Staff Meeting Bulletin
Hospitals of the » » »
University of Minnesota

First Aid Teaching Technic

Volume XIII | Friday, May 8, 1942 | Number 21

STAFF MEETING BULLETIN
HOSPITALS OF THE . . .
UNIVERSITY OF MINNESOTA

Volume XIII | Friday, May 8, 1942 | Number 24

INDEX

Published for the General Staff Meeting each week during the school year, October to June, inclusive.

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William A. O'Brien, M.D.

I. LAST WEEK

Date: May 1, 1942

Place: Recreation Room
Powell Hall

Time: 12:15 to 1:15 p.m.

Program: "Infectious Mononucleosis"
C. A. McKinlay
P. D. Kernan
J. W. Rebuck

Discussion
C. J. Watson
Mr. Crowley

Present: 107

Gertrude Gunn,
Record Librarian

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II. MEETINGS

1. SEMINAR IN PATHOLOGY

Monday, May 11, 1942 at 12:30 p.m., 104 Institute of Anatomy.

"Agastric and premenstrual hypoglycemia controlled with desiccated stomach."
E. M. Schleicher

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2. PHYSIOLOGY-PHARMACOLOGY SEMINAR

Tuesday, May 12 at 12:30 p.m., Room 214 Millard Hall.

"Certain aspects of the colloid osmotic pressure of the plasma."
Henry L. Taylor

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3. ANATOMY SEMINAR

Saturday, May 9, at 11:30 a.m., room 226 Institute of Anatomy.

"Patterns and problems of development."
R. F. Blount

"Regressive staining in hematology."
E. M. Schleicher

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III. ANNOUNCEMENTS

1. FIRST AID

The American Red Cross First Aid textbook was prepared for the instruction of first aid classes. Last revision, 1937. It contains 256 pages and 14 chapters as follows:

1. First Aid--Its Need and Its Use
2. Anatomy and Physiology of the Body
3. Dressings and Bandages
4. Wounds
5. Shock
6. Wounds Requiring Additional Consideration
7. Artificial Respiration
8. Injuries to Bones, Joints and Muscles
9. Injuries Due to Heat and Cold
10. Poisons
11. Unconsciousness
12. Common Emergencies
13. Transportation
14. First Aid Kits

It is complete with many illustrations and should be studied by every physician whether he plans to teach a first aid class or not. As Dr. Potthoff has indicated, at our meeting today, there are places where you may disagree with the procedure recommended. In teaching, no attempt should be made to individualize instruction to such an extent that confusion of the pupil results.

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2. SPECIAL MOVIE TODAY

"Fighting Fire Bombs" -- Courtesy St. Paul Fire and Marine Insurance Company -- Twin City Underwriters.

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3. CLINICAL RESEARCH CLUB

Owing to the recent national meeting, the local May meeting is deferred until early June. Titles for this final meeting of the school year are requested.

F. W. Hoffbauer, Pres.

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IV. FIRST AID TEACHING TECHNIC

C. J. Potthoff

Present day warfare, with participation by the entire population in the defense and offense effort, necessitates training of the whole population, each segment for its duties. Into the public mind today the need for preparation is being instilled, and much thought is being given to devising the direction and method of training. If the whole population is to be trained for the emergencies of war, one of the first objectives will be the training in methods of first aid. In Britain such training has formed an important aspect of defense work. In this country the American Red Cross is extending its first aid program; plans call for an immense expansion of this training.

Without doubt, physicians must play an important part in the local programs. Red Cross units commonly have physicians among their directors and look to them for guidance in phases of activity related to health work. Whether he has a hand in directing the local program or whether he actually does the teaching, the physician may find himself in a role which he does not ordinarily have, that of participating in classroom teaching. Because of his long experience as a student, as a teacher of the individual patient and perhaps as a public speaker, he will have many qualifications valuable for classroom teaching. Nevertheless such teaching is a specialized procedure, requiring study and practice for mastery, and the physician who is equipped with and applies knowledge of good educational methods should represent the best first aid teacher.

