The VA is looking for a better way to determine veterans' exposure to Agent Orange and other major herbicides used in Vietnam.

At the VA's request, the National Academy of Science's Institute of Medicine (IOM) is searching for companies or individuals with ideas on how to reconstruct veterans' exposure to defoliants used by the military during the war. The goal is to further study the health effects of the substances.

The VA embarked on the current effort after the IOM's Committee to Review the Health Effects in Vietnam Veterans of Exposure to Herbicides, in a 1994 report, found a "severe lack of information" about the exposure of individual veterans to herbicides. While most veterans probably experienced lower levels of exposure than those who worked with the chemicals over long periods, it is difficult to determine precisely which veterans may have encountered higher levels, the report said.

The committee said many previously developed methods of determining herbicide exposure were useful but insufficient. For example, some studies have looked at the blood levels of one type of dioxin known as TCDD, a highly toxic contaminant in some of the herbicides used in Vietnam.

Dioxins are absorbed into body fat and stored throughout the body. Although a veteran's current TCDD blood level is useful information, by itself it does not provide a full picture of herbicide exposure. The rate at which TCDD is flushed from the body depends upon such factors as age, diet and percentage of body fat.

Also, TCDD was present only in some herbicides used in Vietnam -- and in those, to make matters worse, the concentration of TCDD varied from batch to batch.

Other studies have looked at the spraying patterns of herbicides by the service branches, but military records alone aren't enough. Although the Air Force kept complete records of its Operation Ranch Hand -- the spraying of herbicides from fixed-wing aircraft -- the Defense Department says documentation of smaller-scale ground spraying was much less systematic.

Ground spraying was done at the unit level, and was included in such activities as Navy patrols clearing inland waterways, engineering personnel removing underbrush for fire
support bases and soldiers clearing 100-meter wide areas immediately surrounding base camps.

Finally, although only a relatively small portion of herbicides were ground-sprayed, the practice could have resulted in higher exposures because it was done in closer proximity to ground troops and at higher concentrations per acre by personnel with possibly less chemical training than those involved in aerial spraying.

About 20 million gallons of herbicides were used in Vietnam from 1962 to 1971, according to the Pentagon. It is estimated that 10 to 12 percent of the total was sprayed by ground personnel using everything from three-gallon backpacks to boats, trucks and trailer-mounted spray systems.

The VA currently is developing a comprehensive roster that includes a veteran's branch of service, rank, occupational codes and dates of Vietnam service.

To date, more than 2.7 million Vietnam veterans have been identified, said VA spokesman Ken McKinnon. "Right now, we're at 2.7 million (veterans) and counting," he said. "It's an ongoing process for us."

Because the VA presumes that all military personnel who served in Vietnam were exposed to Agent Orange -- an acknowledgement of its widespread and persistent use there -- veterans are not required to prove they were exposed.

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