A

Access Improvement Bible (IHA), 164–165

access to care
advanced, 233–234

evaluating successful, 166–168

measures and tools for, 190–192

methods increasing, 164–167

modes of, 163

services and, 163–164

systematically improving, 164

accountable care organizations (ACOs), 306, 310–311

action guide
acute care planning, 239–240

chronic illness care, 271–275

clinical microsystems. See clinical microsystems, action guide
design of, 29

entry functions. See entry functions

high-value health system design, 331–333

measurement, 155–160

palliative care, 297–301

partnering with patients. See partnering with patients, action guide

patient safety. See patient safety, action guide

preventive care, 217–219

action plans
balanced scorecard example, 146

patient self-management in chronic care, 263–265

self-care and system-care through, 231–232

using M3 Matrix for organizational transformation, 331–333

acute care
action guide, 230–240

advanced access and effective care transitions, 233–235

anticipating patient needs, 222

case study, 223–225

in chronic illness care, 249

defined, 200

learning objectives, 221–222

needs of patients and families, 222–225, 244

in palliative care, 282

references, 237–238

summary review, 235–237

acute care, design requirements


evidence-based algorithms/structured decision making, 226–227

overview of, 225–226

planning for expected surprise, 231–233

role of patient and family, 229–231
timeliness of care, 226

well-defined roles within microsystem, 227–229

acute illness

anticipating patient needs, 222

chronic illness vs., 242–243

current health status assessment of, 61
effective care transitions in, 234

if-then formulations of algorithm-based care in, 227

needs of patients and families in, 223

adaptable, effective care plans as, 181

adaptive capacity, of leadership, 316

adherence (Standardize / Seketsu), 5S method of workplace setup, 114

admissions, as supporting microsystem 5P, 38

adolescents, preventive care activities, 199

adults, preventive care activities, 199

advance directives

end-of-life experience and, 280–281

planning for life and death, 290–291

as preventive care, 282

advanced access, 226

Advanced Clinic Access (VHA), 164–165, 191

adverse events

cascading metrics using rates of, 148

communication with patient and family after, 106–107

defined, 93–94

frequency of, 95, 97

identification of and learning from, 89

methods to identify, 94–96

as potential safety event, 94

responding to, 105–106

transparent disclosure policy for, 91

advise, in 5As cycle, 263

advisors, patients and families as, 66–67, 82

Agency for Healthcare Research and Quality (AHRQ), 123

agree, in 5As cycle, 263

AHRQ (Agency for Healthcare Research and Quality), 123

airplane pilots dashboard metaphor, 146–147

alerts, reviewing safety, 89

alignment

achieving quality through, 305

of problems and practice solutions in chronic illness care, 252–254

America

end-of-life experience yesterday and today, 279–281

need for palliative care in modern, 278–279

analysis, patient safety within microsystems, 128

Analysis and Interpretation worksheet, written surveys, 80–81

anatomy model of microsystem, 4–6, 29–35

apology, after medical error, 106

alignment

achieving quality through, 305

of problems and practice solutions in chronic illness care, 252–254

America

end-of-life experience yesterday and today, 279–281

need for palliative care in modern, 278–279

analysis, patient safety within microsystems, 128

Analysis and Interpretation worksheet, written surveys, 80–81

anatomy model of microsystem, 4–6, 29–35

apology, after medical error, 106

appointments

improving access by reducing types of, 164–165

predicting patient needs at time of, 165–166

approach to care, informing microsystem interventions, 279

arrange, in 5As cycle, 263

arrow (→ symbol), Improvement Equation, 23
Assess, Diagnose, and Treat (Greenbooks) workbooks, 31, 72–73
assess, in 5As cycle, 263
assist, in 5As cycle, 263
asthma action plan, 231–232
atomic unit of health care, 3–4
attentiveness, Measure What Matters worksheets, 150–151
audits, random safety, 90
Autism survey, 62
auto injury, analyzing using Haddon Matrix, 126–127

B
backlogs, working down, 164–165
balanced scorecards
action guide, 156–158
building own dashboards from, 147
comparing Patient Value Compass with, 145–147
Measure What Matters worksheets, 149–151
using data to measure and improve, 143–145
beginning points, entry functions, 162
behavioral modifications, preventive care, 202–203, 209
big dot measures of success, 148
bipolar disorders, diagnostic errors for, 97
BRI (Bristol Royal Infirmary) case, 14
Bridging the Gaps, 16–19
business models, for health care value, 309–310