It is possible that some of the training of the physician may condition him unfavorably for certain aspects of first aid teaching. Because of his own experiences, he may rate the pupils too high on the basis of background information and ability to understand explanations and to memorize. Even when warned and wary of dangers, mistakes may occur. In one class, after the topic of broken bones had been considered, one pupil asked, "Now that we have studied about first aid for broken bones, won't you tell us how to take care of fractures?" This pupil was a college student! On another occasion a pupil asked "Will digital pressure, applied to the right arm, stop bleeding in the left arm?" The right arm had been used in the class demonstration. Just as the first aider should "splint 'em where they lie," so the instructor must "know the pupils." The beginning instructor almost invariably overrates the pupils as students.

The approach to becoming a good local adviser or teacher in this program entails (1) acquisition of organized knowledge relating to accident prevention, (2) acquisition of knowledge concerning good first aid procedure, (3) acquisition of knowledge concerning what the public is being taught generally in first aid classes, and (4) acquisition of knowledge concerning methods in first aid teaching. Usually first aid courses consider accidents common to civilian life, using the American Red Cross First Aid Textbook. It may be that soon instructors will be provided with additional material based on the experiences in Europe and that thus the course may include topics pertaining especially to prevention and first aid care of disabilities common to warfare. The Red Cross textbook, written with the collaboration of medical men eminent in their respective fields, is exceptionally good. It gives in simple language information concerning accident prevention and first aid procedures. It is not written primarily as a textbook for physicians but rather for lay people. It considers cognitive levels and assimilative abilities of these people.

The Red Cross also issues an instructor's manual. This book is based on the large body of experience of the national organization in first aid procedures and teaching. It allocates the ground to be covered in each lecture, gives lesson plans and suggestions for class management and lists mistakes commonly made by the novice instructor.

During recent years, many lay persons having been trained in first aid, it has

been possible to study the effects of first aid teaching, to ascertain whether accidents are reduced, whether graduates do good first aid work and what is the nature of the mistakes made by graduates in their first aid efforts. Conclusions can thus be drawn concerning the improvement of first aid courses.

Many studies show beyond reasonable doubt that first aid training represents an effective way to reduce accidents. Accident prevention is a major objective of first aid training; it is not a will-o'-the-wisp objective but rather one which the instructor may with confidence expect to attain. The trained first aider also handles accidents better than does the nontrained person. Physicians may smile occasionally at the work of first aiders, but by and large the trained person does good work when compared with that of the untrained. And course graduates also commonly have an improved attitude concerning matters of general health.

While the trained lay person does improved work, mistakes are occasionally made. Such mistakes include the following:

1. He is overwhelmed by the scene of the accident, modifying learned methods to the detriment of the victim's interests.

2. He fails to examine carefully.

3. When the victim has several injuries, the first aider pays attention only to the worst one.

4. He uses splints that are too short.

5. He gambles that the injury is a sprain rather than a fracture.

6. He is too free with the application of a tourniquet.

7. He handles burns poorly.

8. He applies artificial respiration when he should not do so.

9. He does not organize his first aid efforts efficiently and thus copes poorly with shock.

These mistakes suggest three avenues toward improvement of first aid teaching: better preparation of the pupils concerning general difficulties faced at the scene of an accident; presentation in succinct form of essentials for care of each accident type, with emphasis thereon rather than on details; provision in the home and automobile of splints and bandage material of adequate size for coping with major accidents.

