

A

- Abciximab, 379
- Acenocoumarol, 14
- Activated clotting time, 530-531
 - clinical applications of, 531
- Activated partial thromboplastin time (aPTT), 520
 - argatroban and, 525
 - bivalirudin and, 91
 - coagulation testing and, 520-521
 - direct thrombin inhibitors and, 92, 96, 97, 525-526
 - measurements between point-of-care and central lab, 517
 - transitioning to anti-Xa for heparin management, 638-640
 - unfractionated heparin and, 366-367, 370, 521-524
 - variables in, 514-515
- Activated protein C resistance
 - with factor V-deficient plasma, 556
 - testing, 563
 - treatment considerations, 566
- Activated prothrombin complex concentrates, 166, 202
- Activated thrombin time, 49
- Acute coronary syndrome
 - anticoagulant guidelines for, 371-375
 - anti-factor Xa activity with low molecular weight heparin, 370-371
 - aPTT and anti-factor Xa for unfractionated heparin, 366-367, 370
 - arterial femoral sheath and, 376
 - aspirin therapy in, 377
 - bivalirudin dosing in, 92
 - bivalirudin efficacy and, 385
 - bleeding in, 366, 369
 - diagnostic criteria for, 365
 - direct oral anticoagulants in, 385-386
 - dosing in, 258
 - dual antiplatelet therapy in, 383-384
 - electrocardiographic findings in, 364
 - epidemiology of, 363
 - glycoprotein IIb/IIIa inhibitors in, 379
 - heparin-induced thrombocytopenia, 442-443
 - injectable anticoagulant monitoring in, 376
 - major bleeding risk factors in, 371
 - pathophysiology of, 364
 - P2Y12 inhibitor in, 377
 - risk stratification for NSTEMI in, 366-369
 - signs of, 363, 365
 - symptoms of, 365
 - triple antithrombotic therapy in, 380-383
- Acute liver dysfunction, 19
- Acute spinal cord injury, 303, 304
- Agency for Healthcare Research and Quality, 612, 613
- Aggregation, 507
- Alere, 611
- Alteplase
 - catheter occlusion and, 114
 - deep vein thrombosis and, 112
 - frostbite and, 117
 - intracranial hemorrhage risk with, 122
 - ischemic stroke and, 113
 - mechanical circulatory support devices and, 116
 - peripheral arterial occlusion and, 114
 - pleural effusion/empyema and, 115
 - prosthetic heart valve thrombosis and, 116
 - pulmonary embolism and, 111

- ultrasound-facilitated, catheter directed, low-dose thrombolytics and, 117, 118-119
- See also Recombinant tissue plasminogen activator
- American College of Cardiology, 4, 587
 - evidence grades of, 7
- American College of Chest Physicians (ACCP), 4
 - anticoagulation recommended duration by, 340
 - atrial fibrillation stroke risk stratification by, 351
 - evidence grades of, 6
 - grading recommendations of, 450
 - guidelines of, 5, 271
 - platelet count monitoring by, 61, 427
 - venous thrombolytic embolism bleeding and, 340
- American College of Clinical Pharmacy, 610
- American College of Obstetrics and Gynecology, 450
- American Heart Association (AHA), 4, 587
 - evidence grades by, 7
 - grading recommendations of, 405
 - guidelines of, 5
- American Journal of Health-System Pharmacy*, 609
- American Pharmacists Association, Billing Boot Camp, 613
- American Society of Clinical Oncology, treatment guidelines of, 271
- American Society of Health-System Pharmacists (ASHP), 608, 610, 611, 613
 - guidelines, 5
- American Society of Hematology, 610
- Aminocaproic acid, 174, 180
- Amiodarone, cardioversion, 356
- Andexanet alfa, 139, 178-179, 200, 206, 209, 539
- Androgenic agents, 619
- Annals of Internal Medicine*, 609
- Annals of Pharmacotherapy*, 609
- Antiandrogens, 619
- Anticardiolipin antibodies, 554, 557
- Anticoagulant monitoring
 - in hospital setting, 582
 - injectable, 376
- Anticoagulants. See specific anticoagulants
- Anticoagulation Centers of Excellence, 577
- Anticoagulation Forum, 5, 577, 610, 611, 612
 - Boot Camp, 588
- Anticoagulation management service (AMS)
 - clinical endpoints for, 599-600
 - disease state protocols/guidelines for, 580-581
 - direct oral anticoagulants and, 593-595
 - electronic media care delivery in, 592
 - hospital setting standards of practice for, 581-583
 - in-clinic vs. telephonic care delivery in, 592
 - inpatient care structure in, 577-578
 - inpatient service hierarchy in, 579
 - inpatient standards of practice in, 578-580
 - INR in range and, 599
 - INR variability and, 598-599
 - lab vs point-of-care INR testing in, 591
 - nonadherence management in, 594
 - outpatient panel-based workload in, 589-590
 - outpatient structure in, 589
 - outpatient team-based workload in, 590
 - outpatient therapy and, 588-589
 - patient education and, 584, 586
 - patient self-testing, self-management and, 591-592
 - patient-centered care, shared decision making and, 587
 - pharmacist run vs. nurse run in, 590-591
 - provider training, competency in, 587, 588
 - quality improvement in, 584, 600-601
 - quality metrics for, 598
 - regulatory standards for, 583
 - standards of practice for, 595-597
 - time-in-therapeutic range in, 597-598
 - transitions of care and, 587
- Anticoagulation resources, 588
- Anticoagulation therapy
 - ACCP recommended duration for, 340
 - nutrition and, 623-624
 - restarting, 218-219

