Index

A
Accreditation Council for Graduate Medical Education program, 182
Acinetobacter (ACB), 56, 59, 67, 70, 118
Acinetobacter baumannii, 127, 129
  active surveillance, 135
  antimicrobial stewardship, 135
  CIP, 134
  decolonization, 135
  environmental cleaning and disinfection, 134, 135
  epidemiology and microbiology, 133, 134
  HH, 134
  patient cohorting and dedicating staff, 134
  patient-to-patient transmission role, 134
Active screening cultures (ASC), 4, 130
Active surveillance, 298, 300–303
  active methods, 145
  decolonization therapy, 146
  drug-sensitive pathogens, 145
  infection control measures, 145
  MDR pathogens, 145
  microbiologic methods, 146
Active surveillance cultures (ASC), 135
Active surveillance testing (AST), 84, 87–89
Adenosine triphosphate (ATP), 130
Aerosolized hydrogen peroxide (aHP) devices, 56
Agency for Healthcare Research and Quality (AHRQ), 149, 216
AHC. See Animals in healthcare (AHC)
Air contamination, 164–166
  Acinetobacter baumannii, 168, 169
  Clostridium difficile, 167, 168
  gram-negative organisms, 168–170
  gram-positive organisms, 166
  hospital environment, 163
  hospital environment with nosocomial pathogens, 170
  indications, 164
  KPCs, 170
  mode of transmission, 163
  MRSA, 166, 167
  multidrug-resistant organisms, 163
  principles, 163, 164
  Pseudomonas aeruginosa, 169, 170
  sampling methods (see Air sampling methods)
  VRE, 167
Air sampling methods
  active methods, 165, 166
  classification, 165
  description, 164
  passive methods, 165
Airborne isolation, PPE, 286–288
  classification, 285
  clinical protocols, policies, and procedures, 288
  components, 285
  healthcare personnel protection (see Respiratory protection)
  physical space and engineering controls, 285, 286
  regulatory standards, 288–290
  standard precautions, 285
  types, isolation precautions, 285
Airborne precautions, 43
Alcohol-based hand rub (ABHR), 38
Ambulatory care centers (ASCs), 35, 40, 44
Ambulatory care settings, 38
American Society of Health-System Pharmacists (ASHP), 99
Amp-C-mediated β-lactamases, 175
AmpC-Producing Enterobacteriaceae. See Extended-spectrum β-lactamase (ESBL)
Anesthesia work area
  Acinetobacter, 30
  cleaning and disinfection, 33
  controversies, 33
  environmental contamination, 31
  fecal patina, 29
  hand contamination, 30, 32
  hand hygiene, 31, 32
  MRSA and VRE, 29, 30
  operating rooms, 29
  surgical procedure, 29
  surgical site infections and mortality, 32–33
Animal-assisted activities (AAA)
  benefits, 221–224
  definition, 220
  hospital populations, 224
  mitigation, 223, 224
  risks, 223
  training and scrutiny, 229
  visitation programs, 229
Animal-assisted therapy (AAT). See Animal-assisted activities (AAA)
Animals in healthcare (AHC), 220, 224–227, 229, 230
  AAA (see Animal-assisted activities (AAA))
  aquaria and fish tanks, 231
  cats
    benefits/risks, 226
    households, 226
    infectious diseases, 227
    mitigation, 227
    pet ownership and physical health, 227
  classification and recommendations, 220, 221
  controversies, 220, 222, 223
  dogs, transmission route, 219, 220
  infection prevention, 220
  MDT, 230, 231
  medicinal leeches (see Leech therapy)
  pet ownership, 219
  petting zoos, 231
  policies and procedures, 219
Index

308

Animals in healthcare (AHC) (cont.)
public facilities, 219
recommendations, 232
risks, 220
service animals
anecdotal reports and cross-sectional research
designs, 225
benefits, 225
definition, 224
Fair Housing Act, 224
mitigation, 225
risks, 225
systematic evaluation, 232
zoonoses, 231
Antimicrobial fabrics, 60, 61
Antimicrobial prophylaxis (AMP)
administration, 104, 105
agents, 104
benefits, 103
durations, 105
evidence-based use, 103
glycopeptide, 107
principles, 104
protective effect, 106
Antimicrobial surfaces, 60
Antimicrobial textiles, 60
Association for Professionals in Infection Control and
Epidemiology (A), 182
AST. See Active surveillance testing (AST)
Athletics, 281