C
capability, developing through roles, 229
care coordination
chronic illness, 261–262
near end-of-life, 287–288
care Model
for chronic care, 55–56
forming plans of care with, 181–182
care over time
clinical information systems for, 259
complexity of chronic illness care, 243
partnering with patients for, 244
qualitative well-being in chronic illness care, 249
care plans. See plan of care
care team, optimizing for improved access, 165–166
CARE Vital Signs, 182, 192–194
caregivers
activities that may help palliative care, 294–295
compassion fatigue from continuous care, 280
in health care clinical microsystems, 3–4
CAS (complex adaptive systems), in chronic care, 254–255
cascade metrics
Measure What Matters worksheets, 149–151
measuring levels of system, 148–149
case studies
acute care planning, 223–225
chronic illness experience, 244–245
end-of-life experience yesterday and today, 280–281, 291
feed forward examples, 141
measuring what matters, 135–137
patient safety scenario, 124–126
patients as partners, 57–60
preventive care, 200–201
using advance directives, 290–292
categories
guidelines for scoring with MAT, 40–44
Kano model of satisfaction, 53–54
catwalk, patient access to care from, 168–170
CCHMC (Cincinnati Children's Hospital Medical Center)
leading change, 321–324
Pediatric Early Warning Systems, 93, 95
chain of effect in health care improvement, IOM, 7–9
change concepts
for advanced clinic access, 164–166
process modifications to enhance care, 230–231
change over, value stream maps, 84
Chasm Report (IOM), 7
checklists
patient safety action guide, 116–118
SBAR format for handoff, 172–174
children, preventive care activities, 199
chronic care, defined, 200
chronic care model
clinical information systems in, 259–260
decision support in, 259
defined, 244
delivery system design in, 258
evaluating effectiveness of, 260
medical homes with focal point of, 180–181
overview of, 255–258
partnering with patients in, 55–56
self-management support in, 258
chronic illness
acute illness vs., 242–243
burden of, 245–248
causing years of disability before death, 278
common diseases in U.S., 246
complexity of, 242–244
current health status assessment of, 61
end-of-life experiences yesterday and today, 280–281
experience of, 244–245
chronic illness care
aligning levels of problem and practice complexity, 252–254
burden of, 245–248
care coordination and transitions, 260–262
chronic care model for, 255–260
clinical complexity in, 250–251
complexity of, 242–244
experience of chronic illness, 244–245
goals of, 248–250
learning objectives, 241–242
nature of complex adaptive systems, 254–255
overarching needs of patient and family, 244
overview of, 271
patient self-management in, 63, 262–265
references, 267–269
Star Generative Relationships Tool in, 271–275
summary review, 265–267
Cincinnati Children's Hospital Medical Center. See CCHMC (Cincinnati Children's Hospital Medical Center)
cleanliness (Shine/Seiso), 5S method of workplace setup, 114
clinical acuity, and emotional intensity, 233
Clinical Improvement Equation
designing preventive care, 205–207
maximizing performance of risk-reducing interventions, 210–211
monitoring preventive care performance, 211–212
patient/practice characteristics and risk reduction, 209–210
questions for improving preventive care, 207–208
risks of diseases/hazards, and mitigation of risks, 208–209
clinical information systems, chronic care model, 259–260
clinical interventions, in preventive care, 202–203, 209
Clinical Microsystems Model, 74–75
clinical microsystems
CASCADES for, 148–149
chain of effect in, 9
complexity of in chronic illness care, 250–251
complex problems, chronic illness care, 250-254
complexity, of chronic illness care
  aligning levels of problem and practice, 250-251
  clinical, 250-251
  engaging principles of, 242-244
  nature of complex adaptive systems, 254-255
complexity science, 254-255
complicated organizational frameworks, 23-24
complicated problems, 250-254
complications, defined, 99
comprehensive effective care plans, 181
confidence, in chronic care model, 256, 262
constraints, improving access by managing, 165
contingency plans, improving access with, 164-165
continuous value improvement, 134
contributors, identifying using mapping tool, 35
core concepts of patient-centered care, 51
costs
  chronic disease, 247
  defining and measuring value using, 142
  measuring value in relationship to outcomes and, 305
  palliative care in modern America, 278-279
  reducing variation in end-of-life care, 283-285
  value compass model and, 256-257
  value-based competition and, 306-308
counselors, patient self-management in chronic care, 262-263
coupling, 316-317
CPMs (clinical process models), 16
Crew Resource Management, 90
criticality, FMEA failure node analysis, 101
Crossing the Quality Chasm report (IOM), 88
cultural blind spots, 14
cultural challenges, of health systems, 320
culture, definition of, 318
culture of cooperation, in transitions and handoffs, 90
customer knowledge, gaining
  conducting written survey, 77-78
  observational skills and ethnography, 72-75
  overview of, 71-72
  tips for writing survey forms, 75-76
  types of survey questions, 77
  with value stream maps. See value stream mapping
customer satisfaction model, Kano, 52-54
cycle time monitoring
  creating value stream map, 84
  feed forward case study example, 141
D
Dartmouth Atlas of Health Care, 283-284
Dartmouth-Hitchcock Spine Center
  balanced scorecard, 145-146
  feed forward example, 141
  Patient Value Compass framework, 143-144
  rich information environment, 138
  specialty care case study, 133-135
dashboards
  for clinical microsystems improvement, 147
  Measure What Matters, 149-151
  measurements to improve health care value, 146-147
  posting on data walls, 159-160
data flow
  Overlook Hospital ED case study, 156
  Spine Center case study, 134
data wall
  examples of, 159-160
  Measure What Matters worksheet example, 150-151
  posting patient safety events on, 91
  Spine Center case study using, 134
decision-making
  in chronic care model, 259–260
  informed, 58, 63
  shared, 62–63
  supporting palliative care with shared, 285
defective products, decreasing waste, 309
delay problems, improving access to care, 164
delight characteristics
  case example, 58
  Kano model of satisfaction, 54
  structural method of gaining customer knowledge, 72
delivery system design, chronic care model, 258, 260
demand, improving access by reducing, 164–165
Deming model, 54–55, 313
denial, of medical errors, 106
deployment flowcharts
  example of, 191
  intensive care preventive activity, 217–218
  overview of, 190
  pneumonia, 225
depression
  in chronic illness, 250
  in palliative care, 286
descriptive research. See research, clinical microsystem
detailed flowcharts, in process mapping, 187–190
detection, for patient safety, 102
diagnostic errors
  definition of, 93
  frequency of, 97
  mechanisms underlying, 99–100
dignity
  care coordination near end-of-life, 287–288
  needs of palliative care to restore, 280, 282, 286–287
  in patient-centered care, 51
  planning for life and death with advance directives, 292
direct assessment, of transition metrics, 176–177
direct modes of entry, into clinical microsystem, 163
direct observations, 65, 72
disability, and palliative care, 278–279
disclosure
  apology as part of, 106
  to patient and family after medical error, 106
  patient safety, 128–129
disease risks, identifying within microsystem, 208
disruptions, of acute illness
  defined, 222
  evidence-based algorithms/structured decision making in, 226–227
  patient/family needs during, 223
  planning for expected surprise, 231–232
documentation, of 5Ps, 31–32
downstream outcomes, monitoring, 177
  drafts, flowchart, 187–188
drill down flowcharts, 188
dummy data displays, written surveys, 77

