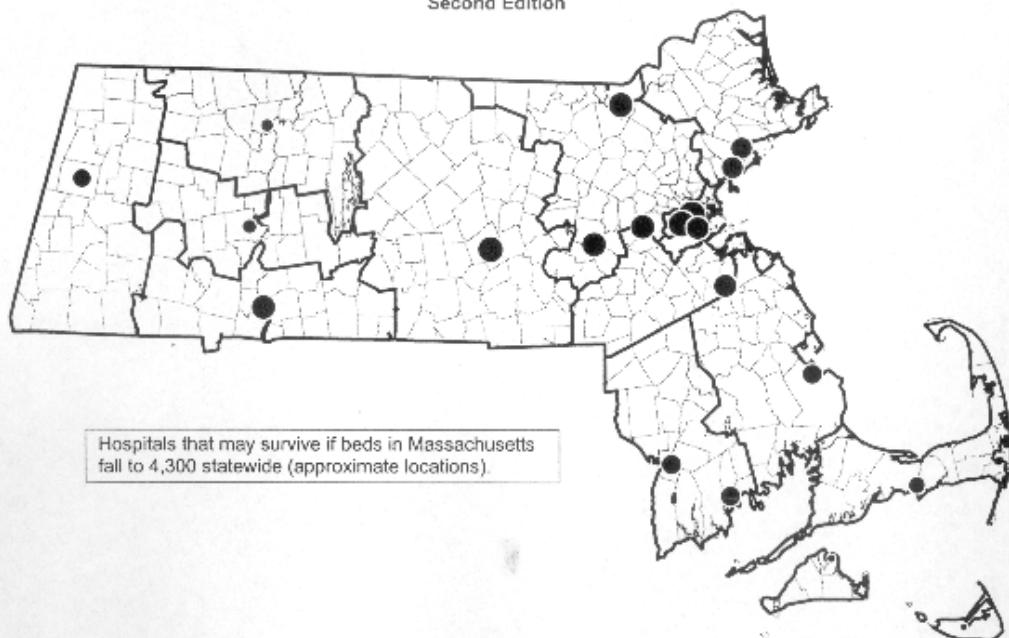


Summary and Excerpts from
BEFORE IT'S TOO LATE:
WHY HOSPITAL CLOSINGS
ARE A PROBLEM, NOT A SOLUTION

Second Edition



Hospitals that may survive if beds in Massachusetts fall to 4,300 statewide (approximate locations).

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with maps by Jasprit Deol, M.P.H.

Early Findings from the
Massachusetts Hospital Reconfiguration Study

ACCESS AND AFFORDABILITY MONITORING PROJECT
Boston University School of Public Health

2 June 1997

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The work of Jasprit Deol, M.P.H., in compiling data and preparing maps, has been indispensable to this study.

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Note on the second edition. This report has been expanded from the edition circulated 10 April 1997. Several additional issues are addressed; new maps, figures, and tables are included; some data have been slightly refined; and additional recommendations are included as well.

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CONTENTS

	PAGE
LIST OF MAPS	vi
LIST OF TABLES	vi
LIST OF FIGURES	vii
SUMMARY	viii
INTRODUCTION	1
I. COSTLY HOSPITALS	3
1. Massachusetts acute hospitals have long been the world's most costly.	3
2. Why are hospitals here so expensive?	3
II. IS CLOSING HOSPITALS THE SOLUTION?	4
3. Several factors— including out-of-state patients— are widely but wrongly blamed for high costs.	4
4. Over-bedding is not the problem— we have fewer beds than average.	5
5. Nor is over-bedding to blame for the nation's high health costs.	5
6. Do closings and down-sizing really attack the causes of this state's high costs?	5
7. Massachusetts hospitals have been closing since 1970.	6
8. Beds have been closing faster here than nationally.	7
9. Some claim the "invisible hand" will close only excess, unneeded hospitals. But there is no evidence that closing hospitals is safe.	7

	PAGE
III. MAYBE CLOSING HOSPITALS IS A PROBLEM, NOT THE SOLUTION	8
10. Many hospitals that close are needed.	8
11. Closings and down-sizing may not save money, for several reasons.	8
a. Shortening hospital stays does not tend to greatly cut real costs.	8
b. In-hospital care may be more efficient than out-of-hospital alternatives.	9
c. Patient volume does not always follow hospital efficiency.	13
d. Hospitals save little by simply cutting beds.	13
12. Closing hospitals may even have raised this state's health care costs.	13
13. Any savings may be one-time gains from cannibalizing hospital assets.	15
14. Hospital closings have health consequences, and can do irretrievable harm. Communities often lose far more than inpatient beds.	16
15. What factors best predict hospital survival in Massachusetts?	17
16. If bed use rates that prevail in HMOs nationally and in California take hold here, the number of hospital beds used here would drop sharply.	18
17. Which 55 or so hospitals might stay open if the same factors continue to predict survival, and if bed use drops to recent levels in U.S. HMOs?	20
18. This state is headed toward a day when only 15-20 hospitals survive.	24
19. Competition is yielding monopoly. Is this competition advocates' aim? And long travel times burden patients and families.	28
20. Even with more preventive care, people will still need hospitals.	29
21. Why don't hospitals speak up and fight for their own survival?	30

	PAGE
22. Someone must think about which hospitals are needed, to protect both them and the people whose health they are supposed to protect.	32
23. For-profit hospitals will not be rescuers.	33
24. Nor does merging with larger hospitals, with deeper reserves, offer security.	33
25. First, do no harm.	34
26. Roemer's Law and Walter McClure— does having hospital beds still mean filling them? Do savings depend on the type of hospital closed?	35
27. Today's closings, bed-reductions and mergers don't advance efficiency.	35
28. Competition and the market cannot protect the public interest in health care. Summary — closings, pro's and con's.	37
IV. STATE ACTION NEEDED— BEFORE IT'S TOO LATE	41
29. Re-regulation of hospitals is inevitable. Why not do it before dangerous damage is done and before costly rebuilding is required?	41
30. Aging baby-boomer's rising need for hospital care is likely to slam up against plummeting hospital capacity. The resulting resource crunch will endanger us all. Expanding insurance would also boost demand.	42
31. Neither state nor federal government policies today protect against closures— no matter how essential a particular hospital may be.	44
32. Proposed legislation may help stabilize needed hospitals.	45
33. To correct one aspect of market failure and to promote efficiency, hospitals could be required to price services more accurately and fairly.	46
34. To conserve resources and provide a safety valve, Massachusetts should maintain both a ready reserve and a mothballed reserve of hospital beds.	47

	PAGE
35. Several other steps may be useful.	48
36. We also need longer-term changes.	48
ENDNOTES	50
OTHER AAMP REPORTS	59

MAPS

	FOLLOWING PAGE
Map 1. Massachusetts hospitals, 1970-1997. (Text, p. 6)	xv
Map 2. Hospitals that might survive, 1997-2002. (Text, p. 21)	xv
Map 3. Massachusetts hospitals that might survive, 1997-2010, worst case. (Text, p. 25)	xv
Map 4. Eastern Massachusetts hospitals that might survive, 1997-2010, worst case. (Text, p. 25)	xv
Map 5. Massachusetts hospitals that might survive, 1970-2010, worst case. (Text, p. 26)	xv
Map 6. Massachusetts hospitals, 1970.	26
Map 7. Massachusetts hospitals, 1997.	26
Map 8. Hospitals that might survive to 2002.	26
Map 9. Hospitals that might survive to 2010, worst case.	26

TABLES

	PAGES
Table 1. Personal health spending, Massachusetts, 1991.	4
Table 2. How many beds will be open in each county under various standards.	20
Table 3. Hospitals still open in 1997: Predicted probability of survival 1990-1997, and projected beds in 2002, by county and hospital.	22-24
Table 4. Massachusetts acute hospitals and beds, 1970-2010.	25
Table 5. Number of older Massachusetts residents, 1980-2025.	42

FIGURES

	FOLLOWING PAGE
Figure 1. Massachusetts and U.S. hospital expenses per person, 1960-1995.	3
Figure 2. Beds per 1000 people, Massachusetts and U.S., 1960-1995.	5
Figure 3. Massachusetts acute hospitals, 1970-1997.	6
Figure 4. Percentage reduction in acute care beds, U.S. and Massachusetts, 1990-1995.	7
Figure 5. Massachusetts acute hospital beds, 1970-1997.	7
Figure 6. U.S. hospitals closing and surviving: Neighborhood percent black and Latino, 1940-1986, in 52 cities.	8
Figure 7. Massachusetts average length-of-stay and percent of U.S. average, 1960-1995.	8
Figure 8. Massachusetts hospitals closing and surviving: Efficiency, 1980-1997.	13
Figure 9. Massachusetts and U.S. personal health spending per person, 1966-1993.	14
Figure 10. Ratio of Massachusetts to U.S. health spending per person, 1966-1993.	14
Figure 11. Massachusetts hospital and non-hospital spending per person, 1980-1993.	14
Figure 12. Demand for Massachusetts hospital beds under various use rates.	18
Figure 13. People aged 55 and above versus hospital beds, Massachusetts, 1980-2025.	43
Figure 14. Hospital beds per 1000 people aged 65 and above, Massachusetts, 1980-2025.	43
Figure 15. Hospital beds per 1000 residents, Massachusetts, 1980-2025.	43

SUMMARY

For 10 years, this state's policy has been to close and down-size community hospitals, even though there has been no public assessment of this policy's effects on the public's health or safety. For even longer, getting care out of the hospital has been a main goal of managed care plans and others seeking to cut medical costs. Market forces are being used as the tool to select which hospitals to close.

Several myths, widely-held here and nationwide, are used to justify those policies:

- the myth that health care costs are so high here largely because we have too many hospitals and hospital beds, and too much of our care takes place in them;
- the myth that market forces and price competition will move health care to the most efficient sites, putting resources where they are needed, while closing inefficient, unneeded hospitals, and thus saving money; and
- the myth that the market can judge which hospitals— how many hospitals, located where— should survive, and which should die.

The Access and Affordability Monitoring Project (AAMP) has found much evidence which contradicts these and related myths and reveals them as dangerous. In reality:

- Excess beds and hospitals cannot explain this state's high costs.
- Market forces are closing too many hospitals, often hospitals that are needed.
- Moving care out of hospitals and closing hospitals often does not save money— indeed, it could be increasing overall health costs here.
- Inefficiency does not predict which hospitals will close, because the inevitably unfree health care market often closes the wrong hospitals.
- Hospital closings can cause grave harm as communities lose emergency rooms and other vital services, along with nearby physicians, and as patients lose trusted sources of care.
- Closings look gradual because there are only a few each year. But their cumulative effects over a decade or so are radical.
- There is nothing to stop this radical rush to close hospitals. By the time a closing is announced, it is often too late to act to analyze whether a hospital is needed, or to take steps to save it.
- Therefore, the state must act to identify and preserve needed but financially vulnerable caregivers.

We report the following findings—and illustrative projections of the beds and hospitals that may survive if this state does not change course—not because we want this future for Massachusetts. On the contrary, we find reason for great concern. We hope to alert communities, hospitals, state policy-makers, and others to evidence of what lies ahead, so that they can, if they choose, take action to change direction.

COSTLY HOSPITALS

1. Massachusetts acute hospitals have long been the most expensive in the world. Hospitals here spent \$1448 per Massachusetts resident in 1995, we calculate. That was \$377 above the U.S. per capita average—so hospital spending here totaled \$2.3 billion more than if costs here had been at the national average.

IS CLOSING HOSPITALS THE SOLUTION?

2. Why are hospitals here so expensive? The usual explanations—research, teaching, service to out-of-state patients, higher wages, more outpatient care, and an older population—explain only about one-third of this state's excess costs, we found in a previous analysis.
3. The net inflow of out-of-state patients to caregivers here accounts for a very small share of health spending—2.7 percent of personal health spending in this state, and 3.8 percent of spending for hospital care.
4. Another enduring myth blames over-bedding for this state's high costs. Actually, in 1995, Massachusetts had 5.5 percent fewer beds per capita than the nation as a whole. So over-bedding can't explain our high costs.
5. Nor is over-bedding to blame for high health costs in the nation as a whole. Most wealthy countries have more hospital beds per person than the U.S. does, but spend only half as much on health care.
6. Those facts raise questions about the desirability of closing hospitals. Does the state's current policy of closing and down-sizing hospitals really attack the causes of this state's high cost problem?
7. The number of acute hospitals in Massachusetts has fallen from 127 in 1970 to 81 today—a drop of 36.2 percent, or more than one-third. The safety of this 36.2 percent drop is unproven.
8. Between 1990 and 1995, American Hospital Association data indicate, while the U.S. cut 5.9 percent of its acute hospital beds, the number in Massachusetts dropped 13.8 percent. Looking back farther, from 1980 to 1997, over one-third (at least 35.7 percent) of the state's acute hospital beds have disappeared.

9. Proponents of closings claim that only excess, unneeded hospitals will close, through the workings of the "invisible hand" of a free market. But there has been no systematic assessment of the effects of past closings on the public's health or safety.

MAYBE CLOSING HOSPITALS IS A PROBLEM, NOT THE SOLUTION.

10. Many needed hospitals close. Other research by AAMP principals has found that hospital closings nationally tend disproportionately to be in communities with higher percentages of African-American or Latino-American residents, and higher percentages of poor people. Such communities tend to have many unmet health needs.

11. Closings and down-sizing may not save money, for several reasons:

- Shortening hospital stays does not tend to greatly cut real costs.
- Whether recuperative, emergency room, day surgery, or other care— in-hospital care may be more efficient than the out-of-hospital alternatives.
- Hospitals save little by simply cutting beds.
- Current pricing policies artificially make out-of-hospital care look far cheaper.
- Hospital fixed costs persist, even when use declines.
- When HMOs dodge paying their fair share of a hospital's fixed costs, they force price increases for those who do use the hospital, and perpetuate a cycle of dehospitalization.
- This represents market failure.

12. In fact, there is evidence that closing hospitals may even have raised this state's health care costs.

- In some periods, surviving Massachusetts hospitals have been more costly than those that closed, although this pattern may be changing. A new AAMP analysis shows that hospitals closing from 1980 to 1990 were slightly less costly than survivors, as judged by their 1981 cost per discharge, adjusted for case-mix. The same is true for hospitals closing between 1980 and 1997. But hospitals closing over the past seven years, when judged by their 1990 efficiency, were slightly more costly than survivors. This is an encouraging sign. The differential, however, is nowhere near as large as would be expected if true free market forces were at work here; neither difference is statistically significant. Thus, efficiency still does not seem to be the bedrock on which hospital survival rests in Massachusetts.
- This state's bed-to-population ratio has dropped from 6.2 percent above the national average in 1985 to just below the U.S. figure in most years since 1989— and to fully 5.5 percent below the U.S. average in 1995.

- But recent federal data indicate that health care spending per capita in Massachusetts rose relative to the U.S. average, from 20-22 percent above the U.S. average from 1980-1985, to 29 percent above the U.S. average in 1993.
- Steep increases in spending for non-hospital care seem to have driven the state's rise, relative to the nation, in total health care spending. We climbed from just above the U.S. average in non-hospital spending per person in 1980 to nearly 30 percent above by 1990.

13. Any savings from closings today may come from cannibalizing hospital assets, and thus are one-time-only gains.

14. Another concern is the likely health consequences of hospital closings. Closing hospitals can do irretrievable harm. Communities often lose emergency rooms, outpatient care, and physicians in private practice. Patients may face dangerously long travel times to care, and many are lost to the health care system. Because hospitals have been most likely to close in less-well-off communities, closings are likely to increase unmet health needs where needs are already greatest.

15. We have assessed which factors best predict hospital survival in Massachusetts. That model found that six variables were of use in predicting survival between 1990 and 1997. Listed in order of importance, they were: number of 1990 beds, total fund balance per discharge in 1990 (a measure of financial reserves), miles from Boston, teaching hospital status in 1990, operating margin in 1990, and median family income in the community around the hospital in 1989.

16. If the different bed demand standards that prevail elsewhere in the U.S.— including in California, where managed care has cut hospital use rates most— were to take hold here, the number of hospital beds used here would drop sharply. If the 1995 average use rate among U.S. HMOs prevailed here (at 85 percent occupancy), only 9,600 hospital beds would be demanded to serve the Massachusetts population.

That would be less than half the actual 1994 number of beds here. This standard thus would require huge cuts— to 1.5 beds per 1000 residents (assuming a state population of 6.2 million). That would be a drop from 4.0 beds per 1000 residents in 1987, and from 3.1 in 1995. And if insurers are permitted to cut hospital use here to what has been called the 1995 California HMO "best practice" standard, just 4,330 beds would be demanded statewide— or just 0.7 beds per thousand residents.

17. Using the predictive model described above (based on hospital survival from 1990 to 1997), we calculated predicted probabilities of survival for all hospitals remaining open in 1997. We present illustrative predictions of which— perhaps 55— hospitals and which beds might survive to the year 2002, assuming 9,600 beds statewide.

We urge the greatest caution in using these projections about the future. First, the assumptions in question should be examined by the reader. Second, the projections are not our view of what is inevitable or desirable. We think that so many hospital

closings and bed reductions may be dangerous to the health of the people of the Commonwealth. We do not think that they will save money. And we are convinced that the policy of hospital closings has not been subject to remotely adequate study.

We hope that this study's concrete identification of hospitals and beds that might be at greater risk will spur public debate about which hospitals are needed, and how to preserve them.

18. And Massachusetts is headed toward a day when only 15-20 hospitals survive. If hospital bed demand here falls to what one analysis has called the 1995 "best practice" standard of California HMOs, just 4,330 beds would be demanded statewide (though more will actually be needed, we believe), or roughly half the number used in the previous projection for 2002. We suggest locations where hospital beds might survive a dozen years from now, in 2010, distributing those 4,330 beds among 20 sites.

Again, several cautions are outlined. However, while the specific details of both sets of projections can and should be disputed, they do show the magnitude of bed reductions and closings that would result if Massachusetts were to drop to certain rates of hospital use that already prevail elsewhere.

19. Competition is giving way to monopoly. Is this the intention of competition advocates? Long travel times to hospitals would seriously harm access to care. And competition requires competitors. Regional monopolies will mean higher hospital prices and reduced quality of care. Further, the wrong hospitals often survive.

20. People will still need hospitals. Primary care and prevention may postpone the need for hospital care, but they can't keep anyone from eventually getting sick and dying. And they may even increase health care costs. Further, although timely primary care can avert hospitalizations for certain "ambulatory care-sensitive conditions," those generated a rising share of U.S. hospital discharges between 1980 and 1994, Peter Cunningham has reported. And the share of discharges that were for such problems rose twice as fast among uninsured people. All this despite growing emphasis (verbal, at least) on primary care.

21. Why don't hospitals speak up for themselves and fight for their own survival? For many reasons, including ideology, embarrassment, exhaustion, the thrill of competition, and domination of the industry association by wealthier hospitals and those that believe themselves likelier to survive. Lamentably, the Massachusetts Hospital Association shows no willingness to acknowledge that hospital closings might be a problem, no interest in investigating the seriousness of the problem, and no inclination to help devise solutions.

22. Today, nobody in Massachusetts is thinking ahead, to make sure that needed hospitals can be secured before too many—or the wrong ones—close. Because each year hospitals close in only a few communities, most of the state is complacent. But a scramble to save a hospital at the last minute has usually come too late. So looking ahead is vital.

23. For-profit chains will not be rescuers. They are more likely than non-profit owners to close hospitals, in part because they are less tolerant of low financial margins.

24. Nor does merging with larger hospitals, with deeper reserves, offer security. The weaker party is often drained of resources, ultimately closing. And after mergers, hospitals tend to consolidate services into better-off and ethnically-mainstream communities.

25. In keeping with the medical admonition to "First, do no harm," advocates of hospital closings and service cuts should be forced to prove that proposed changes would be safe. Systematic assessments of dehospitalization and closings are still lacking, yet these trends are accelerating. While the bias should be toward conservatism, this state's policy has lurched from supporting, first, massive and unnecessary over-building (which our Project opposed), to massive and unnecessary dehospitalization (which we also oppose).

26. Much of the early pressure to close beds rested on a concern that a bed built was a bed filled by a patient. This may have been true under cost reimbursement. But it no longer holds, given the way we pay for care today. And even the leading early proponent of closings, Walter McClure, recognized that prospects for saving by closing hospitals depend largely on the type of hospital closed.

27. Hospital industry consolidation is not advancing efficiency. Many mergers do little to cut costs, and some may raise costs. And monopolization grows. Many merging hospitals seek not efficiency but market power for negotiations with HMOs. The HMOs then merge, too, prompting a cycle of greater consolidation with no prospect of equilibrium.

28. Many requirements of free markets are inevitably absent in health care, so there can be no invisible hand to advance the public good. There is market failure at both the micro and macro levels. As a result, government action is needed to preserve vital caregivers, and thus to protect access and contain cost.

STATE ACTION NEEDED— BEFORE IT'S TOO LATE

29. If you liked paying \$500 billion to bail out the savings and loan industry, you'll love paying to re-build closed hospitals. Re-regulation of hospitals is inevitable. The question is not whether, but when. Why not do it before dangerous and costly damage is done? Must we wait until too many hospitals have closed and the survivors enjoy geographic monopolies and higher prices, or until hospitals must be re-built, as cities and towns now must rebuild schools? The cost would be prohibitive.

30. Aging baby-boomers' rising need for hospital care is likely to slam up against plummeting hospital capacity. The resulting resource crunch will endanger us all. And demand will also rise if coverage is extended to people who now cannot pay for needed care.

31. Neither state nor federal government policies today provide protection against closure of hospitals crushed by competitive pressures— no matter how essential a particular hospital may be to maintaining access to care.

32. Steps to help preserve needed hospitals could include those proposed in the hospital stabilization legislation sponsored by state representatives Emile Goguen and James Marzilli (very similar bills filed as House 1311 and House 3442):

- a. Require the Commissioner of Public Health to identify
 - all hospitals needed to protect the health of the public, and
 - all financially vulnerable hospitals.
- b. Create a stabilization pool to protect needed but vulnerable hospitals.
 - Stabilization and preservation assistance could be either:
 - financing for technical and managerial assistance for a hospital needing reorganization, or
 - partial under-writing of a needed but financially-distressed hospital's capital and operating costs.
 - The stabilization pool would be financed by
 - all acute hospitals statewide
 - each contributing one-quarter of one percent of its revenues
 - yielding a pool of about \$25 million this year (accumulating to a maximum of one percent of statewide hospital revenues).
 - This mechanism would not diminish hospital margins—they would remain intact statewide. The pool would simply recycle a tiny fraction of hospital revenue within the industry to the institutions that need it most.
 - This mechanism would not cost \$1 in public revenue, or boost already ample health care spending.
- c. Allow the state to appoint a receiver to stabilize a hospital in danger of closing but needed by its community.

33. To correct market failure and to promote efficiency, hospitals could be required to price services fairly in relation to incremental cost, plus their appropriate shares of fixed costs. HMOs could be obliged to pay for services in the same way.

34. To conserve resources today and provide safety for the future, Massachusetts should maintain both a ready reserve and a mothballed reserve of hospital beds.

35. Prohibiting further conversions to for-profit hospitals could also be useful. And public officials should be held accountable for securing affordable, quality care for all.

36. We also need longer-term changes. The proposed measures offer stop-gap protection to help prevent catastrophe now. Then, after our state stops being short-sighted, we can begin thinking about a more rational way to finance hospitals and health care.

In the end, public action will be required to identify which hospitals—located where, with how many beds, and with what reserve capacities for disasters—are essential to protect the health of the people of the Commonwealth. Then, public action will also be necessary to ensure that each such hospital is paid enough money to remain in business, if operated efficiently.

The report details a number of CAUTIONS, summarized here:

These illustrative predictions of hospital survival for 2002 and 2010 rest on a number of elements which may reasonably be debated. These include a predictive model of moderate accuracy which reflects 1990-1997 experience, some judgments, use of specific bed demand standards, and a necessarily arbitrary time-frame.

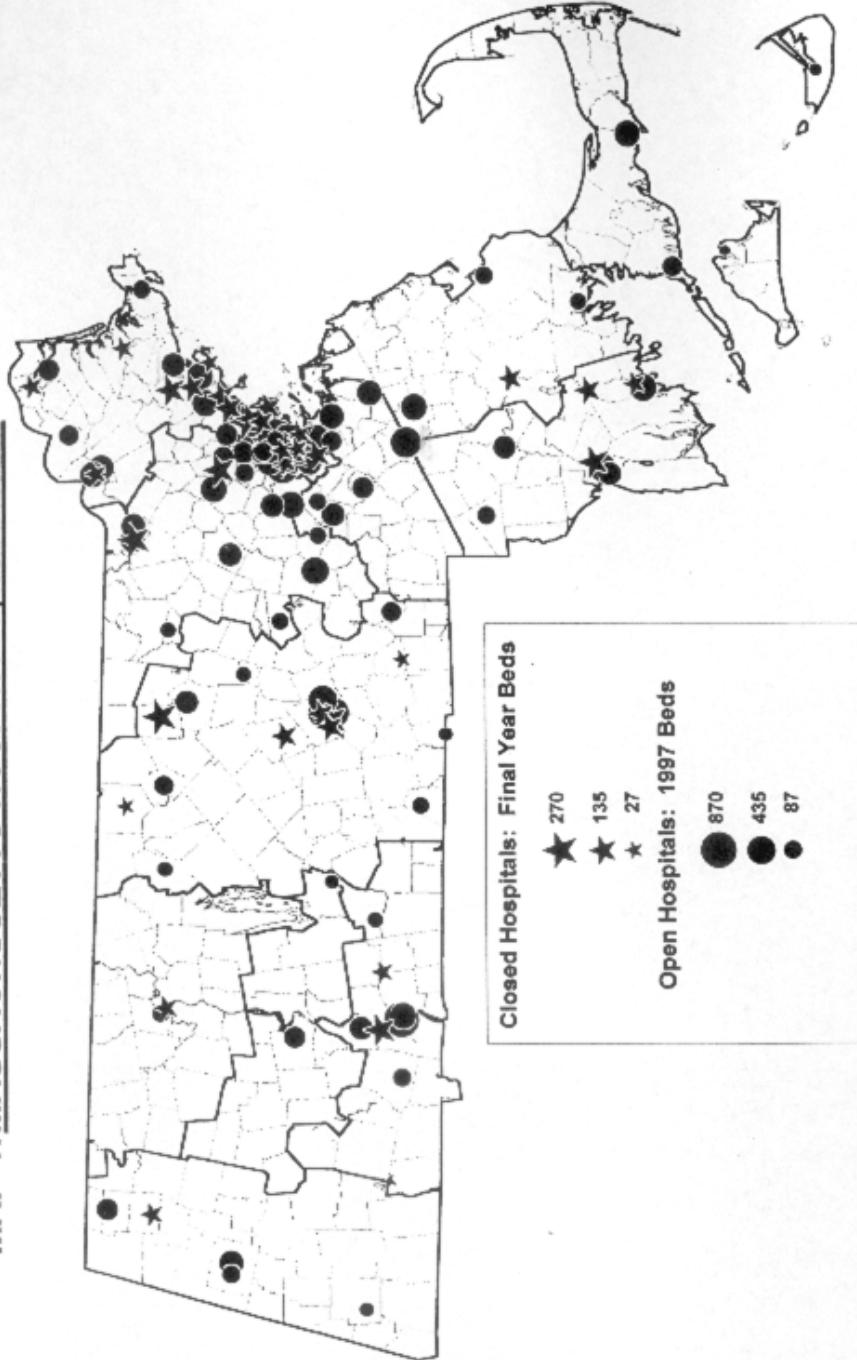
But the predictions reflect hospital use rates which already prevail elsewhere. Many experts consider such use rates desirable and even inevitable. We do not agree. Unfortunately, public decision-makers have abdicated choices to a non-existent free market. It is now vital to investigate the needed number, location, and size of hospitals,

Our illustrative predictions are necessarily imprecise. We put them forward because certainty is not possible until a hospital announces a closing—and then it is usually too late either to debate the need for the hospital, or to take steps to preserve a needed hospital.

