

The Red Cross Contribution to the Development of Medical Equipment

By A. Musy

Right from the very beginning, the founders of the Red Cross were interested in improving military medical equipment; this remained a concern of the movement for many years (1863-1925). Later, attention was devoted to standardizing this equipment (1925-1934). Then, at a third stage, the Red Cross concentrated on studying and developing military medical equipment (1934-1938).

Afterwards, mainly as a result of World War II, this study was interrupted and a few years later, in 1957, the ICRC ceased to be concerned with such questions because many national and international bodies had been specifically set up to deal with them.

Nevertheless, "the preparation and development of medical personnel and medical equipment" are mentioned in the ICRC Statutes as one of the important tasks of the International Committee (Article 4, paragraph f).

*

One of the bloodiest battles of the Nineteenth Century, the battle of Solferino, took place in June 1859. The wounded who could be moved were taken to Castiglione. Henry Dunant, who happened to be in the area on private business, was so moved by the pitiful condition of these people that he forgot the original reason he was there and set about relieving the suffering of the French and Austrian wounded.

Helped by the village children and a few women, he applied dressings, bought food, shirts, bandages and tobacco, and tried to bring comfort to a few of the huge number of injured men.

The rest is history. Obsessed by what he had witnessed, Dunant wrote his book "*A Memory of Solferino*", published in 1862, not only describing what he had seen and done, but proposing "the formation of relief societies for the purpose of having the wounded cared for in time of war by zealous, devoted and properly trained volunteers".

In his book, Dunant included suggestions for technical improvements to relieve the casualties: "If there had been available for the wounded improved means of transportation better than those now existing, there would have been no need for the painful amputation which one light infantryman of the Guard had to undergo at Brescia. The need for that operation arose from deplorable lack of attention when he was being carried from the regimental flying ambulance to Castiglione."

In a commentary, he pointed out that a number of surgeons had recently made special studies relating to the transport of casualties: "Dr. Appia has designed a versatile, light and simple apparatus which reduces jolting for fracture cases. Since the war in Italy, Dr. Joubert has invented a stretcher bag as simple as it is ingenious, the advantages of which are remarkable enough for a number of them to have been taken along by the French expeditionary troops in Mexico and Cochin China. Various governments have realized the usefulness of the stretcher bag and have adopted it. And it is even beginning to be used widely in France in civil administration bodies, large industrial units such as factories, construction sites, mining companies, etc..."¹

Prompted by Dunant's wish for relief societies to be created, the *Société genevoise d'utilité publique* (the Public Welfare Society of Geneva) organized an international conference in 1863 to study ways of reducing the inadequacy of the army medical services. In his opening address, Gustave Moynier outlined what such a relief society might do.

"I shall summarize briefly what the aim of this project is. A committee will be set up in each of the European capitals... In peacetime, it might well study the service to be provided in wartime and how best to use the resources to be made available to it, if necessary; it would prepare instructions for untrained volunteer nursing staff who would offer their help; it would encourage the invention of improvements for medical equipment or methods of transport, etc.

¹ H. Dunand: *A Memory of Solferino, passim*.

Once war had broken out, each committee would organize relief services for the army of its own country; it would appeal for gifts in cash or kind; it would collect such items as dressing, stretchers and all kinds of supplies..."²

In making these proposals, Gustave Moynier showed his insight, for during the subsequent seventy-five years the subject of stretchers and dressings recurred regularly in the agenda of International Red Cross Conferences.

While the draft agreement mentioned that the different committees and sections would concern themselves with improvements to be made in the fitting out of ambulances and hospitals and means of transport for casualties, Article 4 of the resolutions adopted by the Conference was less precise: "In peacetime, the Committees and Sections shall take steps to ensure their real usefulness in time of war, especially by preparing material relief of all sorts and by seeking to train and instruct voluntary medical personnel"³

In a Communication following the Proceedings of the 1863 Conference, the Committee stated: "... that, in the interest of making improvements in medical equipment, it would be advisable to have a depot somewhere for all models in use (ambulance wagons, transport, items and apparatus relating to dressings, hospital furniture, etc.), a kind of permanent exhibition or museum, where a comparative study could be made of the procedures used in the various armies."⁴

The Committee, a private body, proposed that governments should hold a diplomatic conference. This took place in 1864 and produced the Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field, signed on 22 August 1864 (120 years ago), by twelve governments.