- risk factors to determine length of, 341-342
- Anti-factor Xa antagonists
 - potential antidotes for, 207-208
 - chromogenic process for activity in, 528
- Antifibrinolytic agents, 180
- Antineoplastic agents, 619-620
- Antiphospholipid antibody syndrome, 561
 - testing for, 564
 - treatment considerations in, 567-568
- Antiplatelet agents
 - mechanical circulatory support, 409
 - regional anesthesia and, 238-239
- Antipsychotic agents, 621
- Antithrombin deficiencies, 553, 563
 - treatment considerations in, 566
- Antithrombin tests, natural anticoagulant deficiencies, 556
- Anti- β_2 -GPI antibodies, 554, 557
- APC resistance testing, 553
- Apixaban, 48, 203
 - andexanet alfa antidote for, 179
 - body weights studied and, 267
 - commercial availability of, 131
 - dosing of, 154, 155
 - drug interactions with, 140
 - in elderly patients, 266, 267
 - fetus and, 451
 - hepatic dysfunction and, 264
 - heparin-induced thrombocytopenia and, 436
 - lactation and, 456
 - measuring, reversing, 206
 - medically ill and, 456
 - nutrition and, 623-624
 - orthopedic surgery and, 300-301, 302
 - patient and agent selection for, 149, 150, 151
 - patient counseling for, 158
 - in pediatrics, 496
 - periprocedural management of, 232
 - pharmacodynamic properties of, 233
 - pharmacokinetics of, 268, 269
 - pharmacology of, 132-133
 - phase III trials of, 135-138, 144, 146-148, 339
 - renal impairment and, 253, 308
 - reversal of, 209
 - as secondary acute coronary syndrome prevention, 385-386
 - stroke prophylaxis dosing for, 257
 - venous thrombolytic embolism and, 255, 256
 - warfarin, other direct oral anticoagulants comparison for, 134-139
- Argatroban
 - acute coronary syndromes, 442-443
 - aPTT reagents for response to, 525
 - dosing/administration of, 86-88
 - elimination of, 203, 204
 - fetus and, 451
 - hemodialysis and, 90
 - heparin-induced thrombocytopenia and, 91, 435, 437
 - hepatic dysfunction and, 89, 264, 265
 - influence on selected assays by, 98
 - lactation and, 456
 - mechanical circulatory support and, 409
 - open heart surgical procedures and, 99
 - pediatric heparin-induced thrombocytopenia and, 444
 - in pediatric patients, 101, 492-493
 - pharmacokinetics of, 86
 - pregnancy, lactation and, 102
 - renal impairment and, 89, 253
 - side effects, precautions, contraindications for, 103
- Aripazine, 179
- Arizona Pharmacy Association Anticoagulation Certificate Program, 588
- Aromatase inhibitors, 619
- Arterial femoral sheath management, 376
- Aspirin (ASA), 306, 341, 349
 - for acute coronary syndrome, 377
 - bioprosthetic valves and, 402
 - fetus and, 451
 - lactation and, 456
 - in mechanical valve replacement, 399
 - in orthopedic surgery, 299
 - patient, agent selection and, 150
 - pediatric venous thrombolytic embolism prophylaxis and, 484
 - secondary acute coronary syndrome prevention with, 385-386
 - thrombolytic agents and, 123-127

Aspirin plus clopidogrel, 123-127, 349

Atrial fibrillation, 347

- antithrombotic therapy and, 349
- bridging and, 245
- catheter ablation and, 359
- classification of, 348
- echocardiography and, 354
- morbidity, mortality and, 347
- nonpharmacologic prevention and, 357-359
- nonvalvular stroke risk, treatment guidelines, 349, 351-355
- optimal warfarin intensity in, 355
- pregnancy and, 470
- rate vs. rhythm control and, 348
- stroke prevention algorithm for, 350

B

Bariatric surgery, 269

- venous thrombolytic embolism treatment and, 295, 298

Baseline assessment, in hospital setting, 581

Betrixaban, 48, 203

- in APEX trial, 642
- medically ill and, 295
- in pediatrics, 496

Bileaflet mechanical heart valve, 394, 396, 397

Biodegradable polymer stent, 383

Biolimus stent, 383

Bioresorbable stent, 383

Bivalirudin, 85-86

- acute coronary syndrome dosing of, 92, 258-259, 442
- administration/dosing of, 87-88
- aPTT range for heparin-induced thrombocytopenia, 91
- arterial femoral sheath management and, 376
- cardiac surgery and, 443
- fetus and, 452
- hemodialysis and, 90
- hepatic dysfunction and, 89, 264
- heparin-induced thrombocytopenia and, 91, 435, 437
- influence on selected assays by, 98
- lactation and, 456
- mechanical circulatory support and, 409
- NSTE acute coronary syndrome guidelines for, 375
- open heart surgical procedures and, 99
- PCI and, 385
- pediatric heparin-induced thrombocytopenia and, 444
- in pediatric patients, 101, 493, 494
- pharmacokinetics of, 86
- pregnancy, lactation and, 102
- renal impairment and, 89, 253
- reversal of, 203, 204
- side effects, precautions, contraindications of, 103
- STEM1 primary PCI guidelines for, 372
- thrombolytic agents and, 123-127

Bland-Altman plots, 515, 516

Bleeding

- definitions for, 369, 629-630
- interventions for, 415
- mechanical circulatory support devices and, 415
- risk factors for, 188
- risk scoring systems for, 31-32
- thrombosis risk and, 190

Blood, 609

Bridge to decision, 406

Bridge to recovery, 406

Bridge to transplant, 406

Bridge to transplant candidacy, 406

Bridging therapy, 223

- atrial fibrillation and, 245
- between parenteral anticoagulants, 240, 241-242
- clinical trials summary for, 229-231
- direct oral anticoagulants and, 228
- low molecular weight heparin and, 226-228
- mechanical/bioprosthetic heart valves and, 243-244
- parenteral anticoagulation to oral warfarin and, 240
- venous thrombolytic embolism and, 245-246
- VKA to parenteral therapy transition in, 226
- warfarin to parenteral therapy and, 226

Burns, 303, 305

C

- Caged-ball mechanical heart valve, 394, 395, 397
- Cancer, 270
 Khorana Scale and, 272
 low molecular weight heparin dosing for, 273-274
 -related thromboembolism, 272-273
 treatment guidelines for, 271
- Cardiac surgery
 atrial fibrillation ablation, unfractionated heparin in, 45
 heparin-induced thrombocytopenia and, 443
- Cardiopulmonary bypass surgery, heparin-induced thrombocytopenia evaluation and, 430
- Cardiovascular diseases, pregnancy and, 470
- Cardioversion
 electrical vs. pharmacologic, 356
 stroke prevention considerations in, 355-357
 treatment algorithm for, 356
- Catheter ablation, 45, 359-360
- Centers for Medicare & Medicaid Services, 606, 607
- Central nervous system hemorrhage types, 631
- CHADS₂ score, 351-353, 360
- CHA₂DS₂VASc score, 353-354, 360
- Chemotherapy-associated venous thrombotic embolism, 272
- CHEST, 609
- Chromogenic factor X assay, 532
- Chromogenic testing, 507
- Ciraparantag, 539
- Circulation, 609
- Citrate anticoagulation, 627-628
- Clinical trials, 4-8, 9. *See also specific drug phase III trials*
- Clopidogrel
 in acute coronary syndrome, 377-378
 fetus and, 452
 lactation and, 456
 in secondary ACS prevention, 385-386
- Clopidogrel plus aspirin, 123-129, 349
- ClotCare, 5, 610
- Clotting endpoint, 507
- Coagulation assays, direct Xa agents, 538-539, 543
- Coagulation cascade, 617
- Coagulation factor VIIa. *See* Recombinant activated factor VIIa
- Coagulation testing
 activated clotting time and, 530-531
 aPTT, 520-521
 aPTT and parenteral direct thrombin inhibitor monitoring, 525-526
 aPTT and unfractionated heparin, 521-524
 assay calibration in, 509
 available assay tests for, 508
 chromogenic factor X assay for, 532
 dabigatran for, 537
 direct oral anticoagulants and, 536-542
 dRVVT (dilute Russell's Viper Venom Time) and, 534
 ecarin-based testing and, 532-533
 heparin and anti-Xa level in, 527
 implementing new, 509-511
 laboratory data evaluation for, 515-517
 methods of, 507-508
 prothrombin time, INR and, 514-515, 517-520
 sample collection for, 513
 specificity in, 512
 thrombin generation curve in, 534-535
 thrombin time, dilute thrombin time in, 533
 thromboelastography and, 544-546
 variables affecting, 511-515
- College of American Pathologists, 521, 610
- Compression devices, 306
- Compression ultrasound, 470
- Computed tomographic scans, 470
 pulmonary angiography, 326
- Continuous renal replacement therapy, heparin adjustments in, 56
- Contraception, thrombophilia and, 565
- Contrast agents, 621
- Coronary artery, cross section of, 364
- Coronary artery bypass graft (CABG)
 unfractionated heparin in graft, 45
 venous thrombotic embolism treatment in, 295, 299

