatient, 698 clinical presentation of, 176-177 criteria for observation, 698 differential diagnosis of, 177 disposition criteria, 698 emergency department management of, 177 exclusion from observation, 698 failure to respond to treatment, 179-180 management of in the observation unit, 177-179, 178 mortality rate of, 176 observation unit interventions, pathophysiology of, 176 patients discharge from observation unit, 698 policy for, 698-699 poor outcome of, 178 treatment of, 177-179 treatment time frame, 698 chronic pain, 366 of malignancy, 366 Cigna Healthcare, 563 classifications, 41 Cleveland Clinic geriatric care unit (GCU) at, 411 Main Campus Emergency Department, 411 clinical decision units (CDUs), 71, 309, 310, 356, 390, 637, 641 geriatric, 409 in rural communities, 69-70 in Saudi Arabia, 642-643

key performance indicators, 643 meeting agenda, 66 meetings, 63, 65 Clinical Frailty Scale, 399 Clinical Global Impression -Improvement Scale, 436 Clinical Institute Withdrawal Assessment Alcohol Scale Revised (CIWA-AR), 452 Clinical Opiate Withdrawal Scale (COWS), 443, 446, 449, 465 clinical pathways, 65 clinical performance, 575-576 clinical ultrasonography, definition of, 119 clopidogrel, stroke prevention and, 224 CMS Manual on Outpatient Observation Services, 27 CMS Medicare Learning Network (MLN) Provider Calls and webcasts, 17 CMS Medicare physician fee schedule, 587, 589 CMS PEPPER program, 20, See also PEPPER reports coding, 524 coding analyses for labs, 557 coding scenarios, 517 in observation units, 514, 516 College of Emergency Medicine, South Africa, 629 colonoscopy, 314 colorectal mass protocol, 731 comfort treatment, 752 common CMS OPPS status indicators, 596 communicable infectious disease(s), 471 communication, 100, 530, 625 communication boards, for patient rooms, 659-660 community acquired pneumonia (CAP), 181 presentation and disposition of patients with, 181-182 risk factors for, 181 community hospitals in a rural setting, 69-70 in an urban area, 71–72 Comparison of Outcomes of Antibiotic Drugs and Appendectomy (CODA) trials, 344 complaints, 64 complex observation, 73, 97, 100, 118 management of, 99 vs. simple observation, 16 Comprehensive Ambulatory Payment Classification (C-APC), 29, 571

statistics on, 162



Index

Comprehensive Error Rate Testing (CERT) program, 17, 26, 558 comprehensive geriatric assessment (CGA), 409 compression ultrasonography (CUS), diagnostic evaluation of PE, 204 computed tomography angiography (CTA), 159-160, 167, 222, 556, 837 diagnostic evaluation of CTA scans, 203 Comprehensive Oncologic **Emergency Research** Network (CONCERN) study, 289 CONCERN observation units, conditions managed in, 289 Condition Code 44, 24, 524-527, 544, 593, 608, 609 observation and, 608-609 requirements for, 608 congestive heart failure (CHF), 97, 149, 181 asthma and, 174 cardiac and lung ultrasound, 123-126 COPD and, 177 early, 609 magnesium nomogram for, 773 management of, 73 Medicare Part A and, 33 order set, 123-126 potassium nomogram for, 773 consultants, 45-46, 859-860 Consumer Assessment of Healthcare Providers and Systems, 533 continuous quality improvement (CQI), 59, 60, 63, 65, 66, 380, 661, 683, 697 components of, 59 contrast allergy, radiology studies for patients with, 870 conventional Seldinger technique, procedure for, 741-743 COPD. See chronic obstructive pulmonary disease (COPD) coronary artery disease, 138, 167, 230, 307, 600 contraindicated with, 853 management of, 138-139 obstructive, 162 coronary computed tomography angiography (CTA), 166-167 coronary CTA (CCTA), 138 coronavirus. See COVID-19 corticosteroids, 179, 230 cost-effective benefit, pediatric observation units, 382

Coverage and Analysis Group, CMS, 25 COVID-19 pandemic, 17, 51, 197-199, 474, 487-488, 641 accessing the community for managing, 497 alternate or acute care center (ACC), 476 Atrium Health Hospital system and, 483 CERT program and, 26 coordinating with external entities, 502 COVID test-result call-back process, 502 developing incident specific guidance for, 501–502 emergency departments use during, 481-482 emergency use authorization and vaccination, 505-506 establishing emergency departments objectives for managing, 498 homelessness during, 466 impact on availability of medications, 502 leveraging of observation units in disasters, 483 Mount Sinai Hospital system and, 482-487 New York University (NYU) Langone Health system and, observation units and, 101 observation units as hot zones, 488 positive PCR through the AED, 510 program reviews and, 502-505 public health emergency due to the, 29 reduction in emergency department visits, 377 responses from national and local agencies, 497 Stafford Act emergency declaration for, 494-495 training team members to manage, 498-501 US domestic response to, 494 CPT private payer observation codes, 523 cranial vault, 252 creatinine, 259 crisis standards of care, 477 critical access hospitals deliverables, 84-85 emergency departments, 79-84 scope of, 84 critical care, 202, 487, 488, 523 observation and, 518

physician's fees and, 50 CroFab® anti-venom, 747, 751 cross coverage, 6, 8 cryoprecipitate, 284 indication for, 284 CT, 160, 192, 222, 308, 309, 314, 837 for appendicitis, 343 for evaluation of gastrointestinal bleeding, 308 scans, 314 ureterolithiasis and, 322-323 CURB-65 score, 182, 609, 803 Current Procedural Terminology (CPT), 25, 517, 521 CY 2016 OPPS final rule, 15 cyclic adenosine monophosphate, cyclobenzaprine, 365 cyclooxygenase inhibitor, 223 cystitis, acute, 330 dabigatran (Pradaxa®), 193 data elements, 61 data set, for individual patients, 66 D-dimer testing, 160 decompensated comorbid conditions, treatment of, 177 decreased hospital admissions, pediatric observation medicine and, 383 deep vein thrombosis (DVT), 191, 298 benefits of the ED OU, 195-197 criteria for observation, 720 diagnosis of, 192 exclusion of, 635 management of, 194 medications for, 202 order set, 720 outpatient treatment, 194 signs and symptoms of, 191 suspected, 118 dehydration, 317, 381 due to gastroenteritis or vomiting, 319 management of, 303 pathophysiology of, 317-318 principles of evaluation and management of, 318 role of observation medicine in managing, 318-319 delirium, 428 analgesia and, 365 and dementia, 430 assessments, 408 decreased, 453 delirium-dementia overlap syndrome, 409 screening for, 399, 411 vs. mild cognitive impairment, deliverables, 84, 85

costs, observation medicine, 27-29



## Index

dementia, 429, 430 Dengue admission to the the ED OU, 633 discharge advice, 188 pre-admission checklist, 633 denials illing or coding issues, 563 medical necessitymedical necessity, 565-566 denials, from health care plan, 563 depression, 429 design, of the observation units, 10-11, 50-51 desmopressin (DDAVP), 285 diabetes diabetic ketoacidosis, 257, 261, 269, 418 new-onset, 257, 260 observation unit outcome and, 265-266 risk factor for transient ischemic attack, 225 type 2, 259, 260 type I, 260, 263 Diabetes Control and Complications Trial, 263 diabetic ketoacidosis (DKA), 257, 261, 269, 418 diagnoses in observation units, 380 diagnosis rate ACS missed, 113 missed, 36, 113-114, 304-305 reduced missed, 33, 59 diagnosis-related group (DRG) system, 558, 589, 590 hospitalization and, 102 IPPS, 25 payments, 12, 571 diagnostic certainty, lack of, 600-601 diagnostic evaluation echocardiography, 145 patient education and social needs assessment, 145 diagnostic imaging chest radiography, 141 electrocardiogram, 141 lung ultrasound and, 142 diagnostic testing, 49, 319, 571, 663 effect on care plan, 607 elective, 471 observation and, 306 pediatric patients and, 378 systematic, 347 urinary tract infections, 329 diagnostic tools, 40, 205, 308-309 Diamond-Forrester score, 162 diet, age appropriate, 871 diffusion-weighted imaging (DWI) MRI, 221, 242

