Cost of Non-Battle Injuries and Diseases as Compared to Battle Casualties*

By

COLONEL B. DIXON HOLLAND, MC, *U. S. Army* AND
COLONEL ARTHUR P. LONG, MC, *U. S. Army*†

(With three charts)

WE SHALL deal in this presentation with the cost of non-battle injuries and disease, more particularly the former, in terms of manpower losses rather than in terms of dollars and cents.

In the Army in wartime non-battle conditions—injuries as well as disease—account for the greater proportion of days lost. Table I shows that during World War II there were, from all causes, approximately 4/10

TABLE I

PRINCIPAL CAUSES FOR TIME LOST WW II

	Days Lost WW II Estimated Total
I. Battle Injuries and wounds	72,000,000
II. All Nonbattle Conditions	345,781,000
A. Nonbattle Inj.	59,863,000
B. Disease	285,918,000

of a billion days lost, of which battle injuries and wounds accounted for only 1/6, non-battle conditions accounting for the remaining 5/6. Injuries accounted for roughly 1/6 of the approximately 1/3 of a billion days lost because of non-battle conditions.

Table II shows that during World War II there were nearly four times as many deaths from non-battle injury as from disease. Together these two non-battle causes accounted for some 75,000 deaths, compared with the

TABLE II

PRINCIPAL CAUSES OF DEATH WW II

Battle causes		225,165*
Died of wounds	26,309	
Killed in action	192,798	
Declared dead	6,058	
Nonbattle causes		75,280
Nonbattle injury	60,054	
Disease	15,226	

* Excludes 9,256 deaths, for which see explanation in text.

approximately 225,000 deaths due to all battle causes. This last figure does not include 9,256 deaths among battle casualties where the death was due to non-battle causes (deaths from non-battle causes while in prisoner or missing in action status).

Table III deals with the admissions of soldiers to medical treatment facilities for battle and non-battle causes during the periods of the most marked conflict in the European Theater in World War II and in Korea during the Korean conflict. You will note that non-battle injuries alone accounted in the European Theater for 14% and in Korea for 17% of the total admissions. You will note further that non-battle injuries occasioned a rate of 111 admissions in the European Theater and 217 admissions in Korea per thousand men per year. The diagrams in Figures 1 and 2 show that non-battle injuries have continued, during the years 1952 and 1953, to account for roughly as 1/5 of all man-days lost from non-battle causes, roughly 1/5 of the composite figure "deaths plus disability separations" from non-battle causes, and 2/3 of the figure "deaths alone" from non-battle causes. A rough idea of the total cost to the Nation of these injuries in terms of dollars and

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† Preventive Medicine Divsion, Office of The Surgeon General, Department of the Army. Statistics furnished by Medical Statistics Division, office of Surgeon General, Department of the Army.

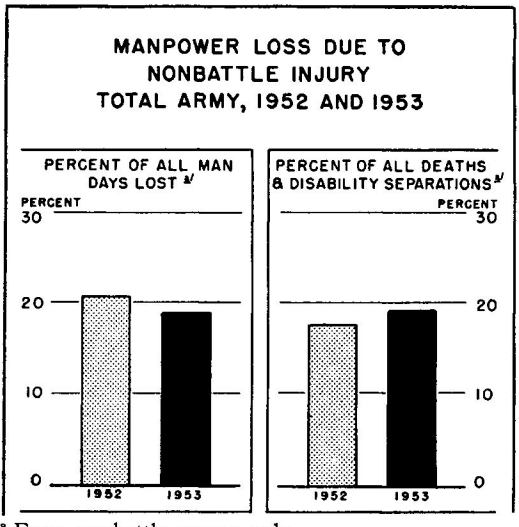
TABLE III

ADMISSIONS FOR BATTLE AND NONBATTLE CAUSES
UNITED STATES ARMY
EUROPEAN THEATER IN WORLD WAR II AND KOREA

Command	Percentage of Admissions		
	Disease	Non-battle Injury	Battle Injury and Wound
European Theater (June 1944 through May 1945)	63	14	23
Korea (July 1950 through June 1951)	60	17	23
	Admissions per 1,000 Men per Year		
European Theater (June 1944 through May 1945)	484	111	176
Korea (July 1950 through June 1951)	749	217	293

cents could be gained by computing the number of fatal injury cases and multiplying it by $21,300 and computing the number of non-fatal injury cases and multiplying it by $1,050.

