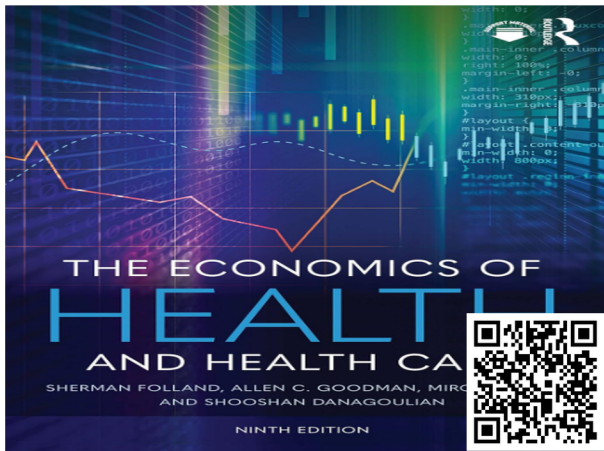


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# THE ECONOMICS OF HEALTH AND HEALTH CARE

SHERMAN FOLLAND, ALLEN C. GOODMAN, MIRON STANO,  
AND SHOOSHAN DANAGOULIAN

NINTH EDITION

# The Economics of Health and Health Care

*The Economics of Health and Health Care* is the market-leading health economics textbook, providing comprehensive coverage of all the key topics, and balancing economic theory, empirical evidence, and public policy.

The ninth edition offers updated material throughout, including two new chapters: Disparities in Health and Health Care (Chapter 7) examines issues of race, ethnicity, income, gender, and geography with respect to health care access, health inputs, and health outcomes; Pandemic Economics (Chapter 9) introduces a new and simplified economic treatment of epidemics and pandemics within the context of COVID-19. We also include applications from the growing literature on digital medicine. The book further highlights the impacts of the Affordable Care Act (ACA) and updates its path-breaking comparative analyses across countries to focus on the differences in access and costs.

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9<sup>th</sup> Edition

Sherman Folland, Allen C. Goodman,  
Miron Stano, and Shooshan Danagoulian

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# Contents

List of Figures	xxi
List of Tables	xxv
Preface	xxvii
Acknowledgments	xxxix
<b>Part I Basic Economics Tools</b>	<b>1</b>
<b>1 Introduction</b>	<b>3</b>
<b>What Is Health Economics?</b>	<b>4</b>
<b>The Relevance of Health Economics</b>	<b>6</b>
<i>The Size and Scope of the Health Economy</i>	6
<i>Health Care Spending in Other Countries</i>	7
<i>Importance of the Health Economy in Personal Spending</i>	7
<i>Importance of Labor and Capital in the Health Economy</i>	8
<i>Time: The Ultimate Resource</i>	9
<i>The Importance Attached to Economic Problems of Health Care Delivery</i>	10
<i>Inflation</i>	11
<i>Access</i>	11
<i>Quality</i>	12
<i>The Economic Side to Other Health Issues</i>	12
<b>Economic Methods and Examples of Analysis</b>	<b>12</b>
<i>Features of Economic Analysis</i>	13
<i>Scarcity of Resources</i>	13
<i>Rational Decision Making</i>	13
<i>Marginal Analysis</i>	13
<i>Use of Models</i>	13
<b>Two Notable Contributors to Health Economics</b>	<b>14</b>
<b>Does Economics Apply to Health and Health Care?</b>	<b>14</b>
<i>An Example: Does Price Matter?</i>	15
<b>Is Health Care Different?</b>	<b>16</b>
<i>Disparities, Equity, and Need</i>	16
<i>Presence and Extent of Uncertainty</i>	16
<i>Prominence of Insurance</i>	17
<i>Problems of Information</i>	18

Contents

<i>Restrictions on Competition</i>	18
<i>Government Subsidies and Public Provision</i>	19
<b>Conclusions</b>	<b>19</b>
<b>Summary</b>	<b>20</b>
<b>Discussion Questions</b>	<b>21</b>
<b>Exercises</b>	<b>21</b>
<b>2 Microeconomic Tools for Health Economics</b>	<b>25</b>
<b>Scarcity and the Production Possibilities Frontier</b>	<b>26</b>
<b>Practice with Supply and Demand</b>	<b>29</b>
<i>The Demand Curve and Demand Shifters</i>	29
<i>The Supply Curve and Supply Shifters</i>	30
<i>Equilibrium</i>	30
<i>Comparative Statics</i>	31
<b>Functions and Curves</b>	<b>32</b>
<i>Linear Functions</i>	32
<i>Demand Functions</i>	33
<i>Derived Demand</i>	34
<b>Consumer Theory: Ideas behind the Demand Curve</b>	<b>34</b>
<i>Utility</i>	34
<i>Indifference Curves</i>	36
<i>Budget Constraints</i>	37
<i>Consumer Equilibrium</i>	38
<b>Individual and Market Demands</b>	<b>38</b>
<b>Elasticities</b>	<b>39</b>
<b>Production and Market Supply</b>	<b>41</b>
<i>The Production Function</i>	42
<i>Special Production Functions</i>	43
<i>Isocost Curves</i>	45
<i>Cost Minimization or Output Maximization</i>	46
<i>Marginal and Average Cost Curves</i>	47
<b>The Firm Supply Curve under Perfect Competition</b>	<b>47</b>
<i>Monopoly and Other Market Structures</i>	50
<b>Externalities</b>	<b>53</b>
<b>Conclusions</b>	<b>54</b>
<b>Summary</b>	<b>55</b>
<b>Discussion Questions</b>	<b>56</b>
<b>Exercises</b>	<b>56</b>
<b>3 Statistical Tools for Health Economics</b>	<b>58</b>
<b>Hypothesis Testing</b>	<b>59</b>
<b>Difference of Means</b>	<b>60</b>
<i>The Variance of a Distribution</i>	61
<i>Standard Error of the Mean</i>	62
<i>Hypotheses and Inferences</i>	63
<b>Regression Analysis</b>	<b>64</b>
<i>Ordinary Least Squares (OLS) Regressions</i>	65

<i>A Simple Regression</i>	66
<i>Estimating Elasticities</i>	67
<i>Dummy (Binary) Variables</i>	67
<b>Multiple Regression Analysis</b>	<b>68</b>
<i>Interpreting Regression Coefficients</i>	69
<i>Difference-in-Differences Estimation</i>	71
<b>Statistical Inference in the Sciences and Social Sciences</b>	<b>73</b>
<b>Conclusions</b>	<b>74</b>
<b>Summary</b>	<b>74</b>
<b>Discussion Questions</b>	<b>75</b>
<b>Exercises</b>	<b>75</b>
<b>Part II Population Health</b>	<b>79</b>
<b>4 Production of Health</b>	<b>81</b>
<b>The Production Function of Health</b>	<b>82</b>
<b>The Historical Role of Medicine and Health Care</b>	<b>84</b>
<i>The Rising Population and the Role of Medicine</i>	84
<i>What Caused the Mortality Rate Declines? Was It Medicine?</i>	86
<i>What Lessons Can We Learn from Medical History?</i>	90
<b>The Production Function of Health in the Modern Day</b>	<b>91</b>
<i>Preliminary Issues</i>	91
<i>The Contribution of Health Care to Population Health:</i>	
<i>The Modern Era</i>	91
<i>Is Health Care Worth It?</i>	93
<i>On the Effect of Social Health Insurance</i>	94
<i>The World's Pharmacies</i>	96
<b>Do Other Measures of Health Care Affect Health?</b>	<b>96</b>
<i>On the Importance of Lifestyle and Environment</i>	96
<i>Cigarettes, Exercise, and a Good Night's Sleep</i>	97
<i>The Family as Producer of Health</i>	98
<i>Social Capital and Health</i>	99
<i>Environmental Impact on Health</i>	99
<i>Income and Health</i>	101
<b>The Role of Schooling</b>	<b>101</b>
<i>Two Theories about the Role of Schooling</i>	102
<i>Empirical Studies on the Role of Schooling in Health</i>	102
<b>Conclusions</b>	<b>102</b>
<b>Summary</b>	<b>103</b>
<b>Discussion Questions</b>	<b>103</b>
<b>Exercises</b>	<b>104</b>
<b>5 Demand for Health Capital</b>	<b>106</b>
<b>The Demand for Health</b>	<b>107</b>
<i>The Consumer as Health Producer</i>	107
<i>Time Spent Producing Health</i>	108

Contents

<b>Labor–Leisure Trade-Offs</b>	<b>109</b>
<i>Trading Leisure for Wages</i>	109
<i>Preferences between Leisure and Income</i>	110
<b>The Investment/Consumption Aspects of Health</b>	<b>111</b>
<i>Production of Healthy Days</i>	111
<i>Production of Health and Home Goods</i>	112
<b>Investment over Time</b>	<b>113</b>
<i>The Cost of Capital</i>	113
<b>The Demand for Health Capital</b>	<b>114</b>
<i>Marginal Efficiency of Investment and Rate of Return</i>	114
<i>The Decreasing MEI</i>	115
<b>Changes in Equilibrium: Age, Wage, and Education</b>	<b>115</b>
<i>Age</i>	115
<i>Wage Rate</i>	117
<i>Education</i>	117
<b>Empirical Analyses Using Grossman’s Model</b>	<b>118</b>
<b>Obesity: The Deterioration of Health Capital</b>	<b>120</b>
<i>Economic Costs of Obesity</i>	121
<i>Why Has Obesity Increased?</i>	124
<b>Conclusions</b>	<b>125</b>
<b>Summary</b>	<b>125</b>
<b>Discussion Questions</b>	<b>126</b>
<b>Exercises</b>	<b>126</b>
<b>6 Economic Efficiency and Cost–Benefit Analysis</b>	<b>128</b>
<b>Economic Efficiency</b>	<b>129</b>
<b>Background to Evaluation Analyses</b>	<b>131</b>
<b>Measuring Benefits and Costs</b>	<b>131</b>
<i>Risk Equity versus Equality of Marginal Costs Per Life Saved</i>	133
<i>Marginal Analysis in CBA</i>	135
<i>Discounting</i>	137
<i>Risk Adjustment and CBA</i>	139
<i>Distributional Adjustments</i>	140
<i>Inflation</i>	140
<b>Valuing Human Life</b>	<b>140</b>
<i>Willingness to Pay and Willingness to Accept</i>	140
<i>Contingent Valuation</i>	141
<i>How Valuable Is the Last Year of Life?</i>	141
<i>Cost–Benefit Analyses of Heart Care Treatment</i>	142
<b>Cost-Effectiveness Analysis</b>	<b>143</b>
<i>Advantages of CEA</i>	143
<b>Cost–Utility Analysis, QALYs, and DALYs</b>	<b>144</b>
<b>QALYs Revisited: Praise and Criticism</b>	<b>146</b>
<i>Extra-Welfarism</i>	146
<i>What People Think</i>	147
<i>The Ageism Critique</i>	147
<i>Use of QALYs in Evaluation</i>	147

Conclusions	148
Summary	149
Discussion Questions	149
Exercises	150
Appendix: Discounting	152
<b>7 Disparities in Health and Health Care</b>	<b>154</b>
<b>Disparity in the United States</b>	<b>155</b>
<i>Disparities in Health and Health Outcomes</i>	155
<b>Definitions and Economic Theory</b>	<b>158</b>
<i>Direct and Indirect Effects</i>	158
<i>Grossman Model and Disparity</i>	162
<i>Empirical Evidence of Disparity</i>	163
<b>Measuring Disparities</b>	<b>167</b>
<i>Measuring Bias</i>	167
<i>Measuring Mistrust and John Henryism</i>	168
<i>Measuring Disparity in Quantity and Quality of Care</i>	169
<i>Measuring Disparity in Health</i>	170
<i>Disparities in Health Care Access and Delivery in       Other Countries</i>	171
<b>Differences Which Are Not Disparities</b>	<b>171</b>
<b>Addressing Disparities</b>	<b>173</b>
<i>Equality in Health and Health Care</i>	174
<i>Equity</i>	175
<b>Conclusions</b>	<b>180</b>
<b>Summary</b>	<b>180</b>
<b>Discussion Questions</b>	<b>181</b>
<b>Exercises</b>	<b>181</b>
<b>8 The Health Economics of Bads</b>	<b>183</b>
<b>An Introduction to Bads</b>	<b>184</b>
<b>Models of Addiction</b>	<b>187</b>
<i>Imperfectly Rational Addiction Models</i>	187
<i>Myopic Addiction Models</i>	187
<i>Rational Addiction</i>	187
<b>Rationales for Public Intervention</b>	<b>190</b>
<b>Advertising Restrictions on Cigarettes and Alcohol</b>	<b>190</b>
<i>The Possible Effects of Brand Switching</i>	192
<i>Increased Demand or Brand Switching?</i>	193
<i>Advertising and Alcohol Consumption</i>	193
<i>Advertising and Opioid Consumption</i>	194
<b>Taxes and Consumption of Cigarettes and Alcohol</b>	<b>194</b>
<i>The Consumption-Reducing Effects of Taxes in Theory</i>	194
<i>Taxes and Cigarette Consumption in Practice</i>	195
<i>Taxes and Alcohol Consumption</i>	196
<b>Regulation of Production and Consumption of Alcohol and Drugs</b>	<b>197</b>
<i>Regulation of Smoking</i>	197

Contents

<i>Regulation of Consumption of Alcohol</i>	198
<i>Regulation of Drugs and Opioids</i>	198
<b>Conclusions</b>	<b>201</b>
<b>Summary</b>	<b>201</b>
<b>Discussion Questions</b>	<b>202</b>
<b>Exercises</b>	<b>202</b>
<b>9 Pandemic Economics</b>	<b>204</b>
<b>Pandemic Economics</b>	<b>204</b>
<b>Determinants of Pandemics</b>	<b>205</b>
<b>Epidemics versus Pandemics</b>	<b>206</b>
<b>Epidemic as an Economic Externality</b>	<b>207</b>
<b>Vaccine Externalities</b>	<b>209</b>
<b>Two Models of Epidemics: Tax or War?</b>	<b>210</b>
<b>Policies to Fight Pandemics</b>	<b>215</b>
<b>Pandemic Direct and Indirect Costs</b>	<b>216</b>
<b>Equity, Race, and Ethnicity Issues</b>	<b>216</b>
<b>Case Study: COVID-19</b>	<b>217</b>
<i>How It Started</i>	217
<i>Direct Costs of Treating the Disease</i>	220
<i>Costs Related to Mortality and Morbidity</i>	220
<i>Education</i>	222
<i>Caring for the Elderly</i>	224
<i>Equity and Race</i>	225
<i>Was the Cure Worse than the Disease?</i>	226
<b>Conclusions</b>	<b>228</b>
<b>Summary</b>	<b>228</b>
<b>Discussion Questions</b>	<b>229</b>
<b>Exercises</b>	<b>229</b>
<b>Part III Supply and Demand</b>	<b>231</b>
<b>10 The Production, Cost, and Technology of Health Care</b>	<b>233</b>
<b>Production and the Possibilities for Substitution</b>	<b>234</b>
<i>Substitution</i>	234
<i>What Degree of Substitution Is Possible?</i>	235
<i>Elasticity of Substitution</i>	236
<i>Estimates for Hospital Care</i>	238
<b>Costs in Theory and Practice</b>	<b>238</b>
<i>Deriving the Cost Function</i>	238
<i>Cost Minimization</i>	239
<i>Economies of Scale and Scope</i>	240
<i>Why Would Economies of Scale and Scope Be Important?</i>	241
<i>Empirical Cost-Function Studies</i>	242
<i>Difficulties Faced By All Hospital Cost Studies</i>	243
<i>Modern Results</i>	244

<b>Technical and Allocative Inefficiency</b>	<b>244</b>
<i>Technical Inefficiency</i>	244
<i>Allocative Inefficiency</i>	245
<i>Frontier Analysis</i>	246
<i>The Uses of Hospital Efficiency Studies</i>	248
<i>Efficiency and Hospital Quality</i>	248
<b>Technological Changes and Costs</b>	<b>249</b>
<i>Technological Change: Cost Increasing or Decreasing?</i>	250
<i>Health Care Price Increases When Technological Change Occurs</i>	251
<b>Diffusion of New Health Care Technologies</b>	<b>253</b>
<b>Other Factors That May Affect Adoption Rates</b>	<b>254</b>
<b>Conclusions</b>	<b>255</b>
<b>Summary</b>	<b>255</b>
<b>Discussion Questions</b>	<b>256</b>
<b>Exercises</b>	<b>256</b>
<b>11 Consumer Choice and Demand</b>	<b>258</b>
<b>Applying the Standard Budget Constraint Model</b>	<b>259</b>
<i>The Consumer's Equilibrium</i>	261
<i>Demand Shifters</i>	262
<i>Health Status and Demand</i>	264
<b>Two Additional Demand Shifters: Time and Coinsurance</b>	<b>265</b>
<i>The Role of Time</i>	265
<i>The Role of Coinsurance</i>	267
<b>Issues in Measuring Health Care Demand</b>	<b>269</b>
<i>Individual and Market Demand Functions</i>	269
<i>Measurement and Definitions</i>	270
<i>Differences in the Study Populations</i>	270
<i>Data Sources</i>	270
<i>Experimental and Nonexperimental Data</i>	271
<b>Empirical Measurements of Demand Elasticities</b>	<b>272</b>
<i>Price Elasticities</i>	272
<i>Individual Income Elasticities</i>	272
<i>Income Elasticities over Time and across Countries</i>	273
<i>Insurance Elasticities</i>	274
<i>Demand Elasticities and Aggregate Expenditures</i>	276
<b>Other Variables Affecting Demand</b>	<b>276</b>
<i>Ethnicity and Gender</i>	276
<i>Urban versus Rural</i>	277
<i>Education</i>	277
<i>Age, Health Status, and Uncertainty</i>	278
<b>Behavioral Economics and Health Care Demand</b>	<b>278</b>
<i>Framing Bias</i>	279
<i>Present Bias</i>	280
<i>Inertia Bias</i>	280
<b>Modeling Consumer Choice with Behavioral Hazard</b>	<b>280</b>
<b>Conclusions</b>	<b>281</b>