e
ecology of medical care, 230
education
  challenges of health systems, 320
  information prescriptions approach to patient, 63–64
  patient and family roles in acute care, 230–231
  patient safety within microsystems, 129
  scoring with MAT, 43–44
  self-management patient programs, 56–57, 262
effective care
  evaluating chronic care model, 260
  transition requirements for acute care, 226
efficient care, 163
EHRs (electronic health records)
  in chronic care model, 259
  ProvenCare (SM) approach, 16
  storing information prescriptions in, 63–64
elimination of risk activity, for patient safety, 101–102
embedded systems, 6–7
emotional challenges, of health systems, 320
EMR (electronic medical record), 137, 291
ending points, health care journey, 162
enteral feeding tubes, 90
entitlement mental model, 91
entry functions
  access to care and services, 163–168
  as foundation of successful care, 162
  initial assessment and plan of care, 178–182
  learning objectives, 161–162
  orienting patients to navigate care, 177–178
  overview of, 162–163
  references, 184–185
  summary review, 182–184
  transitions and handoffs. See transitions and handoffs
everyone
  engaging in value improvement, 20–22
  impact of partnering with patients, 60
  leadership engaging in value improvement, 516
  evidence, supporting specific preventive care, 209
  evidence-based clinical algorithms
    designing acute care, 226–227
    planning for expected surprise, 231–232
    pneumonia care algorithm, 228
execution
  achieving quality through, 305
  framework for, 313–315
  executive walk arounds, for patient safety, 91
expected characteristics, Kano model of satisfaction, 53–54
experience
  of chronic illness, 244–245
  chronic illness care, 248–250
experience-based co-design, high-value health systems, 312–313
experts
  using in high reliability organizations, 124
  using to identify safety practices, 101
external contexts
  clinical microsystems improvement, 11
  external mapping tool, 39
external mapping tool
  exploring external context for improving health, 39
  instructions for, 35
  supporting microsystem 5Ps, 38
facilitation, of patient safety, 102
failure mode and effects analysis (FMEA), 100–101, 118–121
family support
in acute care, 222–225
after medical errors, 105–106
in chronic care. See chronic care model
communication with after medical errors, 106–107
defining health care clinical microsystem, 3–4
entering patients into clinical microsystems. See entry functions
in horizontal/vertical care levels, 9–11
in palliative care. See palliative care
in preventive care. See preventive care
in top performing microsystems, 13
feed forward
case study examples of, 141
health status assessment, 61–62
information flow, 140–141
feedback, information, 139–141
fentanyl administration, standardizing, 90
first time quality, value stream maps, 84
first-pass yields, value stream maps, 84
Five Why’s, 104
5As approach, 262–263, 265
5Ps (purpose, patients, professionals, processes, and patterns) framework
adapting for supporting microsystems, 35, 38
assessing practice discoveries and actions, 35–37
designing acute care, 226–227
introduction to, 29
microsystems in macrosystems and, 13
overview of, 4–6
structure of, 29–35
5S method of workplace setup
Evaluation and Improvement worksheet, 116–117
overview of, 113–114
promoting patient safety, 97–98
flare-ups
acute care domain of chronic illness, 249
chronic disease, 242–243
end-of-life experience, 280–281
flowcharts
palliative and hospice care overlap, 289–290
process mapping with, 187–191
radiology preventive activity of mammography, 217–218
symbols, 189–190
FMEA (failure mode and effects analysis), 100–101, 118–121
Foundation for Informed Medical Decision Making, 62–63
free lessons, 103
functional status assessment
health assessment surveys, 62
measuring with patient value compass, 142–143, 149
palliative care, 286
specialty care case study, 133, 135
functional unit in health care, 3–6
fundamental aim of health care, 48
generic value equation, PVC, 142
goals
chronic illness care, 248–249, 256
complexity of today’s, 2
executing organizational change, 314
setting with patient, 62
golden hour project, for patient safety, 90
Greenbooks workbooks, 31, 72–73
Group Health Profile, 61
H
Haddon Matrix, 126–127
HAIs (hospital-acquired infections), study of, 14
handoffs. See transitions and handoffs
hazard scores, FMEA failure node analysis, 101
health assessment surveys, 61
health care
costs. See costs
fundamental aim of, 48
Ten New Rules for, 49–51
Health Care Advisory Board, 124–126
health coaching
health care transformation through, 319–320
partnering with patients, 63
patient self-management in chronic care, 262–263
using information prescriptions, 63–64
health status
current assessment of, 61–62
end-of-life experiences yesterday and today, 280–281
fully assessing in palliative care, 286
health systems, designing high value
action guide, 331–333
business models for, 309–310
case study, 321–323
changing local culture, 318–321
creating accountable care organizations, 310–311
creating value-based competition, 306–308
execution triangle, 313–315
leading change at all levels, 315–317
learning foundational knowledge, 311–313
learning objectives, 303–304
from parts to whole, 304–305
reducing waste, 308–309
references, 327–329
requirements for, 305–306
summary review, 326–327
what we need to do, 323–325
heparin overdoses, 90
heuristics, in diagnostic errors, 100
high reliability organizations. See HROs (high reliability organizations)
high-level flowcharts, process mapping with, 187–189
horizontal levels of health care system, 9–11
hospice programs, 289–290
hospitalized adults, preventive care activities, 199
Hospitals as Cultures of Entrapment: A Re-Analysis of the Bristol Royal Infirmary (Weick and Sutcliffe), 14
How’s Your Health, 61
HROs (high reliability organizations)
characteristics of high performing microsystems, 128–129
importance of coupling in, 316–317
low error rate in, 123
reliability by virtue of mindfulness in, 123–124
valuing culture of safety, 104–105
huddles, after acute care interventions, 233
Human conditions
patient safety within microsystems, 128–129
WHO. See WHO (Work conditions, Human conditions, and Organizational conditions)
human factors design, high-value health systems, 312–313

