PHARMACY FREEDOM OF CHOICE LEGISLATION FOR RHODE ISLAND

Alan Sager, Ph.D.
Professor
Boston University School of Public Health
715 Albany Street
Boston, Massachusetts 02118
telephone (617) 638 – 4664
fax (617) 638 – 5374
email asager@bu.edu

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Disclaimer: As always, I write and speak only for myself, not on behalf of Boston University or any of its components, or on behalf of any funder or client.

Professional responsibility: While this report was prepared under contract to a group of pharmacies opposed to restrictive contracting, its evidence and conclusions are the results of my own independent professional analyses and judgments. The report’s single aim is to advance the public interest in affordable and accessible prescription drugs for all residents of Rhode Island.

Acknowledgements: I am very grateful to Jasprit K. Deol, MPH, who carefully and speedily compiled and cleaned data and maps, and performed multivariate analyses; and to Deborah Socolar, MPH, who offered valuable advice and criticism, and helped prepare cost data.
SUMMARY

I. INTRODUCTION: THE ARGUMENTS FOR RESTRICTED CONTRACTING

Those who argue for restrictive pharmacy contracting acknowledge they are working against free market principles.

In doing so, they assert they can win lower prices from pharmacies.

II. THE CASE FOR PHARMACY FREEDOM OF CHOICE LEGISLATION

The arguments for restricted contracting are not valid.

First, it does not appear that restricted contracting saves money.

Second, if restricted contracting does save money, it does so only in the short run and only for some people. Other people pay more now, and everyone pays more later. Pharmacies that would be sustained in a free market are forced to close, undermining price competition for years to come.

Third, restricted networks threaten quality of pharmacy care for everyone. They also threaten access to pharmacy care. These problems affect everyone, but are particularly serious for older patients, those with chronic illnesses, those who are disabled, those with lower incomes, and those who are members of racial and ethnic minority groups. Further, restricted pharmacy networks cannot be expected to preserve independent pharmacies.

A. Do Restricted Networks Save Money, Even in the Short Run?

1. Do restricted pharmacy networks actually win lower prices? It appears that they do not. After losing their battle to retain a restricted network, one Massachusetts HMO said it would open its network and that the prices paid previously to members of the restricted network would thenceforth apply to all pharmacies.

2. Would Rhode Island enjoy the benefits of a free market in the absence of restricted contracting? Yes. Enough retail pharmacies are present to
engender serious competition by price and quality. Consumers can confidently shop by price and by service, which they can judge. Entry or new competitors would be easy. Retail pharmacy is one of the relatively few sectors of the health care field in which the benefits of the free market are attainable. It is a shame to tolerate efforts that would casually toss away those benefits.

3. Why would any pharmacy bid its price down below the free market level? Three reasons are possible: to use previously slack capacity; to use prescription drugs as a loss leader to attract patients into the pharmacy—patients who would then buy other products; and to drive competitors out of business, in hopes of gaining market power and raising prices later. The first reason is less likely. The second and third seem likely.

4. How might some pharmacies be able, even hypothetically, to bid their prices down below the free market price? They could not win lower prices from manufacturers. And they would find it hard to become more efficient by cutting their own costs because retail costs and profits on prescription drugs are already so low. They could shift costs to other patients and other payors.

5. Comparing actual prices in states with and without pharmacy freedom of choice statutes. The average prescription in states with pharmacy freedom of choice laws cost $34.75 in 1997, or $0.56 less (1.6 percent less) than in states without pharmacy freedom of choice laws. Using a different definition, the savings rise to almost one dollar—a difference of almost three percent.

6. How do insurors and pharmacies that had participated in restricted networks react when they recognize that such networks will no longer be allowed? With great equanimity, as their own words show.

B. Dangerous Long-term Effects of Restricted Network on Price

1. A rare chance for a free market in health care. If restricted networks did succeed in winning lower price, despite the evidence just presented, the results for Rhode Islanders would be highly undesirable. Restricted networks tend to squeeze non-network pharmacies out of business, leaving the survivors with oligopoly or monopoly power. Pharmacies with this sort of power in the market are free to raise prices. Indeed, they will have to raise prices above free market levels to make up for the revenue they had given up to win their restricted contracts in the first place (again, assuming that happened, despite evidence to the contrary). Restricted contracting could drive many chains without contracts to leave Rhode Island. Restricted contracting is not enough to save the dwindling number of independent pharmacies. It could leave Rhode Island with two chains, chains that would have little reason to compete by price.
2. **Market power.** Blue Cross and United Health Care apparently control over 60 percent of the patients in Rhode Island, and perhaps as much as 70 percent of the insured patients. This gives them usual market power—power which they have been using short-sightedly to create and maintain restricted networks of pharmacies. Their power in the market is remarkably concentrated—and dangerous for the long run.

3. **Maintaining retail pharmacy competition.** Free market competition requires competitors—the more, the better. There were 196 pharmacies in Rhode Island in 1980, 189 in 1990, and 180 in January of 1999. The number of pharmacies in Rhode Island per 100,000 citizens is slightly below the national average, despite rapid drops elsewhere. It can be expected to continue to drop steadily as more pharmacies are forced to close.

4. **Rhetoric versus reality.** Restricted contracting is creating a crisis even in hospital care. Hospitals merge and close. The survivors gain market power. The less efficient hospitals and those with more money in the bank are likelier to survive. It would be a shame to repeat this pattern in the retail pharmacy field, where—unlike hospitals—free markets are so easily attainable.

5. **A look inside retail pharmacy.** This section explores pricing arrangements that may prevail in Rhode Island today. It suggests that earning a profit on retail prescription drugs through a restricted network may be very difficult.

6. **Look to the future.** The number of prescriptions is expected to rise by 44 percent by the year 2007. If too many pharmacies are squeezed out of business in the next few years, will the survivors have the capacity to meet the growing demand?

7. **Shooting at the wrong target.** Retail pharmacies are not the source of the high cost of prescription drugs in the United States. They are efficient; their costs are low; and their profits on prescription drugs are low. Rather, the main source is the world’s manufacturers, who charge remarkably and unjustifiably high prices here, and who earn remarkably high profits on American patients. Restricted pharmacy contracting does nothing about the real sources of high costs. At best, it is a distraction from the real issue.

8. **Would anyone deliberately shoot at the wrong target, and if so, why?** Insurers and HMOs may realize that they are shooting at the wrong target, when they aim at retail pharmacies, but the pharmacies are the only target they can reach with the short-range guns in their private arsenals. That may make them feel better, that they are doing something in the general direction of the problem. But it does not help people who live or work or do business in Rhode Island.
9. Health costs burden Rhode Islanders disproportionately. Rhode Island ranks fifth among all states in the share of the state’s economy going to personal health care—14.7 percent in Rhode Island versus a national average of 12.1 percent. The Rhode Island share is more than one-fifth greater than the national average. Restricted contracting cannot be expected to help. It is an over-sold panacea of the past.

10. An administrative red herring. Pharmacy freedom of choice would not impose meaningful administrative burdens on insurers or HMOs. After all, one insurer has just admitted 40 independent pharmacies into its network. It would be even easier and less costly to admit the remaining chains, which have refined computer systems and considerable experience in working with insurers and HMOs.

11. Summary: Effects of restricted networks on price. Restricted contracting offers the illusion and the theory of price relief, without the substance or the evidence. Even if prices were cut for some and for now, they would rise for everyone for the future. Needed pharmacies would be closed. Surviving pharmacies would enjoy dangerous market power, which they would surely attempt to use to raise their prices. Why else would they run the rapids of restricted contracting?

C. Improving and Protecting Patient/Consumer Access, Choice, and Quality of Care

1. Aims of pharmacy freedom of choice legislation. Protecting patient choice and protecting competition among pharmacies are the key aims. The overwhelming share of Americans have said that they value the ability to choose their own pharmacist.

2. Forcing patients to switch pharmacies. Given the high rates of turnover among insurers and HMOs, patients are often forced to switch pharmacies when their employers switch health plans.

3. Taking the choice out of patients' hands. Employers bargain with insurers and HMOs. Insurers and HMOs bargain with pharmacies. All this bargaining goes over the heads of consumers and patients, who have less and less choice about where they will get their prescription drugs.

4. Reduction in consumer or patient satisfaction. Different people value very different things from their pharmacies. Restricted networks mean less choice and therefore less chance to satisfy consumer preferences.
5. **Capacity problems.** Waits are longer when pharmacies are fewer. If pharmacies bid down their prices to win contracts, they may have too few pharmacists to provide adequate care.

6. **Over-crowding or long waits.** These can be associated with reductions in quality, as pharmacists are more likely to make dispensing mistakes or fail to notice drug interactions when they are in a hurry, and they are less likely to take the time to counsel patients.

7. **Disproportionate and adverse impacts.** The burdens of greater travel time or restricted pharmacy choice are likely to be heavier for elderly, disabled, chronically ill, lower income, African-American, or Latino-American citizens. The 40 surviving Rhode Island independent pharmacies are located disproportionately in lower income, African-American, and Latino-American neighborhoods. If these pharmacies continue to close at high rates, residents of those neighborhoods will be particularly disadvantaged. Again, greater travel time may delay or prevent patients from filling prescriptions.

8. **Disruption to patient – pharmacist relationships.** Changing pharmacists can be highly disruptive, especially for patients needing many prescription drugs, and also for patients who lack a personal physician and therefore rely more heavily on a pharmacist for medical advice. These patients tend to be older, suffer more chronic illnesses, and have lower incomes.

9. **Will loss of competition mean less service?** When Rhode Island has fewer pharmacies and insurors or HMOs can no longer use restricted contracting, how will they then purport to contain cost? They may choose to eliminate subsidized services like home delivery, which today they trumpet.

10. **Below-market prices harm quality.** If restricted contracting does lower prices below free market levels, quality will suffer, other things equal. Dispensing errors, failure to offer consultation, and failure to check for drug interactions will multiply. Waiting times will rise. Again, there is no free lunch.

11. **Pharmacy survival in Rhode Island.** Fully 125 of the 196 Rhode Island pharmacies open in 1980 had closed by 1999. This was a loss of 63.8 percent.

12. **Independent and chain pharmacy survival in Rhode Island.** Especially during the 1990s, independent pharmacies were much more likely to close than chain pharmacies. In 1999, Rhode Island had only 29.4 percent as many independent pharmacies as in 1980. The number of chain pharmacies rose by 133.3 percent. We provide detailed data by county and by decade.

13. **Which types of pharmacies are likelier to remain open.** During the 1980s, pharmacies in lower-income, African-American, and Latino-American
census tracts were significantly more likely to close. During the 1990s, independent pharmacies were significantly more likely to close. These relationships held both bivariately and multivariately.