The illustrative predictions show one way to reach statewide figures of some 9,600 beds in 2002 and 4,300 beds in 2010. These may well be the wrong bed totals, or the wrong way to achieve them. We do not say these are the right totals or the right way to reach them. Indeed, we suspect that more beds would be both cheaper in the long run and better for health care in the long run.

All this should be a matter for study and debate—neither of which has yet happened. The burden of proof is on those who propose change. The bias should be toward conservatism.

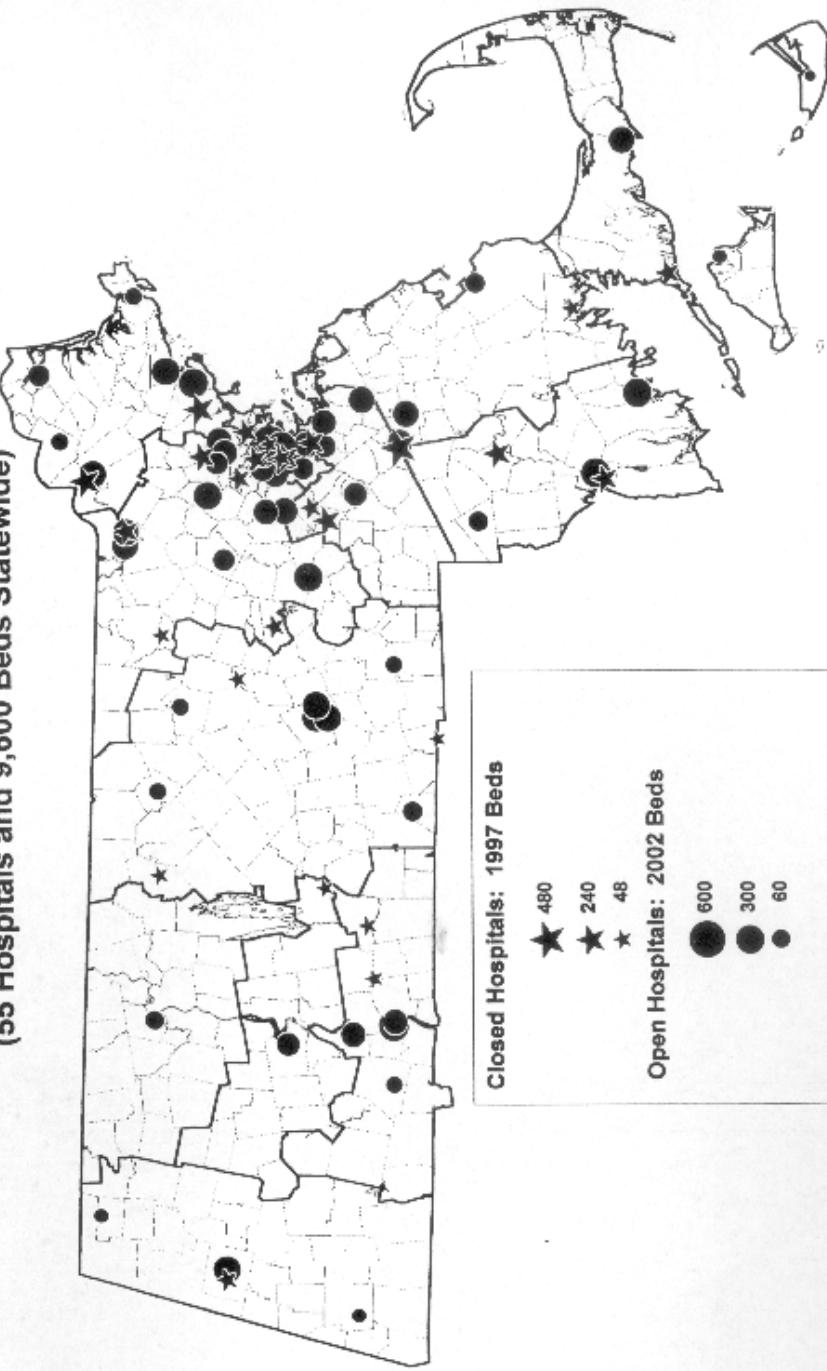
MAP 1: MASSACHUSETTS HOSPITALS, 1970-1997



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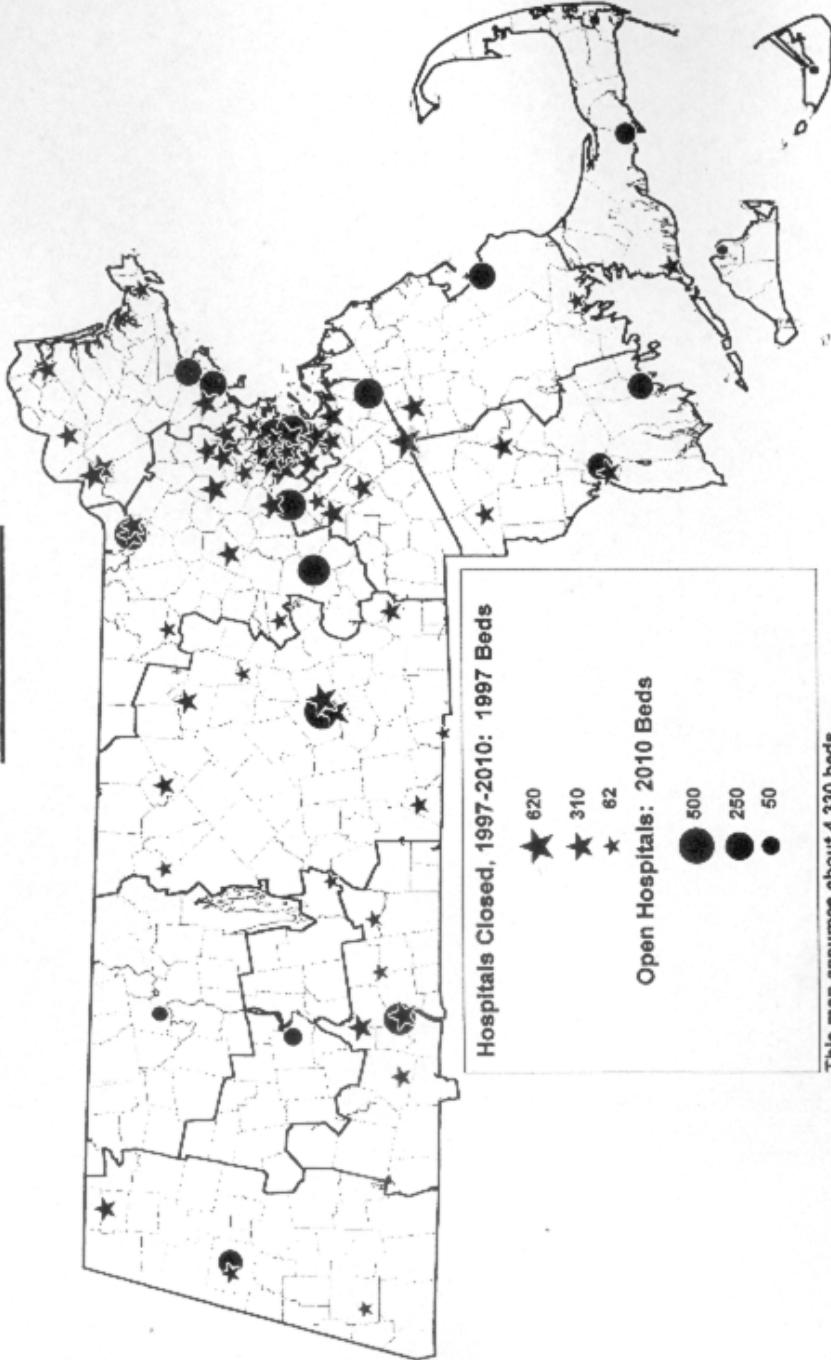
MAP 2: HOSPITALS THAT MIGHT SURVIVE, 1997-2002
(55 Hospitals and 9,600 Beds Statewide)



This map assumes about 9,600 beds in 2002 -- reflecting 1995 US HMO average actual bed use.
The map displays illustrative projections from 1990-1997 predictive model and authors' judgment.

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**MAP 3: MASSACHUSETTS HOSPITALS THAT MIGHT SURVIVE, 1997-2010
WORST CASE**



This map assumes about 4,330 beds statewide in 2010 – reflecting the 1995 experience of certain California HMOs. The map displays illustrative locations that distribute the 4,330 beds in proportion to counties' 1990 share of the statewide bed total.

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**MAP 4: EASTERN MASSACHUSETTS HOSPITALS
THAT MIGHT SURVIVE, 1997-2010
WORST CASE**

Essex, Middlesex, Norfolk, and Suffolk Counties

Closed Hospitals: 1997 Beds

★ 620

★ 310

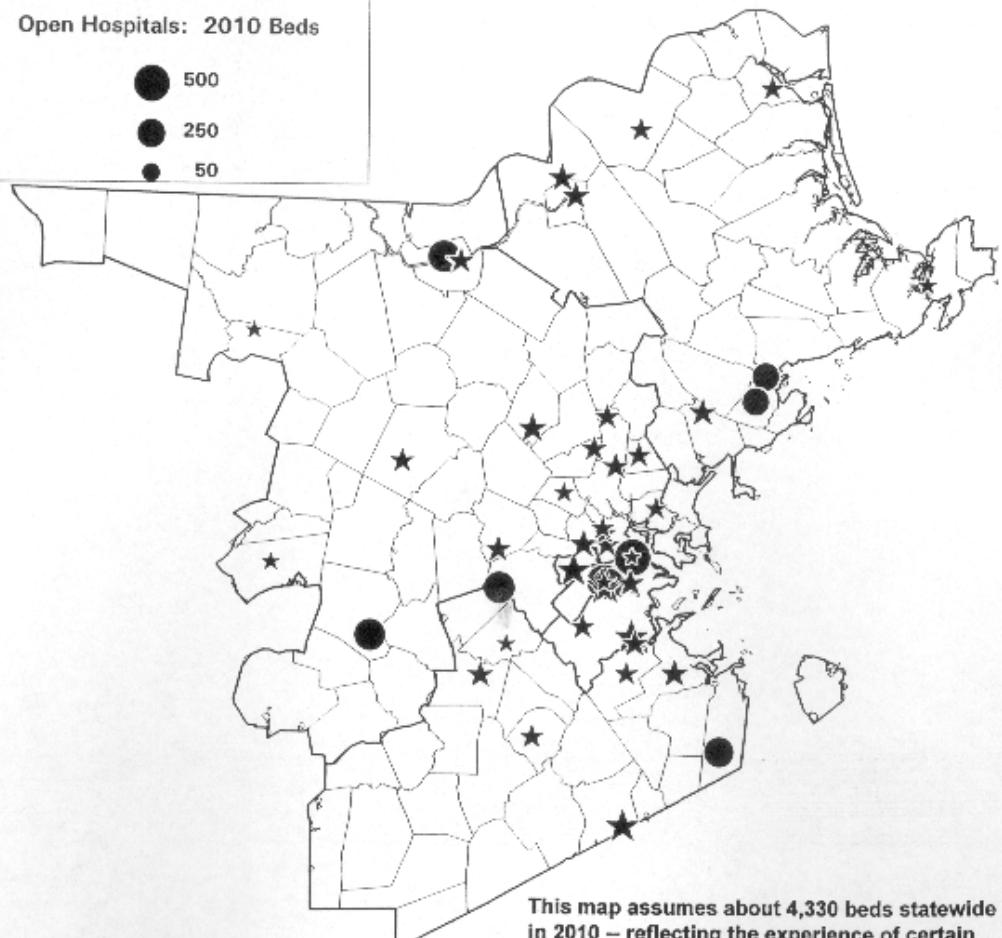
★ 62

Open Hospitals: 2010 Beds

● 500

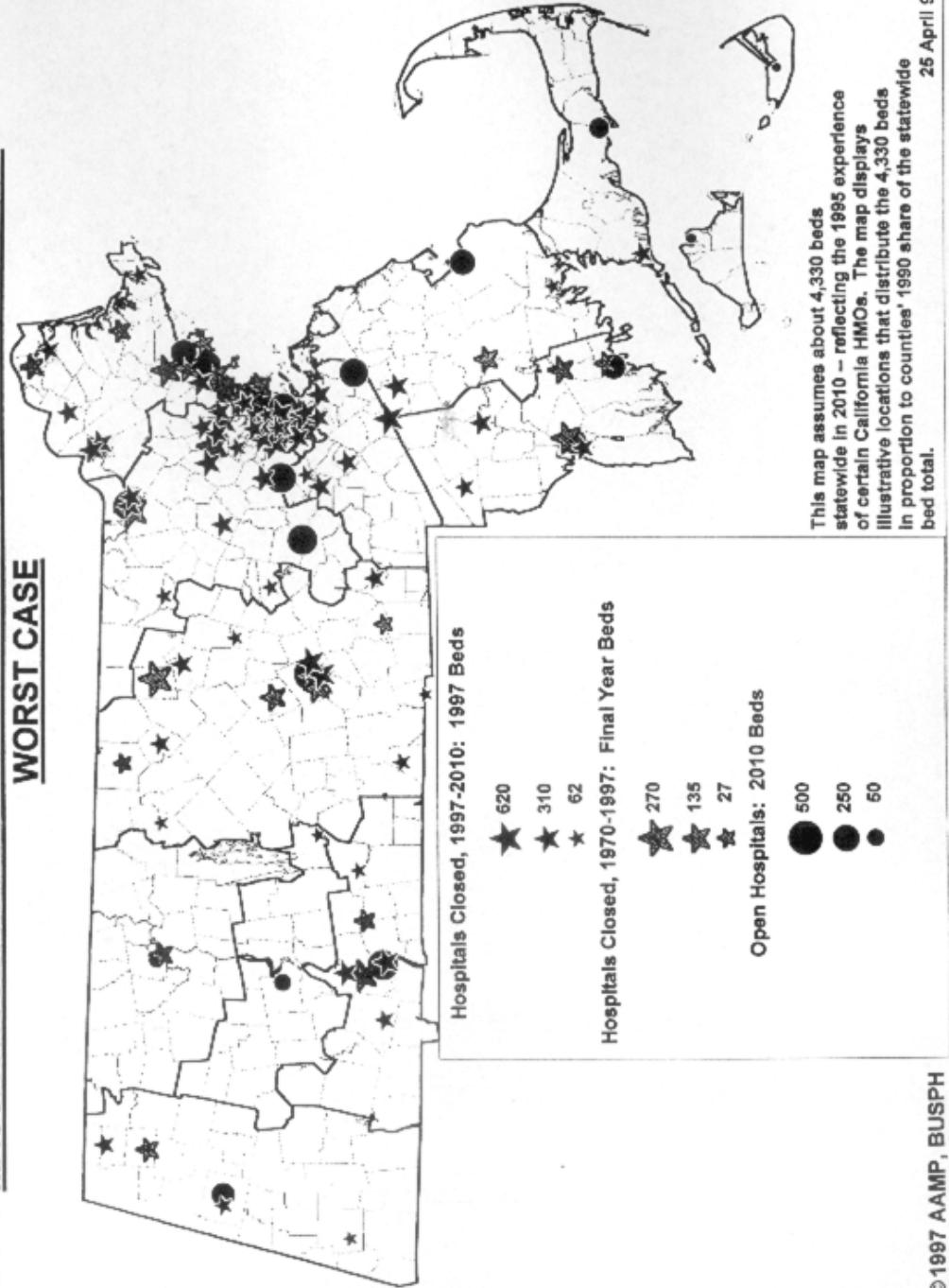
● 250

● 50



This map assumes about 4,330 beds statewide in 2010 – reflecting the experience of certain California HMOs. The map displays illustrative locations that distribute beds in proportion to counties' 1990 share of the statewide bed total.

MAP 5: MASSACHUSETTS HOSPITALS THAT MIGHT SURVIVE, 1997-2010
WORST CASE



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INTRODUCTION

For 10 years, this state's policy has been to close and down-size community hospitals, even though there has been no public assessment of this policy's effects on the public's health or safety. For even longer, getting care out of the hospital has been a main goal of managed care plans and others seeking to cut medical costs. Market forces are being used as the tool to select which hospitals to close.

Several myths, widely-held here and nationwide, are used to justify those policies:

- the myth that health care costs are so high here largely because we have too many hospitals and hospital beds, and too much of our care takes place in them;
- the myth that market forces and price competition will move health care to the most efficient sites, putting resources where they are needed, while closing inefficient, unneeded hospitals, and thus saving money; and
- the myth that the market can judge which hospitals— how many hospitals, located where— should survive, and which should die.

The Access and Affordability Monitoring Project (AAMP) has found much evidence which contradicts these and related myths and reveals them as dangerous. In reality:

- Excess beds and hospitals cannot explain this state's high costs.
- Market forces are closing too many hospitals, often hospitals that are needed.
- Moving care out of hospitals and closing hospitals often does not save money— indeed, it could be increasing overall health costs here.
- Inefficiency does not predict which hospitals will close, because the inevitably unfree health care market often closes the wrong hospitals.
- Hospital closings can cause grave harm as communities lose emergency rooms and other vital services, along with nearby physicians, and as patients lose trusted sources of care.
- Closings look gradual because there are only a few each year. But their cumulative effects over a decade or so are radical.
- There is nothing to stop this radical rush to close hospitals. By the time a closing is announced, it is often too late to act to analyze whether a hospital is needed, or to take steps to save it.
- Therefore, the state must act to identify and preserve needed but financially vulnerable caregivers.

We report the following findings—and illustrative projections of the beds and hospitals that may survive if this state does not change course—not because we want this future for Massachusetts. On the contrary, we find reason for great concern. We hope to alert communities, hospitals, state policy-makers, and others to evidence of what lies ahead, so that they can, if they choose, take action to change direction.

The report details a number of CAUTIONS, summarized here:

These illustrative predictions of hospital survival for 2002 and 2010 rest on a number of elements which may reasonably be debated. These include a predictive model of moderate accuracy which reflects 1990-1997 experience, some judgments, use of specific bed demand standards, and a necessarily arbitrary time-frame.

But the predictions reflect hospital use rates which already prevail elsewhere. Many experts consider such use rates desirable and even inevitable. We do not agree. Unfortunately, public decision-makers have abdicated choices to a non-existent free market. It is now vital to investigate the needed number, location, and size of hospitals,

Our illustrative predictions are necessarily imprecise. We put them forward because certainty is not possible until a hospital announces a closing—and then it is usually too late either to debate the need for the hospital, or to take steps to preserve a needed hospital.

The illustrative predictions show one way to reach statewide figures of some 9,600 beds in 2002 and 4,300 beds in 2010. These may well be the wrong bed totals, or the wrong way to achieve them. We do not say these are the right totals or the right way to reach them. Indeed, we suspect that more beds would be both cheaper in the long run and better for health care in the long run.

All this should be a matter for study and debate—neither of which has yet happened. The burden of proof is on those who propose change. The bias should be toward conservatism.

FINDINGS

I. COSTLY HOSPITALS

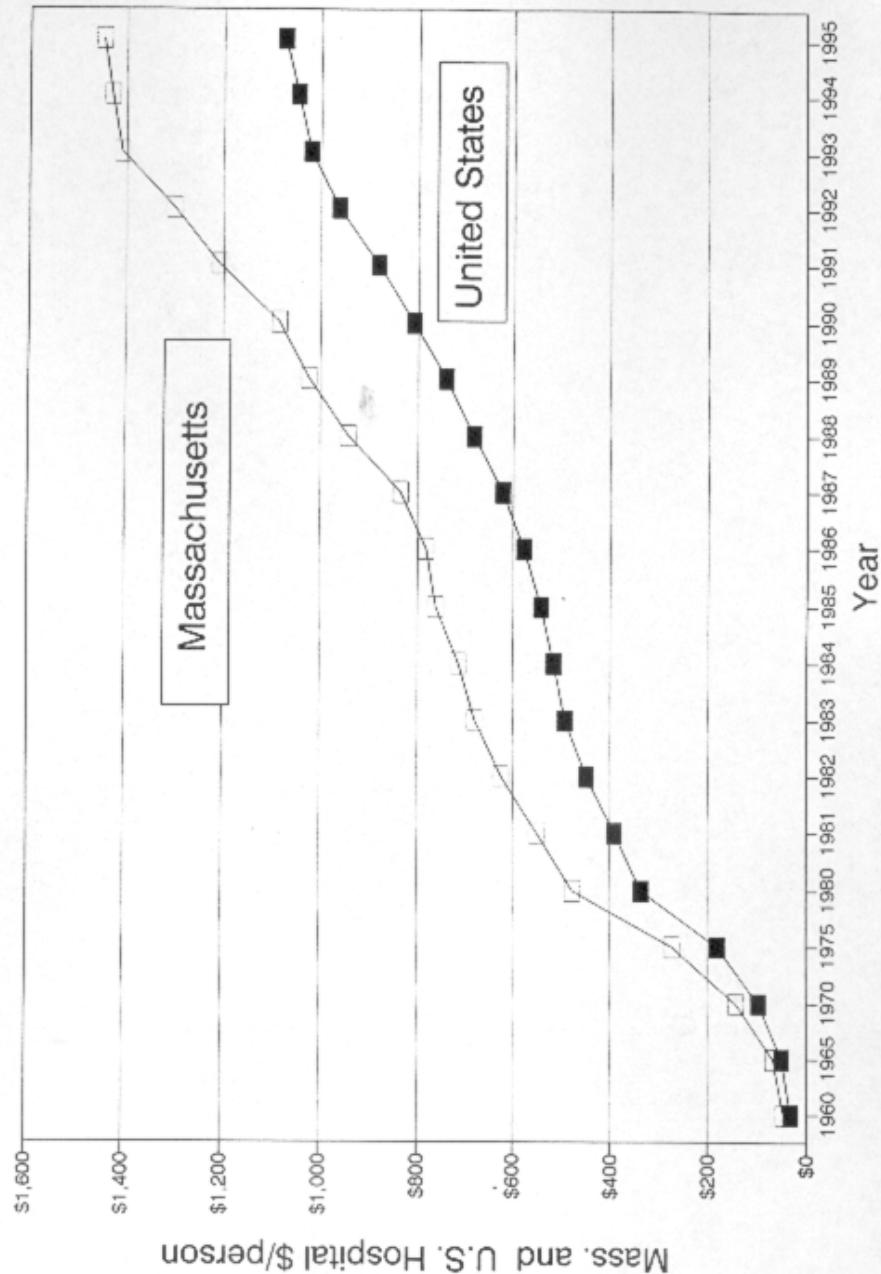
1. Massachusetts acute hospitals have long been the most expensive in the world.

- It is widely recognized that hospital expenses per person are far higher in the United States than in other wealthy nations.
- Hospital expenses per person have for years been higher in this state than in any other—which makes hospitals here the world's costliest.¹
- Analysis of American Hospital Association data shows that Massachusetts acute hospital expenses per capita have been 35-40 percent above the U.S. average for the past 15 years.² (See FIGURE 1.)
- Hospitals here spent \$1448 per Massachusetts resident in 1995, we calculate. That was \$377 above the U.S. per capita average—so hospital spending here totaled \$2.3 billion more than if costs here had been at the national average.³

2. Why are hospitals here so expensive?

- The prevalence of teaching hospitals here means that everyone who pays for care in Massachusetts subsidizes the training of many specialists—most of whom will practice in other states.⁴
- Research is vital, but also tends to raise the cost of care in our many teaching hospitals.⁵
- The style of medical practice in Massachusetts hospitals appears more intensive and elaborate than average—probably in part due to the pervasive influence of our many teaching hospitals.⁶
- For ambulatory care, Massachusetts relies more heavily on hospitals than most states do. In 1995, for example, hospitals here had 47 percent more outpatient (non-emergency room) visits per Massachusetts resident than the U.S. per capita average.⁷
- The usual explanations—research, teaching, service to out-of-state patients, higher wages, more outpatient care, and an older population—explain only about one-third of this state's excess costs.⁸

Figure 1
MASS. AND U.S. HOSPITAL \$ PER PERSON
1960 - 1995



II. IS CLOSING HOSPITALS THE SOLUTION?

3. Several widely-purported causes of this state's high hospital expenses are myths — including the assertion that out-of-state patients account for a large share of hospital spending here.

- Hospitals promote the view that extraordinary numbers of patients come from outside Massachusetts, and thus that estimates of hospital spending per state resident are very misleading. Claiming that out-of-state patients substantially raise hospital spending here, hospitals call their services a major "export" industry for the state.
- Our Project documented in 1990-91 that, after subtracting the outflow of Massachusetts residents cared for in other states, the net inflow of out-of-state patients was less than 5 percent of admissions to Massachusetts hospitals.⁹
- New evidence from the U.S. Health Care Financing Administration confirms that the net inflow of out-of-state patients to caregivers here accounts for a very small share of health spending— 2.7 percent of personal health spending in this state, and 3.8 percent of spending for hospital care. (See TABLE 1.)¹⁰

TABLE 1
PERSONAL HEALTH SPENDING, MASSACHUSETTS, 1991
(in millions of dollars)

	Total Personal Health Spending	Spending for Hospital Care
For care provided in Mass.	\$ 20,565	\$ 8,826
For Mass. residents	20,000	8,486
Net export of care	\$ 565	\$ 340
Exports as percent of care provided in Mass.	2.7%	3.8%

Source: Joy Basu, "Border-Crossing Adjustment and Personal Health Spending by State," *Health Care Financing Review*, Vol. 18, No. 1 (Fall 1996), pp. 215-236, tables 3 and 4.

4. Another enduring myth blames over-bedding for this state's high costs. Actually, Massachusetts has fewer hospital beds than average.

- Attributing high costs to over-bedding is in part a legacy of mid-century observations that building more hospital beds meant that more were used. Some observers also claim that maintaining the hospital beds, even if empty, is costly. (These views will be addressed later in more detail.)
- But in 1995, Massachusetts had 5.5 percent fewer beds per capita than the nation as a whole.¹¹
- While hospital costs per capita here have stayed 35-40 percent above the U.S. average, the hospital bed-to-population ratio in Massachusetts has been no more than a few percent over the U.S. average since at least 1980. Bed capacity here has been below average since 1989.¹² (See FIGURE 2.)
- So over-bedding can't explain our high costs.

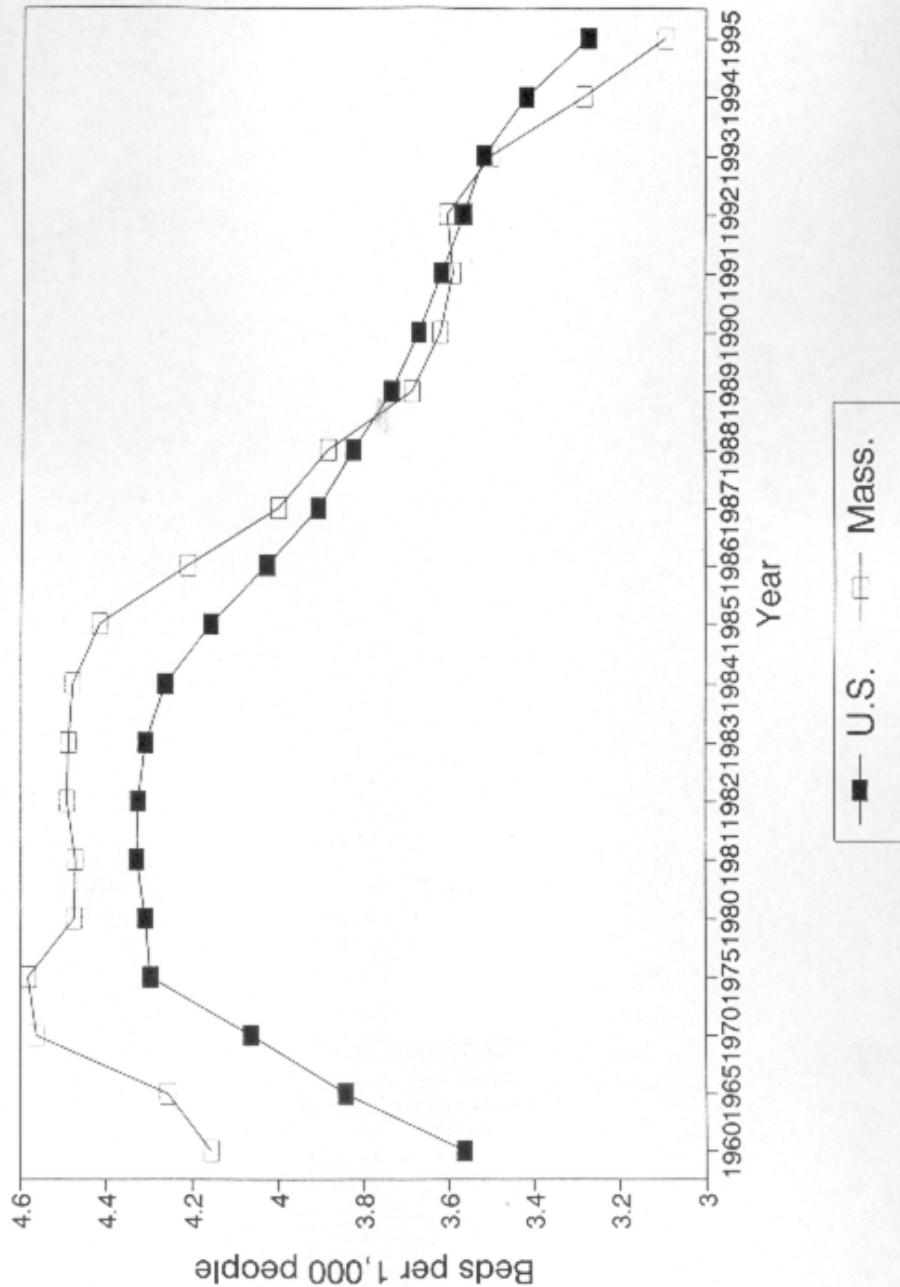
5. Nor is over-bedding to blame for high health costs in the nation as a whole.

