Billions from Bandaids

The Booming Medical Supply Industry

Inside

How to Measure Cutbacks P. 11
Avoiding X-traneous Rays P. 29
To the Editor:

I was very interested in the three comments about my article that you published. I liked all three very much. I wondered, though, why all three commentators chose to discuss whether OTC’s [over the counter drugs] should be available, rather than the issue of OTC promotion, which is the core of the article.

On the one hand, the availability issue is a serious and important one, and I think the comments on it provide an excellent balance to my article. On the other hand, my own opinion is that availability problems may not be resolved until promotion of OTC’s is more strictly regulated, so that manufacturers must provide consumers with full disclosures on the OTC products.

This would have the advantage of making both physicians and patients aware of the actions and risks of OTC products, and would also cause the industry to think twice about introducing new OTC’s that carry significant risks that would, along with benefits, need to be emphasized to consumers.

Dana Delibovi
New York, NY
A Letter from the Editor

Our long-time readers know that the Bulletin has attacked government health care programs for waste, paternalism, and misdirection of resources with a bulldog consistency which matches Reader’s Digest in its assaults on Communist Tyranny. But our concern was always to enhance the effectiveness of funding, not to eliminate it. Those in power have a different agenda.

The most common measures of national health are infant mortality and life expectancy. It is indisputable that the American record in both categories could be dramatically improved if just a fraction of the funds poured into high technology medicine were devoted to expanding prenatal and infant care. Instead, these programs as well as many others have been brutally slashed.

Who pays? The infant mortality rate in the nation’s capital, which happens to be 80 percent Black, is 23 per thousand while the national rate is 13 per thousand. Those excess ten deaths per thousand (actually more, since they bring up the national average) among the poor, the Black, the uneducated, in Washington, D.C., and all over the country are on the heads of those who deny the monies which could save them.

No doubt in the name of saving money, rather than lives, the Reagan Administration will no longer collect much of the data which would reveal the damage caused by its health care cutbacks, just as it has already curtailed surveys on labor disputes, workplace accidents, environmental damage, and many other unpleasant facts. But the scars are on the nation.

In this issue we begin our contribution to taking the toll of the Reagan cutbacks—which in many cases only compound earlier damage under previous administrations. The full measure will not even be calculable for years, but every contribution to the record is important and valuable. Future generations—those children who survive—should know what was done to them.

And why. This degradation of our lives, our air quality, our ability to earn a livelihood, our safety in the workplace, our security from military adventures abroad and nuclear holocaust here at home, is justified in the name of making free enterprise work. Free enterprise used to be known as capitalism, but the system gave itself a bad name. These days it isn’t hard to see why.

Jon Steinberg
To the Editor:

I was disappointed to see you implying in a recent issue that environmental hazards present a conflict between wages and health. And Tony Mazzocchi's assertion that communities faced with those hazards are only interested in "getting rid of the plant," also does a disservice to the many coalitions of workers and community groups who have fought side by side for safer industrial processes. Here in Pennsylvania, one city (Philadelphia) has already passed a right-to-know bill that will help to protect both workers and communities. Other cities are working on similar legislation.

The fact is, environmental pollutants are the result of an industrial process that cares little about human welfare. Instead, "the bottom line" determines how things get produced and that's what's responsible for the hazards that affect both workers and communities.

Gaining control over that process is in the interest of all people exposed to the hazard of industrial production. To accomplish that objective, a unity of action will have to emerge. Presenting health issues as adversarial to workers' other interests (such as wages or job security) only serves to work against that unity.

Sincerely,
Milt Baer,
Pittsburgh, PA

NOTES & COMMENT

It would be dishonest to say there wasn't a little initial scepticism around the Health/PAC office when Ronald Reagan declared that supply side economics would aid all Americans. It seemed to us that even if a rising tide lifts all boats, in this particular sea of prosperity the trickle down strategy provides salt water for the working poor and leaves those without boats drowning.

But when various Reagan Administration officials proposed a policy of including all government benefits in determining income, I realized we might have been too hasty. Just to be sure, I took a trip up to a public hospital to find out.

Squeezing past the lines in the waiting room and stepping gently over the patients awaiting admission to the emergency room, I knew that so many people in such obvious pain must have a good reason for enduring so much trouble for so long.

The reason was readily apparent. Aren't people willing to stand patiently at the ski lifts in Gstaad and Vail? Won't they quietly wait their turn at a blackjack table in Monte Carlo or for their Concorde flight to Paris? This hospital, I was told, was on the verge of becoming a watering hole of the new haute monde: the Beautiful Patients.

"See that fellow over there in the second bed," whispered an awed doctor, "he's got a kidney problem worth $10,000 a week in Medicare payments."

"And all he has to do to earn it is lie in bed," I said, "Rockefeller should be so lucky."

"That's nothing," interjected another physician, "This guy over here is going to make $50,000 in a few hours when we do operations on his detached retina."

"But then he'll be through," I pointed out.

"We might fail," replied the doctor, "And then he'll come back and rake in more cash."

"What a racket," I thought out loud, "Not only will the government give them a bundle, it'll all be tax free. No wonder people are dying to get in here."

"Well," responded a nurse, "There may be another reason. Since they'll be earning so much here, the Reagan Administration will take them off food stamps, so as soon as they leave they'll starve to death."

"See," I said, "people are always criticizing the President for favoring the rich, but here we see he's willing to let them starve just like anyone else."

Erratum

Astute readers may have noticed that the Bulletin had two November-December 1981 issues and no January-February 1982 issue. The second of these was the January-February 1982 issue. We regret any confusion.
Vital Signs

Putting the "Pro" into Pro-Competition

With the recession fully upon us, official unemployment over nine percent and rising, and real unemployment in the double digits of last season’s inflation, most of us are tightening our belts.

The medical profession and the AMA, however, are tightening their accounting.

To reduce the impact of the recession on the medical profession, the AMA has joined VISA and MasterCard in making interest on overdue accounts not only profitable, but ethical! According to Bernard D. Hirsch, general counsel for the AMA, “Everyone pays their credit card bills and car loans, but the doctor is the last one to get paid.” The AMA believes this is the one reason why real income for physicians (as well as everyone else) peaked in 1972 and has been declining since.

AMA bylaws were changed this year from reading that “it is not in the best interest of the public or the profession to charge interest on an unpaid bill or note” to something more befitting the times: “physicians who have experienced problems with delinquent bills may properly choose to request that payment be made at the time of treatment or add interest or other reasonable charges to delinquent accounts.”

The AMA leaves the interest rate entirely up to the individual doctor, but he or she must still comply with state usury laws.

Meanwhile, another AMA—the American Management Association—has begun marketing its training course entitled “Collection Strategies & Techniques” to physicians and health-care managers. For a mere (tax-deductible) $645 it will explain “how to establish and maintain a permanent enthusiasm for the rewarding profession of collection . . . , how to get instant access to proper rebuttals to debtor’s excuses . . ., and words and phrases that give you power and results . . . .” According to its brochure, the “AMA takes no position on any public issues, speaks for no group and espouses no cause other than that of better management.”

Medical administrators can learn how to keep unions out—at government expense.

For those with more modest pocketbooks or captive patients, the Center to Promote Health Care Studies offers a one day course in “Keeping Your Health Facility Union-Free.” Continuing education credits are offered to nursing home and hospital administrators under the rubric, “With so much at stake, you . . . as a prudent health facility manager . . . must be prepared for the inevitable knock on your door.” Jackson, Lewis, Schnitzler & Krupman—the nation’s largest law firm devoted exclusively to the practice of labor and employment law in behalf of management”—will teach us to understand “why health care employees unionize” and “how to act if you receive a demand for recognition.”

Jon Steinberg

Reagan Increases Benefits

Several readers have written in to question whether the ad in the last issue of the Bulletin for the book Mean, Rough, and Tough by Milton “Bear” Nuckles (Turkey paperback, $4.95) was genuine.

“Surely,” writes E. Coli of Trala, LA, “hospitals already strapped for funds wouldn’t shell out big bucks for union-busters when they could probably keep out a union themselves by merely doubling wages, drastically increasing benefits, and improving working conditions.”

Well, E. Coli, they don’t have to pay for their union suits. Spurred by intense lobbying from the American Hospital Association and its own commitment to reordering priorities, the Reagan Administration has decided that Medicaid will pay for management costs incurred in trying to prevent union organization. This reversal of Carter Administration policy, adopted by the Department of Health and Human Services’ Health Care Financing Administration, does stipulate that the management activities must be legal.
We don't know exactly what Jackson, Lewis, Schnitzler & Krupman prescribe for labor pains, but we suspect it's not natural birth.

Hal Strelnick
(Hal Strelnick is a member of the Health/PAC Board and a doctor teaching at Montefiore Hospital in the Bronx.)

Community Unity

My center is giving way. My right is pulled back . . . Situation excellent, I am attacking. —General Ferdinand Foch, Battle of the Marne, WWI

Wounded by cuts in the budgets of OSHA and EPA, and assaults on the laws these agencies are supposed to enforce, trade unionists and environmentalists pressing for right-to-know legislation in states and localities might take up the motto of the French Marshal.

Although labeling the ingredients of some consumer products and providing informed medical consent are precedents, the impetus for right-to-know legislation comes from the occupational safety and health movement. The OSHAct of 1971 gave workers in the private sector the right to inspect their medical and exposure records, but since 1976 OSHA has stalled standards for labeling the chemicals workers handle.

Spurred by Federal inaction, the first generation of worker right-to-know bills was passed in Virginia (1979), Maine (1979), California (1980), Michigan (1980), New York (1980), and West Virginia (1981). Under these laws, right to know is a matter between workers and bosses. The state may safeguard trade secrets, protect an inquisitive worker from retaliation by management, and levy fines for violations, but it is the company which must inform and train workers. Enforcement depends on worker militancy, not the state whose appropriations for oversight were rare.

The next stage began in February, 1981, with the passage of a worker and community right-to-know bill in Philadelphia. Since then access by communities has often become a provision tacked onto what are essentially worker bills or else separate community bills have been put through after worker right-to-know laws had been placed on the books.

These community access provisions and bills rely on decentralization of authority only in the sense that to date most have been passed by municipalities. While the worker bills have been the product of a consciously preventive strategy, the community right-to-know movement has been a response to particular problems: air pollution in Philadelphia, the highest U.S. cancer rate in Cincinnati, trichloereylene in Santa Monica's drinking water, trade secret battles with StaniChem in Connecticut, and fire hazards in Vallejo, California. In all cases, instead of obtaining information about toxic substances at individual businesses, citizens get it from a central governmental authority, whether fire, health, labor, environmental, or other.