14. Effects of independent pharmacy closings. In Massachusetts, many people supported passage of the state's pharmacy freedom of choice legislation because they thought this would protect independent pharmacies. In Rhode Island, the surviving independent pharmacies (40 at this writing) are already included in the Blue Cross and United Health Care restricted networks. Yet, inclusion is not likely to be enough to protect independent pharmacies. Attrition of the independent pharmacies can be expected to continue. That is because, if restricting the networks does result in lower prices—as its advocates claim—独立 pharmacies would be squeezed on the prices they are paid for prescription drugs and the profits they can earn on prescription drugs. They have fewer means of earning non-prescription revenue than do other pharmacies. Just as membership in the restricted networks cannot be expected to be enough to provide that protection to independent Rhode Island pharmacies, passage of pharmacy freedom of choice legislation is not likely to undermine surviving independent pharmacies any further. If it is desired to protect independent pharmacies, it will be necessary to rely on means more powerful than either restricted networks or pharmacy freedom of choice legislation. It is probably important to find ways to protect independent pharmacies because they remain disproportionately located in lower-income census tracts and in tracts with high proportions of African-American and Latino-American citizens.
I. INTRODUCTION: THE ARGUMENTS FOR RESTRICTED CONTRACTING

Some insurers or HMOs are accustomed to attempting to restrict their networks of hospitals or physicians in hopes of winning lower prices. They have applied this way of doing business to pharmacies. An insurer, like Blue Cross or United Health Care, may promise higher volume to some pharmacies in hopes of obtaining a below-market price.

Restricted contracting is an intentional interference in what would otherwise be a relatively free market for prescription drugs. In a free market, the interaction of supply and demand forces would set the price for any good or service, and would determine how many pharmacies should be open and where they should be located.

What are the alleged benefits of restricted pharmacy contracting and interfering with the free market?

1. This arrangement is claimed to satisfy the needs of the insurers for lower pharmacy prices, and the needs of some pharmacies for more business. For example, Blue Cross Blue Shield of Rhode Island recently claimed that “If we were to change the terms of our contract to add other stores, either voluntarily or through legislative mandate, it would lead to higher costs.”

2. Some network pharmacies, including CVS, openly admit that restricted contracting violates free market principles. They argue explicitly against the free market, asserting that “the rules of supply and demand don't apply in managed care. Pharmacies contract to fill prescriptions at discount rates in exchange for the increased volume assured by the restricted network.”

And according to William V. Irons, chair of the Rhode Island Senate’s Committee on Corporations, “Managed care is all about building networks to drive volume to reduce price...” Mr. Irons says he fears equal pharmacy access will reduce the sales volume enjoyed by network suppliers, making it tougher for HMOs to negotiate steep discounts. That, in turn, might deter insurers from offering pharmaceutical coverage, something already viewed as a money loser. “I’m convinced that if we do anything legislatively, we’ll accelerate the demise of these plans, and there’ll be no pharmacy benefit,” says Mr. Irons.”
II. THE CASE FOR PHARMACY FREEDOM OF CHOICE LEGISLATION

Those arguments are not valid.

First, it does not appear that restricted pharmacy networks—deliberate attempts to frustrate a relatively free market for retail pharmacy—actually save money.

Second, even if restricted pharmacy networks did save money, that would be possible only in the short run—followed by substantial price increases—to levels above those prevailing in a free market. And any hypothetical savings, even in the short run, would benefit only some payors. Others would pay more as costs would be shifted. Many of the pharmacies that would be sustained in a free market would be closed by restricting pharmacy networks.

Third, restricted pharmacy networks threaten quality of pharmacy care and access to pharmacy care—particularly to older patients, those with chronic illnesses, those who are disabled, those with lower incomes, and those who are members of racial and ethnic minority groups. Restricted pharmacy networks cannot be expected to preserve independent pharmacies.

This report now presents the evidence in all three areas.

A. DO RESTRICTED NETWORKS SAVE MONEY, EVEN IN THE SHORT RUN?

1. Do restricted pharmacy networks actually win lower prices?

The recent evidence from Massachusetts suggests that pharmacies may not have to bid down their price to win HMO contracts. Consider the case of the Harvard – Pilgrim HMO and CVS in Massachusetts. Before the passage of the Massachusetts pharmacy freedom of choice statute in 1994, 4 most Harvard – Pilgrim patients found it difficult to use any pharmacy but CVS. The Harvard – Pilgrim HMO initially had refused to comply with the new pharmacy freedom of choice legislation.

After losing a strategic legal battle, Harvard – Pilgrim began to comply with the law, signing agreements with pharmacies that it had previously excluded. But what happened to prices? A statement from Harvard – Pilgrim is important in this connection:
"We’re going to a much broader pharmacy network," said Harvard – Pilgrim spokesman Alan Raymond. The prices of drugs purchased at CVS ‘will apply to all new pharmacies.’” (emphasis supplied)\(^5\)

Indeed, a spokesman for a chain that was affected by the Massachusetts pharmacy freedom of choice legislation did not seem perturbed after a ruling favorable to that law was handed down. After a U.S. district court judge ruled that the 1974 federal statute known as ERISA (The Employee Retirement Income Security Act) does not pre-empt Massachusetts’ pharmacy freedom of choice legislation, “A spokesman for CVS said, ‘We believe we can be competitive in any environment.’” (emphasis supplied)\(^6\)

Additional evidence supports the argument that restricted networks may not win lower prices even in the short run. During the debate on the pharmacy freedom of choice legislation in Massachusetts, the Massachusetts Pharmacists Association cited data showing that a large HMO with a restricted pharmacy network suffered slightly higher increases in the cost of a family’s prescription drug plan than did a large HMO with an open pharmacy network.\(^7\)

2. Would Rhode Island enjoy the benefits of a free market in the absence of restricting contracting?

There is every reason to expect that the benefits of free market pricing would accrue to Rhode Islanders in the absence of restrictive contracting. That is, pharmacies would compete by price and quality. Patients and consumers would shop by price, quality, special services, location, and other factors. Efficiency and consumer satisfaction would be maximized. Prices would reach their lowest sustainable levels.

The advocates of restrictive contracting, like CVS, acknowledge—as cited in the first section of this report—that they are violating the laws of supply and demand. No advocates of restrictive contracting claims that a free market would not exist in the absence of restrictive contracting.

No one has claimed that, without restrictive contracting, retail pharmacy prices in Rhode Island would exceed free market levels—and would therefore be full of fat. Given the substantial number of pharmacies still remaining in Rhode Island today, there is ample reason to expect the level of price and quality competition typically found in free markets—if restrictive pharmacy contracting were outlawed. Indeed, Rhode Island has almost as many pharmacies per 100,000 residents as the nation as a whole—95.8 percent as many in 1999.
But without competitors, there is no competition. The challenge for the long run will be to retain sufficient retail pharmacies to retain free market competition by price and quality.

3. Why would any pharmacy bid its price down below the free market level?

There are three possible explanations.

First, hypothetically, pharmacies belonging to the restricted networks might still be better off by submitting bids below prevailing market price if they had previously had substantial unused capacity. That is, if their pharmacists had been idle much of the time, they could fill more prescriptions without costing the pharmacy any more money. But why would a pharmacy have hired pharmacists to be idle much of the time? Why would pharmacies take on this unnecessary, slack capacity?

Second, pharmacies might be willing to suffer a loss on each prescription in order to attract more customers into the store, so they could make more money on the items sold in the front of the store—groceries, over-the-counter medications, and other personal products.

Third, pharmacies might be willing to suffer a loss on prescriptions for the short run in hopes of driving competitors out of business and winning monopoly or oligopoly power—which would allow them to raise prices and profits for a long time to come.

4. How might some pharmacies be able, even hypothetically, to bid their prices down below the free market price?

This is not at all clear.

Could they win lower prices from manufacturers than pharmacies with lower volume? No, pharmacies could not cut their costs of medications by using their bargaining power to win lower prices from manufacturers or wholesalers. The federal Robinson – Patman Act requires wholesalers and manufacturers to charge all retail pharmacies the same price for the same drugs. Discrimination by class of trade is manifestly illegal. Even if it asserted that discrimination by volume is legal, those pharmacies not now part of the network could garner lower-cost medications either through their own
substantial corporate buying power nationally or through a buying cooperative.

**Could they shift costs to other patients and other payors?** Alternatively, if pharmacies that win restricted networks choose to offer prices below free market levels to win contracts, they might try to raise their prices on patients who are outside the network. (Otherwise, they would not be covering their short run costs.) This is called a cost shift or cross-subsidization. But why should those Rhode Islanders whose employers choose Harvard-Pilgrim, Connecticut General, or Tufts be forced to subsidize the pharmacy costs of those whose employers choose Blue Cross or United Health Care?

**Could they cut retail costs?** This is very difficult, because retail costs and retail profit margins for prescription drugs are already so low, according to industry data. In 1998, retailers’ share of the cost of the average $38.64 prescription in the United States was only $8.17 (21.1 percent), and their profits were only $0.72 (1.9 percent). This point is discussed and illustrated in greater detail later in this report.

5. **Comparing actual prices in states with and without pharmacy freedom of choice statutes**

We did this in two slightly different ways because there is some published disagreement about which states indeed are considered to have pharmacy freedom of choice statutes. As it turns out, there is virtually no difference in the results obtained using the two measures.

In each comparison, the measure of average cost per prescription in the two groups of states was taken from Novartis data published on-line for 1997.

**First,** we compared the average cost per prescription in states with and without fairly comprehensive pharmacy freedom of choice statutes, employing the list of states with pharmacy freedom of choice statutes published in *State Health Notes* in November of 1998. There were 18 such states, including four (Idaho, Indiana, Kentucky, and Wyoming) with broad freedom of choice statutes. That left 31 states without pharmacy freedom of choice statutes. (We deleted Connecticut from the analysis because its law excludes HMOs and ERISA plans, making Connecticut difficult to classify fairly. Doing so makes little difference, since its cost is fairly close to the average.)

As shown in the exhibit, the states with pharmacy freedom of choice laws averaged $34.74 per prescription and the states without pharmacy freedom of choice laws averaged $35.30 per prescription.
Thus, prescriptions in states with FoC laws, according to State Health Notes, averaged $0.56 (or 1.6 percent) less expensive in 1997. These findings are displayed graphically on the chart on the next page.

The arguments advanced on behalf of restricted pharmacy networks are often theoretical. This practical evidence counters those theoretical arguments.

This finding is also noteworthy because it would ordinarily be expected that states with higher average costs per prescription would be the more likely to legislate pharmacy freedom of choice statutes, other things equal. That the states with such laws now have lower average costs per prescription suggests that such statutes may help to lower costs—or at least do not tend to raise costs, as advocates of restricted pharmacy networks sometimes seem to suggest.

Second, we repeated the cost comparison, using a somewhat different list of states with pharmacy freedom of choice statutes—that prepared by the National Association of Boards of Pharmacy (NABP). The NABP reported 27 states with comprehensive pharmacy freedom of choice laws and 22 states without.

