

# INDEX

- Academic medical centers (AMCs), 88
- Accessibility, 105–106
- Accountability, 190
- Acute Care Episode (ACE), 10
- Acute myocardial infarction (AMI), 147, 149–150
- Adverse selection, 195–196
- Affordable Care Act (ACA), 11, 56, 62, 81, 112
  - consumer decision-support tools, 125
  - penalties, subsidies, and health plan choice, 124–125
- Agency for Healthcare Research and Quality (AHRQ), 130, 164–166
- Agency theory, 2–3
- Agents, 2–3
- Alternative Quality Contract, 80
- American Hospital Association (AHA), 47, 56, 65, 102
  - Annual Survey, 65–67
- American Life Panel (ALP), 118–119
  - descriptive statistics of, 120, 122–123
  - FL questions in, 119
- Analyses of variance (ANOVA), 49–51
- Arden Health Services Corporation, 10
- Area Health Resources Files (AHRF), 47
  
- Balance billing restrictions, 199
- Baptist Health System (San Antonio, TX), 10
- Binary variables, 34
- Blue Care Network HMO, 5
- BPCI Advanced Model, 13
  
- Breusch–Pagan test for heteroskedasticity, 32
- Bundled payment models
  - choice implications, 18–20
  - early CMS adoption, 5–6
  - early learning dissemination and slow progress (1997–2005), 6–7
  - early payer models, 3–4
  - pioneering innovations (1984–1985), 4
  - private sector adoption and early CMS interest (1986–1989), 4–5
  - reemergence and wide adoption of bundled payments (2005–present), 7–13
- Bundled payment programs
  - clinical levers to increase episode efficiency, 15–16
  - establishing markets for, 16–18
  - factors in determining target price, 15
  - implications of bundled payment model choice, 18–20
  - importance of measuring impact, 16
  - through lens of agency theory, 2–3
  - market catalysts for, 14–15
  - policy recommendations, 13–20
  - prerequisite standard definitions, 13–14
- Bundled Payments for Care Improvement initiative (BPCI initiative), 11–13
- Business imperative, 195
  
- California CABG Outcomes Reporting Program (CCORP), 179

- Capital structure, tradeoff theory of, 62–63
- Captcha functionalities, 110
- CardioVascular Care Providers, Inc. (CVCP), 4
- Centers for Medicare and Medicaid Services (CMS), 4–5, 100–101, 109, 199
  - early CMS adoption, 5–6
- Central line bloodstream infection (CLABSI), 148
- Charge and pricing data compiling issues, 110
- Charge description master (CDM), 105–106
- Chargemaster transparency
  - compliance, 105–106
  - regulation, 109–111
- Chen’s review, 133
- Chi-square test, 104
- Clinical levers to increase episode efficiency, 15–16
- Clinical outcomes, 178
- Cochrane Library, 136
- Coding and analysis, 103–104
- Communities, 45–46
  - stakeholder attributes, 46
- Community orientation (CO), 44–47, 52, 54–55
  - fixed-effects negative binomial regression, 52
- Compensable events, 187–188
- Compensation
  - equitable access to, 194–195
  - full coverage of, 185–186
  - translates improved outcomes to lower premia, 189–190
  - uncertain, 184–185
- Competitive markets, 88–89
- Compliance
  - with and utility of current chargemaster transparency regulation, 109–111
  - chargemaster transparency, 105–106
- Comprehensive Care for Joint Replacement Model (CJR Model), 13
- Consumer
  - engagement, 108, 110–111
  - financial literacy, 118
  - welfare in health care, 87–88
- Contingency table for webpage *vs.* sentiment, 108
- Control variables, 48–49, 168
- Copayments, 116–117
- Coronary Artery Bypass Graft (CABG). *See also* Public reports of CABG outcomes, 4–6, 138–147, 150
- Cost
  - containment, 76–78
  - minimization of outcomes improvement, 189
- Council of Teaching Hospitals and Health Systems (COTH), 48–49
- Critical Access Hospital (CAH), 27, 28–29, 34–35, 37–38, 47
- “Crossing the Quality Chasm”, 130
- Data
  - collection, 183
  - privatization of public hospitals, 47
  - transparency, 138
- Debt, 64
- Deductibles, 116–117
- Defensive medicine, 186
- Definitive stakeholders, 45, 65
- Dependent variable, 48, 67
  - in profitability analysis, 33
- Descriptive statistics, 33, 104–105
  - of ALP, 120, 122–123
- Deterrence, imperfect, 186
- Diagnosis-related group (DRG), 5–6, 31–32, 100

