

MD:agw

MEDDH-SP

27 March 1953

Mr. Tuckerman Day
68 Francis Avenue
Cambridge 38, Massachusetts

Dear Mr. Day:

Enclosed herewith is your manuscript copy of Chapter I on the "Orientation on Atomic Warfare" of the manuscript of the Medical Effects Book.

In addition, I have enclosed some comments relative to Chapter I. You will note that there are a number of items here which are suggested for change or correction. It seems to me that the most helpful comment that I could make would be to recommend that the entire first chapter be rewritten with an entirely different approach.

In the introductory chapter, it would be more appropriate to emphasize some of the fundamental characteristics of the atomic bomb, pointing out that these factors would be unchanged irregardless of the design of the weapon. It should be stressed that the basic medical observations made by the Joint Commission at Hiroshima and Nagasaki are unique and are applicable to future situations.

A restatement of opinions which were fashionable two or three years ago should be avoided. Otherwise, I feel that instead of this book being a factual presentation, it would become obsolete very quickly if it contains too many unsupported facts or controversial subjects.

Sincerely yours,

MAXWELL DAUER
Lt. Col., MSC
Medical Research and
Development Board

Encl
a/s

cc: Dr. Dunham
Dr. Shields Warren
Dr. A. N. Coughterson
Chron File
Read File
Record Room

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Comments on Chapter I. Orientation on Atomic Warfare

1.4 Change this paragraph to read as follows:

The experimental explosions in this country and the Pacific Ocean have yielded invaluable data. Regardless of the design and type of nuclear weapon used, from the medical standpoint, there will always be present hazards of varying degrees and magnitude from blast, heat, and ionizing radiation (alpha particles, beta particles, neutrons and gamma rays).

1.5 Change this paragraph to read as follows:

Although the atomic bomb possesses vast destructive power, it is possible to provide protection under certain conditions and within reasonable limits for exposed personnel provided adequate precautions are followed and provision is made for shielding and cover. It has been demonstrated that shelters can be constructed, if necessary, which will give protection within a few hundred yards from the hypocenter*.

1.6 Omit the following clause:

"and it has enormously increased man's ability to destroy the structures that he has erected".

1.7 This paragraph should not be included in an official government publication of this type. It is believed that it would be inappropriate to make a statement of a policy character implying that all civilian activities as well as military will be a target in order to achieve a victory. There is nothing in the manuscript to support the contention that it is our plan to use the atomic bomb for indiscriminate destruction of large areas. It is believed the comments of this paragraph are best left for the discussions of the military strategists.

1.16 The statement is made that the chief variables in estimating the casualty-producing equivalent of an atomic bomb are population density and the degree of exposure. The problem obviously is not as simple as this statement would lead us to believe. Certainly it should be mentioned that the nature and type of the structures and buildings in the area are important factors, together with providing for adequate fire-fighting or rescue services which, for example, would assist in saving lives which would be lost because first aid or surgical services were not available. Without excellent coordination between the health services and the transportation services, sufficient transport would not be available to handle the volume of personnel, casualties and required supplies. Without emergency water and electricity, engineering services and hospitals would be crippled. All of these factors fundamentally affect the medical care problem.

* This term designates the point on the ground directly beneath the air burst.

Comments on Chapter I
Orientation on Atomic Warfare

- 1.17 It is stated that the number of casualties might have been reduced in Hiroshima and Nagasaki by as much as "50 per cent, or even more". This figure, of course, is conjecture and would be subject to considerable discussion pro and con as to its validity. This comment also applies to the "50 per cent reduction" mentioned in the last sentence of paragraph 1.19.
- 1.21 The idea is conveyed here that the carrying capacity of attacking planes is 10 tons each and that a single plane carrying an atomic bomb will do the work of 300 planes with ordinary bombs. It is suggested that this concept be modified to convey the idea that a single plane (with a 20 kt bomb) without reference to its carrying capacity could deliver the equivalent of 3,000 tons of high-explosive and incendiary bombs.
- 1.22 The statement is misleading and should be corrected:
- "....For these reasons, failure to hit the target is much less important with the atomic bomb than with high-explosive bombs. This was amply demonstrated in the explosion over the Bikini lagoon, in which ships within half a mile of the explosion point were put out of action or sunk."
- This statement gives the unfortunate impression that just because the bomb failed to hit the center of the target that ships within one-half mile from the explosion point were put out of action or sunk. This should be corrected to state that the range of graded damage due to the overpressures from the detonation are over such an extensive area that pin-point accuracy is not required.
- 1.26 Delete the statement in this paragraph regarding decentralization of industries and underground placement. I know of no government statement which has established this as a matter of policy. It should be avoided.
- 1.28 Delete the last sentence and include the statement that there is every indication that medical science can rise to meet the challenge posed by the use of the atom bomb.

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Development Board