ASRC BOD MEETING 02FEB91

Meeting called to order: 10:50

In Attendance: Ellen Bender, William Dixon, Rob Elron, Meg Gralia, Bob Koester, Gary Mechtel, Peter McCabe, BB Oros, David Stooksbury

GROUP REPORTS

AMRG No report.

RSAR No report

TSARG No report

ESAR 616 Verbal report given.

BRMRG BRMRG's budget for FY1991 has been completed. We have also applied to keep our current office space. Hopefully, after last year, there will be no problems this year. Expenses: (Operational $21,000) (Capital $1,600), Revenue: (SAF $7,500) (Contributions $13,100) (Fund raising $2,000).
Training for Spring 1991 is underway, see attached training schedule.
All groups are asked to make sure that they have mailed copies of their current rosters to the locker.
TSARG has submitted proper documentation to be certified as a full member group (see attached). Congratulations!
BRMRG has responded to the following searches since the last meeting: Henrico County, Duckworth 4COQ, 3FTM, 3FTL, 1IS, 2IC.
Two car washes and Van Ripers planned as fund raisers this semester.
Documentation for our 36 month review is attached.
BRMRG 1991 training schedule is attached.

SMRG 09-10FEB There will be a Wilderness First Aid course offered by SMRG with Bob Koester instructing, at the Montgomery County, MD EOC. There is a $20 fee for the course. Contact William Dixon for further details.
1991 Dogwood. The Dogwood will be held this year on 20APR. Mike Sawyer will be the main SMRG contact for the event this year.

SWVMRG The group's main focus since October has been to improve the structure of the group. SWVMRG has, therefor, established a reorganization committee responsible for amending the group's constitution. We feel that this will improve SWVMRG's efficiency and capabilities not just as a group, but for the conference as a whole.

Several of our members have increased their training levels as shown in the table below. 5COQ, 7FTM, 1FTL, 1 EMT, 3 in EMT class, 1 First Responder.

SWVMRG recently purchased a new rope (310 ft. PMI Extra static) and is in the process of updating their locker inventory. This will include both medical and technical equipment, with the final objective being to make SWVMRG capable of responding as an overhead team.

SWVMRG is currently coordinating a series of PSAR presentations for schools in the Blacksburg area. Since several members are certified, we plan to present one class per week with SWVMRG members working in shifts. In this way, we feel that we can effectively cover several schools in the area.

Six of our members responded to the Richmond [Henrico Co.] search. They consisted of two FTL's, three FTM's and one COQ.

COMMITTEE REPORTS

ASTM No report

MRA No report

PIO No report.

COMMO (Elron)
See attached.

OPS (Mechtel)
Nothing pertinent to report at this time.

PLANS (Herbert) (by Koester)
09 MAR Plans meeting in Charlottesville. Time TBA.

MEDICAL (Stooksbury)
VA EMS Agency license received. ASRC is now a First Responder Agency and a Basic (Shock Trauma) Agency.
The new Medical Director for the conference is George Linbeck.
The medical officer requests that each group sends in photocopies of each of their member's medical certifications.
ASRC medical standards entered into the minutes (see attached) to be distributed to each of the groups.

TRAINING (McCabe)

There will be a Swamp SAR 19 APR at the great dismal swamp. Contact TSARG.

The CTO requests copies of all of the groups' rosters. He has received only TSARG and AMRG.

The CTO wants copies of the standards that each group uses to certify and recertify its members. These will be used to compile a conference standard.

See attached for additional points.

CHAIRMAN (Koester)

The Chair has received a letter from RSAR re: their response at Henrico County.

The Chair encourages ASRC personnel to attend the NASAR conference.

The Chair wants to hold an IC meeting.

MRA dues are due.

The Chair has sent a letter to VA Gov. Wilder thanking him for his support for SAR.

VASARC (Dixon)

The VASARC is now incorporated.

The Governor's advisory committee is in the works. The project is being headed by Greg Stiles.

PASARC (McCabe)

Peter McCabe is running for Chairman of the PSARC.

PEMA now has a paid employee who has, among other duties, SAR.

TREASURY (Mechtel)

Accounts: $3,401.91

Old Dues Due

BRMRG 1990	$45
AMRG 1989, 1990	$90

1991 Dues

AMRG	$45
BRMRG	$45
ESAR 616	$45
RSAR	$45
SMRG	$45
SWVMRG	$45
TSARG	$45

Estimated funds: $3,851.91

SEARCHES (Koester)

Henrico County, VA. 73 y.o. male found 3 days after suspension of mission 4 blocks from PLS.

The learning points from this mission are to be distributed by Mechtel and Dixon.

A decision should be made as to who is responsible for calling a post-mission briefing. It was decided by the Board and the OPS officer that it is the responsibility of the ASRC OPS officer to call post-mission briefings.

Motion made (Koester) that the new OPS manual contain a methodology for post-incident follow up.

OLD BUSINESS

36 Month Reviews

Motion made (Mechtel) that at 36 month reviews, a vote be taken by the ASRC BOD as to the status of each group. Motion passed.

