

HEALTH RELATED EFFECTS OF HERBICIDES

June 19, 1978

1. The meeting was called to order at 1:00 P.M.
2. A statement as to the reasons for the Committee's initiation was presented. The following issues were raised:
  - a. It was pointed out that the VA is being required to define a position regarding the human toxicity of herbicides such as Agent Orange and the potential role of these substances in producing disease in Vietnam veterans. The Steering Committee has been given the responsibility of developing this position and suggesting an approach for detecting veterans who may be experiencing unfavorable health effects of these herbicides.
  - b. The Committee will have two major sources of assistance in its work. These are the "Ad Hoc Advisory Committee on Herbicides" and Dr. Abraham Dury. The Advisory Committee will provide the Steering Committee with expert opinions on the scientific and technical aspects related to herbicide exposure. Dr. Dury will provide the Committee with a review of the recent literature on the health effects of herbicides.
  - c. Although no precise time table for completion of the Committee's initial assignment is yet imposed, it is highly desirable that its progress towards that goal be expedited.
3. The Membership Composition and the Initial Effects of the Ad Hoc Advisory Committee Were Described:
  - a. Its membership will contain representatives of the Federal agencies concerned with herbicides; the major

manufacturers of these herbicides and the academic disciplines of environmental toxicology.

b. The Ad Hoc Committee will be requested to provide answers to a series of questions, provided primarily by the Steering Committee, concerning such issues as the following: (1) the results of relevant animal studies on herbicides; (2) data on the clinical studies of humans exposed to herbicides; (3) approaches to the detection of herbicide-related disease among humans; and (4) the need for additional research into herbicide toxicity which might be required to settle major health-related issues.

c. A Summary of Some of the Current Research on the Toxic Effects of Herbicides was Presented:

Dioxin, a by-product of herbicide manufacture, is the major potential toxin in those herbicides utilized in Vietnam. This agent has produced hepatic and pancreatic cancers and teratogenic effects in experimental animals; however, the only definitive "disease" related to dioxin in man is chloracne.

4. The draft of a Circular providing the VAHCFS with an approach for identifying Vietnam veterans who have developed toxic effects of herbicides <sup>was reviewed.</sup> The following issues were raised in regard to this draft:

a. It is not explicit enough regarding the population at risk and the aggressiveness with which their identification should be pursued;

b. Information concerning other toxic substances which could be confused in their effects with dioxin is not provided.

c. a system for retaining information on individuals at risk of toxicity identified by a VAHCF is not provided.

5. The Results of a Search for a Laboratory which can Measure the Level of Dioxin in Body Fat was Reported as Follows:

a. Two laboratories were identified as being technically capable of such measurements, i.e., that of Dr. Michael Gross at the University of Nebraska (Lincoln, Nebraska) and Dr. Tiernam at Wright State University (Dayton, Ohio). The cost per analysis would range between \$400-800 in these laboratories. It is uncertain whether either laboratory would be willing to perform dioxin measurements for the VA on a "service" basis.

b. VAH San Diego already possesses a mass spectrometer which could measure body fat dioxin levels. However, before the VAH would be able to perform these tests it would have to be provided with additional laboratory staff and with supplies at a start-up cost of \$80,000 per year.

c. The recommendation was made that the VA attempt purchase of the necessary digoxin analyses on a fee basis from Dr. Gross or Dr. Tiernam for a period of at least one year. After that, if there is continuing demand for this test, VAH San Diego should be enabled to perform it by provision of the necessary resources.

d. Because of the expense and complexity of this test, it was agreed that its performance must be closely controlled by VACO, with use of explicit criteria.

6. The question of the precise identification of veterans who had potential exposure to herbicides was discussed. It was suggested that the Department of Defense could be of material assistance to the VA in this process and that it should be formally requested to provide such assistance. In addition, the consensus of the Committee was that a VA Register for patients exposed to Environmental Toxins should be set up and given the mandate to function like a tumor registry in regard to purpose and methodology.

7. The following questions were raised by the Committee as constituting areas to which the Ad Hoc Advisory Committee might address its attention:

a. What are the demonstrated relationships in man between dioxin exposure and the subsequent development of carcinomas (i.e. of liver and pancreas), infertility, teratogenesis, skin disease and other diseases?

b. How long does dioxin persist in human tissue? How can it be identified there?

c. What is the experience regarding the domestic use of herbicides and the subsequent development of disease in humans exposed to them?

d. What level of chemical constitutes a potentially harmful exposure of a human to dioxin?

e. How should potential victims of herbicide toxicity be studied in order to detect evidences of disease? How long should they be followed?

8. The following tasks were assigned to the Committee members:

| <u>Task</u>                                                                                      | <u>Assigned Responsibility</u> |
|--------------------------------------------------------------------------------------------------|--------------------------------|
| a. Review the Proposed Circular on Dioxin.                                                       | Entire Committee Membership    |
| b. Develop plan for Herbicide Registry.                                                          | Medical Administration Service |
| c. Develop a plan for demonstration of body fat dioxin levels.                                   | Pathology Service              |
| d. Provide a list of study areas for the Ad Hoc Advisory Committee.                              | Entire Committee Membership    |
| e. Develop a plan for obtaining a list of potential victims victims of dioxin toxicity from DOD. | Medical Service                |
| f. Review and critique research papers relative to human herbicide toxicity.                     | Dr. Abraham Dury               |

9. Meeting was adjourned at 3:00 P.M.

Respectfully submitted,

*Richard A. Levinson, M.D.*

RICHARD A. LEVINSON, M.D.

Membership Health-Related Effects of Herbicides of the VACO  
Ad Hoc Steering Committee on the Health-Related Effects of  
Herbicides

June 19, 1978, 1:00 - 3:00 PM

Room 955

VACO

1. Mr. John Bradley  
Medical Administration Service
2. Dr. Lawrence Hobson, Deputy ACMD  
for Research and Development
3. Ms. Margaret Kilduff, Chief, Medical  
Records Program Staff
4. Dr. Paul LeGolvan, Deputy Director  
Pathology Service
5. Dr. Richard A. Levinson, Deputy ACMD  
for Professional Services  
(Committee Chairman)
6. Dr. Robert Love, Director, Operation  
Review and Analysis Staff
7. Mr. J.C. Peckarsky, Director,  
Compensation and Pension Service
8. Dr. Gerrit Schepers, Program Chief  
for Cardiopulmonary Diseases
9. Dr. John Walsh  
Special Assistant, Operations Review  
and Analysis
10. Dr. Marjorie Williams  
Director, Pathology Service