- Doctors Hospital of Dallas (Dallas/  
Fort Worth, TX), 6
- Dormant stakeholders, 45–47
- Early learning dissemination and slow  
progress (1997–2005), 6–7
- Early payer models, 3–4
- Earned Income Tax Credit, 116
- Easy-to-understand quality metric,  
190
- Economic problem in price  
transparency, 81–82
- Economics of price-cutting, 82–84
- Employee safety climate, 159–160
- EndNote Reference Management  
Tool, 136
- Environmental services (EVS),  
158–159, 163, 164, 171
- Episode-based bundled payment  
programs, 1
- Equitable treatment quality, 198–199
- Exclusion/inclusion criteria, 136, 137
- Exorbitant administrative cost, 184
- Expectant stakeholders, 45–46
- Federal Office of Rural Health Policy,  
32
- Federal poverty level (FPL), 116, 123  
FL by income in percentage of, 122
- Federal Trade Commission, 82
- File accessibility issues, 110
- File formatting issues, 110
- Financial literacy (FL), 118  
characteristics of individuals with  
high financial literacy, 123  
by income in percentage of FPL,  
122  
index of, 119  
multivariable regression  
explaining, 124  
multivariable regression of  
predictors of, 123  
questions in ALP, 119
- Fixed-effects negative binomial  
regression, 52, 53
- Food & Nutrition (F&N), 163–164,  
171
- Full coverage of compensation,  
185–186
- Full-text review, 136–137
- “FY 2019 LTCH PPS Final Rule”  
regulation, 101
- Gag clauses, 87
- Geisinger Health System, 7
- Generic Pharmaceutical Association  
(GPhA), 91
- Google Scholar, 132–133
- Government Accountability Office  
(GAO), 26, 79
- Government-owned hospitals. *See*  
Public hospitals
- Group purchasing organizations  
(GPOs), 83
- Hahnemann Hospital, 26
- Health and Human Services, 4–5
- Health care, 130
- Health Care and Education  
Reconciliation Act, 10
- Health Care Financing  
Administration (HCFA),  
5–6
- Health Care Incentive Improvement  
Newsletter*, 81
- Health Care Incentives Improvement  
Institute (HCI3), 8
- Health Care Payment Learning and  
Action Network, 14–15
- Health care product markets, 88–89  
competitive markets, 88–89  
inevitable monopoly, 89  
oligopoly, unstable and stable, 89
- Health insurance, 116  
analyses, 120–122  
characteristics of individuals with  
high FL, 123

- characteristics of respondents, 121
- choices, 118, 125
- descriptive statistics, 122–123
- descriptive statistics of ALP
  - sample, 120
- differences by income group, 123
- discussion, 124–126
- employer-sponsored, 117
- exchanges, 117
- FL by income in percentage of FPL, 122
- FL questions in ALP, 119
- index of FL, 119
- insurance status and income, 119–120
- limitations, 125–126
- literacy, 118
- multivariable regression explaining
  - financial literacy, 124
- multivariable regression of
  - predictors of financial literacy, 123
- study sample, 118–119
- Health Maintenance Organization (HMO), 5
- Health plan choice, 116–117
- Health service area (HSA), 49
- Health status, 166
- Health care quality, 131
- Healthcare Cost Report Information System, 32
- Heart failure (HF), 147–148
- Herfindahl–Hirschman Index (HHI), 34, 49
- Hidden price discrimination, 84
- “High leverage” hospitals, 67
- High-deductible health plans (HDHPs), 77, 80, 91–94
- High-risk
  - patients, 198
  - physicians, 197–198
- Highly salient stakeholders. *See* Definitive stakeholders
- Hospital Compare, 111
- Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), 102–103
- Hospital Outpatient Prospective Payment System (OPPS), 100
- Hospital quality, 133, 135–136, 138, 149, 152
- Hospital Readmission Reduction program, 66
- Hospitals, 26
  - selection, 102–103
  - system, 64–67
- Impact measurement, 16
- Improved provider-patient matching, 193
- Incentives for patients to invest in risk reduction, 193–194
- Incidence rate ratios (IRRs), 50
- Independent variable, 48, 67
- Individual safety perception, 166
- Inevitable monopoly, 89
- Innovations (1984–1985), 4
- Insurance against adverse outcomes, 186–187
- Internal consistency alphas, 168
- Joint tests, 50
- Kaiser Permanente, 103
- Knowledge gaps, 131
- Legitimacy, 45
- Leverage
  - barriers to optimal, 63–64
  - difference-in-difference estimates of changes in, 70
  - independent NFP hospital leverage, 68
- Licensing requirements, 199
- Local Area Unemployment Statistics (LAUS), 47