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**Exhibit**

**Average Prescription Prices:**
Comparison of States with and States without Pharmacy Freedom of Choice (FoC) Statutes, 1997

<table>
<thead>
<tr>
<th>Source of comparison</th>
<th>FoC law</th>
<th>No FoC</th>
<th>difference</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Health Notes</td>
<td>$34.74</td>
<td>$35.30</td>
<td>($0.56)</td>
<td>-1.6%</td>
</tr>
<tr>
<td>National Association of Boards of Pharmacy</td>
<td>$34.67</td>
<td>$35.60</td>
<td>($0.93)</td>
<td>-2.7%</td>
</tr>
<tr>
<td>Average</td>
<td>$34.71</td>
<td>$35.45</td>
<td>($0.74)</td>
<td>-2.1%</td>
</tr>
</tbody>
</table>
COMPARISON OF AVERAGE COST PER PRESCRIPTION, STATES WITH AND STATES WITHOUT PHARMACY FREEDOM OF CHOICE (FoC) LAWS, 1997

COST PER PRESCRIPTION

$35.80
$35.60
$35.40
$35.20
$35.00
$34.80
$34.60
$34.40
$34.20

State Health Notes
National Assoc of Boards of Pharmacy
Average

$35.30
$35.60
$35.45

$34.74
$34.67
$34.71

METHOD OF COMPARISON

(c) 1999 Alan Seger

Rx $ x FoC states, SHN + NABP 1997 -- FoC mean 3/11/99
As also shown in the exhibit, the states with pharmacy freedom of choice laws averaged $34.67 per prescription and the states without such laws averaged $35.60 per prescription.

Thus, prescriptions in states with FoC laws, according to the NABP, averaged $0.93 (or 2.7 percent) less expensive. These findings are also displayed on the chart, along with the results of averaging the two methods of comparison.

6. How do insurers and pharmacies that had participated in restricted networks react when they recognize that such networks will not be allowed?

As noted earlier:

- A spokesman for Harvard – Pilgrim, a major insurer that had fought for a restricted network said that "The prices of drugs purchased at CVS `will apply to all new pharmacies.""

- A spokesman for CVS said, `We believe we can be competitive in any environment.'"

Clearly, neither party was crushed by the news.
B. DANGEROUS LONG-TERM EFFECTS OF RESTRICTED NETWORKS ON PRICE

1. A rare chance for a free market in health care

It is useful to appreciate that retail pharmacy is one of the two remaining outposts of the free market inside health care. Consumers can buy standardized products safely by price. Many retail pharmacies compete to supply prescription drugs and other products. The threat to the free market comes from the radical concentration of buying power in Rhode Island in a few hands. Using market power to try to win short-term price concessions could so destabilize the free market that long-term concentration of retailers might ensue.

One result of excessive economic concentration among sellers of retail prescription drugs: higher prices for the long run.

Pharmacies might be willing to suffer a loss on each prescription in order to starve their non-network competitors out of business. Then, the surviving pharmacies would enjoy a much stronger bargaining position against all insurors and HMOs, not only those that previously had demanded restricted networks. Everyone who lives, works, or does business in Rhode Island would then pay higher prices for prescription drugs for the long run.

Why is this? Because the surviving pharmacies would enjoy oligopoly power, market power. They would face few competitors and could therefore raise their prices with few limits from ordinary competitive forces. Indeed, they would have to raise their prices, to make up for the revenue lost during the years of restricted contracting that artificially held their prices down below market levels—assuming for now (despite all the evidence to the contrary) that restricted contracting actually did have that effect.

This means that even if restricted contracting saves money for insurors or HMOs, it does so only for a short time. After a while, those pharmacies denied access to the restricted network go out of business, or sell their stores to network members, leaving the surviving pharmacies free to raise their prices. To the extent that this happens, any one-time, short-term savings associated with restricted contracting are won at the price of cannibalizing the pharmacies that are forced to close or sell out.

After many pharmacies are drive out of Rhode Island, the survivors will enjoy market power. Even if insurors or HMOs wanted, in a few years, to re-open negotiations with pharmacies that are not now part of their networks, they
might find it very difficult to do so, if those pharmacies have gone broke or ceased to do business in Rhode Island. And they might not be anxious to return, given their recent experience. For these reasons, continued operation of restricted pharmacy contracting in Rhode Island could deal a serious, durable, long-term blow to the prospects of price competition in retail pharmacy for years or even decades into the future.

Loss of revenue received by out-of-network pharmacies reduces their profitability, which increases their likelihood of closing, and thereby engenders less price competition and higher prices. Ironically, therefore, restrictions on pharmacy freedom of choice could be expected to lead to increased prices down the road (even if it is imagined that restrictions lower prices in the short run).

It should not be imagine that the three-legged stool of today’s Blue Cross and United Health Care network pharmacies would be sufficient to maintain price competition if the non-network pharmacies are gradually squeezed out of business in Rhode Island. First, many of the 40 remaining independent pharmacies (out of 136 only two decades ago) can be expected to face severe pressures. Network membership is not likely to sustain enough of today’s independents. The importance of retaining the independent pharmacies is discussed in some detail later in this report.

Second, if two chains—CVS and Brooks—were to survive in Rhode Island, they might engage in oligopolistic pricing. That is, they might subtly coordinate their prices and raise them well above those that would have prevailed in a free market. Another possibility is that CVS might try to squeeze and weaken Brooks. One example of this practice was reported in the Wall Street Journal, when CVS decided to operate two pharmacies within one block of a Brooks pharmacy in Brookline, Massachusetts. “CVS says those stores have sapped business from Brooks, which Mr. Ryan [of CVS] calls a ‘wounded’ competitor.”15

2. Market Power

This is a bigger problem in Rhode Island than in other states or markets with which I am familiar. That is partly because Blue Cross and United Health Care together control a very great share of the patients who live in Rhode Island.

They are able and willing to use this power to restrict the pharmacy choices of most Rhode Islanders. Misusing this power can distort the shape of pharmacy services in the state for many years to come.
Blue Cross and United Health Care reported mid-1998 enrollments to the Rhode Island Department of Health totaling 626,000 members, including Medicare and Medicaid.\textsuperscript{16} This was 63.4 percent of the state’s population,\textsuperscript{17} and perhaps as much as 70.6 percent of the state’s insured population.\textsuperscript{18}

Further, Blue Cross and United Health Care are able to restrict the pharmacy choices of a large and growing share of Medicare patients. In the first quarter of 1998, Blue Cross and United Health Care together enrolled 36,771 people, or 21.7 percent of Rhode Island’s Medicare patients in their managed care plans with restricted pharmacy networks. By the third quarter, this had risen to 50,547 people, or 29.8 percent of Rhode Island’s Medicare patients.\textsuperscript{19} Viewed in another way, the restricted networks’ Medicare membership rose by 37.5 percent across these three quarters.

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**Exhibit**

**Membership Shares of Health Plans with Restricted Pharmacy Networks, 1998**

<table>
<thead>
<tr>
<th>Plan Members/Population Group</th>
<th>Total</th>
<th>% of Rhode Island Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Cross</td>
<td>380,361</td>
<td>38.5 %</td>
</tr>
<tr>
<td>United Health Care</td>
<td>246,073</td>
<td>24.9 %</td>
</tr>
<tr>
<td>BC + United Subtotal</td>
<td>626,434</td>
<td>63.4 %</td>
</tr>
<tr>
<td>Rhode Island Population</td>
<td>988,480</td>
<td>70.6 %</td>
</tr>
<tr>
<td>People with Insurance</td>
<td>887,655</td>
<td></td>
</tr>
</tbody>
</table>


Note: The Blue Cross and United Health Care totals represent slight over-estimates of their enrollees residing in Rhode Island. The plans report to the state’s Department of Health all members, whether residing in Rhode Island or in adjacent states.
3. Maintaining retail pharmacy competition

Several years ago, the lead sponsor of Massachusetts' pharmacy freedom of choice legislation told me that his first aim was to "maintain retail pharmacy competition."20

Free market competition requires lots of competitors, the more the better. Rhode Island has roughly the same number of pharmacies per 100,000 residents as Massachusetts and Connecticut, its neighbors in southern New England. As shown in the exhibit, Rhode Island now has 18.2 pharmacies per 100,000, slightly below the levels in Massachusetts and Connecticut but about four percent below the national average of 19.0 pharmacies per 100,000.21 The chart on the following page ("Pharmacies/100,000 People, Southern New England and U.S.A., 1980 – 1999") graphs the data displayed in the exhibit.

Exhibit


<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>1980</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhode Island</td>
<td>20.7</td>
<td>18.8</td>
<td>18.2</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>26.9</td>
<td>21.4</td>
<td>19.7</td>
</tr>
<tr>
<td>Connecticut</td>
<td>22.0</td>
<td>19.8</td>
<td>19.9</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>28.1</td>
<td>23.6</td>
<td>19.0</td>
</tr>
</tbody>
</table>

Percent of national average

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>1980</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhode Island</td>
<td>73.6%</td>
<td>79.9%</td>
<td>95.8%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>95.8%</td>
<td>91.0%</td>
<td>103.5%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>78.1%</td>
<td>84.0%</td>
<td>104.5%</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
In 1980, there were 196 pharmacies in Rhode Island. This fell to 189 in 1990 and to 180 in 1999.\textsuperscript{23} 

Please consider that Rhode Island had fewer than three-quarters as many pharmacies per 100,000 people as did the nation as a whole in 1980 but now has almost 96 percent as many pharmacies per 100,000 people. This happened not because Rhode Island added pharmacies but rather because Rhode Island pharmacies closed at a slightly slower overall rate than did pharmacies nationally during the past two decades. But will this persist?

The number of pharmacies per 100,000 citizens of Rhode Island will probably continue to fall gradually over time. If this happens, which pharmacies will be lost? The first group of pharmacies likely to be lost, judging by the trends over the years since 1980, will be many of the independent pharmacies. Second, continued operation of a restricted network in Rhode Island will probably result in pressure on non-network chain pharmacies to close or to sell themselves to operators of network pharmacies. Many such sales would probably be followed by closing of stores and by a consequent decline in both price competition and consumer or patient convenience.

4. Rhetoric versus reality 

It is contradictory to endorse free markets in theory and then tolerate restrictive practices that limit such markets. This problem is not limited to the pharmacy field. Indeed, it is a serious problem in health care generally.

Some observers are sanguine about selective contracting between insurers and hospitals, for example, because they believe that many states have too many hospitals and beds, that capacity reductions will save money, and that price competition and selective contracting are the best ways to shrink capacity. Unhappily, there is clear evidence that the hospitals that are closing are actually slightly more efficient than the survivors.\textsuperscript{24}

Thus, it appears difficult to win even short-term savings through competition among hospitals. And in the long run, it appears that the hospitals with more money in the bank are much more likely to survive.\textsuperscript{25} This might be called “survival of the fattest.” It appears to reflect a failed hospital market, not a free market. It would be a shame to repeat the hospital pattern in retail pharmacy, where the foundations for realizing the benefits of free market competition are so much stronger.
5. A look inside retail pharmacy

Any pharmacy or chain that bid or accepted a price below the market price would hope to make more money in the short run if its increase in revenue under restricted contracting exceeded its increase in cost. But is this likely or even possible under the pricing arrangements prevailing in Rhode Island? Assume that the following costs and pricing now prevail in Rhode Island:

- The average pharmacist fills 15 prescriptions per hour, or one every four minutes (or 120 in an eight-hour day, assuming—for simplicity of calculation—no lunch or breaks).\(^{28}\)
- The time of pharmacists is a semi-variable (or semi-fixed cost) and pharmacies hire the number of pharmacists needed to staff their facilities efficiently.
- The average salaried pharmacist is paid $65,000 per year, or $31.25 per hour.
- The average fringe benefit rate is 25 percent, bringing the hourly total to $39.06.
- The average cost of pharmacist time per prescription filled is then roughly $2.60.

