Report from NIOSH

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Those of you who have been following the Occupational Safety and Health Act should be familiar with the mounting criticism of certain aspects of the Act. My purpose today is to briefly comment on NIOSH's implementation of HEW's responsibilities and to use this as a springboard for discussing some of the principles of the Act which are being questioned.

As an administrator, I would like to point out that the National Institute for Occupational Safety and Health has made a modest beginning in carrying out our responsibilities under the Act. We have been meeting the demands for hazard evaluations. Some of these have taken longer than expected to reach a decision on toxicity, but many of the situations are complex and little toxicity data are available. We have been keeping up with requests from official agencies for technical services. We began with a basic surveillance and priorities system and have made substantial improvements on both. Our human factors research is well on its way, at least by the contract route if not in-house. Applied research has been programmed to support criteria development and hazard evaluations. Our list of toxic substances is growing and many improvements were made in the 1972 edition. Five high priority criteria documents affecting several hundred thousand workers were produced in FY 72 and many more are in the mill for this year. A total of 21 training grants within 16 universities have been funded, involving approximately 780 students (150 with stipends and 630 without).

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There has been some concern expressed with the last two outputs as being on the low side, but I think we have been doing a reasonably good job in carrying out our responsibilities under the Act, based on the resources available. However, as a health professional, I am not satisfied that the expertise of occupational safety and health professionals is being used to the fullest extent. I hope my comments will not be misconstrued as criticism against the Act, which I think is a landmark piece of legislation, or as an attack on the administration of the Act, because I think both OSHA and NIOSH have done outstanding jobs in carrying out their responsibilities. My comments are offered in a constructive vein from a health professional who realizes that we cannot fully achieve the purposes of the Act as it is presently structured, especially the purpose "to assure so far as possible every working man and woman in the Nation safe and healthy working conditions..."

The way the Act is presently written, with emphasis on the development and enforcement of standards is time consuming and costly and requires astronomical sums to produce standards for the several hundred thousand chemical substances known or used in this country. Our approach to criteria development is what our Secretary might call a phony program in that this is only a token attack on the enormity of the problem. I am not saying that more dollars won't help. What I am saying is that the Act in its present form requires an enormous investment in developing separate standards for each hazard and that a professional approach to problems is not utilized.

The trap into which we have fallen should be obvious by now. The Act takes the simplistic approach that all of the occupational safety and health hazards can be

controlled by developing rigid standards which can be enforced through an inspection system.

I realize that some of you may have difficulty understanding what I mean, so perhaps I should make an analogy in more familiar terms. In the practice of medicine, nothing would be more ridiculous than to develop norms for each measurable body function, system, or secretion, for the purpose of treating each one of these separately to bring them within normal range. These values are to be used as guidelines, but no physician treats individual deviations as such. A physician worth his salt treats the whole man, using the range of normal values for blood, urine, pulmonary functions, etc. as guidelines.

By and large safety hazards are amenable to control by such a system, but health hazards are more difficult. Sure, we can and should have health standards for the more important health hazards such as asbestos, beryllium, carbon monoxide, benzene and carbon tetrachloride to name a few, but let us not delude ourselves — the standards are still essentially educated guesses and will remain so for many years to come. The evidence for arriving at educated guesses for the many thousands of chemicals and intermediates that do not presently have standards is poor to nonexistent and much research is needed. As we in NIOSH have attacked this problem of myriads of essentially unknown chemical substances, we have come to two important conclusions:

1. Development of comprehensive criteria documents is expensive and time consuming. The cost is approximately $200,000-300,000, even when the basic dose-effect relationship is known. The length of time is 12 to 18 months. Already the programming of applied research and the development of criteria documents consumes about two-thirds to three-quarters of our resources, and we estimate that to double our present output of 20 to 30 criteria documents per year would require 70 to 75 more staff and 10 to 11 million more dollars, exclusive of the research effort.

2. We cannot be so specific in the proposed standard as to include every eventuality and contingency. For example, we can write an ultraviolet standard to protect the eyes and skin of those working with artificial ultraviolet sources, but it would be ridiculous to try to use the same standard to protect fully outdoor laborers or those indoor workers who recreate out of doors. Our work practice type criteria document for hot environments will probably be criticized at the DOL public hearings for similar reasons. Continuing with examples of legalistic difficulties, consider the monitoring requirements required by Sec. 8(c)(3) of the Act. In the criteria document for lead, which is soon to be unveiled, we have been struggling with little success to develop tight language to put responsibility on the employer to provide both environmental and biologic monitoring.