In preparing the first aid course, it is necessary to plan for the entire course rather than for the isolated lecture. The subject matter we want to teach must be specifically defined; then such subject matter objectives must be weighed against the pupils' abilities to learn in the allotted time. One cannot teach nearly everything one may want to teach; the subject matter must be ruthlessly slashed perhaps, for only the most important can be considered. But the total usable learning is increased through the indelible imprinting of the essential. These most important facets should be presented in brief form with crystal clarity; they should be emphasized again and again. Before a class, the instructor should have in mind the things he expects to emphasize specifically; thus "Today I will clinch the idea that accident victims must be carefully examined," or "Today, in considering first aid for concussion, I am going to drive home the idea that victims must be kept quiet." The instructor will keep to his outline and to his sequence and not be diverted into a morass of side aspects. The physician knows so much, he has had so many interesting experiences, that it becomes easy for him to overflow the banks of the essentials. Eliminating consideration of aspects fairly but not essentially important is like pulling teeth; but it must be done often in first aid teaching for the lay public if the heart of the topic is to be presented emphatically.

In preparing the pupils for the scene of the accident it is important that they visualize the difficulties and common mis-

takes of the first aider. The lecture which treats of this topic and imparts general rules applicable to any accident is no doubt the most important one in the entire course.

To appreciate the difficulty of preparing an effective lecture on this topic, one which will in the dim future result in a good first aid job, one need only reflect on the teaching task. Ordinarily the students in the course are not conditioned to sweat in study. They expect the facts to come in gently. Yet it is the teacher's responsibility to face the teaching situation. The course is usually of only twenty hours, and there is much ground to be covered. Much of the time must be spent in doing first aid practice procedures, so that only part of the time can be devoted to lectures. Yet, despite possible deficiencies of the pupil in ability, motivation and time, this pupil must remember -- if the teaching is to be effective -- material for an accident which may not occur for many years. There are many kinds of accidents, but the student must remember what to do for the one which, unheralded, occurs. Meanwhile he has seldom had time for review.

Then, when the accident occurs, this pupil is in a new situation, a dramatic one perhaps. He does not have an opportunity at this time to sit down and cogitate about the whole matter in peace and quiet. He may be deluged by the enormity of the harm, by the presence of death, by the onlookers, hysterical relatives, injured victims, importunate bystanders. Necessary apparatus, prepared or improvised, may be difficult to obtain. Zero weather, heavy rainfall or concomitant traffic may in effect represent forces which nullify all the teaching. And so he may regard the accident he meets as different from any studied or, while knowing what is correct procedure, surrender to the exigencies of the occasion and give poor first aid.

Attention may then well be directed at the following:

1. Every accident seems different, unique. The general rules should be followed unless one is positive that modification is indicated. The student who knows the common mistakes of the first aider is fortified against making them himself.

2. A careful examination is very important. The first aider is strongly tempted to give only a superficial examination, to hurry through it. A good examination requires deliberation, time, tact.

3. In the presence of serious injuries, other injuries should be searched for and, if present, treated with care.

4. There is tremendous pressure, at the time of a serious accident, that something be done. Doing nothing other than keeping the victim quiet and warm for the time being is often the indicated procedure, but such action is most difficult. The victim and the onlookers interpret this deliberation as a sign that the first aider does not know what to do. Physicians, police and firemen in first aid work subscribe to the statement that this great importunity exists at the scene of the accident.

5. Advice from bystanders is often confusing, occasionally commanding. The first aider, recalling only tenuously what is right, may easily be swayed by others.

6. The drunken are usually hard to handle when injured; they are especially likely to be hysterical, often claim to be hurt far worse than they really are. Yet drunkards are often involved in accidents, may be seriously injured; hence the first aider can take no chances and must be persistent in his examination. Some people seem to feel that a drunkard has forfeited the right to receive good first aid.

7. Very often it is wise to call a physician to the accident scene. Permission of the victim or of a responsible person should first be secured, if possible. In all serious accidents, the first aider

should consider carefully this possibility of getting a physician to the scene of the accident.