Contents

<b>Summary</b>	<b>283</b>
<b>Discussion Questions</b>	<b>284</b>
<b>Exercises</b>	<b>285</b>
<b>Part IV Information and Insurance Markets</b>	<b>287</b>
<b>12 Asymmetric Information and Agency</b>	<b>289</b>
<b>Overview of Information Issues</b>	<b>290</b>
<b>Asymmetric Information</b>	<b>290</b>
<i>On the Extent of Information Problems in the Health Sector</i>	291
<i>Asymmetric Information in the Used-Car Market: The Lemons Principle</i>	293
<b>Application of the Lemons Principle: Health Insurance</b>	<b>295</b>
<i>Inefficiencies of Adverse Selection</i>	296
<i>The Affordable Care Act and Adverse Selection</i>	296
<i>Experience Rating and Adverse Selection</i>	297
<b>The Agency Relationship</b>	<b>298</b>
<i>Agency and Health Care</i>	298
<b>Consumer Information, Prices, and Quality</b>	<b>300</b>
<i>Consumer Information and Prices</i>	300
<i>Consumer Information and Quality</i>	302
<i>Other Quality Indicators</i>	303
<b>Conclusions</b>	<b>305</b>
<b>Summary</b>	<b>306</b>
<b>Discussion Questions</b>	<b>307</b>
<b>Exercises</b>	<b>308</b>
<b>13 Demand and Supply of Health Insurance</b>	<b>309</b>
<b>What Is Insurance?</b>	<b>310</b>
<i>Insurance versus Social Insurance</i>	310
<i>Insurance Terminology</i>	311
<b>Risk and Insurance</b>	<b>311</b>
<i>Expected Value</i>	312
<i>Marginal Utility of Wealth and Risk Aversion</i>	312
<i>Purchasing Insurance</i>	315
<b>The Demand for Insurance</b>	<b>316</b>
<i>How Much Insurance?</i>	316
<i>Changes in Premiums</i>	318
<i>Changes in Expected Loss</i>	319
<i>Changes in Wealth</i>	319
<b>The Supply of Insurance</b>	<b>320</b>
<i>Competition and Normal Profits</i>	320
<i>The Optimal Level of Coverage</i>	321
<b>The Case of Moral Hazard</b>	<b>322</b>
<i>Demand for Care and Moral Hazard</i>	323
<i>Effects of Coinsurance and Deductibles</i>	325

<b>Health Insurance and the Efficient Allocation of Resources</b>	<b>325</b>
<i>The Impact of Coinsurance</i>	326
<i>The Demand for Insurance and the Price of Care</i>	329
<b>Income Transfer Effects of Insurance</b>	<b>330</b>
<b>The Welfare Loss of Excess Health Insurance</b>	<b>333</b>
<b>Conclusions</b>	<b>335</b>
<b>Summary</b>	<b>335</b>
<b>Discussion Questions</b>	<b>336</b>
<b>Exercises</b>	<b>336</b>
<b>14 The Organization of Health Insurance Markets</b>	<b>339</b>
<b>Loading Costs and the Behavior of Insurance Firms</b>	<b>340</b>
<i>Impacts of Loading Costs</i>	340
<i>Insurance for Heart Attacks and Hangnails</i>	341
<i>Loading Costs and the Uninsured</i>	341
<b>Employer Provision of Health Insurance: Who Pays?</b>	<b>343</b>
<i>How the Tax System Influences Health Insurance Demand</i>	346
<i>Who Pays the Compensating Differentials? Empirical Tests</i>	347
<i>Other Impacts of Employer Provision of Health Insurance</i>	348
<b>Employer-Based Health Insurance and Labor Supply</b>	<b>350</b>
<i>Health Insurance and Retirement</i>	350
<i>Health Insurance and Mobility</i>	350
<b>The Market for Insurance</b>	<b>352</b>
<i>The Market for Private Insurance</i>	353
<i>Insurance Practices</i>	353
<i>Health Insurance Markets Since the 1980s</i>	355
<b>The Uninsured: An Analytical Framework</b>	<b>356</b>
<i>The Working Uninsured</i>	356
<i>The Impacts of Mandated Coverage</i>	357
<b>Impacts of the Affordable Care Act on the Uninsured</b>	<b>358</b>
<i>Elements of the ACA</i>	358
<i>Evidence on the Impact of the ACA on the Uninsured</i>	359
<b>Conclusions</b>	<b>360</b>
<b>Summary</b>	<b>362</b>
<b>Discussion Questions</b>	<b>362</b>
<b>Exercises</b>	<b>363</b>
<b>15 Managed Care</b>	<b>365</b>
<b>What Is the Organizational Structure?</b>	<b>367</b>
<b>What Are the Characteristics of Managed Care?</b>	<b>368</b>
<b>The Emergence of Managed Care Plans</b>	<b>369</b>
<i>Employer-Sponsored Managed Care Plans</i>	369
<i>Medicaid and Medicare Managed Care Plans</i>	371
<i>Managed Care Contracts with Physicians</i>	372
<i>Managed Care Contracts with Hospitals</i>	373

Contents

<b>Development and Growth of Managed Care: Why Did It Take So Long?</b>	<b>373</b>
<i>Federal Policy and the Growth of Managed Care</i>	374
<i>The Economics of Managed Care</i>	374
<b>Modeling Managed Care</b>	<b>375</b>
<i>Modeling Individual HMOs</i>	375
<i>How Much Care?</i>	376
<i>What Types of Care?</i>	377
<i>Framework for Prediction</i>	377
<i>Where Managed Care Differs from FFS: Dumping, Creaming, and Skimping</i>	378
<i>Equilibrium and Adverse Selection in a Market with HMOs</i>	378
<b>How Does Managed Care Differ? Empirical Results</b>	<b>381</b>
<i>Methodological Issues: Selection Bias and Quality of Care</i>	381
<i>Comparative Utilization and Costs</i>	381
<i>The RAND Study: A Randomized Experiment</i>	382
<i>Subsequent Evidence</i>	382
<b>Medicare Managed Care: Performance, Risk Adjustment, and Selection Bias</b>	<b>383</b>
<b>Growth in Spending</b>	<b>385</b>
<b>The Managed Care Backlash</b>	<b>386</b>
<b>Managed Care and the Affordable Care Act</b>	<b>388</b>
<b>Conclusions</b>	<b>389</b>
<b>Summary</b>	<b>389</b>
<b>Discussion Questions</b>	<b>391</b>
<b>Exercises</b>	<b>391</b>
<b>Part V Key Players in the Health Care Sector</b>	<b>395</b>
<b>16 Hospitals and Long-Term Care</b>	<b>397</b>
<b>Background and Overview of Hospitals</b>	<b>398</b>
<i>History</i>	399
<i>Organization</i>	399
<i>Regulation and Accreditation</i>	400
<b>Hospital Utilization and Costs</b>	<b>401</b>
<i>Competition and Costs</i>	402
<b>Closures, Mergers, and Restructuring</b>	<b>405</b>
<b>Quality of Care</b>	<b>406</b>
<i>Digital Medicine: Hospital-at-Home</i>	409
<b>Nursing Homes</b>	<b>410</b>
<i>Background and Costs</i>	410
<i>Quality of Care</i>	411
<i>Excess Demand</i>	413
<i>Financing Long-Term Care</i>	414
<b>Hospice, Home Health, and Informal Care</b>	<b>415</b>
<b>Conclusions</b>	<b>416</b>
<b>Summary</b>	<b>417</b>

Discussion Questions	417
Exercises	418
<b>17 The Physician's Practice</b>	<b>420</b>
<b>Modeling Physician-Firms and Supplier-Induced Demand (SID)</b>	<b>421</b>
<i>Physician Agency, Asymmetric Information, and SID</i>	422
<i>Supplier-Induced Demand</i>	422
<i>The Reinhardt Test of SID</i>	423
<i>Do Physicians Respond to Profit Incentives?</i>	424
<i>The McGuire and Pauly Model</i>	425
<i>The Target Income Hypothesis</i>	426
<i>What Do the Data Say about Supplier-Induced Demand?</i>	426
<i>A Marketplace Approach</i>	427
<i>Conclusion on SID</i>	428
<b>Diffusion of Information and Small Area Variations (SAV)</b>	<b>429</b>
<i>Contributions to These Variations</i>	429
<i>The Physician Practice Style Hypothesis</i>	430
<i>Education, Feedback, and Surveillance</i>	430
<i>The Demand Side</i>	431
<i>The Supply Side</i>	431
<b>Hospital and Private Equity Acquisitions of Physician Practices</b>	<b>432</b>
<b>Conclusions</b>	<b>435</b>
<b>Summary</b>	<b>435</b>
<b>Discussion Questions</b>	<b>436</b>
<b>Exercises</b>	<b>436</b>
<b>18 Health Care Labor Markets and Professional Training</b>	<b>438</b>
<b>The Demand for and Supply of Labor</b>	<b>439</b>
<i>Production Functions and Isoquants</i>	439
<i>Marginal Product and Marginal Revenue Product of Labor</i>	440
<b>Factor Substitution and Labor Demand</b>	<b>441</b>
<i>The Supply of Labor</i>	442
<b>Factor Productivity and Substitution among Factors</b>	<b>443</b>
<i>Measurement of Physician Productivity</i>	444
<i>The Efficient Utilization of Physician Assistants: Substitution among Inputs</i>	444
<b>Digital Medicine and Health Care Labor</b>	<b>444</b>
<i>Modeling Telemedicine</i>	445
<i>The Growth of Telemedicine</i>	446
<b>Health Care Labor Supply and the Meaning of Shortages</b>	<b>447</b>
<i>Availability of Physicians</i>	448
<i>Economic Definitions of Shortages of Health Professionals</i>	449
<b>Medical Education and Control over Entry</b>	<b>451</b>
<i>The Control over Medical Education</i>	452
<i>Licensure and Monopoly Rents</i>	453
<i>Licensure and Quality</i>	455

Contents

<b>Other Physician Labor Market Issues</b>	<b>456</b>
<i>International Medical School Graduates</i>	456
<i>Specialization</i>	457
<i>Private Practice or Employed</i>	458
<i>Physician Income By Gender: The Increasing Role of Women</i>	458
<b>Nursing Labor Markets</b>	<b>460</b>
<i>The Role of Monopsony Power: Shortages of Registered Nurses</i>	461
<i>Monopsonistic Nursing Labor Markets</i>	461
<i>Other Earnings Issues and Scope of Practice Laws</i>	463
<b>Conclusions</b>	<b>464</b>
<b>Summary</b>	<b>465</b>
<b>Discussion Questions</b>	<b>466</b>
<b>Exercises</b>	<b>466</b>
<b>19 The Pharmaceutical Industry</b>	<b>468</b>
<b>Structure and Regulation</b>	<b>470</b>
<i>Competition</i>	472
<i>Barriers to Entry</i>	474
<i>Regulation</i>	476
<b>The Production of Health and Substitutability</b>	<b>478</b>
<i>Least-Cost Production</i>	479
<i>Insurance and Substitutability</i>	480
<i>Technological Change</i>	481
<b>Drug Pricing and Profits</b>	<b>482</b>
<i>Monopoly Pricing</i>	482
<i>Price Discrimination</i>	483
<i>Monopoly Pricing and Price Controls</i>	484
<i>Competition and Generic Entry</i>	485
<b>Research and Development (R&amp;D) and Innovation</b>	<b>485</b>
<i>Investment Decisions</i>	486
<i>R&amp;D Spending</i>	487
<i>Firm Size and Innovation</i>	488
<i>Prices, Price Regulation, and Innovation</i>	489
<b>Cost Containment</b>	<b>489</b>
<i>Copayments</i>	490
<i>Generic Substitutes</i>	491
<i>Pharmacy Benefit Managers (PBMs) and Drug Formularies</i>	492
<i>Reference Pricing</i>	492
<b>New Drugs and Health Care Spending</b>	<b>493</b>
<b>Conclusions</b>	<b>494</b>
<b>Summary</b>	<b>494</b>
<b>Discussion Questions</b>	<b>495</b>
<b>Exercises</b>	<b>496</b>

<b>Part VI Social Insurance</b>	<b>499</b>
<b>20 Equity, Efficiency, and Need</b>	<b>501</b>
<b>Efficiency and Competitive Markets</b>	<b>502</b>
<i>The Concept of Pareto Efficiency (Optimality)</i>	502
<i>Trading along the Budget Line</i>	504
<i>The Competitive Equilibrium</i>	505
<i>The First Fundamental Theorem of Welfare Economics</i>	505
<i>Redistribution of the Endowment</i>	505
<i>Price Discrimination</i>	506
<i>Trade-Offs between Equity and Efficiency</i>	507
<b>Deviations from the Competitive Model in the Health Care Sector</b>	<b>507</b>
<i>The Assumptions under Perfect Competition</i>	507
<b>Promoting Competition in the Health Care Sector</b>	<b>509</b>
<i>The Theorem of the Second Best</i>	509
<b>An Economic Efficiency Rationale for Social Health Insurance</b>	<b>510</b>
<b>Need and Need-Based Distributions</b>	<b>511</b>
<i>Health Care Needs and the Social Welfare Function</i>	512
<i>Norman Daniels's Concept of Health Care Need</i>	516
<i>Economic Criticisms of Need-Based Distributions</i>	517
<b>Horizontal Equity and Need</b>	<b>517</b>
<i>Income Inequality</i>	519
<i>Schooling and Income Inequality</i>	520
<b>Theories of Social Justice</b>	<b>521</b>
<i>Utilitarianism</i>	522
<i>Rawls and Justice as Fairness</i>	522
<b>Conclusions</b>	<b>523</b>
<b>Summary</b>	<b>524</b>
<b>Discussion Questions</b>	<b>525</b>
<b>Exercises</b>	<b>525</b>
<b>21 Government Intervention in Health Care Markets</b>	<b>527</b>
<b>Economic Rationale for Government Intervention</b>	<b>528</b>
<i>Monopoly Power</i>	528
<i>Public Goods</i>	529
<i>Externalities</i>	531
<i>Other Rationales for Government Intervention</i>	532
<b>Forms of Government Intervention</b>	<b>533</b>
<i>Commodity Taxes and Subsidies</i>	533
<i>Public Provision</i>	534
<i>Transfer Programs</i>	537
<i>Regulation</i>	537

Contents

<b>Government Involvement in Health Care Markets</b>	<b>538</b>
<i>Support of Hospitals</i>	539
<i>Department of Veterans Affairs and Department of Defense</i>	540
<i>Food and Drug Administration</i>	540
<i>Tax Policy</i>	540
<i>Public Health</i>	541
<i>Other Government Programs</i>	541
<i>Health Sector Regulation and the Prospective Payment System</i>	543
<i>Description of PPS</i>	544
<b>The Theory of Yardstick Competition and DRGs</b>	<b>546</b>
<b>Government Failure</b>	<b>549</b>
<i>Who Does the Regulator Represent?</i>	550
<i>An Example: Physician Payment</i>	551
<b>Conclusions</b>	<b>552</b>
<b>Summary</b>	<b>552</b>
<b>Discussion Questions</b>	<b>553</b>
<b>Exercises</b>	<b>554</b>
<b>22 Social Insurance</b>	<b>556</b>
<b>Social Insurance Policies and Social Programs</b>	<b>556</b>
<i>Program Features</i>	558
<b>Historical Roots of Social Insurance</b>	<b>560</b>
<i>European Beginnings</i>	560
<i>Early Experience in the United States</i>	560
<i>The Establishment of Medicare and Medicaid</i>	561
<b>The Affordable Care Act (ACA)</b>	<b>561</b>
<b>Medicare and Medicaid in the United States</b>	<b>562</b>
<i>Medicare</i>	562
<i>Medicaid</i>	568
<i>Medicaid Eligibility</i>	569
<i>The Medicaid–Medicare Relationship</i>	573
<i>Children’s Health Insurance Program: CHIP</i>	574
<b>Public Insurance and Health</b>	<b>574</b>
<b>The Effects of Medicare and Medicaid</b>	<b>577</b>
<i>Costs and Inflation</i>	577
<i>Health Status</i>	581
<i>Medicare: Changing Financing and Future Prospects</i>	581
<b>Conclusions</b>	<b>583</b>
<b>Summary</b>	<b>583</b>
<b>Discussion Questions</b>	<b>584</b>
<b>Exercises</b>	<b>584</b>
<b>23 Comparative Health Care Systems</b>	<b>587</b>
<b>An Overview of Contemporary Health Care Systems</b>	<b>588</b>
<b>The United Kingdom: The National Health Service</b>	<b>590</b>
<i>The National Health Service</i>	590

<i>A Model of Rationed Health Care and Private Markets</i>	593
<i>Performance under the NHS and More Recent Reforms</i>	593
<b>China: An Emerging System</b>	<b>596</b>
<b>The Canadian Health Care System</b>	<b>600</b>
<i>Background</i>	600
<i>Physician Fees and Quantity</i>	602
<i>Why Are Fees and Hospital Costs Lower in Canada?</i>	603
<i>Administrative Costs</i>	603
<i>A Comparison</i>	604
<b>Different Systems: The Public's Evaluation</b>	<b>607</b>
<b>Differences in Health Care Spending across Countries</b>	<b>608</b>
<i>A Model of Health Expenditure Shares</i>	608
<i>Country Examples</i>	610
<b>Conclusions</b>	<b>610</b>
<b>Summary</b>	<b>611</b>
<b>Discussion Questions</b>	<b>612</b>
<b>Exercises</b>	<b>613</b>
<b>24 Health System Reform</b>	<b>615</b>
<b>Goals of Reform</b>	<b>616</b>
<i>Basic Issues in Reform</i>	617
<i>The Costs of Universal Coverage</i>	618
<b>Ensuring Access to Care</b>	<b>619</b>
<i>Employer versus Individual Mandates</i>	619
<i>Separation of Health Insurance from Employment</i>	621
<i>Single-Payer versus Multiple Insurers</i>	622
<b>Quality of Care</b>	<b>624</b>
<b>The Affordable Care Act (ACA) of 2010</b>	<b>625</b>
<i>The "Three-Legged Stool"</i>	625
<i>The ACA: Basics</i>	626
<i>Economic Analysis of the ACA</i>	627
<b>Competitive Strategies in the Post-ACA Era</b>	<b>629</b>
<i>The Political Divide on Economic Strategies</i>	629
<i>Post-ACA Development</i>	631
<i>Value-Based Insurance Design</i>	631
<i>Development of Alternative Delivery Systems</i>	632
<i>Accountable Care Organizations</i>	632
<i>Consumer-Directed Health Plans and Health Savings Accounts</i>	633
<b>ACA Outcomes after a Dozen Years</b>	<b>634</b>
<i>Health Care Access</i>	635
<i>Health Care Costs</i>	637
<i>The ACA and Quality</i>	638
<i>Labor Market Effects</i>	639
<b>Meeting Reform Goals</b>	<b>639</b>
<i>Creating a Safety Net</i>	639
<i>Cost Containment</i>	639

Contents

<i>Quality, High-Value Care</i>	640
<i>Choice for Patients and Providers</i>	640
<i>Ease in Administration</i>	640
<b>Conclusions</b>	<b>640</b>
<b>Summary</b>	<b>641</b>
<b>Discussion Questions</b>	<b>642</b>
<b>Exercises</b>	<b>643</b>
<b>Glossary</b>	<b>646</b>
<b>Bibliography</b>	<b>656</b>
<b>Author Index</b>	<b>713</b>
<b>Subject Index</b>	<b>720</b>