B
Bacillus cereus, 118
Bacterial isoleucyl-tRNA synthetase, 174
Bacteroides, 153
BactiSTOP®, 123
Bare below the elbows (BBE), 113–115
BBE. See Bare below the elbows (BBE)
Benefits of Universal Glove and Gown (BUGG), 13, 15
Beta-lactam-resistant pathogens, 127
Bifidobacterium, 154
Bile acids, 158
BioCote®, 123
Biological aerosol, 163
Body wash, 97
Bordetella pertussis, 23
BUGG. See Benefits of Universal Glove and Gown (BUGG)

C
C. difficile infection (CDI), 131, 302, 303
Carba-NP test, 149
Carbapenemase enzymes, 128
Carbapenemase-producing Enterobacteriaceae (CRE), 41, 44
Carbapenem-resistant A. baumannii (CRAB), 127, 133, 168
Carbapenem-resistant Enterobacteriaceae (CRE), 5, 6, 127, 278,
297–299
active surveillance, 130
antibiotic stewardship, 131
CIP, 128, 129
decolonization, 131
environmental cleaning and disinfection, 129, 130
epidemiology and microbiology, 128
HH, 128
monitoring of cleaning, 130
patient cohorting and dedicated staff, 129
shared equipment, 130
Carbapenem-resistant Pseudomonas aeruginosa (CRPA), 127
active surveillance, 132, 133
antimicrobial stewardship, 133
CIP, 132
decolonization, 133
environmental cleaning and disinfection, 132
epidemiology and microbiology, 131
HH, 132
patient cohorting and dedicated staff, 132
patient-to-patient transmission, 131–133
Carbapenem, 132, 136
Carbapenem-susceptible A. baumannii (CSAB), 133
Catheter-associated urinary tract infection (CAUTI), 35, 60, 173
CDI. See Clostridium difficile infection (CDI)
Centers for Disease Control and Prevention (CDC), 93
Centers for Medicare and Medicaid Services (CMS)
Hospital Compare data, 109
Hospital Inpatient Quality Reporting Program, 108
incentives and penalties, 110
quality of care, 108
self-reporting, 106
Central line-associated bloodstream infection (CLABSI), 35, 40, 60,
108, 173
Cephalosporins, 136
Certified Registered Nurse Anesthetist (CRNA), 39
Chlorhexidine
cloth bathing, 87
description, 86
indications, 86
mupirocin, 85, 86, 88
Chlorhexidine gluconate (CHG), 96, 236, 237, 299
adherence and technique, 281
athletes, 280, 281
avoidance, 281
bacteriostatic and bactericidal activities, 277
challenges, 281
CHG resistance, 281, 282
correctional facilities, 280
daily CHG bathing, 277
drug-resistant pathogens, 282
hospital wards, 277, 278
long-term care facilities, 278
military setting, 279, 280
non-ICU populations, 282
outpatients, 278, 279
preoperative use, 278
Chlorhexidine gluconate (CHG) bathing, 175
Clinical and Laboratory Standards Institute (CLSI), 128, 176
Clostridium difficile (CD), 67, 69, 74, 75, 78, 118, 271, 272
Clostridium difficile infection (CDI), 5, 6, 254, 255
asymptomatic colonization, infection prevention
antibiotic therapy, 254
antimicrobial therapy, 254
carriers, 254, 255
contact precautions and active surveillance, 254
description, 251
HCW and environmental contamination, 253
hospital-based transmission, 252, 253
incidence and recurrence rates, 153
intestinal epithelium, 153 (see also Microbiome)
prevalence and risk factors, 251
prevention strategies, 251
rates and carriers, 252
risk factors, 153
skin contamination and environmental shedding, 153
strains, 253, 254
symptomatic, 252
symptoms, 153
Clostridium scindens, 159
Clothing, 117, 118, 123
CMS. See Centers for Medicare and Medicaid Services (CMS)
Colistin, 132
Colonization, 149 (see also Staphylococcus aureus)
Community-associated CDI (CA-CDI), 47
Community-associated methicillin-resistant Staphylococcus aureus, 277
Community-associated MRSA/CA-MRSA, 279
Complex element compound (CEC), 122
Contact isolation precautions (CIP), 127–129, 132, 134, 136, 137
Contact precautions, 1–3, 42, 293
description, 1
GNRs and CDI, 5, 6
isolation precautions, 2–4
categories, 1
costs, 1
MRSA (see Methicillin-resistant Staphylococcus aureus (MRSA))
standard precautions, 2
universal precautions, 2
vertical vs. horizontal infection control strategies, 2, 3
recommendations, acute care facilities, 1
VRE, 4, 5
Copper
in clinic consultation room, 60
in HAIs, 60
in VRE, 60
Correctional facility, 279, 280
CRE-K. pneumoniae (CRKP), 128
Creutzfeldt-Jakob disease (CJD), 44, 45
Cystic fibrosis (CF), 132