Professional judgment is essential in deciding the circumstances of monitoring and the frequency, and details are difficult if not impossible to specify in compliance terms. It is the ingredient of *professional judgment* which is missing from the Occupational Safety and Health Act of 1970. This is understandable. The drafters of the legislation were lawyers who wanted the standards to be as specific as possible, and the management interests, the U.S. Chamber of Commerce and the National Association of Manufacturers, did not want employers to be cited for something that could not be spelled out, defined, weighed or measured. In other words, management did not want to be cited for a violation of a principle as interpreted by a professional. Management wanted to know exactly what it would be measured against. Yet, on the other hand, management is willing to accept the judgment of a U.S. Department of Agriculture meat inspector that a carcus appears to be diseased. It is not necessary for the meat inspector to prepare pathologic specimens and demonstrate disease under the microscope. Management in the State of Michigan has been accepting for several decades the professional judgment of the industrial hygienists in the Division of Occupational Health, and up until the Act was passed these industrial hygienists were using the TLV's as guidelines — not standards.

Going back to my analogy with the physician, under a medical Act resembling the Occupational Safety and Health Act, it would be impossible to treat signs or symptoms in a patient unless these were quantifiable and associated with a specific diagnosable disease. This would be ridiculous. Why then can we not treat the work environment as a sick patient and prescribe good work practices based on a combination of known standards and guidelines?

Rather than try to twist good industrial hygiene and occupational medical practices which should be tailor-made for each problem and exposure, NIOSH is considering the feasibility of presenting the good practices which are over and above compliance action in a general discussion section of the criteria document or even in a good practices manual. Up to now we have been using "shall" and "should" to distinguish between mandatory requirements and non-mandatory good practices. This will help to solve the problem for those substances scheduled soon for criteria document development, but what about the thousands of substances for which gaps in our knowledge will require postponement of criteria documents for many years. For these we can recommend good practices as a temporary measure. However, as soon as we do this we would be open to criticism from some quarters for not expending our full energy on criteria document production. If I were a worker, I would prefer protection based on good professional judgment and an in-depth survey of the workplace rather than compliance with minimum standards. Actually we need both.

We should be seeking ways to utilize fully the professional judgment that is presently available. We should be attempting to assure the quality of professional

services through certification and accreditation. We should be developing guidelines based on what we presently know to be good practice and not be overly concerned with putting everything in ironclad standards. We should be increasing technical assistance and consultation to the small employer. And lastly and perhaps most importantly, we should place an increased emphasis on developing the manpower to carry out the purposes of the Act.

I don't have all of the answers, but I can tell you that the United States is not the first country that has faced these problems. The French have steadfastly refused to use the TLV's as anything more than guidelines. Her Majesty's Factory Inspectorate also uses the TLV's as guidelines and relies on the professional inspector to interpret them. A high level committee in the United Kingdom has recently looked into their problem of achieving safe and healthy working conditions, and they also took our new Act into consideration. I think it appropriate that I summarize the findings of Lord Roben's Committee and present the principles set forth in their proposed plan for a major reorganization of industrial safety and health.[1]

> The committee makes a number of criticisms of the present statutory arrangements, and concludes that a more self-regulating system of provision for safety and health at work is needed. The traditional approach, based on ever-increasing detailed statutory regulations, is outdated, complex and inadequate. Reforms should be aimed at creating the conditions for more effective self-regulations by employers and employees jointly. Efforts by industry and commerce to tackle their own safety and health problems should be encouraged. Much greater use should be made of agreed voluntary standards and codes of practice to promote progressively better conditions. This broader and more flexible framework should enable the statutory inspection services to be used more constructively in advising and assisting employers and workpeople. At the same time it would enable them to be concentrated more effectively on serious problems where tighter monitoring and control might be needed.
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> There is a lack of balance between the regulatory and voluntary elements of the overall "system" of provision for safety and health at work. The primary responsibility for doing something about present levels of occupational accidents and diseases lie with those who create the risks and those who work with them. This point was crucial. The statutory arrangements should be reformed with this in mind. The present approach tends to encourage people to think and behave as if safety and health at work were primarily a matter of detailed regulations by external agencies.
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> Present regulatory provisions follow a style and pattern developed in an earlier and different social and technological context. The first and perhaps most fundamental defect of the statutory system is that there is too much law. The committee shares the view that the sheer mass of this law far from advancing the cause of safety and health at work had reached the point where it became counter-productive.
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> Workpeople must be encouraged to take part fully in the making and monitoring of safety and health arrangements. There should be a general statutory obligation on employers to consult with their workpeople about such arrangements, and guidance on methods of consultation and participation should be provided in a code of practice.

In closing, I would like to re-emphasize that somehow we have to bring professional judgment back into the practice of occupational safety and health. We can't do everything by the strict language of a standard.

Reference

1. "Major reorganization plan for industrial safety" *Department of Employment Gazette*, July 1972, pp. 611-14.