During the First International Red Cross Conference in Paris, in 1867, attended by the National Societies already established, an exhibition of medical equipment was organized on the occasion of the Universal Exhibition. Visitors could see small-scale models of ambulance wagons and field hospitals, together with assorted instruments, stretchers, and portable medical kits. They were also shown the original packets of individual (field) dressings as carried by Austrian troops. Experts appointed by their National Societies

² *Proceedings of the 1863 International Red Cross Conference*, ICRC, Geneva, second edition, 1904, p. 13.

³ *Ibid.*, p. 116.

⁴ *Communication from the International Committee* Following the Proceedings of the 1863 International Conference. Geneva, 1864, p. 37.

met over a period of three months, in a total of thirty meetings, to carry out tests and comparative studies of the equipment exhibited. One of the subjects under discussion was the "model equipment" which the Conference recommended should preferably be adopted by the various relief societies.

Lectures and debates dealt with technical improvements made in bandages, surgical instruments and operating tables, and with forms of transport, ambulances, field kitchens and stretchers.

It was decided to hold a public competition for improved methods of transporting the wounded. Among other subjects of discussion were the best means of disinfecting battlefields, the composition of a standard list of medicines, the most satisfactory designs of artificial limbs, the preparation of a manual of instruction in the use of the equipment adjudged as generally most suitable, and the best way to build a field hospital.

Most of the subjects dealt with more than one hundred years ago are still relevant and provide food for thought in modern times.

At the Second International Red Cross Conference, in Berlin in 1869, there were no technical discussions on medical equipment, but three resolutions of interest in this connection were adopted by the Conference.

The first remains extremely topical to anyone who knows the difficulty, even today, of persuading donors to send only equipment which is useful: "Gifts of supplies, before being sent to a theatre of war, shall be subjected to careful examination."⁵

Another resolution dealt with standardization before the word existed: "Medical service equipment shall be acquired, so far as possible, following the models adopted by the State."⁶

A third mentioned the peacetime activities of the relief societies: "Relief committees must in peacetime inform themselves of all new inventions, experiments and proposals which concern military hygiene and sick care during war;"⁷

... should make the acquisition of easily transportable tents or huts and of stretchers for the use of the wounded and sick in war and peace:⁸

⁵ Second International Red Cross Conference, Berlin, 1869. Summary of the discussion, Chapter I, para. 5.

⁶ *Ibid.*, para. 6.

⁷ *Ibid.*, Chapter III, para. 19.

⁸ *Ibid.*, para. 17.

... should make preparations for setting up the military hospitals which they intend to establish or administer during wartime.”⁹

On 27 April 1869 the Berlin Conference also decided to have an *International Bulletin* issued. This later became the *International Review of the Red Cross*: “The Conference considers it indispensable to establish a periodical which will enable the Central Committees in the various countries to keep in touch with each other and which will inform them of events, official or otherwise, which they should know about.... Part of the publication could be devoted to advertisements, reviews of special articles or books, and the description of equipment or inventions dealing with aid for wounded and sick army personnel.”¹⁰

In October 1869 the first edition of the *International Bulletin* made its first appearance. From then on it never stopped to publish proceedings of conferences, descriptions and diagrams of equipment and inventions dealing with aid for the wounded. In this way it greatly assisted in the development of medical equipment.

Shortly after, during the Franco-Prussian War of 1870, Henry Dunant, in co-operation with Dr. Cheron of Paris, started to manufacture anti-haemorrhagic field-dressings. The fact is little known.^{10bis}

The third International Red Cross Conference was held in Geneva in 1884 and was no longer attended by “Societies or associations for the relief of military wounded or sick”, but by National Red Cross Societies. This Conference is of special interest, since it first put forward the concept of standardization. The idea seems to have come from the Comte de Beaufort, Secretary-General of the Council of the French Red Cross, who asked:

“Would it not be possible to set up an International Commission for model equipment, with an international store? The scientific authorities should be included. In the store as arranged by the Commission it would be possible to examine everything of approved design. Let me make clear that I am not trying to repeat the proposal for an international museum made at the Paris Conference in 1867. What I am hoping for is something much more modest—I would be quite happy with, say, a room full of models of practical and necessary equipment for present-day use. The scien-

⁹ Ibid., para. 25.

¹⁰ Ibid., Chapter IV, para. 2.