Admissions for non-battle injuries due to all causative agents during 1953 were at a rate of 50 per thousand average strength, one of the lowest rates ever reported. Motor vehicle accidents were responsible for 6.8 admissions per thousand average strength. The largest proportion of accidental deaths in 1953 was due to motor vehicle accidents, which accounted for 691 deaths, or nearly ⅓ of the 2,246 non-battle deaths. Table IV shows for 1952 that while the army had a substantially lower death rate from all non-battle causes than did the general population (adjustment being made for the age composition of the general population compared to that of the Army), yet the Army had a substantially higher death rate than did the general population for accidents of all kinds. In that year there were in the Army 1,180



[a] From nonbattle causes only.

Fig. 1.

deaths due to motor vehicle accidents, accounting for 38% of all non-battle deaths. There were in the Army that year 10 times as many deaths from motor vehicle accidents as from infective and parasitic diseases.

Figure 3 shows that in 1952 passenger motor vehicle accidents led all other types of motor vehicle accidents combined as a cause of injuries among Army military personnel requiring admission to medical treatment facilities. Particularly is this true of passenger motor vehicle accidents occurring to military personnel in an off-duty status, i.e., on leave or absent without leave. The reasons for this state of affairs have been

TABLE IV

DEATH DUE TO INJURIES

	Deaths per 100,000 Population	
	Total Army 1952	Total Male Pop. US 1950 (Adjusted)
Oper. of War	173.9	[a]
Accidents	129.3	88.2
Motor-vehicle	72.3	51.6
All Other	57.0	36.6
All Causes	188.8[b]	208.1

[a] Not comparable.
[b] Nonbattle causes only.

