

TODAY'S STUDY IN

PREAMBLE—THE EMERGENCE OF A NEW ECONOMICS OF CARE

- Observation #1 Gathering evidence that the economics of hospital care shifting beneath our feet; changes now afoot may prove as wrenching to hospitals as the transition from fee-for-service to managed care a decade ago
- Observation #2 For the last decade or more the most salient feature of the hospital industry has been surplus—too many facilities, too many staffed beds, too many specialists chasing after too little (and declining) patient demand
- Observation #3 To their credit, hospitals and health systems adapted well to managed care economics; with patients—not hospital beds or labor—the scarce commodity, competition centered (appropriately) around capturing any and all inpatient volume
- Observation #4 Those Economics Largely in Our Past: in just the last year or so, all signs point to a sea change in hospital supply and demand; to the mind of some, hospitals rapidly exiting era of surplus, entering period of prolonged and chronic shortage
- Observation #5 World Turned Upside Down: Inpatient beds and hospital staff—not patients—increasingly the scarce commodity in most markets nationwide; hospital administrators now struggling to squeeze patients into “full houses”
- Observation #6 New era of shortage bringing with it a new economics of care; in short order, hospitals being asked to change everything about how they manage their operations, revenue mix, and future investments
- Observation #7 At the Center of the New Economics: With hospital beds and staff (especially nurses) in short supply and patients plentiful, competition will increasingly center around maximizing “return per bed”—ethic of “any and all” inpatient volume giving way to much more discriminating stance
- Observation #8 Most Notable (and Potentially Controversial) Change: Hospitals will now have powerful economic incentive to triage among patients and clinical product lines—the new economics favors selectively marketing to and investing in facilities for most profitable segments, potentially “crowding out” less profitable patients
- Observation #9 Advisory Board View: Hospitals “playing with fire” here, but probably unavoidably so; hospitals that neglect altogether to manage revenue and patient mix will likely face dilemma of “profitless growth”
- Observation #10 New Role for Hospital Boards: Trustees will increasingly be called upon to make difficult tradeoffs among competing demands on scarce health system capital and staffing resources—number one board agenda item for the future will be maintaining patient access in an era of shortage

25+ OBSERVATIONS

ROOTED IN SHORTAGE—EXPLAINING THE NEW ECONOMICS

- Observation #11 Emerging era of shortage in American health care a product of two tectonic shifts in the marketplace—sudden rise in demand for hospital services on the one hand, and the now-nearly-complete effort to reduce “excess” hospital capacity on the other
- Observation #12 An Irresistible Force: What was merely suggested in Advisory Board research last year—that demand for hospital services was rising rapidly—now confirmed in nearly every market, every measure; hospitals are reporting unprecedented levels of inpatient and outpatient growth nationwide
- Observation #13 Of equal note is the changing nature of inpatient demand; medical admissions to most hospitals are growing much faster than surgical, filling an increasing share of inpatient beds
- Observation #14 An Immovable Object: Rising demand hitting as hospitals completing decade-long effort to shed excess capacity—in addition to outright closure of hospitals, EDs and beds, most systems (until recently) underinvesting in new facilities and human capital
- Observation #15 Underinvestment in human capital particularly noteworthy; current hospital labor shortage at least in part attributable to past hospital labor strategy—undoing damage of last decade will require time (and money)
- Observation #16 Health Care’s San Andreas Fault: Like colliding continental plates, where rising patient demand is meeting reduced hospital capacity, the health care market registering the seismic impact—full hospitals, ED diversions, rising nurse vacancy rates are only the most obvious signs
- Observation #17 Less Obvious “Aftershock” of Shortage: The reemergence of health care inflation; prices across the health care system—employer premiums, hospital payments, employee salaries, supply costs, and so on—all rising at higher rates than in the past

IMPLICATIONS OF THE NEW ECONOMICS OF CARE

- Observation #18 Emergence of a shortage economy bringing with it a new economics for inpatient care; safe passage from the old economics to the new by no means guaranteed for any health system or hospital
- Observation #19 Hard to overstate the implications; with shortage, the “rules of the road” for hospitals change abruptly—executive teams forced to reconsider everything about managing the inpatient enterprise

- Observation #20 Spotlight on Patient Mix: Most important change is newfound emphasis on patient mix; with hospital beds in short supply, patient profitability—not volume—takes center stage
- Observation #21 That profitability increasingly in doubt; with less lucrative medical admissions growing faster than surgical, hospitals find themselves fighting an uphill battle—just maintaining current levels of inpatient profitability likely a difficult task
- Observation #22 Perils of Reactive Growth: Greatest danger for hospitals lies in investing solely in the (largely medical) patients virtually guaranteed to arrive through their doors, neglecting to invest in capturing larger share of slower-growing inpatient procedure market
- Observation #23 Most difficult (and surely politically charged) decisions awaiting hospitals center on the ED; reason to believe that hospitals will need to make difficult tradeoffs between maintaining profitability on the one hand, and ED diversions on the other

A DELICATE BALANCE—MANAGING FOR PROFITABLE GROWTH

- Observation #24 Across next five years, no reason any one hospital cannot prosper amidst shortage; Advisory Board research uncovering hospitals nationwide both accommodating increased patient demand and expanding margins
- Observation #25 Secret to Their Success: These hospitals and health systems leaving nothing to chance; best institutions are hardwiring their future growth—explicit goal is to manage the enterprise for profitable growth
- Observation #26 A Posture of Proactive Growth: Strategy here premised on avoiding the perils of reactive growth—prospering hospitals and health systems focusing on actively managing their patient volume and revenue mix
- Observation #27 The Virtue of Balance: End goal for these hospitals is to match growth rates of inpatient medical and surgical admissions—explicit aim to cross-subsidize less profitable medical cases with more profitable surgical ones
- Observation #28 No One Left Behind: Best hospitals striking that balance by growing inpatient procedures, not by avoiding medical admissions—no sacrificing access in pursuit of profits

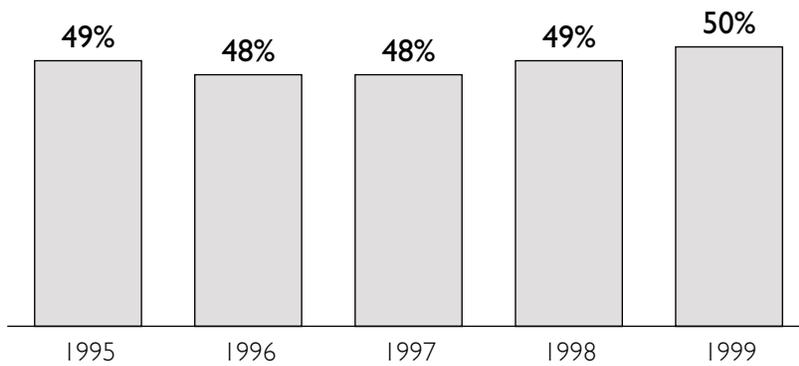
FROM AN OLD ECONOMICS

Four Elements of Hospital

1

Low Inpatient Occupancy

Average Hospital Occupancy

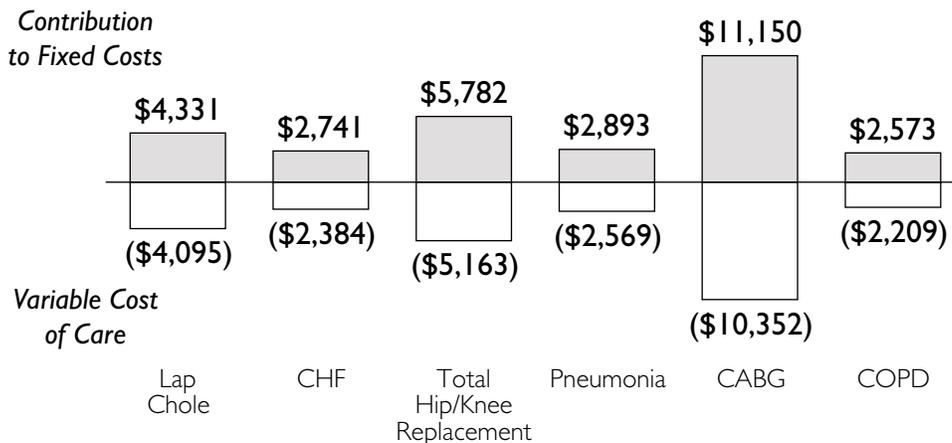


Excess of inpatient capacity across the 1990s gave hospitals a powerful incentive to compete for patient volumes to maximize utilization of large bed supply

2

Positive Marginal Contribution

Contribution Levels of Select DRGs, 1997



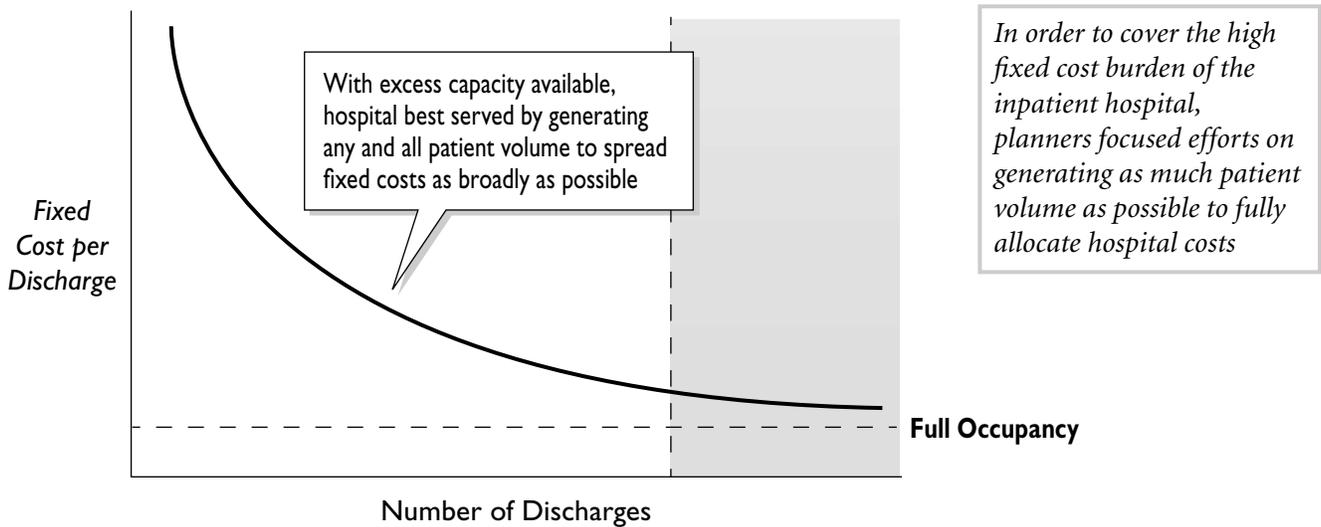
Hospitals had little reason to discriminate between patients, with almost any patient providing a positive revenue contribution toward fixed costs

DRIVEN BY SURPLUS...

Economics Under Managed Care

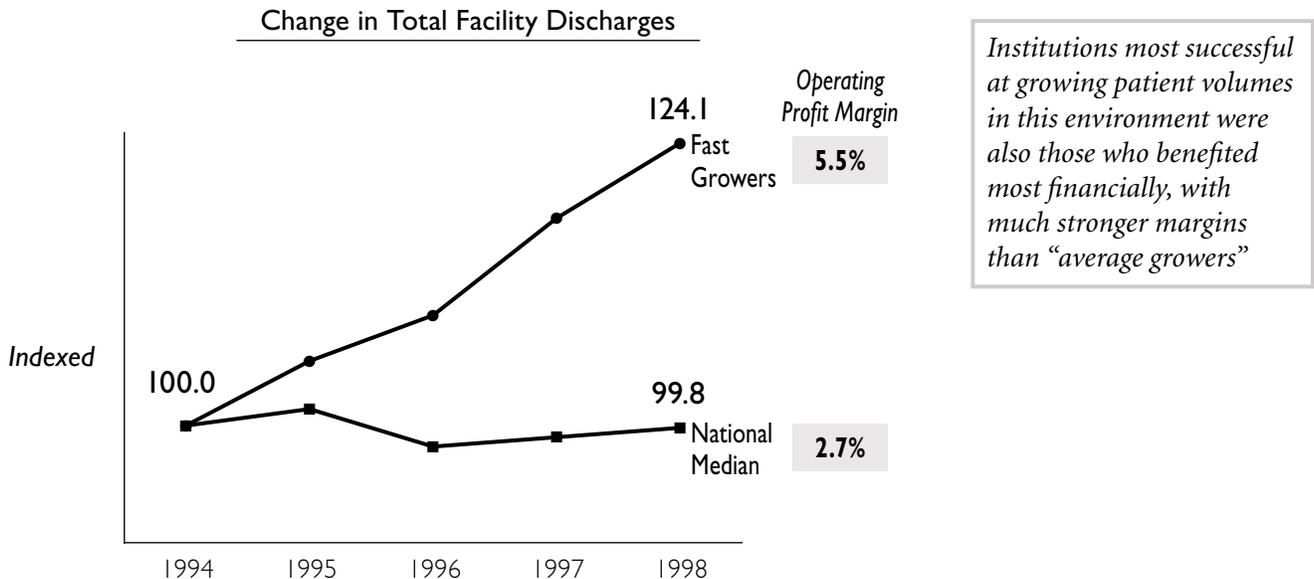
3

Power of Spreading Fixed Costs



4

Focus on Patient Volume



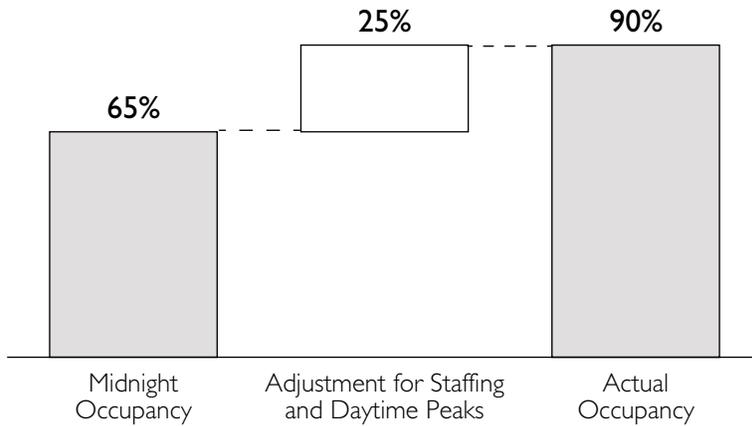
...TO A NEW ECONOMICS

Four Elements of the

1

High Inpatient Occupancy

Change in Total Facility Discharges

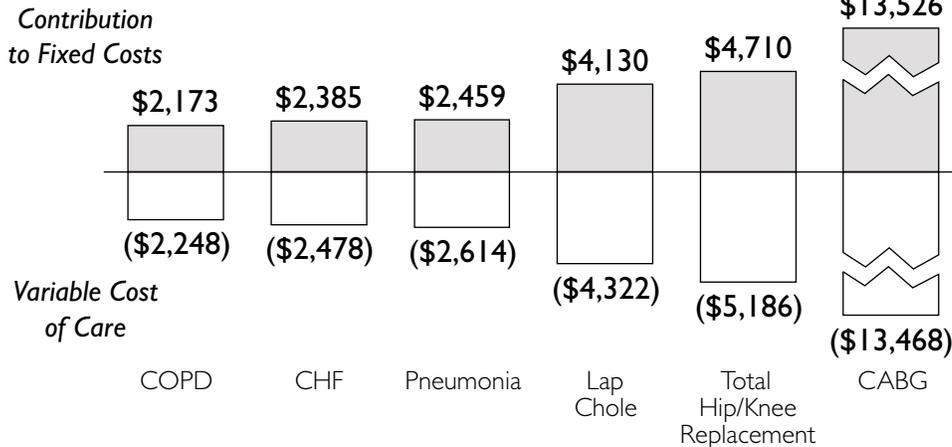


High inpatient occupancies now mean that at any given time, many hospitals are operating at close to full capacity, with no beds to spare and patients queuing for service

2

Variability of Marginal Contribution

Contribution Levels of Select DRGs, 1999



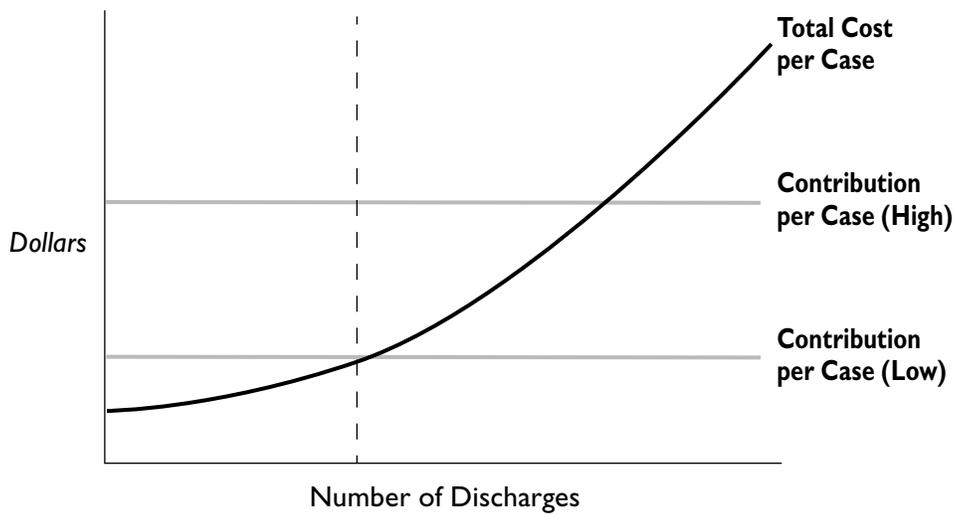
Given a shortage of capacity to treat new patients, hospitals now have a powerful incentive to triage among case types, choosing higher-contribution cases over less profitable ones