direct oral anticoagulants (DOACs), 193-194, 210, 225, 728, See also oral anticoagulants drugs and dosing, 193 pharmacology and bleeding risk with, 213 use of, 151 direct pulmonary angiography, diagnostic evaluation of pulmonary embolism, 204 director, job description for, 89 disasters, 472-473 community disaster plans, 478 disaster plans, 471, 477, 478 hospital and inter-hospital surge during, 471-472 infectious, 471 observation units during, 471 responses to, 506 disposition, 359 from observation, 667 of pneumonia patients, 184 patients with UTIs from emergency departments, 330 Disproportionate Share Hospital (DSH) adjustment, 25 disseminated intravascular coagulopathy (DIC), 284 Dix-Hallpike maneuver, 245 dizziness, 240, See also vertigo after observation unit stay, 250 causes of, 241, 249-250 classification of, 240, 241 history, 240-241 physical examination and, 241-244 DNR-CCA ("do not resuscitate" -"comfort care arrest", 404, 424 dobutamine, 163 documentation. See also nurses: nursing intake documentation 2023 CPT, 516 evaluation and management, 605-606 for the observation unit, 62 hospital observation and, 521 nursing, 53, 54 observation medical record documentation, 604 doxylamine-pyridoxamine, use in pregnancy, 340 droperidol, 787 Drug Abuse Treatment Act (2000), dual antiplatelet therapy (DAPT), 224 ischemic strokes and, 224 Duke Treadmill Score, 162, 164 dyspnea, 141, 142, 191, 202, 278, 287 Anthonisen criteria and, 176

dysrhythmias, 159

ear, anatomy of, 243 East Texas, 76 geography, 76 echocardiography, 145, 158 economical service, 37 edoxaban (Savaysa®), 193 education programs, 74 EINSTEIN-DVT trials, 193 EINSTEIN-PE trials, 193 elder abuse/neglect protocols, 404 - 405elderly patients care and screening of, 417 ED OUs and care of, 419 negative consequences of hospitalization of the, 407 electrocardiogram (ECG), 135, 162, 177,604 12-lead, 158 heart failure and, 141 serial, 137 stress, 164 electrocardiographic monitoring, 159 electrolyte abnormalities, 268 admission to observation unit and, 275 calcium, 270 hypercalcemia, 271-272 hypermagnesemia, 273 hypernatremia, 274 hyperphosphatemia, 275 hypocalcemia, 271 hypokalemia, 268, 269 hypomagnesemia, 272, 273 hyponatremia, 273-274 hypophosphatemia, 274 magnesium, 272 phosphate, 274 potassium, 268 sodium, 273 electrolyte abnormalities, adult order sets and, 794 electronic health records (EHRs), 615 observation notes with length of stay, 609 electronic medical records (EMRs), 131 system, 611 electrophysiology study, 159 elevated blood urea nitrogen, 259 emergency centre observation wards (ECOWs), 629-630 emergency department visits acute abdominal pains causing, emergency department observation units (ED OUs), 15, 42, 152, 390, See also simple

observation



Index

care, 356 case management in, 418 cholecystitis management of, 351 disposition from, 352, 357 documentation and hospice care, 424 efficiency of, 489 elderly patients in, 419 hospitalists, 419 inclusion/exclusion criteria, 351 management, 253-254 physical therapy in, 417-418 sample inclusion/exclusion criteria, 357 sample traumatic conditions for care in, 356 social work in, 418 transitions to hospice care protocols, 424 trauma treatment in, 343 use of during COVID-19 pandemic, 481-482 utilization and social medicine, 465 utilization management and, 418-419 emergency departments barriers to hospice care from the, 424 care for critically ill patients in, 422 COVID-19 pandemic, 481-482 creation of functional physical, 32 exclusion criteria for observation in, 732 improvement in efficiency of, 384 in Saudi Arabia, 641-642 leadership in, 42-43 management of COPD in, 177 managment of CAP in, 181, 183 metrics of, 64 observation care guidelines and, 599 observation units financials, 82 observation units in, 15-16, 283 patient admissions and, 623 rate of returns to the, 383 staffing of, 42 statistics and visits to the, 377 statistics on observation units in, statistics on visits are by older adults, 415-416 suggested workup/treatment in, 729 emergency medical services (EMS), 234 **Emergency Medical Treatment and** Labor Act (EMTALA), 477 emergency medicine alcohol use disorder in the, 451 importance of observation units

in South Africa, 629-630 role of the geriatric observation unit (GOU) in, 397-398 emergency medicine practice POCUS and, 119 Emergency Medicine Clinics of North America on Observation Medicine, 32 **Emergency Medicine Practice** Research Network, 427 emergency medicine residents, 91 **Emergency Medicine Residents** Association, 95 emergency medicine services in the United Kingdom, 637 emergency psychiatric assessment, treatment and healing (EmPATH) unit, 436 emergency use authorization and vaccination, COVID-19 pandemic and, 505-506 emicizumab, 285 emphysema, 176 surgical, 187 enoxaparin/warfarin, 193 enteric flora, 327 epilepsy, 159, 237, 271, See also seizures juvenile myoclonic, 235 rolandic, 235 statistics on, 234 Epley maneuver, 245, 248 equipment, in observation units, equivalent occlusive myocardial infarction (MI) patterns, 137 European Association of Urology (EAU), 324 European Society of Cardiology (ESC), 145, 149, 158, 162 guidelines, 204 European Society of Cardiology Risk Stratification of Pulmonary Embolism, 204 evaluation and management documentation, 605-606 Evaluation of Guidelines in Syncope Study (EGSYS), 155 evidence-based medicine guidelines, 542 evidence-based protocols elder abuse/neglect, 404-405 fragility fracture, 403 frailty, 400 transitions to hospice care, 403-404, 424 exclusion (absolute) criteria, new mass observation protocol, 727 exclusion (relative) criteria, new mass observation protocol, 728-729

executive dashboards, 615 exercise stress test, 162-163 graded exercise testing, 158-159 exogenous magnesium, 273 EXPRESS trial, 220 extended diagnostic treatment unit (EDTU) admission for Dengue, 633 apical pneumothorax, 740 Dengue and, 633 Dengue discharge advice, 633 facility observation reimbursement, 525-526 facility payment, for observation services, 595, 596 factor IX deficiency, 285 factor VIII deficiency, 284, 285 factor Xa inhibitor, 193-194 falls, 409 FAST (focused assessment with sonography in traum) exam, the, 120-122, 832 learning points of, 123 FASTPASS process, 347 criteria checklist for, 347 criteria for direct observation unit placement, 351 opioids, 231 FDA X-waiver, 449 febrile neutropenia observation protocol, 291 febrile seizures. See seizures Federal Emergency Management Agency (FEMA), 494, 497 Federal Food, Drug, and Cosmetic Act (FFDCA), 495 Federal rule-making process calendar, 587 Fee-for-Service (FFS) Medicare error rate, 20 fibrin degradation, 203 fibronectin deficiency, 284 Fiscal Intermediaries (FIs), 563 flank and groin pain, physical examination for, 322 flank pain, 77, 303 differential diagnosis for, 323 flumazenil, 764-766, 797-798 focused cardiac POCUS, 128 syncope assessment and, 127 Food and Drug Administration (FDA), 445 food insecurity, 467 four-hour rule, 637 fragility fracture protocol inclusion, 403 frailty/geriatric protocol, 400

full code, 404, 424

exclusion criteria, 137



## Index

gabapentin, 453 gallstones, 348, 350, 352 gallstone-related disease, 349 gallstone-related disease, laboratory and ultrasound for, 350 gastric acid proton pump inhibitors, 869 gastroenteritis, 51, 303, 317, 381, 558, 635 admission rate due to, 382 dehydration due to, 319 diarrhea related to, 318 gastroenteritis, 667 gastrointestinal bleeding care of patient with, 315 hospitalization and, 313 gastrointestinal drugs, 869 Geneva Score, Revised, 203 geography, East Texas, 76 geriatric care unit (GCU) Cleveland Clinic, 411 creating a, 407-410 Geriatric Emergency Department Accreditation (GEDA) Program, 407 GEDA accreditation, 408 Geriatric Emergency Nursing Education (GENE), 407 geriatric observation unit (GOU) developing a, 398-399 equipping the, 400 financial considerations for developing a, 399 focused, 397-398 fragility fracture, 403 frailty/geriatric protocols, 400 patient selection and strategies for improved utilization of the, 398-399 protocols for, 400 role of in emergency medicine, 397-398 staffing the, 399-400 transitions of care/hospice protocols, 403-404 geriatric quality improvement program, 399 Glasgow Coma Scale (GCS), 358, 739 Global Assessment of Functioning scores, 436 Global Initiative for Chronic Obstructive Lung Disease (GOLD), 176 glucocorticoids pharyngitis/peritonsilar abscess medication, 868 gluconeogenesis, 263 glycemic thresholds, 264 glycogenolysis, 263