Connecticut was the breakthrough state.

Even before this stage has won widespread acceptance, a third wave is breaking. Bills passed in Cincinnati and Connecticut combine workplace disclosure with reporting to local authorities. Even stronger bills are coming up in New Jersey and Massachusetts. This new approach already has corporate officials so worried that Reagan OSHA officials are proposing a limited Federal labeling standard for chemicals to preempt stricter local regulation.

Right-to-know legislation has advanced to a third stage.

Getting worker-community disclosure bills might seem a logical step, but until recently no coalition was pushing for it. Unions rarely venture outside the plant in the United States. Environmentalists have been concerned about the health effects of pollution for years, but have rarely been organized on a neighborhood basis, or even by community. However since Love Canal, the problems of hazardous materials—transport, storage, use, and disposal—have produced an unprecedented amount of political activity at the environmental grass roots. Citizen action groups such as Massachusetts Fair Share, New York Public Interest Research Group, Ohio Public Interest Campaign, and Connecticut Citizens Action Group (CCAG), which do have lower-middle-class, largely urban constituencies organized by neighborhood, are taking the lead.

(Continued on page 31.)
Billions from Bandaids

by Hal Strelnick

(Dorothy Morrison (not her real name) was getting worried. Her first baby had been due in the last week of April; it was the first week of May and nothing had happened. In the health center waiting room, she went over and over her abdomen with her eyes and hands.

The doctor examined her and said he wanted to arrange a hospital test to see if the baby was ready to deliver. When Dorothy arrived on the maternity floor at the hospital, the nurses ushered her into an empty labor room and asked her to lie down on a hospital bed beside a large machine that they soon were attaching to her abdomen. Soon the machine — an electronic fetal monitor — was broadcasting her baby's heartbeats and recording the weak contractions of her uterus on a roll of graph paper like so many tiny earthquakes on a seismograph. Occasionally, a doctor or midwife popped into the room, looked quickly at the machine's markings, and disappeared. From her perspective Dorothy could read only the machine's label, "hp—Hewlett Packard."

A nurse appeared with a wheelchair, saying, "You've got to get an 'echo,'" and removed the monitoring belt. In the elevator she explained, "We are going to the radiology department for a sonogram of the baby to determine its size and position, and the position of the placenta." Dorothy toyed nervously with the wheelchair's metal label, "Everest and Jennings," which came off in her hand.

In the x-ray department she was attached to another machine that projected what she was told were small images of her baby on a tiny television screen. It was labeled Matrix, not Sony or Sylvania. The technician played with and cursed a small camera that produced instant pictures of the screen image, then disappeared with them. An orderly entered with a different wheelchair, its Everest & Jennings label secure, and took Dorothy back to her original room. The labor suite air was filled with the sound of beeping machines.

As she re-attached Dorothy's fetal monitor and slipped an intravenous needle into the back of her hand, the midwife explained, "We are going to give the baby a 'challenge test' to see if he needs to be delivered now. The medicine we are giving you will stimulate contractions that we will watch on the monitor." She attached the intravenous needle to a long plastic tube from a bottle hanging above the bed and then wove the tubing into another machine that appeared to count the drops of liquid medicine from the bottle. The counting machine said "IMED Pump" on its label. Soon Dorothy was having painful contractions every six or seven minutes and squeezing the metal label still in her hand. Midwives and doctors came in to examine the machines and left with an "Everything's just fine..."

Finally, her midwife returned to turn off the IMED pump, remove the intravenous needle and the large belts around her abdomen, and smile. "Everything's just fine," she said, "You can go home now. Come back in a couple of days if you haven't gone into labor. Oh, and remember to stop by the billing office with your insurance card on your way out."

Dorothy left the hospital thinking she had spent more time with machines than with all the health workers combined. Ten days later, after another day of pitocin challenge tests, she had an eight pound six ounce baby boy by spontaneous natural childbirth in the same hospital.

Compared to what many get, Dorothy had received "high quality" medical care. Yet all the expensive, complex tests from equipment costing thousands of dollars had "proved" only that she and her baby did not need further medical intervention — an induced delivery or Cesarean section.

(Hal Strelnick is a member of the Health/PAC Board and a doctor teaching at Montefiore Hospital in the Bronx.)

Health/PAC Bulletin
Was Dorothy Morrison a victim or a beneficiary of the new medical technologies? This is not a question which is often asked. Indeed, surprisingly few questions are asked of an industry which is transforming medical practice in waves of "technological imperatives" that often leave health consumers gasping in the undertow. Even midwives committed to natural childbirth are not free of this pull.

None of the tests Dorothy Morrison received had undergone rigorous clinical testing before their acceptance as standard medical practices and widespread adoption by hospitals. While pharmaceuticals must undergo extensive, if not always sufficiently rigorous, examination before they are approved for marketing, sellers of a new medical technology until recently had only to convince doctors and hospitals that it was better than last year's model to win wide sales.

Intensive care units, for example, became standard in hospitals before their efficacy was even tested, let alone proven—and even today many health professionals doubt that their objective value could be demonstrated. Since then ICU's have not only created an entirely new market for many small technologies, they have spawned a new generation of specialty units—coronary, respiratory, neonatal, neurosurgical, cardiovascular surgical, burn, and trauma—each with still more demands for specialized equipment now deemed essential for "standard medical care."

Although still called the "hidden segment of the medical business," the extraordinary growth and influence of the hospital and medical supply industry ensure that it will not remain unnoticed much longer. Once largely the province of small, "ethical" specialty manufacturers such as Matrix and IMED, it is now increasingly dominated by specialty monopolies such as Everest & Jennings, the wheelchair king; corporate giants like Hewlett-Packard and Fortune 500 conglomerates. To cite one recent takeover, IMED corporation was acquired in June, 1982, for $465 million by Warner-Lambert, makers of Bromo-Seltzer, Cool Ray sunglasses, Freshen-Up and Bubblicious gums, Lady Schick razors, and American Optical's fiber optic endoscopes, among other products.

Revlon has become the world's first total eye care conglomerate, manufacturing everything from mascara and eye shadow to intraocular lenses, permanent contact lenses, and contact lens solutions. Bowling ball and sports equipment makers have applied their expertise to blood plasma filters and sterile syringes (AMF) and surgical instruments (Brunswick). McDonnell-Douglas has soared beyond F-15 jet fighters with its Vitek antibiotic infection fighters, hospital computer systems, and medical equipment financing. Other military contractors have rushed in behind them (see box).

---

**The Medical-Industrial Complex IS the Military-Industrial Complex**

The following major military contractors have significant holdings in hospital and medical supplies:

<table>
<thead>
<tr>
<th>FY 1979</th>
<th>Medical Sales</th>
<th>Defense Sales</th>
<th>Defense Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>McDonnell-Douglas</td>
<td>N.A.</td>
<td>$3,200</td>
<td>2</td>
</tr>
<tr>
<td>General Electric</td>
<td>$413.8</td>
<td>2,000</td>
<td>4</td>
</tr>
<tr>
<td>Lockheed</td>
<td>N.A.</td>
<td>1,800</td>
<td>5</td>
</tr>
<tr>
<td>Raytheon</td>
<td>N.A.</td>
<td>1,200</td>
<td>9</td>
</tr>
<tr>
<td>Litton</td>
<td>50</td>
<td>832</td>
<td>11</td>
</tr>
<tr>
<td>Honeywell</td>
<td>27</td>
<td>658</td>
<td>17</td>
</tr>
<tr>
<td>RCA</td>
<td>74.1</td>
<td>487</td>
<td>22</td>
</tr>
<tr>
<td>Textron</td>
<td>30.2</td>
<td>477</td>
<td>23</td>
</tr>
</tbody>
</table>

(in millions of dollars)
Like other unexplored territories, the medical and hospital supply industry has uncertain boundaries. An industry is usually defined as a group of firms with similar production processes that sell interchangeable products to a common group of buyers. Where products run from band-aids to hearing aids and their manufacturers range from tiny firms that specialize in one or two devices to large corporations that deal in numerous hospital product lines and subsidiaries of large conglomerates, this paradigm does not fit very well.

As in the "leisure time" industry, the definition is clearest in consumption. Thus the medical and hospital supply industry can be considered all the equipment, devices, and supplies used by doctor's offices, clinics, medical laboratories, hospitals, nursing homes, and occasional patients. (Calling the industry "hospital and medical supply" rather than the other commonly used term, "medical technology," avoids the connotation of high technology, which represents only one segment of the whole.)

If the five Standard Industrial Census (SIC) categories that most closely fit the description of the industry — x-rays and electro-medical devices, surgical instruments, surgical supplies, dental equipment, and ophthalmic goods — are totaled, almost 3000 companies were involved with sales of $7.3 billion in 1977. Yet even here there is still room for ambiguity. In 1981, sales were $9 billion according to a Stanford Research Institute study, $11.6 billion according to the U.S. Industrial Outlook published by the Department of Commerce, and $13 billion according to Standard & Poor's.

It is clear, however, that whatever figure is used the industry has been expanding phenomenally. As a major beneficiary of the six-fold growth of total health expenditures between 1960 and 1977, its sales have nearly doubled every five years since 1967 (see figure 1). Currently the industry rings up just over half as much as the pharmaceutical industry and is gaining fast (see figure 2). Put another way, in 1979, even excluding capital equipment, total expenditures just for hospital supplies were almost $14,000 per bed.

As in the computer industry, hundreds of companies have participated in this bonanza. "Growth (in real terms) of all five medical device industries has occurred more largely as a result of increased numbers of establishments of all sizes than increased size of establishments," noted a 1980 Food and Drug Administration report, "though there is some tendency for the largest establishments to increase their (large) share of product shipments."
This picture can be misleading, however, since it conveys the impression that large and small firms are competing in a free market. Recent entries into the industry have generally found a niche with new or substantially different products that do not directly compete with existing lines, such as Intramedics' innovative intraocular lenses for cataract patients coming on the market to compete with Revlon's Coburn Optical products.

But in the vast market for disposable syringes and needles, for example, only established giants hold the economies of scale, capital resources, and sales capabilities that give them an overwhelming edge (see table 1).

There aren't too many medium-sized fish in the hospital and medical supply pond. More than 80 percent of the 3000 companies in 1977 had annual sales of less than $20 million. Almost all the rest were huge, usually pouring out numerous product lines. In an economy where oligopoly is the rule, the medical supply industry is still exceptional. Whether separated out by number of employees or assets, in each of the five SIC categories the eight largest firms win half to three quarters of total sales. Even this understates the degree of concentration; the industry's corporate interlocks webbing out of J.P. Morgan and Co. alone are truly astounding (see box).