DRIVEN BY SHORTAGE

New Economics of Care

3

Power of Increasing Contribution per Day



As the marginal cost of providing each additional patient day begins to rise dramatically—with higher labor and expansion costs required—maximizing return per patient day becomes critical to profitable growth

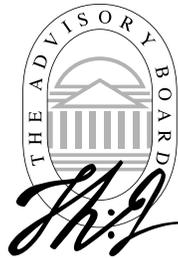
4

Focus on Patient Mix

	Percentage Medical	Percentage Surgical	Operating Profit Margin
DECREASING PROCEDURAL MIX	36.8%	35.5%	2.9%
	41.8%	25.8%	2.1%
	46.1%	20.5%	1.6%
	47.7%	15.1%	0.3%

Further intensifying the imperative to focus on higher-contribution business, patient mix is shifting steadily toward medicine, away from surgery—those able to counter the trend will prosper disproportionately

PREAMBLE



EMERGENCE OF A NEW ECONOMICS OF HOSPITAL CARE

- ∞ From Surplus to Shortage in American Health Care
- ∞ The CEO's Burden—Managing for Profitable Growth
- ∞ Playing with Fire—Sudden Spotlight on Patient Access
- ∞ New Role for the Board—Balancing Among Competing Demands

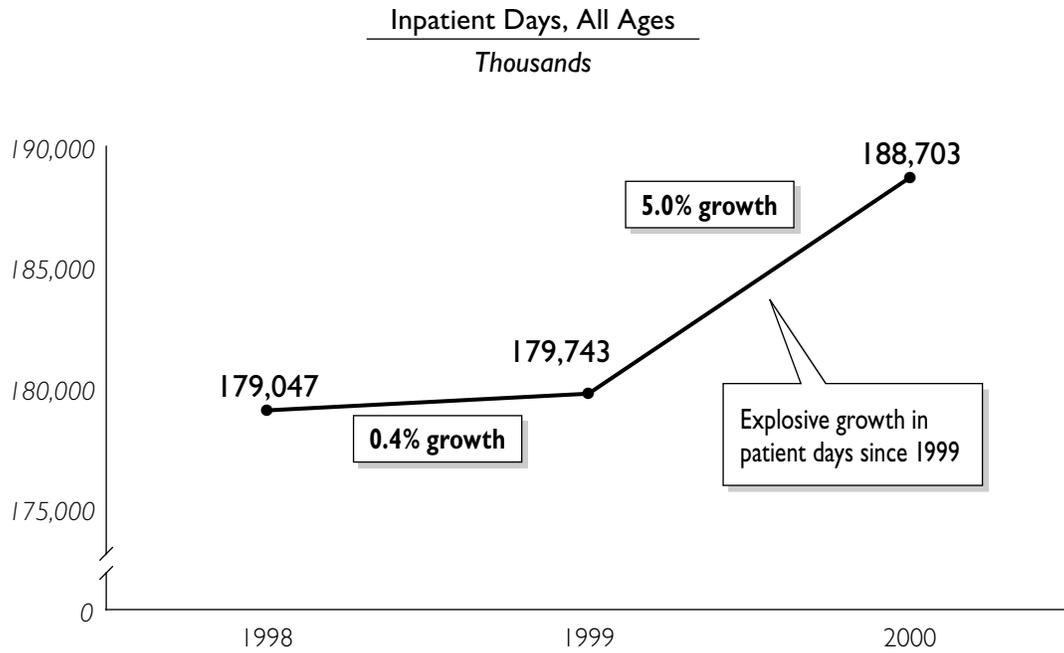
FROM SURPLUS TO SHORTAGE IN AMERICAN HEALTH CARE

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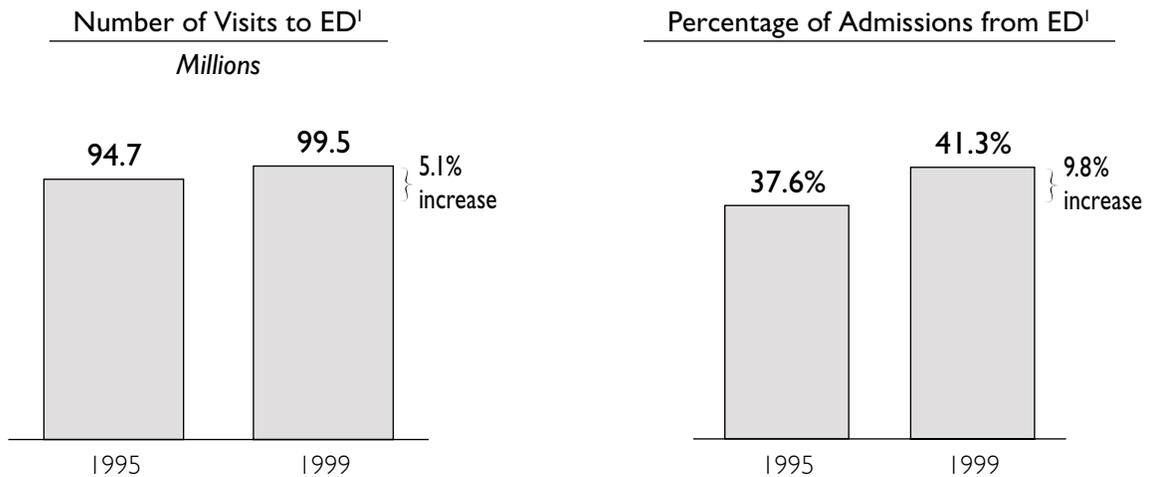
WORLD TURNED UPSIDE DOWN

SUDDEN COLLISION OF

Dramatically Increased Patient Volume



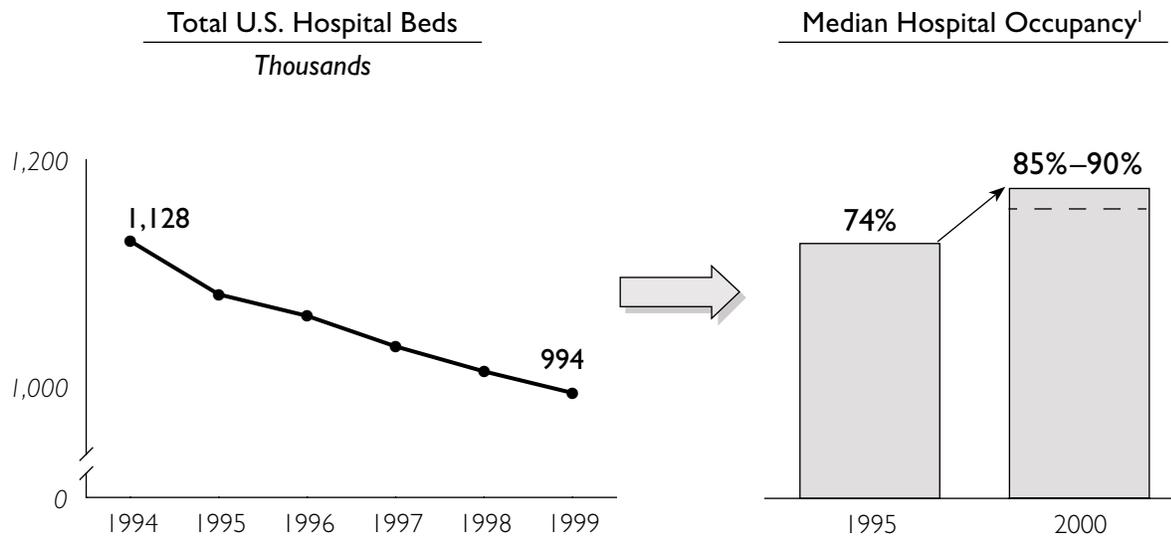
Much Heavier Emergency Care Burden



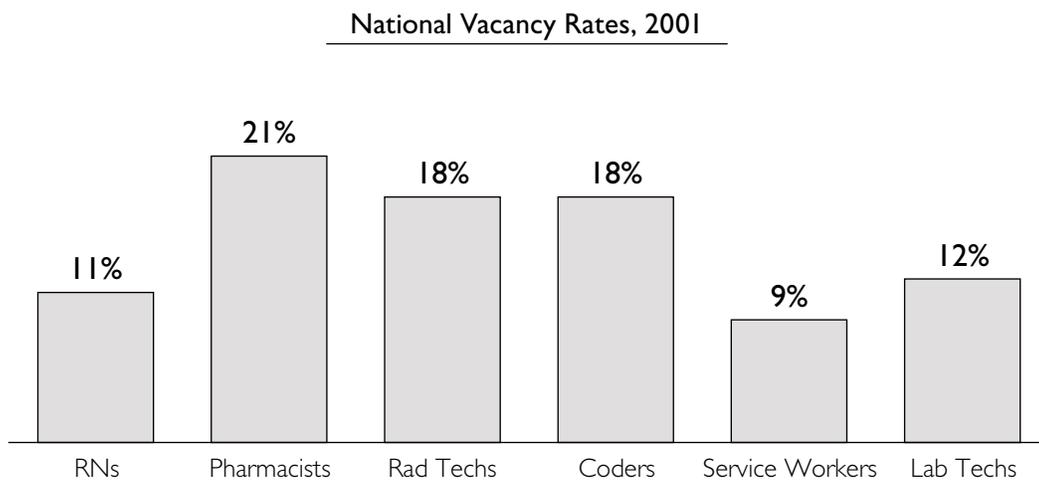
¹ AHA registered community hospitals.

SUPPLY AND DEMAND

Increased Demand Met with Diminished Supply



Too Few Staff to Handle Higher Demand



¹ Advisory Board estimate.

Source: AHA Hospital Statistics 2001, American Hospital Association; Advisory Board analysis.

THE CEO'S BURDEN—MANAGING FOR PROFITABLE GROWTH

Conclusion #6 New era of shortage bringing with it a new economics of care; in short order, hospitals being asked to change everything about how they manage their operations, revenue mix, and future investments

Conclusion #7 At the Center of the New Economics: With hospital beds and staff (especially nurses) in short supply and patients plentiful, competition will increasingly center around maximizing “return per bed”—ethic of “any and all” inpatient volume giving way to much more discriminating stance

Changing Hospital Priorities

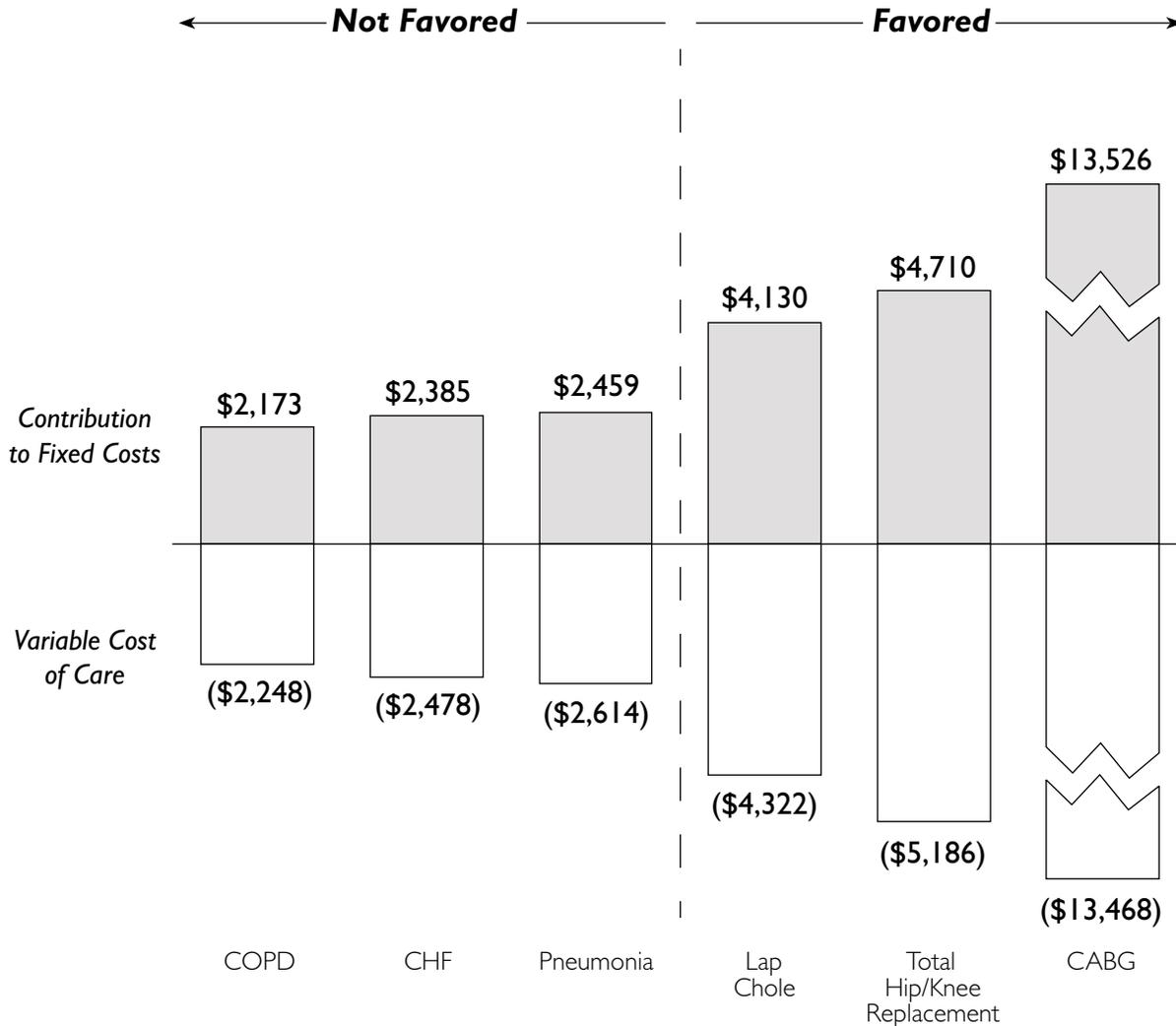
	<u>Era of Surplus</u>	<u>Era of Shortage</u>
<i>Right Metrics</i>	<ul style="list-style-type: none"> • Revenue per discharge • Cost per discharge • Annual admissions growth 	<ul style="list-style-type: none"> • Revenue per day • Contribution per day • Annual revenue per admission growth
<i>Right Management Practice</i>	<ul style="list-style-type: none"> • Reducing length of stay • Reducing cost per case • Annual admissions growth 	<ul style="list-style-type: none"> • Reducing medical admissions • Increasing revenue capture
<i>Right Strategy</i>	<ul style="list-style-type: none"> • Maximizing occupancy • Growing volume 	<ul style="list-style-type: none"> • Maximizing patient access • Shifting patient mix

PLAYING WITH FIRE—SUDDEN SPOTLIGHT ON PATIENT ACCESS

Conclusion #8 Most Notable (and Potentially Controversial) Change: Hospitals will now have powerful economic incentive to triage among patients and clinical product lines—the new economics favors selectively marketing to and investing in facilities for most profitable segments, potentially “crowding out” less profitable patients