- Insurers pay the pharmacies that belong to their restricted networks at average wholesale price less 15-16 percent, plus a $2.00 dispensing fee per prescription.
- Pharmacies can buy medications at average wholesale price less 15-16 percent.
- Pharmacies are paid their cost for medications, yielding no profit and no loss on the sale of the medications themselves.
- Comparing total revenue, including dispensing fee, with cost of acquiring the medications, pharmacies then earn revenue in excess of cost of acquiring the drug of only $2.00 per prescription.

- If these numbers are accurate, price per prescription would fall below total cost per prescription.

- Comparing the $2.60 pharmacist cost per prescription with the $2.00 revenue in excess of acquisition cost earned per prescription, pharmacies then lose $0.60 on each prescription, even before factoring in costs other than the time of the pharmacist—costs like rent, financing inventory, heat, and electricity.
What might change this calculation?
Pharmacies belonging to the restricted networks might be able to win
discounts greater than the 15-16% from average wholesale price quoted
here. But if that is true, their competitors legally should be able to do the
same. 27
Pharmacies belonging to the restricted networks might be able to hold
down their costs by employing individuals paid less than $65,000 annually
(plus fringe benefits equal to 25 percent of salary) to dispense
medications. But if that is true, most or all of their competitors will be able
to do the same.
Pharmacists might be able to increase their rate of dispensing
prescriptions, which would lower their cost per prescription. But this could
increase the rate of dispensing errors, leave too little time to counsel
patients, or even induce pharmacists to refrain from asking patients if they
have questions (as discussed later).

There is no free lunch. We generally get what we pay for.

6. Look to the future

Restricted contracting can be expected to close many pharmacies—
pharmacies that would have remained open had such contracting not
interfered with the free market. If restricted contracting results in prices below
market levels, Rhode Islanders will have access to fewer pharmacies than a
free market would have wrought.

Between 1998 and 2007, the total number of prescriptions dispensed is
predicted to rise from 2.8 billion annually to 4.0 billion annually, an increase of
44 percent. 28 If too many pharmacies are squeezed out of business by
restricted contracting, Rhode Island pharmacies could lack the capacity to
serve all patients in the future—unless the surviving pharmacies expanded to
fill the gaps left by the departure of their former competitors.

All the wasted costs of closing the pharmacies squeezed out of business by
restricted contracting and of opening new pharmacies would have to be borne
by Rhode Islanders—in addition to the higher prices occasioned by the loss of
competition.
7. Shooting at the wrong target

Relying on restrictions on choice to limit prices is therefore short-sighted at best. Worse, those who argue for restricting choice unwittingly distract attention from the main real source of high prescription drug prices: the decisions by the world’s drug manufacturers to impose higher prices on American patients. The manufacturers recover manifestly disproportionate shares of their world-wide research and profit costs in this country.

It is a very good idea to try to save money on prescription drugs. Indeed, prescription drug spending in the United States grew by 42.9 percent during the three years from 1994 to 1997, almost triple the overall rise in U.S. health spending of 15.3 percent.29 30 (Please refer to the chart titled “Total Health and Prescription Drug Spending, U.S., as Percent of 1994 Spending,” on the following page.)

Unfortunately, it is a very bad idea to focus money-saving efforts on the retail level. Retail profit margins on prescription drugs tend to be relatively low. This means that little in the way of savings can be squeezed out.

All of us interested in saving serious money on prescription drugs could pay greater attention to the prices charged by the manufacturers themselves. Manufacturers’ share of the prescription drug dollar is probably greater in the United States than in any other nation, owing to a combination of greater retail efficiency (lower retail cost) and higher manufacturers’ prices. By one estimate, the retail share of the prescription drug dollar was only 28 percent in 1992,31 it has apparently fallen since then, to about 23 percent in 1998.32

According to a series of U.S. General Accounting Office and other studies, American wholesale prices are manifestly the highest in the world.33 Indeed, by the most conservative comparison, Americans would save slightly over $16 billion this year if we paid the same prices that the same manufacturers charge for the same drugs in Canada. We would save substantially more if we paid the lower prices prevailing in many other countries. (For a graphic look, please consult the chart titled “Estimated U.S. Wholesale Prescription Drug Spending Using Prices Paid by Several Nations, $ Billions, 1999.”)

The extra sums we spend constitute a type of underground foreign aid, administered by the drug manufacturers, that subsidizes the people in other wealthy nations. It is more than double the foreign aid that Congress votes to help people in impoverished or endangered nations.34 (See the chart, “Foreign Aid: What Congress Votes versus What the Drug Companies Extract, Conservative Estimates, 1999.”)
TOTAL HEALTH AND PRESCRIPTION DRUG SPENDING, U.S., AS PERCENT OF 1994 SPENDING

ESTIMATED U.S. WHOLESALE PRESCRIPTION DRUG SPENDING USING PRICES PAID BY SEVERAL NATIONS, $ BILLIONS, 1999

- U.S.A: $66.8
- Canada: $50.6
- Britain: $41.8
- Sweden: $31.3
- Australia: $21.1

BILLIONS OF DOLLARS
FOREIGN AID: WHAT CONGRESS VOTES VERSUS WHAT THE DRUG COMPANIES EXTRACT, CONSERVATIVE ESTIMATES, 1999 ($ BILLIONS)

Americans' share of the world's drug market is surprisingly large—about one-third of the total.\textsuperscript{35} (See the chart, "The World's Pharmaceutical Market, 1996.") If the United States—or even individual states or groups of states—chose to flex our market power, we could pay the world's lowest prices for prescription drugs. Or we could negotiate a peace treaty to regularize fair pricing among all wealthy nations.

American states—individually or through regional compacts—enjoy purchasing power sufficient to win very substantial discounts and rebates from the manufacturers. (For a comparison of total health spending by various large and wealthy nations, along with individual U.S. states, see the chart, "Total Health Spending, O.E.C.D. Nations and U.S. States, 1996.") Discounts lower prices for everyone. And rebates provide money with which to buy needed medications for people who cannot now afford them.\textsuperscript{36} The charts on the following pages display this information graphically.

While the prices that Americans pay to pharmaceutical manufacturers is highest in the world, I believe that American distribution and retailing are generally among the most efficient in the world. Unhappily, restrictive contracting at the retail level aims at the wrong target. It cannot save substantial money, even in the short run, and its long-run consequences are likely to be reduced competition and higher prices for everyone who lives, works, or does business in Rhode Island.

Prescription drugs' cost expected to rise as a share of HMOs' or health insurers' premiums—perhaps to as high as 22 percent by 2002, passing hospitals' share.\textsuperscript{37} Therefore, all who are serious about containing that cost will have to pick up tools much more powerful than restricted pharmacy networks are depicted to be—even by their advocates.

Those who seek to save money on HMO or health insurance premiums by squeezing retail pharmacists through restrictive contracting are shooting at the wrong target. First, prescription drugs, while a growing share of HMOs' costs, are still a relatively small share of health care costs. Nationally, prescription drugs took 7.2 percent of the health care dollar in 1997.\textsuperscript{38}

Second, and more important, the retail dollar is a relatively small share of total prescription drug costs. Consider the estimates in the following exhibit, prepared for the years 1992 and 1998. Please also refer to the chart on the following page ("Components of the Price of the Average Prescription ($38.64) Chain Drug Stores, 1998") which graphs the 1998 data.
THE WORLD'S PHARMACEUTICAL MARKET, 1996

Source: IMS Health, 1998;

Japan
Germany
California
France
New York
Italy
United Kingdom
Texas
Canada
Florida
Pennsylvania
Illinois
Ohio
Spain
Michigan
Mexico
New Jersey
Australia
Massachusetts
Netherlands
Korea
Switzerland
Belgium
Poland
Turkey
Austria
Sweden
Portugal

TOTAL HEALTH SPENDING ($ MILLION)
COMPONENTS OF THE PRICE OF THE AVERAGE PRESCRIPTION ($38.64), CHAIN DRUG STORES, 1998

- PHARMACY COSTS: $8.17
- WHOLESALE/Delivery: $0.99
- PROFIT: $0.72
- MANUFACTURER: $28.76

Source: NACDS, "The Facts about Prescription Drug Pricing."
COMPONENTS OF THE PRICE OF THE AVERAGE PRESCRIPTION ($38.64), CHAIN DRUGS STORES, 1998

PHARMACY PROFIT
2%

PHARMACY COSTS
21%

WHOLESALE/DELIVERY
3%

PAID TO MANUFACTURER
74%

Source: NACDS, "The Facts about Prescription Drug Pricing."
Exhibit

Components of the Price of the Average Retail Prescription, 1992 and 1998

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>$18.75</td>
<td>$28.76</td>
<td>72.0 %</td>
<td>74.4</td>
</tr>
<tr>
<td>Wholesale, delivery</td>
<td>$ 0.99</td>
<td>$ 0.99</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Pharmacy costs</td>
<td>$ 6.79</td>
<td>$ 8.17</td>
<td>26.1</td>
<td>21.1</td>
</tr>
<tr>
<td>Pharmacy profit</td>
<td>$ 0.50</td>
<td>$ 0.72</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>$26.04</td>
<td>$38.64</td>
<td>100.0 %</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Note: In 1992, the wholesale/delivery cost was apparently included in the manufacturer total.


As shown in the exhibit, according to one estimate for 1992, the average retail price charged for a prescription in 1992 was $26.04 but the cost paid by the pharmacist averaged $18.75 (72.0 percent), leaving the pharmacist’s revenue before expenses at $7.29, or 28.0 percent of the total. The pharmacist’s profit averaged $0.50 per prescription, or 1.9 percent of the total.

By 1998, the pharmacists’ cost as a share of the total fell from just over one-quarter of the total to just over one-fifth of the total.

What is the retail share of the average premium dollar spent on health care? For this estimate, let us assume conservatively that prescription drugs consume as much as 15 percent of an average HMO’s or insurer’s premium dollar (not the national average of 7.2 percent of health costs actually prevailing in 1997), that retail pharmacists’ costs are as high as 28 percent of the cost of the average prescription (the share prevailing in 1992, not the 21.1
percent prevailing in 1998), and that retail pharmacists’ profits remain at 1.9 percent of the average prescription cost.

Then, the retail pharmacist’s share of the premium dollar, before expenses, is 4.2 percent. And the retail pharmacist’s profit (after expenses) is $0.0029 of every premium dollar, or almost three mills (three-tenths of a cent) on the premium dollar.

If we see the real world of pharmacies and restricted HMO networks in these ways, we appreciate that it is very hard—perhaps impossible—to save any substantial money for patients by squeezing retail pharmacies through restricted contracting.

8. Would anyone deliberately shoot at the wrong target, and if so, why?

If all this is so, why would a Blue Cross or United Health Care fight to retain restricted contracting? In part because it is the only thing they can do. Restricted pharmacy contracting gives Blue Cross and United Health Care the illusion that they are doing something to lower their members’ costs of prescription drugs.

Perhaps as important, Blue Cross or United Health Care can use their huge market power in Rhode Island to try to bludgeon someone against whom they think they can actually marshal that power—the retail pharmacies.

On the other hand, taking on the drug manufacturers—the real source of high prescription drug prices in the United States—is not something that Blue Cross of Rhode Island or United Health Care can manage on their own. They would have to work with state governments and other insurers cooperatively. They would have to abandon solutions they can manage individually and privately and take up shared and public solutions. Few insurance or HMO executives are inclined to think along these lines.