To an investment broker, this is good news. “Fundamentally, I think the supply industry is stronger today than it was five years ago,” James Tullis, a vice-president at Morgan Stanley & Company told a recent symposium. “The fact is that during the last five years the number of competitors has been shrinking. The market share held by the leaders has been going up. If you consider that from a long-term standpoint, it's basically positive to profitability. I think right now, we're moving out of a pretty competitive environment.”

What Tullis is referring to is a growing tendency for a single company to dominate a series of product lines, with a market share significantly larger than competitors'. “The existence of the gap between the leading firm and the next firm is striking,” noted H. Elizabeth Wenchel, director of a study of the industry for the Department of Health and Human Services. “It indicates that the gradation of sales of the companies reflects an abrupt quantum change, not a smooth continuum... (It) provides unambiguous indication of concentration, which is at a level higher than exists in many other industries.”

(Continued on page 19.)

### Table 1.
Market Shares—Needles & Syringes

<table>
<thead>
<tr>
<th>Corporations</th>
<th>Sales (in millions)</th>
<th>Percent of Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becton-Dickinson</td>
<td>$105</td>
<td>40</td>
</tr>
<tr>
<td>Baxter-Travenol (Fenwall)</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>Brunswick (includes Sherwood Medical and Monojet)</td>
<td>35</td>
<td>13</td>
</tr>
<tr>
<td>American Hospital Supply (includes Pharmaceal)</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>Johnson &amp; Johnson (includes Jelco)</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>G.D. Searle (includes Will Ross)</td>
<td>10</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: calculated from A Profile of the Medical Technology Industry and Governmental Policies, National Center for Health Services Research, PHS, DHHS, June 30, 1981.

J.P. Morgan Medical Supply and Pharmaceutical Holdings
(Rank in top ten shareholders)

- American Cyanimid (1)
- American Home Products (1)
- AMF (2)
- Avon (2)
- Johnson & Johnson (2)
- RCA (2)
- Merck (3)
- Pfizer (3)
- Sterling Drug (3)
- General Electric (3)
- 3M (4)
- Searle (4)
- Dow (4)
- Proctor & Gamble (4)
- Textron (5)
- Honeywell (5)
- Celanese (6)
- DuPont (6)
- SmithKline (6)
- Bausch & Lomb (8)
- American Standard (8)
- Baxter Travenol (9)
- Burroughs (9)
- Cheesbrough-Ponds (9)
- Monsanto (9)
- Squibb (9)

* Holds voting rights for the beneficiaries
Source: Corporate Data Exchange Stock Ownership Directory

Health/PAC Bulletin
Wound Watch

by Carl Blumenthal

"Now there," said the Queen, "it takes all the running you can do to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

—Alice in Wonderland

When Bob Hope appeared at a fundraiser for Cape Cod Hospital in 1978, the Cape Cod Health Care Coalition protested that denying health care to poor people is no laughing matter. Its members were out in force chanting, "Cape Cod Hospital, share the wealth—Give poor people quality health."

The coalition had more than a clever rhyme-st; it had activists who did their homework. Feminists, trade unionists, social workers, the poor, and the elderly were all there together. The hospital was compelled to open its doors a little wider. The group's greatest victory was a ruling by the Department of Health, Education, and Welfare that hospitals receiving Federal funds could not deny anyone emergency care.

That, of course, was a different Washington era, when it was possible to reason with bureaucrats who were still trying to balance quality and cost within the limits of the legislation. Today activists find themselves running a stretcher service behind the Reagan Administration scorched earth policy.

Organizations such as the Cape Cod Health Care Coalition which for years sought alternatives to piecemeal Federal programs have been rewarded with budget cuts and block grants. After a year in which they were thrown off balance by these attacks on health care for low income people, they are beginning to regroup in new coalitions which lobby Congress and propose alternative budgets to win support for less guns, more butter policies.

As the recent votes on the 1983 budget indicate, so far they have made little headway in Washington. Health advocates found themselves supporting Democratic party funding authorizations which were only somewhat less distasteful than the Republicans' — and many Democrats seemed more interested in scoring political points for the November elections than in aiding the needy.

The answer, for many activists, is intensified grassroots organizing. One of their most popular new techniques for mobilizing communities is monitoring the effects of cuts on the health and care of their constituents. As the Cape Cod Health Care Coalition put it, "Hope doesn't pay our bills."

There is, unfortunately, a lot to monitor. Workers, minorities, women, children, the poor, the elderly, the disabled are being denied health care at a time when other cutbacks in everything from nutrition programs to fuel subsidies heightens their vulnerability to disease. Separating out the effect of each form of deprivation has never been easy; collecting and analyzing all the data will be even more difficult now, since statistical data is one of the first "frills" the Reagan Administration is lopping off all government programs—sort of a budgetary killing of the messenger who brings the bad news. (Both the National Center for Health Service Research and the National Center for Health Statistics have been affected.)

People engaged in obtaining this information independently know this will not be a short-term process. Because the bulk of Federal health care monies — Medicare and Medicaid disbursements—is spent on acute and long-term care for a relatively small number of people, the consequences of benefit reductions aren't likely to appear in gross measures of mortality and morbidity for some time. In addition, the compounded effects of cuts in related programs will show up in deterioration of health among the deprived only over time.

At least in the short term, therefore, epidemiology appears to be on the side of the Reagan rhetoricians. They will no doubt claim that the cuts haven't affected the health of the poor; in the long run poor people will be better off since "the economic security of the country assures the well-being of its citizens." (This is one more indication that President Reagan has never read
Keynes, who pointed out that "in the long run we'll all be dead.")

To disprove the conservative assertions before the tragic rebuttal emerges epidemiologically, the new Federal policies must be linked in slightly less scientific form to changes in health status which show up in time to make an impression on local communities and the electorate.

Even this more modest goal can only be reached by surmounting several methodological obstacles. Adjustments on the state and local level and even efforts by administrators and clients to accommodate the Federal cuts must be taken into account. So must confounding influences of private and public efforts in fields such as education, employment, and welfare. Finally, the characteristics of the local population must be included. Even if the resources can be found to set up the elaborate monitoring system required, by the time it is in place and revealing changes gross enough to measure, the Reagan policies will be doing irreparable harm to thousands of the most vulnerable members of society.2

At least one municipal health official has asked us if there is any point in documenting the disasters when the Administration has been happy to ignore overwhelming evidence of the cost-effectiveness, let alone the human benefits, of the Women, Infants and Children Supplemental Food Program (WIC) and others. Supporters of this position argue that the assumption behind monitoring is that knowledge is power enough, but in fact knowledge without political power is like facts without a theory. This is a strong argument, particularly when coupled with its corollary that progressive resources are limited and should not be diverted into information-gathering.

Activists engaged in monitoring projects have a number of responses. They point out that although epidemiology relies heavily on body counts to demonstrate cause and effect, surveys can be designed to include easily-understood early warning systems. These can be used to generate extensive publicity and increased public awareness. If prodded, educators and researchers can make the tools of their trade
more accessible; activists can assist them in devising interviews and questionnaires which obtain valuable information a traditional academic approach might have overlooked. Finally, it has already been found that many of the people around the country who are involved in monitoring projects have never seen themselves as political activists; it is very possible that their experiences and new knowledge will motivate many of them to become involved in organizations and movements to ensure a more equitable society.

The information which follows was gathered through communications with some 50 organizations around the country. Because national groups were the main sources, the list is a little top-heavy, but it is clear that once the efforts currently filtering down to states and localities begin to take off, this pyramid will turn rightsided up and be much larger. The national groups also generally have greater resources to develop systematic monitoring projects, but we did find that a surprising amount of ad hoc monitoring is already in progress on the local level.

The Health Policy Advisory Center believes that this activity is so vital and significant that we are devoting a considerable proportion of our resources to aiding its expansion, coordination, and development. Health/PAC will be happy to offer suggestions to any local group which would like to link up with one or more national surveys so that aggregate data can be increased and their reliability improved. The Bulletin will also continue to monitor the monitors. Please take a few moments to let us know about any health watches we may have missed so that our listing can be as complete as possible.

If no monitoring project exists in your area and you would like help in starting one, please contact us or one of the groups listed below.

**NATIONAL MONITORS**

American Medical Student Association
"Health Watch"
14650 Lee Road
P.O. Box 151
Chantilly, VA 22021
800-336-0158
Contact: Patrick Romano

AMSA is asking students, housestaff and others to provide it with case reports about problems of access—inappropriate transfer, premature discharge, denial of service, etc.—particularly for poor and elderly people and women and children. Its purpose is to document inadequacies in the system, not to blow the whistle on individuals or institutions. Cases are to be verified by medical records or multiple interviews. This information will be used for Congressional hearings and lobbying, reports to the media, and local actions.

With the help of Dr. Victor Sidel, head of the Department of Social Medicine at New York's Montefiore Hospital, model research protocols are being drafted so that students and faculty can study the effects on populations at risk. Several projects are underway in Los Angeles, Boston, and New York. For example, students at New York's Harlem Hospital are measuring the nutritional status (e.g., hematocrit and serum albumen) of infants. Other hotbeds of activity are San Francisco; Washington, D.C.; and Chicago. AMSA is working closely with the Children's Defense Fund and the National Health Law Program (NHLP).

American Public Health Association
1015 15th Street, NW
Washington, DC 20005
202-789-5617
Contact: Thomas Elwood, Ph.D.

"The primary emphasis of the APHA effort is to document linkages between national priority shifts and changes in state and local agencies and client utilization." 

At the time of this report, APHA had just pretested a survey of public health agencies in three states, two counties, and two cities. If it proceeds, the Association will query 10 states, one in each DHHS region, including California, Massachusetts, Michigan and New York.

The focus would be block grants and categorical programs, with an emphasis on child health. Expenditures, service reductions, personnel cuts, and health outcomes would be examined. The surveys would be supplemented by reports from state and local affiliates of APHA. APHA is also coordinating other monitors; it has already held a conference and published the first issue of APHA Monitor.

Association for Maternal and Child Health and Crippled Children Services
c/o Utah Department of Health
Salt Lake City, UT 84113
801-533-6161
Contact: Peter Van Dyck, MD, MPH

The final draft of a data collection form is now circulating in a committee of the nation's MCH/CC directors. The Association is looking at some 20 services in the MCH Block Grant for specific health problems, such as PKU, cystic fibrosis, anemia, rubella, dental caries, lead poisoning and accidents. It will identify target population, utilization, outcome, (unmet) need, and cost, with the goal of proving cost-effectiveness to Congress. The emphasis is on well-defined services that have measurable outcomes documented in the past.

