Carter Attempt to Limit Doctor Supply Faces Tough Going in Congress

HEW has a new target in its fight against the cost of health care

If for nothing else, Secretary of Health, Education, and Welfare (HEW) Joseph Califano would apparently like to be remembered as the politician who cut health care costs. Until recently, the targets of his austerity ardor were hospitals, which nevertheless recently fended off an attempt at cost containment. Califano swears he has not even begun that fight, but in the meantime he and the Carter Administration have moved on to fresher ground: the supply, or, in Califano's words, the oversupply of physicians. In the 1980 budget presented recently to Congress, Califano and Carter propose to strike swiftly at an impending (in 1990) oversupply through the complete elimination of funding that has been used by medical schools for nearly a decade to expand their enrollments.

The nearly inevitable result is that almost all of the 122 medical schools in the United States will have to raise even further the skyrocketing costs of obtaining a medical education, lay off untenured faculty, or by strenuous effort squeeze more money out of already exhausted alternative sources of funds.

The grants that Califano is proposing to eliminate—known as capitation grants because they are awarded on a per capita enrollment basis—now account for only 3 to 8 percent of total medical school budgets. But most schools claim they operate so close to the edge of fiscal solvency that to absorb such a cut would be very difficult, and a General Accounting Office study recently confirmed this. One school, Meharry Medical College in Tennessee, the nation's only black medical college, may have to shut down if the capitation funds it currently receives are eliminated, along with the financial-distress grants it also receives.

Califano thinks that if the medical schools resolve eventually to lower first-year enrollments, the cutback would seem eminently sensible despite these temporary hardships. It might also seem so to others—if there actually is going to be an oversupply of physicians by 1990; if physicians really add as much to the cost of health care as Califano claims they do ($300,000 per physician per year, he says); and if, by reducing the number of physicians, one can reduce the cost of health care instead of increasing it through lessened competition.

The major difficulty with the Califano move is that none of these assumptions rests on anything firmer than shifting sand. Health care specialists, even within HEW, are uncertain about what constitutes an appropriate supply of physicians, much less what an oversupply will be and whether we will have one soon. Economists disagree about whether physicians can induce a demand for health care, or must respond to the demands existing in the public at large, and thus whether they may raise fees with impunity. Califano has merely chosen to make a stand on one side of a muddy, arguable issue.

There also are political problems. Senators Richard Schweiker (R-Pa.), Jacob Javits (R-N.Y.), and Howard Metzenbaum (D-Ohio) recently denounced the Administration proposal, which specifically would cut the medical school grants from $83 million in the 1978 budget to half that through a recision in the 1979 budget and then completely eliminate them in 1980. Schweiker, who sits on the Senate subcommittee that appropriates the capitation money, has accused the Administration of playing "one big shell game" because it knows that Congress, which has protected the funding in past years, is likely to restore it again.

Senator Edward Kennedy (D-Mass.), who has begun a frontal attack on a number of items in Carter's health budget from his base as chairman of the health and scientific research subcommittee, also has been critical of the cut, suggesting that it is foolish "at a time when we are concerned about closing off medical schools to the middle class. . . . [This and other cuts] do serious damage to what I consider to be the basic vision that Americans have about the quality of health care they want." Kennedy told *Science* recently that although "I have not fine-tuned it, some formula—some relief for medical schools—will be put back in by Congress."

Califano probably was not surprised at the vociferousness of this reaction. Indeed, as he sat down to testify on the health budget before Kennedy's subcommittee, he told its chairman that "I haven't looked forward to anything so much since the time we were together at the Democratic midterm convention," when Kennedy pasted the Carter Administration for setting the wrong priorities. Actually, Califano does not even support the elimination of capitation funding by 1980; he is known to have suggested a more gradual phaseout in the HEW recommendations to the Office of Management and Budget (OMB) last fall. However, OMB staff, led by Associate Director Suzanne Woolsey, a former HEW budget analyst, sliced $2 billion off Califano's overall budget, including the capitation funds. Califano responded with 137 appeals—many of which were granted—but capitation was not among them; apparently it got lost in the shuffle of larger programs.