and observation, 587, 588 graded exercise testing, 158-159 guideline criteria definition and development, 599-600 inpatient level of care for, 608 guideline-directed medical therapy, 143 H1N1 pandemic, 474 headache order set, 784-786 headache pain. See headaches headaches, 231, See also migraines assessment of a patient with, 229 causes of, 228 diagnostic evaluation, 229 medications for, 851-854 observation unit management of, 229 patient selection, 229 pharmacologic management of, 230 - 231specific treatment of, 230 statistics about, 228 treatment/interventions for, 231 with a shunt order set, 787 Health Care and Education Reconciliation Act, 102 Health Effectiveness Data and Information Set (HEDIS) measure, 533 "plan all-cause readmissions" measure, 533 health information management (HIM) department, 524 Health Insurance Portability and Accountability Act (HIPPA), 660 Health Professions Council of South Africa, 629 Healthcare Common Procedure Coding System (HCPCS) code, 521 healthcare delivery, total cost of, 463 Healthcare Financial Management Association (HFMA), 520 Healthcare Power of Attorney (HCPOA), 403, 424 healthcare system, 108, 277, 427, 463, 465, 490, 492, 565, 575, 629, 678, 682 aims for, 529 in Singapore, 635 in the US, 141 private, 629 significant financial burden on the US, 149

healthcare utilization

heart failure

acute, 141

hospital readmissions and, 106

government, regulatory structure

medications for, 775 statistics about, 141 heliox, for severe asthma, 173 hematuria, 323 hematuria order set, 787 hemoglobin and hematocrit (H&H), 337hemoglobin synthesis, abnormal, 277 hemophilia, 284 with inhibitors, 285 hemophilia A (factor VIII deficiency), 285 hemophilia B (factor IX deficiency), 2.85 hemothorax, 187 hepatic mass protocol definitions of, 186, 731 inclusion and exclusion criteria for emergency department observation/outpatient work-up, 732 recommended work-up/ treatment for, 732-733 suggested disposition/referral, 732 hepatobiliary iminodiacetic acid (HIDA) scan, 351 Hierarchical Condition Category cardiac risk score tool, 116 high-risk older adults, 408, 410, 411 observation unit for, 410 HINTS (head impulse-nystagmustest of skew) testing, 242 HIV-positive patients, 237 Hokusai-VTE study, 193 home medications, 29 homelessness, 466 homozygous individuals, 277 hospice care, 403-404, 422 barriers in the emergency department, 424 ED OU documentation for, 424 eligibility for, 422-424 sample diagnosis and qualifying conditions, 423 hospital admission rates, dehydration and, 317 Hospital Emergency Incident Command System, 497 Hospital Payment Monitoring Program (HPMP), 20, 558 hospital readmissions, 102 30-day rate, 103 30-day rate as a metric, 103 access to care and, 106 community factors and, 106 demographic variables for, 106 factors leading to, 104-105 factors to reduce, 103, 108 hospital factors and, 106-107

government grants, 439



Index

individual factors resulting in, 106 international perspective on, 103 potential solutions, 107 rate of 30 day preventable, 108 rates, 105 recommendations to reduce, 103 report to Congress on, 103 socioeconomic factors and, 106 Hospital Readmissions Reduction Program (HRRP), 102, 596-597 hospital short-stay policy issues (MedPAC Report), 29 hospital site of service, 36 hospital stay, Medicare and Medicaid-dependent patients, 399 hospital variables, 107 hospital-based psychiatric observation units, 437 hospitalists, 419 observation medicine and, 86-87 observation unit, 73 hospitalizations. See also hospital readmissions factors associated with subsequent, 182 without admission, 27 hospitals clinical performance of, 575-576 hospital administrators, 490, 568, 570-571, 575, 580 problems facing, 11 Hounsfield units, 322 Hubei Province, China, 494 hybrid units, 6, 11, 385, 390 hydrocephalus cerebrospinal fluid diversion treatment of, 252 hyperbilirubinemia, 384 hypercalcemia, 271-272 management in the observation unit, 272 hypercoagulability screen, 195 hyperemesis gravidarum, 339, 341 management of, 340 patient selection for the observation unit, 339 treatment of, 340 hyperglycemia clinical presentation, 257-258 fluid replacement and, 259 in the emergency department, 257 management in the observation unit, 258-261 patient selection, 258 protocol, 635 hyperkalemia, 269-270

management in the observation unit, 270 hyperlipidemia, 273 risk factor for transient ischemic attack, 225 hypermagnesemia, 273 hypernatremia, 274 hyperosmolar hyperglycemic state (HHS), 257, 495, 587 hyperparathyroidism, 271 hyperphosphatemia, 275 treatment, 275 hyperproteinemia, 273 hypertension risk factor for transient ischemic attack, 183 hypocalcemia, 271 calcium electrolyte replacement, 818-823 management in the observation unit, 271 hypoglycemia, 263 complications of, 261 glycemic thresholds, 264 managment of in the observation unit, 264-265 pathophysiology of, 263-264 patient selection, 264 response in diabetic patients, 264 hypoglycemia-associated autonomic failure, 264 hypokalemia, 268, 269 management in the observation unit, 269 potassium electrolyte replacement, 773-774 hypomagnesemia, 272, 273 management in the observation unit, 273 hyponatremia, 273-274 treatment, 274 hypophosphatemia, 274-275 observation unit and, 261 treatment, 274 hypovolemia, 274 treatment, 274 ICD-10-CM (Clinical Modification), diagnosis codes, 25 Identification of Seniors at Risk (ISAR), 398, 408 idiopathic intracranial hypertension. See headaches history of present, 430, 605, 666 Medicare coverage for treatment of, 22 medication observation and, 28, 31 terminal, 422

imaging techniques, for cardiac stress induction, 163, 165 Incident Command System (ICS)/ National Incident Management System (NIMS), 473 inclusion criteria, 136 indicators outcome, 65 process, 65 rate-based, 65 sentinel event, 65 types of, 64-65 infectious disasters, 471 Infectious Diseases Society of America (IDSA) guidelines, 803 influenza, 179 of 1917-1918, 490 pandemic, 473 pediatric medicine and, 390 inhaled medications inhalers, 848 nebulized, 848 inhaled medications/inhalers, pneumonia/acute bronchitis, inhalers, for asthma treatment, 869 inherited factor deficiencies, 284-286 initial fluid repletion, 259 inpatient admission, 606-608 threshold for, 114-115 to observation, 24-25, 540-543 inpatient admission documentation checklist, 17 inpatient claims, 16-17 inpatient criteria changing inpatient, 24 failing to meet, 97 inpatient hospital stays, 26, 152, 776 short, 590 inpatient pharmacy charges, 28 inpatient hospital insurance, Medicare Part A, 590-591 Inpatient Prospective Payment System (IPPS), 25, 81 regulation (2014), 21 under Medicare Part A, outpatient care, 527 insulin infusion, 260 insulin therapy, 259 intake. See nurses: nursing intake documentation intake/initial assessment items, 54 Integrated Outpatient Code Editor (I/OCE), 525 intensive care units (ICUs), 378 admission, 104, 685 dedicated observation units and,