- Lovelace Health System  
(Albuquerque, NM), 10
- “Low-leverage” hospitals, 67
- Low-risk patients, 180–181
- Low-use equilibrium, 182–183
- Low-volume providers, 196–197
- Malpractice liability, 192  
quality assurance through medical,  
183–186
- Management problem in price  
transparency, 82
- Market  
catalysts for bundled payment  
programs, 14–15  
competition, 79, 83–84, 89, 93  
establishment for bundled payment  
programs, 16–18
- Massachusetts Data Analysis Center  
(Mass-DAC), 179
- “Mechanical Turks”, 112–113
- Medicaid, 26–27, 85, 111, 116  
expansion, 27–29, 30  
programs, 27–29
- Medical care attributes, 178
- Medical Eye Associates and Cataract  
Eye Center (Cleveland,  
OH), 6
- Medicare, 1–2, 26–27, 30, 85,  
111  
fee-for service, 7–8  
programs, 28, 37  
Value-Based Purchasing program,  
66
- Medicare Advantage penetration, 49
- Medicare Cost Reports. *See*  
Healthcare Cost Report  
Information System
- Medicare Dependent Hospital  
(MDH), 27–29, 37  
estimated coefficients, 36–37
- Medicare Participating Heart Bypass  
Center Demonstration, 5–6
- Medicare Payment Advisory  
Commission (MedPAC),  
8–11
- Medicare Prospective Payment  
System (PPS), 27, 37–38
- Medicare Severity Diagnosis-Related  
Groups (MS-DRGs), 9–10
- Medicare Trust Fund, 38–39
- Methodist Hospital (Indianapolis,  
IN), 6
- Minnesota Community Measurement  
Transparency  
Collaborative, 78
- Moderately salient stakeholders. *See*  
Expectant stakeholders
- Monopoly  
inevitable, 89  
price discrimination under, 86
- Moral hazard, 196
- Mortality relationship with  
transparency, 139–141
- Multiple principal–agent  
relationships, 2
- Multivariable regression  
explaining FL, 124  
of predictors of FL, 123
- National Center for Health Statistics  
(NCHS), 164–166
- National Commission on Physician  
Payment Reform, 3
- National Health and Nutrition  
Examination Surveys,  
164–166
- National Institute for Occupational  
Safety and Health  
(NIOSH), 160–161  
Organization of Work on  
Occupational Safety and  
Health framework, 161
- National Nursing Home Survey,  
164–166
- Negligence rule, 183–184

- New Jersey Department of Health and Senior Services Registry (NJDHSS), 179
- New York Cardiac Surgery Reporting System (NY-CSRS), 179
- NIOSH occupational safety and health framework, 160–164, 170
- support service workers, 163–164
- Nonoperating income, 34–35
- Not-for-profit hospitals (NFP hospitals), 6, 44, 54, 62, 65, 50–52
- analysis, 66
- data and sample, 65–66
- difference-in-difference estimates of changes in leverage, 70
- discussion, 71–72
- independent NFP hospital leverage, 68
- kernel density plot of propensity scores, 69
- measurement, 67
- preacquisition hospital characteristics, 68
- results, 68–70
- Occupancy rate, 31, 31
- Occupational injury, 158
- data analysis, 168
- descriptive statistics, correlations, and scale reliabilities, 167
- discussion, 170–171
- limitations, 171
- measurement, 164–168
- NIOSH occupational safety and health framework, 160–164
- relationship of safety and unit leadership, 169
- results, 168–169
- sample demographics, 164, 165
- Oligopoly, unstable and stable, 89
- Oncology Care Model (OCM), 13
- Optimal coverage amount, 192
- Optimal investment in outcomes improvement, 188–189
- Optimal risk sharing, 191–192
- Organizational safety leadership, 166
- Out-of-pocket limits, 116–117
- Outcome warranties. *See also* Public reports of CABG outcomes; Quality assurance through medical malpractice liability, 178
- accountability, 190
- adverse selection, 195–196
- balance billing restrictions, 199
- business imperative, 195
- compensable events, 187–188
- competition translates improved outcomes to lower premia, 189–190
- considerations for regulators, 199
- easy-to-understand quality metric, 190
- equitable access to compensation, 194–195
- equitable treatment quality, 198–199
- high-risk patients, 198
- high-risk physicians, 197–198
- incentives for patients to invest in risk reduction, 193–194
- insurance against adverse outcomes, 186–187
- licensing requirements, 199
- low-volume providers, 196–197
- minimization of cost of outcomes improvement, 189
- moral hazard, 196
- optimal coverage amount, 192
- optimal investment in outcomes improvement, 188–189
- optimal risk sharing, 191–192
- provider specialization and improved provider-patient matching, 193