I
I PASS the BATON, 172, 175
iatrogenic hazards, mitigating risk of, 208
ICN (Intensive Care Nursery), at Dartmouth
  background, 89
  case study, 88, 90
  discussion, 92–93
  implementing patient safety, 89–90
  near misses, errors, and adverse events, 89
  prevention of nosocomial infections, 91–92
  if-then formulations of algorithm-based care, 227
IHC (Intermountain Health Care), 137, 141
improvement, measuring within levels of health system, 132–133
improvement equation, 22–23
Improvement Triangle, 140–141
Improving Patient Access to Care workbook, VHA, 191
in situ simulation, learning from errors, 104
indirect assessment, of downstream outcomes, 177
infants, preventive care activities, 199
informants, patients as, 65–66
information
  in chronic care model, 259–260
  diagnostic errors from failure to synthesize, 100
  for full health status assessment in palliative care, 286
  patient safety and, 130
  scoring with MAT, 41–44
  sharing in patient-centered care, 51
information environment
  fostering rich, 138–139
  measuring what matters, 132–133
  in top performing microsystems, 14
information flow for high-value care
  balanced scorecards, 143–145
  balanced scorecards vs. compass, 145–146
  cascades metrics for, 148–149
  dashboard metaphor, 146–147
  designing, 140
  feed forward and feedback, 140–141
  Measure What Matters worksheet, 149–150
  Patient Value Compass, 141–143
  summary review, 150–152
information prescriptions, 63–65
information technology
  guidelines for scoring with MAT, 41–44
  patient safety, 130
informed decision making, 58, 63
initial assessment, in plan of care, 178–180
Inpatient Unit Profile, Greenbook, 34
inpatients, evaluating access to care, 167–168
inquiry
  how mental models shape, 297
  using Ladder of Inference to explore, 297–301
Institute for Clinical Systems Improvement, 227
Institute for Healthcare Improvement, 137, 141
Intermountain Health Care (IHC), 137, 141
Intermountain Health Care, Utah, 16
International Motor Vehicle Program, 311
interventions, practices for patient safety, 90
interviews, for patient knowledge, 65–66
inventory (stock on hand), decreasing waste, 309
IOM (Institute of Medicine)
  chain of effect, 7–9
  definition of quality, 304–305
  on fundamental aim of health care, 48
  patient safety goal, 88
  Ten New Rules for health care, 49–51
J
Josie King story, 106
just culture school of thought, patient safety, 99
K
Kano model of satisfaction, 53–54
knowledge, creating value, 311–313
L
laboratory, as supporting microsystem 5P, 38
Ladder of Inference, 297–301
latent conditions, causing medical errors, 97
latent failures, HRO sensitivity to, 123–124
leadership
  executing organizational change, 314, 323–324
  as most needed innovation in health care, 305
  patient safety within microsystems, 105, 124–126, 129
  process of, 135–317
  scoring with MAT, 41–44
  in top performing microsystems, 13
  transitions and handoff processes, 172
  using M3 Matrix for transformation activities, 332–333
lean theory, 311
levels of organizations, 6–7
life expectancy
  burden of chronic illness, 246
  and palliative care, 278–279
line-of-sight measures, cascading metrics, 148
little dot microsystem levels, 148
live actors, rehearsal through, 120
local culture
  case study, 321–323
  changing, 318–321
  executing organizational change, 314
  loopholes, HRO sensitivity, 123–124
  loose coupling, 316–317
  lost productivity, in chronic disease, 247
M
M3 (micro-, meso-, and macrosystem) Matrix, 331–333
macrosystem
  cascading metrics for, 148–149
  chain of effect and, 9
  chronic care model and, 257–258
  horizontal/vertical care levels, 9–11
  M3 Matrix for transformation activities, 331–333
  nesting of clinical relationships in, 7
  research on microsystem in, 15–16
  role of mesosystem in, 19–20
mammography, preventive activity of, 217–218
management, of institutional imperatives, 132–133
many-to-one relationship, health care today, 2
MAT (Microsystem Assessment Tool)
guidelines for scoring, 40–44
overview of, 14
score interpretation, 45
understanding, 40
Measure What Matters. See MWM (Measure What Matters) worksheet
measured performance improvement, Clinical Improvement Equation, 207
measurement
access tools, 190–192
action guide, 155–160
at all levels of system, 132–137
balanced scorecard, 143–145
balanced scorecard vs. compass, 145–146
balanced scorecards, 156–157
dashboard metaphor for, 146–147
designing information flow, 140
examples of data walls, 159–160
feed forward and feedback, 140–141
fostering rich information environment, 138–139
learning objectives, 131–132
 Measure What Matters worksheet, 149–150, 157–159
Patient Value Compass, 141–143, 156–158
performance, 312–313
references, 153, 160
summary review, 150–152
using cascading metrics, 148–149
Measuring Access Improvement workbook, 191
measuring what matters, 132–133
medical errors
annual deaths caused by, 201
causation of, 97–98
communication with patient and family after, 106–107
creating precondition of safety. See patient safety
definition of, 93–94
frequency of, 95, 97
identification of and learning from, 89
identifying and prioritizing using FMEA. See FMEA (failure mode and effects analysis)
implementation and monitoring of safety practices, 101–103
as leading cause of death in U.S., 88
learning from errors, 103–104
methods to identify, 94–96
overview of, 100
patient safety within microsystems, 127–129