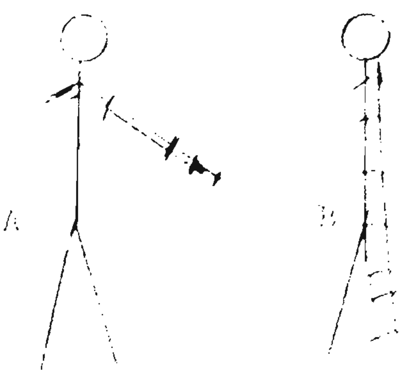
Students occasionally do not learn clearly some of the first aid procedures. In the flood of details presented to them, they do not see the principles of care. The instructor should think of (1) imparting the facts, and (2) having the students bring the facts back to him. Thus they learn better, for they must do the stating and must participate; they secure repetition through the process and learn of their own deficiencies. The instructor learns of their misconceptions and finds where his teaching has fallen short. The Red Cross textbook has more than 250 pages; the material in it will not be uniformly well remembered through the years. If the teacher considers carefully every paragraph, he will not gain emphasis; he will fail to impress the essentials indelibly. It is easy to get far too much detail, to lose perspective view. The teaching should conform to the practical situation and the teacher bear in mind the weighting of topics and be guided by subject matter, pupils, objectives.

Let us take the case of fracture care. There are more than two hundred bones in the body. One cannot reasonably expect that students will remember through the years the ideal splint for each type of fracture considered in the textbook. Yet teachers occasionally spend time to no real purpose on requiring the memorization of such terms as femur, humerus and vertebra. The student should understand thoroughly the idea in splinting: to keep the broken ends quiet. He should understand thoroughly the treatment of shock and the factors that increase shock. For emphasis the following suggestions may be stressed:

1. Don't let the broken ends move.
2. Treat shock.
3. Treat every possible fracture as a fracture.

A general rule for splinting is that the splints should extend well beyond the joints adjacent to the fracture. For purposes of lay education, one may state that by and large a splint can hardly be too long except it becomes unwieldy. A heavy splint, poorly attached, may contribute more to shock than a light one so placed. Students should have considerable practice in applying splints so that they learn to organize, prepare and expedite their efforts and to apply them well. They must learn how to transport a victim a few feet, if such is necessary in order, for instance, to escape traffic. They must get practical help concerning improvisions. Too often recommendations are impractical to the scene of the accident. The first aider may find that raw material for improvisions may not be as easy to find as he had thought, for he may encounter his accident in heavy rainfall, darkness or bitterly cold weather. Under these circumstances, if he spends time looking for fallen boughs, fence posts, or random boards, the victim may sink into deep shock. It is exceedingly important that the teaching recommendations foresee the practical situation.

I have used the accompanying diagrams in summarizing where splints should be placed and I ask students to repeat the drawings after they study the textbook.



A, fracture of elbow with arm straight; B, fracture of [illegible] without traction.

type of injury. Certainly first aid for fractures of the neck should be rendered by a physician called to the scene of the accident.

Head injuries and cerebral circulatory accidents are often encountered. Almost 50 per cent of fatal traffic accidents show concussion as the cause of death, according to National Safety Council reports. Whether concussion or stroke, the victim should be kept quiet. The care may be outlined as follows:

1. Keep the victim quiet.
2. Elevate his head somewhat if the face is red; keep it level if the face is pale.
3. Give the victim no stimulants.
4. Apply an ice cap, if available, to the head.

It is important to consider drunkenness in connection with head injuries. Often the drunkard is the victim of an accident and the injury is dismissed. The textbook discussion on this point is good.

Criticism has repeatedly been directed against various aspects of teaching on the topic of artificial respiration. Many misconceptions concerning theory are held. Henderson and Turner, in a recent issue of THE JOURNAL,[1] consider physiology and methods, their articles being based on much research work. This article should be read by all first aid instructors. Many instructors insist on meticulous observation of minor points in administering artificial respiration. Clearly, the following points should be emphasized:

1. Get started at once.
2. Compress the chest and release twelve to fifteen times a minute.
3. Treat shock.
4. Keep the victim quiet after he starts breathing.