Center on Budget and Policy Priorities
236 Massachusetts Avenue, NE, #305
Washington, DC 20002
202-544-0591
Contact: Bob Greenstein/Jennie Hefferon

The Center is developing a program of self-help for local people—mainly the press—to analyze what is happening in their communities. Nutrition is a prime concern.
Activists already in the field with their questionnaires will inevitably waste effort if they do not collaborate with academics.
changes, and how the impacts of cuts in AFDC, food stamps, Medicaid, etc., interact. Using econometric modeling as a tool.

While they are not documenting impacts, the following three coalitions know a lot about national, state, and local budgets:

Coalition on Block Grants and Human Needs
1000 Wisconsin Avenue, NW
Washington, DC 20007
202-333-0822
Contacts: Shirley Downs/Will Carter

AFL-CIO Budget Coalition
815 16th Street, NW #309
Washington, DC 20006
202-637-5086
Contacts: Barbara Warden/Ronda Trail

Fair Budget Action Campaign
1319 F Street, NW
Washington, DC 20004
202-393-5060
Contacts: Russ Sykes/Bristow Harden

STATE/MUNICIPAL MONITORS

Community Service Society
"Child Watch"
105 East 22nd Street
New York, NY 10010
212-254-8900
Contacts: Anjean Carter/Eleanor Marshall

This is one of the many terminals of the Children's Defense Fund network. CSS is using the same approach of in-depth interviews with knowledgeable parties. As far as the questionnaire for providers is concerned, CSS is more concerned about differences among facilities than among personnel. It is examining the effects of cuts in MCH programs in addition to those in Medicaid and WIC.

Health Status Documentation Project
c/o Linda Nelson
112 First Street
Ithaca, NY 14850
607-256-6445
Contact: Sandy Kelman, Ph.D.

Coordinated by a committee of the regional Health Systems Agency, this project is looking for the heart of the matter in Tompkins County, NY, i.e., health status indices and surrogate measures for poor and elderly people, pregnant women, infants, and children. While relying on the health department's vital statistics, including birth and death certificates, and the hospital's medical records abstracts, the committee is also checking shopping lists of home-bound people, sales of dog food, and weights of animals left at the vets. It may collect figures on access and use students and faculty from Cornell to survey what is not on record. Its targets for exposing their findings are the county legislature and civic groups.

Poverty Education and Research Center
500 West 13th Street
Austin, TX 78701
512-474-5019
Contact: Karen Langley

The Center is one of 15 statewide coalitions working with the Coalition on Block Grants and Human Needs. While the focus is lobbying, some work is devoted to following the results of cuts. Primary care — community and migrant health centers — and Medicaid are primary concerns. Sources of information are the Governor's Office of Federal and State Relations, state agencies, program directors, and case reports from Legal Services centers.

Religious Committee on the New York City Health Crisis
490 Riverside Drive
New York, NY 10027
212-222-5900 X226
Contact: JoAnn Thompson

With budget cuts a reality since 1974, the future is now in a city that once had a public health system comparable to those of the largest states in the country. In some parts of New York, a number of health status measures, particularly of maternal and child health, are now at levels comparable to those in Third World countries. Pooling the efforts of a number of advocacy groups, the Religious Committee is watching school (dental) health programs, the municipal hospitals—especially their delivery of ambulatory care—home care, prevention programs, and health status. It has briefed the City Council and Board of Estimate on these issues.

Michigan League for Human Services
200 Mill Street
Lansing, MI 48933
517-487-5436
Contact: Sharon Willard

The United Way of Michigan is paying for a year's worth of reporting on the consequences of the recession and of state and Federal cutbacks. The League is analyzing programs and budgets statewide, studying the agencies that deliver them (caseload, demand, unmet needs, etc.) and putting together a list of indicators. Nutrition and child health are among them and the effects of unemployment are a special concern. A survey of delivery networks is underway; clients will be surveyed next. The organization is also working with Wayne State University in a study of the impact of cutbacks on 600 families in Detroit and possibly in other cities.

Washtenaw County Coalition for a Fair Budget
c/o Kathy Derrin
912 South Seventh Street
Ann Arbor, MI 48103

With the help of the Student Association at the University of Michigan's School of Public Health, the Coalition has surveyed 50 health and human service agencies about the effects of the cuts. A report is expected by the end of the summer; it should be a model of cooperation between public health schools and advocacy groups.
Who Should Monitor

The wide variety of organizations recording signs of stress reflects the broadly felt need for this information. They fall roughly into two groups. Activists, advocates, and lobbyists are compiling reports from clients and providers. Public health officials, researchers, and educators can provide valuable rigor, but often sit on their data bases. Ideally, the two groups cooperate. New groups can generally utilize these existing resources, but they must have their own energies, people, and money to contribute.

Activists already in the field with their questionnaires gathering ammunition will inevitably waste some of their effort if they do not collaborate with academics skilled in health survey techniques. Given its short preparation time, Child Watch is a prototype for such cooperation.

Monitors must also be prepared to find that despite the views of bureaucrats with a vested interest in a particular program, it might not be working, or working as efficiently as it should. Activists must always keep in mind that the ultimate goal is not collecting information—that would be a deathwatch. What we want to do is fight harmful cuts and propose superior alternatives to provide decent, accessible, community-controlled health care for all.

What to Watch

The projects listed above are evenly divided between those that assess the cuts across the board and those that single out specific populations. This reflects the conflicting priorities of monitoring. Because time is short and resources relatively meager, the most effective measurements will be narrowly defined. Yet the consolidation of programs into block grants will make it increasingly difficult to link any decline in health with a specific cutback.

This problem of “confounding variables” is also an opportunity for building coalitions beyond the health care arena. Food and nutrition programs, environmental regulation, job training, and energy assistance have relatively direct impacts on health which should be of concern to their advocates. The environmental and labor movements in particular are potentially powerful allies. Bringing these groups together would confound the Reagan Administration, which is counting on a fragmented opposition squabbling over a shrinking budgetary pie. Measuring the cuts may entail watching broad service areas, and this in itself provides a potential stimulus to multi-interest coalitions.

Groups with the resources and predisposition to look at human services comprehensively should begin with maternal and child health. MCH programs reach a considerable portion of the population, including many middle-class families, providing a particularly large reservoir of support. The MCH lobby already has the most and best organized monitors.

The reasons for this prominence are epidemiological as well as political, according to Joanne Lukomnik, a former top official of the National Health Service Corps now working in biomedical education at the City University of New York. “It is easiest to see health status changes in children and [prospective] mothers right away,” she explained, “With elderly and disabled people we see changes in access, but the health status indicators are harder to determine.”

Motherhood and childhood are generally supported in this country. When the President is talking about child health, he claims in effect that no one is hurt by the cuts or there aren’t any; these assertions are fairly easy to disprove. Efforts to improve conditions based on race, sexuality, poverty, disability, and old age are less popular; rebutting an Administration argument that we can’t afford programs to ameliorate conditions for the disabled is more difficult.

Maternal and child health monitoring is also a good starting place because many of the examples which show the effectiveness of prevention and primary care are in this area, such as WIC and Early Periodic Screening, Diagnosis, and Treatment. The Department of Health and Human Services apparently disagrees, since it has recently proposed cutting EPSDT; this is exactly the kind of cutback whose exposure can generate an immediate public outcry.

Where to Get the Facts

The activities of the 15 monitoring groups listed above can be split into three categories: tales of horror, documentation of changing demand for services, and investigations of fluctuating health status. Joanne Lukomnik argues that the first two are most important politically.

“Do access studies first,” she advised, “They’re for everyone. Then document the
... Are reports of bigger bombs, shrinking social services and Moral Majority crusades getting you down? Are even your favorite left-wing magazines mired in Reagan-esque gloom?

Well, there is an alternative! For 16 years, one magazine has followed the people who are doing something about war, poverty and injustice. Draft resisters, antinuclear protesters, feminists, conversion organizers, Indian activists, the Anti-Klan Network—these are just a few of the folks who appear on the pages of WIN Magazine every two weeks. Subscribe to WIN and get the good news about the growing nonviolent movement for social change.

☐ No more bad-news blues for me. Here’s $20, send me a year of WIN.
☐ Here’s $11. I’ll try WIN for six months.
☐ Here’s $1 for a sample copy

Name ____________________________________________
Address ____________________________________________________________________________________
City/State/Zip ________________________________________________________________________________

Send your order to:
WIN/326 Livingston St./Brooklyn, NY 11217

---

individual cases — what happens when unemployment benefits run out, the kids have no Medicaid, the working poor can't use community health centers, the hypertension patient can't get medicine. Quick and dirty studies can be attacked on methodological grounds. Surveys require controls. Health indicators have all sorts of complications."

There are also more and less rigorous ways of interviewing consumers and providers and verifying stories. AMSA, CDF, HSAC, and CSS are among the most experienced in these methods, and are aware of the vast number of volunteers needed to maintain high standards.

Fortunately, data is already available to complement much of the case report work and lay the groundwork, however shaky, for correlating expenditures, utilization, and health status. Health systems agencies (HSAs), professional service review organizations (PSRO’s), health departments, state agencies, providers—especially hospitals and nursing homes—the Census Bureau, medical and public health schools, and the National Center for Health Statistics all have valuable information on file.

Most important are HSAs. Of the original 204, 160 are still around. Because they have been among the early victims of the cuts, noted Harry Cain, director of the American Health Planning Association, the HSAs don't have the resources to monitor their effects, but they do have accessible aggregate population data, information on particular providers submitted in applications for certificates of need and Federal grants, patient origin studies, and case mix statistics.

In using this information, researchers must be wary of relying exclusively on providers for determination of needs, since existing data measure only demand for current services. This seemingly methodological consideration has the most profound political implications. It could mean the difference between defending an unsatisfactory status quo against cutbacks and seizing this opportunity to prove that restructuring the health care system would deliver higher quality care for less money. So far the cuts have hit hardest in the areas which are most cost effective, such as health promotion, disease prevention, and primary and home care. The health care system's bias toward acute and institutional care, with its concomitant distortions in service allocation and consumption, has been accentuated. This is more evidence that government health care policies serve interests, not people, and it should be noted in all monitoring work.
The most useful connections to find are those between health status or surrogate measures and specific programs.

There isn’t space here to discuss the gaps in data stratified by morbidity, age, income geography, etc., nor to catalogue exactly what can be found in the other locations. We would like to note, however, that short of Freedom of Information Act requests to Federal agencies it is possible to find a great deal at the National Center for Health Statistics. Health United States is a handy reference of what is published annually. Computer tapes of state and county statistics can often be purchased.

