

Red Cross Organizes Medical Preparedness

Colonel Jefferson R. Kean Tells Why It Is Necessary to Train Physicians for Complicated Duty of Caring for the Wounded

Colonel Jefferson R. Kean, U. S. A., who has been designated to co-operate with the American Red Cross in organizing medical preparedness work, shows in the following article, written before the Army bill passed Congress, how necessary it is to train physicians and surgeons for duty in time of war and to create efficient machinery for the care of the wounded.

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WITH all the talk about preparedness there has been very little attention paid to one form that is of vital importance. It is the care of the sick and wounded in time of war. Bullets, shells, mines, epidemics, are no respecters of persons. Our soldiers should be returned to civil life fit to cope with their environment so far as possible. Nor can the cost of warfare in the form of pensions be forgotten when we are following the example of the wise king of old, who demonstrated his wisdom by sitting down to count the cost before going to war.

The medical corps of the regular army consists of 444 officers, or 4.6 to the thousand men. The ideal proposition is ten to the thousand. The maximum provided for by the House preparedness bill was seven to the thousand. The Senate bill makes provision for a proportion of 5.3. It is therefore certain that there will be less than seven to the thousand. The Government, in adopting this proportion, is expecting civilians to furnish the remainder if war breaks out. As a matter of fact, there is no prospect that we ever will see a time when it will not be necessary to rely upon civilians. Preparedness is needed here.

Preparedness cannot stop with the provision of a supply of physicians, surgeons, and nurses. They must be trained in advance if they are to perform efficient service. In the Spanish-American war the number of deaths from disease was 3,691, or one death from battle to twelve and one-half from disease. This awful record was due to the fact that there had been practically no preparation for meeting the needs of the army. Physicians and surgeons from civil life were available, but they had had no experience in the executive details of army medical work and no opportunities for studying the problems involved.

It is not enough to have a knowledge of medicine or surgical technique. The medical officer must know something about military and sanitary tactics. The gathering of the wounded, their transportation to the rear, and the sanitation of camps are duties of the medical officer. Every one who knows anything of the history of the Spanish-American war is aware of the lack of knowledge of sanitation displayed in the camps and the frightful cost of that ignorance. It is

stated that nearly half of the 225,000 volunteers enlisted in that war have already applied for pensions, and that the cost to date in pensions paid to veterans is approximately \$50,000,000. That is a high price for ignorance and lack of preparedness.

The conditions revealed in that war were so shocking that the Dodge commission was appointed to investigate them. Its recommendations were emphatic. An effort has been made to follow them, but meagre appropriations by Congress have made it difficult. Moreover, while the line has been augmented, no authorization has been made since that time for an increase of the medical corps beyond the enrollment of surgeons who were willing to give their services if they conveniently could when the call came. The result is that where there were seven to the thousand soldiers when legislation along the lines of recommendations of the Dodge commission was enacted, the proportion is now 4.6.

On paper, each regiment in time of war will have four medical officers and a hospital corps detachment of twenty-four enlisted men. They are to all intents and purposes part of the regiment. They stay with it at all times, advancing or retreating as the case may be, according to the fortunes of war. If the regiment intrenches, into the trenches go the sanitary soldiers. Their first duty is to give first-aid treatment to the wounded at the earliest possible moment and then to collect the wounded at the regimental aid station. This station must of necessity be close to the firing line. It may even be in the trenches. It should be protected from the fire of the enemy. The equipment of the regimental aid station can only be limited. It consists of first-aid dressings, a few simple instruments, a tent fly, and some blankets and basins. The entire outfit is carried on one pack mule.

One of the many duties of the medical department is the transportation of the wounded to the rear. Because of this duty the proportion of medical officers to men must be higher than in civil life, and preliminary training is necessary in order to perform efficient work in time of war. To provide for this each division has four ambulance companies of twelve ambulances each. To each of these companies is attached a pack mule section of four mules for the transportation of equipment of a dressing station. At such a station more thorough work can be done than at the regimental aid station.

Attached to each division also are four field hospitals, each of which requires seven army wagons for its transportation. The equipment of these hospitals also is limited. There are tents for the shelter of about 216 men. Hay or straw is spread on the ground. This is covered with rubber blankets. One woolen blanket is furnished to each man. A part of the equipment is a fairly complete operating outfit for doing emergency work that cannot be postponed until the patient is sent further to the rear. After he leaves this hospital he is in the hands of civilians, for the army, if Congress adopts the largest number of medical officers provided for in any bill, will have only enough to man the mobile relief service. Civilians must be relied upon for all work back of this point and in connection with any volunteer forces which may be enlisted.