^{10bis}. See André Durand: «Le livre d’Henry Dunant écrit en collaboration avec le docteur Chéron», in *Bulletin de la Société Henry Dunant*, N° 6, 1981, p. 1-13.

tific authority of such a Commission would serve not only the Red Cross but also governments and armies. The great advantage would be that gradually the equipment adopted would be the same in every country, and this would indisputably represent a laudable step forward.

The Committees and societies should be able and authorized to borrow the models from the international store in order to copy them and thus acquire supplies in advance.

Perhaps the International Committee of Geneva, to which the Red Cross movement is already so greatly indebted, might consider the idea. I hope that it will add this further benefaction to so many others made to mankind in the past.

I am convinced that in this way, in spite of the genuine difficulties which exist, the Societies will be able to attain the desired objective and provide themselves, in time of peace, with the equipment they need, equipment that will always render the greatest service. Otherwise, in time of war, doctors and surgeons will find they have nothing. They will be like soldiers with no weapons; they will have only their goodwill to offer and will experience a great deal of disappointment..."¹¹

Another Frenchman, Albert Ellissen, was not exactly of the same opinion: "I think that an international commission for models could never succeed in getting all countries to adopt standard models. It is impossible to compel a nation to take one type of equipment or another. The essential is to adopt principles on the basis of which it will then be possible to make equipment capable of being used in wartime and of being gradually improved. Nothing would be done if we always awaited the latest news from science and industry..."¹²

Nevertheless, Albert Ellissen favoured uniformity of equipment at a national level and standardization of the dimensions of stretchers in all armies.

On the occasion of this Third Conference, the Swiss Army demonstrated its medical equipment. Experiments in lighting electrically—a new invention—the evacuation of wounded and the burial of the dead, on a battlefield at night, were made in Geneva. One resolution was the starting point for what later became the International Standardization Commission.

¹¹ Proceedings of the Third International Red Cross Conference, Geneva, 1884. ICRC, Geneva, 1885, p. 99.

¹² *Ibid.*, p. 105.

“The Third International Red Cross Conference, referring to previous resolutions adopted at Berlin (1869), recommends:

1. That each Central Committee form an album or collection, to show by sketch, print or photograph, the whole of its ambulance equipment, as well as the corresponding material of the military administration in its country, and that it send a copy to each of the other Central Committees, and to the Governments which have acceded to the Geneva Convention. The effect of such exchange would be to generalize what today can be no more than local and thus, as far as it is possible, standardize ambulance equipment.

2. That an international commission be set up to study standards for ambulance equipment.

3. That the dimensions of ambulance stretchers be made uniform in all armies.

4. The Conference postpones to the next Conference the question of organizing international museums for ambulance equipment.”¹³

Another resolution, dealing with hygiene, is worth noting: “The Third International Red Cross Conference recommends that antiseptic bandaging be made the rule in the Medical Services of all armies in the field and in those of all Red Cross Societies. It is desirable that in peacetime the medical personnel should be given the appropriate instruction.”¹⁴

Three years later, at Karlsruhe in 1887, at the Fourth International Red Cross Conference, there was discussion of the results of antiseptic dressings used in the Serbo-Bulgarian War. One of the resolutions asked the States which had signed the Geneva Convention, and private societies, to take the necessary measures for antiseptic and preservative surgery to be practised in the armies, even in the front line and the combat area.

During this Conference, a gold medal was awarded to Joseph Lister, creator of aseptic methods in the operating theatre.

The notion of a museum of medical equipment was revived. One of those promoting the idea said: “An international museum, or a number of international museums, is what we have to consider. I will begin by saying that in my opinion the need as felt repeatedly by the Red Cross is not so much to have a complete collection of medical equipment containing everything connected with our work, making it possible to study the full range of items, good and bad,

¹³ *Ibid.*, Resolution C, p. 430.

¹⁴ *Ibid.*, Resolution N, p. 433.

more or less practical, more or less worth copying, in other words a complete museum. No, what the Red Cross needs, gentlemen, is sound model designs for the equipment it wishes to have made in time of peace; but they should be designs acknowledged as being really and fundamentally superior, proved in practice and adopted by a committee composed of the most competent men available. Gentlemen, my wish is a modest one: to see a small international museum in which will be collected and kept, as standard models, outstanding items of equipment, extremely practical and of real use, a museum in which each object must, before it is admitted, have been approved by a committee after mature reflection and after being considered worthy of recommendation by the Committees in the various countries.”¹⁵

A. Ellissen, who as we saw, was not in favour of the formation of a Model Commission in 1884, made a proposal of his own, for “an album of equipment, to be constituted by each Committee and circulated, instead of a museum”.