International Consensus Group on

## Index

Upper Gastrointestinal Bleeding, 308 International Statistical Classification of Diseases (ICD), 25 internet-only manuals (IOM), 588 interpersonal violence, 466 high-risk criteria for patients, 466 InterQual criteria, 22, 544 interventional radiology procedures, 859 intracranial hypertension, 252 intravenous furosemide protocol, 775-779 intravenous pyelography, 323 intravenous unfractionated heparin (UFH) therapy, 206 ipratropium bromide, 173 treatment for COPD, 179 ischemic heart disease evaluation, 162 ischemic strokes, 222 anticoagulations for, 224 surgical management of, 225 ticlopidine, 224 job action sheets, 506 Joint Commission of Healthcare Organizations, 60 Kaiser system, 73 ketamine, 787 effects and side effects, 365 for severe asthma, 173 increase use of, 432 kidney stones, 321, See also renal stones criteria for emergency department management, guidance about care for, 324 kidney/ureter/bladder (KUB) radiography, 323 laboratory tests for, 322–323 medical management of, 323-324 NSAID therapy for, 324 pathophysiology of, 321-322 risks factors for development of, 321 ultrasound for, 323 kidney/ureter/bladder (KUB) radiography, 323 King Abdulaziz Medical City (KAMC), Riyadh, 642 King Abdullah Specialized Children Hospital (KASCH), Riyadh,

laboratory tests, 821-873 labrynthitis, 245 laxatives, 870 leadership, 36 development of, 31 executive, 575-576 learning objectives medical students, 94 meeting, 94-95 legal next of kin (LNOK), 403, 424 length of stay (LOS), 7 in the pediatric observation unit, 384 long, 62-63 PEPPER reports and, 20 prolonged, 104 reductions in, 5 report of, 616-617 revenue and, 78 short, 63-64 simple observation and, 16 time in observation units, 686 local coverage determinations (LCDs), 22, 25, 556 locus ceruleus, 444 long-term care facilities, community planning for, Longitudinal care management template, 532 Longitudinal Standards for Effective Patient's Transitions of Care, low back pain admission, 544-545 lower gastrointestinal bleeding (LGIB), 313 acute, 313 clinical approach to managing, 315 colonoscopy and management of, 314 discussion about, 313-315 management of in the observation unit, 315 patient selection and criteria and, 313 risk prediction evidence in, 313 statistics on in the USA, 313 low-molecular-weight heparin (LMWH), 206 lung ultrasound acute heart failure and, 142 congestive heart failure and, 123-126 MADFOCS mnemonic, 430 magnesium, 272

King Faisal Specialist Hospital &

Research Center

(KFSH&RC), 642

kit contents, 741

depletion of, 272, 273 magnetic resonance angiography (MRA), 164, 192, 221 transient ischemic attack and, 222 major depression, 428 major disaster or emergency, declaration of, 494-495 malignancy, 103, 183, 203, 228 chronic pain of, 366 hypercalcemia and, 271-273 lifetime risks of, 378 primary, 730 primary types of bone, 730 suspected bladder, 729 suspected hepatic, 732 suspected pancreatic, 733 suspected renal, 736 Marfan's syndrome, 185, 188 marijuana, use by pregnant women, 340 McBurney's point, 343 Medicaid carve-out states and reimbursement for psychiatric observation, 438 reimbursements for psychiatric observation under, 438 medical and psychiatric illness, coexistence of, 429, 430 Medical Benefit Policy Manual, 559 medical care/special needs shelter, 477-478 medical conditions hospital readmission rates for, 102 with behavioral symptoms, 430 medical director source of data for observation units, 613-614 medical education, 93 observation units, 392 medical illnesses simulating psychiatric disease, 429 medical necessity, 22-23, 115, 555-556 definition of, 22, 565 denials, 565-566 determination for care, 22, 113, 556 determining a, 22 justifying, 513 observation care and, 559-561 screening tools, 22 transition of care and, 529 medical necessity provider appeals, Medical Reserve Corps (MRC), 477 medical staff, conflict management among, 576-577 medical students learning objectives, 94 purpose of training, 93

King Abdullah Specialized Children

Hospital, Riyadh, 643



Index

methicillin-resistant Staphylococcus

training and education, 93 medically complex patients evaluating, 411 in observation units, 407-410 Medicare. See also Recovery Audit Contractor (RAC) billing and payment requirements, 42 Claims Processing Manual, 520 formation of, 555 inpatient prospective reimbursement system, 26 litigation challenging the rules, 28 medical necessity screening tools and, 22 observation reimbursement under, 437 observation rules, 520-521 payment and observation status, 97-98 payment for inpatient admissions, 26 severity-adjusted DRG (MS-DRG) coding, 19 terminal illness and, 422 visits for acute chest pain, 162 Medicare Administrative Contractors (MACs), 15, 16-17, 558-559, 563, 589 Medicare Advantage health plan enrolees and MOON, 17 enrollees, 17, 548, 593 Medicare beneficiaries, 14, 27, 28, 81, 399, 520, 528, 546, 547, 589, 590 hospital readmission and, 102 hospitalizations and, 571 in observation status, 579 lawsuit asgainst US Department of Health and Human Services, 594 MOON and, 17 observation hours and, 14 out-of-pocket expenses, 558, 571 SNF coverage for, 29 traditional, 594 Medicare Benefit Policy Manual outpatient observation services, Medicare comprehensive APCs, 28 Medicare contractors and jurisdictions, 587, 589 Medicare coverage, 25, 26, 556, 558 for the SNF charges, 594 guidance documents, 557 hospice care insurance benefit, 422 medical necessity and, 22-23 Medicare Evidence Development and Coverage Advisory Committee proceedings, 557 Medicare Fee-for-Service (FFS) program, 17, 26 Medicare Outpatient Observation Notice (MOON), 17, 548, 579, 593 Medicare Part A (the hospital billing part), 25, 28, 399, 527, 571, 587, 591, 592 and Part B coverage, 590 deductible, 28, 571 deductible and observation status, 28-29 deductible and Part B, 591 inpatient admission, 28 inpatient hospital insurance, 590-591 IPPS and, 25 section 1814(a) of the Social Security Act, 608 SNF, 590 Medicare Part B (outpatient services billing part), 29, 399, 528, 571, 572, 590, 597 coverage, 25 outpatient medical insurance, 28, 591-592 Medicare Payment Advisory Commission data from, 14 report, 14 Report to the Congress, 29 Medicare payments, 518 rules (2014), 15 medication assisted treatment, for opioid use disorder, 446-449 medication for alcohol use disorder (MAUD), 452 medication reconciliation process, 532 medication-assisted treatment (MAT), 443 patient selection/exclusion criteria, 445 patient selection/inclusion criteria for, 445 medications for asthma, 173, 765 for headaches, 851-854 sickle cell disease, 281 Meniere's disease, 246 menometrorrhagia, 337 menorrhagia, 337 menstrual cycle, 337 blood clotting during, mental health coverage, private insurance for, 438 merit-based incentive payment groups, 533

metabolic stone tests, 322

methadone, 449

aureus (MRSA) infections, 297 MRSA/pseudomonas, risk factors for, 183 methylprednisolone, 340 metoclopramide, 340 metrics, 63 acuity, 64 complaints, 64 emergency department, 64 long length of stay, 62-63 quality improvement and, 59 short length of stay, 63-64 using readmission rate as, 103 metrorrhagia, 337 migraines, 228, 230 migraine headaches, 787 mild alcohol withdrawal pathway, 452-453 Milliman Care Guidelines (MCG)™, 22, 540, 544 Mini-Mental State Examination, 416, 430 Ministry of National Guards Health Affairs (MNGHA), 642 miscommunication and misunderstanding, transitional care team and, 532 missed diagnosis rate, 304-305 appendicitis, 304 reducing, 33, 56, 59 threshold for observation and, 36 vs. acute conary syndrome, 113 modifiers, 518 Modular Emergency Medical System (MEMS), 473 Montreal Cognitive Assessment, 416 Morise score, 162 Mount Sinai Hospital system, 482, 483 MRI, 837-858 naltrexone, 454 National Ambulatory Medical Care Survey, 348 National Center for Health Statistics, 25 National Committee for Quality Assurance (NCQA), 533 National Correct Coding Initiative (NCCI), 557 National Coverage Determinations (NCDs), 22, 25, 556-557 National Disaster Medical System (NDMS) teams, 477 National Government Services, 559