# Figures

1.1	US Health Expenditure Shares of GDP, 1960–2021	7
1.2	Demand Response of Ambulatory Mental and Medical Care in the RAND Health Insurance Experiment	15
2.1	Society's Trade-Off between Guns and Butter. Point X Is Inefficient; Point Y Is Infeasible	27
2.2	Changes in Demand and Supply	30
2.3	Equilibrium Where Demand Equals Supply	31
2.4	Effects of Supply-and-Demand Shifts in the Hot Drink Markets	31
2.5	Graph of the Function $y = a + bx$	33
2.6	The Utility of Wealth	35
2.7	Indifference Curves between Food and Other Goods (OG)	36
2.8	Changes in Budget Constraints Due to Changes in Price or Income (OG)	37
2.9	The Consumer's Equilibrium	38
2.10	Derivation of the Consumer's Demand Curve	39
2.11	Derivation of a Market Demand Curve	39
2.12	The Impact of a Cigarette Excise Tax	41
2.13	Output and Marginal Product of Labor	42
2.14	A Production Isoquant	45
2.15	Cost Minimization (Output Maximization) Determining Efficient Combinations of Labor and Capital	46
2.16	Long-Run Cost Curves for a Firm	47
2.17	The Competitive Firm's Supply Curve: Example of Memory Sticks	48
2.18	The Monopolist's Equilibrium	51
2.19	Welfare Loss of Monopoly	51
2.20	The Pollution Externality	54
3.1	Difference of Means Distribution for BMI by Gender	62
3.2	Health Expenditure and Infant Mortality	65
3.3	Difference in Difference: Flint and Other Michigan Cities	72
4.1	Production of Health	82
4.2	World Population from 200 CE to the Modern Day	85

List of Figures

4.3	Fall in the Standardized Death Rate Per 1,000 Population for Four Common Infectious Diseases in Relation to Specific Medical Measures for the United States	87
5.1	Investing in Health Capital	107
5.2	Labor–Leisure Trade-Off	110
5.3	Increased Amount of Healthy Time Due to Investment	111
5.4	Relationship of Healthy Days to Health Stock	112
5.5	Allocation of Production between Health and Bread	113
5.6	Optimal Health Stock	115
6.1	Consumers’ Surplus	129
6.2	Producers’ Surplus	130
6.3	Efficient Quantity	131
6.4	Gross vs. “Micro” Measures in Evaluation	133
6.5	Efficient Use of Resources Where Marginal Benefits Equal Marginal Costs	135
6.6	Cost-Efficiency and Utility Maximization with QALYs	145
6.7	Hypothetical Market for Apples	151
7.1	Differences in Health and Socioeconomic Indicators By Race and Ethnicity	156
7.2	Direct Effect of Race on Supply of Health Care Services	159
7.3	Indirect Effect of Race on Demand for Health Care Services	160
7.4	Direct and Indirect Effects of Race on Health Care Services	161
7.5	Optimal Health Investment	162
7.6	Difference, Disparity, and Discrimination in Access and Delivery of Health Care	165
7.7	Equity May Require an Unequal Allocation of Resources	176
7.8	Wayne Mobile Health Clinic	179
8.1	Alcohol Consumption Age 15 and over, 2009 and 2019	185
8.2	Daily Smoking in Adults, 2019	185
8.3	Rational Addiction Model	188
8.4	The Consumption of Alcohol Is Reduced By a Tax Increase	195
8.5	State and Federal Taxes as a Percent of the Price Per Pack	197
8.6	Comparing Prohibition versus Legalization under Conditions of Inelastic Demand	199
9.1	Infectious Agents, Hosts, and the Environment	205
9.2	Pandemic as a Pollutant	208
9.3	Vaccination Externalities	210
9.4	Pandemic as a Tax	211
9.5	Pandemic as a War	213
9.6a	Weekly New Cases in the United States as of May 2022	218
9.6b	Total Deaths in the United States through December 2022	219
9.7	Optimal Amount of Activity Reduction Due to Pandemic	226
10.1	Degree of Substitution between Physicians and Nurses	235
10.2	Production Function for a Hypothetical Physician Practice	239
10.3	The Long-Run Average Cost Function	241
10.4	The Case-Mix Issue	243
10.5	Technical Efficiency and Inefficiency at the Firm Level	245
10.6	Technical and Allocative Efficiency	246
10.7	The Data Envelopment Method	247

10.8	The Stochastic Frontier Method	248
10.9	Cost-Decreasing and Cost-Increasing Technological Change	250
10.10	The Diffusion of a New Technology	254
11.1	Demand for Health Capital Determines Optimal Amounts of the Home Goods and Health Capital Investment	259
11.2	Consumer Equilibrium Analysis	262
11.3	Change in Number of Visits as Visit Price and/or Income Changes	263
11.4	Demand Curve Derived from Figure 11.3	263
11.5	Changed Preferences Due to Illness	265
11.6	Demand and Time-Price for Physician Visits	266
11.7	The Effect of a Coinsurance Rate on Health Care Demand	268
11.8	Market Impact of Coinsurance	269
12.1	The Availability of Products of Different Quality (Uniform Probability of Picking Each Car)	293
12.2	Uniform Probability of Expenditure (Expected Health Expenditure Levels)	295
13.1	Total Utility of Wealth and the Impact of Insurance	313
13.2	The Optimal Amount of Insurance	317
13.3	Changes in the Optimal Amount of Insurance	318
13.4	Demand for Care and Moral Hazard	323
13.5	Health Care Demand with Insurance	326
13.6	Impact of Secondary Insurance on Primary Coverage and Utilization	329
13.7	The Effect of Insurance Cost Sharing with Upward-Sloping Supply	330
13.8	Nyman's Decomposition of Moral Hazard Using Demand Curves	331
13.9	The Net Welfare Gain of the Price Distortion under Income Transfer Effects	332
13.10	Moral Hazard and Risk Protection with Employer-Sponsored Plans	334
14.1	Impacts of Loading Costs on Availability of Insurance	341
14.2	Interaction of Health Insurance and Employee Wage	344
14.3	Impacts of Preferential Treatment of Employee Insurance	346
14.4	Insurance and Employment	357
14.5	Annual Uninsured Rate, Population Under Age 65 (2013–2021)	359
14.6	Characteristics of the Nonelderly Uninsured	360
14.7	ACA-Related Enrollment: Marketplace, Medicaid Expansion, and the Basic Health Program, 2014–2023	361
15.1	Treatment and Expenditures under Managed Care	375
15.2	Externality Model of HMO	376
15.3	Selection into HMO and FFS Settings	380
16.1	Analysis of Changes in the Medicare Hospital Reimbursement Rate	404
16.2	Analysis of Changes in the Medicaid Nursing Home Reimbursement Rate	414
17.1	The Physician-Firm under Monopolistic Competition	421
17.2	The Supply and Demand Model of SID	423
17.3	Physician's Response to Reduced Rate of Profit	425
18.1	Production with Varying Rates of Substitution	440
18.2	Firm Hiring Decisions at Different Wage Levels	441
18.3	Market Demand and Supply for Laboratory Technicians	442
18.4	The Effects of Increasing Physician Productivity	445

List of Figures

18.5	An Economic Shortage	450
18.6	Changes in Equilibrium over Time Depending on Supply Adjustment	451
18.7	Nurse Shortage under Monopsony Conditions	462
19.1	Substitution between Drugs and Other Medical Inputs	479
19.2	Cost Minimization	480
19.3	Technological Change	481
19.4	Drug Pricing	483
19.5	Price Discrimination	484
20.1	Edgeworth Box for Exchange: Pareto-Efficient Points Lie on the Contract Curve	503
20.2	The Intersection of Offer Curves Determines the Competitive Equilibrium	504
20.3	A Preferred Efficient Outcome May Be Achieved By an Initial Redistribution of Resources	506
20.4	The Socially Efficient Equilibrium in the Presence of a Beneficial Externality	510
20.5	The Production Function for Health	512
20.6	The Utility-Possibility Frontier and Social Welfare Maximization: Egalitarian Preferences	513
20.7	The Utility Frontier and Social Welfare Maximization: Preferences Favoring Belinda	514
20.8	The Gini Coefficient	518
20.9	Infant Mortality Is Related to Inequality	520
21.1	Welfare Loss of Monopoly	529
21.2	The Optimal Quantity of a Public Good	530
21.3	Using Commodity Subsidies to Correct for Positive Externalities	533
21.4	Profit and Yardstick Competition	546
21.5	The Public Choice Optimum	551
22.1	Medicare Enrollment By Year, 1966–2020	563
22.2	Share of Medicare Beneficiaries Enrolled in Medicare Advantage Plans, By State, 2022	565
22.3	Medicare Part D Prescription Drug Benefit, 2006	566
22.4	The Impact of Medicaid Cost Sharing on State Expenditures	570
22.5	Analyzing the Impacts of Improved Medicaid Coverage	575
22.6	Analyzing the Economics of Take-Up and Crowd-Out	576
22.7	Total Expenditures for Medicare and Medicaid, 1987–2020	577
22.8	Enrollment for Medicare and Medicaid, 1987–2020	578
22.9	Expenditures Per Enrollee, 1987–2020	578
22.10	Projected Medicare Enrollment and Workers Per Enrollee	582
23.1	Percent of GDP Spent on Health Care, 1960–2021	591
23.2	Prices and Quantities in a Controlled Market	593
23.3	Health Expenditures by Market Structure	609
24.1	The Resource Costs of Health Reform	618
24.2	The Impact of the Medicaid Expansion	628
24.3	The Household Impact of Private Market Insurance	628
24.4	Percentage of Nonelderly Adults Uninsured for Entire Calendar Year	635
24.5	Households with the Same Incomes, Facing the Same Prices	644

# Tables

1.1	Health Expenditures as Percent of GDP in Selected OECD Countries	8
1.2	Total Consumption Expenditures (in \$ Billions) By Type, 2019–2021	9
1.3	Active Health Personnel and Number Per 100,000 Population (in Parentheses)	10
1.4	National Health Expenditures and Other Data for Selected Years	11
1.5	US Personal Health Care Spending, Selected Years (in \$ Billions)	17
2.1	Society's Trade-Off between Guns and Butter: Point X Is Inefficient; Point Y Is Infeasible	26
2.2	There Is a Strikingly Diverse Experience in Income, Health, and Health Care across the World's Cultures	28
2.3	Demand Price Elasticities for a Variety of Goods	41
2.4	Production Schedule for X-ray Services	44
2.5	An Isoquant Schedule	44
3.1	BMI By Gender, 2017–2018	61
3.2	Prediction of Infant Mortality	66
3.3	Prediction of Infant Mortality	69
4.1	Death Rates (Per Million) in 1848–1854, 1901, and 1971	85
4.2	Measuring the Contribution of Health Care to Mortality and Life Expectancy	92
4.3	Work-Loss Days Per Employed Person Per Year, By Plan	94
4.4	Excess of Death Rates in Nevada Compared with Utah, Average for 1959–1961 and 1966–1968	97
5.1	Weight Status Classified By Body Mass Index	121
5.2	2021 US State Obesity Rates	122
5.3	Percent BMI: Selected Countries, 2016	123
5.4	Time Costs By Demographic Group (Minutes)	124
6.1	How Much Is One Life Worth?	142
7.1	Infant Health By Race and Ethnicity, 2019–2020	155
7.2	Difficulty in Communicating with the Provider By Race and Ethnicity	157
8.1	US Mortality Rates: Selected Causes 2020	186
9.1	How Many Others Will Each Sick Person Infect?	207
9.2	Percentage Change in GDP: 2018, 2019, 2020	223
9.3	Age Impacts of COVID-19	224
9.4	Age-Adjusted Risk for COVID-19 Infection, Hospitalization, and Death, By Race/Ethnicity	225

## List of Tables

11.1	Price Elasticities from Selected Studies	273
13.1	Example of Payment Tiers for Drugs: United States – 2022	327
14.1	Health Insurance Coverage Status and Type of Coverage, 1990–2021 (in thousands)	354
15.1	Health Plan Enrollment (Percent) for Covered Workers, By Plan Type, Selected Years	370
15.2	Different Health System Organizational Structures	371
15.3	HMO Plan Performance: An Analysis of Published Literature, 1997–2001	383
15.4	Managed Care and Cost Containment: An Example	385
16.1	Hospital Data	398
16.2	Hospital and Nursing Home Costs	401
17.1	Variations by Medical Procedure Category	430
18.1	Outpatient Telemedicine Visits Per Capita Before and During the Pandemic	447
18.2	Physician Characteristics By Type of Practice, 2019	448
18.3	Nursing Employment and Wages, 2021	460
21.1	National Health Expenditures by Sponsor, Selected Years	542
21.2	Fiscal Year 2022 DRGs By Weight: Five Highest and Five Lowest	545
22.1	Indirect Impacts of Medicare and Medicaid	580
23.1	Classification of Health System Types	588
23.2	Health System Indicators for OECD Countries	589
23.3	Medical Staffing, Equipment, and Technology	592
23.4	Comparative Health Services Data: Four Asian Countries, 2021	596
23.5	Demographic Structure and Social Demographics of China, 1980–2021	597
23.6	The Top Six Causes of Death in China in Selected Years	598
23.7	Comparative Data: Canada and the United States, 2021	602
23.8	Selected Health System Performance Indicators for Ten Countries, 2020	605
24.1	Summary of Insurance Coverage, and Impacts of Selected Reforms	620
24.2	Essential Benefits under the Affordable Care Act	626
24.3	Average Cost of “Metal” ACA By Tier, 2023	627

# Preface

We mourn the passing of Sherman Folland in October 2021. Sherman Folland was a vigorous, productive, and conscientious scholar, who was integral to the development of the book from a preliminary set of ideas to a volume that set the standard in health economics education. Sherman was also a thought leader in the interdisciplinary field of social capital. We dedicate this edition to his memory.

We are delighted that Shooshan Danagoulian has joined the team as an ongoing co-author of the book. Shooshan specializes in modern methods of health policy evaluation, and provides a set of valuable perspectives on health disparities and inequality.

This is the ninth edition of a book conceived in 1990 and first published in 1993. The world of health economics has changed since 1990. The first edition made but a single reference to “managed care.” Until the seventh edition, we spoke of the United States as the only country without a universal health insurance plan. This, of course, changed with the passage of the Affordable Care Act (ACA) in March 2010.

## New to the Ninth Edition

Six-plus years have passed since our last edition, an eternity in the health care world. As we write this ninth edition, the world continues in the midst of a once-in-a-century health pandemic. It has colored our discussion of many items. Outside of updated tables and features, we are featuring two brand-new chapters.

- *Health Disparities* (Chapter 7) examines issues of race, ethnicity, income, gender, and geography with respect to health care access, health inputs, and health outcomes. Although analysts have recognized disparities for decades, the COVID-19 pandemic has highlighted them, and has emphasized the differential impacts of diseases, treatments, and health outcomes.
- *Pandemic Economics* (Chapter 9) provides a new economic treatment of epidemics and pandemics. The chapter recognizes the limitations of previous economic models, by considering a pandemic as a “war,” with the concurrent mobilizations and dislocations. It provides frameworks for estimating costs and policy impacts, while recognizing that as we write this, the COVID-19 pandemic continues and the long-run impacts may take years or decades to measure and to understand.

In addition, we highlight the following.

- The Affordable Care Act (ACA) has withstood numerous legal challenges and it has changed the landscape of health care. Millions of Americans have gained health insurance, and as of early 2023, efforts to repeal it or replace it have largely ended. Chapters 22 (Social

## Preface

Insurance) and 24 (Health System Reform) discuss the ACA and its impacts in depth. Chapter 22 also continues with the most up-to-date evaluations of the Medicare Advantage and the Medicare Part D drug benefit programs.

- Chapter 23 continues our path-breaking comparative analyses across countries. We introduced a reclassification of health care systems in the eighth edition, and we update our discussion of the Chinese health economy, which has moved away from the command system of the 1950s through the 1970s, toward a more incentive-based system, with its conflicting impacts. Chapter 23 also provides updated survey information on comparative satisfaction across 11 countries, looking in particular at differences in access and in costs.

From the very beginning, we have sought to assist instructors in conveying clear, step-by-step understanding of health economics to their students. We have also believed it important for instructors to demonstrate what health economics researchers are doing in theory and in empirical work. The book synthesizes contemporary developments around a set of economic principles including maximization of consumer utility and economic profit, and it makes these principles accessible to undergraduate as well as to graduate students. Rather than focusing on institutions specific to the health care economy, we continue to emphasize core economics themes as basic as supply and demand, as venerable as technology or labor issues, and as modern as the economics of information.

As this edition goes to press, we make the following observations:

- 1 The extraordinary recent growth of the health economics literature since our early editions has made it nearly impossible to include comprehensive literature surveys of all health economics topics. In this ninth edition, we selectively replace venerable but somewhat dated material with updates that provide especially relevant or new findings;
- 2 The COVID-19 pandemic has adversely affected data collection, and it has skewed many measurements of economic growth and economic outcomes. While we try to report and critique the most recently available data, some of which have been distorted by the pandemic, we cannot devote space to explaining each aberration;
- 3 The Internet is a veritable trove of information, and we include numerous links to Web sources. The sites noted were live at the time the volume went to press, but we cannot guarantee that they will be available indefinitely.

Together with our publisher, we continue to improve accessibility to the book for the wide range of health services students and practitioners.

## Our Approach

We believe that students must have a working knowledge of the analytical tools of microeconomics and econometrics to appreciate health economics. Some students may be ready to plunge directly into Chapter 4, “Production of Health,” upon completion of the introductory Chapter 1. However, Chapters 2 and 3 help students and their instructors to develop or to review needed analytical concepts before tackling the core subject matter. In Chapter 2, students with as little as one semester of microeconomics may review and study how economists analyze problems, using relevant health economics examples. Chapter 3 provides a review of core statistical tools that characterize modern economic and health services analyses. Moving forward, Chapter 6 completes fundamental economic concepts by reviewing economic efficiency, and showing how cost–benefit, cost-effectiveness, and cost–utility analyses fit into the general economic framework.

Consistent with an emphasis on clear exposition, the book makes extensive use of graphs, tables, and charts. As in all of our previous editions, we require no calculus. Discussion questions

and exercises help students master the basics and prompt them to think about the issues. We also include up-to-date applications of theory and policy developments as features, and occasional items containing purely background information.

We caution that some chapters, such as those on insurance and on regulation, although developed without advanced mathematics, are logically complex and will require considerable effort. No painless way is available to appreciate the scope of the contributions that scholars have made in recent years. More advanced students of the health care economy who seek further challenges can utilize a comprehensive references section, with over 1,200 sources, to enrich their (and our) work through referral to the original sources.

## Additional Sources

The Internet now contains tables and charts that were once available only in book form and then only after several years. We have chosen to focus on those sites that we believe to be both long-lasting and reliable.