- Critical care, 303, 305
- Critically ill patients
 - direct thrombin inhibitors and, 91, 92
 - low molecular weight heparin and, 82
 - venous thrombotic embolism prophylaxis in, 303-306
- Cultural competence resources, 612

D

- Dabigatran, 203
 - body weights studied for, 267
 - coagulation assays and, 537
 - commercial availability of, 131
 - compared to direct oral anticoagulants, 134-139
 - compared to warfarin, 134-139, 401
 - concentration information for, 537-538
 - drug interactions with, 141
 - elderly patients and, 266, 267
 - estimating amount of, 542
 - fetus and, 452
 - hepatic dysfunction and, 264
 - heparin-induced thrombocytopenia and, 435
 - lactation and, 456
 - measuring, reversing, 205
 - nutrition and, 623-624
 - orthopedic surgery and, 300-301, 302
 - patient, agent selection and, 149-152
 - patient counseling for, 158
 - in pediatrics, 496
 - periprocedural management of, 232
 - pharmacodynamic properties of, 233
 - pharmacokinetics of, 268
 - pharmacology of, 132-133
 - phase III trials of, 135-138, 143, 145, 147-148, 339
 - prolonged thrombin time and ecarin clotting time with, 204
 - renal impairment and, 253, 308
 - reversal of, 207-208, 209
 - stroke prophylaxis dosing of, 257
 - testing for presence of, 542, 543
 - thrombin time, dilute thrombin time for, 533
 - venous thrombotic embolism and, 255, 256
- Dabigatran etexilate, 86
- Dalteparin, 65
 - ACCP/ACOG regimens for, 460-461
 - acute coronary syndromes dosing for, 258-259
 - acute spinal cord injury and, 304
 - bariatric surgery and, 308
 - body weights studied with, 267
 - burns and, 305
 - in critical care, 305
 - FDA-approved indications, dosages for, 68-69
 - fetus and, 452
 - in general surgery, 296
 - hemodialysis circuit and, 260, 263
 - lactation and, 456
 - low molecular weight heparin and, 201
 - in orthopedic surgery, 300-301
 - in pediatrics, 490
 - pharmacokinetics of, 67, 268, 269
 - pharmacology of, 67
 - renal impairment and, 80-81, 253, 254, 307
 - strengths, formulations available, 71
 - trauma and, 304
 - venous thrombotic embolism and, 255, 256, 294, 337, 465
- Danaparoid, 443, 444
 - fetus and, 452
 - heparin-induced thrombocytopenia and, 435, 438-439
 - lactation and, 457
 - pediatric heparin-induced thrombocytopenia and, 444
- DAPT, patient and agent selection, 150
- D-Dimer testing, 319-320
- Decompensated heart failure, 21
- Deep vein thrombosis (DVT), 313
 - diagnosis of, 319
 - diagnostic algorithms for, 322-324
 - diagnostic testing for, 319-320
 - embolus crossover in, 318
 - pathophysiology of, 314
 - signs/symptoms of, 319
 - thrombotic agents and adjunctive therapy for, 125
- Deep veins of lower leg, 315
- Delivery, anticoagulants and, 474

- Desirudin, 85
- Destination therapy, 406
- Det Norske Veritas Healthcare, Inc., 606
- Dialysis, unfractionated heparin in, 45, 46, 47
- Dilute Russell's Viper Venom Time (dRVVT), 534
- Direct factor Xa inhibitors, 203
- Direct oral anticoagulants, 131-132
 - anti-IIa, 540
 - anti-Xa, 540
 - anticoagulation management service and, 593-594
 - discharge checklist for, 157
 - dosing of, 153-155
 - drug interactions with, 139-142
 - in elderly patients, 265-266
 - fetus and, 453
 - in home treatment, 337
 - impact on other coagulation assays by, 541
 - interactions altering exposure to, 142
 - mechanical valve replacement and, 401
 - mechanism of action for, 133
 - monitoring of, 536
 - nonadherence and, 594-595
 - in obesity, 308
 - overdose of, 207
 - patient, agent selection for, 149-152
 - patient counseling for, 156, 157-158
 - pharmacokinetics/pharmacodynamics of, 134
 - pharmacology of, 132
 - phase III trials of, 134-138, 339
 - preconception planning and, 459
 - pregnancy and, 308
 - regional anesthesia and, 238-239
 - reversal of, 203-207, 209, 539
 - safety, efficacy of, 142-149
 - as stroke prophylaxis, 257-258, 262
 - testing algorithms for, 541-542
 - thrombophilia laboratory reactions with, 559-560
 - transitioning and, 228, 232, 234-237
 - in transitions of care, 156
 - venous thrombolytic embolism and, 262, 337-338
- Direct thrombin inhibitors, 85
 - adjustment scale for, 94
 - administration, dosing of, 86-90
 - antidote for, 177-178
 - aPTT and, 92, 96, 97, 525-526
 - in lactation, 102
 - measuring, reversing parenteral, 203, 204
 - for mechanical circulatory devices, 98-101
 - monitoring considerations for, 95
 - in open heart surgery, 99
 - in pediatrics, 101
 - pharmacokinetics/pharmacodynamics of, 86
 - pharmacology of, 85
 - in pregnancy, 102
 - reversal plan for, 202-203
 - side effects, precautions, contraindications for, 103
 - in special populations, 91-93, 98
 - titrating infusion with bleeding concerns and, 96
 - transitioning and, 97-98, 234
- Direct Xa agents, 538-539
 - estimating amount of, 543
 - testing for presence of, 543
- Disseminated intravascular coagulation, 632
- Drug eluting stents, 383
- Drug incompatibilities, with heparin, 58
- Drug-induced thromboembolic diseases, agents implicated in, 618-622
- Duplex ultrasonography, 320
-
- ## E
- Ecarin
 - based testing, 532-533
 - chromogenic assay, 533
- Echocardiography, 354
- Edoxaban, 48, 203
 - commercial availability of, 131
 - compared to warfarin, other direct oral anticoagulants, 134-139
 - dosing of, 154-155
 - drug interactions with, 141
 - in elderly patients, 266, 267
 - fetus and, 452
 - hepatic dysfunction and, 264
 - heparin-induced thrombocytopenia and, 436