They may realize that they are shooting at the wrong target, when they aim at retail pharmacies, but the pharmacies are the only target they can reach with the short-range guns in their private arsenals.
9. Health costs burden Rhode Islanders disproportionately

Winning affordable prescription drugs is especially important in Rhode Island, where health care costs are especially burdensome. In 1993, the last year for which data are available, Rhode Islanders’ health care costs were fifth highest in the nation as a share of gross state product, as shown in the chart on the following page (“Personal Health Care Spending as Share of Gross State Product, 1993”). That is, health care costs in Rhode Island ranked fifth among the states in their share of the economy.40 In Rhode Island, health consumed 14.7 percent of the economy, compared with 12.1 percent for the nation as a whole. The Rhode Island level was more than one-fifth greater (21.5 percent greater) than the national average.

10. An administrative red herring

If pharmacy freedom of choice legislation were to pass, the administrative costs of dealing with all pharmacies should not be appreciably different from the previous administrative costs of dealing with most pharmacies. That is, since Blue Cross and United Health Care already now deal with CVS, Brooks, and the surviving independent pharmacies, the administrative cost of adding Walgreens, Stop and Shop, Walmart, and other chains should be minimal at worst. Assertions to the contrary might be self-serving scare tactics. If not, they should be backed up with clear evidence, or they should be ignored. The burden of proof is on those who make such claims.

Any claim that broadening a network will impose burdensome administrative costs should be scrutinized with special care, given the recent entry of the independent pharmacies into Blue Cross’s network. If Blue Cross can work with 40 independent pharmacies, the costs of adding chain pharmacies not now in the network should be even lower. It should be recognized that the pharmacies not now part of the Blue Cross or United Health Care networks do serve Harvard-Pilgrim, Tufts, and other large organizations that require sophisticated and standardized electronic billing or other communications.

11. Summary: Effects of restricted networks on price

Restricted pharmacy networks offer only the appearance of price relief. They are a desperate and badly flawed solution to the problem of the high cost of prescription drugs. In the course of seeking lower prices for themselves, Blue Cross and United Health Care are imposing several types of long-term burdens on all Rhode Islanders:
The national evidence shows that states with pharmacy freedom of choice statutes enjoy somewhat lower average costs per prescription. But imagine, for now, that restricted network pharmacies do somehow manage to obtain somewhat lower prices for Blue Cross and United Health Care—prices lower than those that would be established by a free market. Were that to happen, the pharmacies in the network must raise their prices on their other customers—now or in the future. The average free market price is the price at which enough pharmacies will remain in business and enjoy profits adequate to remain in business. Pharmacies whose prices are below those of the free market cannot generate enough revenue to remain in business. This is a cost shift, something like a private tax increase.

Pharmacies have long complained about their low profit margins on prescription drugs. Why, then, would they bid down their prices still further in exchange for membership in a restricted network? If network pharmacies do indeed give somewhat lower prices to Blue Cross and United Health Care today, in the short run, it is because they are hoping to win a dominant market position in the long run. They seek so large a share of the Rhode Island market that they will be able to raise their prices above free market levels in the future, to recoup whatever discounts they may have offered to win Blue Cross and United Health Care contracts today.

Today, CVS and Brooks together operate some 96 pharmacies in Rhode Island, or half of the state-wide total. Imagine that, in the years to come, most of the surviving independent pharmacies are forced to close or to sell to CVS or Brooks. Imagine further that most of the large national chains decide to do the same because they cannot do enough business with the small share of the state’s population that is allowed to buy prescription drugs from them.

If these things happen—and they are a very likely extrapolation of recent trends—Brooks and CVS will together control retail pharmacy distribution in Rhode Island. Why would they then continue to offer discounts?
C. IMPROVING AND PROTECTING PATIENT/CONSUMER ACCESS, CHOICE, AND QUALITY OF CARE

1. Aims of pharmacy freedom of choice legislation

In Massachusetts, the state’s 1994 pharmacy freedom of choice legislation was designed to achieve several benefits. These included giving:

- individual consumers free choice in selecting their pharmacies
- “small, independent drugstores a chance to win lucrative HMO business.”
- protection to competition among retail pharmacies

Supporters of the 1994 law cited a nationwide survey which found that “83 % of respondents said that the ability to choose their own pharmacist was ‘very’ or ‘somewhat’ important to them.”

2. Forcing patients to switch pharmacies

Restrictions on pharmacy choice are a form of private regulation that can place substantial burdens on patients and consumers. One such burden is the need to switch pharmacies when employers or patients switch their insurers or HMOs, or when insurers or HMOs switch their pharmacy contracts.

In Massachusetts, turn-over rates among HMOs are substantial. During the quarter ending 30 September 1995, for example, 4.82 percent of Massachusetts HMO members terminated membership in their plan. At this rate, if an HMO started a year with 100 members, only 82 of the original 100 members would remain at the end of the year. After three years, only 55 members would remain. After five years, only 37 members would remain. Viewed in another way, the typical HMO member remains in his or her HMO for only about three and one-third years. HMO turnover rates in Rhode Island may be somewhat lower than those prevailing in Massachusetts, but they can be expected to increase in the years ahead, as more HMOs enter the state to compete for business.
Disenrollment rates may be even greater for patients with more prolonged or intense need for medications, such as elderly, disabled, or chronically ill patients. These individuals may be less satisfied with their carrier or subjected to some pressure to enroll with another carrier, given that these patients tend to be more costly and therefore less profitable to an HMO.

Restricting pharmacy freedom of choice forces more patients to change pharmacies involuntarily.

3. Taking choice out of patients' hands

Before the introduction of insurance company or HMO constraints, patients will have chosen the pharmacies they prefer. Restricted pharmacy networks and other private regulatory steps by insurers or HMOs therefore have the effect of reducing both consumer satisfaction and consumer-oriented competition in the retail pharmacy business. When pharmacies and chains compete for the business of insurers and HMOs, instead of the business of individual consumers, consumers' needs will receive less attention. That's because they are no longer the customer.

Pharmacies bid, compete, or negotiate with HMOs or insurers for the right to join a restricted network. The parties may give some weight to patient needs, but patients do not participate in the negotiations. With restrictive networks, the insuror or HMO becomes the customer. Once a chain secures a special contract as part of a restrictive network, it faces less pressure to service the individual patient. The patient is therefore somewhat captive and is no longer truly a sovereign consumer.

Now, it might be argued that patients choose HMOs or insurers, and so are able to choose pharmacies. But I believe that few—if any—patients give much weight to which pharmacies they will be able to use or forced to use when they choose their HMO or insuror. If patients have a choice, they think much more about which physicians or hospitals are in the HMO's or insuror's network. Of course, when an employer offers only one HMO or insuror—as is increasingly the case—there is no choice at all. The employer and the HMO/insuror bargain over the heads of the employees, leaving them with no choice. And employers are not likely to give much attention to pharmacy access.

By contrast, under pharmacy freedom of choice legislation, patients select pharmacies without interference. Pharmacies must compete to please patients, not HMOs or insurers or employers.
4. Reduction in consumer or patient satisfaction

In the absence of restrictive networks, any patient can choose any pharmacy in light of the things that matter to that patient. People want very different things from their pharmacies. And they can choose different pharmacies that would offer better specific goods or services that matter to a certain individual at a certain time. What might matter to a given individual at a given time? Here are some examples:

- Convenient location with low travel time
- Lengthy hours of operation
- Prices of the particular goods purchased
- Special products, including difficult-to-find prescription drugs or certain over-the-counter house brands, offered by the pharmacy
- Special sales
- Special services, such as reminders to refill prescriptions or inexpensive home delivery of medications
- A long-term relationship with an individual pharmacist
- The comfort of a conservative habit, of doing business at the same place or with the same people

Patients use their judgment to select the pharmacy or pharmacies that best satisfy their needs in all of these areas. Restrictive networks curtail choices, supplanting patient preferences by private regulations that mandate use of certain pharmacies. This inevitably reduces consumer satisfaction.

- Much of this problem is attributable to the nature of competition under restricted contracting, as discussed earlier under the heading of taking choice out of consumers' hands.

- Greater travel time to pharmacy (in general, and specifically for elders or disabled people who might be bussed to a grocery and would prefer to obtain their medications in the same building) may delay or prevent patients from filling prescriptions.

- In addition to these general issues of choice and convenience, special problems can arise for patients experiencing medical emergencies or chronic disabilities, or who are searching for medications just after a hospital discharge. Some patients who are discharged from a hospital must fill prescriptions for pain medications or antibiotics. Some of these medications are not stocked at all pharmacies. Restricted networks can limit patient choice and increase inconvenience even when time is short.
5. Capacity problems

If the pharmacies that comprise a restricted network lack enough capacity, both patients and physicians could face greater waiting time at pharmacies. Patients will have to wait longer to phone in prescriptions and to pick them up. Physicians may become frustrated if they have trouble getting through to in-network pharmacists by telephone.

A 1997 Wall Street Journal report on CVS in Massachusetts mentioned criticisms that “The large prescription volume has taxed CVS. Some customers say they sometimes wait a half hour or more for their prescriptions.” Further, “the company concedes it doesn’t process prescriptions as quickly as it would like....”

6. Over-crowding or long waits

Crowding or waits at network pharmacists may reduce quality of service in at least two ways.

- First is the possibility that an increased numbers of prescriptions will be mis-filled, as pharmacists work under stress. If pharmacists are too busy, they are likely to make more mistakes.

- Second is the possibility that busy pharmacists may fail to talk with patients about their medications, inform patients about side effects and about risks of interactions with other medications, and ask patients if they would like additional counseling about their new prescription.

According to the National Council of Chain Drug Stores, the number of prescriptions filled is expected to rise nationally by 44 percent between 1988 and 2005, but the number of pharmacists is expected to grow by only six percent. How will a smaller number of pharmacies cope with a growing number of prescriptions—and with a much higher number of prescriptions per pharmacist?
7. Disproportionate and adverse impacts

The burdens of greater travel time or restricted pharmacy choice are likely to be heavier for elderly, disabled, chronically ill, lower income, African-American, or Latino-American citizens. That is because many of these individuals are likelier to face greater need for medications but, in many instances, will have less sufficient means of getting to the pharmacy owing to greater travel time or distance—or to the stark difficulties of mobility. As shown later, the 40 surviving Rhode Island independent pharmacies are located disproportionately in lower income, African-American, and Latino-American neighborhoods. If these pharmacies continue to close at high rates, residents of those neighborhoods will be particularly disadvantaged. Again, greater travel time may delay or prevent patients from filling prescriptions.

8. Disruption to patient – pharmacist relationships

Restricted pharmacy networks are more likely to disrupt patient – pharmacist relationships than are traditional open pharmacy arrangements. Disruption of long-standing ties to a community pharmacist is likely to be a more serious problem for elderly, disabled, chronically ill, lower income, African-American, or Latino-American citizens.

Elderly, disabled, or chronically ill individuals average higher rates of use of prescription medications, often prescribed by different specialists. One pharmacist, who knows a patient for a sustained time, will tend to be more likely to be able to spot drug interactions, to monitor appropriate levels of renewal of prescriptions, and generally monitor medications.