- Most wealthy countries have (and use) more hospital beds per person than the U.S. does, but spend only half as much on health care.¹³

6. This evidence raises questions about the desirability of closing hospitals. Does closing and down-sizing hospitals really attack the causes of this state's high cost problem?

- Price competition's proponents assert that an excess of hospital beds and hospitals contributes greatly to the nation's and state's high hospital costs.
- Since 1988, the state's health care cost control policy has rested largely on the strategy of cutting beds and closing hospitals.¹⁴
- The 1991 Massachusetts hospital payment law (still in effect) also reflects the view that down-sizing and closing hospitals are crucial to cutting health care costs.
- Those laws promoted price competition on the theory that
 - efficient hospitals would survive;
 - costly hospitals would become more efficient to attract patients, or close;
 - unneeded hospitals would close, and
 - all this would save money.
- The policy of closings is in part a legacy of cost-reimbursement of hospitals, when hospitals that spent more were paid more, and when a bed built tended to be a bed filled. Health planners responded by urging bed consolidation and hospital closings.

Figure 2
BEDS/1000 PEOPLE, MASSACHUSETTS + U.S.
1960 - 1995



Cost reimbursement is dead today, and health planning is barely breathing, but the

policy they inspired is alive and kicking.

- Since at least 1991, the hospital industry here has accepted the goal of closing hospitals.¹⁵ The Massachusetts Hospital Association has appeared complacent, repeatedly saying that closings are "not necessarily bad news," "no surprise," and the like.¹⁶ Despite some institutions' obvious advantages—deep pockets, prestige, regional monopolies, physician loyalty or purchased physician practices, and the like—hospitals also agreed (at least publicly) that the survivors would be the efficient ones. Few acknowledged that their own institutions might be at risk.
- It is surprising that the state's hospitals and their organization have not been speaking out individually and collectively to raise questions about their survival and about preserving their missions of serving their communities. Seemingly influenced by the large hospitals most confident of surviving, the Massachusetts Hospital Association has failed to represent many or perhaps most of its members. It has also claimed, with no foundation, that "a variety of protections," including state and federal laws, will "ensure that...needed hospitals survive."¹⁷ And hospital managers—perhaps addicted to competition¹⁸—have failed to protect their organizations or the communities they serve.

7. So Massachusetts hospitals have been closing.

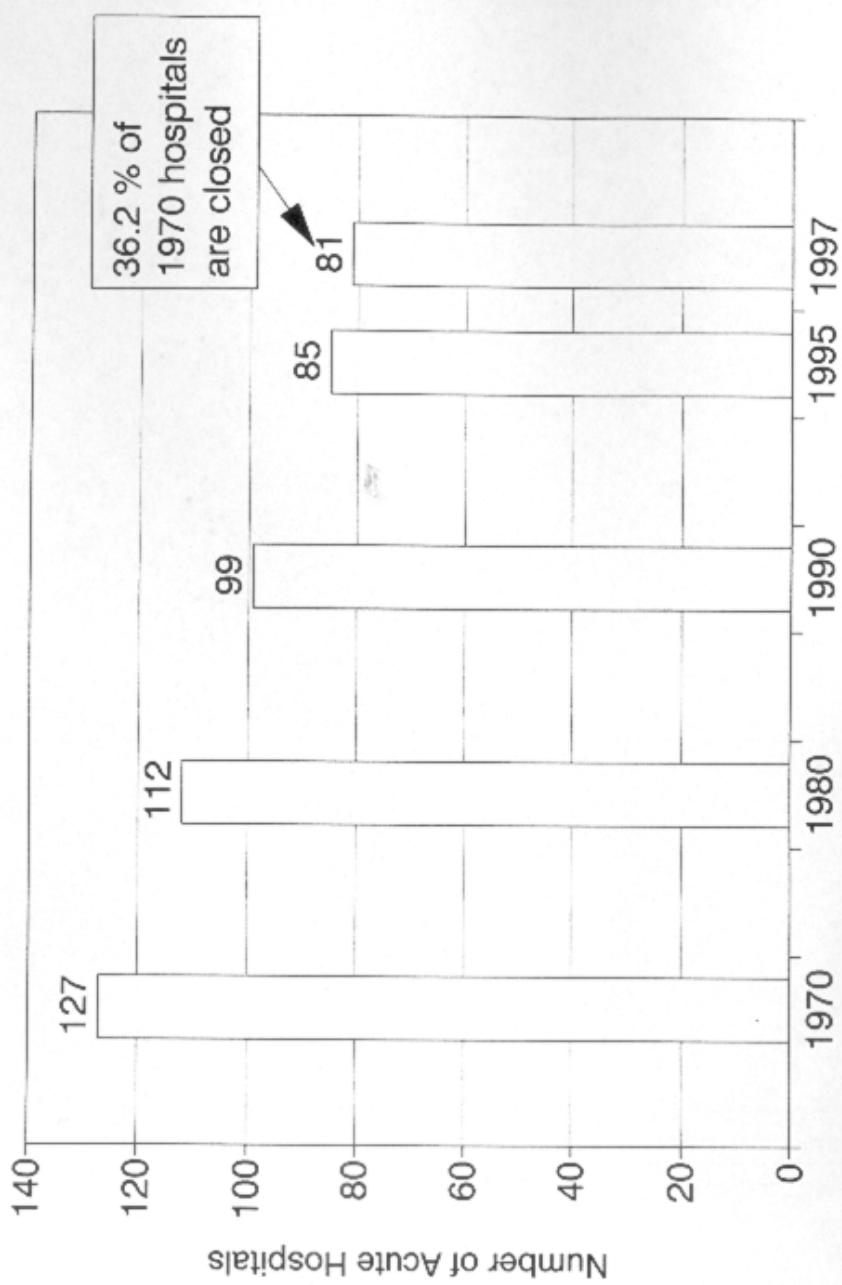
- The number of acute hospitals in Massachusetts has fallen from 127 in 1970 to 81 today—a drop of 36.2 percent, or more than one-third.¹⁹ (See FIGURE 3.)
 - This reflects the loss, by 1980, of 12 percent of the hospitals here in 1970.
 - And 12 percent of hospitals surviving to 1980 were lost during the 1980s.
 - Of survivors to 1990, the state has already—in just seven years—lost 18 percent.
 - Clearly, the rate of closings is accelerating.

Note that some of the 46 hospitals lost since 1970 disappeared as a result of mergers. But the counts presented here reflect sites of inpatient care rather than simply corporate structures. For example, the merger of Beth Israel and New England Deaconess hospitals, which are adjacent, yields one hospital in these counts. But the merged Massachusetts General and Brigham and Women's hospitals are not "adjacent" (meaning less than one-half mile apart), and both maintain inpatient services, so they persist as two sites in our counts.

- MAP 1 (in color, at front of report) shows the locations of Massachusetts acute hospitals that have closed since 1970 and of hospitals that survived to 1997. (MAP 6 and MAP 7, later in this report, show the hospitals open in 1970 and today, respectively.)
- The safety of this 36.2 percent drop is unproven because it has not been evaluated. And by 2010, if present trends continue, just 15-20 hospitals are likely to survive. This is discussed in more detail later.

Figure 3

MASSACHUSETTS ACUTE HOSPITALS 1970 - 1997



30

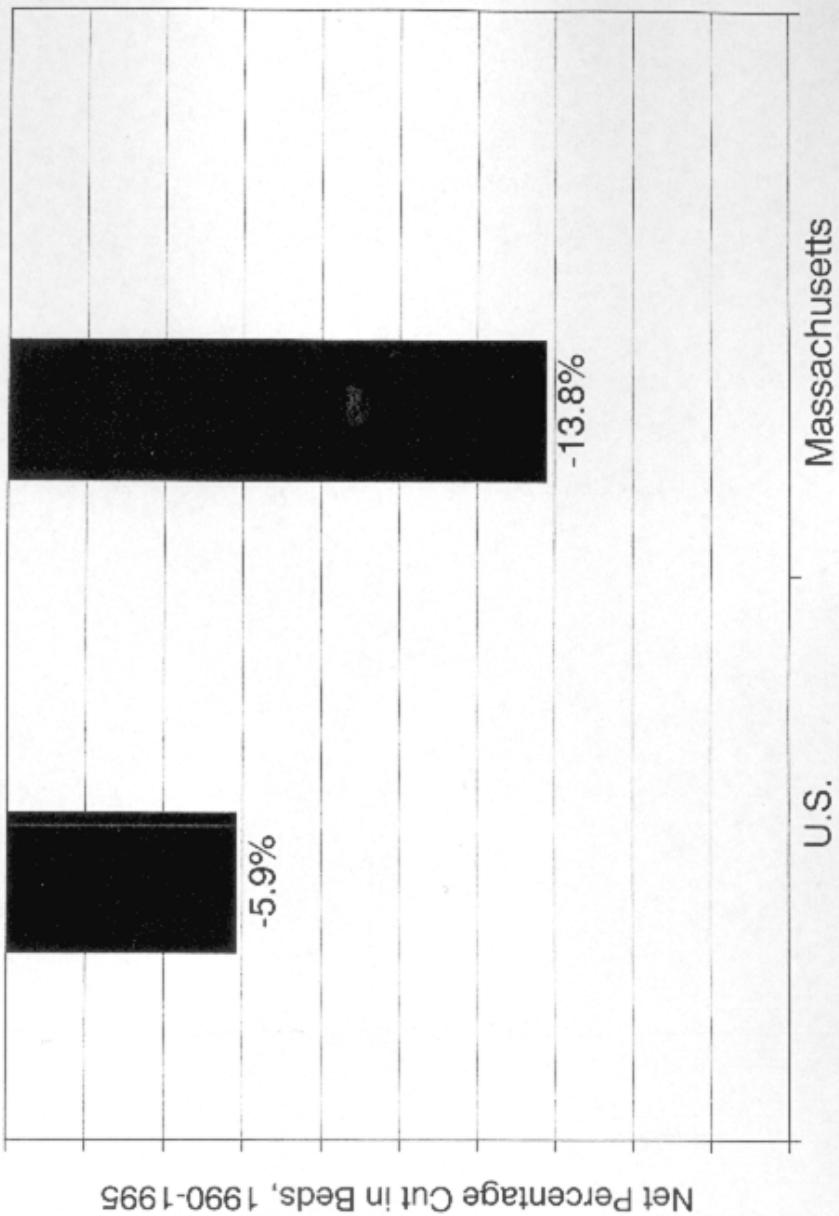
8. Beds have been closing faster here than in the nation as a whole.

- Between 1990 and 1995, American Hospital Association data indicate, while the U.S. cut 5.9 percent of its acute hospital beds, the number in Massachusetts dropped 13.8 percent.²⁰ (See FIGURE 4.)
- We lost roughly 6 percent of our hospital beds in 1994 alone, and 6 percent again in 1995.
- Our bed-to-population ratio fell faster than the nation's in 8 of the 10 years from 1986 to 1995.
- Bed closings proceeded at this pace even though, as noted above, the number of hospital beds per capita in this state has been below the U.S. average since 1989.
- Looking back farther, from 1980 to 1997, over one-third (at least 35.7 percent) of the state's acute hospital beds have disappeared. (See FIGURE 5.)²¹

9. Proponents of closings claim that only excess, unneeded hospitals will close, through the workings of the "invisible hand" of the free market. But there is no evidence that closing hospitals is safe.

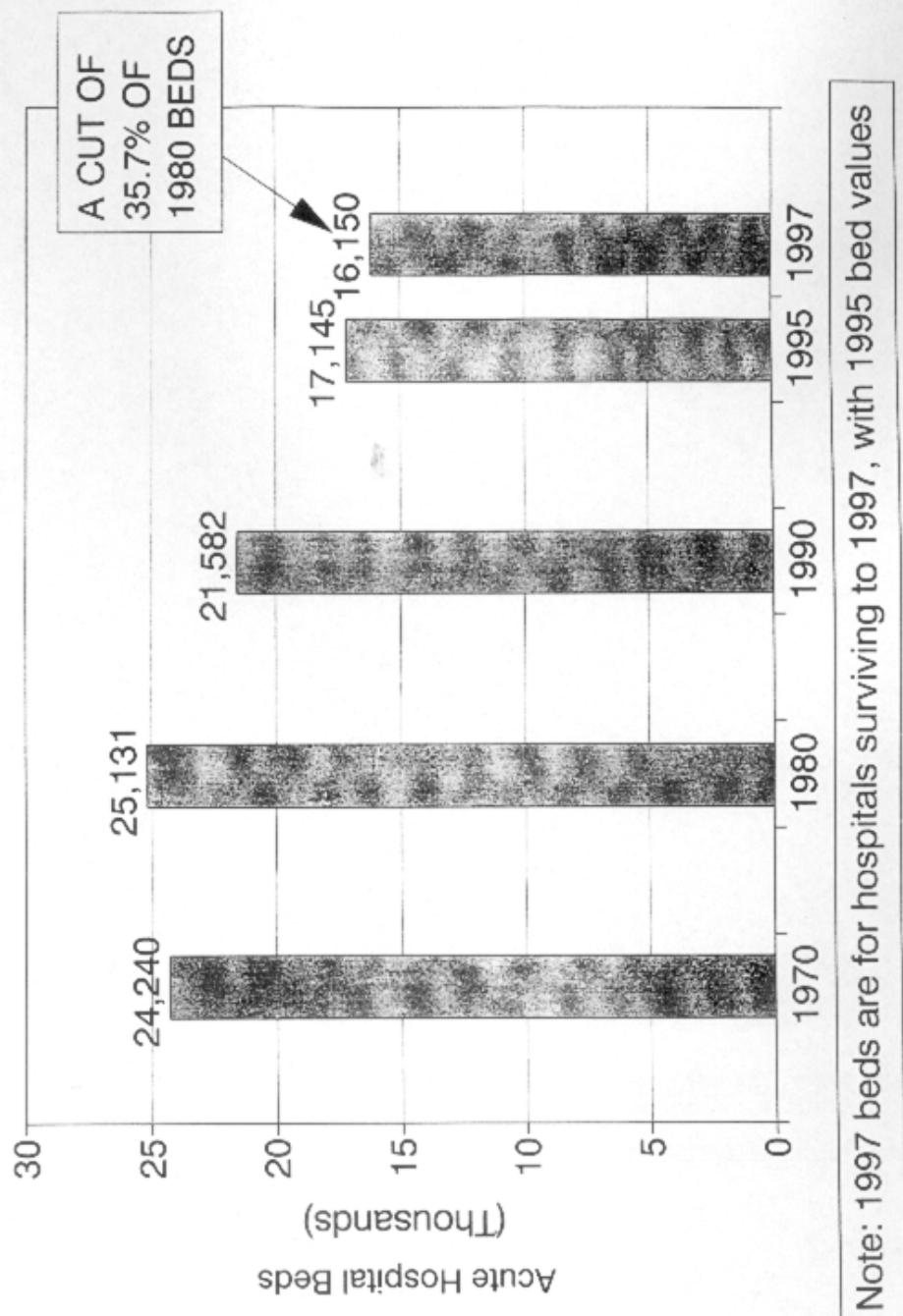
- There has been no systematic assessment of the effects on the public's health or safety of the loss of 36.2 percent of Massachusetts hospitals since 1970—and particularly of the past decade of state-encouraged closings.
- Assessment of the effects of hospital closings is vital, for several reasons (detailed later):
 - the market in health care is inevitably an unfree market
 - buyers remove care from hospitals under conditions of market failure, so as buyers cut their own costs, they may raise costs for society as a whole
 - any savings from hospital closings are one-time savings
 - hospital consolidation is leading to regional monopolies, which will result in higher prices and end even those one-time savings.
- The rule in health care is: "First, do no harm." The burden of proof, therefore, lies with those who propose change. Failure to assess closings' effects means failure to satisfy the burden of proof that closings will do no harm.
- There is no evidence that hospital closings themselves are safe. Further, despite HMO and even hospital claims, there is also no evidence on the safety of the underlying trends that are dehospitalizing care and emptying hospital beds. Yet just as "drive-through deliveries" became widely used without being proven safe, so have rapid discharges and outpatient care for many other patients.

Figure 4
PERCENTAGE REDUCTION IN ACUTE CARE BEDS
U.S. and Massachusetts, 1990 to 1995



23

Figure 5
MASSACHUSETTS ACUTE HOSPITAL BEDS
1970 - 1997



37

III. MAYBE CLOSING HOSPITALS IS A PROBLEM, NOT THE SOLUTION.

10. Many hospitals that close are needed.

For 20 years, Project members have been studying hospital closings in 52 U.S. cities from 1936 to the present.²² Decade by decade, this study has shown:

- Hospitals that close, nationally, tend to be in communities with higher percentages of African-American or Latino-American residents, and higher percentages of poor people. In other words, the average percent minority in communities where hospitals closed has been higher than in communities where hospitals survived. (See FIGURE 6.) The disparity has been highly statistically significant over more than four decades.²³
- This pattern holds true even after controlling for other factors that predict survival, such as the hospitals' bed size, occupancy rate, finances, or competitive environments.
- But minority communities and low-income communities tend to have many unmet medical needs. So these findings contradict the myth that unneeded, inefficient hospitals are much likelier to close. And substitutes for closed hospitals are often inadequate or inaccessible.

11. And closings and down-sizing may not save money, for several reasons.

Many of the prices that hospitals charge (or are paid) do not correspond to their costs. Some services are priced well above cost. Other services are priced well below cost. The disjunction between price and cost leads to market failure. This failed market fails to send accurate signals about the most efficient sites of care, thus raising total costs.

a. First, shortening hospital stays does not tend to greatly cut real costs.

- Most hospital costs arise soon after admission, when the expensive care (like surgery) is usually given. The later days of a hospital stay usually add little to actual costs, because most patients use fewer services when recuperating. Discharging patients quickly therefore saves little.
- Perhaps a sign of how little effect this has: since 1991, the length of the average hospital stay for patients in this state has fallen below that of patients nationally, but our hospital costs have remained far above average.²⁴ (See FIGURE 7.)
- Note that patients in other developed nations are allowed to stay in the hospital far longer, at much lower cost. As Uwe Reinhardt has pointed out, citing data on the wealthy OECD nations, "curiously, nations with much lower levels of health spending typically have had far more hospital beds, hospital admissions, and hospital inpatient days per capita than the United States has." He added, "Although by itself that fact does not prove anything..., it does suggest...that a policy of single-mindedly emptying hospitals....might even add to total national health spending."²⁵

Figure 6
U.S. HOSPITALS CLOSING/SURVIVING
 Neighborhood Pct. Black/Latino, 1940-96

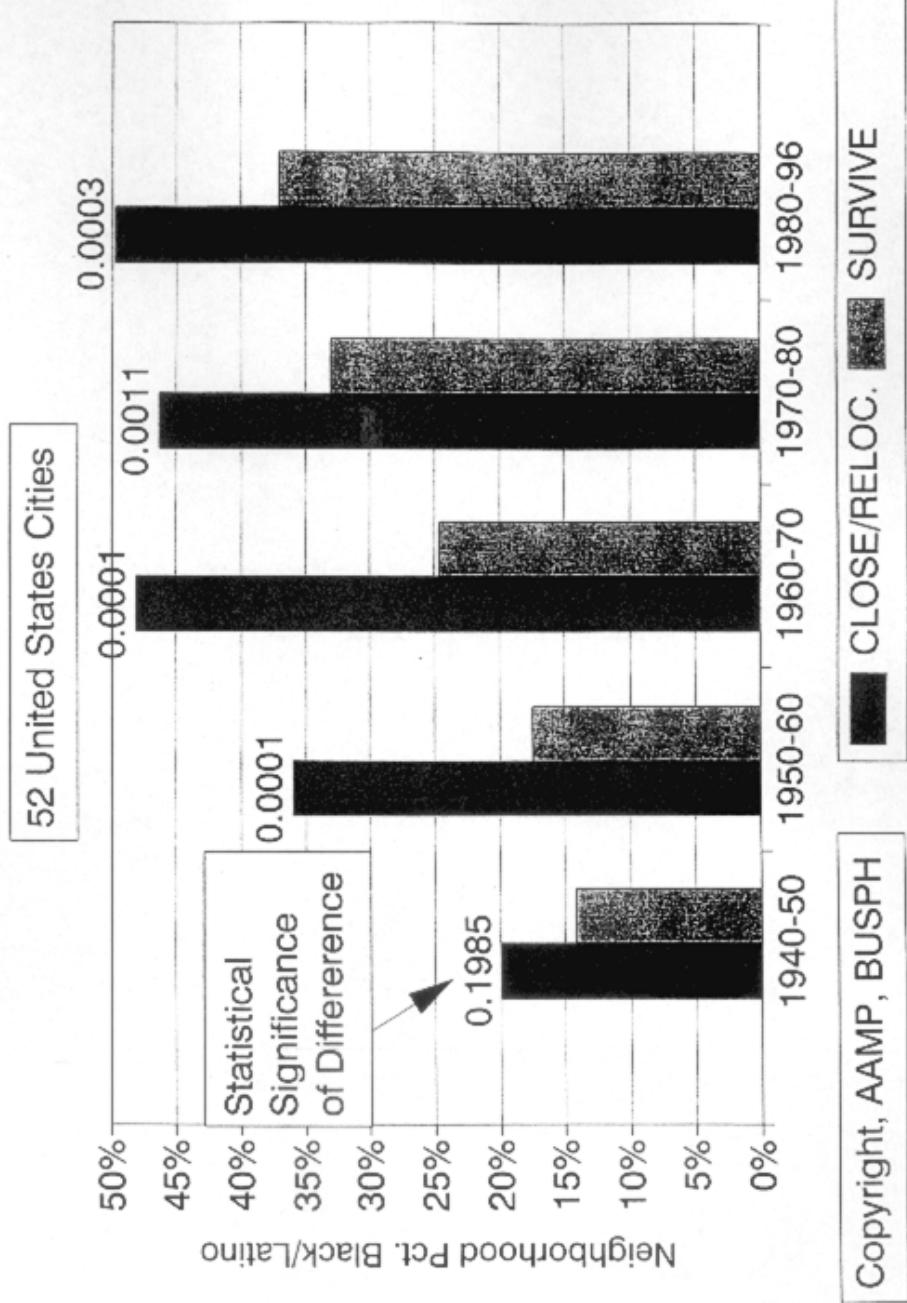
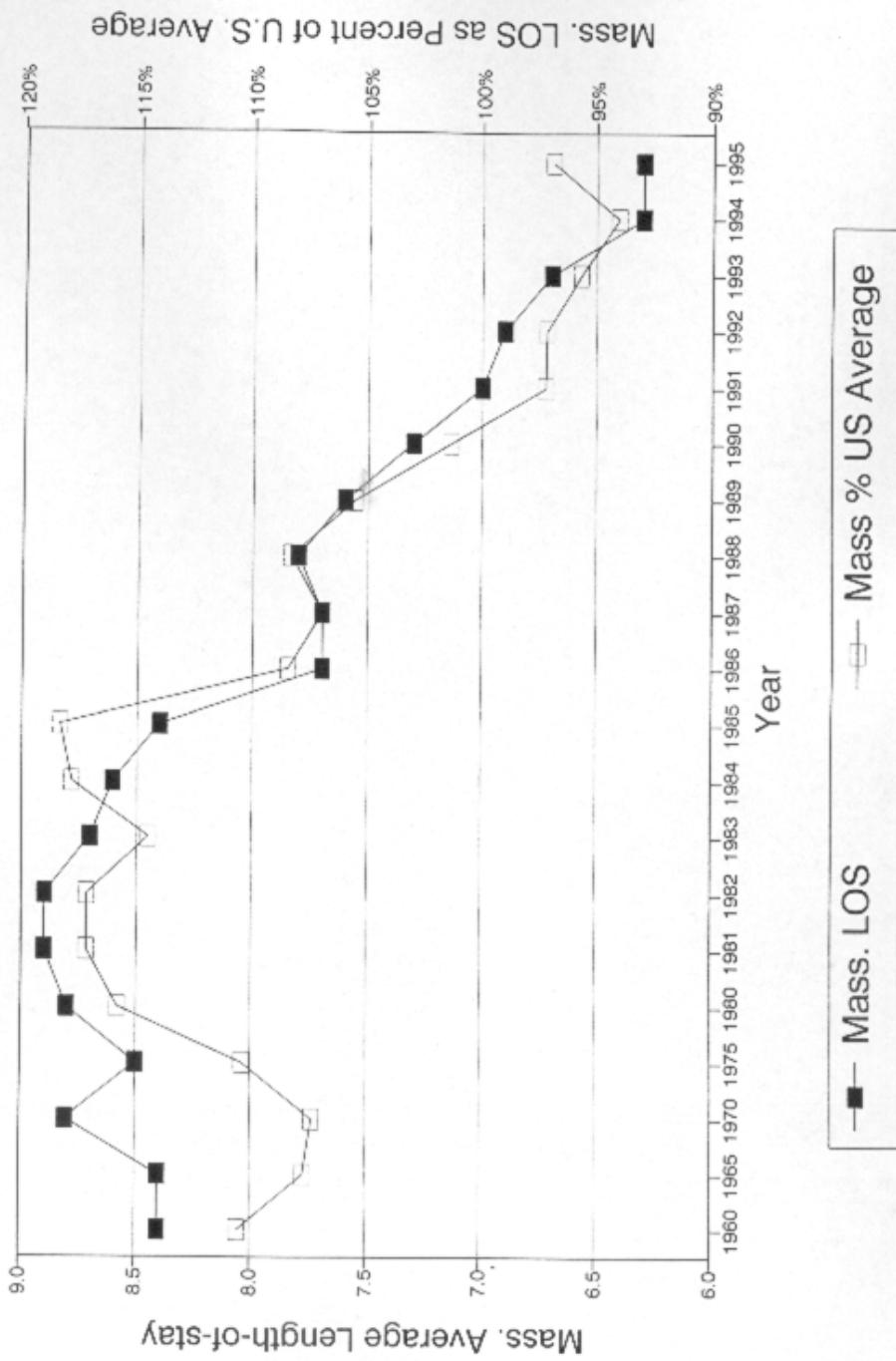


Figure 7

MASS. AVERAGE LENGTH-OF-STAY
And Pct. of U.S. Average, 1960 - 1995



b. Whether recuperative, emergency room, day surgery, or other care—in-hospital care may be more efficient than the out-of-hospital alternatives (though some patients prefer those alternatives).

- The financial analysis supporting the removal of patients from the hospital and from the emergency room was seriously flawed. Those strategies have enabled managed care plans to reduce their own short-term costs, but health care system costs overall have not fallen.