- lactation and, 457
 - measuring, reversing, 206
 - patient, agent selection and, 150, 151
 - patient counseling for, 158
 - in pediatrics, 496
 - periprocedural management of, 232
 - pharmacodynamic properties of, 233
 - pharmacokinetics of, 268, 269
 - pharmacology of, 132-133
 - phase III trials for, 135-138, 144, 146-148, 339
 - renal impairment and, 253
 - stroke prophylaxis dosing for, 257, 258
 - in venous thrombolytic embolism, 255, 256
 - Elderly patients, 265-267
 - low molecular weight heparin and fondaparinux in, 81
 - unfractionated heparin and, 60
 - Electronic media care delivery, 592
 - Enoxaparin, 65
 - ACCP/ACOG regimens for, 460-461
 - in acute coronary syndrome, 258-259, 370-371, 442
 - in acute spinal cord injury, 304
 - arterial femoral sheath management and, 376
 - in bariatric surgery, 308
 - bleeding rates with, 71
 - body weights studied for, 267
 - burns and, 305
 - in elderly patients, 267
 - FDA-approved indications, dosages for, 68-69
 - fetus and, 452
 - in general surgery, 296
 - hemodialysis circuit and, 260-261, 263
 - lactation and, 457
 - low molecular weight heparin and, 201
 - low-weight patients and, 70
 - multiple-dose vials for, 70
 - NSTE acute coronary syndrome guidelines for, 374
 - in orthopedic surgery, 300-301, 302
 - in pediatrics, 488-489, 490
 - pharmacokinetics of, 67, 268, 269
 - pharmacology of, 67
 - renal impairment dosing, monitoring of, 80-81, 253, 254, 307
 - STEM1 with fibrinolytics guidelines for, 373
 - strengths, formulations available for, 71
 - trauma and, 304
 - venous thrombolytic embolism and, 255-256, 294-295, 336-337, 465
 - Eponesesterol, 443
 - Epoprostenol, 445
 - Eptifibatide, 379
 - Estrogen-containing agents, 619
 - Everolimus stent, 383
 - Evidence grades, 6-7
 - Evidence-based guidelines, 4-11
 - Extracorporeal life support, 57-58
 - Extracorporeal membrane oxygenation, 57-58, 497-498
-
- ## F
- Factor levels elevation, 553
 - Factor V Leiden mutation genetic test, 556
 - Factor VIII test, 556
 - Factor IX test, 556
 - Factor XI test, 556
 - Falling, 219
 - Fetus, anticoagulants and, 449-453
 - Fibrinolytic system development, 499
 - Fibrinolytic therapy, 238-239
 - Follicle-stimulating hormone, 619
 - Fondaparinux, 65, 443-444
 - acute coronary syndromes dosing, 258-259
 - acute thrombosis, 18
 - anti-factor Xa and, 75
 - bleeding rates for, 71
 - body weights studied with, 267
 - in critically ill patients, 303
 - dosing of, 67
 - in elderly patients, 81
 - FDA-approved indications, dosages for, 68-69
 - fetus and, 452
 - fixed-dose unfractionated heparin to, 242
 - flushing and, 39
 - in general surgery, 296
 - in heparin-induced thrombocytopenia, 435, 440

in home treatment, 337
 lactation and, 457
 in low-weight patients, 79
 mechanism of action for, 66
 monitoring parameters for, 75
 morbid obesity and, 78-79
 in neuraxial procedures, 74
 NSTEMI ACS guidelines for, 375
 in oncology patients, 79
 in orthopedic surgery, 300-301
 patient education for, 76-77
 in pediatrics, 78, 491, 492
 pharmacokinetics of, 65-67, 268, 269
 pharmacology of, 65-67
 in pregnancy and pediatrics, 78
 prothrombin complex concentrate and, 175-176
 renal impairment and, 79-81, 253, 308
 reversal of, 199, 202
 route of administration for, 67
 self-injection steps for, 77
 side effects, precautions, contraindications for, 71-72
 STEMI with fibrinolytics guidelines for, 373
 strengths, formulations available for, 71
 sub-Q to IV unfractionated heparin and, 241-242
 syringes, 70
 thrombolytic agents and, 123-127
 transitioning from direct oral anticoagulants to, 237
 in venous thrombolytic embolism, 255, 256, 294, 336
 Food and Drug Administration, guidelines of, 5
 Fresh frozen plasma, 166
 administration considerations for, 170-171
 prothrombin complex concentrate and, 174
 Frostbite, 127

G

Gastrointestinal bleeding, 219
 General surgery, 295-296
 Glycoprotein IIb/IIIa inhibitors, 379
 GRACE risk score, 368

GUSTO bleeding, 369
 Gynecologic surgery, 295, 298

H

Health and Human Services, U.S. Department of, 577
 Health and Medicine Division, 608
 Health literacy resources, 612
 Healthcare Facilities Accreditation Program, 606
 Hematopoietic agents, 619
 Hemodialysis
 circuit dosing considerations, 260-261
 dabigatran removal by, 208
 as reversal agent, 205
 Hemolysis, 415-416
 Hemostatic agents, 618
 Heparin
 acute thrombosis and, 18
 anti-factor Xa and, 527-530
 antiphospholipid considerations for, 568
 assay differences and, 432
 estimating subcutaneous regimen when transitioning from IV, 44
 in hemodialysis, 261
 mechanical circulatory support and, 407
 morbidly obese patients and, 269
 thrombophilia lab reactions and, 559-560
 in venous thrombolytic embolism, 256
 Heparin locks, 38
 Heparin-induced thrombocytopenia (HIT), 72, 308, 423
 in acute coronary syndromes, 442-443
 agents used for, 435-441
 alternative agents in bypass graft surgery, 445
 assays for potential presence of, 431
 in cardiac surgery, 443
 cardiopulmonary bypass surgery and, 430
 development factors for, 426
 direct thrombin inhibitors and, 86-87, 89
 disorders mimicking, 426
 identification of, 423-424