SIGNIFICANT ECONOMIC VARIATION

Favoring Certain Lines

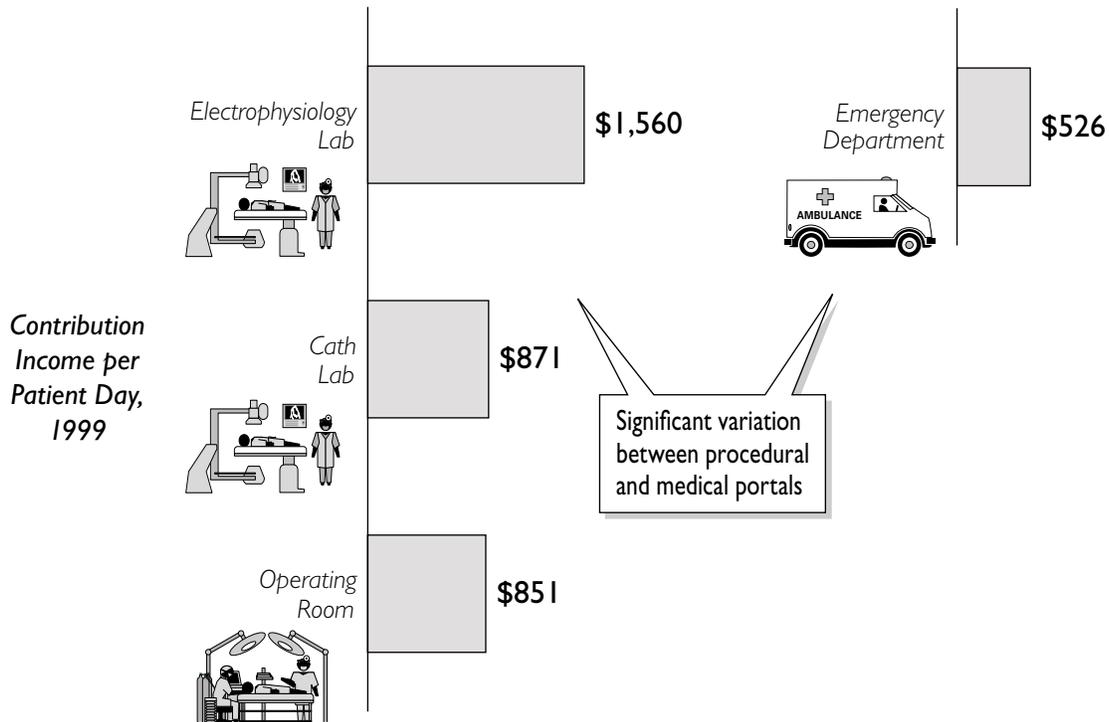


AMONG CLINICAL LINES

Favoring Certain Facilities

Favored

Not Favored



- Conclusion #9 Obvious Danger: Hospitals could trade off patient access for higher margins; reason to believe that concerns over patient access to hospital care—not concerns for patient safety—will become largest, most urgent health care issue on the public’s agenda
- Conclusion #10 Advisory Board View: Hospitals “playing with fire” here, but probably unavoidably so; hospitals that neglect altogether to manage revenue and patient mix will likely face dilemma of “profitless growth”

Playing with Fire

TOP DANGERS FOR PATIENT ACCESS

- ☞ Underinvestment in critical community resources (ED, trauma centers)
- ☞ Underinvestment in lower-margin lines (behavioral health, women’s health)
- ☞ Underinvestment in patient service quality (long wait times, facilities overcrowding)
- ☞ Underinvestment in chronic care capabilities (insufficient long-term care capacity, inadequate disease management)

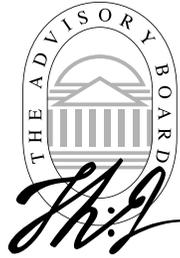
NEW ROLE FOR THE BOARD—BALANCING AMONG COMPETING DEMANDS

- Conclusion #11 Surely appropriate that hospital trustees should find themselves in the middle of the fray; number one board agenda item in the future should be balancing demands for patient access against need to maintain hospital profitability
- Conclusion #12 Nothing But Trouble: Best service Advisory Board can offer is in being truthful as to the difficult tradeoffs that lie ahead; only certainty is that controversy sure to follow every one—boards might do the most good by supporting CEOs in what will be an unpopular, thankless, but principled task

FIVE QUESTIONS FOR THE BOARD

- #1 Does our strategy provide adequate revenue and margin growth to fund our continuing mission?
- #2 Will our system be well-positioned to accommodate dramatic future increases in demand for services?
- #3 Is our facility providing its fair share of key community services (emergency services, disease prevention)?
- #4 Is our investment strategy based on rigorous economic analysis of per-patient-day contribution margin?
- #5 Are we successfully performing against our mission statement?

Phenomenon #1



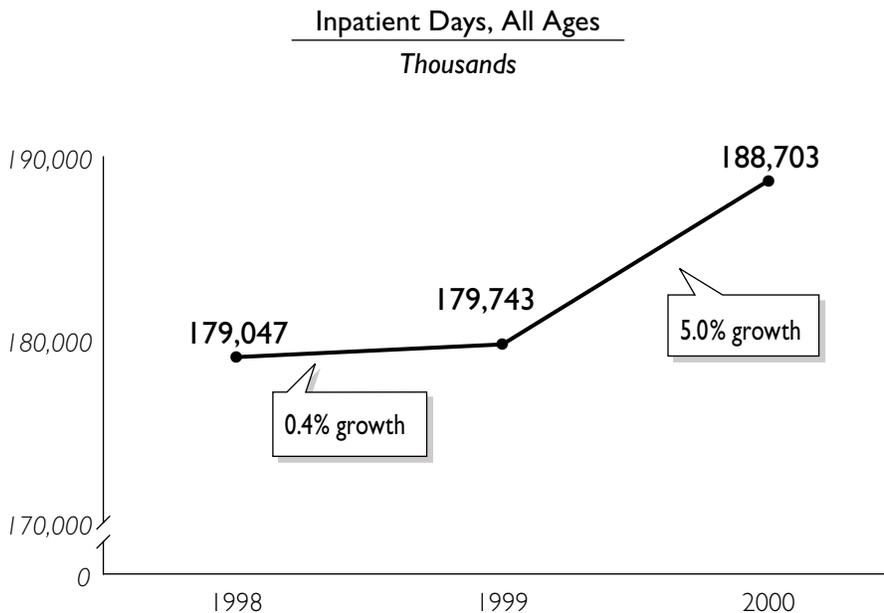
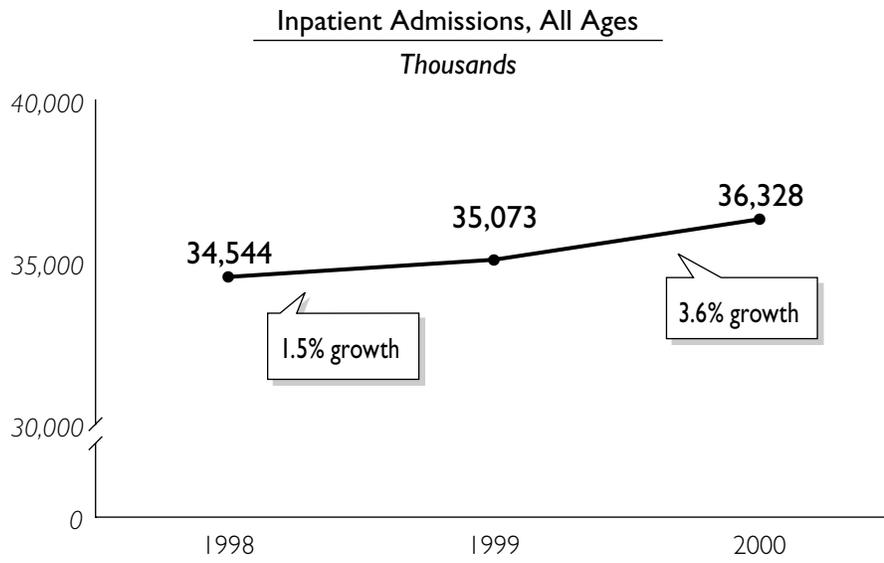
RESURGENCE IN
PATIENT DEMAND

REPORT FROM AROUND THE NATION—A BUSY 18 MONTHS

Conclusion #20 Heard Around the Nation: Demand for hospital services suddenly growing at rate not seen in well over a decade—patient volumes up dramatically in almost every market, in almost every institution

INPATIENT ADMISSIONS UP

Increases Felt Across the Nation



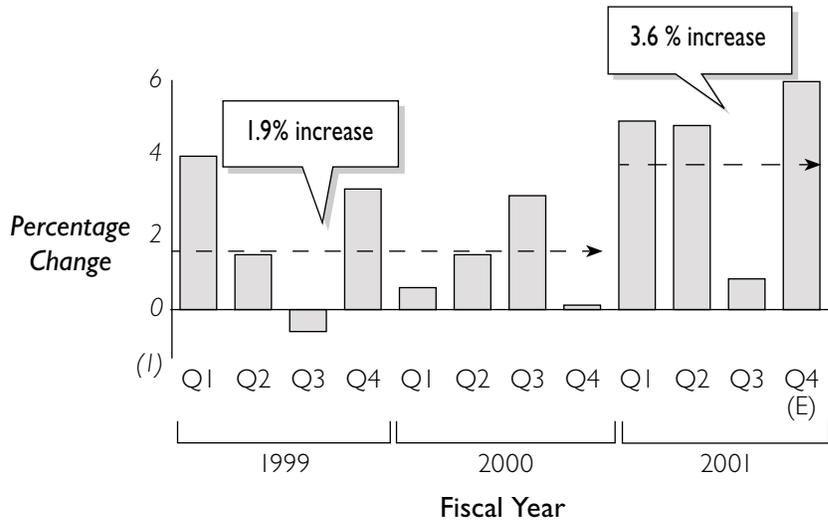
Source: National Hospital Indicators Survey, available at: <http://www.hcfa.gov>, accessed July 17, 2001.

Conclusion #21 Evidence still more in research interviews than in published data—national hospital statistics (predictably) lagging a year or two behind actual industry experience, just now beginning to register magnitude of increase

SHARPLY IN LAST 18 MONTHS

Early Evidence from Tenet

Change in Same-Facility Admissions¹

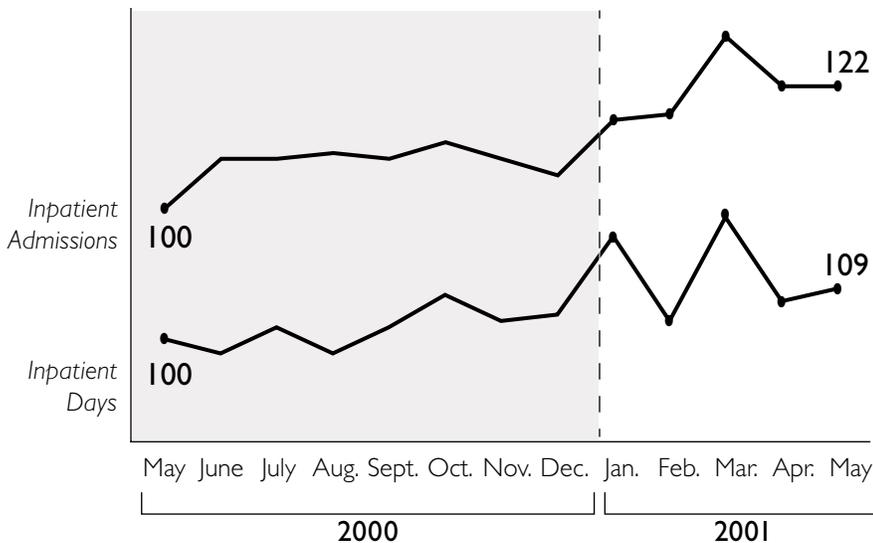


TENET HEALTHCARE IN BRIEF

- 114 acute care hospitals in 17 states
- 28,000 licensed beds
- FY 2001 operating income up 32 percent

Surging Demand in Lincoln

Monthly Volume Growth, 2000–2001, Indexed



ST. ELIZABETH'S REGIONAL MEDICAL CENTER IN BRIEF

- 198-bed community hospital in Lincoln, Nebraska
- 17% surrounding population increase 1990–2000

¹ Quarter-on-quarter increases.

Source: Tenet Healthcare, available at: <http://www.tenethealth.com>, accessed June 25, 2001; Advisory Board interviews and analysis.

Conclusion #22 A Resurgence on All Fronts: Increase in patient demand not limited to any one care setting; strong anecdotal evidence to suggest that outpatient, specialty and primary care utilization all rising as fast (if not faster) than ED and inpatient demand

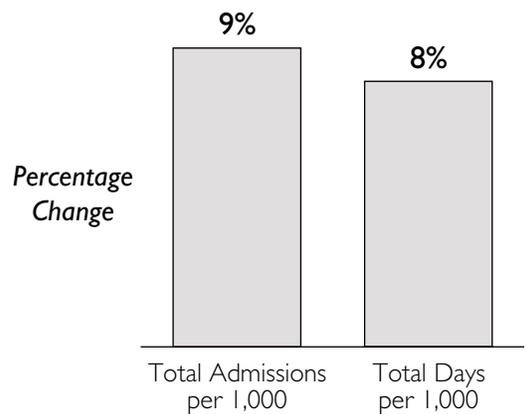
VOLUMES INCREASING

Increase in core hospital services...

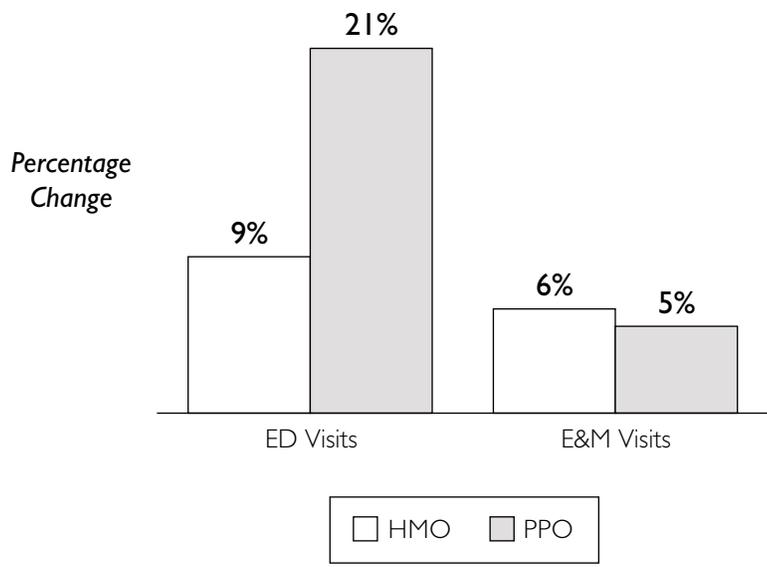
**ARKANSAS BLUE CROSS
BLUE SHIELD IN BRIEF**

- Largest insurer in state with 858,000 lives covered
- Approximately \$677 million in claims for 2000
- Approximately 55% PPO, 45% HMO member breakdown

Increase in Inpatient Utilization, 1999–2000



Increase in Outpatient Visits, 1999–2000

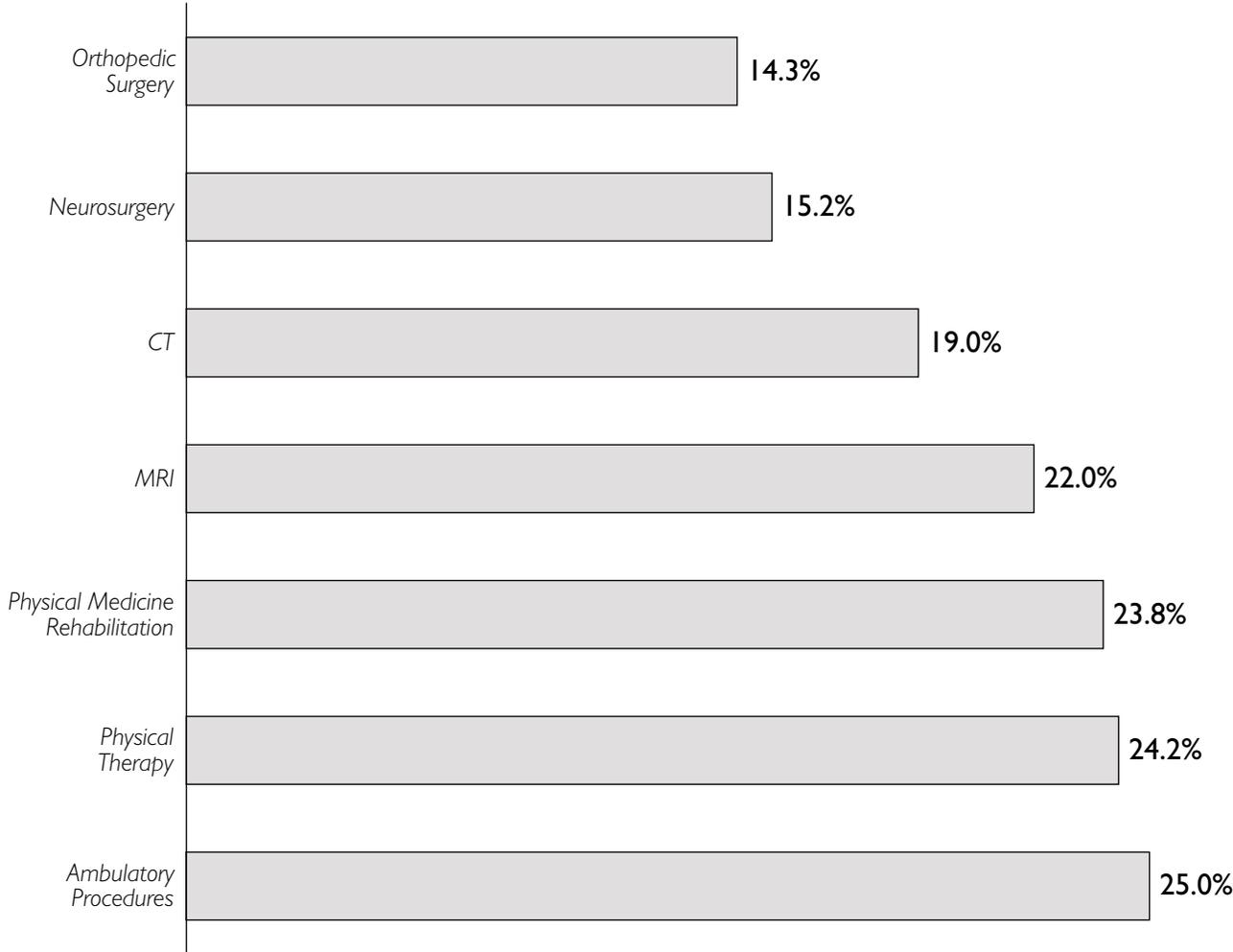


Conclusion #23 **Caught Unawares:** Few hospitals and health systems projecting anywhere near these levels of demand growth in their facilities planning—not surprising that inpatient beds and EDs swamped nationwide