National Health Interview Survey,

458



## Index

National Heart, Lung, and Blood Institute (NHLBI), 278 National Hospital Ambulatory Medical Care Survey (NHAMCS) data from, 14 National Incident Management System (NIMS), 497 National Institute for Health and Care Excellence, 192 National Poison Data System annual report, 369 National Quality Forum (NQF), 102, 530 National Quality Strategy, 529 National Response Framework, 473 nausea and vomiting, 349 and vomiting in pregnancy, 339, and vomiting with migraines, 230 and vomiting with pyelonephritis, 328 controlling with marijuana, 340 ED OU management, 254 hypertension and, 254 intractable, 323, 324, 328 kidney stones and, 321 medication, 351 shunt failure and, 253 ureteral stones and, 81 vitamin B for reducing vomiting and, 340 vomiting and, 330 vomiting with abdominal pain, 691 nebulized medications, 869 neurological problems, common, 234 neuropathic pain, analgesics for, New England Journal of Medicine, new mass observation protocol, 727 exclusion (absolute) criteria, 727 exclusion (relative) criteria, 728 - 729New York State, COVID-19 case, New York University (NYU) Langone Health System, 482 new-onset diabetics, 257, 260, See also diabetes nicotine replacement therapy, 458 (NRT) products, 459 noncardioembolic ischemic stroke, treatment recommendations for, 225 noncardiogenic pulmonary edema, 260 noncomplex observation, 99 noncontrast CT brain imaging, 221

noninvasive positive pressure ventilation (NIPPV), 179 nonpregnant patients, vaginal bleeding mortality and morbidity rate in, 337 nonsteroidal anti-inflammatory drugs (NSAIDs), 520 acute back pain and, 365 for kidney stones, 324 medications, 281 prescriptions for, 231 nonsurgical extended duration therapeutic services, 196, 230, 315, 325, 359, 364, 748 nonvariceal upper gastrointestinal bleeding management, 309-310 nonvariceal upper gastrointestinal hemorrhage, 311 North American crotalid snake (pit viper), 751 Notice of Observation Treatment and Implication for Care Eligibility (NOTICE) Act, 548, 572, 579, 593 NSAIDs. See nonsteroidal antiinflammatory drugs (NSAIDs) N-terminal prohormone BNP (NTproBNP), 142 nuclear myocardial perfusion imaging, 166 nurse manager(s), 659, 669 of the observation unit, 53, 658, 659, 668, 669, 673-674 nurse practitioner education/training, 89 scope of practice, 89 nurse to patient ratio, 7 in observation units, 570 nursing intake documentation, 53, 54 responsibilities of, 681 nursing interventions, 773 nursing leadership, 42 nursing staff, 44 years of service and, 8 nystagmus evaluation, 242, 244 ObamaCare, 102 observation, 7 charges for, 521-524 Condition Code 44 and, 608-609 critical care reported with, 518 definition of, 21-22 disposition from, 667 executive dashboards, 615 initial anticoagulation options in, inpatient admission and, 606-608 level of care and, 36

length of stay report, 616-617 prolonged services with, 516-517 role of, 305-306 simple, 97 technical jargon and acronyms, 587 threshold for, 113-114 vs. admission, 602-603 vs. inpatient care, 540-543 what it is, 15-16 observation care, 537-538 definition of, 599 goals of, 39 issues with choosing, 538-539 medical necessity and, 559-561 physicians and, 568-570 reasons behind increased, 567-568 stakeholder analysis and, 568 strategic business analysis of, 568-572 SWOT analysis, 568 vs. inpatient care, 543-544 when necessary, 600-601 observation criteria, 601–602 observation medical record documentation, 604 observation medicine, 489 background of, 99 caring for complex patients, 101 challenges in Singapore, 633, 634 children's hospitals, 391, 392 controversy about, 27-29 curriculum, 91 dehydration management and, 318-319 developing financial viability of, 32 - 33differences between pediatric and adult, 380 emergency medicine and, 6 future of, 620 hospital site of service, 36 importance of, 59 in the community setting, 73 leadership in, 623 medical students/fellows education and, 93 origins of in Singapore, 633 pediatric, 390 potential solutions, 107-108 principles of, 36 resources and materials, 92 role of, 488-489 role of in health system, 635 role of in pandemic management, 490 Saudi Arabia, 642 telehealth and, 131 the concept of, 31 types of, 15



Index

unique features of in Singapore, 634-635 observation protocol for vaso-occlusive episodes, 280 observation reimbursement, 520-524 observation services APC payment history, 596 complex, 73 compliance oversight for, 526 economical service and, 37 facility payment for, 595, 596 Medicare Part B and, 597 observation reimbursement for, 520-521 payment and, 97-98 observation status, 15 changes in, 24-25 changing, 24 definition of, 5 in postoperative patients, 16 observation unit database, 60-61 observation units. See also psychiatric observation units, emergency departments additional staffing hours in, 49-50 aditional staff in, 10 administration of, 53 administrative staff of, 10 advance practice providers in the, at the University of Texas, Athens emergency department, 77 benchmarks for the, 11 benefits of, 11-13, 12 busiest time in, 8 care coordinator (case manager), 681 census, 51-52, 613 charge nurse in the, 658-659 clinical criteria in pediatric, common considerations for patients in, 99-100 common diagnoses in, 380 criteria for pneumonia patients, cross coverage in, 8 database for the, 661-662 dedicated, 97 design and setup of, 50-51 design for pandemics, 490 design of, 10-11 development of best practice in, 32 disposition of patients placed in, 145, 663-664 diversified admission diagnoses,

entry criteria for patients with acute heart failure, 143 establishing successful, 39-41 evaluation of patients in, 137 evolution of staff in, 32 exclusion criteria for the, 100, 137, 143 financial overview of, 77, 78 follow-up plan for high-risk adults, 410-411 for at-risk older adults, 407-410 future of medicine in, 385 general documentation requirements, 513 guideline criteria, 599-600, 615 history of, 379 hospitalist, 73 hybrid, 381, 385 importance of location of, 48-49 in an emergency setting, 142 inclusion and exclusion criteria for pneumonia patients, 183 inclusion criteria, 136 inclusion criteria for, 100 international and national perspectives on, 382 length of stay in, 7 length of stay in a pediatric, 384 location of, 7 management of, 183-184, 391 management of chest pains in, 139 management of COPD in, 177-179 markers of efficiency, 611-613 medical education in, 392 meetings of, 65 metrics of, 11 noncancer and cancer metrics in, nurse manager of the, 53 nurses responsibilities, 681 open and closed units, 6 operational efficiency and flexibility of, 487 patient criteria for placement in, 678 patient log, 66 patient registration for the, 681 patients evaluation in, 137 pediatric, 379, 384-385 physician management and, 616 physician responsibilities for the, 681, 683-685 reassign staff from, 52-53 research opportunities in, 394 setting up staffing for, 49-50 size of the, 11 social medicine and, 464 staffing model, 46 staffing the, 8-9, 52, 391 structural indicators and, 64

time in, 686 treatment of asthma in the, 172 types of, 5-6, 40, 97-98 types of indicators for, 64-65 University of Texas, Athens emergency department, 78 users satisfaction with, 384 utilization, 613 utilization review of, 391–392 virtual observation and extended care, 101 observation usage rate, inpatient admission and, 114-115 observation visits, 567 data about, 14 short-stay, 572 observation vs. inpatient, deciding on, 550 obstructive coronary artery disease, 138 obstructive lung disease, 179 occupational therapy, 417 Office of the Inspector General (OIG) report, 28, 568 Office of Inspector General's annual work plan, 557-558 office/outpatient visit codes, 25 older adults 359, See also elderly patients fragility fracture protocols and, 403 hospital readmissions rate and, 106 observation unit for high risk, 410 observation units and suggestions for care of, 400 pain management and, 365 role of the geriatric observation unit and, 397-398 statistics for in the USA, 415 treatment in ED OUs, 359 oligomenorrhea, 337 opiate use disorder. See opioid use disorder opioid use disorder, 443, 465 discussion of, 445 management in the emergency department, 449 medication assisted treatment, 446-449 non-opioid management of withdrawal, 445 non-opioid treatment, 446 opioid withdrawal symptoms, pathophysiology of, 443-445 primary goal of, 449 opioids, 231, 373-374 opioid analgesics and pain management, 363 opioid antagonist treatment, 445,