Inpatient care

- Patients use few services when recuperating in hospitals, and caregivers are right there, so home care often costs more.
- During the debates on "drive-through deliveries," HMOs claimed that, to save money, women should leave the hospital soon after giving birth, perhaps with a nurse visiting them at home. But as AAMP testimony on the Massachusetts maternity stay legislation explained, a hospital nurse can easily check on a recuperating mother several times daily, while a home care nurse spends much time traveling just to see each new mother once.²⁶ As a result, that home visit might well cost more than the real cost of allowing the new mother an additional day in the hospital, if she did not feel ready to go home.
- HMOs and many other observers assert that each added hospital day for new mothers would cost \$1000. But, as the AAMP documented, that is a \$1,000 misunderstanding.²⁷ A hospital may indeed charge \$1,000 per day for maternity care—to cover the average cost of a day in the hospital. An HMO may contract to pay that sum. But it is a mistaken to use charge as a proxy for cost, and that mistake yields financially meaningless results.
- A flat daily charge for hospital inpatient care underprices the delivery day and overprices recuperative days. The real (incremental or marginal) cost of the fourth or third day after delivery is usually as little as \$30 - \$50, especially when the newborn rooms in with the mother. What care is actually provided then, if everyone is healthy? Three meals and clean sheets—and a nurse who, while working mainly with patients in greater need, is right there to look in.
- The incremental (marginal) cost for an added day in the hospital is less than for a home nursing visit to check on a newborn and mother. But either is much less than the hospital's negotiated daily charge.
- When HMOs and other payors cut the cheap days, the costly days remain. Cost per patient-day skyrockets. So must charges, if the hospital is to stay open. (Today, however, with occupancy rates low, hospitals find it hard to raise charges to keep up with costs.)
- The gap between price and real cost signals market failure. It artificially makes out-of-hospital care look far cheaper than in-hospital care.
-

Emergency care

- Similar issues have confused perceptions of emergency room costs. A non-emergent patient in the emergency room may be charged a price of, say, \$175 — set to cover the expected average cost of a basic ER visit (before tests, radiology, or procedures). But the real, incremental cost of a non-emergency visit to the ER may be very small. This is because a non-emergency patient must wait until a caregiver is free — in both time and money. ER caregivers are typically paid for their time whether they see patients or not, so most of the ER cost is fixed, not varying with volume of visits.
- A recent Michigan study of six emergency rooms confirmed this analysis. Although the average charge for a non-emergency visit was \$124, the study calculated that the marginal cost of treating an additional non-emergency patient was just \$24.²⁸
- Further, removing non-emergency patients from the ER raises the average cost per visit for the emergency patients who remain. The resulting higher charges can deter still more payors and patients from using the ER. In time, this can undermine the financial stability of the ER, forcing it to close.
- Viewing ERs as costly sites of care has also created access problems. Both private and public payors have adopted cost-sharing policies that tend to penalize patients for using emergency rooms. Coordinated primary care with continuity is clearly preferable to reliance on emergency rooms for non-urgent care. But such primary care is frequently unavailable for lower-income patients. The cost of providing superior primary care for patients displaced from the ER is likely to be greater than the cost of unsatisfactory primary care in the ER. That higher cost can deter provision of the financing needed to establish the superior alternative care. So the better has been made the enemy of the good, and patients—particularly low-income people—have been forced to go without needed care.

Fixed costs persist

- The persistence of fixed costs largely undermines the prevailing wisdom that moving care out of hospitals will save money. Even if some patients avoid hospital inpatient care entirely, getting treatment in new surgi-centers or elsewhere, the hospital's fixed costs must still be paid.²⁹
- First, a basic level of hospital staffing may represent a fixed cost—for example, in emergency rooms, as just described.
- A large component of many hospitals' fixed costs is the repayment of loans for construction. The over-building of the 1980s and early 1990s must be paid for even if facilities close. To build new ambulatory surgery centers, sub-acute facilities, and the like simply incurs additional fixed costs. (Some local observers have recognized that persisting need to pay off debt, though sometimes ignoring the additional costs that new alternative facilities and preventive services will generate.³⁰)

- In cutting hospital stays and moving care out of hospitals, HMOs and other payors seek to avoid paying their fair share of hospitals' fixed costs.
- Here and nationally, many hospitals have decided they must join in the dehospitalization game themselves, building new outpatient surgery or cancer treatment facilities, buying or establishing home care agencies, and the like, and by shifting patients to those new settings, undermining the survival of their core services. Managers of the new facilities trumpet their evasion of hospital fixed costs: "We do not have to support an emergency room or advanced care so we don't have the overhead of a hospital," said one.³¹ But that simply means more of those fixed costs fall on everyone who does have to use emergency rooms or advanced care.
- Another response to recent pressures is essentially cosmetic in its method of attempting to move prices closer to true costs. Some hospitals have felt compelled to repackage their costs—for example, by creating "bedded outpatient" programs. Those patients are described as "requir[ing] a similar level of care as typical inpatients," although the hospital "is reimbursed . . . at a much lower rate than for traditional inpatients."³²
- Over the years, shorter stays and fewer admissions have meant spreading fixed costs over fewer days and patients. As a result, hospitals have had to *raise* prices. This prompts competing HMOs to try even harder to cut their spending on hospital care. So prices rise again for those who still must use hospital services.

These trends seem likely to have raised costs in the health care system as a whole.

- If existing operating rooms have slack capacity, building separate surgi-centers raises system costs. Likewise, unless hospitals are full, building new sub-acute facilities, or creating agencies and purchasing equipment to provide infusion therapy to patients at home, for example, all mean *added* health costs. By discharging patients earlier and earlier, with more and more complex care to be given by home care agencies, current trends, as one physician put it, are simply replicating little hospitals, minus the bricks and mortar, in patients' homes.³³ (The same may be happening for some patients discharged to nursing homes.)
- A recent *Boston Globe* story suggests that managers in some HMOs are finally starting to recognize some of their mistaken assumptions. The chief physician of Tufts Health Plan, for example, said he now realizes that care and special equipment for a patient at home can cost more than extending an inpatient stay.³⁴
- With all types of patients being discharged ever more quickly, it is no wonder that spending on home care has risen faster over the past decade than any other health care costs.³⁵ (Data on spending for non-hospital care will be discussed more shortly.)
- These and related arguments that this Project has made for years—that hospital and emergency room care are not inherently more expensive, and that creating new sites for care increases costs³⁶—were also advanced by Reinhardt.³⁷

Pricing patterns and market failure.

- Part of the pressure for dehospitalization has arisen because hospitals have followed the tradition of charging by the day to recoup their total costs. (HMOs have often pressured hospitals to price their care in this way, too.) Setting an average price per day, as noted above, has tended to underestimate the cost of early days in a hospital stay and to greatly exaggerate the cost of later days.
- That pricing pattern, along with the HMOs' desire to dodge paying their fair share of the fixed costs of maintaining hospitals, combine to spur HMOs to seek shorter hospital stays.
- As an HMO that pays hospitals a flat daily rate continues trimming recuperative days, it pays less for the entire admission than the hospital's real costs for the HMO member admitted. This is a sign of market failure. And as a result, the HMOs leave many hospitals not only with empty beds, but financially cannibalized, at risk of closing.
- If hospitals priced their services more accurately, most of the costs of an admission would be recouped early on, and low charges for recuperative days would reduce insurers' hunger for early discharges. Today, however, dehospitalization has proceeded so far, and so many hospital beds stand empty, that hospitals have little bargaining power; HMOs (and other insurers) often simply dictate the prices that they are willing to pay.
- But when HMOs and insurers choose to duck hospital fixed costs— and to use home care, surgi-centers, and other new services to keep patients out of hospitals and emergency rooms— market failure is the result. These payors benefit as they reduce their own costs, but society pays more in total. So the workings of the market are not succeeding in advancing the public interest, as the invisible hand is supposed to do.
- Further, in hospital care, under conditions of market failure, dehospitalization leads to more dehospitalization, not to an acceptable equilibrium. That is because as more patients— the less costly ones, who are more easily served outside the hospital— are dehospitalized, the remaining hospital patients look and are more costly. This boosts payors' desire and pressure to dehospitalize more of the remaining patients, again the relatively less ill and inexpensive patients. The process closely parallels the underwriting death spiral that Massachusetts Blue Cross's Medex Gold and non-group plans have suffered in recent years.
- The prevailing market failure requires health policy-makers to think more critically about dehospitalizing care, and about whether we may actually need many of the hospitals that today's failed market is discarding.

c. **Patient volume does not always follow hospital efficiency.**

- Earlier Access and Affordability Monitoring Project evidence contradicted the theory that price competition would encourage use of more efficient hospitals, thus promoting their survival. Patients here in the late 1980s were increasingly concentrated in hospitals that were larger but less efficient (measured by their cost per discharge, adjusted for differences in the case mix of their patients), and especially in teaching hospitals.³⁸ If efficiency counts less in attracting patients and insurors than other factors—for example, the financial resources or the reputations of large teaching hospitals—then encouraging closure of smaller or lower-occupancy hospitals will not necessarily improve overall efficiency or cut costs.

d. **Hospitals save little by simply cutting beds.**

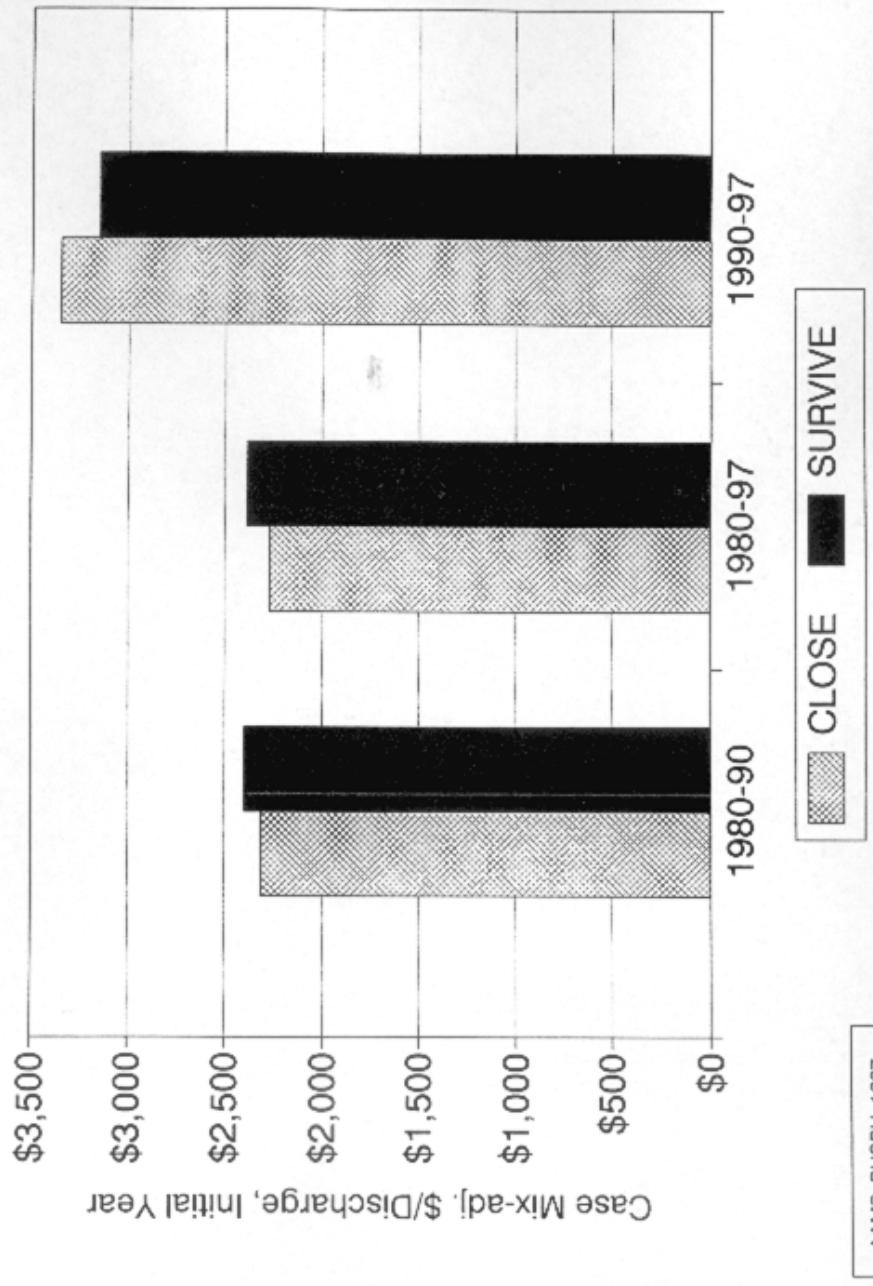
- The state adopted its bed-closing policies in 1988 because of widespread beliefs that "hospitals' need for more money is being driven by the cost of supporting 6,000 to 9,000 empty hospital beds."³⁹
- But hospitals generally cut staffing when beds are unoccupied. As we noted in 1989, closing empty, unstaffed beds does very little to reduce costs, because they are not generating many costs.⁴⁰ In addition, the hospitals' substantial fixed costs persist.
- Hospitals over-built in recent years—a phenomenon this Project criticized. But now those construction costs are sunk. The bonds must be paid off even if facilities close. Again, fixed costs persist. So where facilities are useful, they should be used, rather than wasted, which would only compound the original error.

12. In fact, there is evidence that closing hospitals may even have raised this state's health care costs.

a. **In some periods, surviving Massachusetts hospitals have been more costly than those that closed, although this pattern may be changing.**

- An earlier Access and Affordability Monitoring Project analysis found that the Massachusetts hospitals that closed between 1984 and 1994 were actually slightly less costly—slightly more efficient—than survivors (as measured by cost per discharge, adjusted for differences in the case mix of their patients).⁴¹ That was the opposite of the goal of price competition and closings, and it was a pattern that would tend to raise hospital costs overall.
- A new Project analysis confirms that hospitals closing from 1980 to 1990 were slightly less costly than survivors, as judged by their 1981 cost per discharge, adjusted for case-mix.
- The same is true for hospitals closing between 1980 and 1997, when again judged by their 1980 cost per discharge. (See FIGURE 8.)

Figure 8
HOSPITALS CLOSING/SURVIVING: EFFICIENCY
Case Mix-adjusted \$/Discharge 1980-1997



- But this new analysis indicates that hospitals closing over the past seven years, when judged by their 1990 efficiency, were slightly more costly—slightly less efficient—than survivors. (Again, see FIGURE 8.) This is an encouraging sign. The differential, however, is nowhere near as large as would be expected if true free market forces could exist in health care and were at work here. Neither difference is close to being statistically significant.
- The small differential also means there is still no basis for claiming that state policy encouraging hospital closures has eliminated institutions which were far less efficient than their competitors. Efficiency still does not seem to be the bedrock on which hospital survival rests in Massachusetts.

b. While we down-sized hospitals, total personal health costs rose faster in Massachusetts than nationally. This reinforces concern that hospital and bed closings don't cut systemwide costs, and may even have raised them.

- This state's bed-to-population ratio has dropped from 6.2 percent above the national average in 1985 to just below the U.S. figure in most years since 1989—and fully 5.5 percent below the U.S. average in 1995. (Massachusetts had 4.41 beds per 1000 residents in 1985, falling to 3.10 beds per 1000 a decade later).⁴² (See FIGURE 2, above.)
- Meanwhile, calculations from recent federal data indicate that total personal health care spending per capita in Massachusetts rose relative to the U.S. average. (See FIGURE 9.)
 - Per capita personal health spending here was 20-22 percent above the U.S. average from 1980-1985.
 - But then per capita personal health spending here climbed, and was 29 percent above the U.S. average in 1993, the latest year available.⁴³ (See FIGURE 10.)

c. New evidence suggests that steep increases in spending for non-hospital care here seem to have driven the state's rise, relative to the national average, in total health care spending.

- The same years in which this state's per capita personal health spending rose sharply against the U.S. average also saw an even steeper rise in per capita spending for non-hospital care, calculations from federal data reveal.⁴⁴
- As FIGURE 11 shows, spending per person in Massachusetts for non-hospital care—such as nursing home care, physician care, and prescription drugs—was just 3 percent above the national average in 1980, and then began a gradual rise. But between 1985 and 1989, non-hospital spending per capita climbed much more rapidly here than nationally. So by 1990, this state was 29 percent above the U.S. average in spending for non-hospital services.
- The sharp rise in total health spending here relative to the nation also came between 1985 and 1989.

Figure 9

MASS. AND U.S. PERSONAL HEALTH SPENDING

Dollars per Person, 1966 - 1993

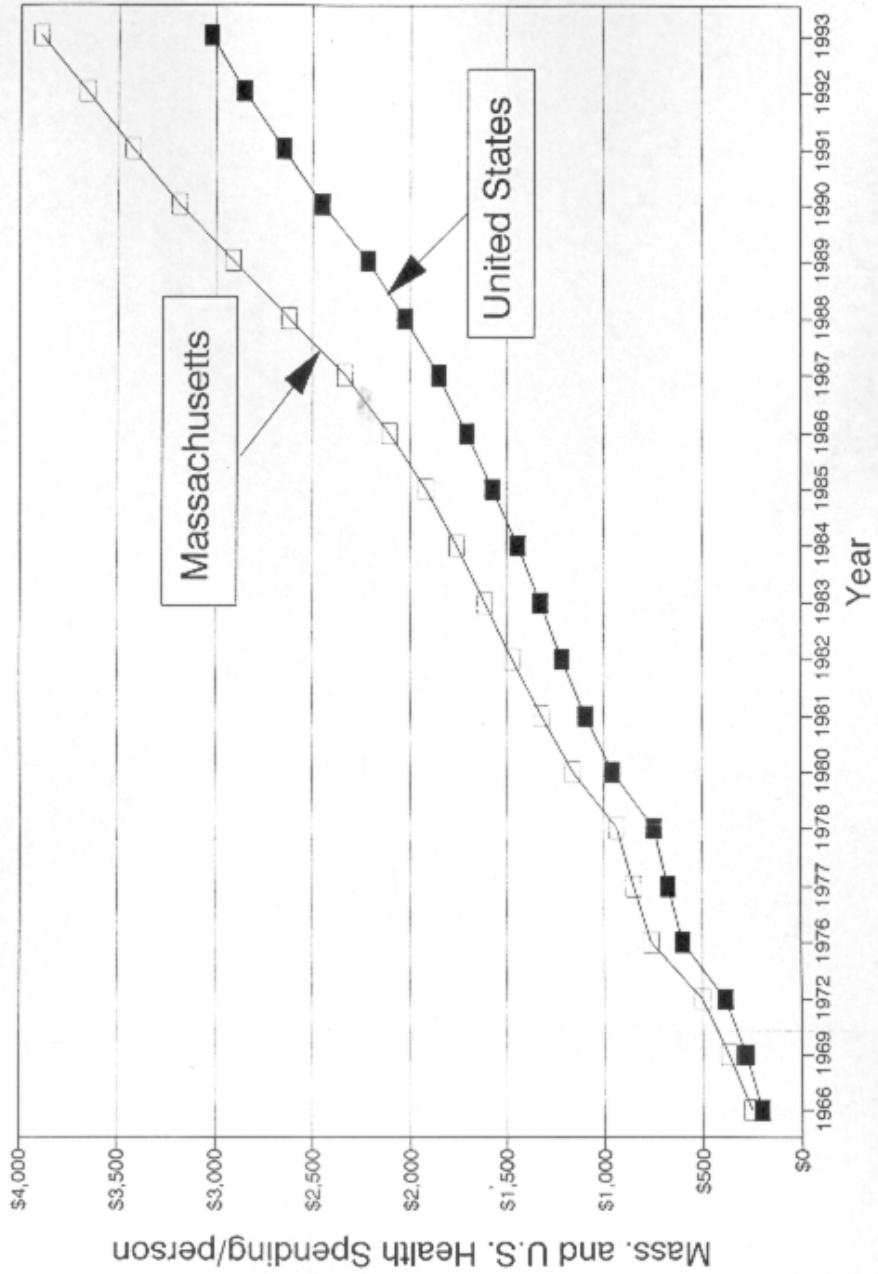


Figure 10

RATIO OF MASS. TO U.S. HEALTH SPENDING

Personal Health Spending, 1966 - 1993

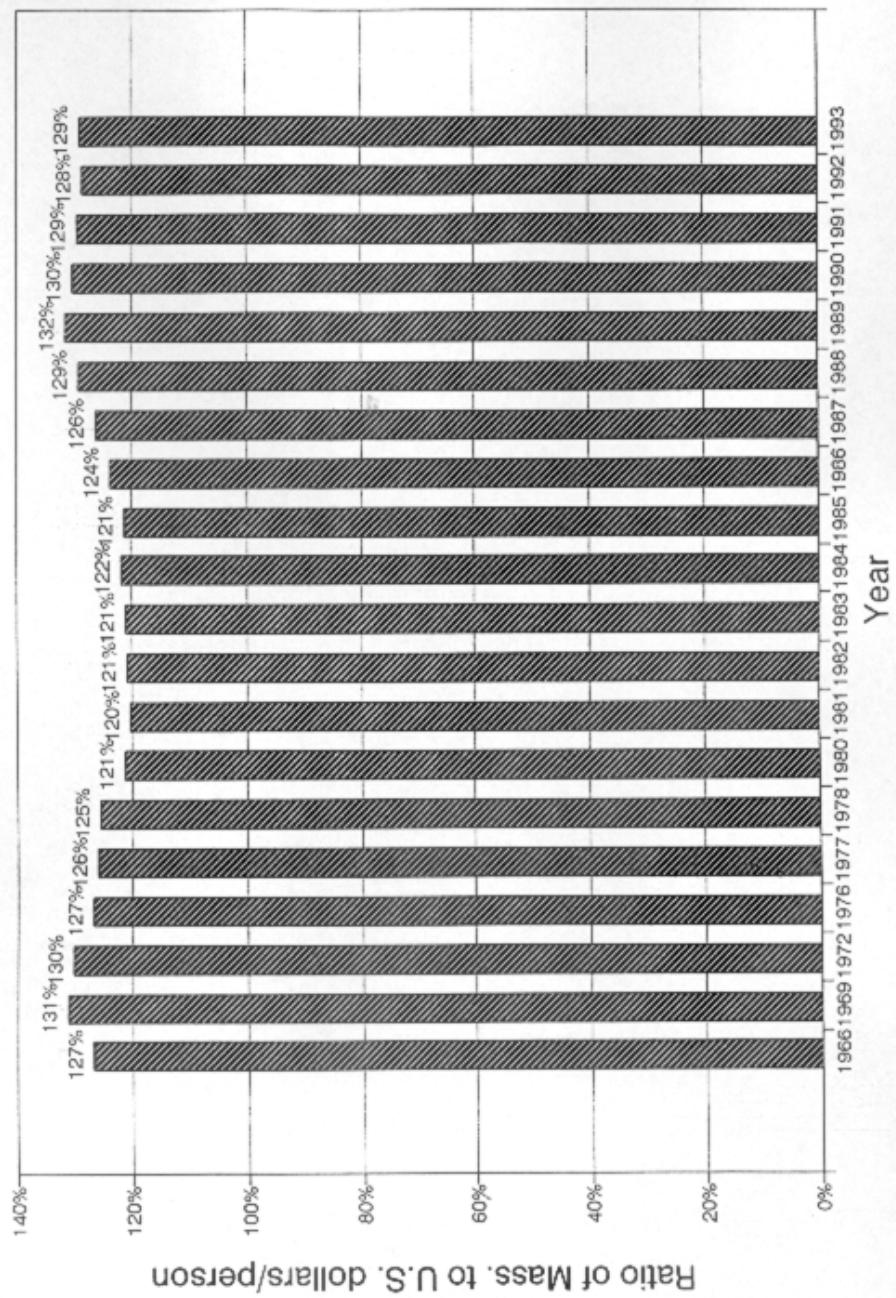
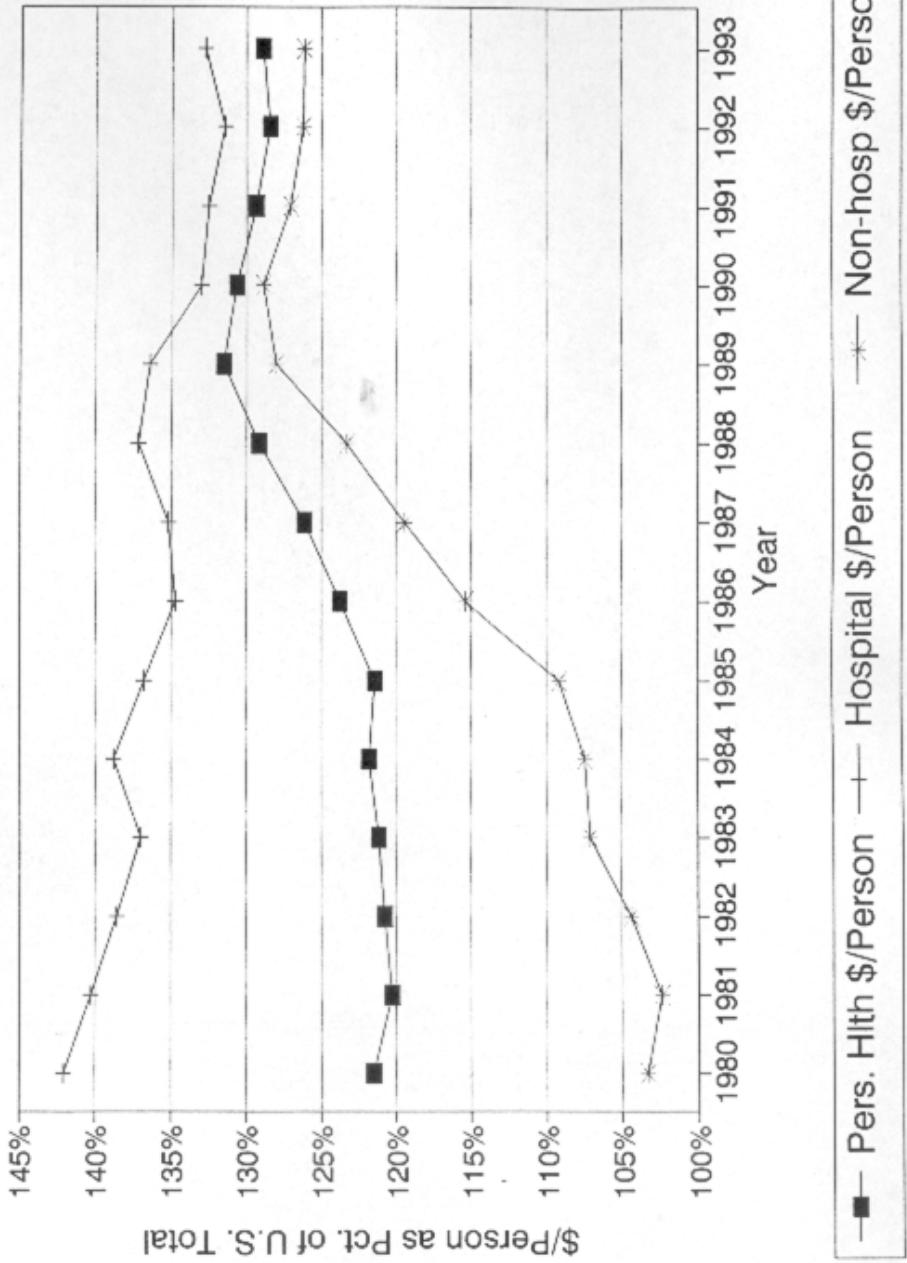


Figure 11

MASS. HOSPITAL + NON-HOSPITAL \$/PERSON
As Pct. of U.S. Average, 1980 - 1993



- Hospital spending per person in Massachusetts by these estimates stayed essentially constant during those years from 1985 to 1989, though it has since

moved just slightly closer to the U.S. average. It declined from about 37 percent above the national average in 1985 to 33 percent above in 1993. (Note that these personal spending estimates exclude construction and research. But they reflect all hospitals. The American Hospital Association hospital expense data used earlier in this report, which are available for a longer time series, are for acute hospitals only.)

- So, modest declines in hospital spending apparently were associated with rapid rises in non-hospital spending. Total health spending here rose rapidly in that time. This pattern reinforces concerns that dehospitalizing care is not saving money.