- Bureau of the Census, for health statistics (<https://www.census.gov/topics/health.html>)
- Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov))
- Centers for Medicare and Medicaid Services, for research, statistics, data, and systems ([www.cms.hhs.gov/home/rsds.asp](http://www.cms.hhs.gov/home/rsds.asp))
- Kaiser Family Foundation ([www.kff.org](http://www.kff.org)), specializing in studies of health insurance
- National Institutes of Health ([www.nih.gov](http://www.nih.gov))
- Organisation for Economic Cooperation and Development, for international data ([www.oecd.org](http://www.oecd.org))
- Social Security Administration, for research and analysis ([www.ssa.gov/policy/research\\_subject.html](http://www.ssa.gov/policy/research_subject.html))

Health-related material is increasingly accessible both in print and on the Internet. University-affiliated professionals and their students will discover that their libraries have extensive electronic access to a wide range of journals. Most health economists browse *Health Affairs*, an up-to-date policy journal. *Health Economics*, *Journal of Health Economics*, *American Journal of Health Economics*, and the *European Journal of Health Economics* have emerged as leading technical journals that specialize in health economics. From our comprehensive reference section, users can see many other specialized journals, including health services and medical journals not often referenced by economists. In the popular press, the *New York Times* and the *Wall Street Journal* also provide excellent health economics coverage, as do many local news outlets.

*The Handbook of Health Economics*, a two-volume set published in 2000, with an additional volume in 2011, emerged as an invaluable source for specific topics, with more detail and more mathematic rigor than any text, including this one. The *Elgar Companion to Health Economics*, published in 2006 and updated in 2012, provides both useful updates and important new topics. They are not texts, however. Our book, with its graphical analysis, discussion questions, and problem sets, provides a valuable complement to both *Handbook* and *Companion* offerings.

## Alternative Course Designs

The economics of health and health care encompasses an evolving literature with no single “correct” order for the course design. US economists often organize topics through markets, and include the roles of government much later. International health economists, as well as population and public health students and scholars, often organize topics related to public

# Subject Index

*Note:* Locators in *italics* refer to figures and those in **bold** to tables. The suffix *g* is used to indicate glossary entries.

- above-normal profit *see* economic (excess) profit  
absenteeism, 204, 216, 222  
access to health care, 11–12, 512; and ACA, 635–7  
Accountable Care Organizations (ACOs), 465, 632–3, 646g  
accreditation, 398; Joint Commission, 194, 400–1; National Committee for Quality Assurance (NCQA), 304, 368; peer review organizations (PROs), 400; professional standards review organizations (PSROs), 400; of universities, 452  
Accreditation Council for Graduate Medical Education, 398  
Activities of Daily Living (ADL), 170  
acute care hospital model, 367  
addiction, 12; addictive capital stock, 188, 189; alcohol consumption, 98; cigarettes, 97, 98; imperfectly rational addiction models, 187, 201; methadone treatment, 120; micro-costing methodology applied to, 133; models of, 187–90; myopic addiction model, 187; opioid addiction, 118–19; rational addiction model, 187–90, 188, 196, 201; *see also* opioids  
advance practice registered nurses (APRNs), 463–4  
adverse events, 71, 455–6, 476–7; *see also* death; mortality rate  
adverse selection, 275, 276, 290, 349–50, 646g; and experience rating, 297–8; and HMO markets, 378–80, 380; inefficiencies of, 296  
advertising, 190–4; and alcohol consumption, 193–4, 201–2; as complementary good, 192, 201; direct-to-consumer (DTCA), 191–2, 474–5; as information, 191–2, 201; and opioid consumption, 186–7, 194, 202; possible effects of brand switching, 192–3; and SID, 428; theories of, 191, 201  
Affordable Care Act (ACA), 12, 19, 21, 340, 361, 646g; and adverse selection, 296–7; blueprints for, 95–6; competitive strategies in post-ACA era, 629–34; cost containment, 639–40, 642; and dependents under age 26, 352; economic analysis of, 627–9; and efficiency, 502; elements of, 358–9; essential benefits, 357–8, 362, 388, 626, 628, 638; establishment of, 561–2; and evidence-based medicine, 430; Health Benefit Exchanges, 562; health care access, 635–7; health care costs, 637–8; health exchanges/marketplaces, 296, 358–9, 630, 631, 649g; and health system reform, 615–16, 619, 620, 625–9, 628, 629; and Hispanic residents in Florida, 629–30; individual mandate, 296, 342, 355, 362, 392n3, 639; and job mobility/job lock, 350–2; legal challenges to, 562; loading costs and the uninsured, 341–2; and managed care, 366, 388–9; and Medicaid, 569; and mergers, 405, 417; “navigators,” 630; outcomes after a dozen years, 634–9; political divide on economic strategies, 569–70, 629–31, 641; post-ACA development, 631; preexisting conditions, 297, 311, 349–52; price discrimination between smokers and nonsmokers, 183; and primary care physicians, 449; quality, high-value care, 640; and quality, 638; Quality Rating System, 306; and reimbursement of hospitals, 405; and shortages, 449, 453; special enrollment periods (SEPs), 297; states’ refusal to participate in, 569–70, 638, 639; and substance use treatment, 572; uninsured, impacts on, 358–60, 359, 360  
age, 557; Activities of Daily Living (ADL), 170; ageism critique of QALYS, 147; and Social Security benefits, 558–9; and consumer choice and demand, 278; and COVID-19, 205, 220, 221, 224, 224–5, 225; and demand for health capital, 115–16; and full insurance, 276; Instrumental Activities of Daily Living (IADL), 170; and retirement, 350, 362; *see also* long-term care  
agency *see* asymmetric information and agency; physician practices; physicians

- Agency for Healthcare Research and Quality (AHRQ), 171, 180, 276, 306, 334
- agency relationship, 298–300, 646g
- agent, 298
- alcohol consumption, 98, 185; and advertising, 193–4; advertising restrictions on, 190–4; minimum legal drinking age (MLDA), 197; personal hazards of, 183–4; regulation of, 198; taxes and price increases, 196–7
- alliances, 405, 488–9
- allocative inefficiency, 245–6, 246, 255
- alternative delivery system (ADS), 632, 642, 646g
- American Association of Nurse Anesthesiologists, 464
- American Association of Nurse Anesthetists (AANA), 464
- American Community Survey (ACS), 572
- American Heart Association (AHA), 172
- American Medical Association (AMA), 433, 447, 552; control over medical education, 452–3, 455; Council on Medical Education, 452
- American Pain Society, 194
- American Rescue Plan (ARP) of 2020–2021, 260, 631
- American Society of Anesthesiologists (ASA), 464
- antimicrobial drugs, 87
- antitrust policies, 543, 552
- arbitrage (third-party resale), 484
- area-wide health planning, 242
- artificial intelligence (AI), 409
- Asia, health care systems, 596, 596–600
- assimilative capacity, 53, 208, 226, 646g
- Association of American Medical Colleges (AAMC), 449, 453
- asymmetric information and agency, 289–308, 454, 509, 646g; agency relationship, 298–300; asymmetric information, 290–3; consumer information, prices, and quality, 300–5; consumer information and quality, 302–3; experience rating and adverse selection, 297–8; imperfect versus asymmetric information, 294–5; inefficiencies of adverse selection, 296; lemons principle (car market example), 293, 293–4; lemons principle, application of to health insurance, 295–8; other quality indicators, 303–5; overview of information issues, 290; ratings, 304–5; reputation goods, 301; uniform probability of expenditure, 295
- Australia, Obesity Evidence Hub, 535
- average cost, 55, 646g
- average fixed cost (AFC), 646g, 649g
- average variable cost (AVC), 48, 49, 403, 404, 413, 646g, 655g
- bad, health economics of *see* health economics of bads
- balance billing, 372, 603, 646g
- Balanced Budget Act of 1997, 415, 581, 582, 583
- barriers to entry, 508, 528, 646g; advertising as, 192, 201; medical education and control over entry, 451–6, 465; pharmaceutical industry, 474, 494
- Bausch Health, 471
- behavioral cost function, 243
- behavioral economics and health care demand, 278–80, 284, 646g
- bias, 91, 158, 181; and access to appointments, 636–7; and disparities, 162, 166, 167–8; disparity in quantity and quality of care, 169–70; framing bias, 141, 279, 279; hypothetical bias, 141; Implicit Association Test (IAT), 167; implicit bias training, 174, 177; inertia bias, 280; and pharmaceutical research, 487; present bias, 280; provider, 159, 162, 165, 165–70, 173–4, 177, 180; selection bias and quality of care, 381
- Black Death, 89
- Blue Cross insurers, 352–5, 361, 362
- board-certified specialists, 442–3, 452, 455
- body mass index (BMI) examples, 61, 61–3, 62, 66, 66–7, 535, 646g; of smoking mothers, 196; *see also* obesity
- bottomless pit criticism, 517
- “bridge cards,” 616
- Broad Street pump, 89
- budget constraints, 37, 37, 55, 646g
- bundled prices, 282–3
- caesarean sections (C-sections), 299, 424, 427
- California Department of Health Care Access and Information, 163
- California Department of Managed Care, 386
- California Medicaid reform, 623
- Canada, 96, 244, 430; administrative costs, 603–4; carbon tax, 54; compared with United States, 602, 612; health care system, 600–7, 602; and IMGs, 457; Joint Canada/US Survey of Health (JCUSH), 606–7; Medicare, 600–1, 617; pharmaceutical industry, 471; physician fees and quantity, 602–3; reason for lower fees and costs, 603–7; single-payer system, 461, 604, 606, 609, 611, 617; specialization, 602–3; waiting times, 605–6
- Canada Health Act of 1984, 601
- cancer: breast cancer and geographical area, 166; and cell phones, 63–4; and cigarette smoking, 185; glioma (brain cancer), 63; and lifestyle and exercise, 97
- “capability,” 515–16
- capital goods: cost of, 113–14; health as, 107, 125
- capital/labor ratio, 237
- capitation, 369, 372, 376, 424, 591, 601, 647g; United Kingdom, 591
- carbon tax, 54
- caregiving costs and savings, 9–10
- car market example, 293–4

## Subject Index

- Carnegie Foundation, 452  
case-mix index, 243, 243–4, 410, 647g  
cell phones, and cancer, 63–4  
Center for Turbulence Research (Stanford University), 73  
Centers for Disease Control and Prevention (CDC), 63, 119, 155, 221, 225; epidemic defined by, 206–7  
Centers for Medicare and Medicaid Services (CMS), 280, 304, 400, 541, 633, 647g; and prescriptions, 567  
central tendency, measures of, 63, 64, 74, 555n1  
certainty equivalents, 139  
Certificate-of-Need (CON), 400, 413, 419n12, 543, 647g  
*Ceteris paribus*, 647g  
children: and Medicaid, 95; and type of health insurance, 94; *see also* infant care, comparative health care systems; infant mortality  
Children's Health Insurance Program (CHIP), 17, 552, 556, 574, 576, 577, 586n7, 647g  
China: consumer-directed health plans, 633; and COVID-19, 3, 217, 218, 227, 228; delivery system, 597; demographic structure and social demographics, 597; emerging health care system, 596–600, 611–12; Find, Test, Trace, Isolate, and Support (FTTIS), 599; “health codes,” 600; mortality causes, 597, 598; private health insurance markets, 599; severe acute respiratory syndrome (SARS) epidemic (2003), 599; three health insurance programs, 597–9; twin children study, 99  
cigarettes, 97; and addictive stock, 189; advertising restrictions on, 190–4; in China, 597; increased demand versus brand switching, 193; mortality rate, 186; possible effects of brand switching, 192–3; during pregnancy, 98; regulation of smoking, 197–8; taxes on consumption in practice, 195–6, 197; use, 185  
Civil Rights Act of 1964, 167  
Cleveland, air and water pollution, 209  
Cobb-Douglas form, 43  
coefficient of variation (CV), 429, 647g  
coinsurance, 309, 311, 323, 325, 345, 647g; as demand shifter, 267–8, 268, 269, 275, 284; impact of, 326, 326–9, 327, 329; rate, 311; welfare loss of excess health insurance, 333–5  
commercial insurers, 352–3  
community hospitals, 398, 540  
community rating, 355, 647g  
comparative health care systems, 587–614; Canada, 600–7, 602, 611, 612; China, 596, 596–600, 611–12; country examples, 610; differences in health care spending across countries, 608–10; infant care, 593, 595, 605; life expectancy, 589, 596, 596, 601, 602; meaning of high expenditures, 589; medical staffing, equipment, and technology, 592; model of health expenditure shares, 608–9, 609; model of rationed health care and private markets, 593; monopoly, 609, 612; monopsony, 603, 609, 609, 610; mortality, 594; number of practicing physicians, 589; overview of contemporary, 588–9, 588–90; private (market-based) actors, 588, 591, 594, 595, 599, 611; public's evaluation of different systems, 607–8; rationing, 593, 593–6; selected health system performance indicators, 605; societal (nonprofit) actors, 588, 611; state-based actors, 588, 611; United Kingdom, 590–606  
comparative statics, 31, 31–2, 647g  
compensating differentials, 98, 141–2, 347–8  
competition, 18, 647g; competitive equilibrium, 504, 505; deviations from model in the health care sector, 507–9; efficiency and competitive markets, 502–7, 503, 504, 506; and generic drugs, 485; Herfindahl–Hirschman Index (HHI), 472–3; and hospitals, 402–5; perfect, 47–53, 55, 426, 507–8, 653g; and pharmaceutical industry, 473–4; promoting in health care sector, 509; and specialization, 458; “yardstick,” 527, 545–9, 547, 655g  
composite hypotheses, 60, 73  
Concentration Index, 518  
concentration ratios, 472–3, 543, 647g  
confounding factors, 59, 74, 167, 174, 276, 636, 641  
Congressional Budget Office, 619  
consumer: budget constraint, 260; as health producer, 107, 107–8; preferences, 260; principal or agent as terms for, 18  
consumer choice and demand, 258–86; age, health status, and uncertainty, 278; applying the standard budget constraint model, 259, 259–61; behavioral economics and health care demand, 278–80, 284; consumer's equilibrium, 38, 261–2, 262; demand elasticities and aggregate expenditures, 276; demand shifters: time and coinsurance, 265–9, 266, 268, 269, 284; differences in study populations, 270–2; education, 277–8; empirical measurements of demand elasticities, 272–6, 273; ethnicity and gender, 276–7; experimental and nonexperimental data, 271; health status and demand, 264, 265; individual income elasticities, 272–3, 284; insurance elasticities, 274–6; issues in measuring health care demand, 269–72; measurement and definitions, 270; modeling consumer choice with behavioral hazard, 280–1; other variables affecting demand, 276–8; patient-centered care, evidence-based medicine, and health care demand, 260–1; pricing information, 282–3; time considerations, 265–7, 266, 283; urban versus rural, 277  
consumer-directed health plans (CDHP), 633–4, 642, 647g

- consumer equilibrium, 38, 261–2, 283  
 consumer information, prices, and quality, 300–5;  
 consumer information and prices, 300–2; price  
 dispersion, 302; reputation goods, 301; role of  
 informed buyers, 301–2  
 consumer price index (CPI), 11, 251, 253  
 consumer's surplus, 129, 129–30, 151  
 consumer theory, 34–7, 35–8, 55; individual  
 demands, 38–9  
 copayment, 311, 323, 327, 482, 647g; and  
 Medicaid, 573; and nonutilization, 491; and  
 prescription drugs, 482, 490–1, 495  
 corporatization, 301  
 cost-benefit analysis (CBA), 148–9, 647g;  
 measuring benefits and costs, 131–40; *see also*  
 economic efficiency and cost-benefit analysis  
 cost containment, 305, 489–93, 540; and ACA,  
 639–40, 642  
 cost curves: isocost curves, 45–6, 46, 47, 239–40,  
 243, 245, 250; long-run average, 47, 47, 50, 55,  
 242, 244; marginal cost curve, 47, 49,  
 318–19, 376, 609  
 cost-effectiveness analysis (CEA), 131, 148;  
 advantages of, 143–4  
 cost function, 234, 238–40, 239; structural versus  
 behavioral, 242–3  
 cost minimization, 46, 46–7, 47, 239–40, 255,  
 479–80, 480  
 cost of illness (COI), 210  
 cost sharing, 275, 300, 330, 388, 570, 647g  
 cost-utility analysis (CUA), 131, 146, 148, 149,  
 647g  
 coverage, 311  
 COVID-19, 3, 6, 19–20, 312; and ACA lawsuits,  
 349–50; American Rescue Plan, 631; beginnings  
 of, 217–20; case study, 217–28; China, 3, 217,  
 218, 227, 228, 599–600; comparative health care  
 systems, 595–6; cost-benefit analysis for school  
 reopening, 134–5; costs related to mortality  
 and morbidity, 220–2; cure versus disease, 217,  
 226–8, 227; direct costs, 220, 228; disparities,  
 equity, and need, 16, 216–17, 225, 226–7; and  
 disparities in health care, 205; and education,  
 211, 216, 222–4, 228; and elderly, 205, 220,  
 221, 224, 224–5, 225; and employment of  
 physicians, 458; “essential workers,” 217,  
 225; excess deaths before and during, 221–2;  
 externalities, 510; Find, Test, Trace, Isolate,  
 and Support (FTTIS, China), 599; and framing  
 effects, 279; and gross domestic product  
 (GDP), 213–15, 223; “health codes,” 600; and  
 health system reform, 631; and HIPAA, 538–9;  
 hospital-at-home (HH), 409; information and  
 disinformation, 291–2; lockdowns, 213, 216,  
 218, 222, 225, 227, 228, 599–600; “long”  
 (post-acute sequelae SARS-CoV-2, PASC),  
 212; and mobile health units, 179; mortality  
 rate, 21, 204, 218, 220–2; and nursing homes,  
 412–13; Operation Warp Speed, 473; in other  
 countries, 171; and patient demands, 260;  
 and pharmaceutical industry, 469, 488; and  
 physician payment, 552; Production Possibility  
 Curve (PPC), 212–14, 213; and public health  
 spending, 541; SARS-CoV-2 viruses, 205;  
 “social distancing,” 134, 211, 219, 226, 227;  
 stay-at-home orders, effects of, 198, 226,  
 227; and telemedicine, 251–2, 444, 447, 640;  
 vaccinations, 73, 96, 155, 472, 622; variants,  
 206, 218, 219; ventilator shortages, 219;  
 weekly new cases, 218, 218; “work from home”  
 practices, 211; *see also* pandemic economics  
 cream-skimming, 298, 355, 378  
 criminality: and alcohol, 183–4; and drugs and  
 opioids, 198–9  
 cross-(price)-elasticity of demand, 647g  
 crowd-out, 574, 574–5, 575, 647g  
 Current Population Survey, 352  
 curves, 32–4, 33, 55; demand curve, 34–7; firm  
 supply curve, 47–53; flat of the curve, 83, 93;  
 Lorenz Curve, 517–18, 518; marginal cost curve,  
 47, 49, 318–19, 376, 609; marginal efficiency  
 of investment curve (MEI), 115, 116, 125, 162,  
 162–3, 180; offer curve, 38, 39, 504, 504–5,  
 652g; Production Possibility Curve (PPC),  
 212–14, 213, 653g; supply curve, 30, 31, 48;  
 Waaler Curve, 88; *see also* cost curves; demand  
 curves; indifference curves
- data and safety monitoring board (DSMB), 71  
 data envelopment analysis (DEA), 237, 246–7,  
 247, 255  
 deadweight loss, 211, 211, 329, 619; *see also*  
 welfare loss  
*Deal or No Deal* (TV program), 314–15  
 death: due to medical management, 455; as  
 endogenous, 115; excess, 221–2; *see also* adverse  
 events; infant mortality; mortality rate  
 deductibles, 94, 94, 270, 275, 280, 311, 325, 647g;  
 high-deductible plans (HDHPs), 282, 296, 345,  
 370, 633, 650g  
 Deficit Reduction Act of 2005, 414  
 delivery of health care, 10–11; disparities in, 165,  
 165–6; vertical integration, 301, 367, 420, 433,  
 434, 458  
 demand, law of, 38, 650g  
 demand and supply of health insurance, 309–38,  
 421; amount of insurance, 316–18, 317; changes  
 in expected loss, 319, 335; changes in premiums,  
 318–20, 319; changes in wealth, 319–20;  
 coinsurance, impact of, 326, 326–9, 327, 329;  
 competition and normal profits, 320–1; demand  
 for insurance, 316–20; demand for insurance  
 and the price of care, 329–30, 330; effects of  
 coinsurance and deductibles, 325; expected  
 value, 312; income transfer effects of insurance,  
 330–2, 331, 332; insurance definitions, 309–11;