D
Decolonization
cardiothoracic and orthopedic surgery, 99
cost-effectiveness, 97, 98
MRSA screening, 98, 99
timing, 97
Decolonization, Gram-negative bacilli, 237–240
antibiotic-resistant organisms, 235
CHG, 236, 237
fecal microbiota transplantation, 241
investigational agents, 241
nares, skin and gastrointestinal tract, 235
probiotics, 241
SDD (see Selective digestive decontamination (SDD))
skin, 235
Staphylococcus aureus, 235
strategies, 235, 236
systemic antibiotics, 240
Decolonization, MRSA
CDC report, 83
CHG bathing, 86, 87
everigenous infections, 83
exogenous infections, 84
federal agencies, 83
HA pneumonia and surgical site infections, 83
healthcare-associated infections, 84
long-term care facility residents, 83
methods, 84
mupirocin, 84–86
persistent carriage, intermittent carriage, and noncarriage, 83
populations, surgical patients, 84
SSIs, 87
universal and targeted decolonization, 87–89
vertical and horizontal approaches, 84
Department of Health and Human Services (DHHS), 35, 40, 41, 48,
50, 209
Dialysis centers, 35, 39, 48–50
Droplet precautions, 43

E
Ebola virus disease (EVD), 197–206, 208, 209
Enhanced Recovery After Surgery (ERAS), 108
Enterobacter, 127
Enterobacteriaceae infections, 129
Enterococcus, 123
Enterococcus faecium, 127
Environmental disinfection cleaning, 69, 72
Environmental hygiene interventions, 69–80
horizontal interventions, 68
clinical studies
CD spores with UV systems, 80
level III, 78
level IV and V, 79
NTDT program, 80
complexity of, 67
environmental services staff, 67
epidemiologic and microbiologic studies, 67
HP no-touch systems (see HP no-touch systems)
ygienic cleaning and hand hygiene, 68
methods, 69
MRSA and VRE acquisition, 67
no-touch disinfection technologies, 68, 69
pathogens, 67
physical cleaning of, 68
preliminary studies, 67
quasi-experimental design, 81
substantial antimicrobial potency, 79
ultraviolet no-touch systems (see Ultraviolet no-touch systems)
UV-C and PX-UV systems, 77
UV-C studies, 78
VRE study, 78
VRE acquisition, 67
Epidemic keratoconjunctivitis (EKC), 47, 48
ERAS. See Enhanced Recovery After Surgery (ERAS)
ESBL. See Extended-spectrum beta-lactamase (ESBL)
Escherichia coli, 120
ESKAPE, 127
European Antimicrobial Resistance Surveillance Network (EARS-Net), 128
European Committee on Antimicrobial Surveillance Network (EUCAST), 128
EVD. See Ebola virus disease (EVD)
Evidentiary hierarchy, 69
Extended-spectrum beta-lactamase (ESBL), 5, 6, 127, 175
active surveillance, 137
antimicrobial stewardship, 137, 138
CIP, 136, 137
decolonization, 137
environmental cleaning and disinfection, 137
epidemiology and microbiology, 135, 136
HH, 136
patient cohorting and dedicated staff, 137
Fecal microbiota transplantation (FMT), 131
    adverse effects, 157
    C. difficile, 157
    CDI, 158, 159
   characteristics, 159
    donor feces infusion, 157
    GI routes, 157
    gut microbiota, 156
    immunocompromised patients, 158
    mechanisms, 158
    stool transplants, 157
    ulcerative colitis, 157
    vancomycin alone group, 157
    vancomycin with bowel lavage, 157
Food and Agriculture Organization (FAO), 154
Frequency of screening, 149
Gloves, 16
    UGG (see Universal glove and gown (UGG))
GNRs. See Gram-negative rods (GNRs)
Gordonia bronchialis, 118
Government Accountability Organization (GAO), 41
Gowns, 16
    UGG (see Universal glove and gown (UGG))