ACROSS THE ENTERPRISE

...extending to specialty and diagnostic services

Percentage Increase, 1999–2000

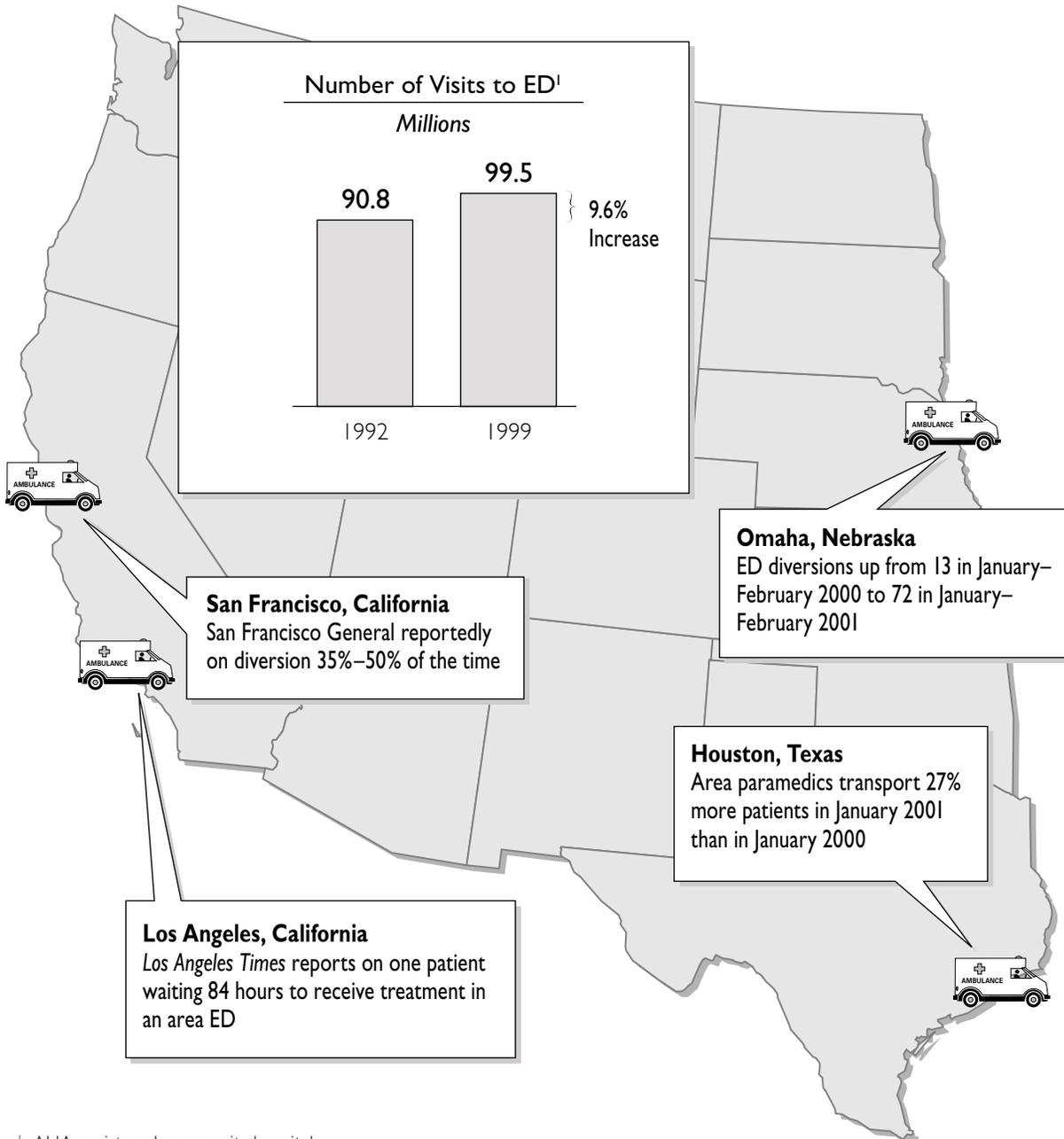


Source: Advisory Board interviews.

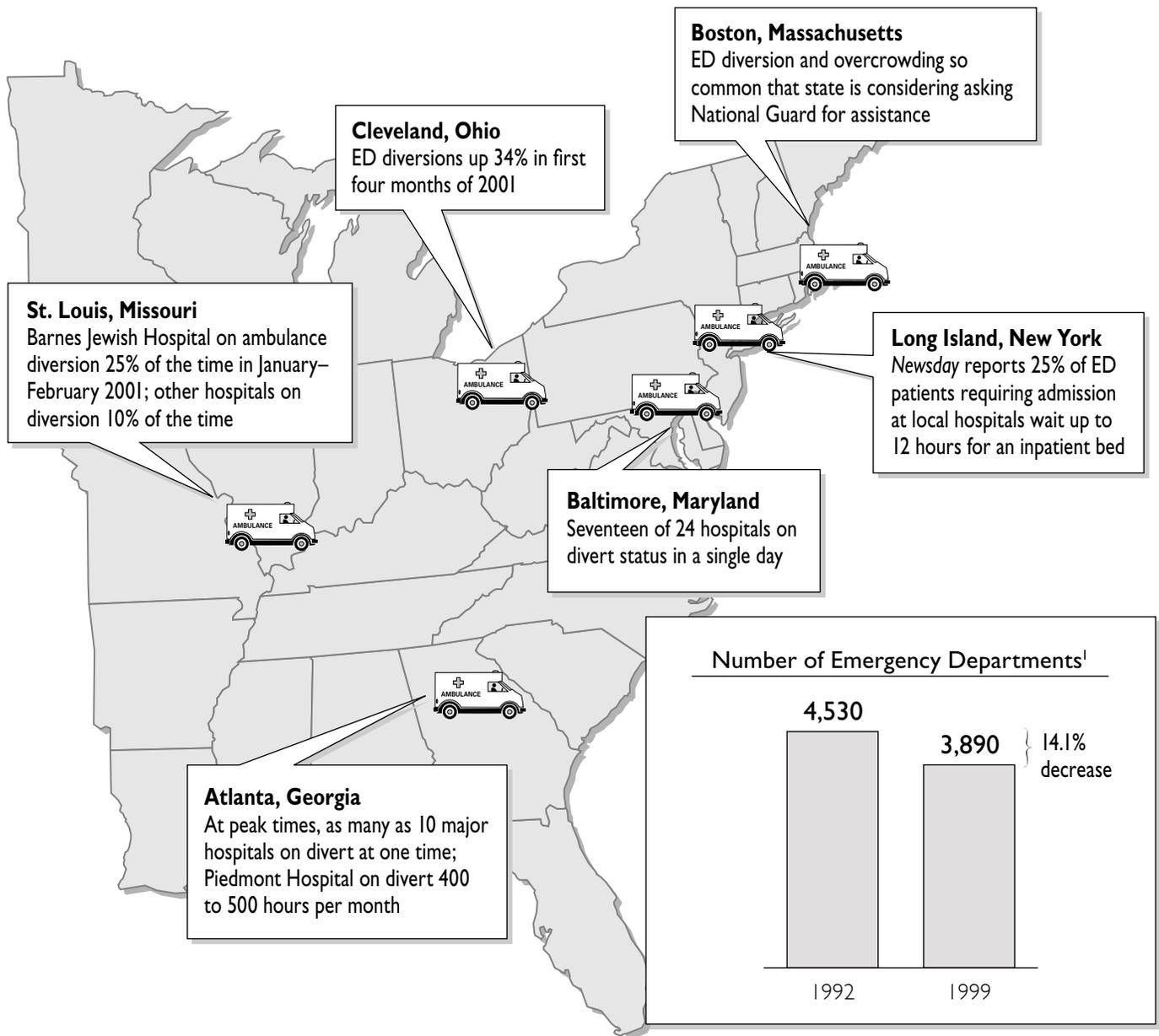
QUALIFYING THE SENSE OF SUDDENNESS

Conclusion #24 Sense of suddenness here wholly understandable; many hospitals simply unaware of magnitude of change under way until the very moment when ED and inpatient beds filled to capacity—patients “stacking up” in hallways first unmistakable sign of trouble

AMBULANCE DIVERSION THE



FIRST INDICATOR OF CONSTRAINT



Source: AHA Hospital Statistics 2001, American Hospital Association; Brewster L, "Emergency Room Diversions: A Symptom of Hospitals Under Stress," *Center for Studying Health System Change*, May 2001; Rohrich T, "Delays Put Lives at Risk at County-USC," *Los Angeles Times*, June 26, 2001: A1; Miller A, "Too-Crowded Hospitals Play Diverting Game," *Atlanta Constitution*, June 15, 2001: G1; Solov D, "Hospital Ambulance Diversions Keep Climbing," *Plain Dealer*, May 6, 2001: 1B; Shelton D, "Hospitals Release First Data on Hours They Diverted Ambulance," *St. Louis Post-Dispatch*, March 11, 2001: A1; Olson J, "When Ambulances Must Go Elsewhere," *Omaha World-Herald*, March 7, 2001: 1.

Conclusion #25 Overwhelming sentiment expressed in interviews that resurgence in patient demand entirely a recent phenomenon—numerous CEOs reporting half-empty hospitals filling with patients across just the last 18 months

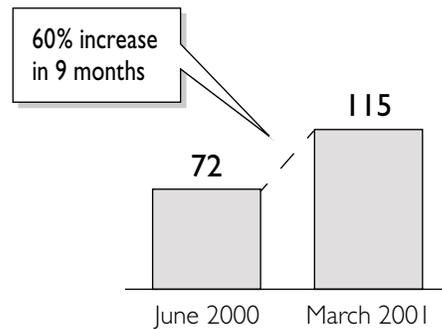
A VOLUME TREND SEVERAL

Ten Years of Declining Census Coming to an End

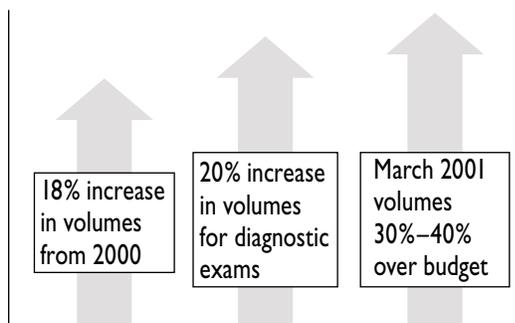
BIRCH MEDICAL CENTER¹

- Member of a three-hospital system in the Southeast
- 160-bed hospital, 141 acute care beds in operation
- 9–12 critical care beds
- Sudden increase in patient volumes—Summer 2000

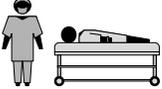
Average Daily Census



Volumes Far Greater Than Expected



Reactive Expansion

- 
 • Conversion of occupational health unit to OR space
- 
 • Additional ED space and staff
- 
 • 50%–65% more diagnostic space with additional MRI and CT capacity

UNEXPLAINABLE INCREASE

“We made concerted efforts to increase market share; however, it does not explain the across the board increases. Our population hasn’t changed, but those using health services have increased.”

CEO
Birch Medical Center

¹ Pseudonymed organization.

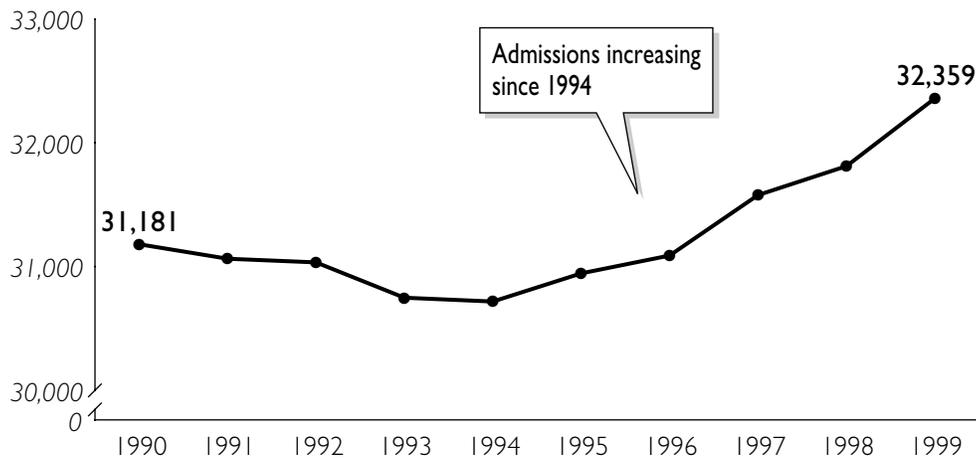
Conclusion #26 Not All That Sudden: While demand for inpatient services surely accelerating across last year or so, closer examination of national data reveals inpatient volumes rising steadily each of last five years

YEARS IN THE MAKING

Steady March of Hospital Volumes

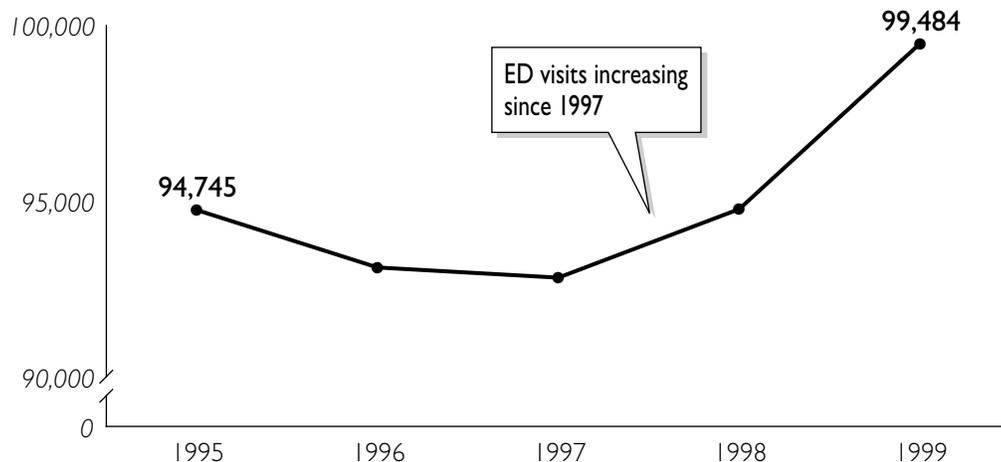
Admissions, AHA-Registered Hospitals¹

Thousands



Emergency Visits, AHA-Registered Hospitals¹

Thousands



¹ AHA-registered community hospitals.

Source: American Hospital Association Hospital Statistics, 2001.