449, 454

during a disaster, 471



## Index

opioids (cont.) opioid overdose, 443, 444, 445, 465 opioid receptor system, 454 oral anticoagulation, 210 organizational culture, 624 orthostatic evaluation, 158 osmotic demyelination syndrome, 274 outcome indicators, 65 outpatient medical insurance, Medicare Part B, 591-592 outpatient observation services Medicare Benefit Policy Manual, 17, 21 **Outpatient Prospective Payment** System (OPPS), 81, 520, 526, 595, 615 with APCs, 33 outpatient services, 615 continuing care in, 37 intensive managerial review of, 37 outpatient setting, 36, 39, 98, 194, 202, 206, 212, 213, 390, 445, 592 continuing care in, 37 COVID-19 pandemic and, 197 direct oral anticoagulants and, 207 transition to, 145 women with pelvic inflammatory disease treated in, 334 pain assessment of, 363 criteria for observation of patients with, 366 epidemiology of, 363 treatment of, 367 pain management, 363 acute low back pain, 365 chronic pain, 366 chronic pain of malignancy, 366 in special populations, 365 medications for, 363-365 opioid medications and their pharmacokinetic properties, recommendations for observation unit protocols, 366-367 painful complaints. See pain palliative performance scale, 423-424 pancreatic mass protocol, 733 exclusion criteria for ED OU, 733 inclusion criteria for ED OU/ outpatient work-up, 733 recommended work-up/ treatment, 733-734 suggested disposition/referral,

pandemic influenza, 473 pandemic management observation medicine and, 490 observation unit management, 490 planning and, 473-475 paradoxical central nervous system acidosis, 260 patent foramen ovale, 225 patient care and hospital system outcomes, 436-437 evaluation of patient and, 666-667 patient log, 66 patient safety, 9, 11, 56, 59, 95, 103, 117, 530, 559, 590, 625, 637, 757, 776 patient satisfaction, 8, 9, 11, 72, 84, 97, 150, 152, 171, 174, 277, 278, 306, 344, 384, 390, 436, 567, 571, 643 patient management, 84, 260, 490, 579,675 in observation units, 549-550 Patient Outcomes Research Team (PORT score), 182, 734 patient populations, 16, 70, 100, 225, 392, 568, 576 high risk, 237 Patient Protection and Affordable Care Act (PPACA), 102 patient selection acute pulmonary embolism and, 206 exclusion, 157 headache management and, 229 hyperglycemia and, 258 hypoglycemia and, 264 inclusion, 157 lower gastrointestinal bleeding and, 313 seizures and, 236-237 shunt malfunction in cerebrospinal fluid, 253 skin and soft tissue infections and, 298 warfarin use and, 213-214 patients, 571-572 adult vs. pediatric, 381 common considerations for observation status, 99-100 continuing care of in observation status, 660-661 criteria for observation unit placement, 678 education and social needs assessment, 145 evaluation and management of, exclusion criteria for observation

units, 100

experience metrics, 576-577 factors leading to hospital readmissions, 104-105 inappropriate labelling of, 16 inclusion criteria for observation units, 100 location of in observation units, 48-49 observation unit evaluation of, 137 physician documenttion on, 666-667 pneumonia, 183, 184 unique observation, 101 with psychiatric complaints in the emergency departments, 427 payers, 525, 572 Payment policy for inpatient readmissions, report to Congress, 103 pediatric children's hospital, Australia, 381 pediatric health information system, 390 pediatric medications order set, 861 pediatric medicine, 390-394 pediatric observation medicine, 385 advantages of, 382-384 differences between adult observation medicine and, 380 principles of, 379-380 pediatric observation units, 381 - 382types and functions of, 390-394 pediatric order set, 759-823 pediatric patients emergency department visits and, 377 in a pediatric observation unit, 381-382 observation of, 70 pathophysiology, 377-379 pediatric population, 327, 380 in the USA, 378 observation protocols for poison patients, 369 pelvic inflammatory disease (PID) antibiotic treatment for, 335 definition of, 328 diagnosis of, 333-334 management of, 334 medications for, 798 parenteral antibiotic treatment for, 335 patient criteria, 334 presumptive treatment for, 333 specific diagnostic criteria for, 334 specificity of the diagnosis of, 333 pelvic inflammatory disease order set, 797

733



Index

PEPPER reports, 12, 19, 558, 613 contents of, 19 errors in payment and, 20-21 how to access, 20 how to use, 20 target areas of, 21 performance improvement (PI), 661 peripheral vs. central lesions characteristics, 242 personal protective equipment (PPE), 488, 498 pharmacologic agents, 163 contraindications to, 167 pharmacologic cardioversion, 151 pharmacologic management of headaches, 230-231 pharmacologic stress agents, 163-167 comparison of, 164 pharmacologic therapy diuretics, 143 guideline-directed medical therapy, 143 pharmacotherapy, 454 pharyngitis/peritonsilar abscess order set, 799 medications for, 801 philanthropy, 439 phosphate, 274 physical exam, psychiatric patients, 430-431 physical therapy, older patients and, 408, 417-418 physicians, 8-9 physician advisors, 621 functions of, 621-622 opportunities for, 621 role of, 622 physician assistants education/training of, 88 scope of practice of, 88 physician documentation, 17 on patient's background, 666-667 physician medical director, 668, 669, 673, 674, 686 of the observation unit, 53 physicians, 43 as hospitalists, 86-87 home visiting, 411 management, 616 observation care, 568-570 Physicians' responsibilities in disaster response and preparedness, 472 physiologic stress, 162 pitfalls observation management and, tertiary hospitals and, 73 plasma products, 283, 284 cryoprecipitate, 284 fresh frozen plasma (FFP), 284

goals of transfusion, 284 platelets, 283, 286 platelet transfusion, 286 pneumonia. See also community acquired pneumonia cases in Wuhan City, China, disposition/discharge of patients with, 184 inclusion and exclusion criteria for patients with, 183 medications for, 760 patients in an observation unit, 183 patients with, 184 risk factors for, 182 pneumonia/acute bronchitis order set, 801 Pneumonia Severity Index (PSI), 182, 604, 609, 734 pneumothorax/pneumothoraces, 359 aftercare for, 743 apical, 186 diagnosis of, 185 discharge advice, 746 discharge advice and follow up for apical, 188 potential complications of, 186 - 187primary spontaneous, 185-186 primary spontaneous apical pneumothorax workflow, 185-186, 634, 741 rim, 186, 741 small, 185 spontaneous, 185-186 tension, 187 point-of-care ultrasound (POCUS), 119, 126 trauma and, 119-122 poisoned patients, 369-370 benefits of observation unit care for the, 369 in the observation unit, 369 poisoning observation protocols, 369 polymenorrhea, 337 polypharmacy/medication compliance related issues, Portex Seldinger chest drainage kit, post-dural puncture headaches, 785, posterior inferior cerebellar artery ischemia, 249 potassium, 268 elevated levels of, 269-270 low levels of, 268, 269 potassium electrolyte replacement,

773-774

Prediction of Alcohol Withdrawal Severity Scale (PAWSS), 452 pregnant patients/women, 237, 323 factor Xa inhibitors and, 193 marijuana use and, 340 trauma and, 360 ultrasound use in for acute appendicitis in, 343 ureterolithiasis in, 324 PREP Act declaration, 497 Presidential policy directive 8 (PPD-8), 490 Press-Ganey scores, 11, 12 pre-test probabilities/scores, 162, 163 obstructive coronary artery disease, 163 primary headaches, 228 private insurance, for mental health coverage, 438 PRN (as needed) medications, 293, 294 process indicators, 65 Program for Evaluating Payment Patterns Electronic Report (PEPPER). See PEPPER reports prolonged services, with observation, 516-517 Proposition 63 Mental Health Services Act, 439 protocols, 65 provocative stress test, 138 pseudocellulitis, 298-299 psychiatric complaints, 427 psychiatric disease agitated patients and, 432 history of present illness, 430 imaging and medical clearance, 432 medical illnesses simulating, 429 psychiatric emergencies, 435 defined, 428, 430 psychiatric observation, 436-437 improvement of patient care and hospital system outcomes, 436-437 rationale for, 435-436 psychiatric observation units covering the startup costs of, 439 direct support as payor reimbursement, 438 financial benefits of hospitalbased, 437 opportunities for patients in, 440 philanthropic efforts in, 439 private insurance coverage in, 438 reimbursement and sustainability improvements, 437-439 reimbursement opportunities in, 437-438 risk management in, 439-440