potential safety events, 94
proactive identification and mitigation of risks, 100–101
responding to, 105–106
Swiss cheese model, 98–99
transparent disclosure policy for, 91
valuing culture of safety, 104–105
medical homes
care plan as focal point of, 180–181
for planned care and self-management, 57
Medicare costs, for chronic illness at end-of-life, 283–284
Medication Error Reduction Improvement Team (MERIT) committee, 89, 91
medications
end-of-life experience yesterday and today, 280–281
frequency of errors in, 95
promotion of patient safety, 90
mental models
defined, 14
Ladder of Inference exploring, 297–301
in palliative care, 297
prevention of nosocomial infections using, 91
MERIT (Medication Error Reduction Improvement Team) committee, 89, 91
mesosystems
cascading metrics for, 148–149
creating integrated systems, 306–307
horizontal/vertical care levels, 9–11
M3 Matrix for transformation activities, 331–333
microsystem research in Sweden, 18–19
nesting of clinical relationships in, 7
role in high performing organizations, 19–20
metacognition, causing diagnostic errors, 100
metasystems, 306
microsurveys, 75
Microsystem Assessment Tool. See MAT (Microsystem Assessment Tool)
mindfulness, in patient safety, 104–105, 123–129
minimum replicable units (MRUs), 2
mistake-proofing, 103
mitigation
of error risks, 100–101
as patient safety intervention, 102–103, 128
monitoring
of downstream outcomes, 177
within levels of health system, 132–133
success of transitions and handoff, 172
of transition metrics, 176–177
motivation to change, 263
motivational interviewing, 62
movement, decreasing waste, 309
MRU’s (minimum replicable units), 2
muda (cultural value), and waste, 308
must have characteristics
case example, 58
Kano model of satisfaction, 53–54
orientation of patients to clinical microsystems, 177–178
MWM (Measure What Matters) worksheet
action guide, 157–159
building dashboards to post on data walls, 159
overview of, 149–150
nearly misses
definition of, 93–94
identification of and learning from, 89
learning from, 103
negligence, 93, 128
negligent adverse events, 93
Neonatal Intensive Care Quality (NICQ) project, 89
neonatal intensive care unit (NICU) microsystems, 14, 150–151
NHS (National Health Service), U.K., 15
NICQ (Neonatal Intensive Care Quality) project, 89
NICU (neonatal intensive care unit) microsystems, 14, 150–151
non-preventable adverse events, 93
non-value added, value stream mapping, 84
nosocomial infections
defined, 95
as most common type of medical error, 95
prevention of, 91–92
tracking rate of, 89, 91
N
National Consensus Project for Quality Palliative Care, 283–285
National Health Service (NHS), U.K., 15
National Patient Safety Goals, 172
naturalistic method, gaining customer knowledge, 71–72
near misses
definition of, 93–94
identification of and learning from, 89
learning from, 103
negligence, 93, 128
negligent adverse events, 93
Neonatal Intensive Care Quality (NICQ) project, 89
neonatal intensive care unit (NICU) microsystems, 14, 150–151
NHS (National Health Service), U.K., 15
NICQ (Neonatal Intensive Care Quality) project, 89
NICU (neonatal intensive care unit) microsystems, 14, 150–151
non-preventable adverse events, 93
non-value added, value stream mapping, 84
nosocomial infections
defined, 95
as most common type of medical error, 95
prevention of, 91–92
tracking rate of, 89, 91
N
O
Observation worksheet, 74, 76
observational skills, for gaining customer knowledge, 72–75
office-linked, chronic disease management as, 242–243
online references
5S method of workplace setup, 114
anatomy and physiology models, 5
balanced scorecards, 157
Gaining Customer Knowledge worksheets, 73–74
Greenbook workbooks for 5Ps, 31
Institute for Clinical Systems Improvement, 227
Institute for Patient and Family-Centered Care, 82–83
Josie King story, 106
Measure What Matters dashboard examples, 160
printing 5Ps poster map, 35
“Through the Patient’s Eyes” tool, 72–73
value stream map worksheets, 83–84
opinion surveys, 78
opinions, writing survey items as, 77
oral medication syringes, for patient safety, 90
orderliness (Straighten/Seiton), 5S method of workplace setup, 114
organization (Sort/Seiri), 5S method for workplace setup, 104–105
organization support, for patient safety, 129
organizational change, M3 Matrix for, 331–333
Organizational conditions. See WHO (Work conditions, Human conditions, and Organizational conditions)
organizational culture
changing, 318–321
definition of, 318
for patient safety, 123
valuing, 104–105
organizational meaning, leadership, 316
organizational support, MAT scores for, 43–44
organizing for quality, research, 18–20
orientation process, entry to microsystem, 177–180
outcomes
in chronic care model, 255–256
collecting information for, 139
designing information flow, 140–141
external mapping tool enhancing, 35, 38–39
FMEA failure modes, 101
measuring value in relationship, 305
monitoring downstream, 177
monitoring preventive care, 212
Patient Value Compass focus on, 142–143
requiring combined efforts of everyone, 20–24
Spine Center case study, 134
in top performing microsystems, 13
in value-based competition, 206–207, 209–210
outpatients, evaluating successful access to care, 166
Overlook Hospital Emergency Department case study case study, 136
feed forward example, 141
fostering rich information environment, 138
overproduction, decreasing waste, 308
oversimplification, HRO reluctance to engage in, 123