Two competitions were proposed, one dealing with arrangements for transporting casualties, the other with “the internal arrangement of an improvised hospital, prepackaged, for fifty patients”.

The Fifth and Sixth International Red Cross Conferences, in Rome in 1892 and in Vienna in 1897, included debates on the question of materials for antiseptic dressings and on the novel concept of sterilization. In speaking of the steam autoclaves that should be installed everywhere, a far-sighted delegate at the 1892 Conference gave his view that “this microbe oven will be almost as useful as the bread oven accompanying the troops”.¹⁶ One of the resolutions expressed the wish for the system of sterilization by autoclaves to be adopted in parallel with antiseptic procedures.

In Vienna, in 1897, a more precise resolution was adopted and the following measures were recommended:

“1. The accumulation in military and Red Cross Society stores of light, absorbent, sterilized dressings; and of which at least a part should be antiseptic.

2. Periodical disinfection of accumulated material by fixed dry-heat cabinets in the warehouses of our Societies.

¹⁵ Proceedings of the Fourth International Red Cross Conference, Karlsruhe, 1887, p. 31.

¹⁶ Proceedings of the Fifth International Red Cross Conference, Rome, 1892, p. 378.

3. Periodical inspection to make sure that dressings continue to be aseptic and antiseptic.

4. Acquisition of sterilizing apparatus of different sizes in sufficient quantity to deal with all wartime needs; they should be of the following varieties:

(a) Very light, small apparatus for sterilization by boiling, which could be added to all the kits of instruments which they are to sterilize (for first-aid posts);

(b) Medium-size autoclaves (for the sterilization by steam under pressure of instruments and dressings) which could be carried by mulepack (for field ambulances);

(c) Larger and heavier autoclaves for field hospitals;

(d) Fixed autoclaves for evacuation hospitals.”¹⁷

At the Eighth International Red Cross Conference, held in 1907 in London, the delegates not only discussed the importance of sufficient supplies of medical equipment but also attended a demonstration of cases for individual dressings (field dressings) in their protective covers. One of the participants asked:

“Could not the Conference express the wish that, to ensure that antiseptic solutions would be easily recognizable from a distance, the colours should be the same in every country, to prevent mistakes and, sometimes, deaths?”¹⁸

This question does not appear to have been acted upon. A resolution was adopted, however, voicing the following request:

“The Eighth International Red Cross Conference recommends that Red Cross Societies be invited to send each other, in future, in the form of printed communications, the results of their experiences, as well as communications on military medicine which they may receive from their respective governments.”¹⁹

In the same year—1907—at the Congress on hygiene and demography, in Berlin, the Spanish army physician Colonel Van Baum-berghen again mentioned the idea of standardizing army medical equipment.

The Ninth International Red Cross Conference in Washington in 1912 considered it desirable “that the material necessary to each Red Cross Society in time of war should be as simple as possible; that it should be prepared and stored in such a way as to be easily

¹⁷ Proceedings of the Sixth International Red Cross Conference, Vienna, 1897. p. 248.

¹⁸ Proceedings of the Eighth International Red Cross Conference, London, 1907. p. 132.

¹⁹ *Ibid.*, Resolution XIII, p. 169.

available for use in time of war by the official Medical Services.”²⁰

The First World War (1914-1918) was, for many National Societies, the occasion for using the equipment collected. It was no longer a matter of testing a particular dressing package or stretcher attachment: the new equipment was to suffer and show its weaknesses. For want of being standardized, the French stretchers, for example, proved difficult to fix in American medical vehicles.

Some National Red Cross Societies grew considerably during this conflict. After the war they had very important resources. The American Red Cross proposed the creation of what became, in 1919, the League of Red Cross Societies. Experience and energies could be pooled in the sphere of public health and in disaster relief, thus enabling National Societies “to continue in time of peace the work undertaken with such success in time of war.”

The Tenth International Red Cross Conference was held in Geneva, in 1921, almost ten years after the Washington Conference. Acknowledging the experience gained during the First World War, “The Tenth International Red Cross Conference requests the International Committee of the Red Cross to ask the Red Cross of each country which has taken part in the Great War to be good enough to indicate the results of its experience of equipment used either in hospitals and for transport of wounded and sick, or in offering them medical assistance.