- initial pharmacotherapy management of, 433-434
 - maintaining lines in, 444
 - in pediatrics, 492
 - phases of, 425
 - platelet count monitoring in, 427
 - post probability assessment tool for, 430, 431
 - in pregnancy, 443-444
 - pretest probability scoring for, 428-429, 431
 - related disorders and, 424
 - terminology for, 424
 - when to begin therapy for, 442
- Hepatic impairment, 19
- agents used in, 264
 - Child-Pugh score for, 263
- Homocysteine test, 558
- Hormone replacement therapy, 565
- Hospital Acquired Condition Reduction Program, 607
- Hospital Compare web site, 607
- Hospital Consumer Assessment of Health-care Providers and Systems Survey, 607
- Hospital Inpatient Quality Reporting Program, 607
- Hypercoagulable states. *See* Thrombophilias
- Hyperhomocysteinemia, 555, 558, 569
- Hypothermia, 46

I

- Idarucizumab, 139, 177-178, 205, 207-209, 539
- Immunologic agents, 620-621
- Immunologic testing, 507-508
- Immunomodulation, 445
- Impella, unfractionated heparin in, 46
- Inferior vena cava filters, 291, 294, 334
 - comparisons of, 293
 - placement of, 292, 334-335
 - potential complications with, 335
- Inpatient care delivery
 - standards of practice for, 578
 - structure of, 577-578
- Institute for Healthcare Improvement, 608
- Institute for Safe Medication Practices, 608
- International normalized ratio (INR), 517-518

- anticoagulation management service and, 591, 598-599
 - applications of, 519-520
 - coagulation testing and, 514-515, 517-520
 - diagnostic testing facilities for, 611
 - laboratory data evaluation and, 516
 - measurements between point-of-care and central lab, 516
 - proportion in range, 599
 - prosthetic valves and, 400, 401-402
 - variability in, 598-599
 - Vitamin K and, 211
 - warfarin and, 26, 28-30
- International Society of Thrombosis and Haemostasis, 453-454, 610
- Academy, 588
- Intra vena catheter filter, 305
- Intravenous catheter occlusions, 498-499
- Ischemic stroke
 - anticoagulants and, 625-626
 - thrombolytic agents and adjunctive therapy in, 126

J-K

- Joint Commission, The, 606, 608
 - 03.05.01 goal, 583
 - National Patient Safety Goal for anticoagulation, 3-4
- Journal of Thrombosis and Haemostasis*, 609
- Journal of Thrombosis and Thrombolysis*, 609
- Knee arthroscopy, 299

L

- Labetalol, 333
- Labor, anticoagulants and, 474
- Laboratory data evaluation methods, 515-517
- Laboratory data evaluation
 - aPTT measurements between point-of-care and central lab, 517
 - INR measurements between point-of-care and central lab, 516
- Lactation
 - anticoagulant safety and, 456-458
 - direct thrombin inhibitors in, 102

- Left atrial appendage obliteration, 357-358
 - Lepirudin, 85, 444
 - Low body weight, 267-270
 - Low molecular weight heparin (LMWH) 65
 - acute coronary syndrome and, 370-371
 - acute thrombosis and, 18
 - administration of, 70
 - anti-factor Xa monitoring and, 75-76
 - bridging with, 226-228
 - cancer and, 270, 273-274
 - in critically ill patients, 82, 303, 305
 - dosing of, 67
 - in elderly, 81
 - FDA-approved indications, dosages for, 68-69
 - fetus and, 452
 - fixed dose unfractionated heparin to, 242
 - in home treatment, 337
 - in labor, delivery, 474-475
 - in low-weight patients, 79
 - maternal safety and, 455
 - in mechanical valve anticoagulation bridging, 398
 - mechanism of action in, 66
 - monitoring of, 75, 490-491
 - neuroaxial procedures and, 73-74, 233
 - obesity and, 78-79, 269-270, 308
 - in oncology patients, 79, 81
 - patient education for, 76-77
 - in pediatrics, 484-485, 488-489
 - pharmacology, pharmacokinetics of, 65-67
 - platelet count monitoring and, 61
 - in pediatrics, 78
 - in pregnancy, 78, 308, 459, 465, 470, 472-473
 - protamine and, 199
 - prothrombin complex concentrate and, 175-176
 - regimens for, 460-461
 - regional anesthesia and, 238-239
 - renal dysfunction and, 79
 - reversal of, 73, 200, 201
 - route of administration for, 67
 - self-injection steps for, 77
 - side effects, precautions, contraindications of, 71-72
 - strengths, formulations available for, 71
 - sub-Q to IV unfractionated heparin, 241-242
 - syringes for, 70
 - thrombocytopenia and, 72-73
 - thromboembolism and, 262, 306, 336-337, 465, 472-473
 - thrombolytic agents and, 123-127
 - thrombophilia laboratory reactions and, 559-600
 - transitioning considerations for, 234, 237
 - twice-daily dosing for, 76
 - venous thrombolytic embolism and, 50
 - Low-weight patients
 - direct thrombin inhibitors and, 91
 - low molecular weight heparin and fondaparinux for, 79
 - unfractionated heparin and, 60
 - Lupus anticoagulant, 554, 557
-
- ## M
- Magnetic resonance direct thrombus imaging, 470
 - Maternal safety, 455
 - Maze procedure, 358
 - mdNR, 611
 - Mechanical circulatory support devices
 - anticoagulation by device, 410-412
 - antithrombotic considerations with, 406-407, 413-414
 - bleeding and, 415
 - in cardiac support, 408
 - complications management for, 414-419
 - diagnoses requiring, 405-406
 - direct thrombin inhibitors and, 98-101
 - durable support devices for, 407, 408, 411-412
 - hemolysis and thrombosis with, 415-417
 - indications for, 406-407
 - temporary support devices and, 407, 408, 410-411
 - Mechanical/bioprosthetic heart valves
 - bridging and, 243-244
 - pregnancy and, 468-469
 - Medicare Value-Based Purchasing, 607

Merit-Based Incentive Payment System, 607

Meta-analysis interpretation, 8

Metronidazole, 24

Miscarriage, 475

Missouri Board of Pharmacy, 613

Morisky Medication Adherence Scale, 594

Myocardial infarction

- classification of, 366
- grading during angiography, 118
- step-down therapy for, 385
- universal criteria for, 365

N

National Action Plan for Adverse Drug Event Prevention, 577, 584, 585

National Blood Clot Alliance, 610

National Certification Board for Anticoagulation Providers, 611

National Comprehensive Cancer Network, treatment guidelines, 271

National Quality Forum, 606, 607

Neonates

- heparin considerations in, 486-488
- heparin-induced thrombocytopenia and, 492

Neuraxial anesthesia, 233, 238-239

Neurosurgery, 295, 297

New England Journal of Medicine, 609

New laboratory testing

- determining accuracy, imprecision, reportable range for, 510
- implementing, 509-510
- sensitivity and, 511

