would have replaced an older fungicide which has an estimated risk of one in 10,000.

EPA is now reviewing many of the older pesticides, and it will soon be faced with applying the Delaney amendment to many commercially important compounds that have been in use for a long time.

The Academy committee is recommending that it use a uniform "negligible risk" standard for suspected carcinogens that would apply to all pesticides and all forms of food. In essence, it suggests that EPA should cancel uses of a pesticide on a particular crop when the combined estimated cancer risk from the residues on both raw and processed foods exceeds 1 in 1 million. The committee points out that the overall lifetime cancer risk in the United States is now about 1 in 4, or 0.25. Adoption of the negligible risk standard for pesticides would raise the risk to 0.250001. Hence its use of the term negligible.

Such a strategy applied to 28 pesticides that the committee regards as potentially the most troublesome would reduce the total estimated cancer risk by 98%, but it would result in cancellation of only 32% of the uses. In contrast, adoption of a consistent "zero-risk" strategy would remove the remaining 2% of the estimated cancer risk but require cancellation of all uses of the pesticides that leave any residues on raw or processed foods, while continued application of Delaney just to processed foods would reduce the total risk by only 55%.

Whether EPA could legally adopt such a strategy is unclear. Moore says EPA will respond to the report with a policy paper, outlining its proposed strategy, within 90 days. The agency will, however, soon have to take action on several old pesticides that are in apparent conflict with the Delaney amendment. Whatever EPA does is likely to be challenged in the courts, which means that it would be years before the legality is finally determined.

A suit filed last year against the Food and Drug Administration (FDA) could, however, pave some legal ground. The suit, filed by Ralph Nader's Public Citizen, challenges FDA's approval of two food dyes that are believed to be weak carcinogens and therefore potentially fall foul of the Delaney amendment. FDA approved the dyes on the grounds that their use poses negligible cancer risk (*Science*, 23 August 1985, p. 739). The case is expected to go all the way to the Supreme Court, and is unlikely to be decided before the summer of 1988.

Congress could always amend the Delaney amendment, but in the past it has been extremely reluctant to tamper with it. ■

COLIN NORMAN

PHS Revitalization Plan Stirs Up NIH

The Surgeon General would like Public Health Service officers to wear uniforms and be reassigned every few years; NIH officials say the service works fine as it is

SURGEON General C. Everett Koop wants to "revitalize" the commissioned corps of the Public Health Service—a project that, he says, will help the PHS respond more effectively to national emergencies as well as day-to-day health problems. But many of the 700 Public Health Service officers at the National Institutes of Health, including the director of NIH, are upset by Koop's plans.

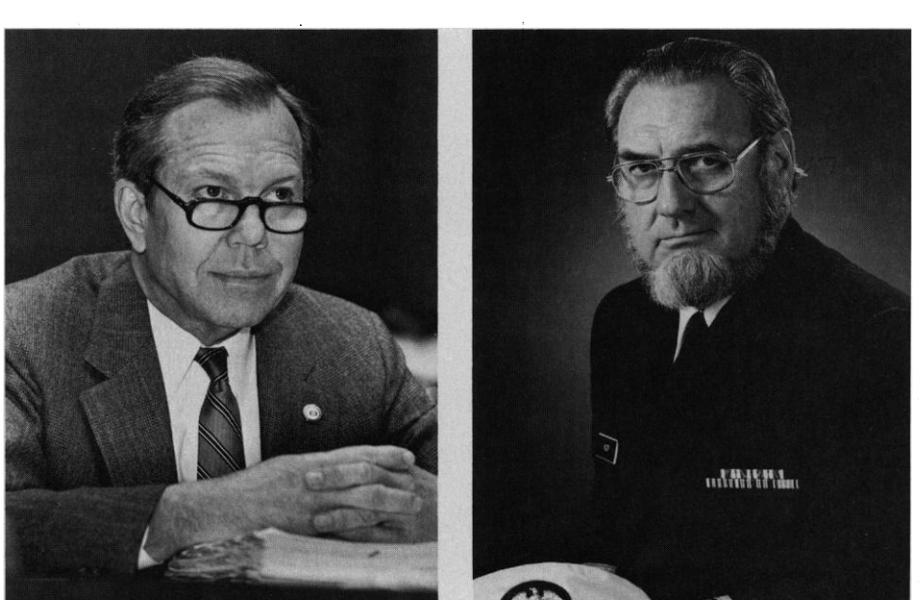
At issue is the question of what the commissioned corps of the Public Health Service should be. Koop argues that it should be more of a military organization that responds efficiently to the country's health problems, especially in an emergency such as the AIDS epidemic. A number of the Public Health Service officers at NIH reply that the corps is functioning fine at NIH just as it is and that the revitalization plans are not just unnecessary, they are detrimental.