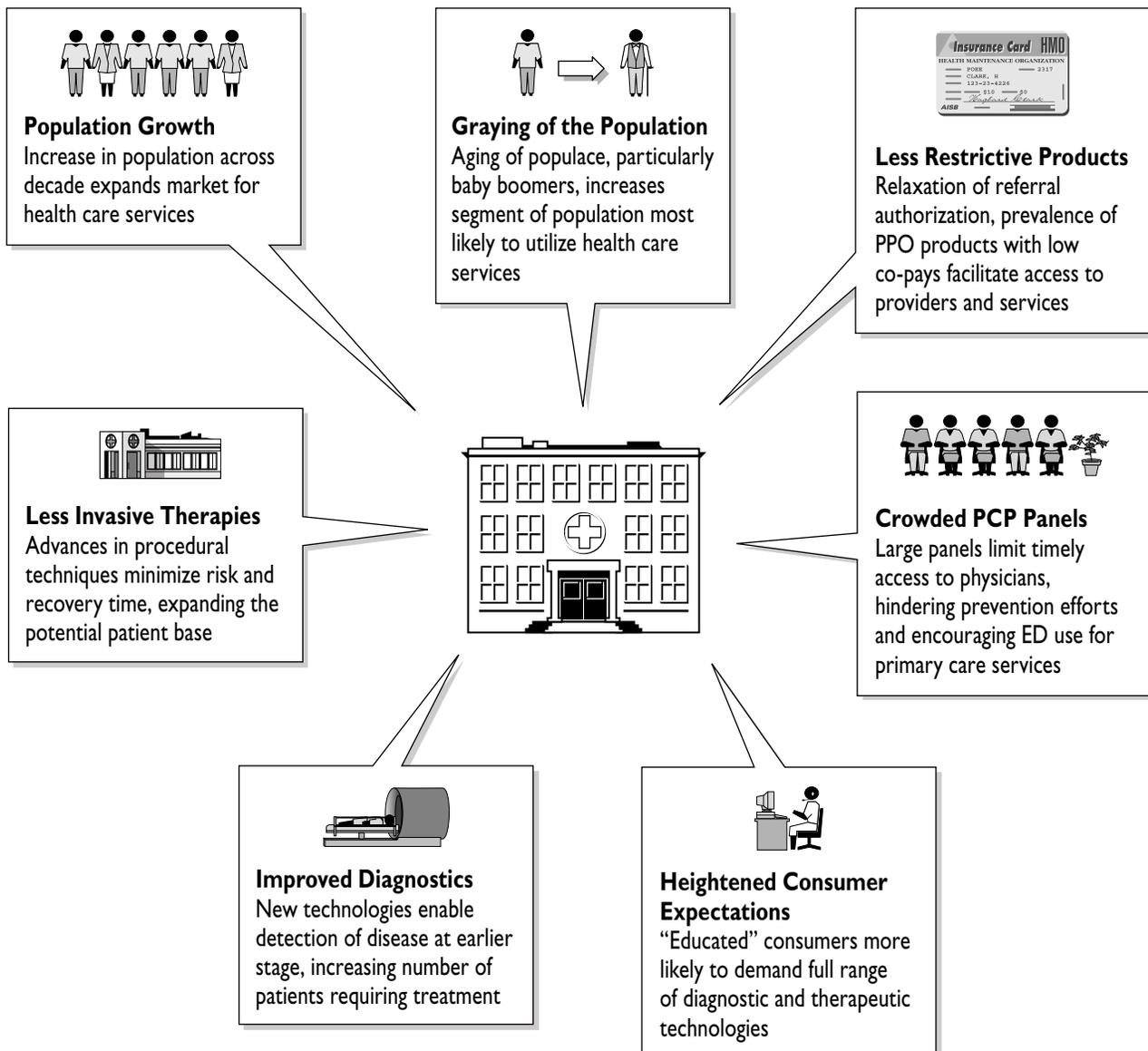
SEARCHING FOR EXPLANATIONS—ROOTED IN DEMOGRAPHICS

Conclusion #27 **Honest Admission:** The Advisory Board finds it far easier to describe the recent resurgence in patient demand than to explain it—phenomenon too recent to allow for definitive answers

Conclusion #28 **Too Certain by Half:** Trade press far too quick to assign managed care backlash lion’s share of the credit; while surely playing a role in increasing physician visits and ED utilization, much harder to attribute increased inpatient activity to “kinder, gentler” health plans

DEMOGRAPHIC SHIFTS MOST LIKELY

Key Drivers of Resurgent Demand

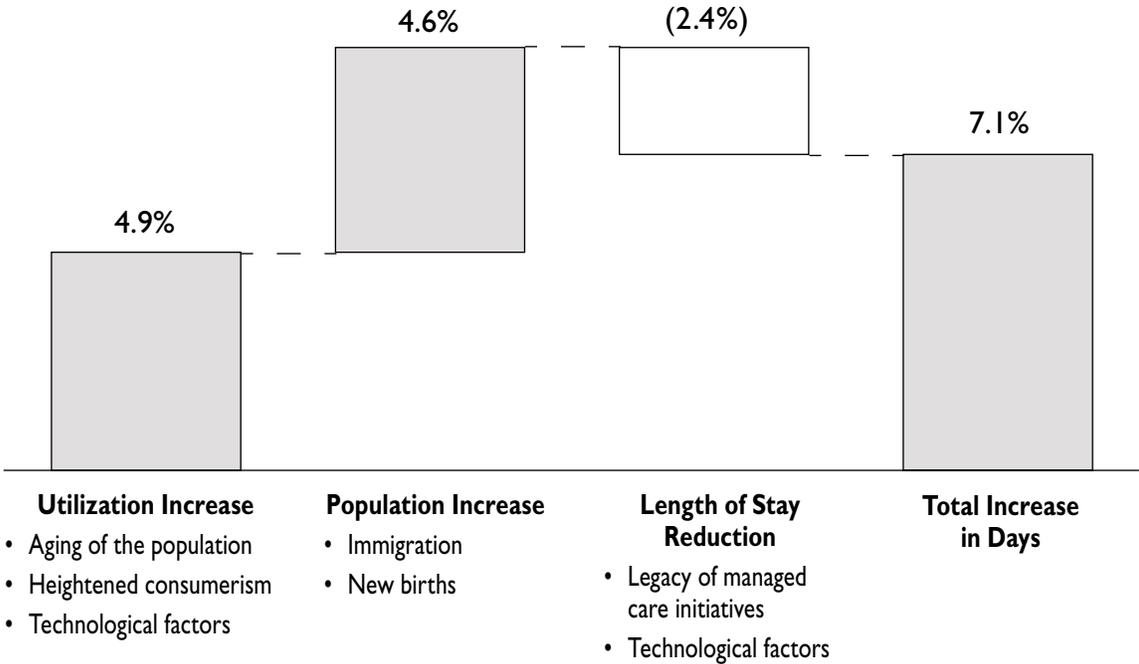


Conclusion #29 Advisory Board View: Compelling argument to be made that increase in patient demand deeply rooted in demographics—combination of (unexpectedly) high population growth and graying of baby boomers largely fueling boom in health care utilization

DRIVER OF RESURGENT DEMAND

A Product of Demographics

Increase in Inpatient Days, 1997–2000



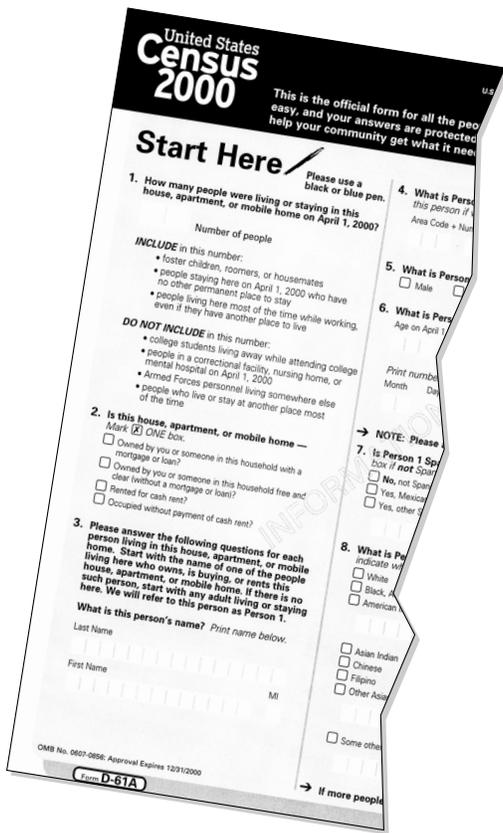
Source: Advisory Board analysis.

BENEFITING FROM A (MUCH) LARGER POPULATION

Conclusion #30 The Census Surprise: Against all expectations 2000 Census reveals truly stunning population increase across United States in last decade—historic growth in population reported in nearly every corner of nation

MASSIVE INCREASE IN

Largest Population Increase



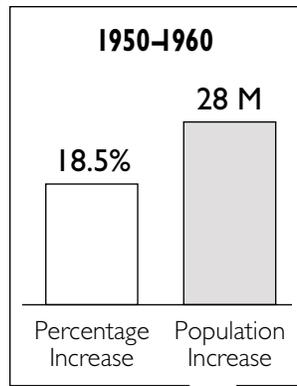
300,000,000

U.S.
Population

200,000,000

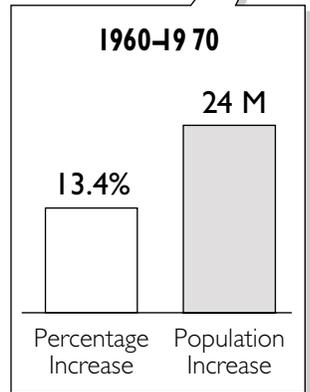
100,000,000

0



151,325,798

179,323,175



1950

1960

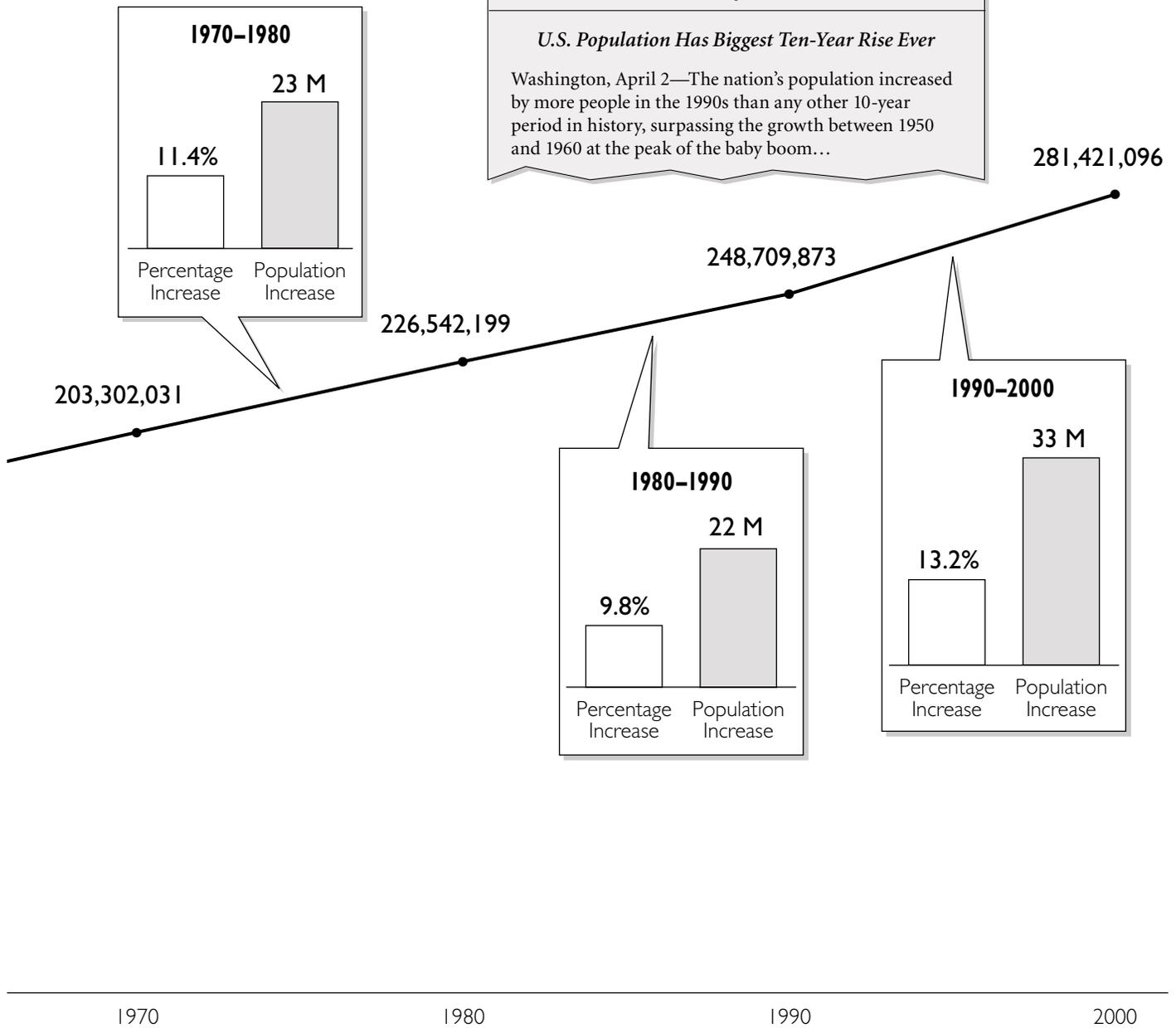
POPULATION IN THE 1990s

in More Than 50 Years

The New York Times

U.S. Population Has Biggest Ten-Year Rise Ever

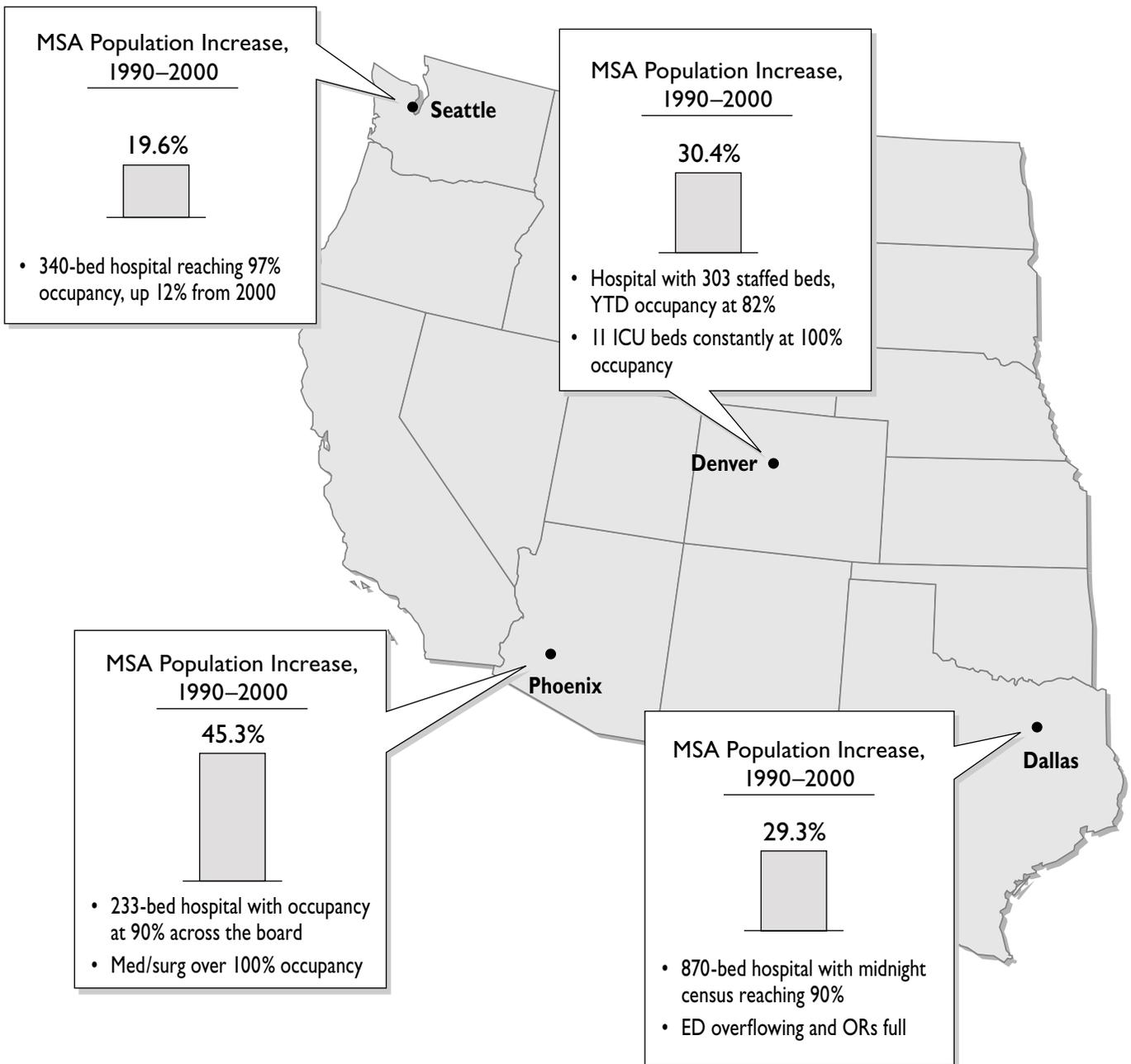
Washington, April 2—The nation's population increased by more people in the 1990s than any other 10-year period in history, surpassing the growth between 1950 and 1960 at the peak of the baby boom...



