

lines are primarily a political document, not a medical document."

While many doctors object to the rigidity of some of the guidelines, many of these same doctors feel that FDA is placing too much emphasis on methadone as a treatment rather than, as one put it, "a precondition for [therapeutic] relationships to start to occur." According to Ed Senay, head of the Illinois Drug Abuse Program and successor to Jerome Jaffee, who now heads the Special Action Office, any program that dispenses just methadone, without supportive services, merely replaces an illegal pusher with a legal one. Senay says the National Association of Methadone Program Directors (of which he is an officer) wrote the FDA to object to its statement that "methadone presently represents the only drug for which there is substantial evidence of effectiveness in the treatment of heroin addiction." The statement should be changed to read, according to the letter, "Methadone used in conjunction with rehabilitative services is an effective drug in the treatment of heroin addiction."

But there is disagreement on the logical consequence of this. Dole says it would be unrealistic for the regulations to stipulate that a licensed program include supportive (rehabilitative, group therapy, job placement, and so on) services, because it would be impossible to find a common denominator for, say, a bunch of suburban teen

addicts and prisoners who had just emerged from the Tombs.

Such a requirement would inevitably decrease the number of patients treated at each center, and most drug experts appear to agree that it is important, particularly in big cities, to reach as many addicts as possible. Peter Bourne, head of the Georgia Narcotics Treatment Program, points out matter-of-factly that methadone is competing on the marketplace with heroin, and that methadone has the great advantage of being free. The more people on methadone, the less demand for heroin, which means that the heroin supply must be reduced in order to keep the prices up, which means, in turn, that there is less heroin around to seduce new users.

There are no end of theories and no end of disagreement. When does methadone produce euphoria? Do addicts buy it on the streets because they can't get in a program, or do they merely add it to their arsenal of kicks? (Or, how many addicts want to stop?) Is it harder to get off methadone than heroin? Should methadone be used as preventive medicine, say, with a teenager whose habit is not yet heavy or a prison addict who has been off the stuff during his term, or should it be withheld until clear signs of addiction are present?

There are, in addition, more basic questions: for example, could it be that the only reason society is in such a

tailspin about heroin is that addicts commit crimes and cannot be ignored—unlike alcoholics, who merely get in accidents and beat their wives?

One reason that there is so much conflict is that authoritative data are practically nonexistent. There are no precedents to go by, and the patient population is constantly shifting. Because of the need for keeping patients' identities confidential, heroin addiction constitutes a unique epidemiological challenge. One of the main concerns of the Special Action Office is to develop a uniform national data system in order to pinpoint environments conducive to drug abuse and locations appropriate for treatment centers, as well as to eliminate duplication among patients. The Narcotics Treatment Administration, in Washington, D.C., is now using a footprint system of identification—similar to the FBI's fingerprint system, but totally unconnectable with criminal records—which could conceivably be expanded nationwide.

Meanwhile, the FDA is laboring to perfect its guidelines, and endless new vistas of controversy are opening before methadone. The comment period was over on 6 July, but it looks now as though there will be no final word until October or later, if public hearings are held. The Special Action Office says no hearings are planned, but they are a "possibility."

—CONSTANCE HOLDEN

McGovern: Conversion Plans Spell Upheavals for Scientists

There is an anecdote on Capitol Hill concerning a questionnaire, sent out in the late 1950's. by Senator Hubert H. Humphrey (D-Minn.), querying leading defense contractors about their plans for conversion. According to the story, the results of the survey were never released because the plans turned out to be few or nonexistent. Today, however, Senator George McGovern (D-S.D.) has beaten Humphrey in the race for the Democratic presidential nomination and he has all sorts of

plans for conversion.

By 1975, McGovern says he would limit the defense budget by \$33 billion to \$54 billion and, at the same time, attain full or 96 percent employment. While his plan for a less defense-oriented economy would obviously cause great upheavals in the national work force, McGovern says his goal is to "take the pain out of peace."

Writing a national science policy is not exactly a presidential candidate's first priority—he has had other more

important things to do—such as choosing a vice presidential running mate. Moreover, during the primaries-through-convention period, a candidate's organization concentrates on winning—with whatever bare bones of a program are needed. Only now is the McGovern campaign group taking on a staff of specialists in many important areas. For example, the organization set up a research and issues division, separately staffed, to hammer out details of various proposals since the convention. And finally, McGovern's positions on some issues may shift and evolve as the campaigning becomes more serious and extensive. Hence, only a few elements of what could happen to research under a McGovern administration can be inferred at this time.

McGovern's past voting record includes opposition to the space shuttle, the antiballistic missile (ABM), the

supersonic transport (SST), and the loan to Lockheed. Since his debut in the Senate in 1963, McGovern has given many speeches about defense cuts and national conversion, although his principal committee work has been with programs in the Departments of Interior and Agriculture. Perhaps because his home state, South Dakota, ranks 51st among all states and territories in receipt of defense contracts, McGovern has been politically unencumbered in formulating freewheeling notions about technological and defense issues.