A committee of the International Committee of the Red Cross should collect the reports, inform each Red Cross Society and each government of particulars acknowledged to be useful, and consider the desirability of organizing an exhibition on the subject.”²¹

The idea of this committee was revived at the Twelfth International Red Cross Conference which met—again in Geneva—in 1925; the same year saw the establishment of the International Institute for the Study of Medical Equipment.

In correspondence preceding the Twelfth Conference, the ICRC mentioned for the first time the word standardization, in the following circular:

“The attention of the International Committee of the Red Cross has been drawn to the major drawback in the transport of the

²⁰ Proceedings of the Ninth International Red Cross Conference, Washington, 1912. Resolution I, p. 317.

²¹ Proceedings of the Tenth International Red Cross Conference, Geneva, 1921. Resolution XIII, para. 3, p. 216.

severely wounded as being the diversity of dimensions and methods of suspensions of the stretchers in use in the different armies and Red Cross Societies. In effect, whether in the case of international relief operations in aid of disaster victims or in time of war, when medical services of different nationalities are engaged together in collecting and evacuating a casualty, it may well happen that this person, being carried on one type of stretcher, has to be transferred to a different type in order to be placed inside an ambulance belonging to another medical service; it may then be necessary for the patient to be put into a hospital train, requiring him to be moved to yet another stretcher suitable for fixing within the train. The condition of some injured persons demands that they be moved as little as possible; yet because a particular stretcher cannot be used in a vehicle of another service, the patient has to be transferred, with consequent pain, even death. Moreover—and in some cases this is also important—such transfers give rise to much waste of time and effort and to serious complications in co-ordinating relief methods.

At a time when a large number of nations and Red Cross Societies are replenishing their stocks, and when the growth of medical aviation is bound to entail the creation of new equipment, when co-operation among relief services is spreading, both nationally and internationally, it seems appropriate to study the *standardization*, not of the various types of stretcher, but of some of their dimensions and of a suspension system capable of being used in any type of vehicle. International regulations might even, at a later date, define the conditions required for designing future stretchers, which should be interchangeable.

For the purpose of studying the possibility of universal adoption of standard size and launching an international competition for the invention of a universal system for attaching any kind of stretcher in any kind of vehicle, the International Committee of the Red Cross wishes to assemble equipment and documentation to enable the most exhaustive technical study to be made by a commission of experts nominated by the medical services and the Red Cross Societies. The ICRC will organize an exhibition of the items and documents that it receives.”²²

Before the Conference ended, the commission was already at work, defining the criteria to be met by field dressings and by

²² Proceedings of the Twelfth International Red Cross Conference, Geneva, 1925, pp. 3-4.

casualty cards, and noted the first subjects to be discussed in the future Institute for the Study of Medical Equipment.

The Twelfth International Red Cross Conference adopted the following resolutions: "The Conference considers that it would be useful to set up, in Geneva, an International Institute for the Study of Medical Equipment. The International Committee is instructed to study the programme for such establishment and its budget, and is requested to present a report and proposals to the National Societies at the earliest date possible."²³

It requested the International Committee: "To collect all information and documents relative to the standardization of medical equipment;

To hold competitions for items to be standardized;

To set up a Standing International Technical Commission to judge the items presented in competition and to investigate standard types which would later be adopted by the International Red Cross Conference;

To investigate methods for standardizing the coding of wounds.

The Medical Services of National Red Cross Societies are earnestly requested in future to leave at the disposal of the International Committee of the Red Cross any exhibits of articles which the Commission is endeavouring to standardize. These might constitute the first collection of the International Institute for the Study of Medical Equipment."²⁴

The International Institute for the Study of Medical Equipment was inaugurated on 19 November 1925 with equipment received from thirty nations. Three years later, the Institute possessed no fewer than 150 different types of stretchers.

The Standardization Commission, composed of technical experts belonging to the medical services of eleven countries met three times between 1925 and 1928 and examined:

- stretchers;
- stretcher suspension systems;
- field dressing packages;
- identity discs;
- medical records;
- detailed coding of wounds;

²³ *Ibid.*, Resolution III, para. 1, p. 168.

²⁴ *Ibid.*, Resolution XIV, p. 173.

- transporting casualties by pack animals;
- a neutrality armlet.

Apart from the growth of medical aviation, the agenda for the Thirteenth International Red Cross Conference, in The Hague in 1928, once again included the standardization of medical equipment.