On the other side, the medical schools were not completely unaware of what the Administration might propose. Califano himself had told the Association of American Medical Colleges (AAMC) annual meeting last fall that "we will no longer discourage schools from reducing student bodies if they wish. It is our hope—indeed our objective—that over the next few years, the medical schools will gradually reduce the size of their classes." The capitation grants program, which was enacted in 1971 as a reward for medical and other professional health care schools that increased their undergraduate enrollments, was an all-too-obvious target. The problem, according to many medical school officials, is that most schools have come to regard the program as an entitlement, and not just an enrollment reward. For example, the General Accounting Office study of 11 medical schools shows that 87 percent of the capitation grants were used to hire new faculty, which on receipt of tenure become a fixed cost. Also, after a number of revisions, the law now rewards schools that maintain the same undergraduate enrollment from one year to the next.

Merlin DuVal, who was assistant HEW secretary for health from 1971 to 1973 and presently is vice president for health affairs at the University of Arizona, says, "Most schools have reached the point psychologically where they

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count on the capitation grants as stable funding. Enrollment increases were made several years ago, and capitation is supporting those students now as they complete their education." Indeed, between 1966 and 1976, 28 new medical schools were started and the annual number of medical graduates rose from 8,148 to 14,969. DuVal noted that in its initial legislative form, capitation *was* an entitlement program—part of general federal aid to medical schools. It was in exchange for an increase in the first yearly authorization that the grants were attached to the social goal of increasing the number of doctors by Representative Paul Rogers (D-Fla.), then chairman of the House subcommittee on health. "To turn this funding back now would be unfair," says DuVal. Indeed, there appears to be no graceful way of phasing out the grants, since schools may not decrease their enrollments during 1979 without losing even the 50 percent of funding that would be retained.

Capitation grants were not the first federal funds to assist medical school expansions, but they have been the most flexible incentive for enrollment increases, and were based on several academic and federal reports suggesting that not enough was being done to boost the number of doctors. The reports, in turn, based their conclusions on estimates of the number of physicians relative to the total population, a figure that most economists today consider to be woefully inadequate as a measure of under- or oversupply. Yet, the same estimate is being cited by the present-day advocates of fewer medical graduates. Califano, for example, relying on extrapolations of present enrollment trends, predicts that, "By the year 1990, we estimate that the supply of physicians in the United States will increase another 57 percent, equivalent to 242 physicians for each 100,000 people in this nation. By virtually all of the accepted yardsticks, this portends a substantial oversupply of physicians on a national basis."

Actually, determining whether 242 is too high, just right, or not high enough is a far less exact science than Califano would suggest. Califano presumes it is too high, because of data in an HEW report issued in August 1978 that uses a complex computer model and present physician utilization rates to estimate the appropriate demand for physicians in 1990. The report concludes that the aggregate national requirement will be 5 to 10 percent less than the supply by then. But the report also places qualifiers on its requirement estimate that Califano has elected to leave off. "Because of the

U.S.–China Exchange Formalized

Negotiations for a formal program of cultural and technological exchange between the United States and China came to fruition on 31 January when President Carter and China's Vice Premier Teng Hsiao-ping signed a series of executive agreements in the White House.

The most detailed parts of the package were those on space, energy, agriculture, and scholarly exchange—all of which had been mapped out in advance during a series of carefully orchestrated talks between U.S. and Chinese officials during the last 6 months. Frank Press, the director of the President's Office of Science and Technology Policy, launched the talks with his visit to China in July 1978. Specifics were nailed down later. In October, the Chinese signed an understanding on scholarly exchange with Richard Atkinson, director of the National Science Foundation. In November, Secretary of Agriculture Robert Bergland and Secretary of Energy James Schlesinger reached agreements while on a trip to China. In December, a Chinese delegation in Washington signed an agreement with Robert Frosch, head of the National Aeronautics and Space Administration (NASA).