The South Dakota liberal has also had as a long-time consultant the Columbia conversion specialist, Seymour Melman. According to current staffers, Melman was a principal architect of early McGovern conversion proposals, including his first conversion bill of 1963. They say that Melman is still in the picture; however, the most up-to-date defense-economic position papers are attributed largely to McGovern aide John Holum, a 31-year-old lawyer from South Dakota.

McGovern has talked about research and development in his speeches, and his basic campaign document, "Full Employment for an America At Peace," containing the 52-page alternate defense posture and various conversion proposals, makes references to the future of research and development.

The alternative defense budget, described in the book, would drastically cut the growth in the military budget by 1975. A tight-fisted, buy-only-what-you-need research policy is also outlined, one that follows the lines of the amendment introduced by Senator Mike Mansfield (D-Mont.) in 1969 which limited defense research to mission-related projects. The McGovern proposed defense budget states

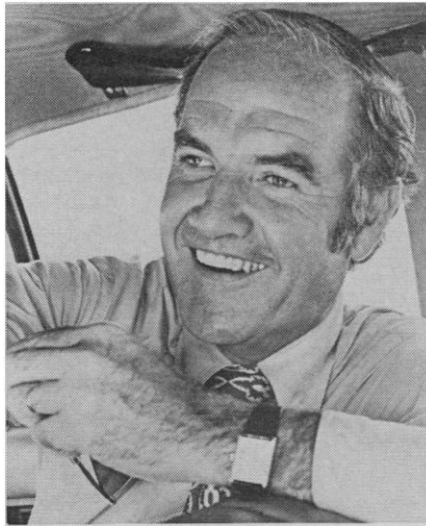
First, more careful scrutiny of military research and development programs is an absolute necessity to assure that research which cannot be expected to lead to viable military systems is stopped or held at low levels before it has used up funds far in excess of any potential worth.

Later, McGovern proposes that

Unnecessary sophistication of weapons systems and the incorporation of doubtful technology must be avoided. . . .

And, still later

. . . Military procurement agencies must understand that cost is an object. . . . A large share of total military procurement involves goods and services which have only indirect relevance, or no relevance at all, to battlefield conditions.



George S. McGovern

Asked about these passages, staffers agree that the result would probably be the opposite of the research policy now followed by DOD in funding all sorts of basic research and exploratory development for the general purpose of maintaining a secure technological base. The McGovern alternative defense budget implies that all this would change.

In the civilian sector, McGovern has a widely publicized plan for injecting into the economy a \$10 billion fiscal stimulus, which he would spend right away, to get domestic programs off and running. In subsequent years, he has said, military savings would be applied to civilian needs.

Despite the fact that his proposed defense budget would eliminate many, many technical jobs, McGovern nonetheless has been trying to paint himself as a friend to the research community. In an April speech to the Association of Technical Professionals of Lexington, Massachusetts, a self-help group for the scientists and engineers in the Boston area, McGovern urged greatly expanded funding for research "across the entire range of public concerns." He has also advocated income support to workers who lose their jobs, "a more sensitive program for the scientific and technical unemployed, and even federal funds to Detroit, for example, to aid the auto manufacturers in the development of a nonpolluting engine.

But McGovern's mechanisms for carrying out the changeover to civilian-oriented technology have shifted a lot in the course of the years. In his 1963, Melman-inspired proposal, a national conversion commission would make

recommendations on this problem. A later version, worked out with the United Auto Workers, is said to have expanded the duties of the conversion commission to oversee the change. Earlier this year, instead of a commission, McGovern was urging a pet notion which many other politicians have had, that of establishing a Cabinet-level Department of Science and Technology. When he spoke to the technical professionals in Massachusetts in April, McGovern was still urging creation of such a department. However, in the latest pronouncements, the department idea has been dropped, and somewhat more vaguely, McGovern advocates "new institutional arrangements."

In recent weeks, staffers say, McGovern has been relying more on S 32, the conversion-research bill identified mainly with Senator Edward M. Kennedy (D-Mass.) which has recently been gaining ground in the Senate (see *Science*, 7 July 1972), and which would greatly expand the role and budget of the National Science Foundation.

If there is a really weak spot in McGovern's proposals as they now happen to affect the scientific and technical community, it is how the country should get from here to there. While intellectuals and liberals have tended to favor some of his conversion notions, the actual technical workers, to whom such changes spell economic suicide, and who have seen enough economic flux during the Nixon Administration, remain less impressed. A chief test for McGovern so far was the California primary, where his vote against the Lockheed loan, for example, is said not to have helped his standing with aerospace workers. Significantly, Humphrey is said to have carried the key aerospace vote. McGovern, naturally, maintains that he will set up programs to help affected industries and employees convert.

McGovern's platform, as it has been outlined to date, has succeeded in winning support among some scientists. There is a thriving Scientists for George McGovern group, with no less than six Nobel prizewinners on its board. These Nobelists, then, have added their number to the actors and actresses, Chicanos, black militants, feminists, and everyone else who has helped the Democratic nominee along so far. Whether, however, in coming weeks, a broader segment of the technical and scientific work-force will also decide to buy McGovern's program remains to be seen.—DEBORAH SHAPELY