Nicardipine, 333

Nitroglycerin, 333

Nonadherence management, 594

North American Society of Thrombosis and Hemostasis, 610

North American Thrombosis Forum, 610

Nutrition, anticoagulation and, 623

O

Obesity, 267-270

- low molecular weight heparin, fondaparinux and, 79
- unfractionated heparin and, 47-48

venous thrombolytic embolism treatment in, 308

Observational studies, 8

Office of Disease Prevention and Health Promotion, 612

Office of Minority Health, 612

Off-label use, 5

Oncology patients, 79, 81

Open heart surgical procedures, 99

Orthopedic surgery, 299-303

P

P2Y12 inhibitor, 377-378

Paclitaxel stent, 383

Parenteral anti-factor Xa, 200-201

Parenteral dosing/infusion guidelines, hospital setting, 582

Paroxysmal embolism, 318

Patient acuity, 10

Patient education, 584, 586

- resources for, 612
- technique-based resources for, 613

Patient self-testing, self-management, 591-592

Patient treatment, 8, 10-11

Patient-centered care, 587

Pediatric patients

- argatroban for, 492-493
- bivalirudin use in, 493
- coagulation factors and, 483
- dalteparin dilution for, 490
- direct thrombin inhibitors and, 101, 492
- enoxaparin dilution for, 488-489, 490
- extracorporeal membrane oxygenation and, 497-498
- fibrinolytic system development in, 499
- fondaparinux and, 79, 491-492
- heparin monitoring in, 487
- heparin-induced thrombocytopenia in, 444, 492
- injections in, 497
- insurance coverage and, 497
- intravenous catheter occlusions and, 498-499
- laboratory test interpretations for, 498
- liver function, development in, 483

- low molecular weight heparin and, 79, 488-491
- neonatal heparin considerations for, 486-488
- nomograms for, 487-488, 491
- oral anticoagulants and, 496
- pharmacokinetic differences by age groups for, 482-483
- thrombosis incidence in, 481-482
- venous thrombolytic embolism treatment in, 483-485
- warfarin considerations for, 493, 494-496
- PEG asparaginase, 273
- Peripheral arterial occlusion, 127
- Periprocedural bridging
 - bleeding risk assessment for, 224, 227
 - direct oral anticoagulants and, 232
 - hemorrhage risk assessment for, 224-226
 - principles of, 223
 - thromboembolic risk assessment for, 224
- Pharmacist Billing in the Ambulatory Clinic Setting, 613
- Pharmacotherapy*, 609
- Phenprocoumon, 14
- Physician Quality Reporting System, 607
- Phytonadione, 174
- Pioneer AF-PCI, 641
- Plasmapheresis, 445
- Platelet
 - aggregation assay, 432
 - count monitoring, 61, 427
 - Factor 4 immunoassays, 432
- Porcine bioprosthetic valve, 396
- Postpartum anticoagulants, 475
- Practice resources, 605, 608
 - articles, 612
 - diagnostic testing facilities for INR home monitoring, 611
 - journals, 609
 - organizations, 610
 - textbooks, 610
 - training programs, credentials, 611
- Prasugrel
 - acute coronary syndrome and, 377-378
 - fetus and, 452
 - lactation and, 457
- Pregnancy
 - anticoagulants during, 449-453
 - arterial event prevention in, 467-469
 - atrial fibrillation in, 470
 - cesarean section considerations in, 466-467
 - direct thrombin inhibitors during, 102
 - grading recommendations for, 450
 - heparin-induced thrombocytopenia in, 445
 - indications for, 450
 - low molecular weight heparin, fondaparinux in, 79
 - maternal safety and, 455
 - mechanical heart valves anticoagulation during, 468-469
 - preconception planning and, 458-459
 - preventing loss and, 473-474
 - thrombophilia, 461, 462
 - venous thrombolytic embolism in, 459-461, 463-465, 470-473
 - warfarin and, 308
- Prosthetic heart valves, 393
 - bioprostheses and, 395-397, 402
 - direct oral anticoagulants and, 401
 - INR adjustments and, 400, 401-402
 - mechanical valve and, 394-396, 398
 - risk factors in, 398
 - thrombosis risk factors in, 394
 - valve position and thrombogenicity, 397-398
- Protamine, 60, 166, 199
 - administration considerations for, 168, 202
 - low molecular weight heparin and, 200, 201
 - risks associated with, 168
- Protamine sulfate, 73
- Protein C deficiencies, 553, 563
 - tests for, 557
 - treatment considerations for, 566
- Protein S deficiencies, 563
 - tests for, 557
 - treatment considerations for, 566
- Prothrombin complex concentrate (PCC), 165, 166
 - administration considerations for, 171, 174
 - combined with other reversal agents, 174-175

- heparin and, 175
 - specific dosing considerations for, 174
 - as reversal agent, 205-207, 213-218
- Prothrombin G20210A mutation genetic test, 553, 556
 - tests for, 563
 - treatment considerations for, 566
- Prothrombin time, 517-518
 - clinical applications of, 519-520
- Provider training, competency, 587, 588
- Psychotropic agents, 621
- PubMed, 5
- Pulmonary embolism, 313
 - diagnosis of, 325, 329, 330
 - diagnostic testing for, 326
 - pathophysiology of, 314
 - pretest probability scoring for, 326, 328
 - right ventricular dysfunction in, 333
 - severity index scoring for, 331-332
 - signs/symptoms of, 325-326
 - thrombolytic agents and adjunctive therapy, 124

Q-R

- Quality improvement, 584, 600-601
- R-acenoumarol, 14
- Readmission Reduction Program, 607
- Recombinant activated factor VIIa (rFVIIa), 165, 167
 - adverse events associated with, 177
 - fondaparinux and, 202
 - prothrombin complex concentrate and, 174
- Recombinant tissue plasminogen activator (rt-PA), 107
 - characteristics of, 108
 - pediatric catheter clearance and, 499
 - STEM1 dosages for, 110
- Regional anesthesia guidelines, 238-239
- Regression analysis, 515
- Regulatory resources, 605
 - agencies and their role, 606-608
 - Joint Commission, 660
- Regulatory standards, 583
- Remote Cardiac Services, 611
- Renal impairment, 251
 - anticoagulant pharmacokinetic changes in, 253
 - low molecular weight heparin, fondaparinux and, 79-81
 - risk factors in, 252-254
 - venous thrombolytic embolism and, 307-308
- Reteplase, 107
 - characteristics of, 108
 - frostbite and, 117
 - intracranial hemorrhage risk and, 122
 - peripheral arterial occlusion and, 114
 - STEM1 dosages for, 110
- Revenue-generation resources, 613
- Reversal plan, 163, 166-167
 - administration considerations for, 168-171, 202
 - anti-factor Xa inhibitor antidotes and, 178
 - antifibrinolytic agents and, 180
 - approaches to, 163-165
 - broad spectrum, 179
 - coagulation factor products, 172-173
 - considerations for, 183-187, 192-193
 - decay patterns and, 186
 - development of, 184
 - development steps for, 189, 191-192
 - for direct oral anticoagulants, 203-207
 - for direct thrombin inhibitors, 177, 202-203
 - end target goal for, 184
 - factors impacting extent, speed of, 198-199
 - during invasive procedures, 188-189
 - measuring, reversing parenteral anti-factor Xa agents with, 199
 - monitoring approach for, 197
 - non-urgent reversal and, 195-196
 - options for, 189-192
 - patient-specific considerations in, 187
 - semi-urgent reversal and, 195
 - survival rates and, 196
 - urgent reversal and, 194
 - for warfarin, 165, 210-216
- Rivaroxaban, 48, 203
 - andexanet alfa antidote and, 179
 - body weights studied with, 267
 - commercial availability of, 131
 - compared to warfarin, other direct oral anticoagulants, 134-139