Lower income, African-American, and Latino-American citizens are less likely to have primary care physicians and therefore may be likelier to rely on pharmacists for medical advice. That advice is best given and received in the context of a durable relationship.

A patient who is forced to abandon a long-standing relationship with a pharmacist to join the Blue Cross or United Health Care restricted network will forfeit the chance to discuss medications with a pharmacist who knows him or her well. The process of transferring medication records may not be complete or accurate.

Disruption of relationships between pharmacists and patients can undermine continuity of care and perhaps impair pharmacists’ ability to detect drug interactions or other problems.
9. Will loss of competition mean less service?

Vulnerable patients may suffer in yet another way. Some elderly, disabled, or chronically ill patients are homebound, unable to go pick up their own medications. Blue Cross of Rhode Island declared recent that, "In the case of homebound patients, delivery from their pharmacy is available, in most cases at no additional cost, and at most $1.00. Free mail order service is also available." Blue Cross highlights this benefit now, when its restricted pharmacy network is under attack. But how long will this benefit last when competition is reduced or eliminated?

10. Below-market prices harm quality

The profit margin on prescription drugs is very low nationally, according to data cited earlier. HMOs and insurers say they use restricted contracts to squeeze retail pharmacies in hopes of winning price concessions—prices below free market levels. If they succeed, they endanger the overall quality of pharmacy care in at least three main ways.

First, they accelerate the rate of turnover in the industry, especially the rate of closings of pharmacies. Turnover forces patients to accept their second choices among their pharmacies, and also disrupts patient-pharmacist relationships. It is the independents that tend to suffer the most when the rate of closings is high, according to our analyses of Rhode Island data.

Second, surviving pharmacies may, unwillingly or even unintentionally, face pressures to cut back on levels of service to patients in order to cut costs. One study by the state Board of Registration in Pharmacy found that "An estimated 2.4 million prescriptions are filled improperly each year in Massachusetts with most of the mistakes occurring because pharmacies were unusually busy when they made the errors...." This is approximately four percent of retail prescriptions filled annually.

Third, fully 64 percent of pharmacies studied were found to have "failed to offer [counseling about medications] or gave inadequate counseling." These are the conditions that prevail in a state with a pharmacy freedom of choice law, albeit one facing continuing controversy about how well the law is being enforced. Such a law should tend to place prices at free market levels. If Rhode Island's restricted pharmacy networks succeed in their avowed aim
of driving prices below free market levels, retail pharmacies earn smaller profits and therefore have less money with which to finance pharmacists' services, such as counseling.

Again, there is no free lunch.

11. Pharmacy survival in Rhode Island

The retail pharmacy business has traditionally shown much of the uncertainty associated with free markets. Of the 196 retail pharmacies open in Rhode Island in 1980, fully 125 (63.8 percent) had closed by 1999. This is probably something of an under-estimate, as the data for 1999 are more accurate than the data for 1980, meaning that some 1980 pharmacies were not listed.

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Exhibit

Rhode Island Pharmacy Survival, 1980 – 1999

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<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>closed</td>
<td>125</td>
<td>63.8 %</td>
</tr>
<tr>
<td>survivors</td>
<td>71</td>
<td>36.2 %</td>
</tr>
<tr>
<td>total</td>
<td>196</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Note: This describes what happened to the pharmacies open in 1980.

Sources: 1980 Hayes Directory and 1999 National Yellow Pages (CD), confirmed locally.

---

There were 196 Rhode Island pharmacies in 1980. This fell to 189 in 1990 and to 180 in January of 1999. These totals reflect substantial numbers of closings and of openings of new pharmacies. The number of closings and the rate of closings by decade are shown in the exhibit:
Exhibit


<table>
<thead>
<tr>
<th>What happens, when</th>
<th>number</th>
<th>% of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980 pharmacies</td>
<td>196</td>
<td></td>
</tr>
<tr>
<td>- closings, 1980 – 1990</td>
<td>-75</td>
<td>38.3 %</td>
</tr>
<tr>
<td>+ new, 1980 – 1990</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>= 1990 pharmacies</td>
<td>189</td>
<td></td>
</tr>
<tr>
<td>- closings, 1990 – 1999</td>
<td>-71</td>
<td>37.6 %</td>
</tr>
<tr>
<td>+ new, 1990 – 1999</td>
<td>+62</td>
<td></td>
</tr>
<tr>
<td>= pharmacies, 1999</td>
<td>180</td>
<td></td>
</tr>
</tbody>
</table>

Note: Percentages are of the number of pharmacies open at the beginning each decade under analysis.


12. Independent and chain pharmacy survival in Rhode Island

**Closings.** Chain pharmacies are likelier to remain open during each of the two decades studied, and especially from 1990 to 1999. The first exhibit in this section shows pharmacy survival from 1980 to 1990, and then from 1990 to 1999. Between 1980 and 1990, 39.0 percent of the independent pharmacies open in 1980 closed, and 36.7 percent of the chain pharmacies closed.\(^{53}\)

But between 1990 and 1999, the independent pharmacies were much more likely to close. During these nine years, fully 54.8 percent of independent
pharmacies closed, compared with only 20.8 percent of chain pharmacies. The average independent pharmacy was over two and one-half times as likely to close as the average chain pharmacy.

New pharmacies. Between 1980 and 1990, 10 new independents opened, but 58 new chain pharmacies opened. Between 1990 and 1999, there was a net loss of two independent pharmacies owing to conversion to chain status, and there was a net addition of 64 chain pharmacies.

Conversions. According to our data, 7 independent pharmacies converted to chains during the 1980s and 8 did so during the 1990s.

The bottom line. As a result of all these changes, the number of independent pharmacies in Rhode Island fell from 136 in 1980, to 93 in 1990, and to 40 in 1999—for an overall decline of 70.6 percent. Viewed in another way, Rhode Island had only 29.4 percent as many independent pharmacies in 1999 as in 1980.

During this entire period, the number of chain pharmacies rose from 60 in 1980, to 96 in 1990, and to 140 in 1999—for an overall rise of 133.3 percent. We display these data—including breakdowns by county—in a series of charts on the following pages. (These are “Rhode Island Pharmacies by Ownership,” “Change in the Number of Pharmacies, Rhode Island Counties, 1980 – 1999,” and “Percentage Change in Pharmacies, Rhode Island Counties, 1980 – 1999.”)

---

**Exhibit**

**Survival of Independent and Chain Pharmacies, 1980 – 1990 – 1999**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>open % closing</td>
<td>close survivors</td>
<td>NEW</td>
</tr>
<tr>
<td>independent</td>
<td>136 39.0%</td>
<td>53</td>
<td>83</td>
</tr>
<tr>
<td>chain</td>
<td>60 36.7%</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>total</td>
<td>196 38.3%</td>
<td>75</td>
<td>121</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>68</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>189</td>
</tr>
</tbody>
</table>
RHODE ISLAND PHARMACIES BY OWNERSHIP, 1980 - 1999

OWNERSHIP AND YEAR

NUMBER OF PHARMACIES

- Total: 196, 189, 180
- Chain: 60, 96, 140
- Independent: 136, 93, 40

(c) 1999 Alan Sager
CHANGE IN NUMBER OF PHARMACIES, RHODE ISLAND COUNTIES, 1980 - 1999

COUNTY AND TYPE OF PHARMACY

(c) Alan Sager
PERCENTAGE CHANGE IN PHARMACIES,
RHODE ISLAND COUNTIES, 1980 - 1999

COUNTY AND TYPE OF PHARMACY

BRISTOL  KENT  NEWPORT  PROVIDENCE  WASHINGTON  STATE TOTAL

-50.0%  -75.0%  -63.6%  -73.0%  -60.0%  -70.6%

0.0%  140.0%  125.0%  112.5%  53.8%  133.3%

(c) Alan Sager

Descriptives by County -- % ch x cty  3/11/99
13. Which types of pharmacies are likelier to remain open?

We looked at pharmacy survival between 1980 and 1990, between 1990 and 1999, and for the entire 19 years between 1980 and 1999.

1980 – 1990. The pharmacies open in 1980 that had closed by 1990 tended to be located in more densely populated census tracts, with high Black, Hispanic, and total minority population shares. Incomes were lower. There were slightly more pharmacies located nearby. The race and income variables were statistically significant at the conventional 0.05 level (p-value less than 0.05). That is, there are fewer than five chances in 100 that these differences between the two groups of pharmacies would be found randomly or by accident. Please refer to the exhibit on the next page for more detailed information.

We also performed multivariate logistic regression analysis of the characteristics predicting pharmacy survival from 1980 to 1990. During this decade, only the 1990 tract percent minority was statistically significant, at 0.0053. Using this variable only, the model was 56.8 percent accurate in judging which of two randomly drawn pharmacies (one of which closed and the other of which survived) actually survived.\(^{54, 55}\)
## Exhibit

### Characteristics of Pharmacies Closing or Surviving, 1980 to 1990

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>GONE</th>
<th>ALIVE</th>
<th>TOTAL</th>
<th>significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tract population density, 1990</td>
<td>5,894</td>
<td>5,182</td>
<td>5,454</td>
<td>0.2609</td>
</tr>
<tr>
<td>tract percent Black, 1990</td>
<td>5.8</td>
<td>2.6</td>
<td>3.8</td>
<td>0.0072</td>
</tr>
<tr>
<td>tract percent Hispanic, 1990</td>
<td>5.7</td>
<td>3.2</td>
<td>4.2</td>
<td>0.0233</td>
</tr>
<tr>
<td>tract percent minority, 1990</td>
<td>11.5</td>
<td>5.9</td>
<td>8.0</td>
<td>0.0051</td>
</tr>
<tr>
<td>tract percent 65 and above, 1990</td>
<td>16.2</td>
<td>17.1</td>
<td>16.8</td>
<td>0.2230</td>
</tr>
<tr>
<td>median household income, 1990</td>
<td>$29,379</td>
<td>$33,316</td>
<td>$31,809</td>
<td>0.0077</td>
</tr>
<tr>
<td>median family income, 1990</td>
<td>$36,469</td>
<td>$40,304</td>
<td>$38,836</td>
<td>0.0245</td>
</tr>
<tr>
<td>per capita income, 1990</td>
<td>$13,936</td>
<td>$15,516</td>
<td>$14,911</td>
<td>0.0181</td>
</tr>
<tr>
<td>chain in 1980?</td>
<td>29.3%</td>
<td>31.4%</td>
<td>30.6%</td>
<td>0.7612</td>
</tr>
<tr>
<td>pharmacies w/in one mile, 1980</td>
<td>3.57</td>
<td>2.91</td>
<td>3.16</td>
<td>0.0752</td>
</tr>
<tr>
<td>pharmacies w/in two miles, 1980</td>
<td>10.76</td>
<td>9.60</td>
<td>10.04</td>
<td>0.3185</td>
</tr>
</tbody>
</table>


Note: The statistical tests are t-tests, performed in Statistica, version 5.1, 1998.