The student should know of the precious time interval between cessation of breathing and cessation of heart action. He should therefore know of the great need for starting artificial respiration at once. Though the prone pressure method is used ordinarily, it is occasionally impossible to straddle the victim. The student should understand the idea so that he will start artificial respiration in a boat or wherever he finds the victim.

The student should know when the method is useful. Occasionally instructors state that the procedure should be followed any time a victim is not breathing. Hence first aiders are giving artificial respiration to victims of stroke, of concussion and even of infectious disease. The argument favoring such teaching is as follows: If a victim is not breathing, artificial respiration cannot be harmful, though it may be useless. One cannot expect the average person to remember a series of indications for its use; but if this person is taught to use the method any time a victim is not breathing, he will remember such a simple rule well.

The argument fails to consider the commonest mistake of the first aider. In his excitement he administers the prone pressure method to victims who are unconscious but breathing. Such cases often represent stroke, concussion or injury to the visceral system. The procedure of artificial respiration here may represent the finishing coup; it is definitely dangerous. During the past year I have seen 2 cases in which prone pressure method was being used on victims of stroke. These injuries are very common, and if the first aider gives artificial respiration to every victim of stroke or concussion he sees he may be responsible for more dire results than the good which follows use of the method wisely. Hence students must learn when artificial respiration is to be used.

The technic of the prone pressure method requires practice for good administration. The beginning instructor should be coached in the technic by an experienced operator. Otherwise, while he may get a good exchange of air, he may fail as a teacher in being awkward or singularly atypical in method.

In consideration of shock, the impor-

tant thing is the prevention and the treatment. One may require the students to memorize thoroughly the symptoms and signs. Time devoted to one facet is obtained at the expense of time devoted elsewhere. Aside from modification of treatment with certain injuries, such as concussion and heat stroke, all accident victims should be treated through (1) heat, (2) position, (3) stimulants. The revised edition of the Red Cross textbook presents in improved fashion the first aid handling of burns. Perhaps one may look forward to better work on the part of graduates of the course in this type of accident.

The preceding paragraphs indicate the method of analyzing the subject matter in order to emphasize the heart of the topic, in order to gain emphasis. The main points should be clinched.

In order to apply methods learned, the first aider must have materials at the scene of the accident. Observation shows that in a proportion of cases graduates do not improvise material. The difficulties, they feel, are overbalanced by other factors. First aid kits provide a partial answer, but they are inadequate when the accident is a major one. They ought to be in each home and each automobile. But there should also be available in each automobile a few splints, at least six large triangular bandages, a flashlight and a jack knife. These can readily be provided and carried; certainly they can be provided more easily before than at the accident. If they are present, they will likely be used. If not present, the likelihood of transfer of the patient without splinting is greater. A film, sponsored by many medical societies and dealing with fracture care, has been widely shown to the public. This film demonstrates only the Thomas splint. But how often is the Thomas splint available at the scene of the accident? The real situation has again not been visualized. How may the situation be remedied? The answer is very simple: Have the pupils while enrolled in the course prepare the material for their own cars and homes. They can cut notches in the splints in such manner that traction splinting is possible. By teaching first aid, the teacher acknowledges its importance; he therefore is consistent when he insures application through providing necessary materials.

After the text work has been completed, a valuable teaching technic is to present hypothetic accident situations to the class, letting it work out procedures on designated victims. The pupils thus learn well the difficulties and factors to consider and also to organize their efforts. Even medical students, segregated into groups of two or three, find difficulty in planning first aid procedures for such a simple matter as splinting an ankle.

Films ought to represent an exceptionally valuable teaching aid. From them students might visualize well the scene of the accident, the discouraging aspects for good first aid, the difficulty of going ahead in a planned way and the common mistakes made. Unfortunately, available films omit particularly the aspects one would like to see. Sometimes significant omissions occur. Thus a film which suggests use of iodine on cuts ought to present some cautions when the lay public is being taught. Surgeons, when previewing films, commonly raise valid objections. However, better films will doubtless be prepared. The makers should have knowledge of the actual accident situation and experience in teaching first aid.