Grading of Recommendations Assessment, Development and Evaluation (GRADE), 123
Gram-negative rods (GNRs), 5, 6
Guillain-Barré syndrome (GBS), 261
Hand hygiene (HH), 37, 38, 127, 128, 136
    compliance, 9–11
    description, 9
    monitoring
categories, 9
direct observation, 9–11
electronic surveillance and alerts, 10, 11
product consumption, 10
systematic review, 9
video surveillance and feedback, 10
Hand hygiene technologies, 61, 62
HCW apparel. See Healthcare worker (HCW) apparel
Healthcare environmental hygiene studies, 70
Healthcare Infection Control Practices Advisory Committee (HICPAC), 1
Healthcare personnel (HCP), 36, 37, 40, 44, 46–48, 257–263
Healthcare worker (HCW) apparel, 132, 176
    BBE, 114
    Gordonia bronchialis, 114
guidelines, 115
hospital policies, 113
infection prevention, 113
innovations, textiles, 114
laundrying, 114
neckties, 114, 115
optimal approach, 115
patients’ perceptions, 114, 115
white coats, scrubs, and uniforms, 113
Healthcare-acquired infectious agents, 293
Healthcare-associated acquisitions, 58–59
Healthcare-associated CDI (HA-CDI), 70, 72, 75, 77, 78
Healthcare-associated infections (HAIs), 128, 145, 146, 267
    bundles, decolonization, and syndromic indications, 4
    CDI rates, 6
    hand hygiene and standard precautions, 2
    surveillance, 269–273
    variability and subjectivity in surveillance, 267, 268
    vertical vs. horizontal infection control strategies, 2, 3
    CPs (see Contact precautions (CPs))
Healthcare-associated influenza, 259–261, 263
Healthcare-associated organisms, 170
Healthcare-associated pathogens (HAPs), 67, 71, 78
Healthcare-associated transmission of influenza, 257
Hemodialysis centers, 40
HH compliance. See Hand hygiene (HH) compliance
HICPAC, 5
High-level containment care (HLCC), 198
    anthrax, 198
    communication, 200
    emotion, 200
    employment, 198
    EVD (see Ebola virus disease (EVD))
    facility design, 199
    leadership, 199
    nursing, 200
    pediatric patient, 201
    PPE, 202
    transportation, 203
    waste management, 205
HLCC. See High-level containment care (HLCC)
Horizontal healthcare hygiene practices, 69
Horizontal interventions, 68
Horizontal transmission, 163, 169, 170
Hospital Corporation of America (HCA) program, 263
Hospital epidemiologist
    administration, 182–183
    and patient safety, 184
    antimicrobial stewardship, 184
    APIC, 182
    compensation, 184
    description, 181
    duties of, 182–184
    education, 183
    employee health, 184
    healthcare-acquired infections, 181
    outbreak investigation, 183
    public health authorities, 181
    public health/emergency preparedness, 183
    research, 184
    resources and compensation, 184, 185
    SENIC, 181
    surveillance, 183
    training, 182
Hospital visitors. See Visitors, infection transmission
Hospital-acquired CDI (HA-CDI), 47
Hospital-acquired infections (HAIs), 57, 117–119
Hospital-acquired pneumonia (HAP), 131
HP no-touch systems
    disinfection studies, 72
    in situ studies, 69–70
    in vitro studies, 69
    pathogen acquisition, 70
    reduced infections, 70–72
Human Microbiome Project Consortium, 153
Human probiotic/synthetic stool, 159
HVAC filters, 164
Hydrogen peroxide (HP), 55
Index

Hydrogen peroxide vapor (HPV), 68–72, 78, 79, 134
Hydrogen peroxide vapor technology studies
   level III, 71
   level IV, 72
   level V, 73
Hydrolyze carbapenems, 150

