allow the marketing of additives posing a "negligible risk." Scarlett also cautioned the department that revisionism by the agency "would provoke a public reaction, quite possibly a strong one."

Peter Barton Hutt, former general counsel at FDA and outside counsel to the Cosmetics, Toiletry, and Fragrance Association, said in an interview that the crux of the matter is, "What is the public health difference [from exposure to the dyes]? This a level of risk that is insignificant." It is "inexplicable" that FDA officials insist that Delaney requires them to ban the dyes, he says.

William Schultz, a Public Citizen attorney, counters that Congress knew what it was doing when it passed Delaney. "No one is saying that we can eliminate all carcinogenic risks. Congress is saying, 'Let's eliminate as many as we can.' There are some carcinogens that are unavoidable, but we can keep out the color additives [which cause cancer] because they're intentionally added."

It's unclear how the debate about Delaney will be resolved. Hatch may reintroduce his bill this fall, but key House Democrats probably will not touch the issue of reform. Passage of the Proxmire bill or the lawsuit brought by Public Citizen may ultimately force the issue. For several months, rumors have been circulating that Young will become the next assistant secretary of health and is expected to be named to the post shortly. If appointed, Young would have even more of a power base to keep deliberating Delaney and the dyes.

So, after 25 years, the fate of the six cancer-causing dyes still hangs in limbo. Gary Flamm, FDA bureau director of toxicology, testified before Weiss, "We are very concerned that there be a consistency and an orderliness in the scientific judgments and decisions that are made." Now, Flamm said in an interview, "no one knows what the guides are. It's not easy to work in this kind of uncertainty."—**MARJORIE SUN**

The Neglected Disease in Medical Education

Medical schools are finally teaching about alcoholism; Johns Hopkins will require basic training for all students and clinicians

It is an old canard in the medical profession that an alcoholic is a fellow who drinks more than his doctor. Physicians have been notoriously deficient when it comes to early diagnosis and intervention with alcoholic patients. And no wonder: they never learned much about the disease in medical school.

Alcoholism afflicts about 10 percent of the drinking population, and alcohol abuse is implicated in at least 20 percent of general hospital admissions. It is said to be the third leading cause of death—although statistics can't tell the story since about 90 percent of alcoholics never see treatment. The early signs of alcoholism are behavioral; yet as recently as a decade ago, instruction in medical schools was confined to organ pathology, and the only alcoholics students knew about were emergency room derelicts. As a result, a 1982 poll by the American Medical Association indicated that only 27 percent of physicians felt competent to deal with an alcoholic patient.

Alcoholism—and addiction in general—is a field fraught with ideological conflict. But more people are now coming to recognize the complexity of the disorder, in which the physical and psychological aspects are absolutely inextricable. Whether or not alcoholism is a "disease" continues to be debated, but the designation (adopted by the AMA in 1956) is almost universally accepted if only to counteract the social stigma and establish the fact that it is treatable and arrestable.

Medical schools are finally coming to reflect the dramatic shift in public attitudes toward alcoholism. The latest development is at the Johns Hopkins Hospital and its School of Medicine, where perhaps the most comprehensive alcoholism initiative in the country is now taking shape. Launched by medical school dean Richard S. Ross and hospital president Robert M. Heyssel, the purpose of the program is to get every medical student and every clinician at the institution acquainted with the early signs of alcoholism and competent to detect and recommend appropriate treatment for the disorder. Emma Stokes, a policy analyst from the Massachusetts Department of Public Health who was hired by Ross and Heyssel to implement the plan, says that at Hopkins as well as other hospitals around the country, alcohol is implicated in 20 to 50 percent of the hospital admissions, but a diagnosis of alcoholism is made in fewer than 5 percent of cases. When she surveyed the medical curriculum on her arrival, she found two elective courses in the psychiatry department and no one had taken either of them for 3 years.

The Hopkins program is unusual in that it has been initiated from top administrative levels. But throughout the country medical schools are developing various strategies that acknowledge the pervasiveness of alcohol as a medical problem. These include the development of new courses, the integration of alcohol information into old ones, seminars, workshops, the establishment of new treatment facilities, and programs for employees, students, and faculty who themselves are addicted to alcohol or drugs.

A vital spur for this activity came from the federally funded Career Teacher Program in the Addictions, which ran from 1971 to 1982. Jointly sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse, this program offered training to a faculty member in each of about 60 institutions. These individuals, most of whom are still in medical education, set about either developing new courses in their own departments, or attempting to broaden the coverage of alcohol and drug-related topics throughout their schools. The career teachers program also led to the establishment of a new Association of Medical Education and Research in Substance Abuse. AMERSA president David Lewis of Brown University's Department of Community Medicine says that membership has been expanding rapidly, with increasing numbers of deans and others concerned with general medical education.

But alcoholism education, coming from almost nowhere, has a long way to go. NIAAA director Robert Niven, a former career teacher, points out that "competition for medical school curriculum is horrendous." Says he, "I would bet the average amount of time devoted to teaching doctors about alcohol and drug issues probably averages 1 percent." Yet, according to a 1983 report

from the Office of Technology Assessment, alcoholism treatment alone consumes 15 percent of the health care dollar.