## Subject Index

- marginal utility of wealth and risk aversion, 312–15, 313, 335; moral hazard, 322–5, 335; moral hazard and demand for care, 323, 323–5; optimal level of coverage, 321–2; purchasing insurance, 315–16; risk and insurance, 311–12; supply of insurance, 320–1; welfare loss of excess health insurance, 333–5; *see also* supply and demand
- demand curves, 29, 30, 31, 49; consumer theory, 34–7, 35–8; and moral hazard, 331; statistical analysis of, 58; *see also* supply and demand
- demand for health capital, 106–27; and age, 115–16; capital, cost of, 113–14; consumer as health producer, 107, 107–8; decreasing MEI, 115, 116; demand for health, 107–9; and education, 117–18; empirical analyses using Grossman’s model, 118–20; health stock, 107, 107, 111, 112; investment/consumption aspects of health, 111–13; investment over time, 113–14; labor-leisure trade-offs, 109–11, 110; marginal efficiency of investment and rate of return, 114–15, 115; and obesity, 120–5; preferences between leisure and income, 110–11; production of health and home goods, 112–13, 113; production of healthy days, 107, 108, 111–12, 112; time spent producing health, 108–9; trading leisure for wages, 110–11; wage rate, 117
- demand functions, 33–4, 648g
- demands: derived, 34; individual and market, 38–9, 39
- demand shifters, 29, 160, 262–4; and consumer choice, 262–4, 263; income, 163; time and coinsurance, 265–9, 266, 268, 269, 284
- demand theory, 102, 281, 289
- dental office productivity, 237–8
- dentists, 454
- Department of Defense, 143, 540
- Department of Health and Human Services (DHHS), 271, 297, 306, 463, 490, 647
- Department of Justice, 355, 473
- Department of Veterans Affairs, 489, 538, 540
- depreciation, 114–16, 115, 648g; and addictive stock, 189
- “deserving,” concept of, 574
- Detroit Mobile Health Clinic, 179
- diabetes, 63; insulin, 468–9, 470, 567
- diagnosis-related groups (DRGs), 18, 243, 353–5, 647g; Medicare Severity Long-Term Care Diagnostic Related Groups (MS-DRGs), 544–5, 648g; Payment by Results (PbR), 549; by weight, 546; “yardstick competition,” 527, 545–9, 547, 655g
- Diamond Princess* cruise ship, 219
- difference-in-differences (DID) estimation, 71–2, 72, 73, 536, 566, 648g
- difference of means, 60–64, 73, 77n1; standard error of the mean, 62, 62–3; variance of a distribution, 61, 61
- digital medicine *see* telemedicine
- Digital Medicine Society, 444–5
- diminishing returns, law of, 83, 441, 650g42–4
- direct and indirect costs, 205, 216, 220
- direct effects, 158–9, 159, 161
- direct-to-consumer advertising (DTCA), 191–2, 474–5
- disabilities, 557; Activities of Daily Living (ADL), 170; Instrumental Activities of Daily Living (IADL), 170; and Medicaid–Medicare relationship, 573–4
- disability-adjusted life-years (DALYs), 147, 149
- discounting, 134, 137–9, 152–3, 648g; *see also* present (discounted) value
- discount rates, 102, 648g
- disease: 1918–19 influenza, 206, 207; asthma, 209; cholera, 89–90; and environment, 206; herd immunity, 206; hosts, 205–6; infectious agents, 205, 228; influenza A(H1N1), 207, 217; malaria, 323; measles, 206; monkeypox, 207; public health control activities, 206; rare conditions, 486, 497n6; severe acute respiratory syndrome (SARS) epidemic (2003), 599; toxoplasmosis, 471; tuberculosis, 86, 87, *see also* COVID-19; heart care treatment; heart care treatment examples; obesity; pandemic economics
- disenrollment, 376–7, 384, 390
- disparities in health and health care, 16, 154–82, 648g; addressing, 173–4, 181; and COVID-19, 205, 216–17, 225, 226–7; definitions and economic theory, 158–67; delivery of health care, 165, 165–6; differences which are not disparities, 171–3, 180; difficulty/expertise in communicating with the provider, 157, 164, 299; direct and indirect effects, 158–62, 159, 160, 161; disparities, defined, 158, 180; diverse experience across world, 28; empirical evidence, 163–7; equality in health and health care, 174–5; equity, 175–80, 176, 179; geographic variation in quality of care, 159, 166, 174; Grossman model and disparity, 162–3, 180; health care access and delivery in other countries, 171; immigration, 166–7; measuring, 167–71, 181; measuring disparity in health, 170–1; measuring disparity in quantity and quality of care, 169–70; measuring mistrust and John Henryism, 168–9, 650g; mistrust, medical, 161, 162, 168–9, 180; and pandemics, 216–17; prevention and cost of care, 178–80, 179; race corrections or ethnicity adjustment in medical algorithms, 172; refusal to participate in ACA, 569–70, 638, 639; *see also* equity, efficiency, and need; race
- “disproportionate share hospital” (DSH), 573
- distributional adjustments, 140
- Doctor of Medicine (MD) degree, 448
- Doctor of Osteopathic Medicine (DO), 448
- Doctors Across New York program, 177

- The Doctors* (television program), 291–2  
*The Dr. Oz Show* (television program), 291–2  
 Drug Enforcement Agency (DEA), 119  
 Drug Price Competition and Patent Restoration Act of 1984, 485  
 dummy (binary) variables, 67–8, 73  
 dumping, 378  
 Durham Humphrey Amendment (1951), 475
- Early Discharge of Mothers and Babies Bill (Maryland), 387  
 Earned Income Tax Credit (EITC), 101  
 economic analysis: economic models, 13–14;  
   features of, 13; marginal analysis, 13;  
   normative issues, 502; rational decision-making, 13; scarcity of resources, 13; *see also* economic efficiency and cost-benefit analysis; microeconomic tools for health economics  
 economic costs, 617  
 economic efficiency and cost-benefit analysis, 128–53; background to evaluation analyses, 131; contingent valuation, 141; cost-benefit analyses of heart care treatment, 142–3; cost-effectiveness analysis, 143–4; cost-effectiveness analysis (CEA), 143–4; cost-utility analysis, QALYs, and DALYs, 144–6; disability-adjusted life-years (DALYs), 147, 149; discounting, 137–9, 152–3; distributional adjustments, 140; economic efficiency, 129, 129–31, 130, 131; inflation, 140; marginal analysis in CBA, 135, 135–6; measuring benefits and costs, 131–40; QALYs revisited: praise and criticism, 146–8; risk adjustment and CBA, 139; risk equity versus equality of marginal costs per life saved, 133–5; valuing human life, 140–3; willingness to pay and willingness to accept, 140–1  
 economic game, 547–8; *see also* game theory  
 economic methods and examples of analysis, 12–14  
 economic models, 13–14  
 economic profit, 648g  
 economic (excess) profit, 49–50, 55, 321, 340, 364, 373–4, 421, 421–2, 483, 529, 545, 648g  
 economic shortages, 447–51, 465  
 economies of scale and scope, 240, 240–2, 241, 488, 648g  
 Edgeworth box, 503, 503–4, 512, 524, 648g  
 education, 117–18; and caesarean sections (C-sections), 299; compulsory education laws, 102; and consumer choice and demand, 277–8; and COVID-19, 211, 216, 222–4, 228; and demand for health capital, 117–18; and disparity, 164; and income inequality, 520–1; level, and firm hiring decisions, 440; maternal level, 98; medical, and control over entry, 451–6, 465; schooling, role of, 101–2; *see also* schooling, role of  
 “Effective Treatment” measures, 306  
 efficacy, defined, 477  
 efficiency *see* equity, efficiency, and need; Pareto efficiency  
 efficiency, defined, 502, 648g  
 elasticities, 39–41, 41, 41, 55, 77n1, 648g; and cigarettes, 195, 196; cross-(price)-elasticity of demand, 647g; demand elasticities and aggregate expenditures, 276–8; empirical measurements of demand elasticities, 272–6, 273; estimating, 67; income elasticities over time and across countries, 273–4, 284; income elasticity of demand, 650g; individual income, 272–3; insurance elasticities, 274–6; microeconomic tools for health economics, 39–41, 41, 41, 55; and moral hazard, 324–5; price elasticity of demand, 40, 194, 276, 284, 324, 497n5, 653g; price elasticity of supply, 653g; and reputation goods, 301; and specialization, 458; of substitution, 236–7, 238, 255  
 Electronic Medical Records (EMR), 249  
 emergency department (ED), 15, 72, 95, 157, 173, 174, 301, 432; and Medicaid, 272; run by private equity firms, 432; United Kingdom, 171, 591  
 Employee Benefit Research Institute, 345  
 Employee Retirement Income Security Act (ERISA) of 1974, 370, 388  
*Employer Health Benefits Survey*, 345  
 employer-provided health insurance: Cadillac tax, 629; and employee turnover, 378; employer-sponsored insurance (ESI), 348; group plans, 296, 297–8, 325, 333–5, 334, 414, 601; and job mobility, 340, 350–2; and labor supply, 350–2; other impacts of, 348–50; payment of, 343–50, 344, 346; self-funded, 370; *see also* organization of health insurance markets  
 endogenous processes, 115, 118  
 energy-dense foods, 124  
 England and Wales, population history, 84  
 entitlements, 557  
 environmental impact on health, 99–101  
 environmental issues, 138–9  
 epidemics, 648g; as an economic externality, 207–9; versus pandemics, 206–7; Susceptible-Infective-Removed (SIR) model, 206, 209, 228; two models of, 210–15  
 epidemiological transition, 88  
 epidemiology, 89–90  
 episode-based payments, 368, 372  
 equality in health and health care, 174–5, 175; fair equality of opportunity, 516–17  
 equilibrium, 30, 31, 55, 648g; changes in: age, wage, and education, 115–18; competitive, 504, 505; and consumer choice, 274; consumer equilibrium, 38, 261–2, 283; and HMO markets, 378–80, 380; and supply adjustment, 450–1, 451; and wages, 344, 442, 462, 465  
 equilibrium price, 49, 158, 191–2, 268, 294, 301, 423, 428, 445, 534, 648g

## Subject Index

- equity, 175, 175–80, 176, 179; and COVID-19, 216–17, 225–6; horizontal, 175; private, 301
- equity, efficiency, and need, 501–26; First Fundamental Theorem of Welfare Economics, 502, 505, 507–8, 524, 649g; Second Fundamental Theorem of Welfare Economics, 502, 506, 507–8, 524; Daniels' concept, 516–17, 524; deviations from the competitive model in the health care sector, 507–9; economic efficiency rationale for social health insurance, 510, 510–11, 524; Edgeworth box, 503, 503–4, 512, 524, 648g; efficiency and competitive markets, 502–7, 503, 504, 506; efficiency defined, 502; equity of access, 512; externalities, role of, 508; extra-welfarism, 509, 514–15; health care needs and social welfare function, 512–16; horizontal equity and need, 517–21; information, role of, 508; need and need-based distributions, 511–17, 513, 514, 524; redistribution of the endowment, 505–6, 506; social justice theories, 502, 521–3; social welfare function, 512–13, 513, 515; Theorem of the Second Best, 509, 524, 655g; trade-offs between equity and efficiency, 507; trading along the budget line, 504, 504–5; uncertainty, role of, 508; utilitarianism, 522; utility-possibility frontier, 512–14, 513, 514; *see also* disparities in health and health care; efficiency
- equity of access, 512
- essential benefits (ACA), 357–8, 362, 388, 626, 628, 638; *see also* mandated benefits
- ethical theories, 521–2
- ethnic differences, 276–7
- Europe, and social insurance, 560
- European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), 64
- European Community Household Panel, 123
- evaluation analyses, 131
- evidence-based medicine (EBM), 260–1, 430
- excess demand, 449–50, 450; nursing homes, 413–14, 414; and registered nurses, 461
- excess profits (economic profits or rents), 373, 453–4, 465, 609
- exclusions, 311
- Exclusive Provider Organization (EPO), 626, 645n3
- exercise, 97; technology, 108–9
- exogenous, defined, 116
- expanded function dental assistants (EFDAs), 237–8
- expansion path, 46, 47, 240, 257
- expected value, 312, 648g
- experience rating, 297–8, 355, 648g
- externalities, 56, 649g; alcohol consumption, 183–4; charitable, 508–9, 524; cigarette smoke, 183, 190, 207–8; and COVID-19, 510; and government intervention, 527; and HMO care provision, 376; information, 253; pollution, 53–4, 54; and public goods, 531–2; vaccine, 209–10
- extra-welfarism, 502, 509, 514–15; and QALYs, 146–7
- extremal ratio, 429
- “fair-innings” approach, 147, 516
- fairness, 522–3
- Fairness Doctrine, 193
- family as producer of health, 98–9, 120
- Federal Communications Commission (FCC), 64
- Federal Employees Health Benefits Program (FEHBP), 541
- Federal Medical Assistance Percentage (FMAP), 569–70
- Federal Trade Commission (FTC), 52, 193, 355, 374
- Federal Uniform Drinking Age Act (FUDAA), 197
- fee-for-service (FFS) care, 365–6, 368–9, 370, 371, 389, 390, 649g; dumping, creaming, and skimping, 378; empirical results on differences with HMOs, 381–3; and physician profit incentives, 424
- fee schedule, 434, 528, 568, 604, 649g
- “fee test,” 423–4
- fentanyl, 119
- fertility treatment example, 305
- Find, Test, Trace, Isolate, and Support (FTTIS, China), 599
- firm, 41–2, 649g; capital/labor ratio, 237; firm supply curve under perfect competition, 47–53; hiring decisions at different wage levels, 440–1, 441; loading costs and behavior of, 340–3, 357, 357; long-run cost curves for, 47; size and innovation, 488–9; theory of, 42; *see also* mergers
- “first best,” 146, 549
- fixed costs, 47, 133, 403, 483, 548, 646, 649g
- fixed-dollar plan payment, 372
- flat of the curve, 83, 93
- Flexner Report (1910), 452–3
- Flint, Michigan, lead water contamination, 100–1, 178, 572
- Food, Drug, and Cosmetic Act of 1938, 475, 476; 1962 amendments, 477, 485, 494
- Food and Drug Act of 1906, 476, 540
- Food and Drug Administration (FDA), 70, 191, 473, 474–5, 540; and thalidomide tragedy, 476–7
- Food and Drug Administration Amendment Act of 2007, 477
- Food and Drug Administration Safety and Innovation Act of 2012, 477–8
- food insecurity, 156, 157
- formularies, 470, 492, 495, 649g
- framing bias, 141, 279, 279

- frontier analysis, 246–8, 649g; data envelopment analysis (DEA), 246–7, 247, 255; stochastic frontier analysis (SFA), 246, 247–8, 248, 255; utility-possibility frontier, 512, 513
- functions and curves, 32–4, 33, 55
- Gallup poll on health insurance, 641
- game theory, 649g
- gatekeepers, physicians as, 281, 367, 370–2, 371, 390, 601, 632, 649g; United Kingdom, 591
- gender differences, 276–7; female physicians, 448, 458–60, 465; income gap for physicians, 459–60; wage gaps, 348, 465
- General Accountability Office (GAO), 475
- General Motors (GM) example, 304–5
- generic drugs, 192, 310, 327, 470, 471, 485, 490, 491
- Ghanaian National Health Insurance Scheme (NHIS), 322–3
- Gini Coefficient, 517–18, 518, 520
- goods: capital, 107, 113–14, 125; complementary, 192, 201; home goods, 112–13, 113, 259; inferior, 29, 40, 650g; normal, 29, 40, 124, 272–3, 284, 590, 652g; public, 529–31, 530, 553, 654g; reputation, 301, 654g; search good, 654g; unpriced, 20, 53, 208, 244
- government intervention in health care markets, 527–55; antitrust policies, 543, 552; commodity taxes and subsidies, 19, 533, 533–4, 553; economic rationale for, 528–32, 529, 530, 553; forms of, 533–8; government failure, 549–52; in health care markets, 538–45; health sector regulation and the prospective payment system, 543–5; hospital support, 539–40; and market failure, 528, 530, 549, 552, 553; and monopoly, 528–9, 529, 543, 553; other government programs, 541–3; other rationales for, 532–3; and physician payment, 551–2; public goods, 529–31, 530, 553; public provision, 534–7; regulation, 537–8, 553; transfer programs, 537; *see also specific government programs, laws, and regulations*
- “Great Recession,” 353, 356, 359, 389, 589
- greenhouse gases, 138–9
- Green Mountain Care (Vermont), 623–4
- gross domestic product (GDP), 13, 65, 120, 551, 637–8, 649g; China, 596, 597; comparative health care systems, 589, 591, 602; and consumer choice, 273–4; and COVID-19, 213–15, 223; Medicare share of, 582; OECD countries, 8; and pharmaceutical industry, 493; and QALY decisions, 147–8; United States, 3, 6–7, 7, 20
- Grossman’s model, 111, 118–20; and disparity, 162–4, 180
- Group-Based Medical Mistrust Scale (GBMMS), 169
- Group Health Cooperative (GHC) of Puget Sound, 382
- group insurance, 297–8, 649g
- Hawthorne effect, 302–3
- health, 649g; demand for, 107–9; as ultimate output, 233; *see also* demand for health capital; production of health
- Health and Retirement Survey (HRS), 347
- health care, defined, 649g
- Healthcare Effectiveness Data and Information Set (HEDIS), 368, 649g
- health care labor markets and professional training, 438–67; availability of physicians, 448, 448; demand for and supply of labor, 439–41, 465; and digital medicine, 444–7; economic definitions of shortages of health professionals, 449–51; evidence of public interests versus self-interests, 454–5; excess demand, 449–50, 450; factor productivity and substitution among factors, 443–4; factor substitution and labor demand, 442–3, 464; health care labor supply and the meaning of shortages, 447–51; labor, defined, 438; licensure and monopoly rents, 453–5, 465; licensure and quality, 455–6; marginal product and marginal revenue product of labor (MRP), 440–1, 441, 446; medical education and control over entry, 451–6, 465; monopsony power and RNs, 461–3, 462, 465; nursing, 460, 460–4; other physician labor market issues, 456–60; private practice or employed, 458; production functions and isoquants, 439–40, 440; public interest and self-interest theories of regulation, 454; specialization, 457–8, 465; *see also* labor market; professional training
- health care reform plan (Clinton, 1993), 489, 561
- Health Care System Distrust Scale (HCSDS), 169
- health economics, 3–24, 421; application to health and health care, 14–15, 15; competition, restrictions on, 18; defined, 4–5; differences in health care, 16–19; disparities, equity, and need, 16; economic methods and examples of analysis, 12–14; economic side to other health issues, 12; government subsidies and public provision, 19; health care spending in other countries, 7; health expenditures for US, 22–4; health insurance, prominence of, 17–18; importance attached to economic problems of health care delivery, 10–11; information, problems of, 18; labor and capital, importance of, 8–9; macroeconomic issues, 25, 118, 140, 254, 443, 473–4, 532; personal spending, importance of health economy in, 7; quality, 12; relevance of, 6–12; scarcity of resources, 13, 14; size and scope of the health economy, 6–7; time, as ultimate resource, 9–10; two notable contributors to, 14; *see also* microeconomic tools for health economics; statistical tools for health economics