13. Any savings from closings today may come from cannibalizing hospital assets, and thus are one-time-only gains.

- HMOs and other insurers— along with hospital chains— are now devouring the financial, organizational, and social capital accumulated in many community hospitals over five or six generations. This can win only a one-time gain, at best.
- Cannibalizing hospital assets for savings does not reflect a free market at work. Nor is it a durable solution to high costs.
- This opportunistic cannibalization of hospital resources has been made possible largely by the current buyer's market for hospital beds and services. The buyer's market that HMOs and other insurers now enjoy has itself arisen because of
 - new, less invasive, technologies that reduce the need for inpatient care
 - recent over-building by hospitals
 - payors' decisions to duck fixed costs, both through the ways they pay for care and through explicit decisions to keep patients out of hospitals
 - pricing of hospital services in ways that cause market failure.
- There are good and bad reasons to reduce use of hospitals. Some good reasons: improved technology such as the MRI for diagnosis and laparoscopic surgery for treatment, the desire to avoid hospital-acquired infections, and some patients' greater comfort when recovering at home. Some bad reasons: payors that operate under conditions of market failure and that therefore save money even if their decisions increase society-wide costs of treatment, and one-time savings won through cannibalizing the capital accumulated in hospitals over generations. Like those two worrisome trends, the rise of capitation for paying doctors and hospitals creates financial incentives to cut hospital care regardless of patient needs.
- To maintain their buyers' market as hospitals close and merge, the purchasers of hospital services are merging, too. Even more important, they are also intensifying their efforts to get patients out of hospitals— as can be seen from the rapidly dropping bed use rates in California's managed care plans (discussed below, and shown in FIGURE 12). No homeostasis or equilibrium is in sight. This closely parallels the underwriting death spiral which has been undermining Blue Cross Medex Gold and non-group coverage in Massachusetts.

14. Another concern is the likely health consequences of hospital closings. Closing hospitals can do irretrievable harm. Communities often lose far more than inpatient beds:

- When hospitals close, communities lose emergency rooms (ERs). Distances to vital emergency care increase. Surviving ERs can become more crowded, with longer waits for care. Thus, we are all at risk. And when hospitals merge and then close most acute services at one site, vows to maintain ERs often prove unreliable.
- When hospitals close inpatient services, communities often lose all their outpatient services, too. Yet these may be major sources of physician and other ambulatory care for people who live nearby.
- An area that loses a hospital also may lose many or most of its doctors in private practice. Physicians may, for example, prefer to be near the hospital where they must visit their patients who are admitted, and where they may use various other resources.
- After a hospital closes, a Massachusetts study found,⁴⁵ about 30 percent of its patients usually disappear from area hospitals, at least for a time— perhaps because people have lost their familiar, trusted point of entry to care. They may suffer greatly from their lack of easy access to other physicians and hospitals. In ethnically-diverse Gloucester, for example, where 300 residents recently turned out for a meeting about preserving services at Addison Gilbert Hospital, many people say that they would never travel "over the bridge" to other hospitals that do not speak their language or know their community. Built of human relationships, hospitals are not interchangeable parts.
- When hospitals close, seriously sick people may face dangerously long travel times to get care.
- And our 52-city study, noted above, shows that, nationally, hospital closings have been likeliest in less-well-off communities.⁴⁶ So hospital closings are likely to increase deficits in health services where needs are already greatest.
- Further, when hospitals do not have excess capacity and empty beds to fill, they will probably have less interest in serving poor people. (One of us started studying hospital closings 25 years ago in part out of this concern.) Today, with many empty beds, Massachusetts hospitals can make money on patients whose care is paid for by Medicaid or the uncompensated care pool, because their payments generally exceed the variable costs that their patients incur. But just as airlines and hotels end most discounts when they have few empty seats or rooms, hospitals, after many shrink and close, will offer fewer discounts to privately insured patients. And—assuming that Medicaid pays less than private insurance does— hospitals are likely to be substantially less eager for Medicaid-financed or free care pool-finance patients than they are today.

- A policy of preserving some hospital capacity—capacity which the unfree market would otherwise close and help keep closed—could help preserve access to care for poor and uninsured people. The costs of past construction, as noted earlier, are sunk and must be paid. It would thus cost little to use the resources already poured into facilities and equipment to protect people at risk of deprivation of needed care.
- Hospitals also are probably better suited than HMOs to organize care that is responsive to communities—care that addresses those medical problems which are geographically concentrated. An HMO's patients usually are more dispersed across a region, and less concentrated geographically than a typical hospital's patients. Networks of care organized around—though not dominated by—community hospitals could, more readily than HMOs, be held accountable for improving and maintaining the health of people in specific communities.⁴⁷ But frustrated with hospitals' past failings, many reformers support managed care and competitive strategies which promise to move care and money out of "dinosaur" hospitals and into community-based preventive and primary care programs. When hospitals have closed, however, little (if any) of the money released by the closing (if any) has found its way into such community programs. And the outpatient departments and institutions with potential orientation to serve local communities are lost.

15. What factors best predict hospital survival in Massachusetts?

- We have built models to predict which hospitals closed and which survived during the periods from 1970 to 1980, 1980 to 1990, and 1990 to 1997. Only limited information was available in 1970, and better information became available in 1980 and 1990.
- The predictive model from 1990 to 1997 is of most interest for this report because it can be used, with appropriate caution, to predict which of the hospitals that have survived until now are in greater danger of closing in future years. Please note that the model suggests which hospitals appear more vulnerable, based on their 1990 characteristics.
- That model found that six variables were of use in predicting survival between 1990 and 1997. Listed in order of importance, they were: number of 1990 beds, total fund balance per discharge in 1990 (a measure of financial reserves), miles from Boston, teaching hospital status in 1990, operating margin in 1990, and median family income in the community around the hospital in 1989. (The community was defined as the city or town in which the hospital was located, except in Boston; in Boston, the community was defined as the census tract containing the hospital plus all contiguous tracts.)
- The model indicates that these relationships hold:

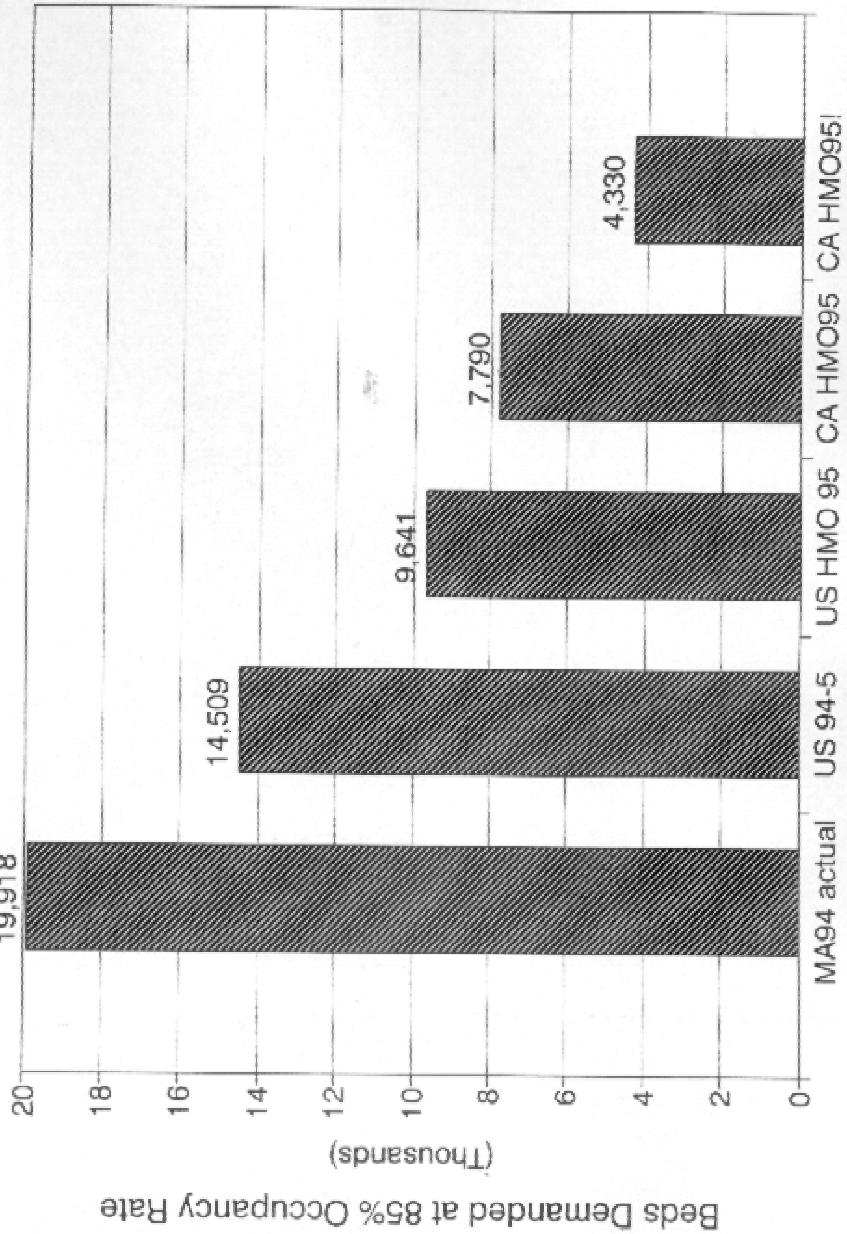
- a doubling in the number of beds in the hospital yields a 29 percent rise in the predicted probability of survival;
- a doubling in the total fund balance per discharge yields a 26 percent rise in the predicted probability of survival;
- a doubling in the operating margin yields a 17 percent rise in the predicted probability of survival;
- a doubling in the distance from Boston yields an 18 percent rise in the predicted probability of survival; and
- a doubling in the family median income in the community around the hospital yields a 12 percent rise in the predicted probability of survival.⁴⁸

The model as a whole achieved an R-square of 19.4 percent and an adjusted R-square of 12.2 percent. We have found that models of this sort have a fair-to-good predictive power.

16. If the different bed demand standards that prevail elsewhere in the U.S.—including in California, where managed care has cut hospital use rates most—were to take hold here, the number of hospital beds used here would drop sharply.

- Although Massachusetts leads the nation in the share of its citizens enrolled in HMOs,⁴⁹ these HMOs are only beginning to be aggressive in reducing use of the hospital. Age-adjusted rates of hospital use prevailing under various standards elsewhere in 1994-1995 were much lower than those in Massachusetts in 1994-1995. While Massachusetts HMOs are overwhelmingly non-profit today, there is good reason to fear that most will be for-profit soon. For-profit HMOs, whose obligation is to maximize profits, are likely to sharply cut hospital use to save themselves money.
- If those rates of use—whether safe or not—were to prevail in our state, many or most of our current hospital beds would be closed. The next figure shows the number of Massachusetts acute hospital beds that would be demanded—reflecting in part simply what insurers will pay for, regardless of patients' actual need—under standards that actually prevailed in several other settings in 1994-95. (These bed demand projections reflect separate use rate calculations for the population over and under age 65. They also assume an average 85 percent occupancy rate, which leaves some room for fluctuations in patient volume.) Thus, FIGURE 12 shows
 - first, the actual number of beds in Massachusetts during hospital fiscal year 1994.

DEMAND FOR MASSACHUSETTS HOSPITAL BEDS
Acute Hospitals, Various Use Rates



Access and Affordability Monitoring Project, Boston University School of Public Health

Then, the number of Massachusetts beds using various other standards of demand are shown as follows:

- in the second bar is the U.S. average during 1994-1995 for HMO and indemnity plans
 - third is the average for U.S. HMOs only, in 1995
 - fourth is the average for California HMOs during 1995
 - fifth is the standard of those California HMOs denoted as "best practice" for 1995 by the Advisory Board Company.⁵⁰ (Note that the term does not reflect assessment of the quality of care.)
- Thus, if the 1995 average bed demand standard for U.S. HMOs prevailed here, just 9,641 hospital beds would be in use to serve the Massachusetts population. That would be less than half the actual 1994 number of beds here, as FIGURE 12 indicates (or 56 percent of our 1995 bed total). Reaching this standard therefore would require huge cuts.
- Such cuts would mean dropping to 1.5 beds per 1,000 residents (assuming the state population will grow to 6.2 million in a few years).⁵¹ That would be a drop from, for example, the 4.0 beds per 1,000 residents that Massachusetts had in 1987 (as FIGURE 2 showed), and from 3.1 in 1995.⁵²
- Such projected reductions in demand for hospital beds are roughly comparable to those forecast nationally by some independent analysts. For example, estimates in *Business and Health* suggested that managed care's expansion might cut U.S. hospital discharges by 26 percent in the five years from 1994 to 1999, and cut the length of average hospital stays by 11 percent. The analysis therefore suggested that total inpatient days and the number of beds demanded would drop by over one-third by 1999.⁵³
- Further, if insurers are permitted to cut hospital use here to the 1995 California HMO use rates that some consider a "best practice" standard, just 4,330 beds would be demanded statewide—or just 0.7 beds per thousand residents.
- TABLE 2 projects how many beds would remain open in each county if each of those two demand standards took effect here. (Projections assume that the number of beds in each county continued to match that county's share of 1990 statewide beds.⁵⁴ The table also shows that counties' 1990 shares of the state's total beds and population corresponded fairly closely, apart from Suffolk County's disproportionate share of the beds.)

TABLE 2
**BEDS BY COUNTY, 1990 ACTUAL BEDS,
AND ILLUSTRATIVE PROJECTIONS FOR 2002 AND 2010**

<u>County</u>	<u>1990 pop. as % of state total</u>	<u>1990 beds</u>	<u>1990 beds as % of state total</u>	<u>demand: 2002 beds</u>	<u>Beds at 1995 U.S. HMO avg.</u>	<u>Beds at 1995 CA 'best' HMO</u>
Barnstable	3.1	385	1.9	187		84
Berkshire	2.3	610	3.1	296		133
Bristol	8.4	1,377	6.9	667		300
Dukes	0.2	39	0.2	19		8
Essex	11.1	1,871	9.4	906		407
Franklin	1.2	128	0.6	62		28
Hampden	7.6	1,433	7.2	694		312
Hampshire	2.4	264	1.3	128		57
Middlesex	23.2	4,242	21.3	2,055		923
Nantucket	0.1	19	0.1	9		4
Norfolk	10.2	1,189	6.0	576		259
Plymouth	7.2	815	4.1	395		177
Suffolk	11.0	5,454	27.4	2,642		1,187
Worcester	11.8	2,074	10.4	1,005		451
State total	100.0	19,900	100.0	9,641		4,330

(Beds allocated to counties in proportion to 1990 share of statewide total beds.)

17. Which hospitals might remain open if the same factors continue to predict survival, and if Massachusetts bed use drops to levels that prevailed recently in HMOs nationwide?

- Using the predictive model described above (based on hospital survival from 1990 to 1997), we calculated predicted probabilities of survival for all hospitals remaining open in 1997.
- We set each county's bed share in proportion to its 1990 share of beds statewide, sorted the hospitals open in 1997 by county, identified the hospitals likelier to remain open in 2002, and estimated their approximate number of beds. In identifying these hospitals and estimating their beds, we relied on the predictive model and our own judgment about the hospitals in question. In a few instances, we over-rode the model and judged that some hospitals considered poor candidates for survival by the model had somewhat better chances of survival, and the reverse. (For example, we suggest that Mount Auburn Hospital may be likely to remain open in 2002 despite its relatively lower predicted survival chances in the model.)

- These identifications and estimates should be regarded cautiously—and we detail several cautions shortly. We are presenting illustrative predictions. While reasonable, they are far from certain. They rest, first, on the assumption that the model is a useful tool for predicting which hospitals are likelier to survive.
- They also rest on the assumption that the state will reach the figure of roughly 9,600 acute hospital beds in the year 2002. That was the number of beds resulting from use of the 1995 U.S. average HMO demand standard, as shown above, which represents a loss of roughly half the actual 1994 Massachusetts acute beds (assuming 85 percent occupancy). This is reasonably close to projections that other organizations have made; for example, as noted above, an independent analysis suggests that hospital bed demand nationally will fall by 1999 to just one-third of the 1994 supply.⁵⁵
- Further, these identifications and estimates rest on the assumption that beds in 2002 will be distributed by county in proportion to the 1990 bed distribution by county (see TABLE 2, described earlier).⁵⁶
- TABLE 3 shows the 81 hospitals still open in 1997, ranked within each county by predicted probability of survival (from the model for 1990-1997). It then shows how 9,600 beds might be distributed among those hospitals most likely to survive in each county (with some modifications to the list of survivors, as just noted).
- MAP 2 (in color, at front of report) displays the 55 hospitals that we project might survive in five years or so, and the possible distribution of beds, if Massachusetts does not change course.
- As noted earlier, for these counts, hospitals are defined as separate sites of inpatient care. (For example, the merger of Beth Israel and New England Deaconess hospitals, which are adjacent, yields one hospital in these counts. But the merged Massachusetts General and Brigham and Women's hospitals both maintain inpatient services and are more than one-half mile apart, so they persist as two sites.) A count of hospitals guided by corporate structure and ownership would yield an even lower total; that smaller number of hospital networks or chains in the state would make even more apparent the reduced competition, emerging geographic monopolies, and likely growth of hospitals' ability to dictate prices.

TABLE 3
HOSPITALS OPEN IN 1997 AND
DISTRIBUTION OF 9,600 BEDS AMONG SURVIVING HOSPITALS
(RANKED WITHIN EACH COUNTY BY PREDICTED PROBABILITY OF SURVIVAL)

<u>County</u>	<u>Hospital Name</u>	<u>Hospital Predicted</u>	<u>Hospital</u>	<u>County Totals</u>
		<u>Probability of Survival</u>	<u>Projected Beds</u>	<u>Projected Beds</u>
<u>1990-1997</u>		<u>2002</u>		<u>2002</u>
Barnstable	FALMOUTH	91.2%		
Barnstable	CAPE COD	98.7%	175	175
Berkshire	BERKSHIRE	95.0%	250	
Berkshire	FAIRVIEW	95.9%	20	
Berkshire	HILLCREST	97.2%		
Berkshire	NORTH ADAMS	98.1%	20	290
Bristol	ST ANNES	84.8%		
Bristol	MORTON	87.9%		
Bristol	STURDY	92.9%	75	
Bristol	ST LUKES	94.5%	300	
Bristol	CHARLETON	96.5%	300	675
Dukes	MARTHA'S VINYARD	86.9%	20	20
Essex	ATLANTICARE	79.2%		
Essex	HAVERHILL	87.5%	50	
Essex	BON SECOURS	89.4%		
Essex	ANNA JACQUES	90.5%	100	
Essex	LAWRENCE GENERAL	90.7%	200	
Essex	ADDISON-GILBERT	98.5%	50	
Essex	SALEM	99.0%	275	
Essex	BEVERLY	102.6%	225	900
Franklin	FRANKLIN	97.0%	60	60
Hampden	WING MEMORIAL	94.7%		
Hampden	HOLYOKE	102.3%	150	
Hampden	NOBLE	104.0%	50	
Hampden	MERCY	106.7%	150	
Hampden	BAYSTATE	108.6%	350	700
Hampshire	MARY LANE	79.5%		
Hampshire	COOLEY-DICKENSON	100.8%	125	125

TABLE 3, continued

<u>County</u>	<u>Hospital Name</u>	<u>Hospital Predicted Probability of Survival 1990-1997</u>	<u>Hospital Projected Beds 2002</u>	<u>County Totals Projected Beds 2002</u>
Middlesex	SYMMES	62.2%		
Middlesex	SOMERVILLE	63.8%		
Middlesex	MT AUBURN	65.8%	150	
Middlesex	CAMBRIDGE	73.8%	100	
Middlesex	NASHOBA	79.8%		
Middlesex	WHIDDEN	83.0%		
Middlesex	ST. JOSEPH	83.2%		
Middlesex	LAWRENCE MEML.	89.1%		
Middlesex	MALDEN	89.2%		
Middlesex	MARLBORO	89.8%		
Middlesex	FRAMINGHAM	90.1%	300	
Middlesex	WALTHAM	91.3%	150	
Middlesex	LAHEY	91.9%	250	
Middlesex	LOWELL GENERAL	92.1%	200	
Middlesex	ST JOHNS	92.3%	200	
Middlesex	LEONARD MORSE	94.1%		
Middlesex	MELROSE	94.4%	150	
Middlesex	N.E. MEMORIAL	95.0%	150	
Middlesex	WINCHESTER	98.5%	100	
Middlesex	EMERSON	98.9%	100	
Middlesex	NEWTON-WELLESLEY	104.4%	200	2,050
Nantucket	NANTUCKET	72.9%	10	10
Norfolk	GLOVER MEMORIAL	82.6%		
Norfolk	QUINCY CITY	82.8%	150	
Norfolk	NORWOOD	86.4%	125	
Norfolk	MILTON	93.0%	100	
Norfolk	SOUTHWOOD	93.7%		
Norfolk	SOUTH SHORE	97.0%	200	575
Plymouth	CARDINAL CUSHING	78.5%	150	
Plymouth	TOBEY	80.1%		
Plymouth	JORDAN	88.5%	75	
Plymouth	BROCKTON	89.0%	175	400
Suffolk	FAULKNER	70.1%	100	
Suffolk	CARNEY	72.3%		
Suffolk	MASS. EYE + EAR	75.2%		
Suffolk	ST ELIZABETH'S	80.1%	200	
Suffolk	CHILDRENS	91.9%	250	
Suffolk	BRIGHAM+WOMEN'S	93.9%	500	
Suffolk	BETH ISRAEL	95.4%	600	
Suffolk	N E BAPTIST	100.2%		
Suffolk	NEW ENG MED CTR	100.3%	150	
Suffolk	BOS. MED. CTR./U.H.	110.3%	250	
Suffolk	MASS. GENERAL	162.0%	600	2,650

TABLE 3, continued

<u>County</u>	<u>Hospital Name</u>	<u>Hospital Predicted Probability of Survival 1990-1997</u>	<u>Hospital Projected Beds 2002</u>	<u>County Totals Projected Beds 2002</u>
Worcester	CLINTON	73.7%		
Worcester	ATHOL	77.5%		
Worcester	HUBBARD	78.8%		
Worcester	ST VINCENT	79.7%	250	
Worcester	U MASS MED CTR	81.5%	250	
Worcester	HEYWOOD	81.7%	50	
Worcester	MILFORD	84.8%	50	
Worcester	WORCESTER MEML	89.4%	250	
Worcester	LEOMINSTER	90.8%	50	
Worcester	HARRINGTON	98.6%	75	975
State-wide totals			55 hospitals	9,605 beds

- Again, the maps and tables here present illustrative predictions, not statements of fact. As always, we urge the greatest caution in using these projections about the future. First, the assumptions in question should be examined by the reader. (See discussion below.) Second, the projections are not our view of what is inevitable or desirable. We think that so many hospital closings and bed reductions may be dangerous to the health of the people of the Commonwealth. We do not think that they will save money. And we are convinced that the policy of hospital closings has not been subject to remotely adequate study.

18. And Massachusetts is headed toward a day when only 15-20 hospitals survive.

- If hospital bed demand here falls to what one analysis has called the 1995 "best practice" standard of two California HMOs, as noted above, just 4,330 beds would be demanded statewide (though more will actually be needed, we believe). That would be roughly half the number used in the previous projection for 2002. Plausibly, the forces at work in health care today might require such cuts in Massachusetts hospital use in the next dozen years—say by 2010—if they are allowed to persist.
- TABLE 4 summarizes the large decline in Massachusetts acute hospitals and beds already seen since 1970, and the even sharper cuts that may lie ahead, again if present trends are allowed to persist.

TABLE 4
Massachusetts Acute Hospitals and Beds, 1970 - 2010

<u>Year</u>	<u>Acute Hospitals</u>	<u>Beds</u>
1970	127	24,240
1980	112	25,131
1990	99	21,582
1995	85	17,145
1997	81	16,150
2002	55	9,600
2010	20	4,300

Notes:

1997 beds are calculated by taking the 1995 beds of the hospitals surviving to 1997; no allowance is made for bed reductions in these hospitals between 1995 and 1997.

2002 beds reflect the number that would be used in Massachusetts, assuming that the state used beds at the age-adjusted rate actually achieved, on average, by U.S. HMOs in 1995. An occupancy rate of 85 percent and a total state population of 6.2 million are assumed.

2002 hospitals are those that we project would be open to hold the 9,600 beds.

2010 beds reflect the number that would be used in Massachusetts, assuming that the state used beds at the aged-adjusted rate achieved in 1995 by two HMOs designated as "best practice" by the Advisory Board Company.

2010 hospitals are those that we project would be necessary to hold the 4,300 beds.

- MAP 3 (in color, at front of report) suggests locations where hospital beds might survive in 2010. It distributes those 4,330 beds among 20 sites, in proportion to counties' share of the 1990 statewide bed total. With so few beds demanded, all hospitals would shrink, but many would also close. (The accompanying MAP 4, for greater clarity, presents the same illustrative locations for four eastern Massachusetts counties.)
- This, we hope, is a worst case prediction, both because it uses the radically-lower bed demand standards that now prevail in some California HMOs, and it again assumes that no action is taken to slow the dehospitalization trend or to preserve vital services. Again, these projections should be used with caution. And again, they are not our view of what is inevitable or desirable. These are illustrative predictions: if use is forced down to 4,330 beds, then roughly 15 to 20 hospitals would survive.
- MAP 5 (in color, at front of report) provides a summary of hospital survival in Massachusetts—the past and a possible future. It repeats those illustrative

predictions of perhaps 20 surviving hospitals, in the worst case prediction for 2010. The map shows them against a background of the 46 hospitals closed between 1970 and 1997, and of the 61 others still open today. Despite having lost over one-third of our state's hospitals since 1970, three-fourths of the survivors are at risk if HMOs here imitate the industry "leaders" in California.

- This sequence is also seen starting with MAP 6, here, showing Massachusetts acute hospitals in 1970. Then MAPS 7, 8, and 9 show the diminishing number of hospitals open today, and, potentially, in the years 2002 and 2010.

CAUTIONS:

- a. Our illustrative predictions about which hospitals will remain open in 2002—and our depictions of the approximate sites of inpatient care in 2010—rest on:

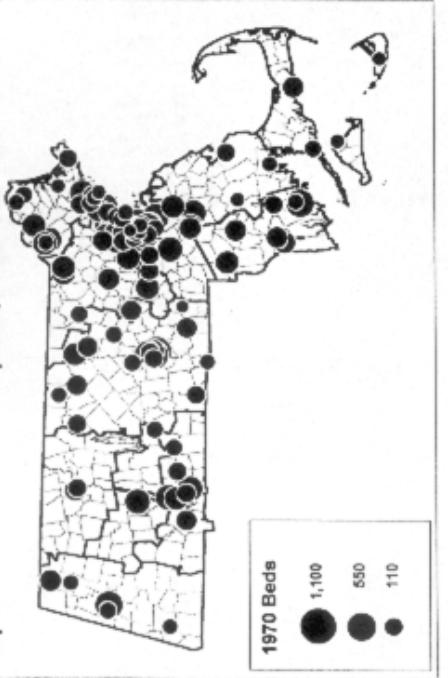
- a model of moderate accuracy in predicting which hospitals close;
- our judgments and best guesses about survival, sometimes leading us to choose to over-ride the statistical model;
- the number of hospital beds assumed statewide for each year:
 - first, the beds that would be used in 2002 if use here equaled HMOs' rate of use of hospitals nationally in 1995, and if a fairly efficient average statewide 85 percent occupancy rate prevailed; and
 - second, the number of beds that would be used in 2010 if hospital use here equaled what has been called the 1995 "best practice" rate of California HMOs, at the same 85 percent occupancy rate.

Note, for example, that our use of county-based bed projections provided a reasonable frame for our work, but that other analyses that do not keep beds proportionate to 1990 county totals could yield slightly different results.⁵⁷ (Since Suffolk County had a disproportionate share of 1990 beds, this framework may seem to give Suffolk County hospital beds too great a chance of staying open. But this simply recognizes that the factors which influenced hospital survival to 1990 may persist. For example, under market forces, the possibility of three hospitals surviving in Suffolk County out of 20 statewide should not be surprising, since two of the three hospitals that we suggest may survive have extraordinarily high accumulated fund balances per bed.)