Other agreements still waiting to be completed will cover health care, environmental and earth sciences, engineering, and commerce. Joseph Califano, Secretary of Health, Education, and Welfare, and Juanita Kreps, Secretary of Commerce, will be among those who travel to China in coming months to hammer out the details.

The largest pieces of equipment Teng and the vice minister for science and technology, Fang Yi, will take home will come from the Energy Department and NASA. According to those who worked on the deal, "senior American officials" as they called themselves, China will buy a communications satellite system, including ground stations, worth about $500 million. This will be used as a link in the telephone system and as a color television transmitting device, extending the national educational program to remote villages that lack teachers. Indonesia and Japan have bought similar systems, although this new satellite will be designed to fit China's unique specifications. China will also get a $3 million Landsat receiving system, which will be used to provide map makers with photographs from outer space. The Energy Department will help the Chinese build a 50-billion-electron-volt proton-synchrotron accelerator in Peking, costing about $200 million. It will have roughly the same power as the accelerator at Brookhaven National Laboratory in New York, and much less than others now operating in the United States and the Soviet Union. As one of the briefers said, "Research in high-energy physics is a 'natural' for cooperation between us." He mentioned that some major discoveries in this field have been made by Chinese Americans, and that the chief of China's high-energy physics commission, Chang Wen-yu, was a professor at Princeton. The accelerator is expected to produce no military or other practical applications.

In other sections of the document, the two countries pledge to set up a Joint Commission on Scientific and Technological Cooperation, headed by Fang Yi and Frank Press. U.S. consulates will be opened in Canton and Shanghai, and Chinese consulates will be opened in Houston and San Francisco. Tourism will be expanded as soon as the Chinese believe they have enough "Western facilities" to house the expected flood of foreigners. The Chinese Ministry of Culture and the U.S. International Communication Agency (successor to the old USIA) will arrange for exchanges of books, films, theater performances, sports events, and the like. The details are still being worked out.

America's technological and military strength is clearly what interest the Chinese in this partnership. Although they presumably feel they have little to learn from Western cultural and political traditions, they describe themselves openly as our disciples in science. As Fang Yi said in a meeting at the National Academy of Sciences, "China is still rather backward in the field of science and technology on the whole. So . . . we have more to learn from you." It will be interesting to see, as this experiment continues, whether China can absorb our technology without absorbing some of our culture.

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uncertainties involved in projecting requirements, . . . the best interpretation of these numbers is that the supply of physicians would be more than adequate to meet the Nation's needs by 1990. . . . In many respects, the potential oversupply could serve as a means of alleviating current problems of geographic and specialty maldistribution, *although the cost implications of such an oversupply are not clear*" [emphasis added].

Another means of determining that 242 physicians for each 100,000 people is too high is to compare this number with those of other countries, many with infant and general mortality rates lower than ours. John Cooper, president of the AAMC, believes that the number will be even higher by 1990 than does HEW—250 physicians per 100,000—and points out that only two countries have higher ratios, Israel and the Soviet Union. He also says that the Kaiser-Permanente Plan in California has only 102 physicians per 100,000; Europe, Great Britain, and Sweden, each with national health programs, have 150 per 100,000. "But all of it doesn't mean anything," Cooper says. "There is no good way to tell whether you have enough. In areas of the United States with a high density of physicians, doctors are simply working more reasonable hours, down from 80 to around 40, which is common everywhere but the United States." To end the capitation grants as a means of reducing the number of physicians is a poor judgment, he adds. "It's just like getting a girl pregnant and leaving her, when she still has the kid."

Determining whether costs automatically escalate as the number of doctors increases is no easier than determining whether 242 doctors per 100,000 people is too high or too low. The economics of medicine has been widely studied, but remains controversial because it appears to violate many commonsense economic notions of supply and demand. The theoretical underpinnings of Califano's proposal come from the work of Uwe Reinhart, a Princeton University economist who assumes that because patients are ill-informed doctors may raise fees at will or increase patient use of medical procedures to bring in more income and protect themselves from competition. "Intuitively, the theory is very attractive," says Frank Sloan, a Vanderbilt University expert in medical economics who disagrees with Reinhart. "His theories are highly regarded because he is so clearly understood. Unfortunately, the evidence for them is not good; it is not bad, either, just not there. And it would be a shame to see federal policy set on such a poor, unscientific basis."