I
Infection control, 277–280, 282
Infection prevention, 293–295
   antimicrobial fabrics, 60, 61
   antimicrobial surfaces, 60
   in clinical outcomes, 57
   hand hygiene monitoring systems, 62, 63
   hand hygiene technologies, 61, 62
Killing Efficacy, 55, 56
   outbreak management, 57–59
   touchless devices, 59, 60
   touchless technology, 59
UV and HP room disinfection systems, 55, 58, 59
Infectious Diseases Society of America (IDSA), 99, 127, 279
Infectious organisms, 163
Influenza vaccine, 261
Inpatient prospective payment system (IPPS), 108
Institute of Medicine (IOM), 35
Intensive care unit (ICU), 127, 136, 146
Intravenous prophylaxis, 97
Isolation practices, 25
   hospital visitors (see Visitors, infection transmission)

J
Joint Commission on Accreditation of Hospitals and Healthcare Organizations (JCAHO), 35

K
Klebsiella pneumoniae, 121, 127, 131, 136
Klebsiella-Producing Carbapenemase (KPC), 170

L
Lachnospitacea, 159
Lactobacillus, 154, 156
Leech therapy
   antimicrobial prophylaxis, 230
   benefits/risks, 230
   Hirudo medicinalis, 230
   prophylactic antibiotic therapy, 230
   saliva, 230
   storage protocols, 230
Legionella, 246–248
   amoeba culture, 245
   burdens, water cultures, 245
   controversies, 248
   culturing methods, 243, 244
   environmental testing, 246, 248
   growth requirements, 244
   hospital water systems, 248
   limitations, 248
   prevention and control, 243
   surveillance
      biocide treatment, 247
      chemotherapy, cancers, 247
      engineering control, 248
environmental detection, 246
   hospital visit, 247
   hospital water, 247
   hot and cold water, 247
   indications, 248
   infection prevention programs, 247
   patient risk, waterworks complexity, and facility history, 246
   positivity rates, 247
   primary and secondary, 248
   water-positivity thresholds, 247
   whole genome sequencing (WGS), 248
   take-home points, 248, 249
   water testing, 245–247
   waterborne infection, 243
Legionnaires’ disease, infection prevention. See Legionella
Long-term acute care hospitals (LTACHs), 128, 175, 278, 281
Long-term care facilities, 128, 278
Lunar Receiving Laboratory (LRL), 198

M
Maggot debridement therapy (MDT), 230, 231
Matrix-assisted laser desorption ionization-time of flight (MALDI-TOF), 298
McFarland meta-analysis, 155
MDR organisms (MDRO), 127
MDR-GN, 147–149
MDT. See Maggot debridement therapy (MDT)
Measles, 24
Methicillin-resistant Staphylococcus aureus (MRSA), 13, 35, 41, 42, 56, 93, 118, 163, 166, 167
   anxiety and depression, 4
   blood stream infections (BSI), 2
   cluster-randomized trial, 3
   cost savings, 3
   decolonization strategies, 2
   hand hygiene compliance and skin health, 3
   healthcare providers, 3
   horizontal infection prevention strategies, 4
   ICUs, 3
   infections and deaths, 3
   surveillance cultures, 3
   UGG (see Universal glove and gown (UGG))
Methicillin-Resistant Staphylococcus aureus (MRSA), 299–301
Methicillin-susceptible Staphylococcus aureus (MSSA) infection, 93, 279
Microbiome
   and C. difficile, 154
   homeostasis, 153
Microsporum canis, 118
Middle Eastern respiratory syndrome coronavirus (MERS-CoV), 20, 24, 25
Military, 279, 280
Minimum bactericidal concentration (MBCs), 281
Minimum inhibitory concentration (MIC), 122
MLST. See Multilocus sequence typing (MLST)
Monte-Carlo simulation analysis, 135
MRDOs, See Multidrug-resistant organisms (MRDOs)
MRSA, 146–148
Multi-dose vials (MDVs), 36
Multidrug-resistant (MDR), 127, 145
Multidrug-resistant bacteria, 191, 192
Multidrug-resistant gram-negative rods (MDR-GNRs), 57
Multidrug-resistant organisms (MRDOs), 277
clinical data, 216
growth inhibition mechanism, 215
hospital mortality, 215, 216
ICU and hospital mortality, 215
ICU patients, 215
*Lactobacillus rhamnosus* GG (LGG), 215
randomized controlled trials, 215
risk factors, 214
Multilocus sequence typing (MLST), 188
Mupirocin
antibiotics, 85
CHG, 85, 86
formulations, 84
intranasal mupirocin treatment, 94
nasal colonization, *S. aureus*, 85
perioperative prophylaxis, 86
phenotypes, 85
post-treatment cultures, 85
povidone-iodine (PI), 86
*Pseudomonas fluorescens*, 84
randomized controlled trials, 94, 95
resistance, 85, 86, 88, 96
sensitivity analysis, 85
Mycobacterial Interspersed Repetitive Unit-Variable Number of Tandem Repeat (MIRU-VNTR), 192