- quality revelation through PRCs, 179–180
- risk selection, 194
- third-party verification, 196
- trade-off of mortality risk reductions, 193
- Outcomes improvement
  - competition translates improved outcomes to lower premia, 189–190
  - cost minimization of, 189
  - optimal investment in, 188–189
- Participating Centers of Excellence
  - Demonstration for Orthopedic and Cardiovascular Services, 7
- Patient Protection and Affordable Care Act (PPACA), 10, 27, 44–45, 112, 116
- Payments for care, 1
- Pennsylvania Health Care Cost Containment Council (PHC4), 179
- Percutaneous coronary intervention (PCI), 147, 149–150
- Percutaneous transluminal coronary angioplasty (PTCA), 181
- Personal or institutional practices
  - negative effect on, 147
  - no effect on, 147
  - positive effect on, 138–147
- Physical hazards, 162
- Physician–hospital organizations (PHOs), 9–10
- Pneumonia (PN), 147–148
- Policymakers, 150
- Poor matching of patients to
  - Providers and Procedures, 181–182
- Post-acute care settings (PAC settings), 9
- Power, 45
- Preferred reporting items for systematic reviews and meta-analyses (PRISMA), 135
- Preoperative expectation of discharge home, 18–19
- Prerequisite standard definitions, 13–14
- Price discrimination, 85–87
  - hidden, 84
  - hospitals in, 101
  - under monopoly or stable cartels, 86
  - under unstable oligopoly, 86–87
- Price transparency. *See also* Transparency, 76, 100
  - challenges facing pricing transparency solution, 111–112
  - chargemaster transparency compliance and accessibility, 105–106
  - classifying health care product markets, 88–89
  - coding and analysis, 103–104
  - compliance with and utility of current chargemaster transparency regulation, 109–111
  - consumer welfare in health care, 87–88
  - contingency table for webpage *vs.* sentiment, 108
  - cost containment, 76–78
  - descriptive statistics, 104–105
  - differences in real markets with real patients, 85
  - economic problem, 81–82
  - economics of price-cutting, 82–84
  - harms, 92–93
  - helps, 91–92
  - hidden price discrimination, 84
  - hospital selection, 102–103
  - interpretation of results, 108–109

- limitations and future directions, 113
- limits on impact, 80
- management problem, 82
- policy and management, 93–94
- review of literature, 78–80
- selected illustrative quotes, 107
- sentiment analysis, 106–107, 111
- sentiment of homepage vs. price transparency page, 107–108
- US hospital characteristics, 105
- webpage selection, 103
- Price-cutting, economics of, 82–84
- Pricing transparency webpage
  - identification, 109
- Primary care markets, 89
- Private for-profit hospitals
  - (FP hospitals), 44, 46–47, 50–52, 54
  - fixed-effects negative binomial regression, 53
- Private sector adoption and early CMS interest (1986–1989), 4–5
- Privatization of public hospitals, 44
  - analysis, 49–50
  - conceptual framework and hypotheses, 45–47
  - cross-tabulations and analysis of variance, 51
  - data, 47
  - directions for future research, 56
  - discussion, 54–57
  - fixed-effects negative binomial regression, 52, 53
  - limitations of study, 56
  - managerial, policy, and research implications, 56–57
  - results, 50–54
  - variables, 48–49
- Producers, 83
- Profit, 27
  - model, 30–32
- Profitability of rural hospitals
  - conceptual framework, 27–30
  - descriptive statistics, 33
  - discussion, 37–40
  - mean values, 35
  - Medicare programs targeted for rural hospitals, 28
  - methods, 32–34
  - ordinary least squares regression estimates, operating margin, and total margin, 36
  - policy implications, 39–40
  - profit model, 30–32
  - results, 34–37
- Program evaluation, 16
- PROMETHEUS program, 8–9
- ProvenCare, 7
- Provider report cards (PRCs), 179, 182
  - quality revelation through, 179–180
- Provider(s), 83
  - factors, 15
  - facts, 182
  - specialization, 193
- Psychological stressors, 162
- Public health agencies, 150
- Public Health Service Act, 101
- Public hospitals, 44
- Public release, 130–133, 138–147, 149–150
- Public reporting
  - impact, 138–147
  - of quality measures, 130–131
- Public reports of CABG outcomes. *See also* Coronary Artery Bypass Graft (CABG); Outcome warranties, 179
  - costly data collection, 183
  - low-use equilibrium, 182–183
  - no guarantee of future performance, 179–180