## Index

psychiatric observation units (cont.) sustainability of, 439 psychiatric patients, 102, 437, 439-440, 638, 797 acute, 382 boarding in emergency departments, 439 coexistence with medical illnesses, 429, 430 medical clearance of, 427 observational care of, 101 pediatric, 382 physical examination of, 430-431 psychiatric observation of, 436-437 psychiatric observation units and, risks management of, 439-440 routine testing of, 431-432 statistics on, 427 testing of, 432 public health emergency (PHE) Centers for Medicare and Medicaid Services, 495-497 declaration, 505 due to the COVID-19 pandemic, of international concern, 494 section 319, 506 Public Health Service (PHS) Act section 319, 494 pulmonary arterial bed, occlusion of the, 202 pulmonary contusion, 359 pulmonary embolism (PE), 160, 191, 194–195, 738 clinical decision rules on probability of, 202 diagnosis of, 192 diagnosis of acute, 202-204 European Society of Cardiology Risk Stratification of, 204 fatal, 213 length of stay/hospitalization for, 202 low-risk, 192 risk stratification, 204-206 Severity Index and Geneva Risk Score, 205 Pulmonary Embolism Severity Index, 192 pulmonary nodule/mass protocol, 734 exclusion criteria (for observation), 734-735 inclusion criteria, 734 pyelonephritis, 327, 328, 330

Quality Improvement Organization Program for Medicare beneficiaries, 558 Quality Improvement Organizations (QIOs), 15, 16, 20, 27, 558, 589–590, 599 quality improvement, metrics tracking and, 59 Quality Innovation Network (QIN -QIOs), 27 quality of patient care, pediatric observation medicine and, 383 Queen Elizabeth Hospital, 508 Quick Confusion Scale (QCS), 430 radiology studies contrast allergies and, 870 other, 874 plain X-rays, 759 Raja Isteri Pengiran Anak Saleha Appendicitis (RIPASA) score, 346, 346 rapid intense observation units, 99 rapid treatment units (RTUs), 390 for children, 394–395 rate-based indicators, 65 rattlesnake bites, treating patients with, 795 readmissions. See hospital readmission to the observation unit, 383-384 REA-ICU (risk of early admission to ICU), 182 REALM-R (Rapid Estimate of Adult Literacy in Medicine, Revised), 260 recombinant activated factor VIIa (rFVIIa), 285 Recovery Audit Contractor (RAC), 15, 16, 20, 526, 559 Recovery Audit Program, 559 red blood cell transfusions, 283-284 mortality for patients, 283 re-expansion pulmonary edema (RPE), 187 referral centers, emergency physicians and, 74 regional medical coordination centers (MCCs), 472 registered nurses (RNs), 570 registration, as inpatient or outpatient, 521 Relative Value Scale (RVS) Update

Committee (RUC), 32

renal mass protocol, 736-737

academic centers and, 74

research opportunities, 394

training and education of, 91-92

Reli Group, 20

renal colic, 322, 323

resident physicians, 44

Residents and Medical Students (RAMS) Roadmap, 93 resource-based Relative Value Scale process, 517, 518 respiratory interventions, 821 restrictive transfusion strategy, 283 revascularization procedures, 225 rim pneumothoraces, 186 risk management and observation medicine, 58 in healthcare, 56 what it is, 56-57 risk stratification, 115-116, 136 ABCD2 risk stratification for TIA, 115, 115 of pulmonary embolism, 204-206 transient ischemic attack, 219, 220 with clinical scores for appendicitis, 345 Risk stratification Of Syncope in the Emergency department (ROSE) protocols, 155 rivaroxaban (Xarelto®), 193 Robert T. Stafford Disaster Relief and Emergency Assistance Act, 494, 506 Rockall score, 307 history of, 307 routine testing, of psychiatric patients, 431-432 Royal College of Physician's acute medicine guidelines, 117 rural areas, statistics on Americans living in, 76 rural observation medicine, background to, 76 Saudi Arabia, 641 emergency departments, 641-642 observation medicine in, 642 scatter beds, 15 schizophrenia, and other psychoses, 428 Screening, Brief Intervention, and Referral to Treatment (SBIRT), 454 secondary headaches, 228 seizures evaluation of patients with, 235-236 in clinical practice, 238 management of in the observation unit, 237 pathophysiology, 234-235 patient selection for the observation unit, 236-237 patients not recommended for observation, 237 seizure classifications, 235 statistics on, 234



Index

treatment of in the observation unit, 238 treatment/intervention, 238 what it is, 234 Seldinger technique, 187, 634 conventional, 741-743 seniors at risk, 398, 408 identification of, 314 sentinel event indicators, 65 serial electrocardiogram, 137 shift, change of, 659 short inpatient stays, 26 short-stay units (SSUs), 384 short-stay inpatients (SSIPs), 613 shunt failure. See shunt malfunction shunt malfunction, 253, 254, 255 patient selection, 253 shunt order set, headaches with a, 787 sickle cell disease crisis medications, 281 current management of, 278 guidelines for management of, 278 in adults, 277 pathology and clinical presentation of, 277-278 pathway metrics and goals, 280 pitfalls in vaso-occlusive episodes, management of, 281 vaso-occlusive crisis, 577-578 vaso-occlusive episodes in, 281 simple observation target hours for, 16 vs. complex observation, 16 simple pneumothorax, Seldinger technique for, 187 Simplified Pulmonary Embolism Severity Index, 192 Singapore challenges in observation medicine in, 633, 634 COVID-19 pandemic in, 635 guidelines and staffing concepts in observation unit, 633 origins of observation medicine in, 633 RIPASA score, 346 role of observation medicine, 635 unique features of observation medicine in, 634-635 single photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI), 163, 166 size, of the observational unit, 11 skilled nursing care criteria and screening for, 416 exclusion and conversion to, 416-417 sesources, 417

skilled nursing facility (SNF), 25, 29, 97, 106, 399, 422, 537, 572, 593 inpatient stay and, 524 Medicare Part A and, 590 placement in, 410, 411, 415-416, post-acute care, 593-595 qualifying for, 528 skin and soft tissue infections (SSTIs), 297, 300 benefit from observation unit placement, 298 clinical presentation, 297 conditions that mimic, 299 discharge/transfer criteria for patients with, 299-300 exclusion from observation unit placement, 298 failure to respond to 24-48 hours of antibiotic treatment, 299 laboratory evaluation and imaging, 297-298 management of, 299 patient selection criteria for the observation unit, 298 prevention of recurrent, 300 pseudocellulitis, 298-299 small pneumothorax/ pneumothoraces, 185 smoking cessation, 458 observation units and, 460 pharmacotherapy for, 459 using the observation unit for, smoking/smoking disorder interventions, 458, 459 opportunities for preventative care, 458 statistics about, 458 snake bites, 751 social determinants of health (SDOH), 141, 408, 463, 601 social medicine, 466 alcohol use disorder, 466 interpersonal violence, 466 observation units and, 464 opiate use disorder, 465 resources and stakeholders, 464-465 specific protocols in, 465 social needs assessment, 145 social observation medicine, 463-464 Social Security Act (SSA), 495, 504, 506, 595, 608 1965, 555 prohibition of payments, 555 section 1862(a) (1), 556 social work, for elderly patients, 418

Society for Academic Emergency Medicine (SAEM), 32, 93, 458 Society of Cardiovascular Patient Care, 143, 379 Society of Chest Pain Centers, 33, 143, 379 Society of Hospital Medicine, 8 sodium, 273 sodium valproate, 230 soft tissue masses, 737 South Africa emergency medicine in, 629-630 health system, 629 special health care needs (SHCNs), 378 specialized clinics, 220, 411 spontaneous pneumothoraces, 185-186 staff acute care, 37 evolution of, 32 staffing additional, 49-50 advanced practice providers, 43-44 consultants, 45-46 cross coverage of staff in the observation unit, 8 flexible, 7 for daily and hourly census, 52 importance of, 42 leadership and, 42-43 nursing staff, 44 nursing staff ratios, 7-8 primary clinical physicians, 43 resident physicians, 44 support staff, 44-45 staffing model, 42, 43 physician, 43 Stafford Act, 494, 495 declaration assistance types, 495 emergency declaration for COVID-19,494-495 stakeholders, creating buy-in with, 623 standardized order sets, 65 standards of care, 563 state and national disaster plans, 478 status admission to inpatient, 193 changing inpatient, 24 changing patient's, 24 changing to inpatient, 24 critical access hospitals (CAHs), 79 determining correct, 23, 527-528 incorrect patient, 23 inpatient, 80-81 patient status reviews, 16 patient's, 17