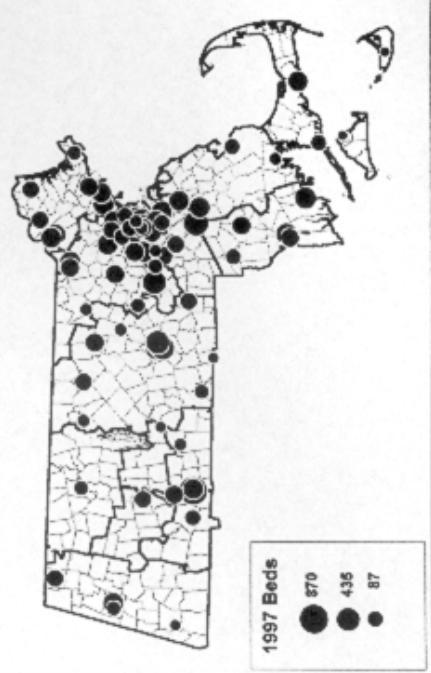
- b. The specific details of our illustrative predictions can and should be disputed by interested community groups and other parties. We do not claim that the illustrative predictions are what will happen, or that they are what should happen. The illustrative predictions show the magnitude of hospital bed reductions and closings that will result if Massachusetts were to drop to certain statewide rates of hospital use that already prevail elsewhere in the nation.

MASSACHUSETTS HOSPITAL SURVIVAL, 1970-2010

Map 6: Massachusetts Hospitals, 1970



Map 7: Massachusetts Hospitals, 1997



Map 8: Hospitals That Might Survive to 2002



Map 9: Hospitals That Might Survive to 2010 -- Worst Case



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12 May 97

c. It appears that many experts consider these use rates to be desirable and even inevitable. We do not agree. We consider the needed number of hospital beds and the needed number and location of hospitals to be open questions that are fit subjects for public discussion and debate. Nothing resembling such a debate has taken place in our state, or in most others. Instead, public decision-makers have abdicated choices about hospital survival and hospital care to the invisible hand of a free market. If there were a free market for hospital care, this would be trustworthy. But there is not.

We put forward publicly these illustrative predictions, even though they are necessarily imprecise, because we recognize that certainty is not possible until a hospital announces a closing—and then it is too late to debate the need for the hospital to survive. That is also too late to take steps to protect and preserve a hospital that is found to be needed. But if communities, hospitals, state policy-makers, and others recognize the closings that lie ahead, they can consider the prospects. Such information makes choices possible—to take action, to change direction.

d. Of necessity, the time-frame for these illustrative predictions is fairly arbitrary. But clearly, the pressure for cuts in hospital spending and capacity already is strong. (One source of increased pressure on hospitals will probably be the federal Medicare program, which is likely to seek \$100 billion or more in savings nationally by 2002, much of it from hospitals.) While some observers—including people skeptical of the appropriateness of such steep cuts in hospital capacity—will doubt those reductions could safely be achieved by 2002 or 2010, or at any time, some health care experts clearly believe that the underlying use rates should be in place today, rather than five or 13 years from now.

e. The illustrative predictions show one way to reach a statewide figure of some 9,600 beds in 2002. They show a number of surviving hospitals (55) and the cuts in their beds (considerable), along with the closing of some 26 of today's 81 hospitals that would reach that approximate bed total in 2002. Likewise, we show one way to reach a statewide figure of 4,300 beds in 2010.

f. These may well be the wrong bed totals, or the wrong way to achieve them. We do not say these are the right totals or the right way to reach them. Indeed, we suspect that more beds would be both cheaper in the long run and better for health care in the long run. All this should be a matter for study and debate—neither of which has yet happened.

g. The burden of proof is on those who propose change. The bias should be toward conservatism, because the medical injunction to "first, do no harm" applies to health policy just as it does to individual physicians treating individual patients. Consequently, the burden of proof falls on those who propose wholesale changes in the shape of hospitals, and on those who blindly worship the golden calf of counterfeit competition in health care.

19. Competition is giving way to monopoly. Is this the intention of competition advocates? Monopolization reduces responsiveness to both payors and patients. And long travel times burden patients and their families.

- Competition requires competitors. Price competition is the state's declared policy of cutting hospital costs. Competition does squeeze out waste (and, often, needed services as well). But it also squeezes out competitors. The wrong hospitals often survive— those with more money in their financial reserves, for example, rather than those with greater efficiency or better patient care. And once hospitals close, geographic monopolies or oligopolies form, and price competition ends. The surviving hospitals enjoy a sellers' market. (Perhaps this is why some hospitals are so sanguine about competition: they expect to be among the survivors. Perhaps they like using competition's invisible hand to toss their competitors from the lifeboat, leaving more patients and revenue for themselves.)
- But then, high barriers to entry of new hospitals allow the survivors to retain their monopoly. That would not happen in a free market.
- Unless we change course, each surviving hospital will have a monopoly in a substantial region of the state—or perhaps one competitor, in Boston or other densely populated areas. And their market power statewide would intensify further to the degree that they form chains.
- Mega-hospitals that acquire others, but cut most acute services in the acquired hospitals, may pledge to keep emergency rooms open. But these promises are unlikely to endure without ironclad guarantees, in part because free-standing emergency rooms may have difficulty maintaining affordable quality when back-up services are far away.
- Meanwhile, the increasing replication of today's hospital-based services in non-hospital settings (nursing homes and sub-acute facilities, patients' homes, surgery centers, and the like) will also boost costs.
- Monopolization will also mean higher prices—and reduced quality of care. Hospitals whose patients have nowhere else to go will no longer find much need to be responsive to patients or payors.
- Further, having so few surviving hospitals would present grave consequences for access to care. Among the most serious concerns is the distance that patients would have to travel to care. This would burden all patients—including well-insured, middle-class people. But it would pose especially great problems for sicker patients and for people needing emergency care—thus tending to increase use of, and expenditures for, ambulances and other medical transport services.⁵⁸ And difficulty in affording transportation would aggravate access barriers for lower-income people in particular.
- The increased travel times needed to reach increasingly distant hospitals also would burden patients' families, hindering visits to hospitalized relatives. Such visits are not a frivolity but a valuable support to patients in the best of times—and today an increasingly critical need. Great responsibilities (and uncounted costs) are being

shifted to patients' families in this era of price competition, managed care, dehospitalization, and rapid discharges.⁵⁹ Patients and their families are urged to monitor care closely, and to be advocates for themselves. Hospital staffing cuts are prompting recommendations that a family member should stay with anyone who is hospitalized.⁶⁰ Indeed, in California, hospitals now count on such assistance from families of hospitalized children or of patients who particularly ill— those too weak to press their nursing call buttons, for example; hospitals commonly tell families that if they can't be there, they should hire someone to sit with the patient.⁶¹ Dangerous staffing levels, early discharges, and incentives to underserve must be challenged directly,⁶² but diminishing families' ability to visit with hospitalized relatives would only exacerbate those problems.

20. And people will still need hospitals. Preventive care can't keep us all from eventually getting sick and dying.

- Promoting primary care and prevention is good and vital. They are valuable in themselves. But the effectiveness of many such services is unknown. Further, at best, they could win us a one-time saving by delaying death, disease, and disability. Patients would then suffer later, from something else— something other than the problem that was prevented or was detected early and treated successfully.
- Even if primary care and prevention work, people will still eventually get seriously sick. Most people will not be dying on golf courses at age 90. People will still need hospitals to go to, and an HMO or payment method which can be trusted to cover the care they need.
- Primary care and prevention may postpone the need for hospital care, but they can't prevent it overall. They are complementary, not alternatives, to hospital care. Thus, as our Project has long argued, preventive care cannot prevent most health care costs, only delay them.
- And expanding preventive care may even increase health costs— a reality which some health care observers are just starting to recognize. Evidence that many types of preventive care save money is weak.⁶³
- AAMP principals have, with others, initiated and supported efforts to strengthen primary care services in communities whose residents suffer high rates of preventable admission— hospitalization for "ambulatory care-sensitive" conditions.⁶⁴ (Those are conditions which generally would not have worsened to the point of requiring hospitalization if the patients had received timely and appropriate primary care.) But in some communities, hospitals themselves may be in the best position to organize expanded primary care services. And it would be reckless to eliminate hospital capacity unless those hospital services are actually no longer needed.
- Indeed, between 1980 and 1994, ambulatory care-sensitive conditions represented a growing percentage of hospital discharges nationally. Further, Peter Cunningham has reported, the share of hospital discharges that were for such preventable

problems rose twice as fast among uninsured people as among the overall population. This, as he noted, "suggests that access to primary care for uninsured persons deteriorated over this time period." And that deterioration occurred despite the nation's growing emphasis on primary care.⁶⁵ Therefore, while working to improve access to primary care, it is imperative to preserve hospitals' ability to protect the many people whose medical problems still go too long unattended—and whose number may be rising.

- Public health advocates often assert that prevention and good primary care will reduce need for acute care beds. So do others understandably frustrated by many hospitals' inattention to needs of local communities or poor people. Apologists for or proponents of closings make similar claims. But recall how countless mental patients were virtually abandoned as state hospitals were closed and down-sized.⁶⁶ There have been years of promises that new ambulatory mental health services would be superior to mental hospitals often criticized as snake pits. But an adequate supply of community-based alternative services has never materialized. And funding has been diminishing.⁶⁷ Many people removed from state mental hospitals ended up re-institutionalized in nursing homes.⁶⁸ Thousands of other vulnerable people became homeless. It has been easier to promise improvement than to deliver it.
- A hint of such dangers may be seen in the campaign against using emergency rooms for non-emergency care. Hospitals and their ERs are known. They are visible. And compared with other caregivers, they can much more easily be held accountable for serving people vulnerable to deprivation of needed services. Also, as noted earlier, ER care for non-emergency problems is much cheaper than is commonly thought. While hardly a site of optimal, continuous, and coordinated primary care, the ER costs far less than the desirable alternative, which is not yet available in adequate quantities. Most people would surely be attracted away from ERs if truly accessible, continuous, affordable primary care ever does materialize, but—to avoid harm—they must not be hit with the stick of financial penalties or emergency room closings. The only thing worse than relying on ERs for non-urgent care is denying access to ERs, whether through closing hospitals or other means, without providing adequately financed and high-quality substitutes.

21. Hospitals and their associations don't speak up for themselves and fight for their own survival. Why not?

- The industry's main voice here, the Massachusetts Hospital Association (MHA), has been lamentably short-sighted on the problem of hospital closings and related concerns. For example, an MHA response to this report's first edition and to a related *Boston Globe* article,⁶⁹ states that we "raise good questions about the effect of consolidation on Massachusetts hospitals." But the MHA shows no willingness to acknowledge that there might be a problem, no interest in investigating the seriousness of the problem, and no inclination to help devise solutions.
- Instead, the MHA accepts the goal of closing hospitals (see Point 6, above), embraces a free market mindset, and exaggerates the state's regulatory powers

(see Point 31, below). Ignoring the core concerns raised here, the MHA response tries to shift attention to worthy but diversionary apple-pie issues. “Our real concern” should be “access to care for vulnerable populations” and “coverage for those without health insurance,” the MHA asserts⁷⁰— rather than grappling with the problem of how to assure survival of adequate hospital services for all citizens. The MHA even emphasizes the increasing availability of “high-quality, low-cost care outside of hospitals....”

- The Commonwealth, it appears, is witnessing the MHA-assisted suicide of hospitals. Like some patients pondering suicide, however, hospitals are not actually terminally ill. Many hospitals appear sick, and may indeed be financially terminal, but only if current payment methods persist. And their administrators’ judgment may be clouded by financial depression. But many such hospitals are needed by their communities and could be restored to medical and financial health. If the crypto-competition which now suffocates them were lifted, these hospitals could have many years of productive life ahead.
- Failure to defend the role of hospitals means condoning both their outright closure and the HMOs’ and insurers’ financial squeeze which now undermines the quality of hospital care. And if the state’s hospitals allow the quality of their care to deteriorate, they will be collaborating with the further de-legitimization of hospitals and helping to justify still more closings.

So why don’t hospitals and their associations speak up for themselves and fight for their own survival? Several reasons:

- Hospital associations, as noted elsewhere, tend to be dominated by powerful teaching and other hospitals that have lots of money in the bank or enjoy strong market positions and expect to survive.
- Speaking up means denouncing the market, saying that it does not work fairly. But many hospital CEOs and trustees are ideologically challenged, and cannot say a word against the market.
- Speaking up has the appearance of conceding that you and your hospital can’t cut the mustard— that you are a wimp. If you can’t survive in the marketplace, the assumption is that it’s your fault, that you deserve to be bankrupted or taken over.
- Many administrators, as noted earlier, find it thrilling to fight for survival. They ignore the battle wounds that they and their hospitals— and their communities— suffer. Their pain is masked because they are under the influence of the adrenal anodyne of competition, the opiate of the managers.
- Administrators and trustees don’t realize how badly the market works in health care and how illegitimate or unsubstantiated are most of the reasons given for dehospitalization.
- Having over-built and over-spent for so many years, many administrators and trustees may be ashamed and feel that they deserve to be punished for past misbehavior— that they deserve to be closed.

- Many administrators and trustees are so exhausted by their long struggle to stay open that they have no stamina left for a new fight—against the phony market that is destabilizing them.
- Many administrators and perhaps some trustees as well hope to find jobs in the hospital that takes them over, so they will be reluctant to make waves.
- Many administrators and trustees honestly hope that a merger with a stronger hospital or a sale to a for-profit will preserve a vital community resource that they themselves could not save.

22. Someone must think about which hospitals are needed, to protect both them and the people whose health they are supposed to protect.

- Nobody in Massachusetts now has responsibility for systematically assessing which hospitals are needed, and which hospitals are vulnerable.
- Today, nobody—including the Massachusetts Department of Public Health—is thinking ahead, to make sure that the future of needed hospitals can be secured before too many, or the wrong ones, close.
- As this report describes, the unfree market's decisions about which hospitals to close cannot be trusted. Hospitals are being tried in a kangaroo court—without a lawyer and, as just noted, without even a willingness to plead their innocence!
- Without an invisible hand to make those decisions, we must use our invisible brains. We must think.
- Hospitals often go into a tail-spin and close rapidly—or are acquired by a parent which rapidly closes most acute services at the facility, despite the community's hopes for protection. A scramble to save a hospital at the last minute almost always comes too late. So looking ahead is vital.
- This is a critical and persistent problem. Because each year only a few hospitals have been closing, however, few people perceive hospital closings as a statewide crisis, rather than only as an issue in someone else's community. Most of the state is complacent—just as frogs in water heating slowly to a boil are oblivious to their impending deaths. In contrast, a visible crisis would impel action—just as a frog jumps out if put directly into boiling water.
- Someone therefore must take the long view, to think about the cumulative effects of losing all these hospitals.

23. For-profit hospitals will not be rescuers.

- Many advocates of for-profit hospitals applaud them as more likely to reduce capacity.
- Yet for-profit chains sometimes persuade communities which they hope to enter that they will rescue hospitals.
- Actually, for-profits are more likely to close hospitals that they acquire than non-profit purchasers would be, because
 - they seek high returns, and, compared with non-profit owners, are therefore less tolerant of losses or low financial margins
 - they more aggressively buy and close facilities to achieve market dominance.
- There is no free lunch: for-profit hospitals' first duty is to stock-holders, so although those hospitals may achieve some efficiencies, their patients pay more or receive less care.

24. Nor does merging with larger hospitals, with deeper reserves, offer security for vulnerable institutions. Many people today appear to hope that such mergers will help preserve smaller hospitals— and hospitals in less well-off areas— to keep resources where they are needed. Experience suggests otherwise. Merging hospitals often begin by promising to retain all care, and even promise that the merger is a means to buttress a weaker institution. But the weaker party can find itself drained of resources and services— as Addison Gilbert Hospital in Gloucester has, for example, since being acquired by Beverly Hospital⁷¹— leading to destabilization and often to closing.

- After mergers, hospitals tend to consolidate resources in better-off and ethnically-mainstream communities. Again, this frequently happens despite promises before the merger to maintain substantial services at both sites, as occurred recently in Manchester, New Hampshire.⁷² For example,
 - Atlanticare in Lynn shut its doors downtown, consolidating in a more suburban area
 - services moved from Fitchburg's Burbank Hospital to Leominster Hospital
 - St. Margaret's Hospital left Dorchester's high infant death zone for Brighton, and
 - in Manchester, N.H., services are moving from Catholic Medical Center to Elliot Hospital.
- It is also vital to measure the effects of closings on access to care. This is not done in Massachusetts, because we do not evaluate the safety of closings before they occur, or monitor their effects after they occur.

25. First, do no harm.

- The Access and Affordability Monitoring Project has long criticized hospital waste and the dramatic over-building of the 1980s and early 1990s. Hospitals and their highly-skilled accounting firms were certifying that the construction was needed and was financially sound, and proclaiming that it would create thousands of permanent jobs at good pay. (Others encouraged those massive hospital construction projects and praised hospitals as the saviors of the state's economy.) We disagreed on all three counts, opposing the profligate construction publicly. We have also shown that such over-building violated state certificate of need regulations.⁷³
- In confronting aggressive people driven by desires to do good or by edifice complexes, we took the conservative position, against reckless over-building. Now, others aggressively advocate dehospitalization and down-sizing, while we again maintain the conservative position.
- And many hospitals and their experts today have reversed course and speak as if a closed hospital is a good hospital—as long as it is not their hospital.
- As noted above, the safety of the current dehospitalization trend is unproven. But patients are being pushed out of hospitals in many ways. While some patients are satisfied to go home sooner or avoid overnight stays, many—especially those with few family supports—find it difficult to cope at home, as the recent debates over "drive-through" deliveries and mastectomies revealed. It appears that many patients fear these trends will put them at risk. For example, when a major Massachusetts HMO in 1993 gave women the option of going home one day after delivery, only one in ten chose to do so—even with 16 hours of homemaker services⁷⁴—much more post-discharge assistance than health plans generally offer today. Systematic assessments of such dehospitalization are still lacking, yet the trend is accelerating.
- As a result of the dehospitalization trend, closings have accelerated. The burden has been put on communities to show why their hospitals and services are needed—and they have had little recourse even then. As noted above, however, in keeping with the medical admonition to "First, do no harm," advocates of hospital closings and service cuts should be forced to prove that proposed changes would be safe.
- Because that admonition falls just as heavily on policy-makers who propose wholesale changes in the shape of hospitals as it falls on the individual physician treating the individual patient, the bias should be toward conservatism. Instead, our state's bias in the hospital field has, in the past, been toward radical and unproven actions: the massive and unnecessary over-building of the past, which we opposed, and the massive and unnecessary dehospitalization of the present, which we also oppose. These extreme swings, these attempts to make policy by spasm, have often been promoted by the same people and backed by the same consultants. We suggest that it is dangerous to act without a stable and serious view of health care needs and realities. Navigating without a compass can throw hospitals on the rocks.

26. Does having hospital beds still mean filling them? Not given the way we pay for care today. And even the leading early proponent of closings, Walter McClure, recognized that prospects for savings depend largely on the type of hospital closed.

- As U.S. hospital capacity rose at mid-century, "Roemer's Law" recognized that building more hospital beds meant that more would be used.⁷⁵ But that tendency was a product of another era. With the decline of cost reimbursement of hospitals and fee-for-service payment of physicians, the growth of highly competitive and for-profit health plans, and other factors that diminish use of hospitals (as described earlier), Roemer's Law has been repealed.
- A leading early proponent of closings, Walter McClure argued in 1979 that "if done appropriately, at least 20% of the nation's hospital capacity could be retired without threat to health." But the now-repealed Roemer's Law was a manifest foundation of Walter McClure's estimates of the savings from hospital closings.⁷⁶
- Does closing a whole hospital save more money than down-sizing several institutions? While McClure's work originally tended to support the path of closing entire hospitals, he later noted that much depended on the type of hospital closed.
- Further, this major proponent of closings acknowledged in a case study, "The most likely candidates for hospital closure appear to be financially marginal, older hospitals. . . . Unfortunately such hospitals contribute relatively little to rising national hospital expenditures." He concluded that, whether under financial pressure or planning pressure,

it seems especially unlikely that the larger, costlier hospitals will succumb. . . [A]n emphasis on closing capacity is likely to force out the smaller, weaker hospitals. This will require much effort but will only make a small dent in the expenditure problem.⁷⁷

27. Indeed, today's hospital industry down-sizing— through closings, bed-reductions, and mergers— is not advancing efficiency.

- The myth is that competition is prompting hospital mergers to cut costs and boost efficiency. But in reality, many hospital mergers do little to cut costs.
- Some hospital consolidations offer reasonable promise of saving some money. The Beth Israel-Deaconess merger is one example. It may yield real integration of services and diminished duplication.
- But other consolidations may cost more money. The Massachusetts General-Brigham and Women's merger is one example. As the two largest hospitals in the state, they were already big enough to enjoy almost all of whatever economies of scale were available. This merger led to the creation of a wasteful new layer of
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super-ordinate or coordinating departments, and the renting of costly new downtown office space. The merger was designed in large part to win bargaining power in the market— perhaps more than it was designed to reduce costs. And despite the merger, MGH opened a duplicative obstetrics unit with a \$10 million start-up cost. The Partners hospitals trumpeted \$240 million in annual savings (20 percent of their spending), but no savings on anywhere near that scale have been publicized subsequently. Any savings that have been achieved could have been won without merging.⁷⁸

- Another costly merger is that between Burbank (in Fitchburg) and Leominster hospitals.⁷⁹ It has been followed by the consolidation of acute care at Leominster—at a cost of perhaps dozens of millions in new capital spending—despite the original promise that both hospitals would be kept open.
- Instead of bringing efficiency, consolidation is occurring in ways that mean
 - survival of those with geographic monopolies;
 - survival of the fattest— those with the deepest reserves, able to keep their prices low until they can drive competitors out of business; and
 - survival of hospitals able to buy physician practices to assure referrals.

A major reason why MetroWest Medical Center sold to Columbia/HCA was to win a war-chest big enough to fight off Partners' efforts to buy local physicians.

- As we argued when Massachusetts was debating deregulation,⁸⁰ and as some hospitals now acknowledge, many merge mainly to eliminate competitors and to gain market power in their negotiations with HMOs and insurers, and with doctors. But those parties merge, too—and thus will prompt more hospital mergers. Nothing assures that this cycle of greater and greater consolidation will reach equilibrium. This parallels the pre-World War I naval arms race between Britain and Germany.
- So current hospital mergers and closings mean that the number of hospital competitors in our "competitive" system is plummeting. This is reinforced by the near impossibility of opening new hospitals or re-opening closed ones (one sign that this is an unfree market).
- Competition will not last. As noted above, it will be followed by regional monopolies with little need to be responsive to patients, payors, or communities.

28. In summary, the evidence is clear: it is only a myth that competition and the free market will protect the public interest in health care.

- There can be no free market in health care. Many requirements of free markets are absent. Here are some examples. Doctors "sell" care but decide what patients "buy." Some buyers and sellers can set prices. New sellers face high entry barriers. Huge gaps between price and cost signal market failure. So price competition in health care is unfair, not free.
- The dehospitalizers claim that people do not have to judge whether a closing will save money or be safe because the market's invisible hand will decide. But a hospital's accumulated financial reserves do a much better job of predicting survival than does the hospital's efficiency. So the market is closing the wrong hospitals.
- Further, payors are removing patients from hospitals under conditions of market failure. Hospital pricing patterns often make recuperative days and other care look costlier than it really is, resulting in market failure at the micro level. So as HMOs cut their own costs, they raise costs in the health care system as a whole.
- Worse, as more hospitals close, the survivors look forward to gaining geographic monopolies. So higher prices will result— signaling market failure at the macro level.
- Perhaps the richer or more powerful hospitals applaud closings because they know that competition requires competitors. Like the stronger survivors of a shipwreck, they know that having fewer people in the lifeboat means more food for themselves.
- And it is only a myth that present trends— short hospital stays, closings, mergers, staffing cuts— are inevitable. In reality, they mainly reflect explicit private and government decisions about the way we pay for health care. Medicare's shift to per admission payments in the early 1980s encouraged rapid discharges. Massachusetts completely deregulated hospital payment in 1991. Federal and state governments now permit HMOs to pay doctors and hospitals a flat monthly or annual capitation to cover most care for each patient, thus intensifying the incentives to cut hospital care. For-profit HMOs and hospitals skimp on care to pursue huge profits. To survive, non-profits must also compete by price— even though this can mean potentially unsafe staffing patterns. The result shifts costs to patients and undermines vital caregivers. Quality and access to care suffer.
- Today's unfree market is closing many hospitals. The survivors will enjoy great market power in a sellers' market for hospital care. Substantial profits will result. Government re-regulation of prices will follow shortly. In a true free market, this would not be necessary, since high prices would induce new suppliers of hospital care to enter the market in pursuit of those high profits. Higher supply would result, along with more empty beds and, consequently (as discussed earlier), greater willingness to accept Medicaid- or free care pool-financed patients. But entry barriers of high capital costs, tight contracts between HMOs and hospitals, life safety codes, licensing standards, and certificate of need regulation will block entry of new hospitals. Therefore, ironically, regulation not only will be needed in the future to restrain monopolistic pricing, but also is needed today to maintain the slack

capacity essential to induce hospitals to serve vulnerable populations. And, as noted shortly, that reserve capacity is also helpful in emergencies.

- Price competition has been popular in health care because it has filled three roles. It functions simultaneously as
 - a financial battering ram,
 - a political shock absorber, and
 - an institutional smokescreen.
- Financially, price competition has forced hospitals to bid down their prices and obliged many to close. But since over-bedding does not explain high costs here, removing care from hospitals will yield, at best, one-time savings associated with cannibalizing the capital accumulated in our hospitals over many decades. And it will allow survivors to raise prices, requiring regulation. (A summary of the pro's and con's of closing hospitals appears on the following two pages.)
- Politically, competition has already given some states' Medicaid programs—and will soon give Medicare—an excuse to under-pay hospitals or allow HMOs to under-pay hospitals on governments' behalf, without political fall-out. Politicians' hands will look clean and budgets may come into balance. Promises that prevention or primary care could substitute for hospitals will provide additional political cover. But advocates of closing state mental hospitals also promised adequate community care alternatives.
- Institutionally, competition arms the hospitals that expect to survive with sanctimonious slogans. It tells hospitals forced to close that they deserved their fate. It makes the ride exciting. In health care, therefore, competition is the opiate of the managers.⁸¹
- But with no invisible hand present in health care to advance the public good, we need government action to preserve vital caregivers, and thus to protect access and contain cost.

SUMMARY: PRO's AND CON's OF CLOSING HOSPITALS

WHY DO PEOPLE WANT TO CLOSE ALL THESE HOSPITALS?

MAJOR REASONS:

1. Hospital care must be costly—look at the prices they charge. Other sites must be less costly, since they charge so much less.

2. Closing hospitals eliminates costs. Merging hospitals ends duplication, spreads fixed costs, and allows greater economies of scale.

3. More hospitals mean more beds. More beds mean more use, says Roemer's Law, which is a manifest foundation of McClure's estimates of the savings from closings.

4. When reducing beds, closing entire hospitals is the best way to save money, again according to McClure.

5. Competition lets payors squeeze insurers and HMOs. In turn, they squeeze and underpay hospitals, which then close. During this time of cannibalization, payors pay less but care is still provided.

6. We don't need so many hospitals. The health care of the future will rely little on hospitals. It's better to send patients home fast. And prevention promises to substitute lower-cost ambulatory care.

WHY SHOULD WE QUESTION THE POLICY OF CLOSING HOSPITALS?

MAJOR REASONS:

1. Current pricing practices artificially make hospital care look more costly than care outside hospitals, even when it is not.

2. Closings and mergers often eliminate few costs. Construction costs are sunk, and must still be paid after closings. Instead of cutting duplication, many merging hospitals just seek market power, often building local monopolies. That can raise spending.

3. With the end of cost-reimbursement, a bed built no longer is automatically filled. There is no relevant evidence that closing hospitals actually saves money today, given how we finance and deliver hospital care.

4. There is reason to worry that continued closings and dehospitalization will increase spending. For example, as McClure cautions, and as Mass. evidence suggests, the hospitals that are easiest to close are also likely to be the least costly.