The Government expects that the American Red Cross will do the greater part of this work. Indeed, steps have been taken toward the organization of units for service at base hospitals. In three New York hospitals units are being formed and these will be ready to go to any point to which they may be called in case of war. They are to receive training in the administrative duties which will devolve upon them in caring for the sick and wounded. This is the form in which the Government is putting preparedness up to the Red Cross. This organization is the only one which will be permitted to assist the medical corps of the army. It is obligated to perform this service.

Under the law passed in 1908 provision was made for a volunteer corps of medical officers. Nearly 2,000 physicians and surgeons of high reputation have enrolled. Yet, with the exception of about 150 who paid their own expenses last year in order that they might attend a training camp at Tobyhanna, Penn., none of them is prepared to take up his duties. They have had no opportunity to fit themselves for service. One of the reasons why the American Red Cross needs additional members and is conducting a campaign to obtain them is that it may fulfill its obligations to the Government and to humanity in time of war, by preparing in time of peace.

Let us follow a soldier who is wounded in action while his regiment advances. The regimental sanitary soldiers at the earliest opportunity pick him up and carry him off on a litter to the regimental aid station established behind a hill. A medical officer looks him over and finds that with the application of a bandage he can safely be transported to the field hospital. The enemy's fire is so spiteful, however, that it is not safe to attempt the journey until nightfall. So he is left at the station, shaded from the hot sun by a tent fly.

After dark, the fire having subsided, all the wounded are collected and the ambulance begins its duties. Its station is a mile and a half in the rear. The litter bearers come forward and pick up the wounded man at the regimental aid station. He is carried back to the dressing station established by the ambulance company. With renewal of dressings he will be in a condition for removal in an ambulance to the field hospital. Lying on his back, he can see the stars as he looks out of the rear of the ambulance, now rolling roughly over the plowed surface of the road.

It is a ride that seems interminable. It is actually four or five miles. It is a relief to be laid on a blanket on the soft grass at the field hospital, even if the stars are now shut out by the roof of the tent. For the time being he can rest. There are others nearby, some of them not yet recovered from the anaesthetics applied in the neighboring operating tent while a leg or an arm was amputated.

The rest is not a long one, however, for the division has been ordered to another part of the line. The field hospital, being a part of the mobile field force, must go with it. As rapidly as possible, the more seriously wounded are started toward the fixed base hospital by rail, for the field

hospital had been established at the railroad. This is a long and tedious journey. The base hospital is a hundred miles in the rear. There are stations where the soldier is taken from the car for food and rest. At these stations he sees the Red Cross nurses. A woman's hand and sympathy is a joy to a wounded soldier.

At last the train, after several days' journey, deposits him and his fellows in a village perhaps 100 miles from the firing line. Here the Red Cross has fitted up a hospital in a large schoolhouse, from whose classrooms the children's seats have been removed. Neighboring houses have been occupied by the Red Cross physicians and nurses. An unoccupied warehouse has been taken for the storage of supplies, the rolling of bandages, and the preparation of dressings. In the hospital the soldier stays until he is so far on the road to recovery that he can safely be discharged.

All this seems very simple. It is a more complex problem than appears on the surface. In the early days of the European war, a nation so well organized as France required from seven to ten days to get its wounded back to a well-equipped hospital, usually not more than 100 miles in the rear. The care and evacuation of wounded from the battlefield is a task of considerable magnitude, and one which requires a high degree of preparation both in material and personnel.

The chief surgeon of a division has under his immediate control nearly 100 medical officers, nearly a thousand sanitary soldiers, forty-eight ambulances, more than 500 animals and numerous wagons. Distances are very great. A division in column from head to rear on a single road will measure upward of twenty miles. Deployed for battle, the front of a division, depending upon the nature of the ground, will be from three to six miles. Unless each unit is in its proper place at the right time, the whole mechanism will be disarranged. The chief surgeon must keep in touch with all his units and dispose them in the manner best suited to meet conditions as they arise. He must make his decisions from the map of the country and be able to tell from a military map where shelter for his ambulance companies and field hospitals can be found. He must have a sufficient knowledge of tactics to form a good idea of the nature of the action from the lay of the land, and he must dispose his sanitary troops accordingly.

In a moderately severe engagement 10 per cent of casualties can be expected, while in a severe engagement this figure will rise to 20 or even 30. At the lesser figure there would be 2,200 wounded to care for, and at the higher 6,600. When the question of transportation over bad roads and uncertain distances for such numbers is considered the problem is a most serious one. It can be accomplished only by a perfectly trained machine.

This is the reason why there should be preparatory training of the civilians who are to aid in caring for the wounded. That is the job of the American Red Cross, for which it must make preparation.