The NIH critics say that if Koop's revitalization project goes through, it will seriously disrupt research and the collegial atmosphere of the NIH. In particular, many excellent senior scientists would be forced to retire, other key researchers would be relocated, and NIH scientists and clinicians would have to wear uniforms—a requirement that, the commissioned officers argue, would seriously disrupt professional relationships at NIH.

Koop, who declined through a spokesman to be interviewed for this article, has reportedly told NIH director James Wyngaarden that his plans are not set in stone—the rules may be bent a bit, he said. So far, however, all the NIH officers have to go on is Koop's written proposal, which does not include any specific plans for flexibility.

Public Health Service officers at NIH have been feeling uneasy ever since Koop announced his revitalization project this spring, but matters came to a head on the afternoon of 18 May when commissioned officers jammed the NIH's 500-seat Masur auditorium for a meeting with Koop. Many left the meeting feeling hostile and demoralized. "Koop could have reassured us, but he didn't," says one scientist who asked that his name not be used.

The Public Health Service was established



The uniform question. *NIH director James Wyngaarden (left) does not own one, but Surgeon General C. Everett Koop (right) says Wyngaarden and all other Public Health Service commissioned officers should own and wear them.*

nearly 200 years ago and was purposely designed along military lines. The commissioned corps was to be a mobile force, and its members were to be subject to duty anywhere they were assigned. Today, about half of the 5000 commissioned officers of the Public Health Service work for the Indian Service, but as many as 700 have what seemed to be permanent positions at NIH.

There are between 2500 and 3000 researchers with M.D. or Ph.D. degrees at NIH, and those in the PHS usually came to NIH first as research associates—an untenured position. After 7 years, they were offered positions in the civil service or the PHS, and so those in the PHS usually never worked anywhere else as commissioned officers. The advantages of the PHS are the retirement benefits after 20 years and the military health plan. The PHS officers earn about $10,000 a year more than their civil service counterparts, but this wage disparity has varied over the years and there have been times when civil servants made more.

Earlier in this century, the Public Health Service corps helped eradicate malaria and other diseases in this country, and its doctors treated wounded servicemen in military camps during World War I. But as years went by, the corps has gradually changed. A number of physicians joined the corps during the Vietnam War as an alternative to military service and ended up doing research at NIH. Some have not practiced medicine since they joined the corps, although others do see patients as part of clinical research projects. Commissioned officers working in the Indian Service or the Bureau of Prisons have very different experiences from those of officers doing research at NIH and it is virtually unheard of for an NIH officer to be routinely reassigned to working in a prison, for example.

In a prepared speech at NIH on 31 March, Koop said, "The day after I was sworn in as Surgeon General I told then Assistant Secretary for Health Edward Brandt that the corps was not as it was advertised—expert, flexible, and mobile—our only defense against nonmilitary disaster. And if it was evident to me on the inside, think how it appeared to those who were outside at the time."

Among Koop's proposals to revitalize the the officers corps are a requirement that commissioned officers be reassigned every 4 to 5 years, that there be mandatory retirement after 20 years, and that officers own and wear uniforms. Each of these items is a bone of contention at NIH.