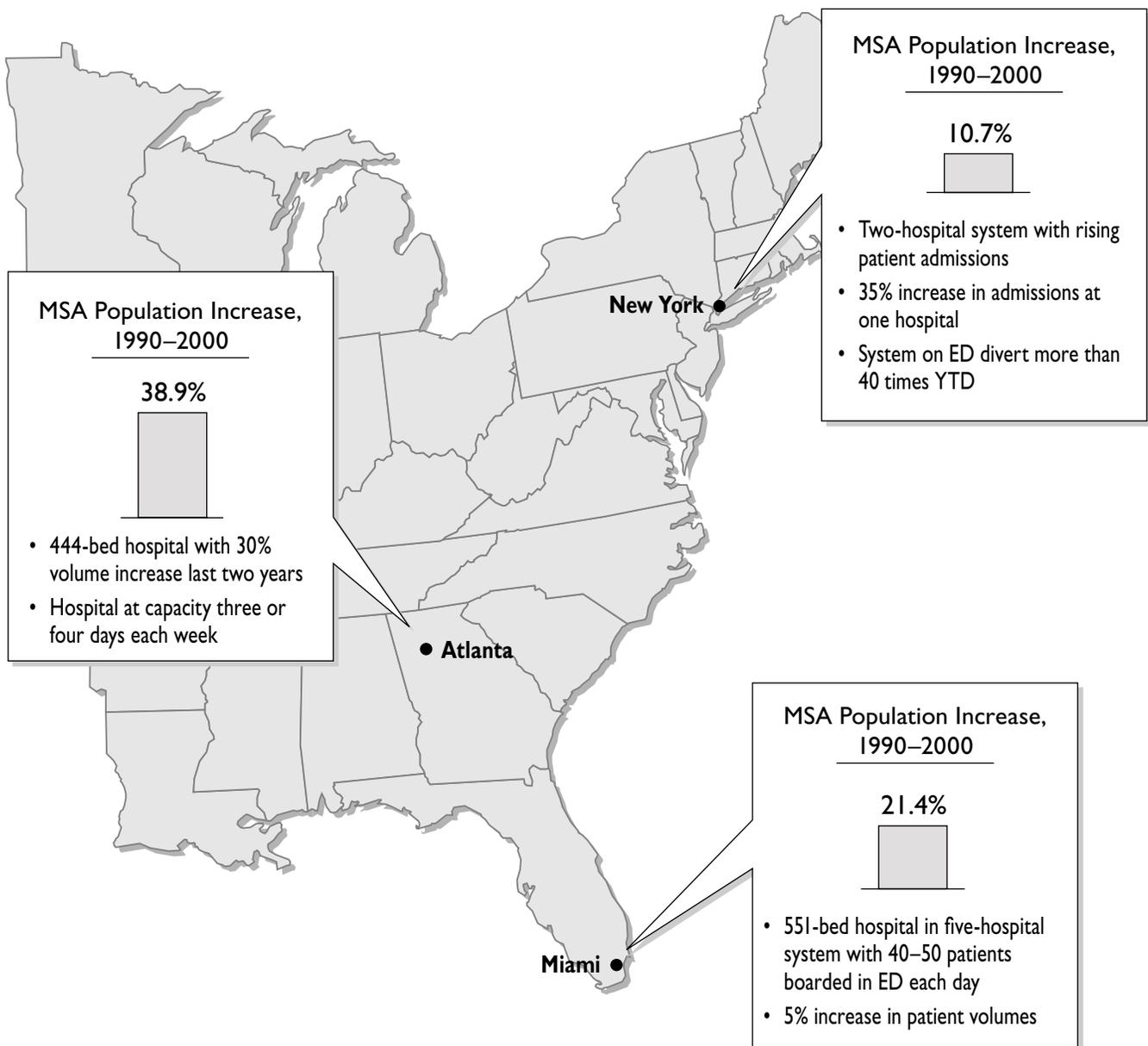
Source: U.S. Census Bureau, available at: <http://www.census.gov>, accessed June 28, 2001; Schmitt E, "U.S. Population Has Biggest 10-Year Rise Ever," *New York Times*, April 3, 2001.

Conclusion #31 Not surprising that those regions gaining most in population also those in which hospitals reporting the greatest increase in ED and inpatient volumes—almost possible to predict hospital occupancy rates by census tract

HIGH GROWTH MARKETS



EXPERIENCING SEVERE CONSTRAINTS



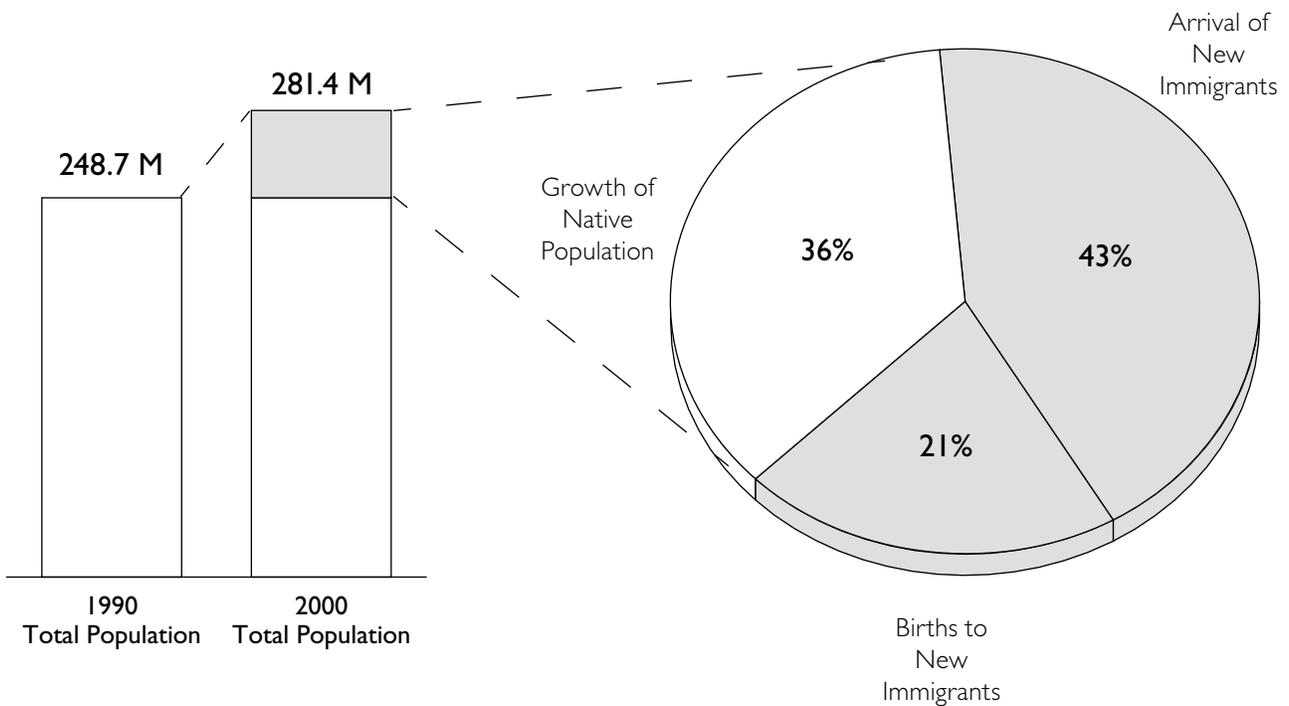
Source: U.S. Census Bureau, available at: <http://www.census.gov>, accessed July 28, 2001; Advisory Board interviews.

Conclusion #32 Mixed News for Hospitals: Much of this growth driven by unprecedented levels of immigration; some research to suggest that recent immigrants making up disproportionate number of new uninsured

MOST POPULATION GROWTH

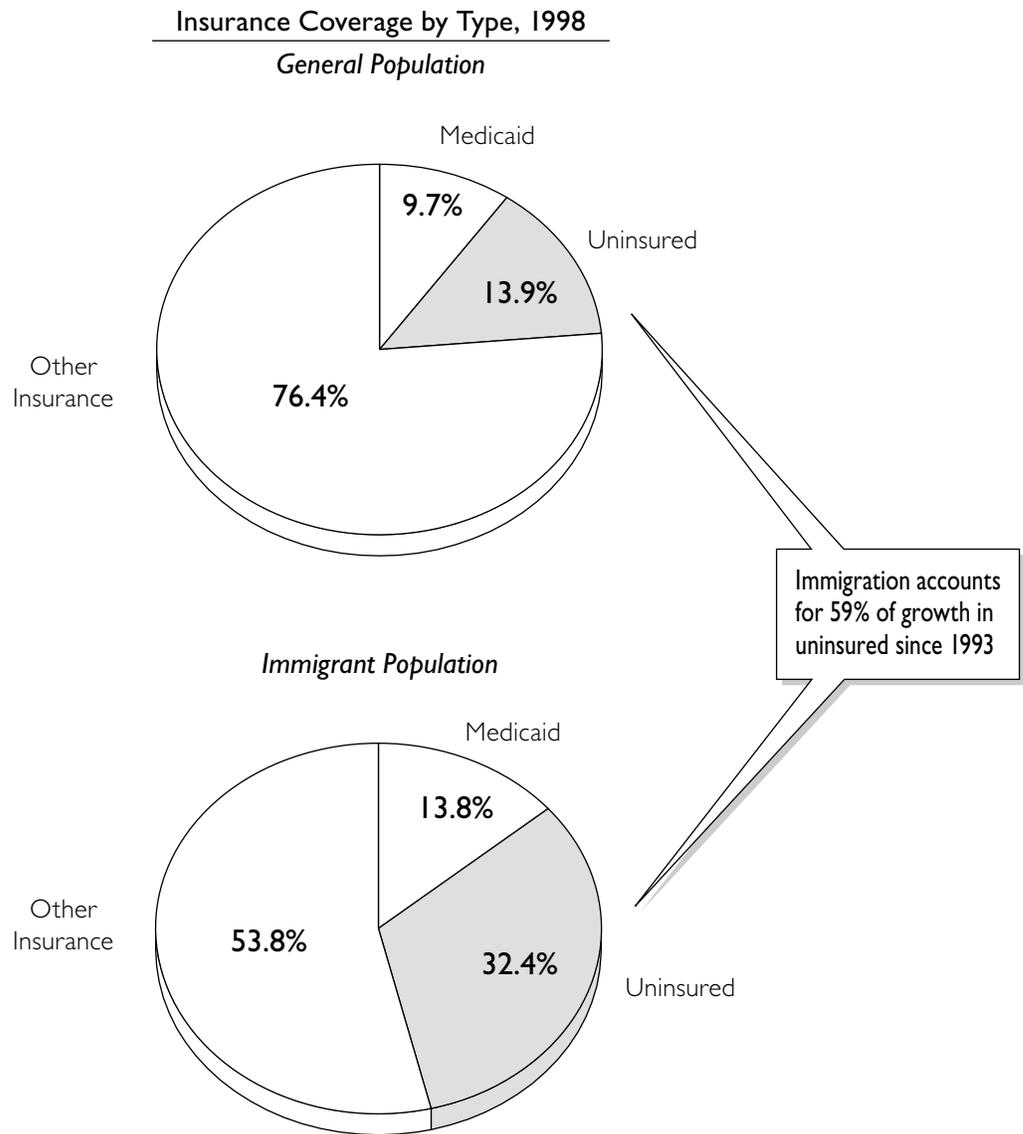
Immigration Driving Population Increase

Sources of U.S. Population Growth, 1990–2000



FROM IMMIGRATION

Swelling the Uninsured Ranks

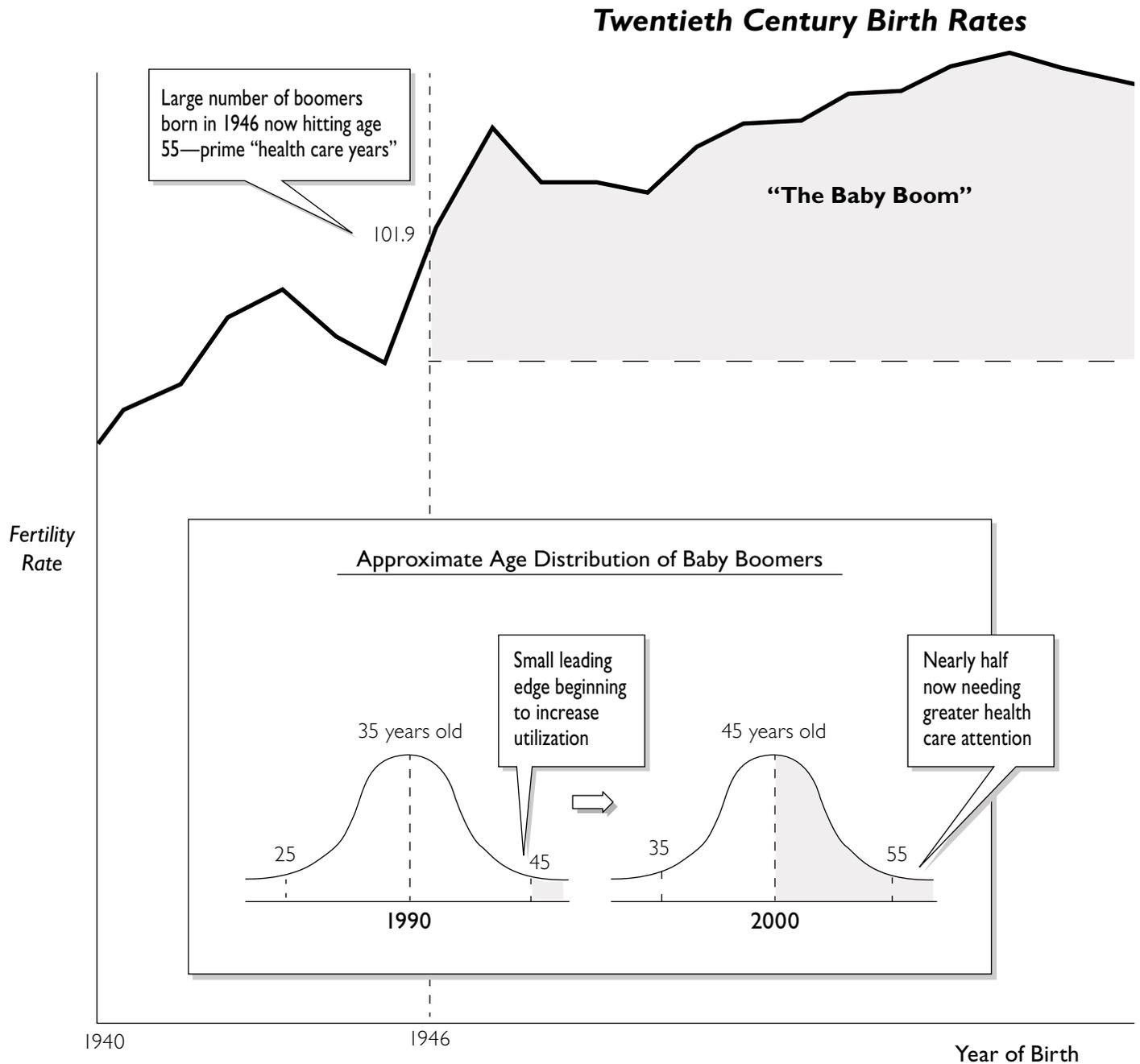


Source: "Without Coverage: Immigration's Impact on the Size and Growth of the Population Lacking Health Insurance," Center for Immigration Studies, July 2000; "The Impact Population Growth," Center for Immigration Studies, July 2001, available at <http://www.cis.org>, accessed July 27, 2001.