About half the nation's medical schools have made changes in various aspects of their undergraduate and residency programs, but only a handful, in Lewis's estimation, have brought the topic into the mainstream of medical education. A survey on the subject was conducted by psychiatrist Alex Pokorny of Baylor College of Medicine who did a two-phase investigation in 1976 and 1981. Pokorny looked at three indicators: the proportion of total required hours devoted to alcoholism and drug abuse; the number of electives related to the subject; and the number of affiliated clinical programs containing a drug and alcoholism component. The schools with the career teachers had made the most progress, but by 1981 the proportion of curriculum time was still below 1 percent, and 23 percent of the schools surveyed offered no electives on substance abuse.

Schools are experimenting with various ways of introducing addictive disorders to the curriculum. Some combine alcoholism and drug addiction, some offer separate courses, and at least one—Johns Hopkins—has decided to focus almost exclusively on alcoholism. Schools take either the "segregated" or the "integrated" approach, according to Jean Trumble of NIAAA. The former usually means the development of special elective courses within the career teacher's department; the latter involves the incorporation of material on alcoholism throughout the curriculum. One of the hazards of the former approach has been the failure to gain institutional acceptance, and courses sometimes fade out when the teacher does. Although most efforts have been initiated at the grassroots level, there is general agreement that for lasting results, support from the top is vital.

Dartmouth is the only school other than Johns Hopkins where the administration has taken the lead in restructuring its approach to alcoholism. It received a large grant in 1977 from the Kroc Foundation as part of Operation Cork (Kroc spelled backward). Through its Project Cork, Dartmouth has developed a model curriculum, and serves as a resource to schools around the country. Significant additions have been made in most of the preclinical courses (the first two years of medical school). For example, in the cardiology course, the only reference to alcoholism was in the discussion of cardiomyopathy. The revised course includes discussion of the relationship of alcohol to hypertension and hyperlipidemia, and the appropriate use of alcohol by heart patients. The psychiatry course, in which the alcohol-related aspects focused mainly on interactions with psychotropic drugs, now contains instruction on the emergency management of the alcoholic, the role of the psychiatrist in treating alcoholism, and the pathology and treatment of the alcoholic family. In the second 2 years, most of the clinical clerkships include segments related to the behavioral as well as medical management of alcoholism.

Alcoholism, as a chronic disease, offers "a fantastic vehicle to teach other concepts," says Kinney.

Medical students have by and large been responding enthusiastically to the new course offerings. The image of the alcoholic as repulsive and intractable is still held by many medical professionals. Students learn fast, however, when exposed to panels of physicians who are also recovering alcoholics, as they are at Georgetown University Medical School, where freshman medical students are also required to attend meetings of Alcoholics Anonymous. At some schools, the alcoholism instruction is closely tied in with programs for impaired physicians and medical students. Max Schneider, a gastroenterologist at the University of California at Irvine, has designed a psychiatry elective that is taken by almost half the class. This involves spending a month in a chemical dependency unit in which entering students pair up with entering patients. The experience often opens students' eyes to addiction problems in themselves or their families for which they then seek help. Adds Schneider: "It's the only time in medical school where they get something for their own emotional stability."

Change has come remarkably fast and virtually all of it has been in the past decade. Schneider recalls that in the late 1960's a hospital liver specialist was only delivering a routine reaction when he told Schneider he didn't want to "waste time with a bunch of drunks." Georgetown psychiatrist William Flynn sees the new openness about alcoholism as the latest in a series of taboo-topplings. In the 1960's, medical schools started to come to grips with death and dying; in the 1970's, sexuality came out of the closet. Drinking habits, like sexuality, are an uncomfortable subject for many doctors, and sheer embarrassment is probably as strong a factor as ignorance in their failure to explore it with patients.

Although social forces and the growing concern with healthy behavior are primarily responsible for the developments, recent advances in research have added considerably to the scientific basis for instruction. Fetal Alcohol Syndrome was identified in the early 1970's. In the mid 1970's came scientific confirmation, from adoption studies in Scandinavia, that there is a hereditary factor in alcoholism. It was not until the 1970's that researchers demonstrated that many of the signs of physical deterioration seen in alcoholics was due to alcohol, not malnutrition. The mechanisms by which alcoholism causes liver cirrhosis were not elucidated until 1976. One of the latest developments is the finding that some alcoholics may have a genetic vulnerability, in the form of a deficiency in thiamine metabolism, for Wernicke-Korsakoff's syndrome ("wet brain").

Treatment programs have spread rapidly in the past few years, and recovery rates are improving. The overall rate is over 60 percent, and goes as high as 95 percent for impaired physicians and other professionals.

In contrast to a generation ago, there is now plenty to teach about alcoholism. Furthermore, as Jean Kinney of Dartmouth's Cork Institute observes, alcoholism offers "a fantastic vehicle to teach other concepts," and its successful integration into medical education is bound to have effects beyond the treatment of addictions. Alcoholism has inherited the title formerly held by both syphilis and tuberculosis of "the great masquerader." Alcohol abuse leads not only to cirrhosis and Korsakoff's syndrome, but to innumerable other complications including hypertension, sexual dysfunction, grand mal seizures and diabetes—not to mention a panoply of psychiatric symptoms. Doctors who are sensitive to the early behavioral signs of alcoholism are also likely to be more attuned to the behavioral causes and effects of disease in general. Alcoholism treatment also provides a model for management and rehabilitation in chronic illnesses, which have become the prevailing type of health problem.

William Osler, Kinney remarks, coined the aphorism that "to know syphilis is to know medicine," because of the many manifestations of that disease. Now, she says, the same can be said of alcoholism.—**CONSTANCE HOLDEN**