## Subject Index

- health economics of bads, 183–203; advertising restrictions on cigarettes and alcohol, 190–4; bads, introduction to, 183–7; consumption-reducing effects of taxes in theory, 194–5, 195; imperfectly rational addiction models, 187, 201; marijuana use, 200; models of addiction, 187–90; myopic addiction models, 187; Oregon, decriminalization of drugs, 200; rational addiction model, 187–90, 188, 196, 201; rationales for public intervention, 190; regulation of production and consumption of alcohol and drugs, 197–201, 199; taxes and cigarette consumption in practice, 195–6; taxes and consumption of cigarettes and alcohol, 194–7, 195; *see also* addiction
- health exchanges/marketplaces, 296, 358–9, 630, 631, 649g
- health insurance: coverage status and type of coverage, 354; disparities by race, 156, 156–7; dual coverage, 353; high-deductible health plans (HDHPs), 282, 296, 345, 370, 633, 650g; indemnity policies, 322; insurance elasticities, 274–6; millions lacking in US, 3; primary and secondary, 328, 329; prominence of, 17–18; social health insurance, effect of, 94, 94–6; and substitutability, 480–1; and technological change, 250; value-based insurance design (VBID), 282, 306, 368, 631–2, 655g; work-loss days per employed person per year, 94, 94; *see also* Affordable Care Act (ACA); Children’s Health Insurance Program (CHIP); coinsurance; demand and supply of health insurance; Medicaid; Medicare; organization of health insurance markets; social health insurance
- “The Health Insurance Game” (Kohn), 342–3
- Health Insurance Portability and Accountability Act (HIPAA), 351, 527, 538–9, 649g
- health maintenance organizations (HMOs), 254, 266, 298, 353, 370, 371, 649g; amount of care, 376, 376–7; analysis of published literature, 383; concerns about, 377–8; defined, 370; disenrollment, 376–7, 384, 390; framework for prediction, 377–8; HMO Act of 1973, 374; Kaiser-model HMOs, 373; modeling individual, 375–6; rating of, 304; social inefficiency (underutilization), 365; staff model plans, 370, 654g; types of care, 377
- health outcomes, 16; adverse events, 71, 455–6, 476–7; and disparities, 155–7
- Health Professional Shortage Areas (HPSA), 166, 175
- Health Professions Educational Assistance Act 1976, 457
- health records, 166; *see also* Electronic Medical Records
- health reimbursement account (HRA), 649g
- Health Savings Accounts (HSAs), 633–4, 642, 649g, 650g
- health status (HS) measure, 83, 112, 112, 649g
- health stock, 107, 111, 112, 112–13, 126; decline, 115–16
- health system reform, 615–45; Accountable Care Organizations (ACOs), 632–3; and Affordable Care Act (ACA), 615–16, 619, 620, 625–9, 628, 629, 634–9; alternative delivery systems, 632, 642; average cost of “metal” plans, 627; basic issues, 617–18; choice for patients and providers, 616; competitive strategies in post-ACA era, 629–34; consumer-directed health plans and health savings accounts, 633–4, 642, 647g; cost containment, 616; costs of universal coverage, 618–19; and COVID-19, 631; ensuring access to care, 619–24; goals of, 616–17; health care costs, 637–8; household impact of private market insurance, 628; mandate types, 617, 619–21, 641; meeting goals, 639–40; quality, high-value care, 616; safety net, 616–17, 639; separation of health insurance from employment, 621–2; single-payer versus multiple insurers, 622–4; value-based insurance design (VBID), 631–2
- health utility index (HUI), 606–7
- health visitors (NHS), 595
- healthy days, production of, 107, 108, 111–12, 112
- Healthy Diné Nation Act of 2014 (HDNA), 537
- Healthy Michigan Plan, 388, 572–3
- heart care treatment examples, 4, 341; acute coronary syndrome, 491; angioplasties (PCI), 171; carotid stenosis, 427; coronary artery bypass grafting (CABG), 171; coronary artery bypass graft surgery (CABG), 305; cost-benefit analyses of, 142–3; and cost sharing, 491; myocarditis, 212; OECD studies, 493; percutaneous transluminal coronary angioplasty (PTCA), 146; revascularization, 4, 142–3; and technological changes, 251, 253
- herd immunity, 206
- Herfindahl-Hirschman Index (HHI), 355–6, 472–3, 543, 650g
- high-deductible health plans (HDHPs), 282, 296, 345, 370, 633, 650g
- Hill-Burton Act of 1946, 540
- historical role of medicine and health care, 84–90
- HIV and AIDS, 185, 228, 277, 349, 522
- HMO Act of 1973, 374
- home goods, 112–13, 113, 259
- Home Health Agency (HHA) care, 563
- home health care, 46, 238, 383, 384, 415–16, 417, 460, 460–1, 568
- hormone replacement therapy (HRT) example, 70–1
- hospice, home health, and informal care, 415–16, 563
- Hospital Acquired Condition (HAC) Reduction Program, 638

- “hospital acquired conditions,” 406  
 hospital-at-home (HH), 409, 449  
 Hospital Inpatient Value-Based Purchasing Program (VBP), 638  
 hospital outpatient department (HOPD) practices, 252  
 Hospital Readmissions Program (HRP), 638  
 hospitals, 397–419; acute care hospital model, 367; background and overview, 398, 398–401; beds, 9, 242, 405, 417, 422–3; and Blue Cross and Blue Shield, 353–5; closures, mergers, and restructuring, 52–3, 244, 405–6; community, 398, 540; competition and costs, 402–5; cost shifting, 403–5, 419n7; difficulties faced by all hospital cost studies, 243–4; “disproportionate share hospital” (DSH), 573; efficiency and hospital quality, 248–9; estimates for care, 238; facility fees, 434; history of, 399, 417, 539–40; hospital systems, 400; length of stay (LOS), 549; managed care contracts, 373; multihospital systems, 406; organization, 399–400; outpatient care, shift to, 400; physicians, relationship with, 399–400; physicians’ practices, acquisitions of, 432–4; quality of care, 406–9, 417; regulation and accreditation, 400–1, 417; teaching, 398; and telemedicine, 409, 417; total hospital efficiency, 248; uses of hospital efficiency studies, 248; utilization and costs, 401–5; *see also* nursing homes; production, cost, and technology of health care  
 human capital, 215, 221, 375, 443, 451; theory of, 120, 140, 149, 455, 650g  
 human capital, theory of, 107, 650g  
 human life, valuing, 140–3; contingent valuation, 141; cost–benefit analyses of heart care treatment, 142–3; and COVID-19, 220–1; last year of life, 141–2, 142; willingness to pay and willingness to accept, 140–1  
 Human Mortality Database (HMD), 221  
 human species-typical functioning, 516  
 Hunan, China, 217  
 hydroxychloroquine, 291  
 hypothesis testing, 59–60  
 hypothetical bias, 141  
 immigration, 617; California reform, 623; and disparity, 166–7; ineligibility for Medicaid or ACA, 360; and international medical graduates (IMGs), 456–7  
 Implicit Association Test (IAT), 167  
 incidence, 170, 206, 209, 310, 650g; *see also* prevalence  
 income, 29, 101, 644; absolute mobility rates, 521; and disparity, 163; elasticities over time and across countries, 273–4; elasticity of demand, 650g; income effect, 274, 332, 425–6, 435, 650g; income-maintenance programs, 507; income transfer effects of insurance, 330–2, 331, 332; individual income elasticities, 272–3, 284; inequality, 519–21, 520; job security measures, 164; labor-leisure trade-offs, 109–11, 110, 425–6, 650g; of physicians, 424–5, 425; trading leisure for wages, 110–11; wage rate, 117; wealth, 313  
 indemnity policies, 322, 650g  
 independent practice associations (IPAs), 366, 370, 650g  
 indifference curves, 110, 112, 113, 259–64, 424–5, 627, 643, 650g; as microeconomic tools, 34, 36, 36, 38, 39, 44, 54; and Pareto efficiency, 503–5; social indifference curves, 512–14  
 indirect effects, 160, 160–1, 161  
 individual demands, 38–9  
 inducement *see* supplier-induced demand (SID)  
 industrialization, 89, 399  
 inefficiency, 650g; *see also* equity, efficiency, and need; Pareto efficiency (optimality)  
 inertia bias, 280  
 infant care, comparative health care systems, 593, 595, 605  
 infant mortality, 650g; disparities in by race, 155, 155–6, 180; and disparity, 163; examples, 3, 65, 65–6, 66, 91–2; and income inequality, 519–20, 520; and Medicaid, 581  
 inference, statistical, 59, 63, 73  
 inferior good, 29, 40, 650g  
 inflation, 6, 11, 140; and Medicare and Medicaid, 577–81  
 Inflation Reduction Act of 2022, 470, 490, 494, 567, 579, 631, 641  
 informal care, 415–16, 417, 419n14  
 information: overview of information issues, 290; problems of, 18; as public good, 531; *see also* asymmetric information and agency  
 information systems, health care, 367  
 insecticide-treated bed net (ITN), 323  
 Institute for Clinical Evaluation and Research (ICER), 148  
 Institute of Medicine (IOM), 260, 648; report on disparities in health care, 165–6, 171, 173; report on quality and safety, 305–6  
 Institutions for Mental Diseases (IMD), 572  
 Instrumental Activities of Daily Living (IADL), 170  
 insulin, 468–9, 470, 567  
 insurance, 29; definitions, 309–11; social insurance versus, 310, 335; *see also* demand and supply of health insurance; health insurance; organization of health insurance markets  
 interest rate, 137–8; and inflation, 140  
 internal rate of return, 443, 451, 650g  
 International Agency for Research on Cancer (IARC), 63  
 international medical graduates (IMGs), 448, 452, 456–7

## Subject Index

- investment, 108, 125; investment/consumption aspects of health, 111–13; over time, 111, 111–13
- isocost curves, 45–6, 46, 47, 239–40, 243, 245, 250
- isoquants, 44, 44–5; and health care labor markets, 439–40, 440; and prescription drugs, 478–9, 479
- Ivermectin, 291–2
- job mobility/job lock, 340, 350–2, 538
- John Henry Active Coping Scale (JHAC12), 169
- John Henryism, 161, 168–9, 172, 650g
- John Henry legend, 168–9
- Johns Hopkins Hospital (Baltimore), 399
- Joint Canada/US Survey of Health (JCUSH), 606–7
- Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), 194, 400–1
- Judiciary Subcommittee on Competition Policy, Antitrust, and Consumer Rights, 52–3
- Kaiser Family Foundation (KFF), 224, 349, 356, 369
- Kaiser Family Foundation Employer Health Benefits survey, 535
- labor and capital, importance of, 8–9
- labor-leisure trade-offs, 109–11, 110, 425–6, 650g
- labor market, 342–5, 351–2, 356, 357; *see also* employer-provided health insurance; health care labor markets and professional training
- labor supply, and employer-provided insurance, 350–2
- laparoscopic cholecystectomy, 253–4
- law of large numbers, 310
- leaky bucket analogy, 507
- lemons principle, 454; application to health insurance, 295–8; car market example, 293, 293–4
- length of stay (LOS), 549
- licensure, 453–5, 465, 509, 528; and quality, 455–6
- life expectancy, 3, 4, 68, 69, 88, 91–3, 92, 558–9; comparative health care systems, 589, 596, 596, 601, 602; drop in US, 226
- lifestyle and environment, 96–8, 97, 103
- Likert scale, 170
- Limitations (insurance), 311
- linear functions, 32, 33, 55
- loading costs, 340–3, 651g; impacts of, 340–1, 341; and the uninsured, 341–2, 357, 357
- loading fees, 311
- long run, 240, 242, 651g
- long-run average cost, 47, 47, 50, 55, 242, 244
- long-term care (LTC), 14, 417, 651g; financing, 414–15
- Lorenz Curve, 517–18, 518
- luxury goods, 274, 651g
- macroeconomic issues, 25, 118, 140, 254, 443, 473–4, 532
- malpractice issues, 302, 393, 431, 432, 458, 610
- managed care, 365–93, 651g; and Affordable Care Act, 366, 388–9; alternative delivery systems, 632, 642; backlash against, 365, 386–8, 390, 403; characteristics of, 368–9; childbirth length of stay, 386–7; comparative utilization and costs, 381–2; contracts, 368; development and growth of, 373–4, 375; differences from FFS: dumping, creaming, and skimping, 378; economics of, 374, 375; emergence of managed care plans, 369–73; empirical results on differences from FFSs, 381–3; equilibrium and adverse selection in a market with HMOs, 378–80, 380; and federal policy, 374; growth in spending, 385, 385–6; hospital contracts, 373; independent practice associations (IPAs), 366; individual consumer questions about, 366; Medicaid and Medicare managed care plans, 371–2; Medicare, 365, 371–2, 374, 383–5, 632; modeling, 375–80; organizational structure, 367, 371; physician contracts, 372–3; selection bias and quality of care, 381; *see also* health maintenance organizations (HMOs); point-of-service providers (POS); preferred provider organizations (PPOs)
- managed care organizations (MCOs), 390, 651g; fee-for-service (FFS) care compared with, 365–6, 368–9
- mandated benefits, 357–8, 370, 570, 620–1, 642, 651g; *see also* essential benefits (ACA)
- mandates: Affordable Care Act (ACA) individual, 296, 342, 355, 362, 392n3; and health system reform, 619–21, 641
- marginal analysis, 13; in CBA, 135, 135–6, 149
- marginal benefit (MB), 132, 326, 345
- marginal cost (MC), 651g
- marginal cost curve, 47, 49, 318–19, 376, 609
- marginal effects, 103
- marginal efficiency of investment curve (MEI), 115, 116, 125; and disparity, 162, 162–3, 180
- marginal external benefit (MEB), 209, 210, 510, 510–11, 532, 534
- marginal external cost (MEC), 208, 208
- marginal labor cost (MLC), 461–2, 462, 651g
- marginal product (MP), 651g; of health care, 81, 82, 83, 91–3, 102–3; and health care labor markets, 440–1, 441; of labor, 42, 42–4, 44; and prescription drugs, 478–9, 479
- marginal rate of technical substitution (MRTS), 44, 235, 478, 651g
- marginal rate of transformation (MRT), 651g, 653
- marginal revenue (MR), 48, 49–50, 51, 376, 404, 404, 413, 421, 550, 651g; product of labor (MRP), 440–1, 441, 446
- marginal revenue product (MRP), 440–1, 441, 446, 651g