## Index

status assignment, 527 status epilepticus, 238 ST elevation myocardial infarction (STEMI), 137 STePs (Short Term Prognosis of Syncope) study, 155 steroids, 868 stimulants, 372-373 Strategic National Stockpile (SNS), 474 strengths, weaknesses, opportunities, and threats (SWOT) analysis, 568 stress agents, pharmacologic, 163-167 stress echocardiogram, 163, 164 stress electrocardiogram, 164 stress testing, 167 contraindications to pharmacologic agents, 167 exercise, 162-163 in acute chest pain, 162, 163 strokes. See also transient ischemic attack (TIA) noncardioembolic ischemic, 224 prevention of, 223-224 structural indicators, 64 subarachnoid hemorrhage (SAH), Substance Abuse and Mental Health Services (SAMHS) census panel, 455 Supplemental Security Income, 438 support staff, 44-45, 488, 530, See also staff ancillary, 490 secretarial, 664 supraventricular arrhythmia, 149 surgical emphysema, 187 surgical subspecialty care, 356 syncope, 155-156 admission for an inpatient workup, 156-157 Canadian Syncope Risk Score, 156 cardiac or neurologic event and, 156 - 157cardiac ultrasound, 126-128 classifications, 156 estimated risk of serious adverse event, 156 exclusion of patient selection and, 157 management of patients, 158 mimic examples, 155 pathophysiology, 156 patient criteria for admission to observation unit, 157 patient selection inclusion, 157 use of observation units in the

Syncope Evaluation in the **Emergency Department** Study (SEEDs), 155 syncope/near-syncope/presycope order set, 284 systemic inflammatory response (SIRS)/sepsis, 318 systemic inflammatory response syndrome (SIRS), 732 Targeted Geriatric Assessment (TaGa), 410 targeted probe and educate (TPE) program, 17 Tax Relief and Health Care Act, 2006, 559 team development, 623 telehealth, 130-131 telemetry monitoring, 159 tension pneumothorax, 187 terminal illness, 422 diagnosis of, 422 Medicare and, 422 tertiary care hospitals, 73 Texas Children's Hospital ED OU admission criteria, 392 therapeutic intensity, 600-601 thoracic trauma, 359 ticlopidine, strokes prevention and, 2.24 tilt-table testing, 159 time in therapeutic range, warfarin, 211 TMF® Health Quality Institute, 20, Tokyo Guidelines for acute cholecystitis, 349-351 2018, 350 traditional approach, failings of, 31 tranexamic acid (TXA), 285 transfusion order set, 810 transfusion-associated circulatory overload (TACO), 287 transient ischemic attack (TIA), 576 cardiac imaging and, 222, 224 computed tomography angiography and, 222 consultation and, 226

definition, 219

226

224

echocardiogram

differential diagnosis for, 221

disposition in observation unit,

recommendations for,

evaluation and, 221

evaluation of (workup), 221

inpatient admission and, 226

discharge from emergency

department, 226

emergency department

follow-up and, 226

magnetic resonance angiography, 222 management of in the emergency department observation setting, 226 observation unit protocol for, 221 other risk factors, 226 risk factor modification<sup>1</sup>, 223 risk factors for, 181 risk stratification, 219, 220 role of observation, 220, 221 transient ischemic attack (TIA) order set, 221-222 transition of care, 529-534, 661 change of shift and, 659 older adults in the observation unit, 407 primary care visit, 410 Transitions of Care Standards, 531, 532 trauma, 355 advanced trauma life support, 356 blunt abdominal, 357, 358 blunt thoracic, 352 cervical radiculopathy, 357 ED OU care, 356 ED OU interventions, 356 hospital resources for, 355 maternal death from, 360 nontrauma centers, 355 patient selection for the ED OU, 358 POCUS in, 119-122 pregnant patients and, 360 surgery, 355 surgical subspecialty care, 356 thoracic trauma, 359 trauma centers, 355 traumatic brain injury, 357 treatment of older adults in the ED OUs, 359 traumatic brain injury, 357, 577 mild, 739 treadmill/stationary bicycle, 162 Triage Risk Screening Tool (TRST), 398, 408 trimethoprim-sulfamethoxazole, 299 triptans, 230, 787, 853 Turkey emergency observation medicine in, 645-647 two-midnight rule, 15, 21, 33-34, 527, 592 benchmark, 608 Code 44, 24 failing to adhere to, 16 history of, 16-17 Medicaid service (CMS) fact sheet on, 527 observation and, 608 type I diabetics, 259, 260, 263 type II diabetics, 263

evaluation of, 160



Index

US Department of Health and Human Services, 25, 494 US Preventive Services Task Force (USPSTF), 458 UB04 hospital claim form, 521 ultrasound, 837 for kidney stones, 323 United Kingdom acute medical units in the, 118 acute medicine in the, 117, 118, 637 emergency medicine services in the, 637 United States Census Bureau, 76, 529 University of Texas System, 76 University of Texas, Athens emergency department, 78 observation care, 77 upper gastrointestinal bleeding, 307, 313 clinical trials, 310-311 emergency department observation and, 307-308 patient criteria, 307 upper gastrointestinal hemorrhage, 307 nonvariceal, 311 ureteral stones, 225, 323, 329 nausea/vomiting and pain, 81 ureterolithiasis CT for, 322-323 diagnosing in pregnancy, 324 emergency care and, 324 urgent dispatch, 411 urinalysis, 254, 259, 303, 328 kidney stones and, 322-323 test for acute appendicitis, 343 urinary tract infections (UTIs), 327 diagnostic testing, 329 disposition from emergency department, 330 management/interventions of patients with, 329-330 pathophysiology and, 327-328 patient selection - exclusions, 329 patient selection - inclusions in emergency department, urine pregnancy testing, 303 urolithiasis (urinary/kidney stones), emergency department and, 323 US Food and Drug Administration (FDA) medications for alcohol use disorder, 454 US National Library of Medicine, Medical Subject Headings, utilization management, 416, 418-419, 527, 529, 544, 657

department, 563 nurse case manager, 527 team, 366 utilization management committees, 613 utilization review process, 115, 580 vaginal bleeding, 337 diagnosis of, 337 guidance on management of, 338 patient management in the observation unit, 337 vaginal bleeding order set, 813 varenicline, FDA black box warning for, 460 vascular imaging, 222 vaso-occlusive crisis (VOC), 577-578 vaso-occlusive episodes (VOEs), 277, 281, See also sickle cell disease adjunctive therapy for, 281 clinical pathway for the evaluation and management of, 278–280 observation protocol for, 280-281 pitfalls in observation management of, 281 treatment with infusion therapy, 278 treatment with oral home medications, 278 venous thromboembolism (VTE). See also deep vein thrombosis (DVT) benefits of the ED OU, 195-197 observation unit inclusion/ exclusion criteria, 198 order set, 720 outcomes of treatment, 199 suspected, 192 treatment of, 192 ventilation-perfusion scintigraphy (V/Q scan) diagnostic evaluation of pulmonary embolism, 204 ventricular hypertrophy, 159 ventricular rate control of the, 150 lower, 150 vertebrobasilar ischemia, 249 benign paroxysmal positional, 241, 245 causes of, 249 complaints of, 241 differential diagnosis of, 244-249 nystagmus evaluation, 242 vestibular causes of, 246 vertigo/dizziness order set, 814 vestibular neuritis, 245

Veterans Health Administration, video capsule enteroscopy, 309 video-assisted thoracoscopic surgery (VATS), 186 virtual acute care unit (VACU), 483 virtual emergency department/tele emergency department, 410-411 virtual observation units, 615 Atrium Health System, 483 vital signs, 871 vitamin B6, for hyperemesis gravidarum, 340 vitamin K intravenous, 212 oral administration of, 212 subcutaneous administration of, 212 - 213vitamin K antagonists (VKAs), 193, 210, 817 vitamin K epoxide reductase, 210, 212 vitamin K oxide reductase, 211 vitamin K reductase, 210, warfarin reversal strategies with, 212 - 213volume depletion, 317 vomiting, 317, 324 dehydration due to, 319 kidney stones and, 321 pelvic inflammatory disease and, 334 renal colic and, 322 von Willebrand Disease (vWD), 285-286 von Willebrand factor (vWF) deficiency, 284 warfarin, 193 excessive anticoagulation and bleeding risk with, 211-212 management of excessive anticoagulation on warfarin, 214 observation care, 214-215 patient selection and observation care, 213-214 pharmacology of, 211 reversal strategies with vitamin K, 212 - 213water, body mass and, 317 Wells score/rule, 192, 203 workflows, 309 World Health Organization (WHO), 454, 494 World Society of Emergency Surgery Guidelines, 345 young children, 70, 861 dehydration and, 318