In the meetings of the commission responsible for this matter, the French General Marotte defined what he meant: "The word 'standardization' is a somewhat barbarous neologism, but it has been sanctified by use and every country has incorporated it into the language. To standardize is to search for and exactly describe the essential characteristics of an agreed ideal design intended to serve as a model."²⁵

Colonel Van Baumberghen, whom we have already quoted, was won over to the idea: "Among the large quantity of significant information provided by the last war, what is most striking is the need to standardize, as far as possible, methods of treatment and systems for transporting casualties."²⁶

The commission of experts reported the results of its work. A definitive agreement was reached on the dimensions of stretchers, of stretcher harnesses, and of field-dressing cases; the material for identity discs and the details to be entered on it; the front-line medical record, the evacuation record and the hospitalization record; and the definition of the casualty litter for use with pack animals.

In its resolution XI,

"The Thirteenth International Red Cross Conference notes with lively satisfaction the measures taken by the International Committee of the Red Cross to set up an International Institute for the Study of Medical Equipment,

notes that, thanks to the strict economy which has characterized these measures, the Institute has already been created at Geneva, where it constitutes an agency, absolutely unique of its type, and capable of rendering very appreciable services,

congratulates the governments and Red Cross Societies which, without waiting for the Thirteenth Conference, have subscribed for this purpose to the International Committee, and

²⁵ Proceedings of the Thirteenth International Red Cross Conference, The Hague, 1928, p. 127.

²⁶ *Ibid.*, p. 142.

recommends the governments of all States signatory to the Geneva Convention, and all National Red Cross Societies, to allocate regular subventions to the International Committee of the Red Cross to meet the expenses of the Institute, and to send copies of all items of medical equipment, suitable for inclusion in the Institute's collections or for submission in the competitions organized by the International Standardization Commission.

Considering the great advantage of the Institute, and taking into account its special aim and the fact that it is of interest to all countries, the Conference earnestly requests the governments of States signatory to the Geneva Convention to be kind enough to consent, by reciprocal concession, to exonerate from all transport charges and entry dues, medical equipment intended for the International Institute for the Study of Medical Equipment, sent by Central Committees of the different Red Cross Societies and by Army Medical Services and material sent by the Institute to rap-porteurs, for purposes of study.”²⁷

In 1930, General Marotte, who was a member of the Standardization Commission, addressed those attending the Fourteenth International Red Cross Conference in Brussels: “You can do a lot for us. When you get home and report on your mission, stress the importance of this question, the special aim we have, which is really in the interests of all countries of the world, and urge your governments to send us the material we need for our studies.”²⁸

In order to understand this remark it is necessary to know that, apart from stretchers, the other items of study had not aroused the desired interest. The competitions concerning identity discs, medical records and the manufacture of prototypes conforming to the decisions on standardization were not a success.

From 1929 onwards, the Standardization Commission had been working in connection with the Standing Committee of the Congresses of Military Medicine and Pharmacy and with the Health Division of the League of Nations on the subject of the coding of wounds.

In Tokyo, in 1934, the Fifteenth International Red Cross Conference recommended “the world-wide use of the manual published in French by the League of Red Cross Societies under the title “Hygiène et médecine à bord” and expressed the hope “that the

²⁷ Ibid., Resolution XI, p. 179.

²⁸ Proceedings of the Fourteenth International Red Cross Conference, Brussels, 1930, p. 165.

League study “(a) the standardization of medical chests, and draft plans for the publication of a similar but smaller manual to be used in aerodromes, air ambulances and aeroplanes; (b) the standardization of chests to be used by air services.”²⁹

It should be recalled that when the League was founded, it had been stated that it would concern itself with public health matters, while the ICRC would engage in activities related to conflicts.

Resolution XXXV of the Tokyo Conference also gave a wider definition of the activities of the Standardization Commission: “The XVth International Red Cross Conference, considering the interest of comparative study of medical stores to Army Medical Services and to National Red Cross Societies,

approves the modifications in the statutes of the Standing International Commission on the Standardization of Medical Stores, and resolves to change the title of this Commission, which will henceforth be known as the Standing International Commission for the Study of Medical Stores,

instructs this Commission, in addition to the work which it may undertake looking directly towards standardization, to endeavour to comply with the requests which may be addressed to it, through the intermediary of governments, for investigations and information on particular points,

expresses the hope that the governments of States which are party to the Geneva Convention, and the National Red Cross Societies, which are not represented on the Commission, will promote such studies by sending in appropriate material and granting subventions.”³⁰

The Conference also adopted numerous resolutions on the standardization of:

- field stretchers;
- stretcher harnesses;
- field-dressing cases;
- identity discs;
- front line medical records;
- medical records of hospitalization;
- medical record wallet;
- detailed coding of war wounds;
- casualty litter for use with pack animal;

²⁹ Proceedings of the Fifteenth International Red Cross Conference, Tokyo, 1934. Resolution XXVII, p. 237.