- poor matching of patients to providers and procedures, 181–182
  - risk selection, 180–183
  - upcoding, 181
- PubMed, 29, 132–133, 136
- Quality assurance through medical malpractice liability.
  - See also* Outcome warranties, 183–186
  - defensive medicine, 186
  - exorbitant administrative cost, 184
  - full coverage, 185–186
  - imperfect deterrence, 186
  - negligence rule, 183–184
  - uncertain compensation, 184–185
- Quality of care, 130
- RAND Corporation, 7–9
- Rate of injury, 166
- Reemergence of bundled payments (2005–Present), 7–13
- Regulators, 199
- Request for proposals (RFP), 9–10
- Research questions (RQ), 131–132
- Risk selection, 180–183, 194
- Risk-adjusted mortality rates (RAMRs), 181–182
- Robert Wood Johnson Foundation (RWJF), 8
- Roux-en-Y gastric bypass (RYGB) surgery, 188, 193
- Rural Referral Center (RRC), 27–29, 34–35, 37–38
  - estimated coefficients, 36–37
- Rural-Urban Commuting Area (RUCA), 32
- Safety and health services and programs, 163
- Saint Joseph’s Hospital (Atlanta, GA), 6
- Sample means, 168
- Scopus, 136
- Search strategy, 135–136
- Searched, databases, 136
- Searchers, 78
- Sellers, 86–87
- Sentiment
  - contingency table for, 108
  - of homepage *vs.* price transparency page, 107–108
- Sentiment analysis, 101, 106–107
  - and effect on consumer behavior, 111
- Severity-of-illness (SOI), 88
- “Shoppable” services, 77, 100
- “Silver bullet” solutions, 80
- Society of General Internal Medicine, 3
- Sole Community Hospital (SCH), 27–29, 37
  - estimated coefficients, 36–37
- Southwestern Eye Center (Phoenix, AZ), 6
- St. Joseph Mercy Hospital (Ann Arbor, MI), 6
- St. Luke’s Episcopal Hospital (Houston, TX), 6
- St. Vincent’s Hospital (Portland, OR), 6
- Stable cartels, price discrimination under, 86
- Stable oligopoly, 89
- Standard deviations, 168
- Strategic responses by competitors, 82
- “Structure, process, outcome” model, 78
- Supervisor safety leadership, 166
- Supervisor support, 166
- Support service workers, 163–164
- Surveys on Patient Safety Culture™ (SOPS™) Hospital Survey* leadership, 164–166, 171
- System membership, 31, 39–40
  - benefits, 64–65

- Systematic review on transparency, 131–136, 149–150, 152
- Target price, 15
- Tax-exempt debt, 62–63
- Teaching hospitals, 31, 34
- Tenet Corporation, Exempla Saint Joseph Hospital (Denver, CO), 10
- Texas Heart Institute (THI), 4–5
- The Ohio State University (Columbus, OH), 6
- Third-party insurers, 197
- Third-party verification, 196
- Trade-off of mortality risk reductions, 193
- Tradeoff theory of capital structure, 62–63
- Transparency. *See also* Price transparency, 103–104, 130–131  
 conceptual framework, 131–132  
 data transparency, 138  
 databases searched, 136  
 discussion and recommendations, 149–151  
 effect on quality and type of quality measure, 147–148  
 exclusion/inclusion criteria, 136, 137  
 full-text review, 136–137  
 future recommendations, 151–152  
 new contribution, 133  
 previous studies, 132–134  
 public reporting impact, 138–147  
 of quality-of-care data, 131  
 relationship with mortality, 139–141  
 relationship with other quality measures, 142–146  
 search strategy, 135–136
- Twenty-one care episodes, 8
- U.S. Institute of Medicine (IOM), 130
- Uncompensated care, 27
- Unemployment, 34
- Unit safety grade, 166
- United States Department of Health and Human Services (USDHHS), 1–2, 164–166
- University Hospital (Boston, MA), 6
- Unstable oligopoly, 89  
 price discrimination under, 86–87
- Upcoding, 181
- “Urban” markets, 76
- Urgency, 45
- “Value-based purchasing” initiatives, 149
- Variables, 35–36  
 control, 48–49  
 dependent, 48  
 fixed-effects negative binomial regression, 53  
 independent, 48
- Variance inflation factor (VIF), 168–169
- Web of Science, 132–133, 136
- Webpage  
 contingency table for, 108  
 as PDF, 119  
 selection, 103
- Wide adoption of bundled payments (2005–Present), 7–13
- Work injury, 170
- Work unit culture, 166
- Workplace violence, 158–159
- Workplace-related injury, 158
- Zero-order correlations, 168