in critically ill, 295
 dosing of, 153, 155
 drug interactions with, 140
 in elderly patients, 266, 267
 fetus and, 452
 hepatic dysfunction and, 264, 265
 heparin-induced thrombocytopenia and, 436
 lactation and, 457
 measuring, reversing, 206
 orthopedic surgery and, 300-301, 302
 patient, agent selection for, 149, 150, 151
 patient counseling with, 158
 in pediatrics, 496
 periprocedural management of, 232
 pharmacodynamic properties of, 233
 pharmacokinetics of, 268
 pharmacology of, 132-133
 phase III trials for, 135-138, 143, 147-148, 154, 339
 renal impairment and, 253, 308
 secondary ACS prevention with, 385-386
 stroke prophylaxis dosing for, 257
 venous thrombolytic embolism and, 143, 145, 255, 256

Roche, 611
 Royal Pharmaceutical Society, 613
 R-phenprocoumon, 14
 R-warfarin, 14, 23

S

S-acenocoumarol, 14
 Saddle pulmonary embolism, 326, 327
 Selective estrogen-receptor modulators, 619

Serotonin release assay, 432-433
 Shared decision making, 587
 Sirolimus stent, 383
 Special management population, 11
 Special populations, 251

- acute coronary syndromes and, 258-259
- cancer and, 270-273
- hemodialysis and, 260-262
- hepatic impairment and, 263-265

obesity, low body weight considerations for, 267-270
 renal impairment and, 251-254, 261-262
 stroke prophylaxis in atrial fibrillation and, 257-258
 venous thrombolytic embolism and, 255-257

S-phenprocoumon, 14

STEM1

- with fibrinolytics, 373
- primary PCI for, 372
- thrombolytic agents, adjunctive therapy for, 123

Streptokinase, 107

- characteristics of, 108
- in deep vein thrombosis, 112
- intracranial hemorrhage risk with, 122
- in pleural effusion/empyema, 115
- in prosthetic heart valve thrombosis, 116
- in pulmonary embolism, 111
- STEM1 dosage for, 110

Stroke prevention, 147-148, 355-357

Students paired t-test, 515

S-warfarin, 14, 23

Syringes, 70

T

Telephonic care delivery, 592

Tenecteplase (TNK), 107

- characteristics of, 108
- frostbite and, 117
- intracranial hemorrhage risk with, 122
- ischemic stroke and, 113
- pulmonary embolism and, 111
- STEM1 dosages for, 110

Texas Medical Institute of Technology, 608

Thoracic surgery, 295, 298

Thrombin generation curve, 534-535

Thrombocytopenia, 72-73

- drug-related causes of, 634-636
- heparin-induced. *See* Heparin-induced thrombocytopenia
- nondrug causes of, 633

Thromboelastography, 544-546

- TEG and ROTEM interpretation in, 545, 546

- Thromboembolic diseases, drug-induced, 618
- Thrombolytic anticoagulants
- adjunctive therapy strategies for, 122-127
 - bleeding risk with, 121
 - clinical properties of, 108
 - contraindications to, 120
 - indications, dosage, administration of, 108-109
 - intracranial hemorrhage risk with, 122
 - mechanism of action for, 107-108
 - monitoring, 118-119
 - pharmacology, pharmacokinetics of, 107
 - reversal of, 219
 - side effects, precautions, considerations for, 120-121
 - ST segment elevation myocardial infarction and, 109, 121
- Thrombophilia, 549
- antiphospholipid antibody syndrome, treatment for, 561, 567-568
 - categories of, 549-550
 - hormone contraception, hormone replacement therapy and, 565
 - hyperhomocysteinemia considerations in, 569
 - laboratory interactions and, 555-561
 - laboratory tests for, 552-555, 562-565
 - pregnancy and, 461-462, 473-474
 - prevalence, risk for thrombosis and, 551
 - proposed treatment algorithm for, 343
 - testing and, 342, 569
 - treatment, prevention considerations for, 565
- Thrombosis
- algorithm of diagnosis, management of pump for, 419
 - ECMO oxygenator with clot formation and, 418
 - interventions for, 416-419
 - mechanical circulatory support devices and, 416-418
 - pregnancy and, 459-460, 470-471
 - pump in outflow bearing of Heartmate II LVAD, 418
- Thrombosis and Haemostasis*, 609
- Thyroid status, 21
- Ticagrelor
- acute coronary syndrome and, 377-378
 - fetus and, 452
 - lactation and, 458
 - myocardial infarction step down therapy with, 385
- Tilting disk mechanical heart valve, 394, 395
- TIMI
- non-coronary artery bypass graft related bleeding and, 369
 - risk score for NSTEMI acute coronary syndrome, 367
- Tinzaparin, 65
- ACCP/ACOG regimens for, 460-461
 - acute spinal cord injury and, 304
 - body weights studied for, 267
 - fetus and, 452
 - general surgery and, 296
 - lactation and, 458
 - low molecular weight heparin and, 201
 - orthopedic surgery and, 300-301
 - pharmacokinetics of, 268, 269
 - renal impairment and, 253, 307
 - venous thrombolytic embolism and, 294
- Tirofiban, 379, 443, 445
- Tranexamic acid, 180
- Transcatheter aortic valve replacement, 396, 397, 402
- Transesophageal echocardiography, 394
- Transfusion-related reactions, 637
- Transient ischemic attacks, 625-626
- Transitional care, 11
- Transitioning. *See individual drugs*
- Transitions of care, 587
- Trauma, 303, 304
- Travel venous thrombolytic embolism prophylaxis, 306
- Trousseau syndrome, 273-274
-
- ## U
- Unfractionated heparin (UFH)
- ACCP, ACOG regimens for, 460-461
 - acute coronary syndrome and, 366-367, 370, 374
 - acute spinal cord injury and, 303, 304
 - aPTT considerations for, 37, 51-53,