When wading through a sea of statistics it is obviously useful to have a helping hand. Sander Kelman, a professor of Urban Planning at Cornell active in the Tompkins County Health Status Documentation Project, advises working through existing health channels where possible. Professor Kelman said that having a committee which includes doctors, the local health and mental health commissioners, the Planned Parenthood director, and a hospital representative has opened many doors to needed information. Officially, he noted, the monitoring is "an ongoing function of the local health planning council. Formally, it has nothing to do with Reaganomics."

**How to Make Connections**

Among the many difficulties monitors face, tracing the wiring in the black box we call the health care system is among the more formidable. Many of the inputs and outputs that ought to be diagrammed have been identified by Drs. Mary Peoples and C. Arden Miller of the University of North Carolina in their recent article on monitoring and by Dr. Peter Van Dyck, director of Utah’s Maternal and Child Health programs.

They all suggest that the most useful connections to find are those between health status or surrogate measures, such as the number of adolescent pregnancies, and specific programs. "For example," wrote Peoples and Miller, "primary care services may become sufficiently inaccessible that parents may not take their children to appropriate providers until a disease has progressed to an irreversible point. Thus, the incidence of pneumonia or dehydration secondary to diarrhea, both potentially fatal diseases, could increase." Surrogate measures are more sensitive to short term changes, these researchers note. Peter Van Dyck and other MCH directors are looking at immunization status, anemia levels, adequacy of prenatal care, number of adolescent pregnancies, etc.

To measure declines in access, CDF, AMSA, HSAC, and CSS are already asking about routine care, crisis services, eligibility requirements, fees, waiting time, admissions and discharges, and staffing and equipment. Findings in all these areas will be valuable to health care advocates as well as academics, so both should welcome exchanges of information.

However, even the best of short term statistical studies won’t be conclusive, warned Anjean Carter of the CSS Child Watch. "We’re collecting gross data on infant mortality, late prenatal care, and birth weight," she explained. "We’re doing neighborhoods that are medically underserved — health manpower shortage areas or areas where there is no prenatal care at all. But these aren’t statistical samples. We can’t really correlate them. We’ll be able to say, 'Where the infant mortality rate is such and such, $100,000 was cut from such and such programs.'"

One local health official who likes to season his current pessimism with a little positive thinking suggested that even if it doesn’t have any effect in Washington, a local monitoring project can help concerned administrators who are compelled to practice budgetary triage with their remaining funding.

**Beyond Facts**

A monitor does not record and report passively. Since the ends are political, it is delusory to insist the means are "value-free." Choices must be made about what data to collect, how to collect it, and how to report it. Since the information presented to hearings, political representatives, press conferences, meetings, and demonstrations will be provocative, horror stories must be mixed with hard facts. Clients can report the figures as well as providers can tell the tales of woe.
Health care advocates can learn a great deal from the success of groups like the Cape Cod Health Care Coalition and Love Canal Homeowner's Association about researching and recruiting, grabbing headlines, and cornering politicians. But Joanne Lukomnik suggests that each group or coalition must link monitoring to local conditions. It is best to start with whatever has gotten your goat, she advises.

Most advocates have the skills and the will to organize their clients and communities, but in the present climate the flesh may still be weak. Monitoring can be a way of reactivating political muscles, of convincing people that it is possible to do more than run in place, waiting for the Queen of Hearts or her Presidential equivalent to cut off more heads.

Important news for 10 million Americans

Health Protection for Operators of VDTs/CRTs

Find out the dangers—eyestrain, muscle pain, indigestion, stress—and some simple ways to minimize them in this booklet produced by the New York Committee for Occupational Safety and Health.

Available from Health/PAC, 17 Murray St., New York, N.Y. 10007, for $1 plus 25¢ postage for individuals and $3 plus 25¢ for institutions and corporations.

Billions from Bandaids

(continued from Page 10.)

Hewlett-Packard, for example, enjoys twice the market share of the nearest competitor in patient monitors; Becton-Dickinson ships three times more needles and syringes than the runner-up (see tables 1 and 2). The ability of such firms to dominate their markets can be imagined when it is realized that American economic theorists generally declare an industry competitive only if the market shares of the four largest firms are five to ten percent or less.

"Companies which have commanding positions, virtual monopolies, within a rapidly growing market...might be characterized as a 'technological monopoly,' whereby a specific company so dominates a field that it has an effective monopoly," observed David Lothson, a senior investment officer with Chemical Bank. Examples he cites include New England Nuclear (a Dupont subsidiary producing radioisotope), Servicemaster Industries, National Medical Care (dialysis), Shared Medical Systems (computerized information systems), and Metpath (clinical laboratories).

Consumers have reason to be less enthusiastic about this trend than stockholders. For them it can mean paying for inflated profits, cosmetic innovation, and shoddy products. A prime example of all is wheelchairs, a market in which the Los Angeles manufacturer Everest & Jennings has a virtual stranglehold (see box—"Holding a Captive Market Hostage"). Market dominance stifles technological innovation, too. William Winpisinger, head of the Machinists union, has said a highly placed official of the Department of Commerce in the Carter Administration involved in its Domestic Policy Review on Industrial Innovation told him that the government intended to continue funding research and development for small businesses only because their acquisition seemed to be the only way of getting new technologies into the larger corporations.12

The giants of American industry realized long ago that the cheapest way to deal with the competition is to swallow it whole. A prime example of this horizontal integration is the so-called

2. Ibid., p. 9. This is an excellent overview of the methodological problems and challenges of monitoring. A revision in progress will give more attention to advocacy and management needs for data.
3. The list which follows is derived from telephone interviews with most of the contacts mentioned, the above article by Peoples and Miller, and the American Public Health Association Monitor, no. 1, March 1982.
5. Ibid., p. 16.
8. Ibid., p. 6.
Table 2.
Market Shares—Patient Monitors

<table>
<thead>
<tr>
<th>Corporations</th>
<th>Sales (in millions)</th>
<th>Percent of Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hewlett-Packard</td>
<td>$75</td>
<td>21</td>
</tr>
<tr>
<td>Narco Scientific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(includes Air Shields)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squibb (includes Spacelabs &amp; Tektronix)</td>
<td>30</td>
<td>9</td>
</tr>
<tr>
<td>Litton</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Warner-Lambert</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Honeywell</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>General Electric</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Abbot Laboratories</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Becton-Dickinson</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: calculated from A Profile of the Medical Technology Industry and Governmental Policies, National Center for Health Services Research, PHS, DHHS, June 30, 1981.

“competing” lines of surgical sutures, Ethicon and Surgicon, both owned by Johnson & Johnson. Johnson & Johnson’s Technicare dominated the CAT scan market until 1980, when second ranking General Electric bought EMI Technology, a British firm then third in sales; now all these companies have to worry about is weak competition from Siemens A.G., the West German electronics behemoth, and Pfizer, the pharmaceutical house (see figure 3). The top three firms control 92 percent of the market; J.P. Morgan is the second largest stockholder in one of them and the third largest in the other two (see box).

Within most segments of the industry, horizontal integration is the only way to go because in vertical integration, hospital and medical supplies already rival petroleum, where company control of every step from exploration to the gas tank has been the classic model. As Exxon and Mobil have proved, this not only secures supplies all the way down the line—which may be important for a new, exotic product—it permits shuffling of costs and profits all along the production line to maximize income and minimize taxes. Pharmaceutical companies enjoying tax holidays in Puerto Rico might owe more of their net profits to creativity in accounting than in research.

Size offers another advantage familiar to purchasers of inexpensive Polaroid cameras who are subsequently staggered by the price of film. Large national distributors can afford to “package” low or no cost equipment for lease or purchase with profitable supplies, services, or training. Thus bargain prices for intravenous pumps guarantee profitable sales of disposable, plastic tubing sets; electronic thermometers are coupled with disposable probes and covers; clinical laboratory diagnostic analyzers can seem like a good buy when the manufacturer gets handsome profits from their testing reagents, maintenance and service, and additional components to expand or update processing. Leasing or loan packages for a line of capital equipment often “addict” a hospital or other purchaser to vast quantities of compatible supplies and services. Hidden in the Economic Recovery Act of 1981 is a special tax deduction for donations of such equipment to medical schools, which makes this practice even more profitable. These arrangements can also permit institutions to duck a Certificate of Need examination by keeping the equipment under the $150,000 capital investment trigger price.

Even excluding lease and loss-leader juggling, the lady selling lipsticks in homes could learn a lot from her coworker in Avon’s medical supply division. Experience has shown the industry that its purchasers are more influenced...
by sales personnel and company and product images than by genuine differences in price, safety, or specifications. Advertising (as a percent are of sales) consequently receives twice the resources of the national industrial average, providing the lifeblood of the medical journals that conveniently reinforce the American bias toward capital-intensive medicine. This intensive promotion usually bears closer resemblance to consumer pitches than to other industrial-goods advertising, employing emotional appeals to proclaim superficial changes in style and design.16

Hospital purchasing practices distorted by personal preferences of medical and nursing staff certainly deserve some responsibility for this phenomenon. A 1980 Government Accounting Office report revealed institutions in the six cities surveyed were accepting price variations as large as 300 percent for identical hospital supplies.17 The GAO found no consistent relationship between lower prices and higher volume sales; the study also concluded that group purchasing did not always insure lower prices. The Inspector General of the Department of Health and Human Services estimated in 1980 that such poor procurement practices cost hospitals $1.3 billion annually.