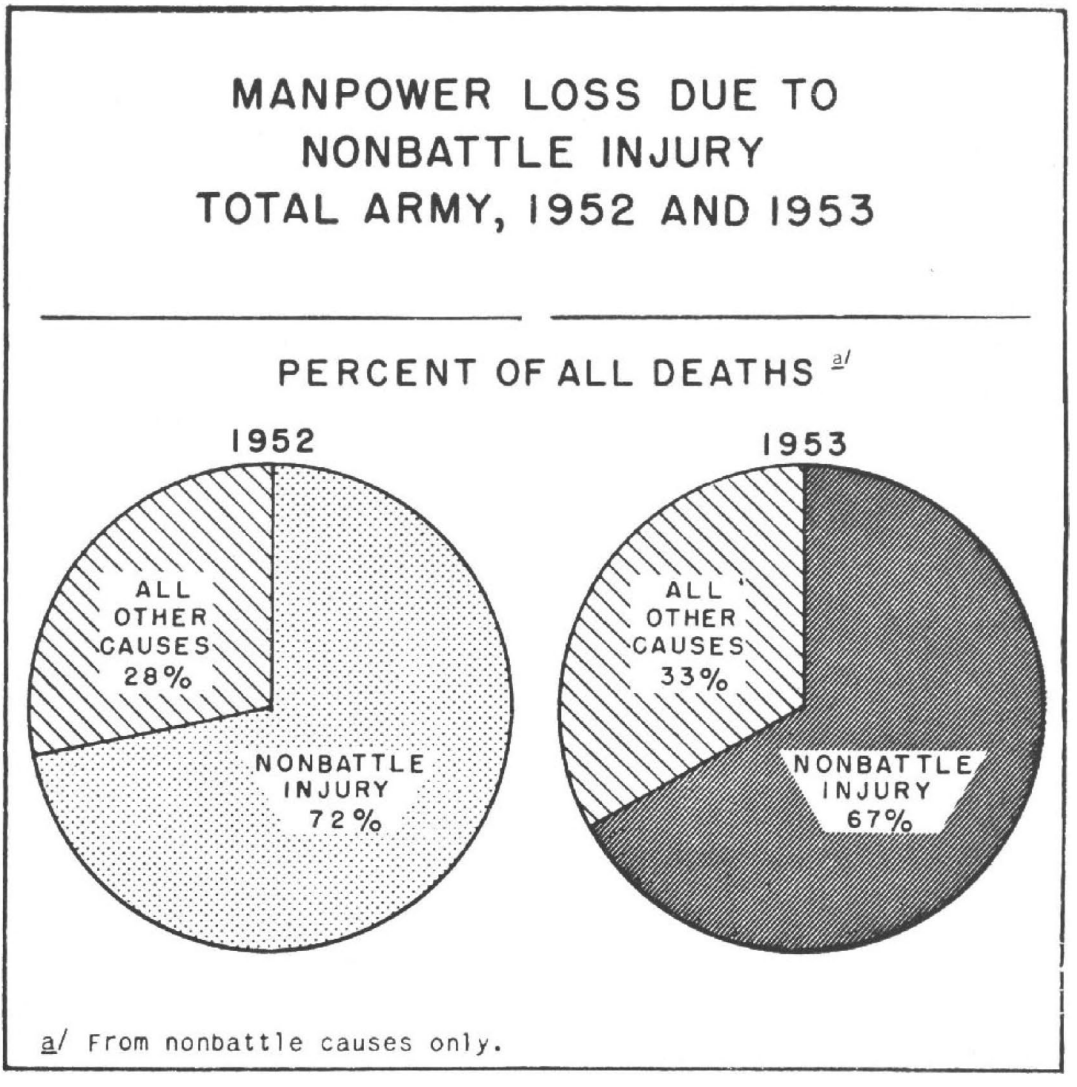


Fig. 2.

demonstrated, such as driving when fatigued or under the influence of alcohol; or driving too fast, and otherwise taking chances in order to complete as long a trip as possible in the period of leave granted. However, correction of this situation has largely defied the best efforts of commanders and others concerned, even when these efforts have been guided by experts in the various scientific disciplines underlying sound accident prevention practices. Largely to blame are the glorification, on the part of the American public, of speed, pickup and horsepower in automobiles, and the reckless competition among automobile manufacturers to capitalize on this popular state of mind.

The fact seems to have been lost from sight, or disregarded, that, by his very nature and in spite of what science has been able to do for him, man, like other animals, has a limit to the speed of his reactions. This fact will inevitably lead to accidents under certain circumstances, regardless of the speed with which the automobile is capable either of accelerating in an attempt to escape a tight spot, or of stopping, in an attempt to avoid a collision. That very capacity of the automobile for rapid acceleration, claimed to be