P
P2 (Pursuing Perfection) program, CCHMC, 321–324
P,P (Provider, Patient, and Information), 5–4
pain scales, palliative care health status assessment, 286
palliative care
action guide, 297–301
care coordination near end-of-life, 287–288
as component of chronic illness care, 249
core processes in, 285–287
defined, 200
end-of-life experience yesterday and today, 279–281
hospice programs and formal, 289–290
learning objectives, 277–278
need for in modern America, 278–279
overarching needs of patient and family, 244
planning for life and death with advance directives, 291–293
principles of, 281–283
reducing variation in end-of-life care, 283–285
references, 296, 301
summary review, 293–296
using Ladder of Inference, 297–301
palliative care teams
activities that may help burnout, 294–295
care coordination near end-of-life, 287–288
defined, 280
overlapping with hospice care, 289–290
paradigm of complexity, 250–251, 252–254
participants, complexity of health care, 2
participation, in patient-centered care, 51
particular context, Clinical Improvement Equation, 206–207, 209–210
partnering with patients
assessing health status, 61–62
in entry functions, 162
establishing care plans, 62–63
executing care plans, 63–65
learning objectives, 47–48
need for, 48–51
in palliative care, 285
patients as informants and advisors, 65–66
phases of, 61
references, 68–70
setting health goals, 62
summary review, 67–68
partnering with patients, action guide
gaining customer knowledge. See customer knowledge, gaining
Institute for Patient and Family-Centered Care matrix, 82–83
value stream mapping, 83–86
partnering with patients, conceptual frameworks
core concepts, 51
Deming model, 54–55
example of, 57–60
Kano model of satisfaction, 52–54
Lorig’s self-management model, 56–57
target diagram and clinical microsystem model, 51–52
Wagner’s chronic care model, 55–56
patient and customer satisfaction tracking, 136
patient care
chain of effect in, 9
in health care clinical microsystem, 3–4
horizontal/vertical care levels, 9–11
requiring combined efforts of everyone, 21–22
patient contracting, 62
patient needs, in top performing microsystems, 13
patient safety
causation of medical errors, 97–98
communication with patient and family after medical errors, 106–107
definition of, 93
definitions of terms, 93–94
diagnostic errors, 99–100
frequency of medical errors and adverse events, 95–97
identification of medical errors and adverse events, 94–95
learning objectives, 87–88
organizational factors for, 88–93
prevention of medical errors, 100–104
prevention of nosocomial infections, 91–92
professionals involved in, 107
references, 109–111
research on organizing for, 18–20
responding to medical errors, 105–106
summary review, 107–109
Swiss cheese model, 98–99
valuing culture of safety, 104–105
patient safety, action guide
5Ps method, 113–117
checklists, 116–118
conclusion, 129–130
designing into microsystem, 122–123
failure mode and effects analysis, 118–120
link between mindfulness and, 123–129
overview of, 113
references, 130
rehearsals or simulations, 120–122
Patient Value Compass. See PVC (Patient Value Compass)
patient viewpoint surveys, 74
patient-centered
clinical care, 48
designing high-value health systems as, 312–313
effective care plans as, 181
patients
in 5Ps framework. See 5Ps (purpose, patients, professionals, processes, and patterns) framework
acute care needs of, 222–225
current health status of, 61–62
effective transitions and handoffs, 90
enhancing outcome using mapping tool, 35, 38–39
entering into clinical microsystems. See entry functions
identifying, 208
managing chronic conditions of. See chronic care model
navigating, 177–178
palliative care needs of. See palliative care
as partners. See partnering with patients
preventive care needs. See preventive care
safety of. See patient safety
scoring with MAT, 41–44
supporting/impeding risk reduction, 210
patterns, 5Ps framework. See 5Ps (purpose, patients, professionals, processes, and patterns) framework
perfect storm, in error causation, 97
performance
designing information flow for, 140–141
measurement principles and practices, 312–313
microsystem in macroystem research, 15–16
microsystem research, 11–15
monitoring in preventive care, 211–212
of patient safety, 130
scoring with MAT, 41–44
in top performing microsystems, 13
value improvement imperatives, 20–24
person approach, to medical errors, 97
personal health records (PHRs), storing information
prescriptions in, 63–64
PHQ-9 (depression screen), health status assessment, 286
PHRs (personal health records), storing information
prescriptions in, 63–64
physical challenges, of health systems, 320
physiology model, clinical system, 4–6, 52
plan of care
characteristics of effective, 181
evaluating success of, 182
initial assessment and, 178–180
matching patient’s needs with, 169
Wagner Care Model, 181–182
planned care model, 56
plus (+ symbol), Improvement Equation, 23
pneumonia
care algorithm, 228
deployment flowchart, 225
intensive care preventive activity, 217–218
Poka-yoke, 103
political challenges, of health systems, 320
post-event, patient safety matrix, 126–127
potential safety events, 94, 103
practice features, supporting/impeding risk reduction, 209–210
Practice-Based Learning and Improvement, 210
practice-specific triage protocol, 224
pre-event, patient safety matrix, 126–127
preoccupation with failure, in HROs, 123
preprinted medication order entry sheets, for patient safety, 90
preventable adverse events, 91, 93–94
preventable events, frequency of, 95
preventive care
action guide, 217–219
chronic illness care intersecting with, 248–249
Clinical Improvement Equation, 205–207
defined, 200
improving in clinical microsystems, 204–205
learning objectives, 197–198
needs of patient and family, 244
palliative care intersecting with, 282
questions for improvement of, 207–212
references, 214–215
summary review, 213–214
taxonomy of services, 202–204
work of, 198–201
preventive health
in current health status assessment, 61
defined, 198
need for palliative care and, 278–279
scope and challenge of, 200–201
Primary Care Practice Profile, Greenbook, 32
primary prevention, missed opportunities for, 201
primary symptoms, acute illness, 222
proactive communities, chronic care model, 258
proactive identification and mitigation of risks, 100–101
problems, imperatives for framing, 23–24
process improvement
patient safety, 130
scoring with MAT, 42–44
processes
in 5Ps framework. See 5Ps (purpose, patients, professionals, processes, and patterns) framework
collecting information for betterment of, 139
decreasing waste during, 309
mapping with flowcharts, 187–190
measuring improvement within levels, 132–133
palliative care, 285–287
processing time, in preventive services, 210
productive interactions, chronic care model, 56, 255
professionals
in 5Ps framework. See 5Ps (purpose, patients, professionals, processes, and patterns) framework
burden of chronic illness on, 246–247
effects of medical errors on, 107
information flow for high-value care, 140–141
requiring combined efforts of everyone, 21–22
profiles, Greenbook, 32–35
ProvenCare (SM) approach, 16
Provider, Patient, and Information (P2I), 3–4
pseudo-apology (apologia), after medical errors, 106
purpose, 5Ps framework. See 5Ps (purpose, patients, professionals, processes, and patterns) framework
Pursuing Perfection (P2) program, CCHMC, 321–324
PVC (Patient Value Compass) action guide, 155–157
building own dashboards from, 147
comparing balanced scorecard with, 145–147
Measure What Matters worksheets, 149–151
overview of, 141–144
Spine Center case study, 133–135