Like the pharmaceutical industry, the supply industry fields armies of "detail men" who provide advice, information, and services. Generally, the larger the firm, the heavier its reliance on both personal selling and heavy advertising.18 These "personal selling methods" reached a high point in 1977 on Long Island, where surgical supply sales personnel were found to be actually performing surgery while purveying their latest wares.19

The many similarities to the pharmaceutical industry are more than coincidental. Gobbling up firms in a sister industry is a natural strategy at a time when pharmaceutical profits are sluggish. This "epidemic of acquisitions involving medical products and equipment companies" offers "technological expertise and prospects for future growth," in the words of Business Week.20 SmithKline, cash-rich with profits from Tagamet, the nation's most profitable drug, recently merged with Beckman, a manufacturer of scientific instruments, in one typical acquisition. SmithKline was eager to gain a foothold in the burgeoning biotechnology industry—Beckman was among the exclusive guests at the recent biotechnology summit conference at Pajaro Dunes sponsored by Stanford, Harvard, MIT, Cal Tech, and the University of California. In

<table>
<thead>
<tr>
<th>Corporation (Subsidiaries)</th>
<th>Market Shares—Surgical Instruments</th>
<th>Market Shares—Surgical Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson &amp; Johnson (including Unilab, Applied Medical Research, Codman &amp; Sherris, Ortho-diagnostic Instruments, Jelco, Ohio Nuclear, Extracorporal Medical Specialties, Ethicon, Permacel, Invacare, Technicare, and Surgicon)</td>
<td>$146.6 6%</td>
<td>$562.7 17%</td>
</tr>
<tr>
<td>Becton-Dickinson (including Alrich Precision, Vanguard/Electrodyne, Clay Adams, Drake Willock, Bard Parker, and Medical Development)</td>
<td>240.4 10%</td>
<td>86 3%</td>
</tr>
<tr>
<td>American Hospital Supply (including Heyer-Schulte, Edward Laboratories, V. Mueller Div., Pharmaseal Labs., and Hamilton Industries)</td>
<td>233.5 7%</td>
<td></td>
</tr>
<tr>
<td>Warner-Lambert (including all Orthopedic Appliances, Parke Davis, Snowden Pencer, and Deseret Pharmaceutical)</td>
<td>92.5 4%</td>
<td>67 2%</td>
</tr>
<tr>
<td>American Sterilizer Company</td>
<td>109 3%</td>
<td></td>
</tr>
<tr>
<td>Brunswick (including Sherwood Medical Industries)</td>
<td>106.4 4%</td>
<td></td>
</tr>
<tr>
<td>C.R. Bard (including Wm. Henry Research, Burnett Instruments, Macbuck and USCI Divisions)</td>
<td>99.3 4%</td>
<td></td>
</tr>
<tr>
<td>Bristol Myers (including Zimmer Mfg. Co.)</td>
<td>89.2 4%</td>
<td></td>
</tr>
<tr>
<td>Cordis Corporation</td>
<td>80.6 3%</td>
<td></td>
</tr>
<tr>
<td>Pfizer (including Shiley Labs, United Division, Howmedica)</td>
<td>88 2%</td>
<td></td>
</tr>
<tr>
<td>Colgate Palmolive (including Kendall)</td>
<td>71 2%</td>
<td></td>
</tr>
</tbody>
</table>

What doctors say:

"God bless you. You’ve quintupled my income and given me more time for my family in the bargain."
Patience Kanwate, M.D., Pishaw, Arkansas

"Now the only strokes I have to deal with are on the golf course."
Bule B. Rich, M.D., Park Avenue, New York

Doc-Humant® is the breakthrough which for the first time applies the full range of space-age technologies to medical diagnosis and treatment.

After the patient presses one or more of the easy-to-understand keys shown, a soothing, authoritative voice responds with an appropriate witticism. Doc-Humant® then gently extends the needles, tubes, sensors, and other instruments to perform a complete battery of tests. The patient is relaxed by a light musical interlude.

The state-of-the-art Doc-Humant® computer analyses the test results instantly and emits a slip of medical stationery with the name of the illness, a prescription, and a schedule of future visits.

After inserting a valid Medicaid, Medicare, Blue Cross, VISA, or other appropriate card into the slot provided, the patient is permitted to leave.

Tests by independent researchers show that Doc-Humant® can carry five times the normal patient load. Only seven percent of the patients in one study complained Doc-Humant® provided care inferior to what they were accustomed to. A gratifying 88 percent declared that Doc-Humant® offered the most careful and considerate medical care they had ever received.

Doc-Humant®. Another product from the Armageddon Corporation, “Serving you with everything from air freshener to binary weapons.”

Health/PAC Bulletin
return, Beckman gained a pharmaceutical sales force and a mechanism for moving products through the Food and Drug Administration.

These "incestuous" acquisitions, in the words of James Tullis, are part of a "strong trend of consolidation between two big industries. . . . Management expertise in the hospital supply industry far exceeds anything I see in the pharmaceutical industry . . . (in) the rapidity with which they introduce new products or change their marketing strategy." Despite this fancy footwork relative to the pharmaceutical industry, some hospital and medical suppliers are reaching the "mature" stage in their growth cycle (see Gel Stevenson, "Profiles in Medicine," Health/PAC Bulletin No. 72, Sept./Oct. 1976). Positions are consolidated; markets are saturated. The next logical step is a move into overseas markets, and the industry is out there. In the 1960's, U.S. medical supply imports were rising at the highest rate in the industrialized world; most of this increase came in standardized devices and supplies. Since then exports have surged ahead so rapidly—16 to 20 percent a year—that by 1980 $3 worth was shipped out for every $1 brought in. The 1981 U.S. Industrial Outlook predicted their value would be over $2 billion in that year. Since 1967, exports of x-ray and electromedical equipment have multiplied 18-fold—nine-fold since 1972. West Germany and Japan may be surpassing the U.S. in other industries, but not here.

Reasons for this success are readily apparent. Although American corporations may publicly complain about domestic regulation, relatively high U.S. quality control standards secure their domestic market by raising a high hurdle against foreign competitors. These American producers and distributors also benefit from an unusually high level of brand and company loyalty, characteristic of the medical market as a whole, as well as many "first chance" opportunities in foreign markets where the product has not been available previously.

Because the goal of providing the most sophisticated care for those who can afford it occupies a higher position in American medicine than in more egalitarian health care systems, a high proportion of the world's technological advances are consequently achieved and marketed here. In addition, the many foreign doctors who receive specialized training in American institutions are likely to want the latest equipment when they return home.

Apologists for capitalism generally describe profits as the market's means to accomplish social and economic ends, while critics emphasize the social and economic distortions arising when profits themselves become the social and economic end. Worrying about the ethics of such a system is not the business of medical and hospital supply industry executives. As in all American industry, their concern is the bottom line. High profits in an industry may indicate economic health and managerial efficiency. They may also mean exploiting and underpaying workers here or in the Third World or cutting corners on materials, design, and safety testing. Or that a few firms grip a market so tightly that they can set prices without fear of competition.

Among the 1981 Fortune 500 companies, pharmaceuticals ranked second in return on sales (behind mining and crude oil) and third in return on stockholders' equity (after tobacco and beverages). Along with these gratifying profits the ethical drug industry has attracted a steady barrage of criticism which reached a crescendo in the embarrassing exposures of the Kefauver hearings in the early 1960's.

As we have seen, if the medical and hospital supply industry were subjected to similar scrutiny there is reason to believe investigators would discover that its "ethical" nomenclature also belongs to a past era. Its newness as a major in-

---

**Table 4.**

<table>
<thead>
<tr>
<th>Corporations</th>
<th>Sales (in millions)</th>
<th>Percent of Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson &amp; Johnson</td>
<td>$90.8</td>
<td>41</td>
</tr>
<tr>
<td>(Technicare)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Electric</td>
<td>83</td>
<td>37</td>
</tr>
<tr>
<td>(includes EMI Tech)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pfizer</td>
<td>30</td>
<td>14</td>
</tr>
<tr>
<td>Siemens A.G.</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>(West Germany)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North American</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Philips (Netherlands)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elscint Ltd. (U.K.)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Omnmedical Services</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: calculated from A Profile of the Medical Technology Industry and Governmental Policies, National Center for Health Services Research, PHS, DHHS, June 30, 1981.
Holding A Captive Market Hostage

In 1978 a quadriplegic patient using an Everest & Jennings power wheelchair died of third degree burns when its electric wiring caught fire and she could not get out. In another incident, an Everest & Jennings wheelchair caught fire, the driver lost control; the control crossbar broke, hurling him to the ground so violently that he required treatment in a hospital emergency room. George Mason, a Michigan state assistant attorney general, found himself hurling to the ground from his E & J "Remarkable Mark 20" when a wheel fell off; later his chair stalled in the middle of a busy traffic intersection in downtown Lansing. On both occasions he was rescued by horrified bystanders. The Remarkable Mark 20 was later withdrawn from the market.

Defective products under most circumstances would drive consumers to other manufacturers, but according to the Department of Justice E & J customers are handicapped by its control of more than 90 percent of the most profitable sector of the market, prescription wheelchairs, and, since 1955, of more than two thirds of all wheelchair sales (including those used in airports and hotels). Not satisfied with this commanding position, E & J has attempted to buy out three of the six other companies manufacturing wheelchairs in the United States, and successfully acquired outright or in partnership the largest wheelchair producers in Germany, England, Canada, and Mexico. When the Johnson Wheelchair Company of Toronto, then the sole Canadian manufacturer, refused an E & J bid in 1962, they were told to expect a new factory "down the street." Johnson's owners reconsidered and sold.

E & J's legal department has been as busy as the acquisitions staff, suing almost every competitor in the country for alleged patent infringements. The Justice Department decided these suits were pure harassment.

For the consumer, such monopolistic control has meant inflated prices and limited innovation. In its anti-trust suit against E & J, the Department of Justice asserted that the company was raking in profits of more than 50 percent on prescription chairs and more than 100 percent on many parts. Repairs on E & J chairs are frequent and lengthy, requiring users to own and maintain spares. The parts are particularly expensive, costing from one and a half to twenty times comparable parts from auto supply or hardware stores—but E & J won't repair wheelchairs that contain parts it didn't make. According to Dr. Robert Spindel, a specialist in rehabilitation medicine at Montefiore Hospital in the Bronx, the E & J chair is so constructed and repairs so lengthy that purchasing a new one is often the natural response after any breakdown. This travesty was outrageous enough to win a segment on television's "60 Minutes."

While rejecting the notion that expensive repairs and limited longevity are "planned obsolescence, Ralf Hotchkiss, an Oakland engineer and wheelchair inventor who is himself disabled, describes E & J's behavior as "benign neglect" where they believe shoddy products and limited innovation "won't hurt too many people." What E & J does well, he says, is take other company's innovations and mass produce them.

The result is slow, incremental improvement. Unlike many medical devices, the wheelchair of today would easily be recognized by our grandparents. The basic design is exactly what it was in 1935 when the late Harry Jennings, Sr. developed the first E & J wheelchair. The major advance of this chair was its ability to fold up and fit into the trunk of a car, but this design is less suited to today's motorized versions with their added weight and stress.

"I've sat in my wheelchair and watched men walk on the moon," commented a bitter Becky Heinrichs, a 31-year-old secretary in Bakersfield, California, who has been paraplegic since birth, "I know science was able to do that. I know it has developed strong, new light materials. Why is the wheelchair I'm sitting in like the one I sat in as a child?"