- marginal social benefits (MSB), 135, 135, 210, 510, 511, 530, 530, 534
- marginal social cost (MSC), 208, 208, 208–9, 226, 227, 532, 534
- marginal utility of wealth, 35, 35, 651g; and risk aversion, 312–15, 335, 340
- market demands, 38–9, 39, 269–70, 651g
- market effects, 260, 268
- market failure, 184, 199, 208, 305, 343, 454; and government intervention, 528, 530, 549, 552, 553
- market structures, 26, 48, 50–3, 51, 55–6, 543, 651g; comparative health care systems, 609, 609; production, cost, and technology, 243, 255; and supplier-induced demand, 426, 428
- market supply, 41–7
- Massachusetts Health Reform, 95
- maximin principle, 523
- maximum dollar expenditure (MDE), 275
- McGuire and Pauly model, 425–6, 435
- means tests, 537, 557
- measurement of health: eliminating biases, 91; reduced form equations, 91; structural equations, 91
- measuring benefits and costs: discounting, 137–9, 152–3; distributional adjustments, 140; inflation, 140; marginal analysis in CBA, 135, 135–6; micro-costing methodology, 132–3, 133; risk adjustment and CBA, 139; risk equity versus equality of marginal costs per life saved, 133–35
- measuring disparities in health and health care, 167–71
- Medicaid, 6, 14, 353, 568–73, 651g; 1115 Waivers, 572–3; and ACA, 569; and access bias, 636–7; analyzing the impacts of improvements in, 574–5, 575; and CBA, 131; and children, 95; and copayment, 573; and cost containment, 489; eligibility, 569–71, 581; establishment of, 561; expansion, 359, 361, 372, 388, 390, 392n3, 541, 562, 569, 573, 576, 584, 628, 638, 641; home health care, 415; lives saved by, 571–2; and managed care, 371–2, 374; Medicaid–Medicare relationship, 573–4; nursing homes, 411–12; Oregon Health Insurance Experiment (OHIE), 95, 271–2; out-of-pocket costs, 17; as “payer of last resort,” 574; and PDMPs, 200; physician acceptance of patients, 175; physicians as gatekeepers, 372; premiums subsidized, 310; scope and duration of services, 571–2; state cost sharing, 569, 569–71, 584; and telemedicine, 447; work requirements, 572–3
- Medical Expenditure Panel Survey (MEPS), 121, 171, 271, 352
- medicalization, 83
- Medically Underserved Areas (MUA), 166, 175
- Medically Underserved Populations (MUP), 166
- Medical Mistrust Index (MMI), 169
- medical savings accounts (MSAs), 633, 651g
- Medicare, 6, 14, 276, 280, 464, 562–8, 651g; and ACA, 638; acute hospital-at-home (HH), 409; beneficiary payment liabilities, 567–8; and CBA, 131; changing financing and future prospects, 581; cost containment, 490; diagnosis-related groups (DRGs), 18, 243, 544, 648g; drug legislation 2004, 415; and drug prices, 327–8; and efficiency, 502; enrollment by year, 563; establishment of, 561; expansion, 2006, 470; home health care, 415; hospital payment system, 18; hospital reimbursement, 403–4, 404; and IMG physicians, 457; insulin cost, 470, 567; managed care, 365, 374, 383–5, 632; Medicaid–Medicare relationship, 573–4; Medigap policy, 328, 567, 568, 652g; out-of-pocket costs, 17; and ownership of physician practices, 434; Part A- hospital insurance, 562–4, 567–8, 582, 651–2g; Part B- Supplementary Medical Insurance (SMI), 563, 567, 568, 651–2g; Part C- managed care, 564, 565, 652g; Part D- prescription drugs, 470, 484, 490–1, 562, 563–7, 577–9, 583–4, 652g; physician payment, 551–2; program financing, 567; projected enrollment and workers per enrollee, 582; prospective payments system (PPS), 403, 440, 544–5, 553, 653g; provider payments, 568; reduction in payments, 404, 404–5, 427, 552, 628–9, 638; and retirement, 350; retrospective payment, 544; and SID, 427; and technological change, 579–80; and telemedicine, 252, 447; traditional (TM), 383–4; and worker taxes, 346; *see also* Medicare Advantage (MA, Part C) plans
- Medicare (Canada), 600–1, 617
- Medicare Advantage (MA, Part C) plans, 280, 371–2, 383–4, 388–9, 390, 562, 565, 652g
- Medicare Current Beneficiary Survey, 619
- “Medicare-for-all” proposal, 631
- Medicare Modernization Act of 2003, 370
- Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, 563
- Medicare Prospective Payment System, 237
- Medicare Severity Long-Term Care Diagnostic Related Groups (MS-DRGs), 544–5, 648g
- Medigap policy, 328, 567, 568, 652g
- Medscape surveys, 457, 458
- mental health, 275; ADHD prescriptions, 475–6; *see also* addiction; opioids
- mental health and substance use (MH/SUD), 325, 572
- mergers: and Affordable Care Act, 405, 417; hospitals, 52–3, 244, 405–6; and pharmaceutical industry, 488
- Mexico: as cheaper alternative for prescriptions, 484; soda tax, 536
- “miasma,” 89–90
- micro-costing methodology, 132–3, 133, 149
- microeconomic tools for health economics, 25–57; budget constraints, 37, 37, 55; comparative

## Subject Index

- statics, 31, 31–2; consumer equilibrium, 38; consumer theory, 34–7, 35–8, 55; cost minimization or output maximization, 46, 46–7, 47, 239–40, 255; demand curve and demand shifters, 29, 30, 31; demand functions, 33–4; derived demand, 34; elasticities, 39–41, 41, 41, 55; equilibrium, 30, 31, 55; externalities, 53–4, 56; firm supply curve under perfect competition, 47–53; functions and curves, 32–4, 33, 55; indifference curves, 34, 36, 36, 38, 39, 44, 54, 55; individual and market demands, 38–9, 39; isocost curves, 45–6, 46; linear functions, 32, 33, 55; marginal and average cost curves, 47, 55; monopoly and other market structures, 50–3, 51, 55–6; practice with supply and demand, 29–32; production and market supply, 41–7; scarcity and the production possibilities frontier, 26–8; special production functions, 43–5, 44–5; supply curve and supply shifters, 30, 31; utility, 34–5, 35, 36
- military health insurance (Tricare), 427
- mistrust, medical, 161, 162, 168–9, 180; Tuskegee Study of Untreated Syphilis, 172, 217
- models: acute care hospital, 367; of addiction, 187–90; comparative health care systems, 593, 608–9, 609; competition, deviations from, 507–9; consumer choice with behavioral hazard, 280–1; economic, 13–14; of epidemics, 210–15, 211, 213, 228; Grossman's, 111, 118–20, 162–4, 180; HMOs, 370, 373, 375–6, 654g; hospital-at-home, 449; McGuire and Pauly, 425–6, 435; monopoly, 421, 421–2; standard budget constraint model, 259, 259–61; Susceptible-Infective-Removed (SIR), 206, 209, 228; telemedicine, 445, 445–6
- Modernization Act of 1997, 477
- Monograph on the Evaluation of Carcinogenic Risks to Humans* (IARC), 63
- monopoly, 48, 50–3, 51, 55–6, 648g; comparative health care systems, 609, 612; and drug pricing, 482–3, 483; and government intervention, 528–9, 529, 543, 553; inefficiencies, 527, 529; and licensure, 453–4; and physician practices, 421, 421–2; and price controls, 484–5
- monopoly profit (rent), 453–4, 465, 483, 529, 545, 550, 652g
- monopsony, 461–3, 462, 465, 652g; comparative health care systems, 603, 609, 609, 610
- monotechnic approach, 448, 517, 525
- moral hazard, 322–5, 331, 335, 624, 652g; and demand for care, 323, 323–5; income transfer effects of insurance, 330–2, 331, 332; primary and secondary insurance, 328, 329
- morbidity rate, 91, 163, 448, 576, 652g
- mortality rate, 103, 652g; avoidable deaths, 608; cause of declines, 86, 87, 87; causes, 186; comparative health care systems, 594; and COVID-19, 204, 218, 219; and COVID-19 costs, 220–2; declines, 85, 86–90; and disparity, 164; and for-profits, 303; and hospital high capacity days, 174; Human Mortality Database (HMD), 221; infant mortality examples, 3, 65, 65–6, 66, 91–2; measuring the contribution of health care to, 92; and Medicaid expansion, 96, 571; and Medicare admissions, 581; Nevada and Utah compared, 96–7, 97; and nutrition, 88; and public health, 88–90; reduced by taxes on bads, 196; *see also* death
- multiple regression analysis, 68–72
- National Assessment of Educational Progress (NAEP), 224
- National Cancer Institute, 63
- National Center for Education Statistics (NCES), 224
- National Committee for Quality Assurance (NCQA), 304, 368, 649g
- National Health and Nutrition Examination Survey (NHANES), 164
- National Healthcare Quality and Disparity Report, 180
- national health expenditures (NHE), 11, 11, 17, 470–1, 493, 541–3, 542; growth rate, 637; *see also* Affordable Care Act (ACA)
- National Health Insurance Act 650 (Ghana), 322–3
- National Health Service (NHS, United Kingdom), 171, 549, 560, 590–6, 604
- National Highway Traffic Safety Administration, 140
- National Institute of Diabetes and Digestive and Kidney Diseases 2021 Report, 63
- National Longitudinal Survey of Youth (1979), 125
- National Survey of Substance Abuse Treatment Services (2010–2018), 572
- Native Americans and Alaska Natives: and COVID-19, 225–6; junk food tax, 537
- Navajo Nation Council, 537
- necessity, 273–4, 652g; *see also* need and need-based distributions
- need and need-based distributions, 511–17, 524; Daniels' concept, 516–17, 524; economic criticisms of, 517, 525; health care needs and social welfare function, 512–16, 513, 514
- needs based shortages, 438, 465
- net present value (NPV), 486–7
- Nevada, mortality rate, 96–7, 97
- Newly Cooperative Medical Scheme (NCMS, China), 597–9
- New York City licensure requirements, 1760, 453
- nominal value, 652g
- “non-parametric,” 247
- nonprofit organizations, 355, 362, 411
- normal good, 29, 40, 124, 272–3, 284, 590, 652g
- normal return (normal profit), 452–3, 652g

- normative issues, 502
- North American Industry Classification System (NAICS), 47
- nurses, 8, 10, 444; advance practice registered nurses (APRNs), 463–4; associate degree in nursing (ADN), 463; Bachelor of Science in Nursing (BSN), 463; Certified Registered Nurse Anesthetist (CRNA), 464; comparative health care systems, 589; degree of substitution, 235, 235–6; labor markets, 460, 460–4; nurse anesthetists and anesthesiologists, 463, 464; nurse practitioners (NPs), 444; other earnings issues and scope of practice laws, 463–4; production and the possibilities for substitution, 234–8; registered nurses (RNs), 412, 460, 460, 466; turnover rates in nursing homes, 412
- nursing homes, 410–14, 652g; background and costs, 410; and COVID-19, 412–13; excess demand, 413–14, 414; quality of care, 411–12; type of ownership, 411–12
- obesity, 97, 120–5, 126, 347, 535; deterioration of health capital, 120–1; economic costs of, 121–3; as epidemic, 206; rates by US state, 122; reasons for increase in, 124–5; *see also* body mass index (BMI) examples
- OECD *Health at a Glance 2021*, 184–5
- offer curve, 38, 39, 504, 504–5, 652g
- Operation Warp Speed, 220, 473
- opioids: addiction, 118–19, 186; and advertising, 194; mortality rate, 186; prescription drug monitoring programs (PDMPs), 119, 199–201, 202; regulation of, 198–201, 199
- opportunity costs, 26, 26–7, 27, 132, 141, 652g; for medical students, 443; of public health take-up, 574–5
- optimality *see* Pareto efficiency
- ordinal utility, 35, 522, 652g
- ordinary least squares (OLS) regressions, 65–6, 121
- Oregon, decriminalization of drugs, 200
- Oregon Health Insurance Experiment (OHIE), 95, 271–2
- Organisation for Economic Cooperation and Development (OECD), 7, 8, 66, 96, 493, 549; classification of health care systems in, 588
- organization of health insurance markets, 339–64; compensating differentials, payment of, 347–8; employer provision of health insurance, 343–5, 344; health insurance markets since the 1980s, 355–6; insurance practices, 353–5; and labor market, 342–5, 351–2, 356, 357; loading costs, impacts of, 340–1, 341; loading costs and the behavior of insurance firms, 340–3, 357, 357; other impacts of employer provision of health insurance, 348–50; private insurance market, 353; tax system influences on health insurance demand, 346–7; and uninsured, 356–60, 357; *see also* Affordable Care Act (ACA); employer-provided health insurance
- Orphan Drug Act of 1983, 486, 497n6
- osteopathic medicine, 448, 453
- other countries *see* comparative health care systems
- out-of-pocket costs, 17, 94, 267, 271, 281, 300, 304–5; and healthcare demand and supply, 325, 328, 333, 334; for insulin, 469, 567; and managed care, 368, 369; for prescription drugs, 469, 470
- output maximization, 46, 46–7
- overutilization, 367, 377, 621, 633
- OxyContin, 119, 186–7, 194, 202
- pandemic economics, 3, 204–30; 1918–19 influenza, 206, 207; case study: COVID-19, 217–28; costs related to mortality and morbidity, 220–2; determinants of pandemics, 205–6; disease-, variant-, and vaccine-specific analyses, 210; disease transmission, 205; epidemic as an economic externality, 207–9; epidemics versus pandemics, 206–7, 648g, 652–3g; equity, race, and ethnicity Issues, 216–17, 224–5; in general, 204–5; longer-term disability costs, 216; pandemic as pollutant, 208, 208–9, 226–7; pandemic direct and indirect costs, 205, 216, 220, 228; policies to fight pandemics, 215–16, 228; reproduction number, 206, 207; two models of epidemics: tax or war, 210–15, 211, 213, 228; vaccine externalities, 209–10; *see also* COVID-19
- Pareto efficiency (optimality), 146, 176, 503–6, 524, 653g; Edgeworth box, 503, 503–4, 512, 524, 648g; redistribution of the endowment, 505–6, 506; and social welfare function, 515; trading along the budget line, 504, 504–5
- parity, 653g; purchasing power parity (PPP), 588, 588–9
- patent protection, 469, 471, 472, 474, 486, 528
- patient-centered care (PCC), 260–1
- Patient-Centered Outcomes Research Institute (PCORI), 629
- Patient Protection and Affordable Care Act, 561, 646g; *see also* Affordable Care Act (ACA)
- Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act (MHPAEA), 325
- pay-for-performance (P4P), 368, 387, 390, 624, 653g
- PCORnet (National Patient-Centered Clinical Research Network), 216–17
- peer review organizations (PROs), 400
- People's Vaccine Alliance, 473
- perfect competition, 47–53, 55, 426, 653g
- per-member-per-month (PMPM) dollar amount, 372
- personal spending, 7–8, 9, 17, 19

## Subject Index

- pharmaceutical industry, 468–97; barriers to entry, 474, 494; and competition, 473–4; competition and generic entry, 485; cost containment, 489–93; and COVID-19, 220, 469, 488; “detailers,” 474; drug pricing and profits, 482–5, 483, 484, 494; formularies, 470, 492, 495, 649g; Fortune 500 pharmaceuticals, 482; investment decisions, 486–7; media and legislative scrutiny of, 469–70, 471–2; mergers, 488; monopoly and drug pricing, 482–3, 483; new drugs and health care spending, 493–4; and opioid crisis, 119, 186–7, 194, 201; patent protection, 469, 471, 472, 474, 486; pharmacy benefit managers (PBMs), 492–3; price discrimination, 483–4, 484; production of health and substitutability, 478–82, 479, 480, 481; regulation, 476–8, 485, 540; research and development (R&D) and innovation, 485–9, 494–5; spending, 487–8, 494; structure, 470–6; substitution, 478–82, 479, 490; and technological change, 481, 481–5, 494; *see also* prescription drugs
- Pharmaceutical Research & Manufacturers of America (PhRMA), 485–6
- pharmacy benefit managers (PBMs), 492–3
- Physician Advocacy Institute, 458
- physician assistants/extenders, 235–6, 444
- physician practices: and demand side, 431; diffusion of information and small area variations (SAV), 429–431, 435; education, feedback, and surveillance, 430–1; hospital and private equity acquisitions of, 432–4; McGuire and Pauly model, 425–6, 435; modeling physician-firms and supplier-induced demand (SID), 421–8; and monopoly model, 421, 421–2; physician agency, asymmetric information, and SID, 422; physician practice style hypothesis, 430; private ownership, decline in, 420, 435; and profit incentives, 424–5, 425; target income hypothesis, 426, 435; and utility, 425–6; *see also* health care labor markets and professional training; physicians
- physicians: agency and health care, 298–300; as agents, 298–300, 420; availability of, 448, 448; board-certified specialists, 442–3, 452, 455; Canada, 602–3; comparative health care systems, 589; and diffusion of new health care technologies, 253–4, 254, 256; as employees, 433–4, 458; excess profits (economic profits or rents), 373, 453–4, 465, 609; female, 448, 458–60; as gatekeepers, 281, 367, 370–2, 371, 390, 591, 601, 632, 649g; in hospital setting, 399–400; increase in numbers, 8, 10; international medical graduates (IMGs), 448, 452, 456–7; lifetime earnings, 457–8; managed care contracts, 372–3; minority, 455; pandemic-era relief measures, 552; as patients, 299; payment, and regulation, 551–2; physician bias, 166; primary care, 449; productivity, 443–4, 445; specialty groups, 301, 457; *see also* health care labor markets and professional training
- Pittsburgh, air pollution, 209
- point-of-service providers (POS), 353, 370, 371, 371, 390, 651g, 653g
- pollution examples, 509; air and water, 209; dirty air and dirty water, 53–4, 54; lead water contamination, 100–1, 178; pandemic as pollutant, 208, 208–9, 226–7
- population: and environmental issues, 138–9; rising, and the role of medicine, 84–6, 85, 85
- population health *see* bads, health economics of; demand for health capital; disparities in health and health care; economic efficiency and cost-benefit analysis; pandemic economics; production of health
- poverty, 90, 156, 557; and disparity, 164; federal poverty level (FPL), 359; and Medicaid, 372; and subsidies, 507
- preexisting conditions, 297, 311, 349–52, 538
- preferred provider organizations (PPOs), 254, 303, 345, 353, 366, 370, 370–1, 371, 389, 632, 653g
- pregnancy and childbirth, 98, 424; caesarean sections (C-sections), 299, 424, 427; “drive-through” deliveries, 386, 538; “supplier-induced pregnancies,” 426, 427; thalidomide tragedy, 476–7
- premiums, 309, 311; changes in, 318–20, 319; group, 355; pure, 311
- prepaid group practice (PGP), 381, 653g
- prepayment-based organizations, 373–4, 390, 573, 653g
- prescription drugs, 10, 96; for ADHD, 475–6; copayment, 482, 490–1, 495; cost minimization, 479–80, 480; Daraprim, 471; “dispense as written” (DAW), 491; drug pricing and profits, 482–5, 483, 484, 494; examples, 468; generic, 192, 310, 327, 470, 471, 485, 490, 491; insulin, 468–9, 470, 567; Isuprel, 471; Medicare Part D, 470, 490–1, 562, 563–7, 566, 583–4, 652g; Mexico as cheaper alternative, 484; Nitropress, 471; orphan drugs, 486, 497n6; patent protected, 469, 471, 472, 474; Paxlovid, 640; prescription drug monitoring programs (PDMPs), 119, 199–201, 202; statins, 476; thalidomide, 476–7, 497n4; therapeutic drug substitution, 491; in United Kingdom, 591; *see also* alcohol consumption; cigarettes; opioids; pharmaceutical industry; vaccinations
- present bias, 280
- presenteeism, 204, 216, 222
- present (discounted) value: discounting, 137–9, 152–3, 648g; net present value (NPV), 486–7
- prevalence, 63, 121, 158, 179, 249, 272, 428, 573–4, 653g; *see also* incidence
- prevention and cost of care, 178–80, 179
- price, importance of, 15, 15–16, 29
- price-cost margins, 454