N
National Ebola Training and Education Center (NETEC), 209
National Healthcare Safety Network (NHSN), 40, 128, 131, 267–272
National Surgical Quality Improvement Program (NSQIP), 271
Nebraska Biocontainment Unit (NBU), 202, 203
Neonatal ICU (NICU), 132
Nevada State Health Division (NSHD), 48
New England Compounding Center (NECC), 36
N-halamines, 119
N-Halamines, 121
No-touch disinfection systems (NTDS), 68, 69, 79, 80
No-touch disinfection technologies. *See* Environmental hygiene interventions
Novobiocin, 97
Nucleic acid amplification test (NAAT), 252, 269

O
Occupational Safety and Health Administration (OSHA), 38
Operation taxonomic units (OTUs), 159
Other potentially infectious materials (OPIM), 38
Outpatient clinic, 279
Outpatient infection control
ABHR, 38
acute care hospitals, 35
acute care settings, 35
ambulatory surgery centers, 48
antimicrobial stewardship, 45–46
cancer chemotherapy, 35
CDC, 36
CDI, 47
cough etiquette, 42
definitions, 36, 37
dialysis centers, 48–50
education of HCP, 46
EKC, 47, 48
environmental cleaning, 42, 43
HAIs, 35
hand hygiene, 37, 38
infection control practices, 36
infrastructure, 37
injection practices, 38–40
MDROs, 36
medical devices, 43–45
medical waste, 46
principles of hospital infection control, 36–37
regulations, mandatory reporting and monitoring, 40, 41
respiratory hygiene, 42
risk assessment, 47
standard precautions, 37
surveillance, 40
transmission-based precautions, 41, 42
in the United States, 50

P
PAPRs. *See* Powered air-purifying respirators (PAPRs)
Passive surveillance, 300, 301
*Pasteurella*, 220, 226, 228
Perioperative antibiotics, 97
Perioperative care, 104–105
AMP (*see* Antimicrobial prophylaxis (AMP))
blood glucose control, 105
ERAS, 108
normothermia, 103, 105
Personal protective equipment (PPE), 199–208, 285–290
acute care hospital, 294, 295
airborne isolation (*see* Airborne isolation, PPE)
fluorescent dye contamination, 295
meta-analysis of, 295
public and patient safety, 295
self-contamination, 293, 294
and training, 294
Pet therapy
benefits/risks, 229
estimation, 228
mitigation, 229
pet ownership and physical health, 229
Pet visitation, 219, 220, 222, 228, 229, 232
Photodisinfection, 97
Polybiguanides, 121
Polyhexamethylene biguanide (PHMB), 119, 121
Polymyxin E, 299
Positive end expiratory pressure (PEEP), 272
Post-ERCP bloodstream infections, 40
Povidone-iodine, 96
Powered air-purifying respirators (PAPRs)
advantages, 287
airborne transmission, 287
batteries, 288
cognitive impairment, 287
cost, 288, 290
description, 287
design, 291
disadvantages, 287
emergency preparedness, 291
hospitals’ respiratory protection programs, 290
indications, 290
laboratory technician wearing garments, 287
maintenance, 290
manikins, 288
vs. N95 respirators, 288, 289
pandemic situations, 291
PPE choice and safety, 290
mitigation, 228
zoos and veterinary facilities, 227
Respiratory etiquette, 42
Respiratory protection, 286–288
airborne pathogens, 286
face masks, 286
infectious airborne and droplet particles, 286
respirators, 286
classes, 287
factors, 286
N95, 286–288
PAPRs (see Powered air-purifying respirators (PAPRs))
supplied air, 287
surgical, 287
Respiratory syncytial virus (RSV), 42