Reinhart's theories depend on data that show physician fees to be higher in areas where there are more physicians—the opposite of what one might normally expect. This suggests that each physician generates his own patient demand in order to maintain income—that by limiting the number of physicians, health care costs will go downward, not up. Sloan, however, says that more refined studies demonstrate that although this may be true for specialty medical practices, it is not so for general practitioners and general surgeons—in these areas, fees are lower or the same when physician density is high, when mathematically corrected for living costs. "Calculus has no appeal to policy-makers," Sloan says.

Strangely, all studies appear to demonstrate that physician's earnings are lower in high-density areas, despite the higher fees. The explanation appears to lie in the same phenonomenon cited by Cooper: shorter working hours for these doctors. In this light, decreasing the number of physicians may decrease the fees charged in the specialty fields, but not necessarily among general practitioners and surgeons. And, unless physicians are willing to return to greater working hours, fees in general will not decrease by much.

This is already known in part. When capitation grants were reauthorized by Congress in 1976, the law was amended to target enrollment incentives at the area of primary care, where fees have not generally been affected by the number of practitioners. Ending the capitation grants would have the obvious effect of ending this incentive for education in primary care.

DuVal suggests that an alternative might be to maintain current capitation funding as an entitlement, and provide additional funds as a reward for diminishing class sizes—a sort of reverse capitation. Medical schools would no doubt scurry to participate in such a plan, which would provide enormous economies. Alas, such a proposal does not satisfy the test of trimming the federal budget and reducing the deficit, which was apparently applied this year to everything OMB could get its hands on. It is because federal support to medical schools has already been on a downward trend that many in Congress and academia were piqued by this latest, additional cut. They will, in all probability, be heard before the legislative session ends, setting the issue aside until the affair is restaged next year. Without much hard data on either side, the debate can go on forever.—R. JEFFREY SMITH

Canada Wants Cash for Cosmos 954 Cleanup

"I looked through the window and saw this object coming toward me," recalled Marie Ruman of Yellowknife, in the Canadian Northwest Territories. "The main part was like a bright fluorescent light. There were lots of small parts trailing behind it. The pieces were bigger than shooting stars, and each had a long bright tail. None of it made a sound."

It was the white fire of Cosmos 954, a nuclear-powered Soviet spy satellite which, 1 year ago, broke apart in the atmosphere and scattered radioactive debris across the Canadian Arctic.

On 23 January 1979, just 1 day before the first anniversary of the Cosmos crash and 1 day before the deadline prescribed by international law, Canada handed the Soviets a $6.1-million bill for the cleanup. It was the first claim of its kind. Canadian Foreign Minister Don Jamieson said that the bill included only those expenses above normal salary and equipment costs. Canada spent a total of $13.7 million on the 35,000-square-mile search and recovery operation. While the Soviet Union has never officially accepted responsibility for cleanup costs, Jamieson said Soviet comments implied acceptance, although Canada is still awaiting an official reply from Moscow. Added Jamieson: "I presented the ambassador literally a briefcase full of documents."

United States assistance, which at its peak included five military planes, three gamma-radiation detection devices, and 120 personnel, cost a total of $2 million over and above normal expenses, according to Colonel Roy Lounsbury, director of Safety, Environment, and Emergency Action within the office of military applications of the Department of Energy. No U.S. bill was handed to either the Canadians or the Soviets. Said Lounsbury: "We wouldn't have put up a fight if the Canadians offered to repay us, but they never asked what it cost."

The 5-ton, 46-foot-long satellite was powered by 100 pounds of enriched uranium. It scattered itself in a long arc over the thinly populated Northwest Territories in the early hours of 24 January 1978. In the following

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