Q
quality
defining and measuring value using, 142
guidelines for palliative care services, 283–285
Overlook Hospital ED case study, 136
research on organizing for, 18–20
six dimensions of, 305
Quality by Design, 210
questions, preventive care improvement
how to monitor performance, 211–212
maximizing risk-reducing intervention, 210–211
mitigating disease risks or hazards, 208–209
overview of, 207–208
patient characteristics for risk reduction, 209–210
real-time process monitoring
Measure What Matters worksheets, 150–151
Overlook ED case study, 136
Shock Trauma ICU case study, 137
using feed forward, 141
reasoning, using Ladder of Inference, 297–301

R
RA (Rheumatoid Arthritis) patient survey, 61–62
radial communications, 261
ratings, writing survey items as, 77
readiness to change, patient self-management, 263
real-time process monitoring
Measure What Matters worksheets, 150–151
Overlook ED case study, 136
Shock Trauma ICU case study, 137
using feed forward, 141
reasoning, using Ladder of Inference, 297–301
Redefining Health Care: Creating Value-Based Competition on Results (Teisberg), 306
reflection
how mental models shape, 297
using Ladder of Inference to explore, 297–301
refreezing, in organizational change, 319
rehearsals
learning from errors, 104
mitigation of error risks, 101
patient safety action guide for, 120–122
planning for expected surprise, 231–233
relationships
care coordination near end-of-life, 287–288
complexity of today’s health care, 2
importance of coupling in HIROs, 316–317
structural and anatomical, 4–5
systems dynamics/embedded systems and, 6–7
replacement of error-prone steps in processes, for patient safety, 101–102
reports
measuring processes within levels of health system, 132–133
writing survey items as, 77
research, clinical microsystem
designing patient safety, 123
macrosystems, 15–16
organizing for quality, 18–20
overview of, 11–15
in Sweden and in future, 16–18
resilience, HIROs commitment to, 124
resources, identifying outside, 35, 38–39
respect, in patient-centered care, 51
restoration of integrity, palliative care, 282
return on investment, of wellness-based services, 201
Rheumatoid Arthritis (RA) patient survey, 61–62
risk priority number (RPN), FMEA process, 101, 119
risk reduction
maximizing interventions for, 210–211
patient and practice characteristics for, 209–210
patient safety and, 100–101
preventive care, 208–209
value compass model and, 257
risk-based pricing, ProvenCare (SM) approach, 16
role play, rehearsal through, 120
roles, acute care
patient and family, 229–231
well-defined but flexible, 227–228
rooms, improving access by optimizing, 165–166
RPN (risk priority number), FMEA process, 101, 119
runchart, tracking nosocomial infections, 89

S
Safety Attitudes Questionnaire, 105
safety climate, of organization’s safety culture, 105
safety culture of organization, 104–105, 128
safety practices, 101–103
safety sciences design, high-value health systems, 312–313
satisfaction, improving care, 163
SBAR (situation, background, assessment, response) tool, 90, 172–173
scientific evidence, decision support in chronic care model, 259
scores, MAT, 40–45
screening, preventive care, 202–203, 209
secondary prevention, missed opportunities for, 201
secret agent patients (mystery shoppers), 72
self-care
achieving best outcomes, 56–57
high-value care and, 50
in preventive care, 211
target diagram and, 51–52
using shared medical appointments, 62–63
self-discipline (Sustain/Shitsuke), 58 method of workplace setup, 114
self-efficacy
challenges in chronic illness, 250
developing through health coaching, 63
patient education program fostering, 56–57
stimulating for chronic illness, 258, 262
self-management model
achieving best outcomes with, 56–57
in chronic care model, 258, 260
education, 57
in preventive care, 211
self-sealing cultures, performance of microsystems in, 14–15
sentinel events, 94
service guarantees, ProvenCare (SM) approach, 16
severity, FMEA process, 119
shared decision-making
palliative care, 285
partnering with patients, 62–63
shared medical appointments, 63
shared mental models, 14
sharp end of health care system, 2
Shine/Seiso (cleanliness), 5S method of workplace setup, 114
Shock Trauma ICU. See STRICU (Shock Trauma ICU)
of IHC
sick role, 229
simple organizational framework, 23–24
simple problems, chronic illness care, 250–253
simulations
learning from errors through, 104
patient safety action guide for, 120–122
planning for expected surprise, 231–233
rehearsals using, 120
six dimensions of quality, STEEEP, 305
smallest replicable units (SRUs), in service
organizations, 2–3
SOAP notes, 180
Sort/Seiri (organization), 5S method for workplace
setup, 104–105
Specialty Care Practice Profile, Greenbooks, 33
Spine Center case study. See Dartmouth-Hitchcock
Spine Center
Spine Condition Survey, 61
SRUs (smallest replicable units), in service
staff
access to care improving morale of, 163
as focus of top performing microsystems, 13
information flow for high-value care, 140–141
patient safety and, 129
responsible for transitions and handoffs, 171–172
role in gaining customer knowledge, 72
scoring with MAT, 41–44
use information and, 139
Standardize/Seketsu (adherence), 5S method of
workplace setup, 114
standards, handoffs and transitions, 90, 171–172
Star Generative Relationships Tool, 271–275
STEEEP attributes of quality
chain of effect, 9
horizontal and vertical levels of health care, 11
improving value, 304–305
stock on hand (inventory), decreasing waste, 309
Straighten/Seiton (orderliness), 5S method of
workplace setup, 114
Strategic Performance Balanced Scorecard worksheet,
144–145
STRICU (Shock Trauma ICU) of IHC
case study, 137
feed forward example, 141
tips to foster rich information environment, 138
structural methods
challenges of health systems, 320
of gaining customer knowledge, 71–72
success characteristics
analyzing using MAT. See MAT (Microsystem
Assessment Tool)
of high performing clinical microsystems, 13–14
summits, Overlook Hospital ED case study, 136
supply and demand, improving access, 164–165
supporting microsystem 5Ps, 35, 38
surrogate markers, monitoring preventive care, 212
Survey Monkey, distributing MAT via, 40
surveys
conducting written, 77
gathering participant knowledge through, 65–66
health assessment, 61
microsurveys, 75
opinion, 78
patient viewpoint, 74
structure of written, 78–82
types of questions, 77
valuing culture of safety, 105
writing good questions, 75–76
sustainable improvement
of clinical microsystems, 15
requiring everyone, 25
triangle of, 21
Sustain/Shitsuke (self-discipline), 5S method of
workplace setup, 114
Sweden, microsystem research in, 16–19
Swiss cheese model, of error causation, 98–99
synchronization, improving access with, 165–166
syntactic connectors (+sign and → sign)
Clinical Improvement Equation, 207
for risk reduction, 210–211
system modifications, preventive care, 202–203, 209
systems approach
analyzing patient safety matrix, 126–127
to medical errors, 97
not absolving individuals from error involvement, 99
systems dynamics, 6–7
systems thinking
defined, 6
Deming model, 54–55
horizontal/vertical care levels, 9–11
IOM’s chain of effect in health care, 7–9
microsystems and their external context, 11
systems dynamics and embedded systems, 6–7
T
TALL man lettering for prescribing medications, 90
target diagram
clinical microsystem model and, 51–52
nesting of clinical relationships, 6–7
taxonomy of preventive health care, 292–294
TeamSTEPPS educational process, 175
technological challenges, of health systems, 320
Ten New Rules for health care, IOM, 49–51
tension, of horizontal and vertical priorities, 10
tertiary prevention, missed opportunities for, 201
The Checklist Manifesto (Gawande), 116
The Fifth Discipline (Senge), 297–298
The Josie King Foundation, 94
The Machine That Changed the World (Womack, Jones &
Roos), 311
The Nature of Suffering and the Goals of Medicine (Cassell), 282
three essential goals of chronic illness care, 248–250
“Through the Patient’s Eyes” tool, 72–73
tight coupling, 316–317
time on hand (waiting), decreasing waste, 308
time to thrombolytics, 136
timeliness
advanced access, 233–234
Measure What Matters worksheets, 150–151
palliative care intersecting with acute care, 282
requirements for acute care, 226
time-trended data, Shock Trauma ICU case study, 137
timing, for acute care, 226
To Err is Human report (IOM), 88, 122–123
touch time, value stream mapping, 84
touchscreen computers, 133–134, 141
TPS (Toyota Production System)
5S method taken from, 114
in chronic care model, 290
designing health systems, 308–309
lean theory principles and methods, 311
for organizational transformation, 313
training
patient safety within microsystems, 128–129
scoring with MAT, 43–44
transfer mode of entry, 163
transition of care, as transfer mode of entry, 163
transitions and handoffs
acute care planning, 234–235, 239–240
coordinating in chronic illness care, 260–262
evaluating successful, 176–177
methods of improving, 171–176
overview of, 168–171
principles of effective, 171
standardizing communications, 90
translation of knowledge into action, evidence-based clinical algorithms, 227
transportation, decreasing waste, 308–309