A part of the answer to her question lies in the long-standing collusion between E & J and the Federal government, first with the Veterans Administration and more recently with the Food and Drug Administration's Bureau of Medical Devices. According to Donald Wright at the VA's Prosthetic Center in New York, "All the wheelchair specifications in earlier VA standards described the typical E & J chair. . . ." Rather than specifications for how a chair should perform, its durabili-
ty or strength, the VA specified its appearance and construction materials, a policy that Wright and a colleague wrote, "stifles creativity in development and severely restricts the use of new materials and construction methods. It may also fix costs at higher-than-necessary levels."

Recently the VA changed its policy but now the Bureau of Medical Devices has placed wheelchairs in the same category as tongue depressors, requiring only "quality manufacturing practices" except when major design innovations appear. Then pre-market testing and approval must be carried out.

In a 1975 court deposition E & J officials testified that their products did not undergo longevity testing and that the Remarkable Mark 20 had no scientific testing before being placed on the market. The E & J officials knew of no written quality control programs at their plant or trade association standards for wheelchairs, what the Bureau means by "good manufacturing practices." Frank Pipari, a consumer safety officer at the Bureau, told one reporter, "I'm convinced that in most cases of problems with wheelchairs, the chairs are being used incorrectly by the users." Enough said.

In 1977 the Department of Justice initiated an anti-trust suit against E & J, calling for divestiture of its foreign subsidiaries and cessation of numerous monopolistic business practices. In February 1979 a consent decree between the Department of Justice and E & J was reached, calling not for divesting its Canadian subsidiary but rather the establishment of a new independent sales and marketing company that would promote the sales of imported wheelchairs produced by E & J subsidiaries in Canada, Mexico, England, and Germany. E & J was to provide up to $100,000 per year for 10 years to this new company, International Medical Equipment. The Department of Justice is required to review annually for 10 years E & J's agreement to stop its textbook examples of "anti-competitive practices." According to Ralf Hotchkiss, an Oakland engineer and wheelchair inventor who is himself disabled, the new marketing company has had little impact on sales, but the Justice Department's reviews have the potential for restraining E&J's past predatory practices. Frank DiGeorge, national advocacy director of the Paralyzed Veterans of America, said that his group had wanted to take this case all the way to the Supreme Court but they just did not have the financial resources.

E & J's legal problems, however, are not over. Although the California Association of the Physically Handicapped dropped its class action suit after the consent decree, the Emerald Distributing Company of Auburn, CA, has filed a class action suit on E&J's pricing practices and in April 1982 Invacare Corporation of Ohio filed a civil action in U.S. District Court charging E & J with monopoly practices and patent violations. Invacare is E & J's major competitor for low cost, lightweight wheelchairs and was just beginning to enter the more lucrative prescription wheelchair business. According to E & J Senior Vice President Robert C. Birth, Invacare's charges are groundless since the main complaint is that E & J's prices are "too low." However, the suit may have bearing on the Justice Department's annual review.

Disabled activists and advocates have turned from legal strategies to direct political action and self-help remedies for wheelchair problems including establishing independent repair services and "midnight" van pickups for broken electric wheelchairs. Responding to the Administration's "New Federalism," on April 30th 100 disabled people "rolled out" in protest from the President's Commission on Employment of the Handicapped. They were led by Tom Andrews, director of the Maine Association of Handicapped People, who said, "Our rights, our dignity, our quality of life are being sacrificed here." Ralf Hotchkiss has been working with Disabled People International in Singapore, Nicaragua, and the Philippines to develop lightweight wheelchairs with fewer and cheaper parts, appropriate to the needs of Third World countries. His work enabled Philippine wheelchair users to become major producers of custom-made wheelchairs and stimulated a flurry of design innovations in Managua.

While defective automobiles, bicycles, and hair dryers are recalled so often now that it is no longer newsworthy, wheelchair users are still being blamed for their breakdowns and held hostage by the makers of the machines they are most dependent on.

(\textit{Some research for this article was done by Betty Medsger and the Center for Investigative Reporting and published in The Progressive, March 1979.})
Industry has probably spared it attention; so has its absence as a separate category from standard listings such as the Fortune 500 and the U.S. Office of Management and Budget data (where Fortune gets its categories).

When its major corporations have been sorted out from numerous other categories, they reveal better than average but otherwise unexceptional profits up until five years ago. Then they took off (see figure 3), and are now well above average and closing fast on the pharmaceutical industry's. One study of the industry found somewhat higher profits among the largest firms, and linked this with their monopoly or oligopoly position. Measured by return on assets, some of the smallest (and most innovative) firms have been the most profitable, even a bit ahead of the giants, but it would be a safe bet that many of these, like IMED, have already or will soon disappear into conglomerates.

Stock purchasers, of course, look for more than good current profits, particularly in an industry such as hospital supply. It "may be growing faster" than pharmaceuticals, cautioned Michael Harshbarger, vice president of Chicago's Northern Trust Company, but "most products have a shorter life cycle." This can be a danger to the complacent. It can also be a source of profit to companies energetic enough to leap forward, whether by developing new methods for home monitoring of blood sugar for diabetics or adding a little more chrome to last year's CAT scanner. "The major growth in the medical technology industry in innovation and new products took place between 1940 and 1965," according to Dr. Joyce C. Lashof, dean of the University of California School of Public Health and former Assistant Director of the Congressional Office of Technology Assessment. "The major change during the last 15 years has been the diffusion and increased use of existing technologies rather than proliferation of new ones."

Even though the number of major breakthroughs may be small, the pressure to find something new has intensified. Since the 1950's the industry's investment in research and development has consistently been almost double that of all manufacturers as a percent of sales, and a higher percentage of this comes out of the company treasury rather than government grants or contracts. The results have been dramatic: the annual number of patents granted for medical supply equipment has jumped nearly 100 percent since 1965 while the number granted to all manufacturers has actually declined. As in computers and other research-intensive industries with earnings significantly above the national average, "research is considered the key to profits."

"We expect R & D spending by medical supply firms to grow as they recognize the apparently strong correlation between percent of sales spent on R & D and gross profit," predicted John R. Starr, a consultant with Arthur D. Little, Inc.

In recent years this willingness to pour huge sums into new products has been fostered by confidence that money will be there to buy them. Wall Street has often described the industry as "recession-proof," a must for every portfolio in the Reagan years. "History shows that during a recession there is relatively little impact on hospital supplies that are oriented toward direct therapy in hospitals," advised Morgan Stanley's James Tullis, "I think a lot of the hospital supplies... tend to grow in volume even in a recession."

But Tullis offered this opinion before the slashes in Medicare and Medicaid funding. The fate of the hospital industry and its purchasing power is closely tied to public expenditures on health care and the spigot appears to be closing. Despite promises of deregulation in other areas, hospital cost containment remains high on the Reagan Administration's agenda.
Institutions are also tightening up to cover mounting deficits. Alongside existing Certificate of Need controls for major capital equipment, hard-pressed voluntary hospitals are increasingly turning to "materials management" to determine their drug, equipment, and supply purchasing that now accounts for 42 percent of their budgets. A study conducted by Patricia Gempel and David Boodman of Arthur D. Little, Inc., found cost containment is already affecting the institutional market for health care products.

Hospitals are behaving more like other industries, employing techniques such as group buying, prime vendor contracts, and vendor performance monitoring. Even the slimmed-down six percent annual real growth rate that analysts predict for the 1980's may succumb to the Reagan cutbacks and the long-term crisis of American capitalism.

Even if growth slows down or ceases entirely, maintaining current sales will continue to reshape virtually every aspect of health care. An office-based internist can triple his or her income merely by performing more office procedures such as electrocardiograms and simple blood tests. As the hospital labor force has become larger and better paid, disposable products have replaced many items formerly cleaned, laundered, re-sterilized, and/or reused. The major expansion in the hospital labor force has been in technicians who attend the new machines that, in turn, require new reagents, supplies, and parts. The labor-intensive health care industry of yesterday has yielded to a capital-intensive system where the skills and cost of the labor the new technology requires stimulate a market for still more capital investment. This "technological imperative" has transformed the standards of medical practice, leading to the depersonalized health care which patients like Dorothy Morrison have too often received.

What they can't sell through a promise of reduced labor costs, the hospital supply corporations market to willing buyers through a strategy of "planned obsolescence" built into the competition between institutions for medical personnel, prestige, status, and patients. CAT scanners will soon be "outmoded," replaced by the PET (positron-emission tomography) and NMR (nuclear magnetic resonance) scanners like so many car models or generations of computers.

For patients like Dorothy Morrison and millions of others, this trend is a mixed blessing. Many of the technologies replace more invasive, more painful, or more dangerous procedures and treatments. The labor saving devices should free staff for more direct patient care. Yet the reduced risks often are lost in altered medical practice which results in greater utilization, additional case finding, and potential iatrogenesis. Labor savings end up meaning de-skilling or proletarianizing the workforce or reductions in patient care staffing rather than more personalized care, as patients receive more care from machines than people. The ideal patient fits the machine, the way the ideal tomato has become the square, plastic one that is picked and packaged easily and never spoils.

Medical supplies is an industry that shapes and thrives on our American system. Whether health consumers benefit is another matter. Those who can afford it or are adequately insured will increasingly find that their care resembles an assembly line where the consumer is packed, processed, and, finally, consumed.

Acknowledgements: Gessie Saget, a Health/PAC summer intern, provided much of the background research for this article. Gel Stevenson provided special expertise, guidance, and encouragement.

2. Todd, M.D., Malcolm, Plenary Address, Association for the Advancement of Medical Instrumentation, 12th Annual Convention, San Francisco, CA, 1977.
8. ibid.
Where’s Poppa?

The U.S. Public Health Service is assembling a directory of 500 publications and audiovisuals about maternal and child health. Publication is expected by this summer. Get a preview from Elaine Bratic, Office of Public Affairs, U.S. PHS, Room 740G, 200 Independence Avenue, S.W., Washington, DC 20201. (From APHIS Federal Monitor, 2/15/82)

Generic Politics

A recent survey by the National Consumers League ranks health fourth among the concerns of American consumer organizations—behind energy, environment, and housing. “A Look at the Current Consumer Activist Movement: 1981” predicts “a shift in the consumer activist community from a concentration on product information, product safety and other individual concerns to a broader emphasis on the structure of the economy, prevention of problems and long-term public policy.” For a copy, write NCL, 1522 K Street, N.W., Suite 406, Washington, DC 20005.
X-traneous Rays
by Arthur A. Levin

Half of all Americans are ionized by an x-ray every year. As we saw in the last issue, assuming this is no more dangerous than exposing yourself to an instamatic lens is a mistake. Rather than submit with the cheery resignation of a World War II kamikaze pilot, the prudent consumer should always ask why an x-ray is necessary. Besides assuaging your doubts, this might encourage the practitioner to exercise caution and be sure that the decision is the right one at the right time.