We then forced into the logistic regression equation tract percent minority in 1990 and several other characteristics—Independent/chain status in 1980, tract percent age 65 and above in 1990, and number of competing pharmacies within one mile. After doing this, tract percent minority was still significant at 0.0987. Nothing else was significant at better than 0.5908. The overall predictive accuracy of the model rose only slightly (to 58.7 percent) above the accuracy of the model using only tract percent minority.
1990 – 1999. The picture changes substantially when we examine closings between 1990 and 1999. In the following exhibit, we analyzed the 1990 and also the 1997 characteristics of the pharmacies that closed between 1990 and 1999. The demographic and income characteristics that were so important during the 1980s seem no longer to be associated with pharmacy survival during the 1990s. The only significant characteristic was whether a pharmacy was independent or chain-owned. And this was highly significant indeed between 1990 and 1999—the difference in survival rates would be found by chance less than one time in ten thousand.

Exhibit

Characteristics of Pharmacies Closing or Surviving, 1990 – 1999

<table>
<thead>
<tr>
<th>1990 characteristics</th>
<th>GONE</th>
<th>ALIVE</th>
<th>TOTAL</th>
<th>significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=71</td>
<td>n=118</td>
<td>n=189</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tract population density, 1990</td>
<td>5,275</td>
<td>4,650</td>
<td>5,010</td>
<td>0.4925</td>
</tr>
<tr>
<td>tract percent Black, 1990</td>
<td>3.31</td>
<td>3.17</td>
<td>3.23</td>
<td>0.8926</td>
</tr>
<tr>
<td>tract percent Hispanic, 1990</td>
<td>3.80</td>
<td>3.36</td>
<td>3.53</td>
<td>0.6494</td>
</tr>
<tr>
<td>tract percent minority, 1990</td>
<td>7.11</td>
<td>6.54</td>
<td>6.75</td>
<td>0.7525</td>
</tr>
<tr>
<td>tract percent 65 and +, 1990</td>
<td>16.50</td>
<td>16.34</td>
<td>16.40</td>
<td>0.8436</td>
</tr>
<tr>
<td>median household income, 1990</td>
<td>$33,500</td>
<td>$32,996</td>
<td>$33,186</td>
<td>0.7310</td>
</tr>
<tr>
<td>median family income, 1990</td>
<td>$40,456</td>
<td>$39,089</td>
<td>$39,602</td>
<td>0.4091</td>
</tr>
<tr>
<td>per capita income, 1990</td>
<td>$15,748</td>
<td>$15,014</td>
<td>$15,290</td>
<td>0.2763</td>
</tr>
<tr>
<td>chain in 1990?</td>
<td>28.2%</td>
<td>64.4%</td>
<td>50.8%</td>
<td>0.0000</td>
</tr>
<tr>
<td>pharmacies w/in one mile, 1990</td>
<td>2.55</td>
<td>2.52</td>
<td>2.53</td>
<td>0.8977</td>
</tr>
<tr>
<td>pharmacies w/in two miles, 1990</td>
<td>8.28</td>
<td>7.58</td>
<td>7.84</td>
<td>0.4030</td>
</tr>
<tr>
<td>1997 Characteristics</td>
<td>Gone</td>
<td>Alive</td>
<td>Total significance</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>tract population density, 1997</td>
<td>5,068</td>
<td>4,661</td>
<td>4,814</td>
<td>0.4931</td>
</tr>
<tr>
<td>tract percent Black, 1997</td>
<td>3.51</td>
<td>3.44</td>
<td>3.46</td>
<td>0.9428</td>
</tr>
<tr>
<td>tract percent Hispanic, 1997</td>
<td>5.04</td>
<td>4.56</td>
<td>4.74</td>
<td>0.7138</td>
</tr>
<tr>
<td>tract percent minority, 1997</td>
<td>8.56</td>
<td>7.99</td>
<td>8.21</td>
<td>0.7937</td>
</tr>
<tr>
<td>tract percent 65 and +, 1997</td>
<td>17.49</td>
<td>17.66</td>
<td>17.59</td>
<td>0.7966</td>
</tr>
<tr>
<td>median household income, 1997</td>
<td>$53,421</td>
<td>$51,442</td>
<td>$52,186</td>
<td>0.4193</td>
</tr>
<tr>
<td>median family income, 1997</td>
<td>$62,904</td>
<td>$59,876</td>
<td>$61,013</td>
<td>0.2823</td>
</tr>
<tr>
<td>per capita income, 1997</td>
<td>$19,568</td>
<td>$18,665</td>
<td>$19,004</td>
<td>0.2995</td>
</tr>
<tr>
<td>chain in 1996?</td>
<td>36.4%</td>
<td>67.0%</td>
<td>64.3%</td>
<td>0.0434</td>
</tr>
</tbody>
</table>


Note: The statistical tests are t-tests, performed in Statistica, version 5.1, 1998.

We also performed multivariate logistic regression analysis of the characteristics predicting pharmacy survival between 1990 and 1999. Only the status of a pharmacy as independent/chain in 1990 was a statistically significant (at 0.0001) predictor of pharmacy survival. The model using this variable only was accurate for 46.3 percent of all randomly drawn pairs, inaccurate for 10.0 percent of the pairs, and tied for 43.7 percent of the pairs.\(^{57}\)

Then, we forced all of the 1990 values for the pharmacies' census tracts and competitive positions into a logistic regression, along with independent/chain status. Independent/chain status remained significant at 0.0001. The overall model was accurate in identifying which pharmacy would survive for 71.5 percent of all pairs.\(^{56}\)

1980 – 1999. We analyzed pharmacy survival in Rhode Island during the entire 19 years as a function of the 1990 census data (mid-point of the period), and available 1980 pharmacy characteristics. This analysis pertains only to the 196 pharmacies open in 1980.

In this combined, two-decade analysis, the race/ethnicity/income link to closings that was found during the 1980s was more than offset by the
independent/chain link to closings that prevailed during the 1990s. Only the pharmacy's independent/chain status in 1980 was significantly associated with survival over the full 19-year span.

---

**Exhibit**

**Characteristics of Pharmacies Closing or Surviving, 1980 - 1999**

Alive in 1999?

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>GONE</th>
<th>ALIVE</th>
<th>TOTAL</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=125</td>
<td>n=71</td>
<td>n=196</td>
<td>(p-value)</td>
</tr>
<tr>
<td>tract population density, 1990</td>
<td>5,546</td>
<td>5,293</td>
<td>5,454</td>
<td>0.6926</td>
</tr>
<tr>
<td>tract percent Black, 1990</td>
<td>3.96</td>
<td>3.60</td>
<td>3.83</td>
<td>0.7627</td>
</tr>
<tr>
<td>tract percent Hispanic, 1990</td>
<td>4.48</td>
<td>3.62</td>
<td>4.17</td>
<td>0.4287</td>
</tr>
<tr>
<td>tract percent minority, 1990</td>
<td>8.44</td>
<td>7.22</td>
<td>8.00</td>
<td>0.5491</td>
</tr>
<tr>
<td>tract percent 65 and above, 1990</td>
<td>17.01</td>
<td>16.33</td>
<td>16.76</td>
<td>0.3629</td>
</tr>
<tr>
<td>median household income, 1990</td>
<td>$31,161</td>
<td>$32,950</td>
<td>$31,809</td>
<td>0.2343</td>
</tr>
<tr>
<td>median family income, 1990</td>
<td>$38,493</td>
<td>$39,440</td>
<td>$38,836</td>
<td>0.5853</td>
</tr>
<tr>
<td>per capita income, 1990</td>
<td>$14,864</td>
<td>$14,994</td>
<td>$14,911</td>
<td>0.8492</td>
</tr>
<tr>
<td>chain in 1980?</td>
<td>24.8%</td>
<td>40.8%</td>
<td>30.6%</td>
<td>0.0191</td>
</tr>
<tr>
<td>pharmacies w/in one mile, 1980</td>
<td>3.36</td>
<td>2.82</td>
<td>3.16</td>
<td>0.1508</td>
</tr>
<tr>
<td>pharmacies w/in two miles, 1980</td>
<td>10.38</td>
<td>9.44</td>
<td>10.04</td>
<td>0.4226</td>
</tr>
</tbody>
</table>


Note: The statistical tests are t-tests, performed in Statistica, version 5.1, 1998.

---

We again performed multivariate logistic regression analyses of the characteristics predicting pharmacy survival. Only a pharmacy's independent/chain status entered the equation, significant at 0.0202. This model was able to correctly classify 30.7 percent of all possible pairs. It
was incorrect for 14.7 percent of pairs, and it was tied for 54.6 percent of pairs.\textsuperscript{69}

Finally, we forced into the equation the pharmacy's tract percent minority in 1990, its tract share of the population aged 65 and above in 1990, and the number of other pharmacies located within one mile in 1980. Only independent/chain status was significant, now at 0.0174. This overall model accurately predicted which member of a randomly selected pair actually closed 62.6 percent of the time.\textsuperscript{60}

14. Effects of independent pharmacy closings

In Massachusetts, many people supported passage of the state's pharmacy freedom of choice legislation because they thought this would protect independent pharmacies.

In Rhode Island, the surviving independent pharmacies (40 at this writing) are already included in the Blue Cross and United Health Care restricted networks. Yet, inclusion is not likely to be enough to protect independent pharmacies. Attrition of the independent pharmacies can be expected to continue.

That is because, if restricted networks do result in lower prices, independent pharmacies would be squeezed on the prices they are paid for prescription drugs and the profits they can earn on prescription drugs. And it is because they usually do not have enough space in "the front of the store" to earn as much offsetting profits on non-prescription sales as do the chain pharmacies. Nor are they able to spread advertising costs across many stores.

Just as membership in the restricted networks cannot be expected to be enough to provide that protection to independent Rhode Island pharmacies, passage of pharmacy freedom of choice legislation is not likely to undermine surviving independent pharmacies any further.

If it is desired to protect independent pharmacies, it will be necessary to rely on means more powerful than either restricted networks or pharmacy freedom of choice legislation. I suggest that it is important to protect independent pharmacies for several reasons:

- To preserve patient - pharmacist relationships and continuity of care.
- To retain diversity of ownership and management—characteristics that can be expected to enhance innovation.
• To protect service to those patients who are especially vulnerable to denial of needed care.

The last point merits particular attention. Continued closing of independent pharmacies is likely to have an adverse and disproportionate impact on lower income, African-American, and Latino citizens of Rhode Island. Further, such closing will impair the capacity of any restricted network of pharmacies to serve such citizens.

Race and ethnicity. Independent pharmacies surviving in 1999 are substantially more likely than other Rhode Island pharmacies to be located in neighborhoods with high minority populations. Pharmacies that were independent in January of 1999 were located in census tracts that were 10.5 percent minority in 1990 and 12.8 percent minority in 1997. This compares to 5.9 percent and 7.1 percent, respectively, for the chain pharmacies. This disparity was not as great in earlier years, as the following exhibit indicates.