U
unfreezing, in organizational change, 319
United States Preventive Services Task Force (USPSTF), 209
universal protocols, patient safety, 90
up time, value stream mapping, 84
urgent care visits, acute care interventions, 222
user’s manual, orientation process, 178–179
USPSTF (United States Preventive Services Task Force), 209

V
value
defining and measuring, 142
high-value health systems. See health systems, designing high value
value (or solution) shops, 309
value added, value stream mapping, 84
value chains
business models to improve health care value, 309–310
Deming model, 54–55
in value stream mapping, 66
viewing patient’s health care journey, 305
value compass model, 256–257
value improvement imperatives
engage everyone, 20–22
framing problems and practice solutions, 23–24
overview of, 20
work improvement equation, 22–23
value networks, 310
value of care, PVC, 155–156
value stream mapping
creating value stream map, 83–84
goals of, 83
overview of, 66
process mapping with, 187–190
terminology, 84–85
value-based competition, 306–308
VAP (ventilator associated pneumonia), 92, 217–219
variation, reducing in end-of-life care, 283–284
verbal orders, eliminating for patient safety, 90
verbatim, recording answers to survey questions, 77
Vermont Oxford Network (VON NIC/Q 2007), 150–151
vertical levels of health care system, 9–11
VF-12 (functional status inventory), in palliative care, 286
virtuous cycle, in balanced scorecards, 145
voice of leadership, 316
voluntary reporting, of errors or adverse events, 103
VON NIC/Q 2007 (Vermont Oxford Network), 150–151
vulnerable system syndrome, and patient safety, 122

W
Wagner Care Model. See also chronic care model, 181–182, 260
waiting (time on hand), decreasing waste, 308
waste, reducing. See TPS (Toyota Production System)
well-being (mental, social and spiritual), in palliative care
core processes, 286–287
end-of-life experience yesterday and today, 280–282
principles of, 284
restoring integrity, 283
wetware, 259–260
white spaces, in transition of care, 170–171
WHO (Work conditions, Human conditions, and Organizational conditions)
contributing to errors and adverse events, 97–98
learning from errors, 103–104
practices to promote patient safety, 89–90, 92, 101
WHO (World Health Organization), on palliative care, 283
wired patients, Shock Trauma ICU case study, 137
Work conditions. See WHO (Work conditions, Human conditions, and Organizational conditions)
work in process, value stream mapping, 84
workbooks
access to care, 191
Greenbooks, 31, 72–73
workflow (movement), decreasing waste, 309
worksheets
5S Evaluation and Improvement, 116–117
CARE Vital Signs, 192–195
Gaining Customer Knowledge, 73–74
interview, 79–81
Measure What Matters, 149–150
Microsystem Assessment Tool, 44
Observation, 74, 76
Patient Value Compass, 155–157
Star Generative Mapping, 272–275
Strategic Performance Balanced Scorecard, 144–145
“Through the Patient’s Eyes,” 72–73
Transition and Handoff, 234–235
value stream mapping, 83
World Health Organization (WHO), on palliative care, 283

Z
Zoomerang, distributing MAT via, 40