5. Cannibalization brings only a one-time saving—until enough hospitals close that survivors win the sellers' market that monopoly endows. Communities lose resources built over generations. Quality can suffer during financial cannibalization.

6. There is no evidence on how many hospitals are needed now, on whether we have too few or too many, or on when we will have closed too many. There is no evidence that closings and dehospitalization of care are safe for patients. Even with the best preventive care, almost everyone will need hospital care eventually.

WHY DO PEOPLE WANT TO CLOSE ALL THESE HOSPITALS?

7. Competition closes unneeded hospitals.

8. Hospital closings will be offset by expanded and improved ambulatory care.

9. Hospitals have won bad reputations and made themselves into villains. High spending, manifest over-building, and neglect of nearby communities of lower-income people all contributed.

10. The hospitals that know they will survive happily toss weaker ones from the lifeboat, leaving more money for survivors. Strong hospitals are surfing on the wave of anti-hospital sentiment—and will usually endure, yet are the very hospitals that did the most to create that sentiment.

11. Closing hospitals is essential because, without it, the competition champions have no policy.

12. Closings promise lower cost and better quality at the same time. The policy of closings rests on planners' accumulated pleadings that consolidation is necessary to save money, in the context of Roemer's Law. And it reflects arguments that consolidation also means better quality.

WHY SHOULD WE QUESTION THE POLICY OF CLOSING HOSPITALS?

7. Again, there is no systematic evidence on which hospitals are needed. And this unfree market is especially likely to close hospitals in poor and minority communities—where unmet health needs are often great.

8. Closings could increase travel time to the ER (or to visit relatives), and leave surviving ERs overcrowded. Communities may lose the practices of physicians whose offices had been convenient to a hospital that closed. Rather than travel farther to care for hospitalized patients, such physicians may move or retire.

9. Hospitals are neither sinners nor saints. Their accumulated resources should not be wasted. Despite their failings, they may be better suited than are HMOs for organizing care for geographic areas and being held accountable for the health of communities.

10. The policy of closings is taking hold a decade or two after it might have been effective—when it might have prevented over-building and when cost-reimbursement and fee-for-service payment tended to fill beds. Closings do not save money today.

11. Rather than being guided by ideology, let's think. Having competition requires having competitors. The policy of closings apparently serves mainly the interests of the hospitals that expect to survive.

12. Again, there is no evidence that closings and dehospitalization are safe. And with Roemer's law repealed, closings may even increase our costs.

IV. STATE ACTION NEEDED— BEFORE IT'S TOO LATE

In the end, public action will be required to identify which hospitals— located where, with how many beds, and with what reserve capacities when disasters strike— are essential to protect the health of the people of the Commonwealth.

29. If you liked paying \$500 billion to bail out the savings and loan industry, you'll love paying to re-build closed hospitals. Re-regulation of hospitals is inevitable. The question is not whether, but when. Why not do it before dangerous and costly damage is done?

- Must we wait to re-regulate until too many hospitals have closed and the survivors enjoy geographic monopolies and higher prices?
- Or shall we wait to re-regulate until after we have incautiously closed so many hospitals that we will have to re-build, too?
- Consider all the public schools that were closed, sold or often given away, and turned into condominiums or other uses in the late 1970s and early 1980s, after the baby-boom generation graduated. Today, many cities and towns must hold classes in lunchrooms or trailers, and are struggling financially, as they find they must build new schools for the children of the baby-boom generation. Some are seeking state aid. The costs incurred as a result of having discarded old schools have not yet, and may never be, tabulated.
- Do we want communities— and state government— to face re-building hospitals, too, in a decade? The cost of building hospitals anew would be prohibitive. And once a hospital is closed, high regulatory thresholds and extraordinarily high costs make it virtually impossible to re-open. While existing facilities are grand-parented in as building and life safety codes are updated, a re-opened facility would have to comply with all current codes. It also would be virtually impossible to restore the organization of human caregivers at the hospital— and, for example, to replicate their knowledge of that community.
- Yet unless we change course, we will have to do more than re-regulate. We will have to re-build. Eventually, people will recognize that hospital closings have gone too far— perhaps just as baby-boomers start reaching ages at which they are much more likely to need hospital care.

30. With the aging of the baby-boom generation, rising need for hospital care is likely to slam up against plummeting hospital capacity early in the new millennium. The resulting resource crunch will endanger us all. And demand will also rise if coverage is extended to people who now cannot pay for needed care.

- People who lack health coverage report serious difficulties in obtaining needed care, and use substantially less hospital care than those who have coverage.⁸² Roughly one in nine Massachusetts residents is uninsured.⁸³ If the Commonwealth makes progress in covering more of our population, hospital use is likely to rise as people gain the ability to pay for the care they need. This increased demand would intensify a resource crunch already anticipated due to population aging.

TABLE 5
NUMBER OF OLDER MASSACHUSETTS RESIDENTS
Actual and Projected, 1980-2025

<u>Year</u>	<u>People ages 55-64</u>	<u>People ages 65 and up</u>
Actual		
1980	588,379	726,531
1985	583,000	782,000
1990	515,055	819,284
1995	471,000	861,000
Projected		
2000	522,000	843,000
2005	643,000	827,000
2010	743,000	863,000
2015	820,000	965,000
2020	871,000	1,092,000
2025	834,000	1,252,000

Note: 1980 and 1990 figures are for 1 April; others are 1 July estimates.

Sources: All data are from U.S. Bureau of the Census.
 1980 figures from Census of Population and Housing, 1980.

1985 estimates from "State Population and Household Estimates, with Age, Sex, and Components of Change, 1981-1988," P-25-1044, August 1989.

1990 figures from Census of Population and Housing, 1990.

All others from "Population Projections for States by Age, Sex, Race, and Hispanic Origin: 1995-2025," PPL-47, October 1996, Table 4.

- The "aging of the Baby Boom generation [is] expected to create major reverberations in the year 2010," *Business and Health* has observed.⁸⁴ The first baby-boomers,

born in 1946, will turn 65 in the year 2011. So unless current policies change, the number of hospitals and beds in the Commonwealth are likely to plummet just when the number of older people, who tend to need more hospital care, will soar. (See TABLE 5, above, and FIGURE 13.) By the year 2025, according to the U.S. Census Bureau, the number of people in Massachusetts who are 55 years old or older is expected to exceed the 1995 figure by 57 percent.

- As a result, the number of hospital beds available per senior here will drop sharply. Consider the effect if the state's bed supply is allowed to fall by the year 2010 to the 4,300 figure that we projected earlier, and then stays there. As FIGURE 14 shows, by the year 2025, there would be just one-tenth as many beds per 1,000 seniors here as existed in 1980 and about one-sixth as many as in 1995.⁸⁵
- Dropping to just 4,300 beds, as noted earlier, would also mean a steep drop in the ratio of beds to the overall population. (See FIGURE 15.⁸⁶) There is reason, however, for particular attention to the projections about older citizens. People aged 65 and over will be increasing not only in number but also as a share of the population. In Massachusetts, the U.S. Census Bureau has projected, 18 percent of the people will be 65 or older in the year 2025, up from 14 percent 1995. And as we age, of course, we tend to need more health care.
- When *Business and Health* expressed concern about aging baby-boomers, as noted above, this reflected awareness that "people over 65 require three times as many hospital days as those who are 40 and under."⁸⁷ Other data suggest even larger age-based disparities in hospital use rates. The National Hospital Discharge Study,⁸⁸ reported that in 1993, hospital use in days per 1,000 people was:
 - 399 days for people aged 15-44
 - 785 days for ages 45-64, and
 - 1927 for people aged 65-74.

In other words, hospital use by people aged 45-64—the age bracket that baby-boomers have started to enter—was nearly double that of people aged 15-44. And hospital days rose another 2.5-fold among people aged 65-74—the range boomers will begin reaching in 2011.

- Even if hospital use by all ages diminishes under intensified managed care pressures, older people will still use far more hospital care than younger people. The precise ratios may change, but roughly comparable age-based disparities are likely to persist. So the aging of the huge baby-boom population may mean a huge hike in demand for hospital services. Since aging occurs steadily, its rising impact may be felt steadily both before and after 2010.
- Thus, early in the new millennium, a rising need for hospital care may slam up against diminished hospital capacity. The impending explosive impact of the baby-boom is widely mentioned in relation to Medicare costs, but it is rarely noted in discussions of the anticipated radical down-sizing of hospitals.

Figure 13

PEOPLE AGED 55+ VERSUS HOSPITAL BEDS
Massachusetts, 1980 - 2025

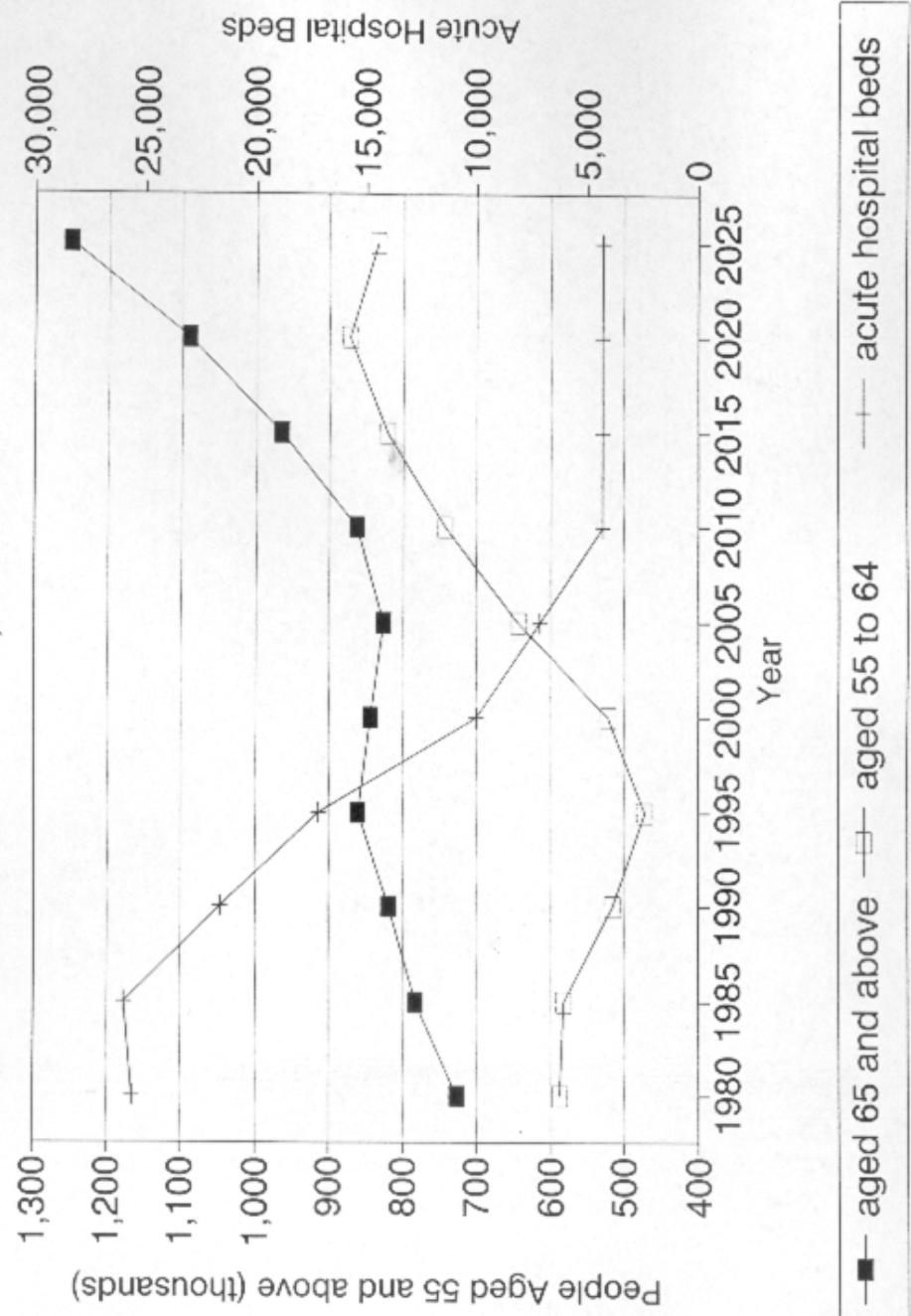
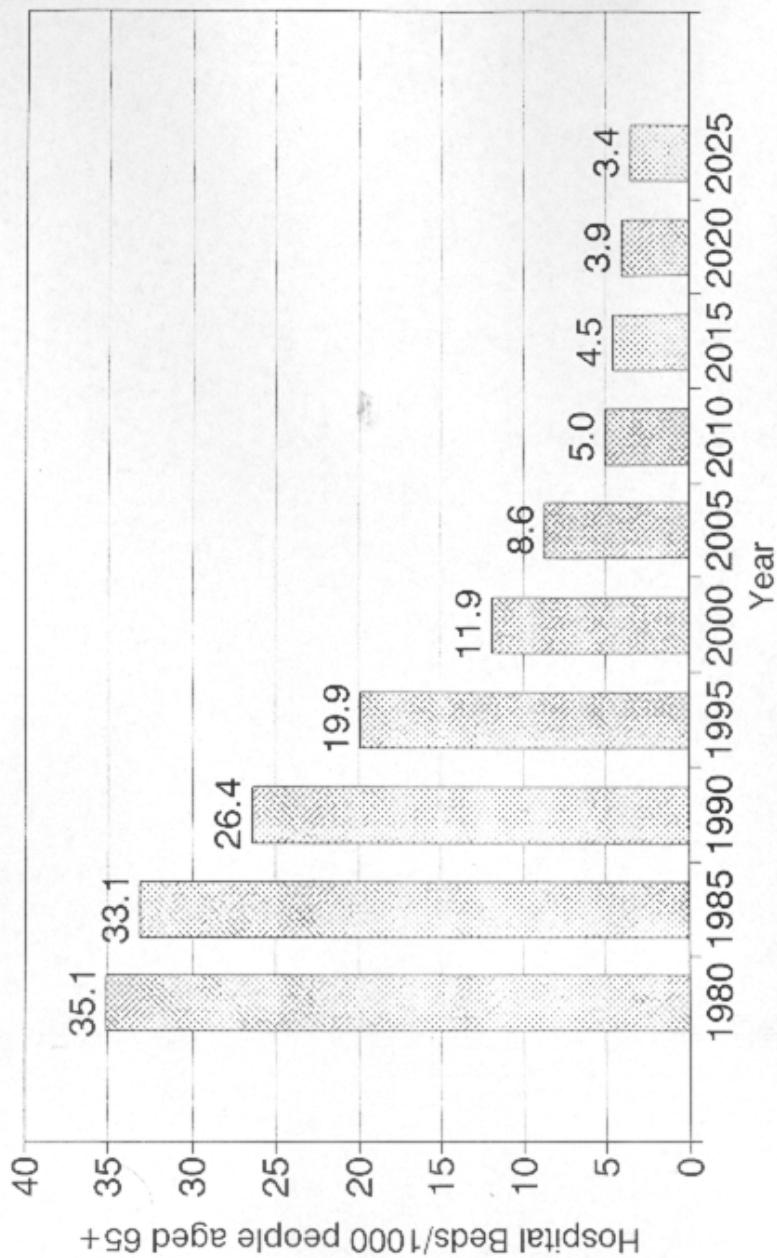


Figure 14

HOSPITAL BEDS/1000 PEOPLE AGED 65+
Massachusetts, 1980 - 2025



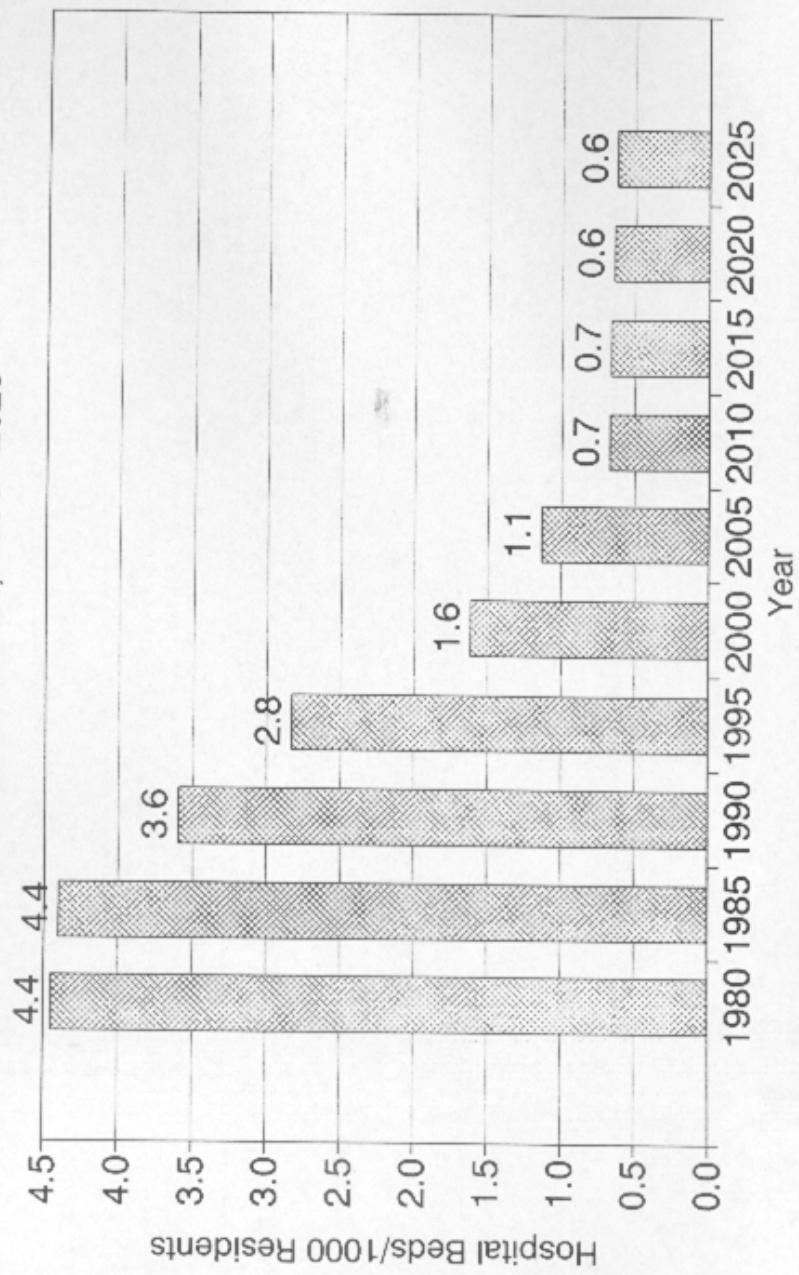
Assumption: Mass. reaches 4,300 beds in 2010 and remains at that level.

AAMP, BUSPH, 1997

Figure 15

HOSPITAL BEDS/1000 RESIDENTS

Massachusetts, 1980 - 2025



Assumption: Mass. reaches 4,300 beds in 2010 and remains at that level.

AAMP, BUSPH, 1997



- Further, the consequences will not be borne by seniors alone. If we permit drastic shrinkage of our hospital capacity despite our aging population, the resulting resource crunch will endanger us all. A few years ago, many patients in New York City—including well-insured patients—endured long waits for care and severe overcrowding when the AIDS crisis and other problems suddenly increased demand for hospital care. Do health care policy-makers here want to risk having Massachusetts citizens (perhaps themselves or their parents) treated in hospital hallways or stuck in emergency rooms waiting for inpatient beds? Or shall we stop the tide of closings, think about how many and which hospitals we need, and act to preserve them—before it's too late?

31. Neither state nor federal government policies today provide protection against closure for hospitals crushed by competitive pressures—no matter how essential a particular hospital may be to maintaining access to care.

- Strikingly, the Massachusetts Hospital Association (MHA)—which asserts that closings are natural and "no surprise"—contended recently that "a variety of protections [are] in place to ensure that access to care is protected and needed hospitals survive."⁸⁹ Indeed, the MHA told the *Boston Herald* that state and federal laws exist to safeguard needed hospitals.⁹⁰ Which laws? There is no foundation for these MHA claims.
- And the evidence that hospitals nationwide have been most likely to close in poor and minority communities—which tend to be high-need communities—further suggests that the industry is making false assurances.
- Moreover, in response to the first edition of this report and a related *Boston Globe* article, the MHA wrote that the attorney general and the Department of Public Health "already exercise extensive regulatory authority...."⁹¹ Those regulatory powers, however, do not include the power to stop closings. (Nor have they stopped hospital mergers which reduced competition. Almost all recent mergers here—including the Partners merger of the state's two largest hospitals—have been allowed without even a public hearing.)
- Lamentably, as discussed in Points 6 and 21 of this report, the MHA apparently agrees that hospitals should close, and has not yet been willing to engage with the real problems posed here. We urge the smart and decent people of the MHA to reconsider. The MHA's responses simply embrace a free market mindset—ignoring the evidence of market failure—and betray no interest in helping to find answers. In a recent hearing,⁹² after opposing a state legislative proposal (described shortly) to help sustain needed but threatened Massachusetts hospitals, the MHA was challenged by the committee chairman to offer its own proposed methods for assuring the survival of needed hospitals. The MHA's more recent comments in the *Boston Globe*⁹³ suggest that it still has no such recommendations.
- Yet new approaches are vital. If a hospital is needed but is inefficient owing to bad management or a high cost structure, the solution is not to close it. The community should not be punished. Instead, a restructuring is needed, to reduce costs.

- And if a hospital is needed, efficient, and still threatened with bankruptcy, the problem is one of insufficient revenue. That should be addressed.
- When will enough people agree that the problem of hospital closings has become serious enough to warrant attention by state government? When we reach 60 hospitals? 40? 20? 10? If government does not think ahead, any action may come too late to save needed hospitals. Proposed stabilization legislation calls for a pause before many more hospitals are allowed to close without assessment.

32. Steps to help preserve needed hospitals could include those proposed in the hospital stabilization legislation sponsored by state representatives Emile Goguen and James Marzilli (very similar bills filed as House 1311 and House 3442):

a. Require the Commissioner of Public Health to

- set standards for judging which hospitals are needed by their communities, by weighing need for specific important services (for example, safe travel times to emergency rooms)
- identify all hospitals needed to protect the health of the public, according to those standards, and
- identify all financially vulnerable hospitals.

b. Create a stabilization pool to protect hospitals which are needed but vulnerable.

- Stabilization and preservation assistance could be either:
 - financing for technical and managerial assistance for a hospital needing revitalization, or
 - partial under-writing of a needed but financially-distressed hospital's capital and operating costs.
- This pool has parallels:
 - Designed to protect hospitals that serve all people, it would complement the hospital free care pool—but be just one-twelfth the size.
 - It resembles the FHA mortgage insurance mechanism introduced after World War II—which provided back-up in case of financial distress in individual households. That stabilized the housing market and allowed many more people to buy homes.
- The stabilization pool would be financed by
 - all acute hospitals statewide,

- each contributing one-quarter of one percent of its revenues,
- yielding a pool of about \$25 million this year (accumulating to a maximum of one percent of statewide hospital revenues).
- This mechanism would not diminish hospital margins— they would remain intact statewide. The pool would simply recycle a tiny fraction of hospital revenue within the industry to the institutions that need it most.
- This mechanism would not cost \$1 in public revenue.
- This mechanism would not boost already ample health care spending.

c. Establish receivership provisions.

- These will allow the state to appoint a receiver to stabilize a hospital in danger of closing but needed by its community.
- Note that the proposed legislative language on receivership follows the model of the state's nursing home receivership statute where that is appropriate. However, the tools needed are substantially different because the goal in the case of a nursing home has usually been to facilitate a smooth closing; with hospitals, the goal is to stabilize needed institutions and keep them open.

33. To correct one aspect of market failure and to promote efficiency, hospitals could be required to price services more accurately and fairly.

- State legislation could require that all hospital services be priced in a fair relation to their incremental costs plus their appropriate shares of fixed costs. This would not mean that each hospital must charge the same price for the same service. Rather, each hospital would price its own services fairly relative to its other services. So the first day of a typical hospital stay, for example, would be priced high, but subsequent days would have much lower prices. Similarly, non-emergency visits to the ER would be priced at their incremental cost, which is typically very low. (These prices would not cover a part of the ER's fixed costs, since those were incurred to support emergency services.)
- HMOs and other insurers could be obliged to pay for services in the same way.
- Pricing relationships could be considered hospital-wide, or they simply could be considered within each department, if cross-subsidies for certain services still were deemed socially valuable.
- Such a measure would be useful because hospitals' traditional pricing patterns—which many HMOs demand that they continue—distort the real costs of much of the care that hospitals provide, contributing to market failure. Regulatory intervention is warranted because, given HMO market power today, hospitals would probably find it impossible to move individually to more accurate and fair pricing.

34. To conserve resources today and provide a safety valve for the future, Massachusetts should maintain both a ready reserve and a mothballed reserve of hospital beds.

- One provision of the state's 1988 universal health care law reflected the mistaken assumption that empty beds are costly to maintain. It requires the Department of Public Health to review annually each acute hospital's average occupancy rate. In low occupancy hospitals, the Department automatically cuts the number of licensed beds⁹⁴ to bring occupancy up to at least 75 percent.⁹⁵ But because empty beds are generally unstaffed, this requirement saves very little money.
- Further, with hospitals closing and with automatic bed de-licensing, Massachusetts is skating on the edge of a health care disaster. Continuing loss of hospital capacity raises concern that we are losing the ability to cope with a natural (or unnatural) disaster—an earthquake, influenza epidemic, air pollution crisis, gas explosion, or countless other events that are rare but real possibilities.⁹⁶ When car makers try to match delivery of parts precisely to use, instead of maintaining an inventory of parts, a strike at one "just-in-time" supplier can bring car assembly to a standstill. In hospitals, trying to match capacity too closely to use could bring catastrophe. Having some "inventory" is critical when the product means life or death.
- The risk of having too few available beds appears greater here than nationally. As compared with the U.S. average, we have both fewer beds per capita (as was shown earlier in FIGURE 2) and consistently higher hospital occupancy rates. Throughout the 1980s and 1990s, average hospital occupancy has been five to nine percentage points higher in Massachusetts than for the nation as a whole.⁹⁷
- The state's bed de-licensing requirement is coupled with a useful provision, which may not be widely known, for simple re-licensing. It permits a gradual increase in the number of licensed beds for a hospital that experiences 85 percent occupancy for three consecutive months.⁹⁸ These Lazarus beds can help hospitals adapt to relatively gradual increases in demand.
- But for hospitals to re-license beds, they must have kept some in mothballs. Further, the re-licensing process is not designed for response to sudden large increases in demand. To maintain flexibility as hospitals down-size, it seems vital for a number of them to keep two reserves of licensed but unstaffed beds—a "ready reserve" of beds that could be brought into use in a couple of days (using temporary or re-assigned staffing), and a larger "mothballed reserve" that might take a few weeks to bring on line. Beds that remain licensed, even if mothballed, would remain grandfathered in under life-safety codes, rather than having to upgrade to meet current codes before re-opening.
- Maintaining such mothballed beds means not converting acute beds to other uses. This imposed opportunity costs on hospitals. It could be appropriate for the state to provide some financial support for these proposed reserves because they would represent an essential protection of the public's health.

35. Other useful steps might be:

- a. Prohibit any more conversions to for-profit hospitals.
- b. Require "Community Impact Statements" for proposed cuts in hospital services; assume existing hospitals and services are needed unless proven otherwise.
- c. Hold public officials accountable for securing affordable, quality care for all through these and other measures.