S
Safe injection practices, 39
Safe injection practices Coalition (SIPC), 39
Salmonella hadar, 118
SARS. See Severe acute respiratory syndrome (SARS)
SCIP. See Surgical Care Improvement Project (SCIP)
Selective digestive decontamination (SDD), 131, 237
aminoglycoside-resistant organisms, 238
antibiotic resistance, 238
antimicrobial activity, 237
antimicrobial resistance, 240
diotaxime, 238
clinical infections, 240
cefotaxime, 238
cluster randomization, 238
eradication, 237
feasibility and effectiveness, 237
Gram-positive and Gram-negative organisms, 239
ICU mortality, 237
liver transplantation, 240
meta-analyses, 239
morbidity and mortality, 238, 240
multidrug resistance, 239
oropharyngeal and intestinal administration, 240
overall mortality, bloodstream infections, and infections, 239
pneumonia, 240
polymyxin E and gentamicin, 240
prophylactic maneuvers, 239
protocol, 239
respiratory tract infections, 239
SOD (see Selective oropharyngeal decontamination (SOD))
Selective oropharyngeal decontamination (SOD), 131
and standard care, 237
antibiotic resistance, 239
gentamicin and polymyxin E, 238
meta-analyses, 239
morbidity and mortality, 238
oropharyngeal paste, 238
polymyxin E, tobramycin, and amphotericin B, 238
respiratory tract colonization and bacteremia, 237
SER-262, 158
Severe acute respiratory syndrome (SARS), 20, 24, 25
Single nucleotide polymorphisms (SNPs), 188
Single-dose vials (SDVs), 36
Single-molecule real-time (SMRT), 188
Single-use devices (SUDs), 43
SNP, 188–192
SNPs, 188–190, 192
Society for Healthcare Epidemiology of America (SHEA), 99
Southern Nevada Health District (SNHD), 48
Index

patients, 173
prevention strategies, 174
strategies, 173, 174
universal decolonization, 176
vancomycin-resistant Enterococcus, 175
Veterans Affairs (VA), 146
VHF. See Viral hemorrhagic fever (VHF)
Viral hemorrhagic fever (VHF), 204, 205
administration and support services, 199, 200
autopsies, 206
bioccontainment, 197–198
causative agents, 199
clinical care
  antipyretic agents, 204
electrolytes, 204
EVD outbreak, 204
favipiravir, 205
hospital discharge, patients, 205
laboratory support, 205
malaria, 204
renal failure, 204
resource limitations, 204
respiratory symptoms, 204
description, 197
engineering and facility controls, 209
facility design, 199
federal laws and guidelines, 206
hospital preparedness, 209
maintenance, preparedness, 208, 209
microbiologic characteristics, 199
NETEC program, 209
nursing, 200, 201
physicians, 201, 202
PPE, 202, 203
protective barrier, 206
PUI evaluation, 206, 207
special populations, 207, 208
taxonomic families, 198
thrombocytopenia, 199
transportation, 203, 204
waste management, 205, 206
Yellow fever, 198
Visitors, infection transmission, 19, 20
airborne precautions, 24
contact precautions, 21, 22
description, 19
droplet precautions, 22, 23
ethical issues, 25
hand hygiene, 21
immunocompromised, 24
infection prevention measures, 21, 24
MERS-CoV, 24
outbreaks
  Bordetella pertussis, 20
  influenza and respiratory viruses, 19
  Mycobacterium tuberculosis, 19
  norovirus, 20
  pediatric tuberculosis, 19
  SARS, 20
  visitor restriction, 20
  recommendations, 23, 24
  standard precautions, 21
  visitor restriction policies, 25
VMMC, 257
VRE. See Vancomycin-resistant Enterococcus (VRE)
VRE colonization. See Vancomycin-resistant enterococcus (VRE) colonization

W
WGS. See Whole genome sequencing (WGS)
Whole genome sequencing (WGS), 189–194
antimicrobial-resistant bacterial strains, 187
MLST, 188
next-generation sequencing, 187
outbreak investigation
  bioinformatics expertise, 194
  endemic-resistant MDRO, 191
  epidemics, 189
  epidemiological and genomic data, 189
  foodborne outbreaks, 193
  hospital, 190
  inter-institutional, 191, 192
  international, 189, 190
  M. abscessus, 192
  M. chimaera, 192
  MIRU-VNTR, 192
  molecular clock, 192
  nosocomial transmission, 190
  plasmids, horizontal transmission, 190, 191
  public health and hospital epidemiology, 193
  social network analysis, 192
PFGE, 188
Rep-PCR, 188
sequence analysis, 188, 189
SNPs, 188
third-generation sequencing, 188
World Health Organization (WHO), 154