BENEFITING (FINALLY) FROM THE BOOMERS

Conclusion #33 A Much Anticipated Arrival: Evidence from the research that baby boomers finally having a meaningful effect on health care utilization; anecdotal data suggests much of the recent increase in hospital demand coming from their ranks

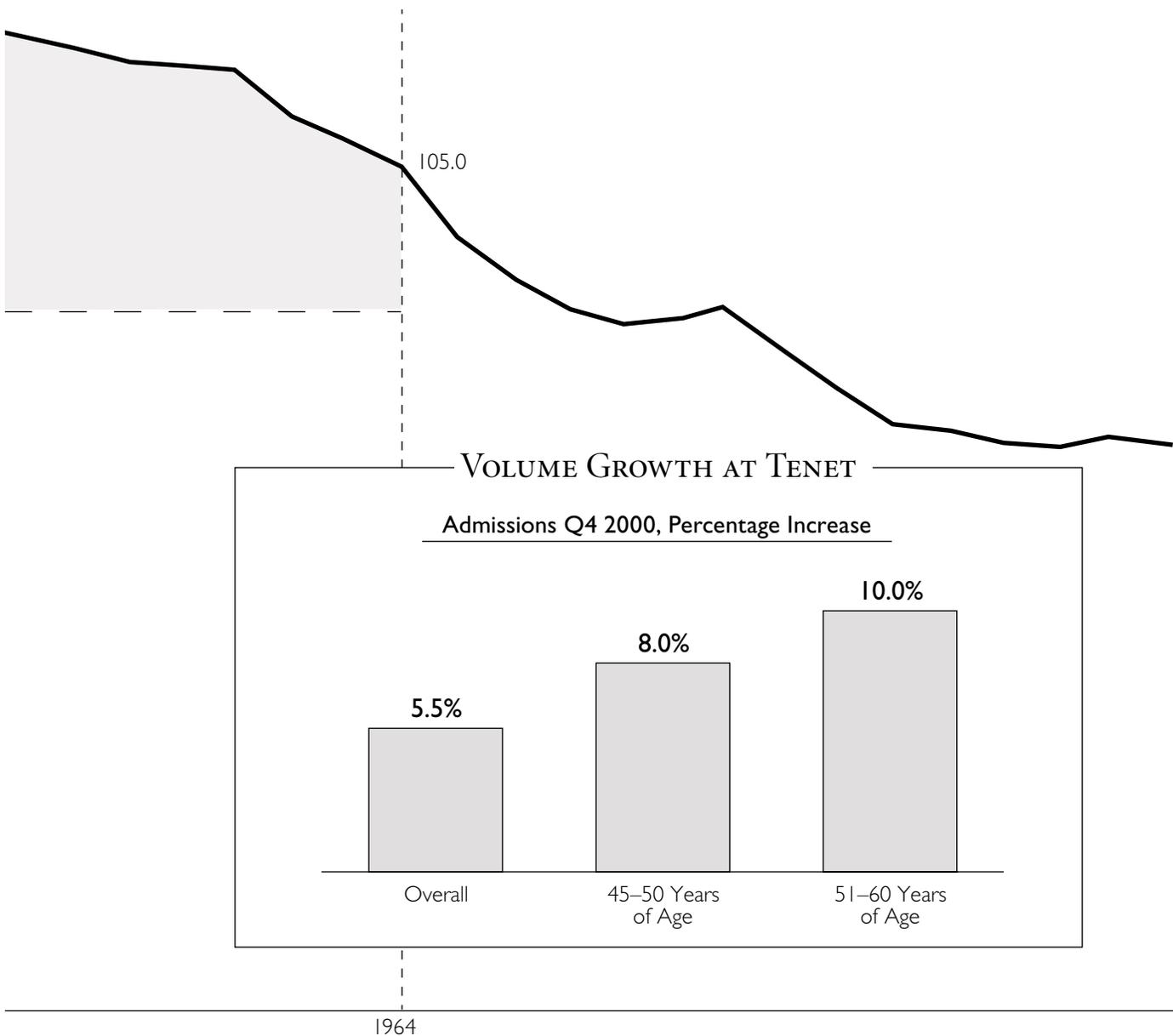
BABY BOOMERS



Conclusion #34 In retrospect, their late arrival hardly surprising—baby boomers only now entering their “health care years” in force; as of 2001, fully half the boomers over the age of 45—their utilization of medical services just now shifting into high gear

DRIVING AGING EFFECT

Driving Millennium Growth

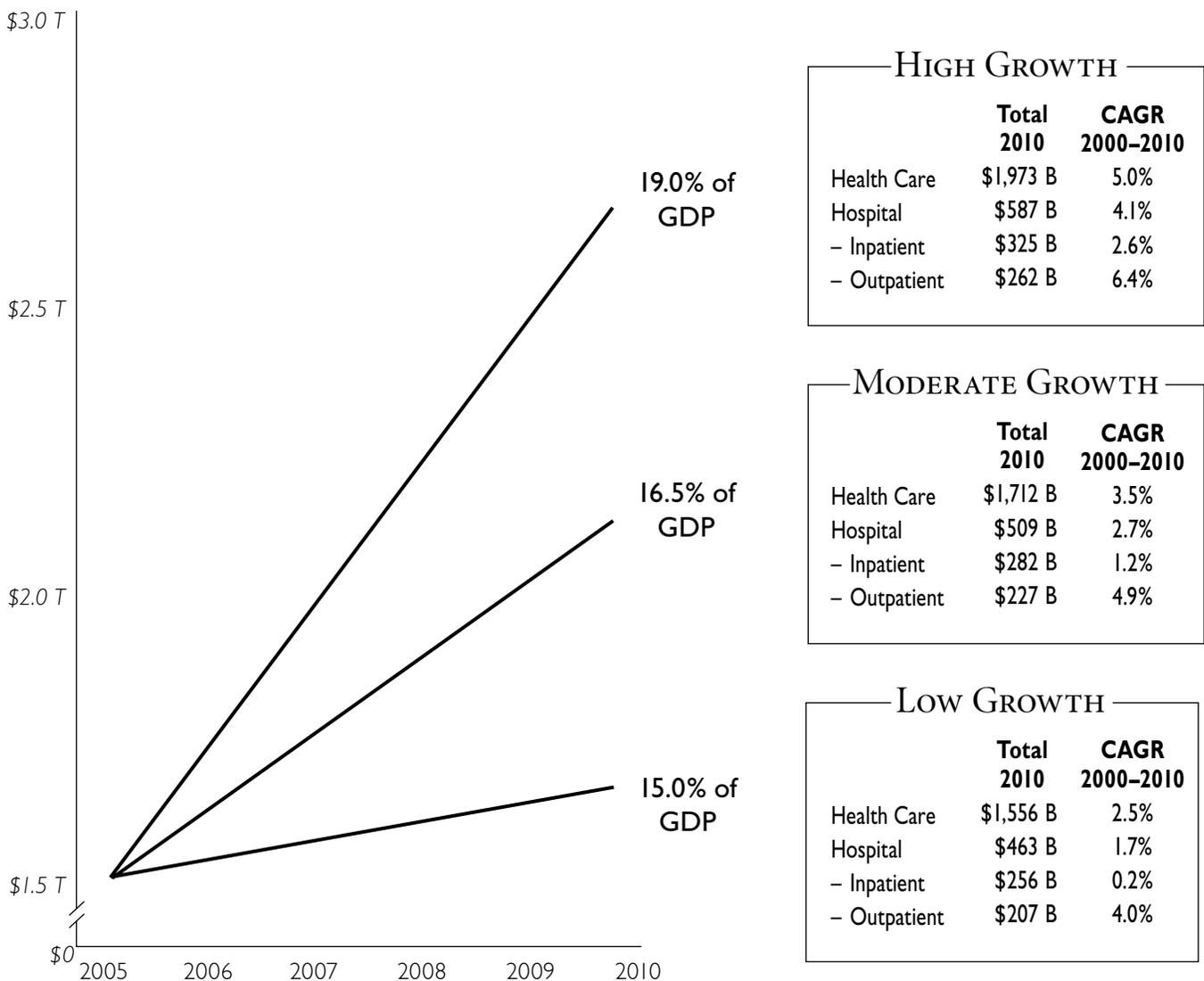


Source: National Hospital Discharge Survey, 1979-1999; Department of Health and Human Services CDC, Baltimore, March 2001; U.S. Census Bureau, available at: <http://www.census.gov>, accessed June 27, 2001; "Aging Baby Boomers Boost Tenet Quarterly Profit," Reuters, July 11, 2001.

Conclusion #35 Every reason to believe nation still in foothills of what will be a long upward march in demand for hospital services; best educated guesses project hospital spending growing between two percent and five percent for the next 10 years

ONLY AT THE BEGINNING OF

Projected Health Expenditures



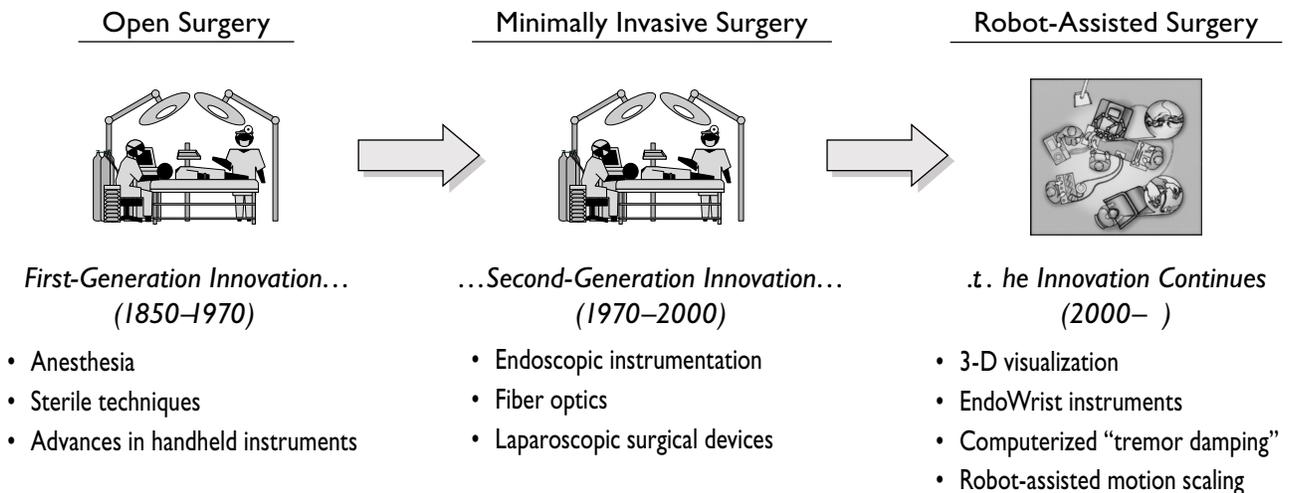
¹ Inflation-adjusted.

Source: "Health & Health Care, 2010," Institute for the Future; Health Care Financing Administration; Health Care Advisory Board analysis.

Conclusion #36 Advisory Board View: Bullish forecasts entirely reasonable given unstoppable demographics and demand-inducing aspect of new medical technologies—far from eliminating need for care, new technologies expanding market further

AN INPATIENT BOOM AHEAD

Innovation Expanding the Market



RISING CLINICAL THERAPEUTICS

The market for hospital services will expand further as a result of advances in minimally invasive procedures and technological innovations such as robot-assisted surgery. The “aggregation of innovation” across time improves the quality, feasibility, and outcome of surgery; innovation helps expand the market by encouraging a higher proportion of patients to opt for surgery and allowing physicians to treat greater numbers of patients. In particular, clinical and surgical innovations are enabling surgeons to treat patients who previously would have been too old or frail to be candidates for procedures. Robotics also allows more surgeons to conduct operations that previously could be performed only by the most highly skilled.

Conclusion #37 Fears that economic downturn and return of health plan cost discipline might put the brakes on patient demand overdrawn; managed care backlash not cause of resurgence in demand, managed care crackdown unlikely to signal its demise

ASSESSING THE KEY DRIVERS

	<i>Demand Driver</i>	<i>Contribution to Recent Growth</i>	<i>Future Contribution</i>
Demographic Drivers	#1 Population Growth	Unprecedented population increase last decade, with immigration contributing disproportionately; result is increased demand for health care services, greater number of uninsured, greater ED utilization	Significant, though lesser role in increasing health care demand
	#2 Population Aging	Baby boomers just turning 55–65 years old, with concomitant (sharp) increase in utilization of health care services, especially high-end diagnostics and procedures	Significant and increasing role in increasing health care demand
Market Drivers	#3 Consumer Expectations	Consumers more knowledgeable, more demanding of health care system; moderate role in demand increase, largely affecting physician practice and diagnostic testing	Continued moderate role, though increasing effect on utilization of physician and diagnostic services
	#4 Managed Care Restrictions	Health plans pulling back on utilization restrictions; largely affecting specialty care, diagnostic testing and ED care	Possible return of managed care restrictions in response to accelerating health care costs, largely affecting specialty care and outpatient diagnostics
	#5 Liberal Employer Health Benefits	With labor market tight and economy growing, employer health care coverage expanding; increasing demand for physician and diagnostic services, coverage for inpatient care	Possible contraction in coverage with economic downturn; moderate, negative effects on utilization of physician services and outpatient diagnostics, positive effect on ED visits
Technology Drivers	#6 New Clinical Therapies	Minimally invasive therapies migrating procedures to outpatient settings, reducing hospital admissions; other therapeutic advances are expanding market for some inpatient procedures	Continued migration of procedures outpatient, continued market expansion for some inpatient procedures—net negative effect on inpatient volumes
	#7 New Clinical Diagnostics	Advances in imaging and other technologies allowing for earlier and more precise diagnosis, expanding demand for testing and resulting in greater number of procedures	Expanding demand for diagnostic testing; moderate effect on procedure volumes

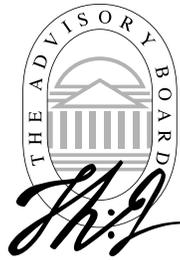
Conclusion #38 **Advisory Board View:** To the extent health plans reassert cost discipline, effect most likely to be felt in primary and specialty care utilization, as well as in the ED—inpatient care and major outpatient procedures less likely to feel the effect

OF FUTURE HOSPITAL DEMAND

Effect on Future Health Care Demand					Advisory Board Commentary
Primary Care	Specialty Care	Outpatient Diagnostics	ED	Inpatient	
↑↑	↑↑	↑↑	↑↑	↑↑	Demographics the unstoppable engine driving health care demand in the next decade, only picking up steam thereafter; will likely overwhelm those drivers working to diminish demand; an aging population should ensure continued (if anemic) inpatient procedure growth despite minimally invasive technologies
↑↑	↑↑↑↑	↑↑↑↑	↑↑↑↑	↑↑↑↑	
↑	↑↑	↑↑	↑↑	↔	Concerns that economic downturn and return of health plan discipline might put brakes on health care demand overdrawn; managed care backlash not the cause of resurgence in demand, nor will crackdown signal its end; greatest effect would be on demand for specialty and diagnostic services; demand for inpatient care largely unaffected, though numbers of uninsured would rise
↑↑	↓↓	↓↓	↓	↔	
↓↓	↓↓	↓↓	↑↑	↓	Advances in technology a double-edged sword; will continue driving increased utilization overall, though effects uneven—large increases in specialty and diagnostic services, as well as outpatient procedure volume, partly offset by much slower growth in inpatient procedures
↔	↑↑	↑	↔	↓↓	
↔	↑	↑↑↑↑	↔	↑	

↑↑↑↑	Strong Positive Effect	↑↑↑	Moderate Positive Effect	↑↑	Slight Positive Effect	↓↓↓	Strong Negative Effect	↓↓	Moderate Negative Effect	↓	Slight Negative Effect	↔	No Effect
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Phenomenon #2



MEDICINE, NOT SURGERY

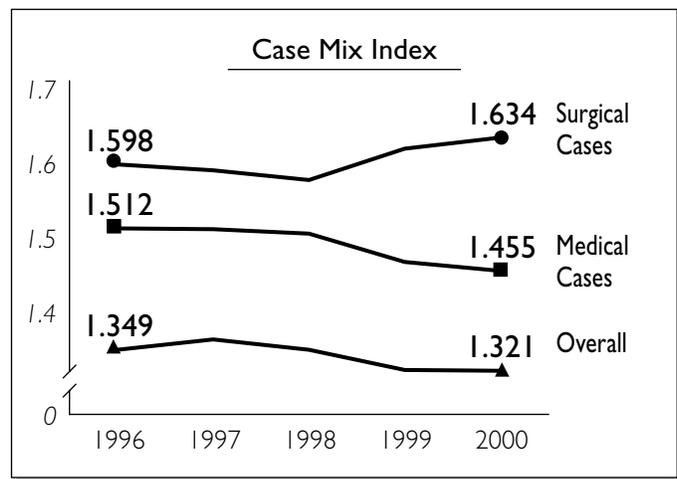
A RISING TIDE OF MEDICINE

Conclusion #39 While hospitals now fully aware of resurgence in patient demand, many only beginning to come to grips with subtle but deep shift in its composition—medical admissions far outpacing surgical admissions at most hospitals

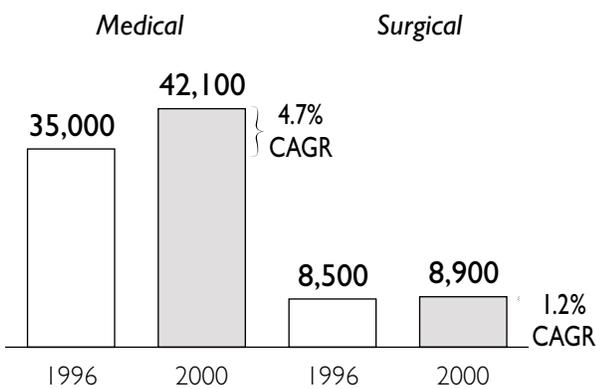
MEDICAL CASES RELENTLESSLY

WALNUT HEALTH SYSTEM¹ IN BRIEF

- Three-hospital academic health system located in Midwest metropolitan area
- 1,100 staffed beds
- 20 primary care clinics
- 17 percent increase in admissions
- \$1.1 billion gross revenues



Discharges by Case Type



DESPITE BEST EFFORTS

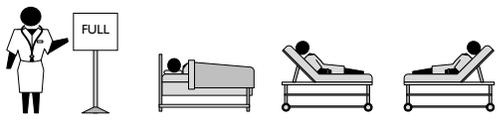
“I’m not sure how to explain it, but we’re increasingly turning into a medical hospital. We’re doing everything we can to drive more surgeries through, but the volumes just aren’t there.”

CEO, Walnut Health System

¹ Pseudonymed organization.

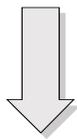
Conclusion #40 As with resurgence in demand, hospital awareness often coming suddenly and only when problem becomes unmistakable—first indication of trouble often when surgeries canceled or lost altogether due to shortage of beds

CROWDING OUT SURGERIES



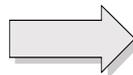
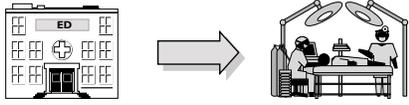
Capacity Constraints

- 48% increase in average hours on divert
- 400 lost transfers in nine months
- 100 cardiac-related transfers




Partnership with Nearby Community Hospital

\$250,000–\$500,000 investment in community hospital OR with goal to transfer 1,700 low-level, elective orthopedic cases

ED Backfill

Community hospital surpasses volume expectations, but freed med/surg space at AMC consumed by medical cases

MEADOWDALE HEALTH SYSTEM¹

- Six-hospital health system in the southern United States, including three AMCs and three community hospitals
- 2,000 licensed beds
- 85%–95% midnight occupancy rates across the board at the AMCs
- 65%–70% midnight occupancy rates at the community hospitals

NOT KIND TO MARGIN

“There is a lot of bumping going on in the OR. We are losing revenue due to the rise in volumes. We could be performing a lot more surgeries, but we are unable to find the OR time and med/surg beds to accommodate them.”