- price discrimination, 183, 404, 653g; and managed care, 373–4, 390, 392–93n4; and Pareto efficiency, 506–7, 524; pharmaceutical industry, 483–4, 484
- price dispersion, 302
- price distortion, 332, 332
- price elasticity of demand, 40, 194, 276, 284, 324, 497n5, 653g
- price elasticity of supply, 653g
- price index, 251, 653g; *see also* consumer price index (CPI)
- price offer curve, 38, 39
- pricing and profits, pharmaceutical, 482–5, 483, 484, 494; reference pricing, 492–3
- primary care physicians, shortage of, 449
- principal, 298
- priority condition, 334–5, 653g
- private equity (PE) firms, 432
- producer's surplus, 129–30, 130, 151
- production, cost, and technology of health care, 233–57; cost minimization, 239–40, 255; costs in theory and practice, 238–44; data envelopment analysis (DEA), 246–7, 247, 255; degree of substitution, 235, 235–6; deriving the cost function, 238–9, 239; difficulties faced by all hospital cost studies, 243–4; economies of scale and scope, 240, 240–2, 241, 488; efficiency and hospital quality, 248–9; elasticity of substitution, 236–7, 255; empirical cost-function studies, 242–3; estimates for hospital care, 238; frontier analysis, 246–8; long-run versus short-run studies, 241, 242–3; modern results, 244; production and the possibilities for substitution, 234–8, 255; stochastic frontier analysis (SFA), 246, 247–8, 248, 255; structural versus behavioral cost functions, 242–3; technical and allocative inefficiency, 244–6, 245, 246, 255; technological change and diffusion of new technologies, 253–4, 254; technological change and health care price increases, 251–3; technological change: other factors in adoption rates, 254–5; technological changes and costs, 249–50; technological changes: increasing or decreasing, 250, 250–1; uses of hospital efficiency studies, 248; *see also* hospitals
- production and market supply, 41–7
- production function, 42, 42–3, 55, 653g; of health, 82, 82–4, 512; special, 43–5, 44–5
- production of health, 81–105; cigarettes, exercise, and a good night's sleep, 97; contribution of health care to population health in modern era, 91–2, 92; effect of social health insurance, 94, 94–6; eliminating biases in measurement, 91; environmental impact on health, 99–101; family as producer of health, 98–9; historical role of medicine and health care, 84–90; income and health, 101; lessons learned from medical history, 90; lifestyle and environment, 96–7, 97, 103; measurement of health, 91; mortality rate declines, 86–90; other measures of health care, 96–101; pharmaceutical industry, 478–82, 479, 480, 481; production function of health, 82, 82–4, 512; production function of health in the modern day, 91–6; rising population and the role of medicine, 84–6, 85, 85; role of schooling, 101–2; social capital and health, 99; world's pharmacies, 96; worth of health care, 93
- production possibilities frontier (PPF), 26–8, 144–5, 258
- Production Possibility Curve (PPC), 212–14, 213, 653g
- productivity, of physicians, 443–4, 445
- professional standards review organizations (PSROs), 400
- profit-maximizing output, 49, 528–9
- profits: and competitive market, 49–50; economic (excess) profit, 49–50, 55, 321, 340, 364, 373–4, 421, 421–2, 483, 529, 545, 648g; normal return (normal profit), 452–3, 652g; pricing and profits, pharmaceutical, 482–5, 483, 484, 492–4; profit-maximizing output, 49, 528–9; and supplier-induced demand (SID), 424–5, 425
- prospective payments system (PPS), 400, 403, 538, 543–5, 553, 653g
- provider-patient transactions *see* asymmetric information and agency
- public choice, 527, 549–51, 551
- public goods, 529–31, 530, 553, 654g
- public health, 541
- public interest and self-interest theories of regulation, 454
- public pay patients *see* Medicaid
- public provision, 534–7
- purchasing power parity (PPP), 588, 588–9
- Purdue Pharma, 119, 186–7, 194, 201
- pure community rating, 347
- quality, 12; and ACA, 638, 640; and consumer information, 302–3; geographic variation in, 159, 166, 174; and hospitals, 248–9, 406–9, 417; and licensure, 455–6; nursing homes care, 411–12; other indicators, 303–5; quality assurance, 368, 400; “quality chasm,” 18; and telemedicine, 447; *see also* consumer information, prices, and quality
- quality-adjusted life-years (QALYs), 144–6, 145, 253, 654g; ageism critique, 147; and DTCA spending, 476; extra-welfarism, 146–7; “fair-innings” approach, 147, 516; praise and criticism, 146–8; use of in evaluation, 147–8; what people think, 147
- race: Black individuals and John Henryism, 161, 168–9, 172, 650g; direct and indirect effects in health care services, 161; historical abuse of Black individuals in vaccine experimentation,

## Subject Index

- 155; and physician bias, 166; systemic racism, 217; Tuskegee Study of Untreated Syphilis and Black patients, 172, 217; *see also* disparities in health and health care
- Ramadan, effect on pregnancy, 98
- RAND Health Insurance Experiment (RHIE), 15, 15–16, 73, 94, 94–5, 103, 275–6, 333, 382
- rate of return, 114–15, 115; internal, 443, 451, 650g; relative, 451
- rate of time preference, 258–9, 259
- rational choice, 13, 15, 187, 190, 259, 278, 283, 302; and social welfare, 514, 515
- rationing, 593, 593–6
- real value, 652g, 654g
- real-world data, 58, 68, 118, 242–3, 379, 509
- redistribution, as public good, 531, 558
- regression analysis, 64–8, 73, 654g; difference-in-differences (DID) estimation, 71–2, 72, 73, 536, 566, 648g; multiple, 68–72; ordinary least squares (OLS) regressions, 65–6; simple regression, 66, 66–7
- regression discontinuity, 92, 352
- regulation, 537–8, 553; Certificate-of-Need (CON), 400, 413, 419n12, 543, 647g; of hospitals, 400–1, 417; of nursing, 463–4; pharmaceutical industry, 476–8, 485, 540; of production and consumption of alcohol and drugs, 197–201, 199; as “public choice” process, 527, 549–51, 551; public interest and self-interest theories of, 454; *see also* accreditation and regulation
- reinforcement, 187, 188, 654g
- rent (economic rent), 654g; excess profits, 373, 453–4, 465, 609; licensure and monopoly rents, 453–5, 465
- reputation goods, 301, 654g
- research and development (R&D) and innovation, 494–5; investment decisions, 486–7; prices, price regulation, and innovation, 489; spending, 487–8, 494
- revascularization, 4, 142–3
- risk: Medicare as insurance against, 581; as reason for insurance, 296, 311–12
- risk adjustment, 297; and CBA, 139
- risk aversion, 139, 654g; and marginal utility of wealth, 312–15, 313, 335, 340, 341; and Rawlsian veil of ignorance, 523; on TV, 314–15
- risk-based contracts, 372
- risk equity versus equality of marginal costs per life saved, 133–5
- risk selection, 296, 384, 390, 654g
- risk sharing, 14
- Roemer’s Law, 423
- safety net, 166, 611, 616–17, 639
- scarcity, 55; and production possibilities frontier, 26–8; real, 28; of resources, 13, 14
- schooling, role of, 101–2; and COVID-19, 134–5; empirical studies, 102; theories about, 102; *see also* education
- scope of practice (SOP) laws, 463
- search good, 654g
- Seattle, Washington, Sweetened Beverage Tax (SBT), 536, 537
- secondary insurance, 328, 329
- Securities and Exchange Commission, 471
- selective contracting, 302, 368, 373, 654g
- self-interests, 454–5
- severe acute respiratory syndrome (SARS) epidemic (2003), 599
- shortages, 166, 175, 179, 457; economic definitions, 449–51, 451; meaning of, 447–51, 465; needs based shortages, 438, 465; of nurses, 461–3, 462, 466
- short run, 242, 654g
- single-payer systems, 461, 604, 606, 609, 611, 617, 654g; Canada, 461, 604, 606, 609, 611, 617; health system reform, 622–4, 641; Vermont proposal, 623–4
- skilled nursing facility (SNF) care, 563
- skimming, 378
- sleep hygiene, 97
- small area variations (SAV) phenomenon, 420, 429–31, 435, 654g; by medical procedure category, 430
- Snow, John, 89–90
- social capital and health, 99, 103
- social cost, 6, 53, 54, 135, 143, 149, 376; marginal social cost (MSC), 208, 208–9, 226, 227, 532, 534
- social health insurance: Affordable Care Act, establishment of, 561–2; changing financing and future prospects for Medicare, 581; Children’s Health Insurance Program (CHIP), 17, 552, 556, 574; costs and inflation, 577–81; “dual eligibility,” 573–4; economic efficiency rationale for, 510, 510–11, 524; effect of, 94, 94–6; effects of Medicare and Medicaid, 577, 577–82, 578, 580; enrollment for Medicare and Medicaid, 1987–2020, 578; entitlements, 557; expenditures per enrollee, 1987–2020, 578; health status, 581; historical roots of, 560–1; versus insurance, 310, 335; Medicaid–Medicare relationship, 573–4; Medicare and Medicaid, establishment of, 561; program features, 558–60; social insurance policies and social programs, 556–60; spending, rise in, 579–81; take-up and crowd-out, 574, 574–5, 575, 647g; total expenditures for Medicare and Medicaid, 1987–2020, 577; types, 557; *see also* Affordable Care Act (ACA); equity, efficiency, and need; extra-welfarism; Medicaid; Medicare
- social inefficiency (underutilization), 365
- social insurance *see* social health insurance
- social justice theories, 502, 521–3

- Social Security Act, 560, 583  
 Social Security Act Title XIX *see* Medicaid  
 Social Security Administration, 558, 614n1  
 Social Security Administration Low-Income Subsidy, 565  
 Social Security Trustees Report, 559  
 social welfare function (SWF), 515, 654g; and policy, 512–13, 513  
 societal costs, 133  
 special interests, 454  
 specialization, 457–8, 465; Canada, 602–3  
 species-typical functioning, 516  
 spirometer, 172  
 sponsor, 541; *see also* Centers for Medicare and Medicaid Services (CMS)  
 staff model HMO, 370, 654g  
 standard budget constraint model, 259, 259–61  
 “stated preference” studies, 142, 142  
 statistical discrimination, 299  
 statistical tools for health economics, 58–77;  
   composite hypotheses, 60, 73; difference-in-difference estimation, 71–2, 72, 73, 536, 566, 648g; difference of means, 60–4, 73, 77n1;  
   dummy (binary) variables, 67–8, 73; estimating elasticities, 67; hypotheses and inferences, 63–4; hypothesis testing, 59–60; interpreting regression coefficients, 69–71, 73; multiple regression analysis, 68–72, 69; ordinary least squares (OLS) regressions, 65–6, 121; regression analysis, 64–8; significance, 59; simple regression, 66, 66–7; standard error of the mean, 62, 62–3; statistical inference in the sciences and social sciences, 73; variance of a distribution, 61, 61  
 Statistics Canada, 606  
*Stern Review* (Stern, 2007), 138–9  
 stigma, 574–5, 616  
 stochastic frontier analysis (SFA), 246, 247–8, 248, 255  
 “stop rule,” 71  
 structural cost function, 242–3  
 subsidies, 310, 507, 533, 533–4; in kind, 557; Social Security Administration Low-Income Subsidy, 565  
 substitutability, 654g; and generic drugs, 491; and health insurance, 480–1  
 substitution, 234–6; among factors, 443–4; degree of, 235, 235–6; elasticity of, 236–7, 238; expanded function dental assistants (EFDAs), 237–8; factor substitution and labor demand, 442–3, 464; and health care labor markets, 439–40, 440; marginal rate of technical substitution (MRTS), 478; pharmaceutical industry, 478–82, 479, 490; supply of labor, 442–3  
 substitution effect, 426, 655g  
 sulfa drug, 93  
 sum of the squared deviations, 65  
 Supplemental Nutritional Assistance Program (SNAP), 125, 537  
 supplier-induced demand (SID), 420, 421–8, 435, 655g; empirical data, 426–7; marketplace approach, 427–8; McGuire and Pauly model, 425–6, 435; origins of, 422–3; and profit incentives, 424–5, 425; Reinhardt Test of, 423–4, 426; “supplier-induced pregnancies,” 426, 427; supply and demand analysis, 423, 423; target income hypothesis, 426, 435  
 supply and demand, 55; direct and indirect effects, 158–62, 159, 160, 161; practice with, 29–32; supply of labor, 442–3; *see also* consumer choice and demand; demand and supply of health insurance; production, cost, and technology of health care  
 supply curve, 30, 31, 48; upward-sloping product-supply curve, 329–30, 330  
 supply shifters, 30, 31  
 Supreme Court decisions, 562, 640  
 Surgeon General of the United States, 190–1, 196  
 Survey of Income and Program Participation (SIPP) 1996–2000, 351  
 Susceptible-Infective-Removed (SIR) model, 206, 209, 228  
 Sustainable Growth Rate (SGR), 543, 551  
 Systematic component of variation (SCV), 429  
 take-up, 574, 574–5, 575, 655g  
 target income hypothesis, 426, 435, 655g  
 taxation, 110, 527, 540; and cigarette consumption in practice, 195–6, 197; commodity taxes and subsidies, 533, 533–4, 553; and consumption of cigarettes and alcohol, 194–7, 195; consumption-reducing effects in theory, 194–5, 202; Earned Income Tax Credit (EITC), 101; excise, 41, 190; and health insurance demand, 346–7; on “junk food,” 535–7; as model of epidemics, 210–15, 211, 228; NHS funding, 590–1; payroll tax payments into Social Security program, 558; Social Security and Medicare, 346; tariff on China, 211–12; tax system influences on health insurance demand, 346–7  
 technical inefficiency, 244–5, 245, 255; *see also* equity, efficiency, and need  
 technological change, 21, 30, 655g; adoption rates, other factors affecting, 254–5; costs, 249–50; costs of, 4–5; diffusion of new health care technologies, 253–4, 254, 256; health care price increases, 251–3; increasing or decreasing, 250, 250–1; and Medicare, 579–80; and pharmaceutical industry, 481, 481–5, 494; *see also* telemedicine  
 technology: artificial intelligence (AI), 409; comparative health care systems, 589, 592; CT scanners and MRIs, 4, 5, 242, 300, 589, 590, 592  
 telemedicine: and COVID-19, 251–2, 444, 447, 640; growth of, 446–7, 447; and health care

## Subject Index

- labor markets, 444–7, 465; and HIPAA, 539; and hospitals, 409, 417; modeling, 445, 445–6; models, 445, 445–6; *see also* digital medicine; technological change
- Temporary Assistance to Needy Families (TANF), 537
- tertiary care, 398
- thalidomide, 476–7, 497n4
- Theorem of the Second Best, 509, 524, 655g
- third-party payers, 446, 458; and reference pricing, 492–3
- time: and consumer choice, 265–7, 266, 283; investment over, 111, 111–13; spent producing health, 108–9; time costs of food production, 124, 124–5; as ultimate resource, 9–10
- time costs, 13, 124, 124–5, 655g
- time preference, 137–8; rate of, 258–9, 259
- Title XIX of the Social Security Act *see* Medicaid
- tolerance, 187, 188
- total hip arthroplasty (THA), 282–3
- toxoplasmosis, 471
- traffic accidents, 140, 186, 194, 198
- traffic-light labeling, 536
- transfer programs, 537
- TRICARE program (military), 427
- Trump administration, and ACA, 349–50, 359, 629
- Tuskegee Study of Untreated Syphilis, 173, 217
- typhoid, 86, 87, 90
  
- uncertainty, 16, 508
- “Uncertainty and the Welfare Economics of Medical Care” (Arrow), 14, 278
- undercompensated care, 403, 417, 647, 655g
- underwriting, 297
- unemployment-related programs, 557
- uninsured, the, 94, 356–60, 562, 583, 586n7, 618; evidence of ACA impact on, 359, 359–60, 360, 639, 642; and insulin costs, 469; and loading costs, 341–2, 357, 357; percentage of nonelderly adults uninsured for entire calendar year, 635; working, 356–7
- United Kingdom, 7, 549, 560; health care disparities, 171; health visitors, 595; model of rationed health care and private markets, 593; National Health Service (NHS), 171, 549, 560, 590–6, 604; performance under the NHS and more recent reforms, 593–6; PHIN, 594; private sector health system, 591, 594, 595; waiting times, 593, 595–6
- United States: border cities, 604; comparative gaps in health care, 587; compared with Canada, 602; COVID-19 deaths, 3; disparities in health and health care, 155–7; and history of social insurance, 560–1; Joint Canada/US Survey of Health (JCUSH), 606–7; share of GDP to health care spending, 3, 6–7, 7, 20; *see also* Affordable Care Act (ACA); Medicaid; Medicare
- United States Public Health Service, 275
- United States Tobacco Settlement of 1998, 195
- unpriced goods, 20, 53, 208, 244
- urban centers, 88–9, 89–90
- Urban Employee Basic Medical Insurance (China), 597
- Urban Resident Basic Medical Insurance (URBMI, China), 597–9
- US Army Corps of Engineers, 131
- US National Center for Health Statistics, 606
- US News & World Report* national hospital rankings, 304
- US Office for Civil Rights, 539
- US Public Health Service, 541
- Utah, mortality rate, 96–7, 97
- utilitarianism, 522
- utility, 34–5, 35, 36, 655g; cardinal or ordinal, 35, 647g; criticisms of, 146–7; and equity, 176; marginal utility (MU), 35, 35; marginal utility of wealth and risk aversion, 312–15, 313, 340, 341; ordinal, 35, 522, 652g; and physicians’ practices, 425–6; and prescription drugs, 480; production of, 112–13, 113; utility-possibility frontier, 512–14, 513, 514
- utility function, 34, 55, 188, 313, 313, 315, 340, 416, 425, 575, 655g
- utilization review (UR), 368, 655g
  
- vaccinations, 54, 468, 622; COVID-19, 73, 96, 155, 472, 622; disparities, 473; externalities, 209–10; Operation Warp Speed, 473; race and ethnicity and rates of, 155, 227; smallpox (1796), 228; vaccination hesitancy, 73, 220, 279
- Vaginal Birth after Cesarean (VBAC), 172
- Valeant Pharmaceuticals, 471–2
- value-based insurance design (VBID), 282, 306, 368, 631–2, 655g
- value-based payments, 368
- variable costs, 47–9, 48, 133, 282, 403–4, 404, 413, 631–2, 655g; *see also* average cost; average variable cost (AVC)
- veil of ignorance, Rawlsian, 523
- Vermont single-payer proposal, 623–4
- vertical integration of health care delivery, 301, 367, 420, 433, 434, 458
- veterans, 249, 261, 489, 538
- Veterans Administration Medical Centers, 249, 261
  
- Waller Curve, 88
- wages, 110, 117; and equilibrium, 344, 442, 462, 465; firm hiring decisions at different levels, 440–1, 441; interaction of with health insurance, 344; “living wage” laws, 358; and shortages, 450–1, 451; wage-based studies, 142, 142
- waiting time solutions, 549; *see also* “yardstick competition”
- war, as model of epidemics, 210–15, 213, 228
- water filter and cookstove distribution, 135
- wealth, 313, 362, 493; changes in, 319–20

- The Wealth of Nations* (Smith), 141
- welfare, defined, 655g
- welfare economics: First Fundamental Theorem of Welfare Economics, 502, 505, 507–8, 524, 649g; Second Fundamental Theorem of Welfare Economics, 502, 506, 524; Theorem of the Second Best, 509, 524, 655g; *see also* equity, efficiency, and need
- welfare loss, 51–2, 655g; of excess health insurance, 333–5; and health system reform, 619; of monopoly, 51, 529
- “welfarism” *see* social welfare function (SWF)
- welfarist view, 146–7
- Who Shall Live?* (Fuchs), 87, 96
- willingness to accept method, 140–1
- willingness to pay (WTP), 142
- women physicians, 448, 458–60, 465
- world economy, and COVID-19, 222
- World Health Organization (WHO), 148, 207, 217, 473, 596, 652–3g
- “yardstick competition,” 527, 546–9, 547, 655g