---

### Exhibit

**Tract Percent Minority for Independent and Chain Pharmacies, 1980 – 1990 - 1999**

<table>
<thead>
<tr>
<th>Independent/Chain in 1999?</th>
<th>Tract percent minority in 1990</th>
<th>% minority in 1997</th>
<th>number of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>10.5</td>
<td>12.8</td>
<td>40</td>
</tr>
<tr>
<td>Chain</td>
<td>5.9</td>
<td>7.1</td>
<td>140</td>
</tr>
<tr>
<td>All pharmacies</td>
<td>6.9</td>
<td>8.4</td>
<td>180</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent/chain in 1990?</th>
<th>Tract percent minority in 1990</th>
<th>% minority in 1997</th>
<th>number of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>7.5</td>
<td>9.2</td>
<td>93</td>
</tr>
<tr>
<td>Chain</td>
<td>6.0</td>
<td>7.3</td>
<td>96</td>
</tr>
<tr>
<td>All pharmacies</td>
<td>6.8</td>
<td>8.2</td>
<td>189</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent/Chain in 1980?</th>
<th>Tract percent minority in 1990</th>
<th>number of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>8.4</td>
<td>136</td>
</tr>
<tr>
<td>Chain</td>
<td>7.1</td>
<td>60</td>
</tr>
<tr>
<td>All pharmacies</td>
<td>8.0</td>
<td>196</td>
</tr>
</tbody>
</table>
Income. Similarly, estimated incomes in 1997 for the census tracts containing independent pharmacies open in 1999 were, on average, markedly lower than incomes around chain pharmacies, as the following exhibit shows. For example, median household income in the tracts containing independent pharmacies in 1999 averaged $5,125 lower than in the tracts containing chain pharmacies in 1999. This was a difference of 10.8 percent.

Exhibit

1997 Estimated Incomes in Census Tracts Containing Independent and Chain Pharmacies

<table>
<thead>
<tr>
<th>Pharmacies in 1999</th>
<th>Median household income, 1997</th>
<th>Median family income, 1997</th>
<th>Average per capita income, 1997</th>
<th>Number of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independents</td>
<td>$ 47,641</td>
<td>$ 55,600</td>
<td>$ 16,932</td>
<td>40</td>
</tr>
<tr>
<td>Chains</td>
<td>$ 52,766</td>
<td>$ 61,678</td>
<td>$ 19,147</td>
<td>140</td>
</tr>
<tr>
<td>All pharmacies</td>
<td>$ 51,627</td>
<td>$ 60,327</td>
<td>$ 18,654</td>
<td>180</td>
</tr>
</tbody>
</table>

Age. On the other hand, independent pharmacies were typically located in census tracts with slightly lower average tract elderly population share, as the following exhibit indicates. Tracts containing independent pharmacies average elderly population share in 1997, for example, was 16.7 percent; for chain pharmacies, it was 18.2 percent.
Exhibit

Elderly Share of the Population in Tracts Containing Independent and Chain Pharmacies

<table>
<thead>
<tr>
<th>Pharmacies in 1999</th>
<th>Tract % over age 65 in 1990</th>
<th>Tract % over age 65 in 1997</th>
<th>Number of pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independents</td>
<td>15.2</td>
<td>16.7</td>
<td>40</td>
</tr>
<tr>
<td>Chains</td>
<td>16.8</td>
<td>18.2</td>
<td>140</td>
</tr>
<tr>
<td>All pharmacies</td>
<td>16.4</td>
<td>17.9</td>
<td>180</td>
</tr>
</tbody>
</table>

The effects of losing independent pharmacies become even clearer when we examine the 135 network pharmacies open in January of 1999. According to our data, 40 of these were independents while were 95 chain pharmacies.

There are distinct and statistically significant racial and income distinctions between the residents of the census tracts containing independent network pharmacies and the chain network pharmacies. As shown in the exhibit, below, the network's independent pharmacies were significantly more likely to be located in more heavily minority neighborhoods and in neighborhoods with lower incomes. These relations held for the 1990 census data and also for the estimates for 1997.

As would be expected from these data, it appears, further, that a substantial share of the coverage provided by network pharmacies to lower income people and to members of ethnic or racial minority groups is provided by independent pharmacies. It is to be feared that the loss of those pharmacies would impair the network's ability to cover Rhode Islanders equitably.
Exhibit

Characteristics of Census Tracts Containing Network Pharmacies in 1999, Independents and Chains Compared

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Independent n=40</th>
<th>Chain n=95</th>
<th>TOTAL n=135</th>
<th>Significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tract population density, 1990</td>
<td>5,814.10</td>
<td>4,623.29</td>
<td>4,976.13</td>
<td>0.1185</td>
</tr>
<tr>
<td>tract percent Black, 1990</td>
<td>5.11</td>
<td>2.95</td>
<td>3.59</td>
<td>0.1127</td>
</tr>
<tr>
<td>tract percent Hispanic, 1990</td>
<td>5.42</td>
<td>2.64</td>
<td>3.46</td>
<td>0.0157</td>
</tr>
<tr>
<td>tract percent minority, 1990</td>
<td>10.53</td>
<td>5.59</td>
<td>7.05</td>
<td>0.0344</td>
</tr>
<tr>
<td>tract percent 65 and +, 1990</td>
<td>15.15</td>
<td>17.18</td>
<td>16.58</td>
<td>0.0887</td>
</tr>
<tr>
<td>median household income, 1990</td>
<td>$30,599</td>
<td>$33,250</td>
<td>$32,465</td>
<td>0.1174</td>
</tr>
<tr>
<td>median family income, 1990</td>
<td>36,488</td>
<td>39,994</td>
<td>38,955</td>
<td>0.0572</td>
</tr>
<tr>
<td>per capita income, 1990</td>
<td>13,720</td>
<td>15,160</td>
<td>14,733</td>
<td>0.0476</td>
</tr>
<tr>
<td>pharmacies w/in one mile, 1980</td>
<td>2.73</td>
<td>2.51</td>
<td>2.59</td>
<td>0.5392</td>
</tr>
<tr>
<td>pharmacies w/in two miles, 1980</td>
<td>7.84</td>
<td>7.69</td>
<td>7.74</td>
<td>0.8895</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Independent n=20</th>
<th>Chain n=25</th>
<th>TOTAL n=45</th>
<th>Significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tract population density, 1997</td>
<td>5,537</td>
<td>4,477</td>
<td>4,849</td>
<td>0.1477</td>
</tr>
<tr>
<td>tract percent Black, 1997</td>
<td>5.42</td>
<td>3.22</td>
<td>4.17</td>
<td>0.1099</td>
</tr>
<tr>
<td>tract percent Hispanic, 1997</td>
<td>7.42</td>
<td>3.55</td>
<td>5.14</td>
<td>0.0158</td>
</tr>
<tr>
<td>tract percent minority, 1997</td>
<td>12.84</td>
<td>6.76</td>
<td>9.30</td>
<td>0.0287</td>
</tr>
<tr>
<td>tract percent 65 and +, 1997</td>
<td>16.66</td>
<td>18.37</td>
<td>18.02</td>
<td>0.0556</td>
</tr>
<tr>
<td>median household income, 1997</td>
<td>$47,641</td>
<td>$51,840</td>
<td>$50,914</td>
<td>0.1299</td>
</tr>
<tr>
<td>median family income, 1997</td>
<td>$55,600</td>
<td>$60,856</td>
<td>$59,848</td>
<td>0.0926</td>
</tr>
<tr>
<td>per capita income, 1997</td>
<td>$16,932</td>
<td>$18,872</td>
<td>$18,547</td>
<td>0.0487</td>
</tr>
</tbody>
</table>
NOTES

1 Scott Fraser, Assistant Vice President, Legislative Affairs, Blue Cross Blue Shield of Rhode Island, letter to Rhode Island Legislators, 29 January 1999, p. 2.


7 The Pilgrim HMO, with a restricted network, showed a 27.5 percent rise between 1990 and 1993, while the Tufts HMO, with an open network, showed a 25.8 percent rise. See Massachusetts Pharmacists Association, “Questions and Answers on H. 5680,” n.d. (1994?).


We again excluded Connecticut.

The other is eye care products—glasses and contact lenses.

"CVS Grows Rapidly, Aided by HMO Ties," *Wall Street Journal*, 24 February 1997. It is not clear from the text whether, in characterizing Brooks as a "wounded" competitor," Mr. Ryan was referring to Brooks as a chain or to that single Brooks pharmacy.


The state's population is estimated to have been remarkably stable in recent years. See [www.census.gov/population](http://www.census.gov/population), table st98-3.

For March of 1997, the U.S. Census Bureau estimated 10.2 percent of Rhode Island's population to be uninsured. Applying this rate to the estimated Rhode Island 1 July 1998 population of 988,480 yields an estimate of 100,825 uninsured people. See [www.census.gov/hhes/hlthins/hlthin97](http://www.census.gov/hhes/hlthins/hlthin97), 28 September 1998.

Rhode Island plan data were calculated from Rhode Island Department of Health, reports from individual health plans for first three quarters of 1998, under the jurisdiction of the Health Care Accessibility and Quality Assurance Act of 1996, 19 February 1999. Medicare enrollments were obtained from "Medicare Enrollment by State," 1994 through 1997, unpublished data from the Health Care Financing Administration, BDMS.

Telephone interview with former state representative Marc Draisin, 4 September 1996. Mr. Draisin was then serving as executive director, Massachusetts Association of Community Development Corporations, 197 Portland Street, Boston, Massachusetts 02114.

Sources:
United States: National Association of Boards of Pharmacy.
The variation in sources may be associated with a reduction in the reliability of the data.

This probably under-states the drop, as records are somewhat more complete and accurate for 1999 than for earlier years. The changes in the number and composition of pharmacies in Rhode Island are discussed in detail later in this report.


But some Massachusetts pharmacists complained that they were overworked, forced to fill more than 200 prescriptions daily, leading to dispensing errors. Michael Lasalandra, “Druggist Probe Uncovers Millions of Errors,” Boston Herald, 10 February 1999.


30 Alan Sager, "All the Money We Need," Presentation to the Committee on Federal Government Affairs, American Academy of Pediatrics, Ritz-Carlton Hotel, Arlington, Virginia, 24 January 1999.

31 Attributed to the U.S. Senate Special Committee on Aging, February 1993.


35 The U.S. share was 33.2 percent in 1996. See PhRMA Industry Profile (using data from IMS Health, 1998), www.phrma.org/publications/industry/profile98.


37 Alex Pham, "Drug Costs Put Strain on Health Insurers," The Boston Globe, 18 March 1998.


39 Attributed to the U.S. Senate Special Committee on Aging, February 1993.


42 Telephone interview with former state representative Marc Draisin, 4 September 1994. Mr. Draisin was then serving as executive director, Massachusetts Association of Community Development Corporations, 197 Portland Street, Boston, Massachusetts 02114.

43 Summary of House 1109: An Act Relative to Providing Accessibility to Pharmaceutical Services (The Pharmacy ‘Freedom of Choice’ Bill). The survey was conducted by Penn+Schoen Associates, New York City.


49 www.nacds.org/industry/fastfacts.html.

50 Scott Fraser, Letter to Rhode Island Legislators, 29 January 1999.


53 We define chain pharmacies as groups of three or more under the same ownership.

54 We used SAS’s stepwise logistic regression package, SAS release 6.12.

55 The ROC or c value was 0.587.

56 The ROC or c value also rose slightly, to 0.596.

57 The ROC or c value was a respectable 0.681.

58 The ROC or c value rose slightly to 0.717.

59 The ROC or c value was 0.580.

60 The ROC or c value again rose slightly, to 0.629.

61 The 1997 population estimates are from Wessex, Inc.