³⁰ *Ibid.*, Resolution XXXV, pp. 259-260.

- identity documents;
- adaptation of a standard field stretcher for use with a wheeled base;
- adaptation of a field stretcher as an operating table and a bed;
- adaptation of a standard field stretcher for use in aircraft;
- medical vehicle;
- adaptation of a standard stretcher for use on skis or a sleigh;
- transport of wounded or sick persons by cable-car;
- transport in mountains;
- disinfection and decontamination of stretchers and vehicles that have been exposed to the effects of poison gases;
- device intended to adapt the standard stretcher to requisitioned vehicles;
- identification markings for equipment belonging to National Red Cross Societies;
- haemostatic bandages.

Like the Washington Conference in 1912, on the eve of the First World War, the Sixteenth International Red Cross Conference, which met in London in 1938, one year before the Second World War, made recommendations prompted by the extremely tense political situation at that time.

It recommended the National Societies: "... to organize their emergency services in order to be ready at all times to second quickly and efficiently the public bodies in their respective countries"

and specially draws their attention to the necessity of:

"Completing the training of Red Cross nurses and voluntary aids on those points which are recognized as necessary in order to prepare them for the duties, whether medical or social, which may devolve upon them;

Enrolling sufficient personnel and training the relief personnel which will deal with the victims of aerial attacks;

Having at its disposal relief material suitable for any eventuality;

Organising in advance, as far as possible, a transport service capable of being adapted to all needs and, if necessary, aerial relief, the importance of which becomes daily more evident."³¹

³¹ Proceedings of the Sixteenth International Red Cross Conference, London, 1938. Resolution XVI, p. 105

- Resolutions were adopted on the standardization of:
- Restraining devices for the transport of fracture cases;
 - Individual medical equipment for medical service Personnel (stretcher-bearers, nurses);
 - Transport of wounded and sick persons by train;
 - Lighting in forward medical units;
 - Disinfestation of troops in forward areas.

In a report from the Standardization Commission to the Conference, the French representative, General Marotte, the only member who had taken part in all the Commission's meetings since its creation in 1925, recalled the advances made. He distinguished two periods.

The first, which he called the "period of pure standardization", had regarded the stretcher as the chief and indeed only object of consideration. The second period, which he called the period of medical equipment study, began in 1934 after the Commission had had its responsibilities extended by the Tokyo Conference. In this period, 26 resolutions on standardization were approved and more than 80 different subjects, all of them concerning equipment capable of use in time of war, were dealt with between 1926 and 1938.

During the ten years following the London Conference of 1938, a period during which the Second World War took place, there was no question of a Standardization Commission. In its report published in 1948, the ICRC pointed out that during the Second World War medical equipment was still far from being standardized. "At all points on the front, heterogeneous medical units were to be found side by side, and never had the differences in the design of their equipment, and especially their carrying equipment, appeared so marked and so disadvantageous to the interests of the wounded."³²

At Stockholm, in 1948, in one of its resolutions: "The Seventeenth International Red Cross Conference expresses the hope that the World Health Organization will undertake to be responsible for the uniformity of medical equipment both for military and civilian needs, on the basis of experience acquired and with the co-operation of international Red Cross organizations, in particular the Standing International Commission for the Study of Medical Equipment."³³

³² André Durand: *From Sorajevo to Hiroshima*, p. 266.

³³ Proceedings of the Seventeenth International Red Cross Conference, Stockholm, 1948. Resolution L, p. 102.

The ICRC at once forwarded this resolution to the World Health Organization and contacted it in order to establish the base for possible collaboration between the two institutions in relation to medical equipment.

On 18 March 1949, in a letter from its Director-General, the World Health Organization informed the International Committee of the recommendations made by the WHO Executive Board, the tenor of which was as follows:

- “1. The International Committee of the Red Cross is requested to continue its work relating to standardization of medical equipment for civilian and military needs.
2. The World Health Organization will collaborate with the International Red Cross bodies in this activity by providing them with any information it may possess on the subject”...³⁴

The World Health Organization thus left to the ICRC the responsibility of continuing its work in the sphere of medical equipment.