The rotation of duties, says Wyngaarden, may be acceptable elsewhere, such as in the Indian Health Service, because it creates upward mobility. But at NIH, "we have a stable group of creative scientists. Enforced changes of station would be disruptive to research teams." A lab chief, who asked not to be named—and who said "the fact that I have to ask you not to use my name says something important about this issue"—adds that assignments of scientists among research groups at NIH "have been determined by scientific excellence and contributions to the research program." The problem with mandatory rotations of duty is that it means that "somehow the corps takes precedence" over these scientific considerations.

Mandatory retirement is also rejected at NIH. It is, says Wyngaarden, "very disturbing." The NIH could lose excellent scientists if they had to retire after 20 years with the Public Health Service.

Then comes the uniforms—a real sticking point for many at NIH. They view the uniform, says Wyngaarden, as "a routinized expression of loyalty. It seems to us that it's not needed." In addition, he says, it gives a distasteful message of conformity. "Creativity and conformity just don't go together," Wyngaarden says. Wyngaarden owned a uniform during the Korean War, but does not have one now. The anonymous NIH lab chief goes still further. "I regard this as an academic institution," he says. "Uniforms create a distinction that is detrimental and divisive."

Michael Zasloff, who is chief of the human genetics branch at the National Institute of Child Health and Human Development, says "a uniform signals a discipline and a rigidity that many scientists don't feel comfortable with in the atmosphere of the NIH."

Of course, there is always the argument that if the commissioned officers do not like the revitalization plan, they can simply get out and join the civil service or find employment outside the government. But the officers say that is not so easy. In particular, they are reluctant to leave because they would lose all retirement benefits if they resign before they have served for 20 years. But there is a deeper issue. The critics at NIH say it is important to realize that the commissioned officers corps actually has served NIH very well the way it is. If officers were to give up and resign from the corps they would be, in a sense, turning their backs on an institution that holds their first loyalty.

"Look at the reality of what's being done," says Samuel Broder, who is associate director of the clinical oncology branch of the National Cancer Institute. "The corps is serving the needs of the research community very successfully now." The commissioned officers, including Broder, quickly geared up to meet the AIDS challenge, for example. And because most of the senior doctors and residents who are doing AIDS research at NIH are commissioned officers, they can immediately be reassigned to work wherever the need is greatest. "The corps makes it possible to transfer people from one assignment to another with essentially no red tape," Broder says.

Zasloff agrees. "Although Koop argues we are not mobile anymore, it's not true. We are not mobile in a physical sense but we have the capacity to deal with problems with great fluidity. Any major scientific problem can be immediately studied at NIH. We are a mobile force, but we don't physically move anywhere."

Wyngaarden says he and Koop are preparing to discuss the revitalization plan further and that there is still room for compromises. But as matters stand now, says Wyngaarden, the outlook for NIH is not good. "I don't know that any of Koop's proposals benefit NIH," he says. It is hard enough to retain good scientists now, he explains, "we are slowly losing the battle with academia and industry is competing very heavily. This will not help." ■ GINA KOLATA

Ariane, Shuttle Delayed Again

The next launch of the European rocket Ariane is provisionally scheduled to take place in August, it was announced in Paris last week. This will be 15 months after the previous flight in May 1986, which ended when the third stage of the rocket failed to ignite. It is also 2 months later than expected. The accidental "mishandling" of a test motor at the end of March and the discovery of two minor technical problems unrelated to last year's failure caused the additional delay.

[The U.S. space shuttle will also be late getting back into service. Last week, the National Aeronautics and Space Administration announced that the next shuttle flight will be delayed until June 1988, 4 months later than planned. The delay will permit additional testing of modifications made after the Challenger disaster. Moreover, only three shuttle flights are now planned in 1988 and seven in 1989. Last October, NASA announced that it planned to launch five in 1988 and ten in 1989.]

The delay in launching Ariane has been costly for Arianespace, the company responsible for the commercial operation of the rocket; the bill for modifications to the launch vehicle, and for meeting ongoing