- 521-524
- arterial femoral sheath management and, 376
 - burns and, 305
 - calibrators change for, 37
 - catheter flushing with, 38-39
 - in continuous infusion, 39, 41
 - in critically ill, 303, 305
 - direct oral anticoagulants and, 228
 - dosing considerations for, 39-46, 52-55
 - fetus and, 453
 - general surgery and, 296
 - hemodialysis and, 308
 - indications for, 36
 - in-vitro spiking and response curve, 523
 - laboratory tests for monitoring, 49
 - in labor and delivery, 474-475
 - lactation and, 458
 - locks for selected devices, 38
 - maternal safety and, 455
 - mechanical valve anticoagulation bridging with, 398
 - mechanism of action for, 66
 - neonatal considerations with, 486-488
 - NSTE ACS guidelines for, 374
 - obesity weight considerations and, 47-48
 - orthopedic surgery and, 299
 - PCI and, 385
 - in pediatrics, 485
 - pharmacology of, 35
 - pharmacokinetics/pharmacodynamics of, 36-37
 - platelet count monitoring with, 61
 - pregnancy and, 308, 470, 472
 - protamine and, 199, 201
 - regional anesthesia and, 238-239
 - renal impairment and, 254
 - resistance and, 55-57
 - reversal considerations for, 200
 - side effects, precautions, contraindications for, 58-60, 71
 - special population considerations for, 60-61
 - STEM1 guidelines for, 372-373
 - target anti-factor Xa activity level and, 50
 - therapy initiation with, 38-42
 - thrombolytic agents and, 123-127
 - transitioning considerations for, 44, 48, 234, 236-237, 241-242
 - trauma and, 304
 - venous thrombolytic embolism and, 43-44, 52, 294, 295, 336, 465, 466
 - United States Pharmacopeia, heparin and, 37
 - University of Connecticut, 611
 - School of Pharmacy, 588
 - University of Florida, 611
 - College of Pharmacy, 588
 - University of Southern Indiana, 611
 - certificate program, 588
 - Upper extremity deep vein thrombosis, 317
 - Urokinase, 107
 - catheter occlusion and, 114
 - characteristics of, 108
 - deep vein thrombosis and, 112
 - intracranial hemorrhage risk with, 122
 - peripheral arterial occlusion and, 114
 - prosthetic heart valve thrombosis and, 116
 - pulmonary embolism and, 111
 - STEM1 dosage of, 110
 - Urologic surgery, 295, 298
-
- V**
- Vascular damage, 459
 - Vascular reconstruction, 45
 - Vascular surgery, 295, 297
 - VATS/MAZE procedure, 358
 - Venous anatomy
 - lower extremity, 315, 316
 - upper extremity, 316, 317
 - Venous stasis, 459
 - Venous thrombolytic embolism (VTE), 283
 - anticoagulant therapy and, 335-336
 - bleeding risk stratification for, 340
 - bridging and, 245-246
 - cancer and, 287, 337
 - common areas for, 314
 - compression guide for, 290
 - in critically ill patients, 294-295, 303-306

- direct oral anticoagulants for, 143-146, 337-338
- dosing for, 256
- general surgery and, 296-299
- graduated socks for, 289-290
- guidelines, resources for, 284
- heparin dosing with catheter-directed fibrinolysis, 333-334
- heparins and systemic fibrinolysis, 333
- home treatments for, 337
- inferior vena cava filters and, 291-294, 334
- low molecular weight heparins/
fondaparinux treatment for, 336-337
- nonpharmacological options for, 288
- orthopedic surgery and, 255, 299-303
- overview of, 313
- phase III trials for, 143-144
- prophylaxis for, 288, 306, 307
- quality improvement and, 309
- recurrent, 341, 342
- risks for, 285-286, 319
- special populations and, 307-308
- systemic fibrinolysis treatment and, 331, 333
- unfractionated heparin and, 336
- warfarin for, 338
- Ventilation perfusion lung scan, 326, 327
- Ventilation/perfusion scans, 470
- Vitamin K, 18-19, 165, 167
 - administration considerations for, 168-169
 - adverse effects with parenteral, 170
 - dependent proteins and, 14
 - dispensing of, 170
 - dosage of, 216-217
 - injectable, 30
 - INR value reversal and, 211
 - IV formulation administered orally, 210
 - oral vs. intravenous, 212
 - oral vs. subcutaneous, 212
 - procedure/surgery planned and, 212
 - prothrombin complex concentrate and, 174
 - reversal dose factors for, 210-211
- Vitamin K antagonist
 - bioprosthetic valves and, 402

- mechanical valve and, 398-399
- preconception planning and, 459
- Von Willebrand disease, 409, 415

W

- Warfarin
 - amiodarone and, 356
 - antiphospholipid considerations for, 568
 - atrial fibrillation and, 196, 349
 - bridging and, 26-28
 - catheter ablation and, 359-360
 - coagulation factor decline over time with, 18
 - concentrated clotting factors for reversal of, 217
 - disease state interactions and, 19-21, 23
 - direct oral anticoagulants and, 134-139, 232
 - dosage considerations for, 19, 24-29, 213-215
 - drug-drug interactions with, 21-24
 - fetus and, 453
 - hemodialysis and, 261
 - hemorrhagic risk assessment for, 30-33
 - heparin-induced thrombocytopenia and, 435, 441
 - hepatic dysfunction and, 264
 - INR and, 26, 28-30
 - lactation and, 458
 - maintenance therapy monitoring for, 29
 - management of complications with, 29-30
 - mechanical circulatory support and, 409
 - monotherapy and venous limb gangrene, 426
 - nonadherence and, 594
 - nutrition and, 623-624
 - orthopedic surgery and, 300-301
 - patient, agent selection for, 149, 150, 151, 152
 - in pediatrics, 484-485, 493-496
 - pharmacokinetics, pharmacodynamics of, 13-18
 - pharmacology of, 13-14
 - pregnancy and, 308
 - proteins and half life with, 14, 18

prothrombin complex concentrate and, 174
R and S enantiomers differences, 14
renal impairment and, 254
reversal of, 165, 167, 210-217
tablet color scheme for, 15-16
tablet strengths, colors for, 24
thrombophilia laboratory reactions with, 559-560
transitioning considerations with, 97-98, 226, 228, 235-236
venous thrombolytic embolism and, 294, 338

Warfarin plus aspirin, 349
WATCHMAN device, 357-358
WebCareHealth, 611
Wells Pretest Probability Score, 320-321, 328
World Health Organization, heparin standards, 37

Z

Zotarolimus stent, 383