The Board of Governors of the League of Red Cross Societies, meeting in Monte Carlo in 1950, stressed the need for closer co-operation between the League and the ICRC in the study of medical equipment; but it recommended that the National Societies make any proposals for standardizing equipment through the national organizations for standardization.

In view of the WHO's refusal and the wish expressed by the League, a joint League-ICRC committee was set up, with the addition of four outside experts, and met in January 1952. The meeting was the 14th of the Standing International Commission for the Study of Medical Equipment, which had not met since 1938.

In his opening address, the French General Jame drew attention to two new facts that had arisen since the previous meeting and that he thought likely to alter the Commission's activities:

“First of all, the nature of modern warfare means that medical equipment is no longer solely the province of army medical services, but also of civilian medical services. Secondly, there exists today a large number of international organizations studying the problems which were for a long time considered only by the Commission”...³⁵

³⁴ Proceedings of the Eighteenth International Red Cross Conference, Toronto, 1952. Document No. 5, p. 2.

³⁵ Minutes of the Fourteenth Session of the International Commission for the Study of Medical Equipment. p. 2.

Mr. Robert Tissot, secretary of the Medical Division at the ICRC, pointed out that, in a survey carried out in the spring of 1950, the matters that had seemed of greatest concern to army medical services and the Red Cross Societies had been the standardization of stretchers and of blood-transfusion apparatus. These two important questions had been taken into consideration by the International Standardization Organization (ISO), with which the League and the ICRC had made contact. This body had stated its willingness to examine the subjects which the Commission would propose to it. The work of the ISO and that of other organizations, national and international, in the same field, was to be taken into account when the Commission's programme of study came up for discussion.³⁶

In July and August 1952, the Eighteenth International Red Cross Conference, held in Toronto, voted the following resolutions:

“The XVIIIth International Red Cross Conference

notes the action taken on Resolution L adopted by the XVIIth International Red Cross Conference and the opinion expressed with regard to this resolution by the World Health Organization,

approves the report presented by the reorganized Standing International Commission for the Study of Medical Equipment, as well as the new regulations of this Commission, whose title will henceforth be ‘International Commission for Medical Equipment’,

insists that the matter of blood transfusion equipment be studied as a question of primary importance.”³⁷

In December 1952, the new Commission began work.

From the start of the meeting, it bore in mind the large number of international organizations studying the problems about which the Commission had long been the only body to concern itself. The question of stretchers was being examined by the ISO and that of blood-transfusion equipment by the ISO and the International Society of Blood Transfusion. The meeting did not come to any important decision apart from resolving to keep in touch with the ISO, which was already working on matters likely to be of interest to the Commission.

³⁶ *Ibid.*, p. 3.

³⁷ Proceedings of the Eighteenth International Red Cross Conference, Toronto, 1952. Resolution XXIX, p. 160.

After the 1952 meeting, the work of the Commission did not seem to have attracted any interest from the ICRC or the League or from the National Societies. There was no reason at all to maintain this Commission, whose purpose was to report the work done and the results obtained by better equipped technical bodies in touch with many civilian and military bodies.

The Nineteenth International Red Cross Conference, held in New Delhi in 1957, therefore took the advice of the League and the ICRC and adopted the following resolution:

“The XIXth International Red Cross Conference, having taken cognizance of the joint report of the International Committee of the Red Cross and the League of Red Cross Societies on the International Commission for Medical Equipment, considering that these two organizations have reached the conclusion that whilst the work of this Commission had proved extremely useful in the past, this is no longer the case, other specialized organizations now being in a better position to undertake these tasks, recommends that the Commission be dissolved, further recommends that the International Committee and the League continue to follow problems connected with medical equipment for civilian and military use and inform National Societies of progress in these fields, at the same time remaining in close contact with the competent international technical organizations and national health authorities.”³⁸

So, after a fruitful period of work on improving army medical equipment, from 1863 to 1925, and then on standardizing it, between 1925 and 1938, this Red Cross activity officially ceased in 1957.

André Musy
Medical Division, ICRC

³⁸ Proceedings of the Nineteenth International Red Cross Conference, New Dehli, 1957. Resolution XXI, p. 172.