According to a 1976 report issued by the Environmental Protection Agency, entitled "Radiation Protection Guidance for Diagnostic X-Rays," the most effective way to reduce exposure would be to encourage more appropriate and "rational" prescription practices. Major reasons cited for "unnecessary" procedures were inexperience of the practitioner, intellectual curiosity, fear of criticism, fear of legal action, administrative convenience, and public health screening. "No x-ray," the report noted, "should ever be routine, but should be based on clinical evaluation of the patient to determine its medical necessity."

Some x-rays, however, carry more risk than others. Many people concerned with protecting their unborn descendants take care to keep their sex organs unexposed. Few are aware that various parts of the body require photography with rays of greater intensity and duration, with commensurately higher risk. The following estimates of typical dosage are taken from X-Rays: More Harm Than Good, by Priscilla W. Laws.

**High Dose**
- Upper GI (gastrointestinal) series (barium drink), lower GI series (barium enema), lower back (lumbar), lower spine (lumbosacral), middle spine (thoracic), and mammography.

**Medium Dose**
- Intravenous pyelograms (IVP exams of the kidney, bladder, and ureter), gallbladder (cholecystography), pelvic and lower spine (lumbo-pelvic), skull, upper spine (cervical), and other kidney, bladder, or ureter exams (K.U.B.)

**Low Dose**
- Chest, shoulder, hands and feet, hip, upper thigh (femur), and dental bite-wings and whole mouth.

Even a low dose should not be accepted casually, and certainly not when it is offered routinely. Twice annual dental x-rays have become prevention scripture despite scanty evidence that this is beneficial to the teeth, let alone the chromosomes. In fact, what may be the only study, published in Lancet (8035:422, 1977), concluded that those who trudged off to the dentist for two checkups a year had no better teeth than those who went less frequently.

Although they don’t appear to affect the health of your molars, these semiannual visits do take a large bite out of your bank account if you are one of the overwhelming majority which has no dental coverage in an insurance or health plan. X-rays, of course, are extra, and many practitioners take at least a series of bite-wing pictures on every visit.

Dental experts generally agree that a whole mouth series should be performed only when there is some suggestion of a clinical problem and bitewings should follow only when disease shows up on the whole mouth. The only routine aspect of a dental x-ray should be the lead apron to protect reproductive organs.

**Chest x-rays serve little clinical purpose for the general population.**

Failings of other common x-rays have been exposed with greater success. Many readers will remember lining up to board a bus which they thought was going nowhere for a chest x-ray (fluoroscopy). It turns out a few of those examined might have been stepping up for a one-way trip to Sloan-Kettering.
These and similar tests for jobs and school admissions have often exposed us to higher than necessary dosage and frequently spilled radiation onto other parts of the body. When high technology is involved, an ounce of prevention may require a pound of cure.

Aside from entailing some danger, chest x-rays serve little clinical purpose for the general population. Tuberculosis is detectable by other, safer tests and lung cancer is generally agreed to be too far advanced for treatment by the time it shows up on a chest x-ray. As part of the "perk" of negative by the time it shows up on a chest x-ray, which this is designed for. Most experts agree that pregnant women and other women of childbearing age should avoid x-rays if at all possible. When absolutely necessary, they should be designed to minimize exposure of the fetus and reproductive organs. A report by the Food and Drug Administration's Bureau of Radiological Health stresses that the often routine pelvimetry for women in labor or even simply pregnant should be given only if an individual clinical assessment indicates it is needed.

Unfortunately, this has not completely halted inappropriate use. Executives often get chest x-rays as part of the "perk" of annual multiphasic examinations; perhaps employers find this is an easy way to reduce the expense of generous pension plans. Workers are frequently required to get their lungs shot when entering a new job. Many hospitals still require all patients to have one on admission, even though the Blue Cross Association has recommended that such routine chest x-rays not be reimbursed except for surgical patients.

It may be difficult to protest when you are on your back with an IV tube in your mouth in an intensive care unit. But if a "portable" x-ray machine comes rolling through the door be sure there is good reason. Their dosage and focus controls are considered less effective than those of normal machines; even if the intended target is in the next bed you may get some rays. Hospital workers are also at risk, of course, and likely to be exposed regularly.

Other doubtful exposures include pre-employment lower spine series for longshore workers and in other occupations, routine barium enemas for patients with hernias, and urograms and/or arteriograms for hypertensive patients—only five percent have the renal-artery disease which this is designed for. Most experts agree that pregnant women and other women of childbearing age should avoid x-rays if at all possible. When absolutely necessary, they should be designed to minimize exposure of the fetus and reproductive organs. A report by the Food and Drug Administration's Bureau of Radiological Health stresses that the often routine pelvimetry for women in labor or even simply pregnant should be given only if an individual clinical assessment indicates it is needed.

Mammography has probably aroused more controversy and debate than any other type of x-ray, and the issues are too numerous and complex to be discussed adequately in a few paragraphs. Readers interested in more information on this test should contact the Center for Medical Consumers, 237 Thompson St., New York, N.Y. 10012.

The medical literature regards a good radiologist as the person most qualified to judge if an x-ray is appropriate. The qualification "good" is important, however. An estimated 15 to 20 percent of all American x-rays must be retaken. Some 45 percent of these retakes are necessitated by poor exposure, which a competent radiologist avoids by ensuring that the film and equipment are working properly. Another 23 percent result from poor positioning of the patient—again something a well-trained radiologist wouldn't permit.

Perhaps it isn't surprising in a country where most jurisdictions don't require a license to carry a gun that x-ray machines can be legally operated by a chimpanzee, but still it's unnerving that only a dozen states license equipment operators. Even where regulations do exist equipment standards and inspection can be serendipitous. New York City, for example, used to have a rigorous program, but budget cutbacks have virtually reduced this to an honor system.

Consumers, therefore, are left to trust the judgement and competence of medical personnel and their own. Here are several rules which the wise consumer should keep in mind:

1) Always ask why any suggested x-ray is necessary.
2) Always insist on receiving a duplicate set of films for your personal files. This may obviate the need for a new set should the other copy be lost and aid in a different practitioner's diagnosis.
3) Don't pressure a practitioner to take an x-ray. Good care is sometimes less care, and many more people suffer from overexposure than from underexposure.
Initially some worker-protection bills passed on the strength of labor alone. By this time, corporate lobbying has become so intense that proposing a statewide bill focused exclusively on either labor or the community may well be an exercise in futility. The 100,000-member Massachusetts Fair Share found this out watching its own bill and the one supported by the state AFL-CIO wend their separate ways to the legislative shredder this year. Next time the two groups will work together on a double disclosure bill, promised John O’Connor, head of Fair Share’s neighborhood health and safety campaign.

The AFL-CIO got the bill to the floor through the labor committee.

Labor and community activists in Connecticut recently showed how such cooperation can pay off. The Connecticut Council on Occupational Safety and Health (ConnectiCOSH) drafted a bill providing for worker and community disclosure and then brought the unions and CCAG together through its community and labor task force on cancer. When the State legislature’s environmental committee balked, the AFL-CIO got the proposal to the floor as a labor bill. CCAG mobilized everyone it could. Demonstrations held at plants turned out workers and the community. Public access was added to the bill just before it passed, although in a weakened form which required using the state’s freedom of information act to obtain data from the State Department of Labor.

Whatever their differences of means and ends, activists on both sides of the factory gate agree that the right to know is an excellent organizing tool. Said Caron Chess of the Delaware Valley Toxics Coalition, “We’re still working through different ways [the Philadelphia law] can give you a handle on the toxics problem; by bringing the information to doctors; by knowing what’s there you can figure out how it’s being transported; and by having ambient guidelines for toxics in the air you can reduce emissions or substitute other chemicals.” Emergency planning, health surveys, pollution watches, and plant inspections are some of the other tactics that right-to-know allows citizens to use. Not to mention electioneering. (In Cincinnati, the president-elect of the city council won on a right-to-know platform.)

For Jim Moran, of the Philadelphia Project on Occupational Safety and Health, the proof is still in the pudding. “What we need is good information from (union) locals” that request it, he said, “Then we can move to make changes in the workplace so it gets publicized that you can do something concrete.”

It is clear that even in places like Philadelphia, where a significant amount of money was appropriated, implementation will depend on rank-and-file organizing. But once labor and citizen activists have tasted the forbidden fruits of knowledge—protected by the proper pesticides, of course—there is no telling what they might do.

—Carl Blumenthal

Carl Blumenthal is on the Health/PAC staff.

Burning Health Issues

If illnesses could be eliminated by quashing government reports on them, the Reagan Administration would be the best news in health since smallpox vaccine.

In its first foray into literary eradication, the Reagan team demanded a rewrite of a pamphlet explaining the dangers of Brown Lung disease to remove “anti-business” passages. Now a pamphlet on the effects of the deadly defoliant Agent Orange is being “reconsidered.”

The Veterans’ Administration recently revealed that a pamphlet, produced during the Carter Administration, describing diseases connected to Agent Orange would be rewritten. Calling the previous pamphlet “somewhat outdated,” VA spokesperson Larry Moen described the new publication as “a different pamphlet done by... a different administration.” Mr. Moen also said that remaining copies of the old pamphlet had been removed from circulation.
The earlier publication warned that many diseases have developed "among humans who have been exposed to dioxins," a substance used in Agent Orange. It goes on to list kidney, liver, blood and nerve disorders, as well as several forms of cancer, as some of the many health effects connected to dioxin.

The Reagan Revisionists have turned these findings into a "theory [that those exposed] might be subject to delayed health effects." The new pamphlet does not specify any of these "effects." Instead, it explains that "minute traces" of dioxin were contained in Agent Orange, and that laboratory "animal studies have shown it [dioxin] to be toxic to certain species." It fails to mention any findings among humans unless we suppose "laboratory animals" is a reference to humans in Vietnam.

In a final attempt to minimize any connections between the pamphlet and the outcries against the Vietnam defoliant, the color of the pamphlet's cover has been switched from orange to blue. Perhaps one can tell a book (or pamphlet) by its cover. Vietnam vets might not feel more secure knowing that the dangers of the hazardous chemicals they were exposed to in Southeast Asia are only "theoretical." Executives of Dow Chemical, manufacturers of Agent Orange, might draw more comfort. Another victory for the free enterprise system, aided by the Reagan Administration.

—Peter Medoff

Peter Medoff is on the Health/PAC staff.

HEALTH/PAC
HEALTH POLICY ADVISORY CENTER
17 MURRAY STREET
NEW YORK, NEW YORK 10007