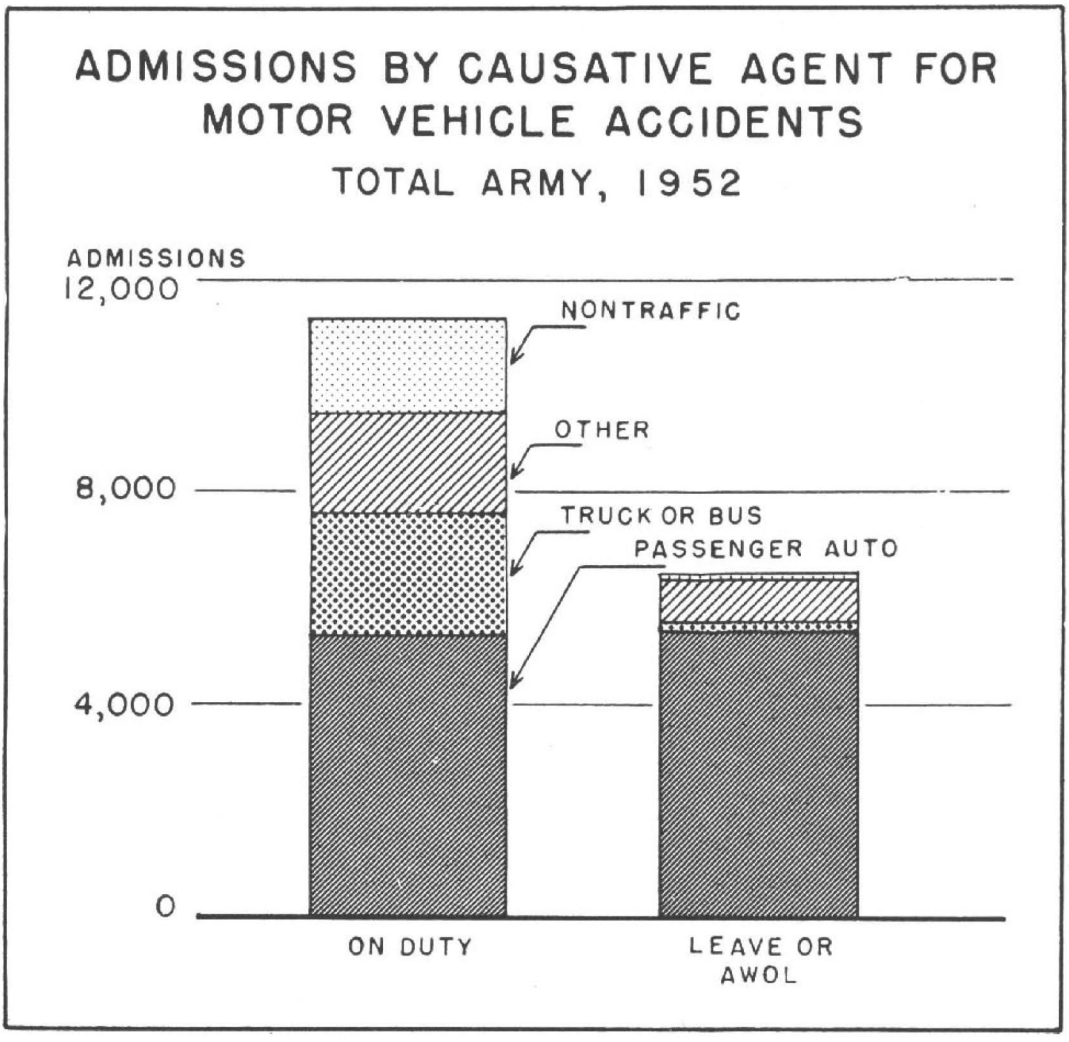


Fig. 3.

valuable for getting out of tight places, is bad in that it tempts the driver to take greater chances than he otherwise would take and thus get into tight places unnecessarily.

The laudable improvements in motor vehicle design, including the placing of controls and instruments within easier reach, as shown to be required by the results of anthropological and other studies, can help—but only to a limited extent—to make up for the deficiency in the speed of man's reactions. To help minimize the seriousness of injuries to persons in case of accident, manufacturers of automobiles, availing themselves of the results of research in crash injuries, anthropology, etc., are making automobiles more rugged and are so constructing and locating the instruments, controls, gadgets and other projections in the cab of the vehicle as to minimize the damage which human bodies would sustain if thrown against these projections in an accident.

It can be seen, from what we have said, that accidents in the Army—preventable accidents for the most part—impose upon the Nation an incalculable cost in terms of manpower losses as well as dollars and cents. Even more staggering than the figures we have cited are the figures computed by the Army Safety Director which we shall not

cite—representing the cost in dollars and cents of injuries to persons and damages to materiel resulting from preventable accidents. Figures were cited above to convey a rough idea of the cost of injuries to persons. Considerations of national defense and economy, as well as considerations of humanity, demand that all of us interested in military medicine concern ourselves with accident prevention and continually strive and cooperate aggressively in worthwhile, sound endeavors to reduce the toll which accidents are taking of the manpower and other resources of the Nation.