Reference

1. Henderson, Yandell and Turner, J. McCullough
Artificial Respiration and Inhalation: The Principle Determining the Efficiency of Various Methods.
J.A.M.A. 116:1508 (Apr.5),'41.

V. GOSSIP

Nancy Ann, daughter of Dr. and Mrs. McLennan, arrived Sunday, May 3rd, 19[illegible].. ..Dr. Carl J. Potthoff, our speaker today, came into medicine from the American Red Cross. He knows first aid training from both sides of the fence. His timely remarks on the duties of physicians in these matters have caught the attention of the profession of the United States from the American Medical Association and also the English profession through their journals. Each summer he is in charge of the medical service at Glacier Park. His other duties include teaching a course in Human Biology in General College....In line with the times our thinking will become more and more involved in war medicine. Next week's program will deal with the question of blood substitutes. At the American College of Surgeons' war program on Friday, May 1 the enrolment exceeded expectations. The various speakers were most complimentary about the attitude and attention of those who came. We may have other faults but one of them is not our failure to attend medical meetings with a critical eye on the proceedings. The Medical School is planning a series of war lectures, covering the main problems of military medicine. Also a special course in parasitology will be given. As all graduates except those physically handicapped will enter the army or navy on the completion of their internship these courses should be helpful in preparing them for the job ahead. Last Friday I spent a day on the range in connection with in-service training program in health education for teachers. The St. Louis County health officer, Dr. Carl Scherer, had arranged the series. The north country was at its best. There is a difference in vegetation as you leave the influence of the Lake Superior. Duluth was rimmed by a fog cloud which made driving difficult. A small spring along the road near Eveleth has been diverted into a flowing stream through a pipe. The water varies about 4 degrees throughout the year. It is believed that enough water flows from this one source to supply an average town. War has touched the range. Everyone is busy and enormous piles of ore are seen everywhere. The recreational halls so widely criticized as extravagance are used to their utmost by the people on the range. I watched a game of "butchiball" played by some Italians. It consists of rolling a small wooden ball on a dirt floor. Larger balls are rolled in the general vicinity of the small one apparently with the purpose of seeing who can come nearest. If an opponent is too close an effort is made to knock him away. It doesn't sound very exciting but it seemed to arouse the Italians. A large photograph in the school with an appropriate plate for a young man from Virginia who was the first one to give his life in the World War #2. Many mementos of World War #1 including some of the buildings built since then...Meetings on the range are always enjoyable because of the music. I do not know of any section of the state which has so much developed talent along these lines. Graduating classes there include representatives of 33 nationalities, which gives plenty of chance for all sorts of native talents and abilities....A group of physicians are at the Center this week studying the Kenny technique. Next week nurses will arrive to study the hot pack phase and also another group of technicians. Next monday physicians from North and South Dakota will arrive for a special course in obstetric methods--May 11-13. Following this they will join a group of physicians from Minnesota who will study clinical obstetric problems..... The medical techs will have their annaul dinner on Monday evening, May 11. As usual they have made careful arrangements for the comfort and pleasure of all. Of all the women on the campus they rate among the highest in scholastic ability and social techniques. After the grades are all in and the battle debris has been removed, instructors often find mysterious boxes of candy in their post office boxes. Just a polite letter of thanks for a good course....H. G. Scheie, '36, now an oculist in Philadelphia, dropped in the other day to say hello. He brought greetings from Clayton Beecham who is doing very well (obstetrics and gynecology) and H. D. Palmer who has become one of the outstanding neuropsychiatrists of Philadelphia. Fred Fetter,'2[illegible] was in the other day. He has been in the navy for some time.....Correction: Cecil Watson, et al, were at the American Society of Clinical Investigation, in Atlantic City.....