Director, Decision Support
Meadowdale Health System

¹ Pseudonymed organization.

Source: Advisory Board interviews.

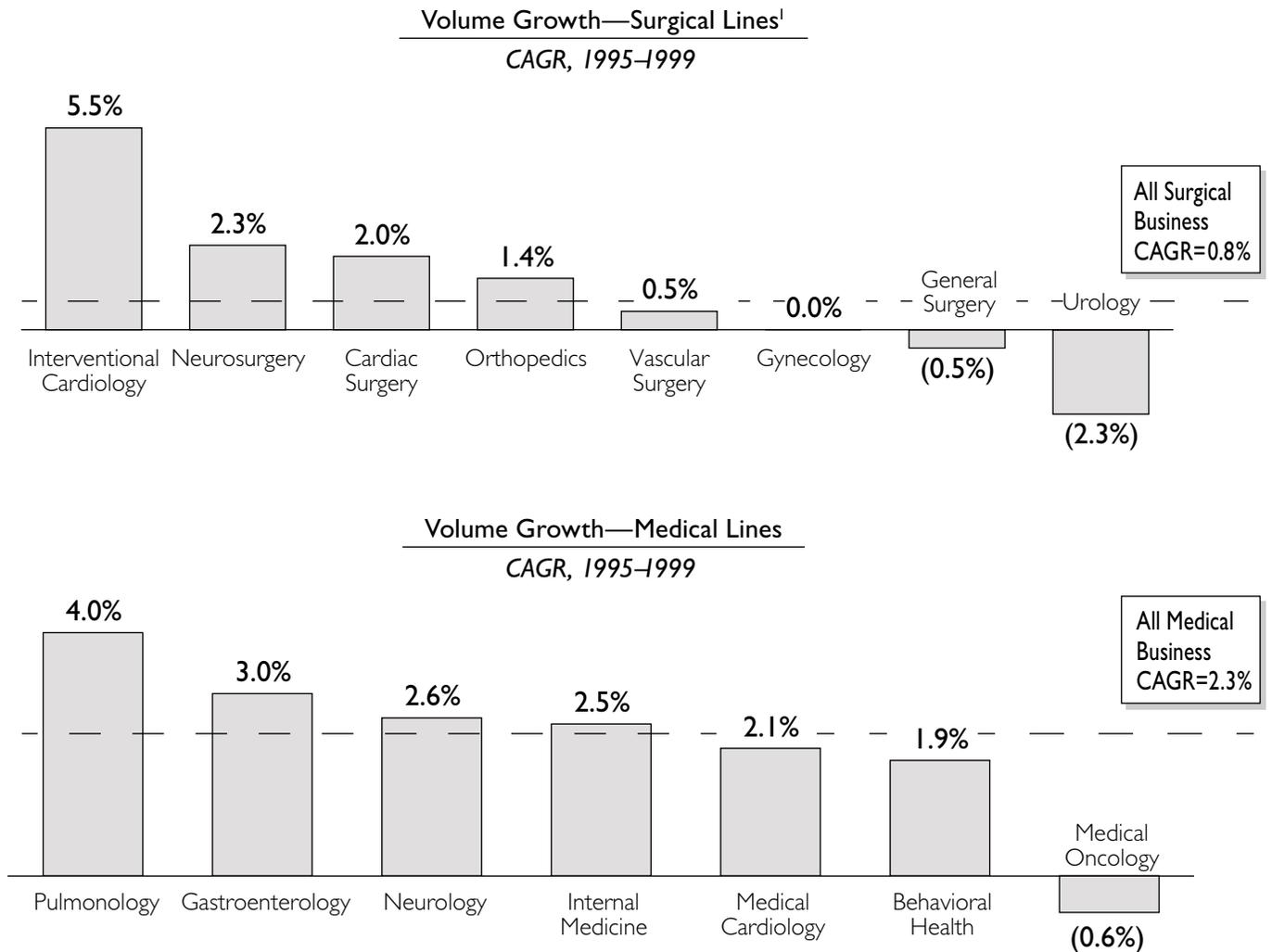
MEDICINE'S PERSISTENT GROWTH ADVANTAGE

Conclusion #41 Here, too, suddenness of medicine's growth advantage more apparent than real; national data reveals that inpatient medicine has been growing at three times the rate of inpatient surgery across last five years

Conclusion #42 Medicine's persistent growth advantage producing a subtle but steady shift in patient mix nationwide; medical cases accounting for growing percentage of both hospital discharges and total days

MEDICAL VOLUMES OUTPACING

Unequal Service Line Growth



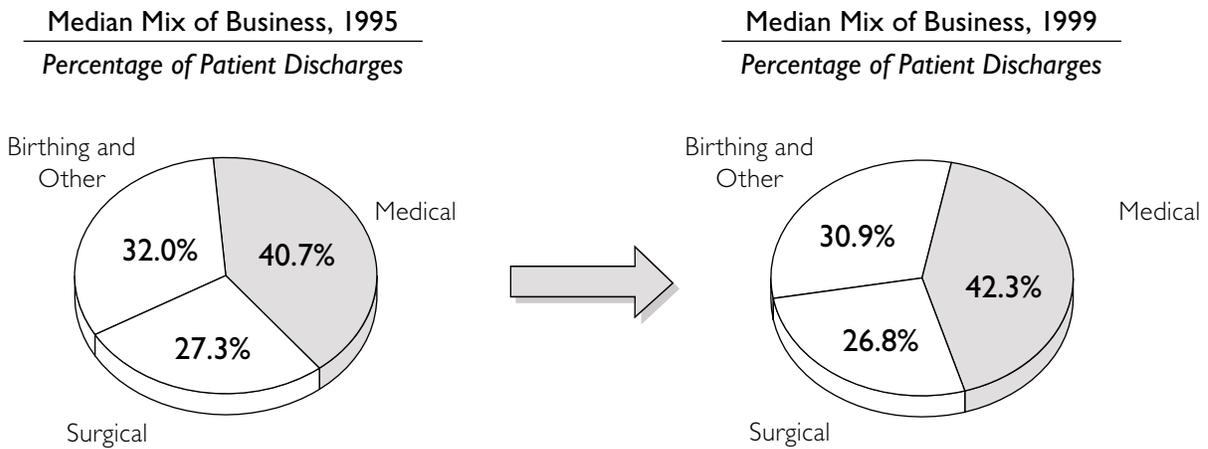
¹ The terms "procedure" and "surgery" are used interchangeably herein; both terms include interventional cardiology.

Conclusion #43 Hardly any good news across any surgical specialty; admissions either stagnant or actually declining altogether—general surgery, gynecology, vascular surgery, and urology all losing ground or flat the last five years

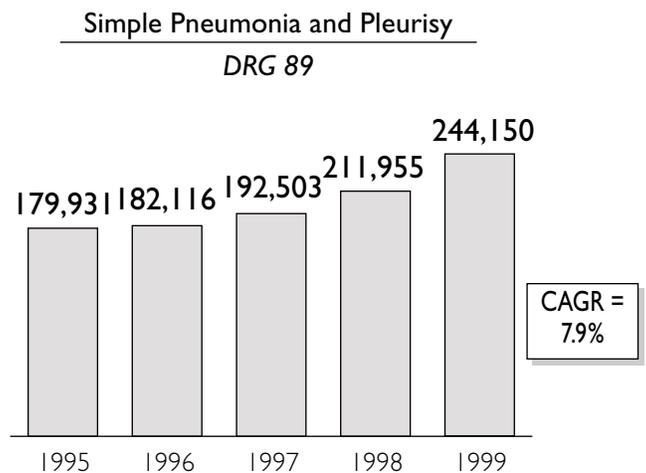
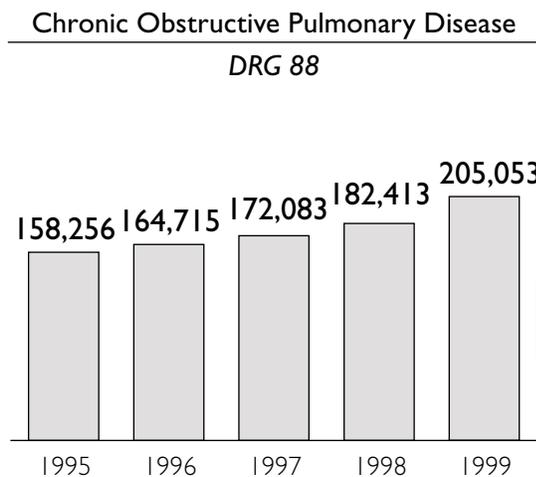
Conclusion #44 News far happier for most medical specialties, especially among major chronic conditions—congestive heart failure, pneumonia, COPD and other chronic care patients all crowding into hospital beds the last half-decade

PROCEDURAL GROWTH

Patient Mix Shifting Over Time



Rapid Growth of Sentinel Medical DRGs

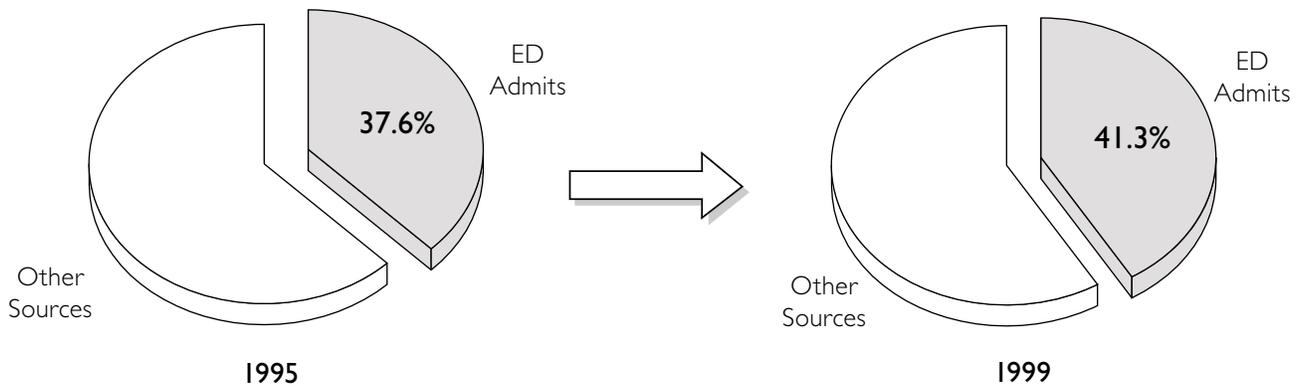


ISOLATING THE SOURCE—SPOTLIGHT ON THE ED

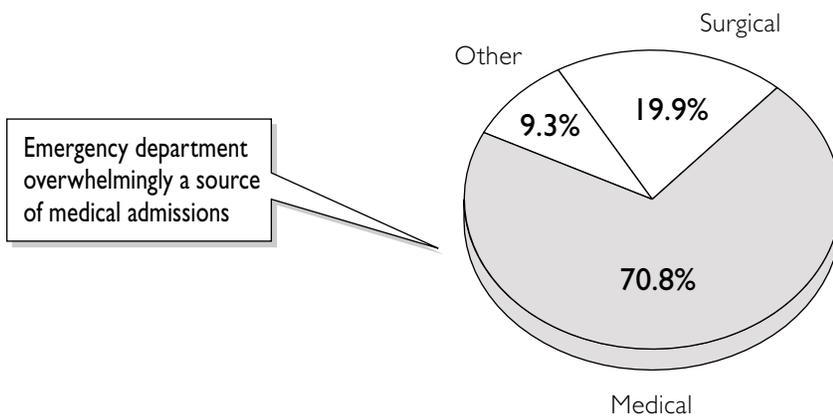
Conclusion #45 Hospital emergency departments are the “Ellis Island” of medical admissions; source of the largest numbers of inpatient admissions for most institutions, the ED is also by and large a channel for medical admissions

EMERGENCY DEPARTMENT

Percentage of Total Admissions Through ED



Patient Mix of ED Admits, 1999

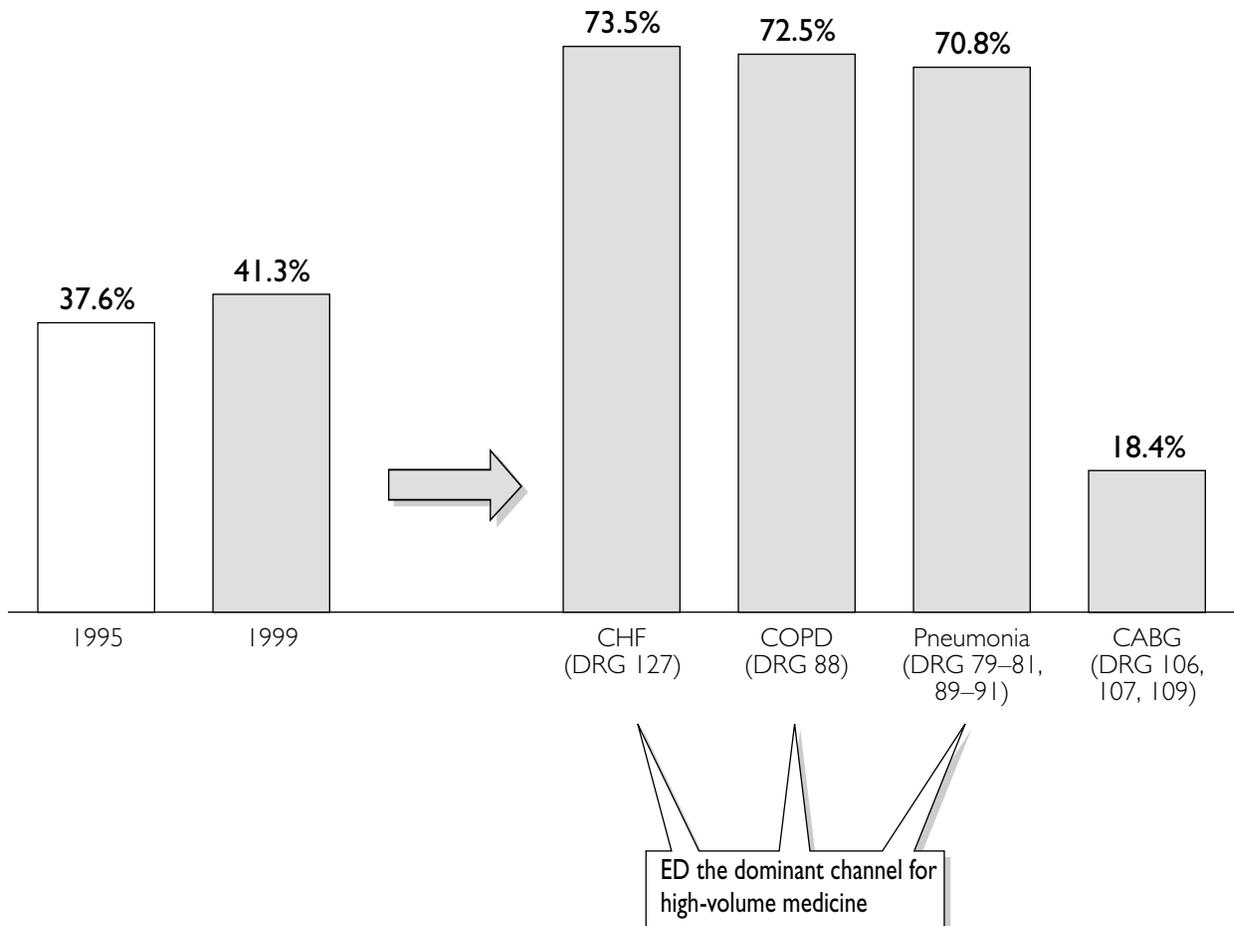


Conclusion #46 Not surprising that as medical admissions to hospitals have grown, so has importance of the ED; emergency department now supplying more than 40 percent of all hospital admissions

Conclusion #47 Emergency department especially important as feeder for highest-volume medical admissions—large proportion of pneumonia, COPD, congestive heart failure cases and so on entering through ED doors

LARGELY A MEDICAL FEEDER

Percentage of Inpatient Admissions from ED



EXPLAINING THE GAP—WHERE HAVE ALL THE SURGERIES GONE?

Conclusion #48 Gap between medical and surgical growth rates largely explained by migration of procedures to outpatient settings—procedure volumes overall (inpatient and outpatient) continue to grow handsomely, outpacing growth in medical admissions

SURGERIES—AN INPATIENT

Surgeries Increasingly Moving Outpatient

U.S. Hospital Surgery Volume