36. We also need longer-term changes.

- Clearly these proposed measures won't solve the hospital stabilization problem for the long term, but they offer stop-gap protection that will help prevent catastrophe now.
- Then, after our state stops being short-sighted, we can begin thinking about a more rational way to finance hospitals and health care, and to contain cost. The inevitably unfree market in health care cannot handle the job. But Massachusetts health care still relies on decisions of the market, since it is now the only purported cost control tool available. So its heavy hand is causing needless pain. Instead, because health care will never have the magic touch of an invisible hand to transform the sum of private interests into the public interest, we must use our invisible brains. We must think.
- After determining which hospitals are essential to protect the health of the people of the Commonwealth, further public action will be necessary to ensure that each such hospital is paid enough money to remain in business, if operated efficiently.
- Devising new financing strategies will require identifying the causes of our health care problems and developing policies to counter those causes. It will also require negotiating a peace treaty in health care— one that respects the need to contain spending, but does so in ways that leave us enough hospitals, beds, emergency rooms, and other resources to protect the health of the public. Forging such a peace treaty will be exasperating, as most political decisions are in a democracy. It will be painful, but not as painful as having to find the money to re-build 50 hospitals.
- Some people say that only the market can close hospitals, that making political decisions to close hospitals is too difficult. They conclude, as a result, that hospitals would not be closed if politics governed survival. Some say that the Massachusetts experience with the Acute Hospital Conversion Board (from 1988 to 1991) confirms this view. But if hospital closings do not save money, the policy of closing hospitals must be re-evaluated. And if reliance on the crypto-market's decisions means wrongly closing the cheaper hospitals, that policy must be re-evaluated.

- To contain health costs, we all should focus instead on the key decision: limiting the amount of money spent on health care. Once that decision is made, the challenge is to divide available resources among legitimate competing claims. Every other country has figured out how to do that— without torturing themselves, without propagating an epidemic of incentives to underserve. So the Commonwealth and the nation can do so, too. We are already spending amply to provide the care that works for all the people who need it, and to sustain needed hospitals and other vital caregivers.

NOTES

¹Access and Affordability Monitoring Project, The World's Most Expensive Hospitals: One-fifth of Massachusetts Hospital Costs Appear Unjustified, Boston: The Project, 1 February 1991. See also Access and Affordability Monitoring Project, "Paying for Our Mistakes—Wrong Incentives Help Boost 1989 Hospital Costs and Use," Boston: The Project, 2 July 1991.

²Access and Affordability Monitoring Project calculations using data from annual editions of American Hospital Association, Hospital Statistics, Chicago: The Association, and from the United States Bureau of the Census.

³Access and Affordability Monitoring Project analysis of data from American Hospital Association, Hospital Statistics, Chicago: The Association, 1996 and United States Bureau of the Census.

⁴We estimated the increase in this state's hospital costs attributable to teaching costs in Access and Affordability Monitoring Project, The World's Most Expensive Hospitals: One-fifth of Massachusetts Hospital Costs Appear Unjustified, Boston: The Project, 1 February 1991.

⁵Finding more secure and equitable ways of paying for appropriate levels of medical research and education is increasingly critical, as the unwillingness of payors — and especially of managed care plans — to help support such functions increasingly puts them in jeopardy. See, for example, Suzanne Gordon, "Is research being 'managed' out of existence?" Boston Globe, 13 October 1996; John Iglehart, "The American Health Care System: Teaching Hospitals," New England Journal of Medicine, Vol. 329, No. 14 (30 September 1993), pp. 1052-1056.

⁶See discussion in Access and Affordability Monitoring Project, The World's Most Expensive Hospitals: One-fifth of Massachusetts Hospital Costs Appear Unjustified, Boston: The Project, 1 February 1991. See also Access and Affordability Monitoring Project, "Effects of Chapter 495; the Road to Health Care for All; Preparing for National Health Care Reform," invited testimony to Massachusetts Senate Committee on Post Audit and Oversight, 6 January 1994.

⁷Access and Affordability Monitoring Project analysis of data from American Hospital Association, Hospital Statistics, Chicago: The Association, 1996 and United States Bureau of the Census.

⁸Access and Affordability Monitoring Project, The World's Most Expensive Hospitals: One-fifth of Massachusetts Hospital Costs Appear Unjustified, Boston: The Project, 1 February 1991.

⁹We estimated net earnings for out-of-state inpatients at about 4.4 percent of hospital patient revenues. We concluded that out-of-state patients' share of total hospital and health spending here was probably below our estimate of 3.3-5.0 percent for inpatient hospital spending. Access and Affordability Monitoring Project, Hospital Expenses: Massachusetts vs. United States, Boston: The Project, 11 September 1990; Access and Affordability Monitoring Project, The World's Most Expensive Hospitals: One-fifth of Massachusetts Hospital Costs Appear Unjustified, Boston: The Project, 1 February 1991.

¹⁰Even these figures necessarily overstate the share of Massachusetts hospital costs attributable to serving out-of-staters. The incremental or variable cost of that care should be measured.

¹¹Access and Affordability Monitoring Project calculation from American Hospital Association, Hospital Statistics, Chicago: The Association, 1996, and U.S. Bureau of the Census.

¹²Access and Affordability Monitoring Project analysis of data from annual issues of American Hospital Association, Hospital Statistics, Chicago: The Association, and from the U.S. Bureau of

the Census. (Data for 1996 are not yet available.)

¹³Access and Affordability Monitoring Project calculation from data in George J. Schieber, and others, "U.S. health expenditure performance: An international comparison and data update," Health Care Financing Review, Vol. 13, No. 4 (Summer 1992), pp. 1-87.

¹⁴See Access and Affordability Monitoring Project, Promise and Performance — "An Act to Make Health Security Available to All Citizens of the Commonwealth and Improve Hospital Financing" (Chapter 23 of the Acts of 1988), Boston: The Project, 9 April 1989.

¹⁵The Massachusetts Hospital Association supported deregulatory legislation while acknowledging that it would close 10-15 hospitals within three years. (See AAMP, Which Hospitals are Vulnerable?, Boston: The Project, 28 October 1991.) And, for example, Mount Auburn Hospital's president at the time reportedly said, "I believe there are already too many hospitals in the Metro Boston area." (As cited in Doreen Iudica, "Area hospitals mull options for competing," Boston Globe, 15 December 1991.)

¹⁶See, for example, association views paraphrased in Amy Sessler, "Dying hospitals find new leases on life," Boston Globe, 7 February 1994, and quoted in Eric Convey, "Report: Acute care hospitals may dwindle," Boston Herald, 10 April 1997.

¹⁷As quoted in Eric Convey, "Report: Acute care hospitals may dwindle," Boston Herald, 10 April 1997.

¹⁸See Alan Sager, "The Opiate of the Managers," Society, Vol. 23, No. 5 (July-August 1986), pp. 65-71.

¹⁹Earlier years as reported in annual issues of American Hospital Association, Guide to the Health Care Field (Chicago: The Association); 1997 data from Massachusetts Hospital Association, "Massachusetts Hospital Closures/Conversions: 1980-Present," 2 February 1997.

²⁰The following bed data reflect Access and Affordability Monitoring Project calculations from annual issues of American Hospital Association, Hospital Statistics, Chicago: The Association, and from U.S. Bureau of the Census.

²¹This bar graph reflects an Access and Affordability Monitoring Project tabulation, using bed numbers for hospitals open in each year, as reported in annual issues of American Hospital Association, Guide to the Health Care Field (Chicago: The Association). The 1997 figure reflects hospitals surviving to 1997, but uses the available 1995 bed values.

²²Alan Sager and Deborah Socolar, "Urban Hospital Closings, Relocations, and Other Reconfigurations, 1936 to 1995," presentation to American Public Health Association, 18 November 1996; Alan Sager, "Why Urban Voluntary Hospitals Close," Health Services Research, Vol. 18, No. 3 (Fall 1983), pp. 451-75; Alan Sager, "The Reconfiguration of Urban Hospital Care: 1937-1980," in Ann Lennarson Greer and Scott Greer, eds., Cities and Sickness: Health Care in Urban America, Beverly Hills: Sage, 1983, pp. 55-98.

²³This refers to the significance of the b-coefficient in regressions. See Alan Sager and Deborah Socolar, "Urban Hospital Closings, Relocations, and Other Reconfigurations, 1936 to 1995," presentation to American Public Health Association, 18 November 1996; Alan Sager, "Why Urban Voluntary Hospitals Close," Health Services Research, Vol. 18, No. 3 (Fall 1983), pp. 451-475.

²⁴Access and Affordability Monitoring Project analysis of data from annual editions of American Hospital Association, Hospital Statistics, Chicago: The Association, 1991 to 1996, and United

States Bureau of the Census.

²⁵Uwe Reinhardt, "Spending More Through 'Cost Control': Our Obsessive Quest To Gut the Hospital," Health Affairs, Vol. 15, No. 2 (Summer 1996), p. 148.

²⁶Alan Sager and Deborah Socolar, "Testimony on Massachusetts Senate Bill 1926, An Act Expanding Childbirth and Post Partum Care Benefits," 11 July 1995.

²⁷Alan Sager and Deborah Socolar, "Testimony on Massachusetts Senate Bill 1926, An Act Expanding Childbirth and Post Partum Care Benefits," 11 July 1995.

²⁸Robert M. Williams, "The Costs of Visits to Emergency Departments," New England Journal of Medicine, Vol. 334, No. 10 (7 March 1996), pp. 642-6. See also related evidence summarized in 26 October 1996 talk by Gary Fleisher, chief of emergency medicine, Children's Hospital, Boston.

²⁹Alan Sager and Deborah Socolar, "Does Massachusetts Need Additional Freestanding Ambulatory Surgical Capacity?" 26 June 1995; Dolores Kong, "New walk-in surgical clinics approved, ending moratorium," Boston Globe, 28 June 1995.

³⁰See, for example, Rina K. Spence, "As health care changes, so must the hospital system," Boston Globe, 30 December 1993.

³¹As quoted in John Holusha, "Hospitals' Use of Satellite Centers Is Growing," New York Times, 17 November 1996.

³²See, for example, "MGH Vital Signs: FY 1997 second quarter results," MGH Hotline, 18 April 1997.

³³John Ross, personal communication.

³⁴Alex Pham, "HMOs facing unexpected costs surge," Boston Globe, 2 August 1996.

³⁵Katharine R. Levit and others, "National Health Expenditures, 1994," Health Care Financing Review, Vol. 17, No. 3 (Spring 1996), Table 10, p. 230.

³⁶See, for example, Deborah Glotzer, Alan Sager, Deborah Socolar, and Michael Weitzman, "Prior Approval in the Pediatric Emergency Room," Pediatrics, Vol. 88, No. 4 (October 1991), pp. 674-80; Deborah Socolar, Alan Sager, and Peter Hiam, "Competing to Death: California's High Risk System," Journal of American Health Policy, March-April 1992, pp. 45-50; Alan Sager and Deborah Socolar, "Does Massachusetts Need Additional Freestanding Ambulatory Surgical Capacity?" 26 June 1995; Alan Sager and Deborah Socolar, "Testimony on Massachusetts Senate Bill 1926, An Act Expanding Childbirth and Post Partum Care Benefits," 11 July 1995.

³⁷Uwe Reinhardt, "Spending More Through 'Cost Control': Our Obsessive Quest To Gut the Hospital," Health Affairs, Vol. 15, No. 2 (Summer 1996), pp. 145-154.

³⁸Access and Affordability Monitoring Project, Paying for Our Mistakes: Wrong Incentives Help Boost 1989 Hospital Costs and Use, Boston: The Project, 2 July 1991.

³⁹Then-Secretary of Human Services Philip Johnston, as quoted in "Hospital workers rally against health proposal," Boston Globe, 17 September 1987. (Cited in Access and Affordability Monitoring Project, Promise and Performance— "An Act to Make Health Security Available to All

Citizens of the Commonwealth and Improve Hospital Financing", Boston: The Project, 9 April 1989.)

⁴⁰See Access and Affordability Monitoring Project, Promise and Performance— "An Act to Make Health Security Available to All Citizens of the Commonwealth and Improve Hospital Financing", Boston: The Project, 9 April 1989.

⁴¹Findings reported in Alan Sager and Deborah Socolar, testimony before the Health Care Committee on H. 4822, "An Act to Stabilize and Preserve Essential Community Hospitals," 25 April 1995. See also Dolores Kong, "BU researchers find no savings in hospitals closings, competition," Boston Globe, 25 April 1995.

⁴²Access and Affordability Monitoring Project calculations from annual issues of American Hospital Association, Hospital Statistics, Chicago: The Association, and from U.S. Bureau of the Census.

⁴³Access and Affordability Monitoring Project calculations from unpublished Health Care Financing Administration data accompanying Katharine Levit and others, "State Health Expenditure Accounts: Building Blocks for State Health Spending Analysis," Health Care Financing Review, Vol. 17, No. 1 (Fall 1995), pp. 201-254.

⁴⁴Access and Affordability Monitoring Project calculations from unpublished Health Care Financing Administration data accompanying Katharine Levit and others, "State Health Expenditure Accounts: Building Blocks for State Health Spending Analysis," Health Care Financing Review, Vol. 17, No. 1 (Fall 1995), pp. 201-254.

⁴⁵Donald S. Shepard, "Estimating the Effect of Hospital Closure on Areawide Inpatient Hospital Costs: A Preliminary Model and Application," Health Services Research, Vol. 18, No. 4 (Winter 1983), p. 513-550.

⁴⁶Alan Sager and Deborah Socolar, "Urban Hospital Closings, Relocations, and Other Reconfigurations, 1936 to 1995," presentation to American Public Health Association, 18 November 1996; Alan Sager, "Why Urban Voluntary Hospitals Close," Health Services Research, Vol. 18, No. 3, Fall 1983, pp. 451-75; Alan Sager, "The Reconfiguration of Urban Hospital Care: 1937-1980," in Ann Lennarson Greer and Scott Greer, eds., Cities and Sickness: Health Care in Urban America, Beverly Hills: Sage, 1983, pp. 55-98.

⁴⁷ This approach could be part of a broader strategy for organizing affordable universal health care coverage, as summarized in Alan Sager and Deborah Socolar, "A 10-step plan for healthy HMOs," Boston Globe, 10 September 1996. A smaller-scale example of how hospitals' geographic service areas might be built on to improve access to care for vulnerable people was described in Alan Sager and Deborah Socolar, "Health Care for Boston," in Joseph R. Baressi and Joseph S. Slavet, eds., Boston Update '94, Boston: John W. McCormack Institute of Public Affairs, University of Massachusetts, April 1994. This proposal suggested dividing Boston into "backstop" areas, each linked to one hospital which would be required both to serve anyone who seeks care (with funding from an expanded free care pool) and to plan, provide, and catalyze services to address unmet need in the area for which it is the backstop.

⁴⁸This reflects income in the town where the hospital was located, for hospitals outside Boston. For Boston hospitals, it reflects income in the hospital's census tract and those adjacent tracts which together form an area whose outer boundaries are roughly equidistant from the hospital.

⁴⁹HMO-PPO Digest, Kansas City, MO: Hoechst Marion Roussel, 1996.

⁵⁰Sources: American Hospital Association, Hospital Statistics, 1995-1996 edition, Chicago: The

Association, 1996, Table 3C; and data compiled by the Advisory Board Company from the Health Care Financing Administration's 1995 Data Compendium, the Marion-Merrell Dow 1995 HMO-PPO Digest, Advisory Board Company interviews, and Advisory Board Company estimates.

⁵¹Note that the population figure of 6.2 million is not age-adjusted.

⁵²Access and Affordability Monitoring Project analysis of data from American Hospital Association, Hospital Statistics, Chicago: The Association, 1988 and 1996, and from the U.S. Bureau of the Census.

⁵³Sachs Group forecast cited in Cathy Tokarski, "The case of the vanishing inpatient," Business and Health: The State of Health Care in America, 1996, pp. 36-38.

⁵⁴Bed numbers as reported in American Hospital Association, Guide to the Health Care Field, Chicago: The Association, 1991.

⁵⁵Sachs Group forecast cited in Cathy Tokarski, "The case of the vanishing inpatient," Business and Health: The State of Health Care in America, 1996, pp. 36-38.

⁵⁶This approach is conservative. It provided a reasonable frame for our work. Although it may seem to endorse the 1990 distribution of beds among counties as appropriate, it simply recognizes that the factors influencing hospital survival to 1990 may persist. Other analyses that do not keep beds proportionate to 1990 county totals could yield slightly different results. For example, factoring in the age distribution for each county, and projected changes in the age-mix, could lead to changes in the estimate of relative bed demand by county.

⁵⁷Any framework of analysis introduces certain arbitrary elements. For example, using the county framework may mean predicting that more hospitals will survive in western Massachusetts than other frameworks might suggest. MAP 3 shows one hospital preserved in 2010 in each of Franklin, Hampshire, and Hampden counties, and one in Worcester county. That result might seem unlikely, since Worcester county has as many people as the other three counties combined. But looking at population concentrations or transportation patterns might yield a similar result. The city of Worcester is located centrally within that county, with good roads radiating from it. In the tier of three counties to its west, however, Springfield is the population center but is some distance from the geographic center. Other frameworks, therefore, might also predict survival of more than one hospital in that part of the state. (Again, it is important to recognize that our illustrative predictions of hospital survival do not reflect our view of what is either inevitable or desirable.)

⁵⁸On projections that ambulance costs will rise when hospitals and ERs close, see for example, Sally Kuhn, "Town to hospital: 'We're not going away,'" Ipswich (Mass.) Chronicle, 22 May 1997.

⁵⁹For example, an HIV counselor told the California Nurses Association (CNA) of a client who was caring for an HIV-positive relative and needed counseling after she sustained several needle sticks. She had been expected to give injections despite having no previous medical training or experience. She may have borne the ultimate in uncounted cost-shifting. (CNA, "Patient Watch" notice, undated.)

⁶⁰See, for example, Gail Douglas, "Beware the California health care experience," Massachusetts Nurse, March 1997, p. 5.

⁶¹Yes on Proposition 216 coalition, "HMO Casualty of the Day," 18 September 1996"; and Gail Douglas, personal communication.

⁶² See, for example, Alan Sager and Deborah Socolar, "Before It's Too Late: Why Additional For-profit Hospitals and HMOs Should Be Outlawed in Massachusetts," testimony to the Health Care Committee, 11 March 1997; Alan Sager and Deborah Socolar, "No More Band-Aids: To Win Trustworthy Managed Care, We Must Change the Rules that Make HMOs Do the Wrong Things," testimony to the Health Care Committee on Omnibus Managed Care Bill, 7 April 1997; and Deborah Socolar and Alan Sager, "Will There Be A Nurse When You Need One? Declining Staffing Ratios in Massachusetts Hospitals," testimony to the Health Care Committee, 15 May 1997.

⁶³See, for example, Elisabeth Rosenthal, "The H.M.O. Catch: When Healthier Isn't Cheaper," New York Times, 15 March 1997. See also David Stipp, "Prevention May Be Costlier Than a Cure," Wall Street Journal, 6 July 1994.

⁶⁴Alan Sager, Charles Donahue, Eliot Stone, Hospital Care for Lowell, a report to the Raytheon Company, 10 July 1991. See also Deborah Socolar and Alan Sager, "Research and Policy Advocacy for Equity and Cost Control," presentation to American Public Health Association, 2 November 1994.

⁶⁵Findings presented at a seminar on access to care, summarized in Center for Studying Health System Change, "Defining and Measuring Access to Care," Issue Brief, No. 8 (April 1997), p.2.

⁶⁶See, for example, Ernest M. Gruenberg and Janet Archer, "Abandonment of Responsibility for the Seriously Mentally Ill," Milbank Memorial Fund Quarterly/Health and Society, Vol. 57, No. 4 (1979), pp. 485-506; Jonathan F. Borus, "Sounding Board: Deinstitutionalization of the Chronically Mentally Ill," New England Journal of Medicine, Vol. 305, No. 6 (6 August 1981), pp. 339-342; E.L. Bassuk and S. Gerson, "Deinstitutionalization and Mental Health Services," Scientific American, Vol. 238, No. 2 (February 1978), pp. 46-53.

⁶⁷This trend was summarized in a recent Boston Globe Spotlight Team series entitled, "Locked wards open door to booming business." A companion article noted that "despite promises of increased money for community mental health centers, monthly rates for providers have dropped steadily in the past five years and the overall [Department of Mental Health] outpatient budget has decreased from \$9.6 million to \$8.2 million. See Dolores Kong and Gerard O'Neill, "A shadow government behind the numbers," Boston Globe, 11 May 1997.

⁶⁸Mareasa R. Isaacs, The Use of Nursing Homes as Long-Term Care Facilities for the Chronically Mentally Ill, Bethesda: The Alpha Center for Health Planning, February 1982.

⁶⁹Ronald M. Hollander, "Mass. hospital consolidation: Story proposed wrong answers," Boston Sunday Globe, letter to the editor, 25 May 1997. (Letter was written in response to Alan Sager and Deborah Socolar, "Imprudent and impatient— Are hospitals closing too fast and for insufficient reasons?" Boston Sunday Globe, Focus section, 27 April 1997.)

⁷⁰Ronald M. Hollander, "Mass. hospital consolidation: Story proposed wrong answers," Boston Sunday Globe, letter to the editor, 25 May 1997.

⁷¹See, for example, Margaret O'Malley, Partners for Addison Gilbert Hospital (PAGH), press releases, 9 April 1997 and 23 February 1997; Peggy O'Malley, "We have a responsibility to health care," Gloucester Daily Times, 27 February 1997; J.F. Muench, "Health care being swamped by greed," letter to the editor, Gloucester Daily Times, 27 February 1997; Margaret

O'Malley, PAGH, "Opening Remarks to David Mulligan et al.," 8 January 1997; Margaret O'Malley and Katherine E. Nutbrown, PAGH, letter to Massachusetts Attorney General Scott Harshbarger, 1 December 1996.

⁷²See, for example, Alan Sager, presentation and testimony on "Optima Health's Application for a Certificate of Need," 25 July 1995; and Alan Sager, Report on "Optima Health's Application for a Certificate of Need," 11 July 1996. (Both were prepared for hearings before the New Hampshire Health Services Planning and Review Board on behalf of the Community Action Group to Save Catholic Medical Center.)

⁷³See, for example, a series of Access and Affordability Monitoring Project reports on the subject Why Worcester's Medical City Isn't Needed and Shouldn't be Built, Boston: The Project, December 1993 - February 1994; also "Worcester's Medical City: Why Not," 27 October 1992. See also Alan Sager, letter to David H. Mulligan, Massachusetts Commissioner of Public Health, 26 December 1990; Access and Affordability Monitoring Project, A Reckless Miscalculation: Spending More to Serve Fewer People— The Weld Administration's Competitive Hospital Payment Plan, Boston: The Project, 16 September 1991, especially pp. 5, 38, 52-4, 74; and Access and Affordability Monitoring Project, California's Catastrophic Competition, 28 October 1991.

⁷⁴Harvard Community Health Plan announced in 1993 that it would end this policy, and start requiring one-day discharges— without the aide's services. See "Short-changing maternity care," editorial, Patriot-Ledger, 4 December 1993.

⁷⁵Milton I. Roemer, "Bed Supply and Hospital Utilization: A Natural Experiment," Hospitals, Vol. 35 (1 November 1961), pp. 36-42; M.I. Roemer and M. Shain, Hospital Utilization Under Insurance, Chicago: American Hospital Association, 1959.

⁷⁶That presumed cutting hospital use "by just 8% to 1100 days per 1000 persons by eliminating the most inappropriate use," and achieving 85 percent occupancy. He also argued that if done by closing whole hospitals, the quality of care could be improved. Walter McClure and Lenore Kligman, Conversion and Other Policy Options To Reduce Excess Hospital Capacity, Health Planning Information Series #16, U.S. Department of Health, Education, and Welfare Publication (HRA) 79-14044, September 1979, pp. 1, 4.

⁷⁷Walter McClure and Lenore Kligman, Conversion and Other Policy Options To Reduce Excess Hospital Capacity, Health Planning Information Series #16, U.S. Department of Health, Education, and Welfare Publication (HRA) 79-14044, September 1979, p. 99.

⁷⁸See Alan Sager, Deborah Socolar, and Peter Hiam, "Public not served by merger of MGH, Brigham," Boston Business Journal, January 14-20, 1994; Deborah Socolar, Peter Hiam, Alan Sager, "Hospital Merger Masquerade," Harvard Magazine, July-August 1994. See also Charles Stein, "Who's Next?" Boston Globe, 9 December 1993; Richard Knox, "New name, new slant on hospital `merger,'" Boston Globe, 22 March 1994; Joan Vennochi, "Prescription for the future," Boston Globe, 3 July 1996.

⁷⁹Note that in 1994-1995, Alan Sager served as a consultant in Fitchburg to the Mayor's committee to study hospital survival.

⁸⁰See, for example, Access and Affordability Monitoring Project, Manipulating the Minnesota Marketplace, 28 October 1991. See also Sandy Kendall, "Superhospital," Harvard Magazine, March-April 1994.

⁸¹See Alan Sager, "The Opiate of the Managers," Society, Vol. 23, No. 5 (July-August 1986), pp. 65-71.

⁸² See, for example, Karen Donelan, et al., "Whatever Happened to the Health Insurance Crisis in the United States? Voices From a National Survey," JAMA, Vo. 276, No. 16 (23-30 October 1996), pp. 1346-1350; Karen Davis and Diane Rowland, " Uninsured and Underserved:

Inequities in Health Care in the United States," Milbank Memorial Fund Quarterly/Health and Society, Vol. 61, No. 2 (Spring 1983), pp. 149-176.

⁸³ See Alan Sager and Deborah Socolar, Massachusetts Residents Lacking Health Insurance: The 1995 Update, Boston: Access and Affordability Monitoring Project, 2 October 1996.

⁸⁴Cathy Tokarski, "The case of the vanishing inpatient," Business and Health: The State of Health Care in America, 1996, pp. 36-38.

⁸⁵The 1980 and 1985 data reflect Access and Affordability Monitoring Project calculations from unedited statewide bed totals reported in American Hospital Association, Hospital Statistics, Chicago: The Association, 1981 and 1986 (and from U.S. Bureau of the Census population data). The 1990 and 1995 data here reflect Access and Affordability Monitoring Project tabulation of hospitals open in those years, along with the American Hospital Association's bed count for each of those hospitals, as reported in American Hospital Association, Guide to the Health Care Field, Chicago: The Association, 1991 and 1996.

⁸⁶The 1990 and 1995 bed-to-population ratios shown here differ slightly from those shown earlier, in Figure 2, which used unedited statewide bed totals from the American Hospital Association (AHA). The 1980 and 1985 data here reflect those unedited AHA bed totals; as in the figure just shown on seniors, however, the 1990 and 1995 data reflect AAMP tabulation of hospitals open in those years, along with the AHA's bed count for each of those hospitals.

⁸⁷Cathy Tokarski, "The case of the vanishing inpatient," Business and Health: The State of Health Care in America, 1996, pp. 36-38.

⁸⁸National Center for Health Statistics, Health, United States, 1995, Hyattsville, Maryland: U.S. Public Health Service, 1996, Table 84, p. 199. Also, data compiled by the Advisory Board Company (from the Health Care Financing Administration's 1995 Data Compendium, the Marion-Merrell Dow 1995 HMO-PPO Digest, and Advisory Board Company estimates) show five-fold or greater differences in hospital days for Medicare patients (although that does include disabled people under age 65).

⁸⁹As quoted in Eric Convey, "Report: Acute care hospitals may dwindle," Boston Herald, 10 April 1997.

⁹⁰Eric Convey, "Report: Acute care hospitals may dwindle," Boston Herald, 10 April 1997.

⁹¹ Ronald M. Hollander, "Mass. hospital consolidation: Story proposed wrong answers," Boston Sunday Globe, letter to the editor, 25 May 1997. (Letter was written in response to Alan Sager and Deborah Socolar, "Imprudent and impatient— Are hospitals closing too fast and for insufficient reasons?" Boston Sunday Globe, Focus section, 27 April 1997.)

⁹² Joint Committee on Health Care, 10 April 1997.

⁹³ Ronald M. Hollander, "Mass. hospital consolidation: Story proposed wrong answers," Boston Sunday Globe, letter to the editor, 25 May 1997.

⁹⁴This refers to adult medical-surgical beds, excluding all critical care beds.

⁹⁵Massachusetts General Laws Chapter 111, Section 51.

⁹⁶ See, for example, Thames Regions Accident and Emergency Trainees Association, et al., "A major outbreak of asthma associated with a thunderstorm," BMJ, Vol. 312 (9 March 1996), pp. 601-604.

⁹⁷Access and Affordability Monitoring Project analysis of data from annual editions of American Hospital Association, Hospital Statistics, Chicago: The Association, 1981 to 1996, and United States Bureau of the Census.

⁹⁸Massachusetts General Laws Chapter 111, Section 51.