Motion made (Elron) that due to the recent changes in ASRC communications, that the equipment requirement for having all 155 MHz on radios be waived at this review, and the requirement be changed to having 155.160, 205 and 280. Motion passed.

No report was presented by AMRG. The only document able to be presented was a roster from the CTO.

Motion made (Oros) that AMRG be placed on observation due to failure to submit 36 month review documents. Motion passed. Registered letter will be sent to AMRG by the Chair as per Operations manual.

BRMRG presented the 36 month review documents which were inspected by the BOD.

Motion made (Oros) that BRMRG continue as a Certified group. Motion passed.

SMRG presented the 36 month review documents which were inspected by the BOD.

Motion made (Stooksbury) that SMRG continue as a Certified group. Motion passed.

SWVMRG presented the 36 month review documents which were inspected by the BOD.

Motion made (Oros) that SWVMRG continue as a Certified group. Motion passed.

Groups to reviewed next year are ESAR 616 and in 1993, TSARG.

Motion made (Stooksbury) to adjourn for lunch. Motion passed.

TSAR was voted in as a Certified group at the the last ASRC General Membership meeting pending submission of documents to be reviewed by BRMRG. The documentation has been reviewed by BRMRG and has been submitted to the BOD.

Motion made (Stooksbury) to accept TSARG as a Certified group. Motion passed.

NEW BUSINESS

Motion made that ASRC members who wish to join the MRA send a $5 check, made out to the MRA to: Peter McCabe, 11034 Berrypick Lane, Columbia, MD 21044. Motion passed.

Motion made (Elron) that the ASRC apply for recoordination of the following eight frequencies: 155.160, 175, 205, 220, 235, 265, 280 and 295 in the continental US to include aircraft usage, cost to be approximately $450.00. Motion passed. 155.265 and 235 are the PASARC primary and secondary frequencies respectively.

An in-depth technical discussion followed including arrows, diagrams, chalk throwing, selected excerpts from an Official FCC Manual, many mentions of a "black box" and 24 8x10 glossy photographs, in color, with a paragraph on the back of each one describing what each picture was. At the end of this discussion, a request was made that a copy of the following table be placed in the minutes of the meeting:

	I		O	
	P	F	P	F
1)	2.5	Rep	100	Tac
2)	2.5	Rep	2.5	Rep
	100	Tac	100	Tac
3)	100	Tac	100	Tac
	100	Tac	100	Tac

4) Waiver: a) I/P = 100W or 5W
b) Not in vehicle (Antennae)
c) " " (Repeater)

Motion made (Oros) to allocate funds (approximately $60.00) to and authorize Elron to apply for two repeater frequencies in addition to allocating approximately $450.00 and authorizing Elron to recoordinate eight tactical frequencies. Motion passed.

Motion made (Oros) that the annual ASRC General Membership Meeting occur on the first Saturday in April, beginning in April 1991. Motion passed.

(Secretary's note) The previous motion resulted from a long discussion arising from an obscure point concerning General Membership meeting participation and new officers of the ASRC. The motion was made under almost unanimous if not unanimous consensus of the members attending. The ideas behind moving the meeting included: 1) An aproval of the previous administration's decisions by the general membership at the end of the administration. 2) A chance to get non-BOD members involved in ASRC affairs (especially appointed positions) due to a larger pool of members to talk to at the meeting when these appointments would normally be made. 3) An avoidance of having the General Membership meeting when a large number of

members would (or should) be studying for finals. 4) Generally better weather for training. The fact that this Saturday may fall on the Saturday before Easter (or Holy Saturday) was taken into consideration. Some members felt that it should be tied into the Saturday after Easter, but most felt that it would be better not to have so much leeway in when the meeting was actually held since the date of Easter varies greatly.

Motion made (Oros) that ASRC representatives will assume their offices during the April General Membership meeting. Motion passed. Since this requires a bylaws change, a mailout will be sent to announce the date of the General membership meeting and the motion to make this bylaws change.

Motion made (Koester) to allocate allocate funds to copy and distribute the Wilderness First Aid curriculum to the Editorial Board. Motion passed.

Motion made to accept the following as the ASRC Editorial Review Board for the Wilderness First Aid curriculum including Fundamentals, Essentials and the Instructors edition: Lorrick Fox, P.A., Carol Gilbert, Susan McHenry, Al Baker, M.D., Keith Conover, M.D., John Wallace, Beth Pinkney, George Linbeck, M.D. and Bob Koester. Motion passed.

A discussion, much like the one described above, but without the diagrams or the pictures, followed concerning the fees paid to ASRC instructors teaching ASRC material to ASRC personnel.

Jack Jackson is the new VA CAP Wing Commander.

Another discussion followed concerning the mechanism to handle incident performance problems. The following resolutions were made: Incidents concerning FTL's FTM's or COQ personnel should be directed to the GTO of the person in question. Incidents involving IS or IC personnel should be made to the CTO. In all cases the incident must be reported to the IC of the current event. The GTO or CTO should provide feedback to the person making the observation or complaint.

Motion made to authorize Elron to write a letter of agreement with VA DES and the VASARC. Motion passed.

Motion made to discuss funding for the ASRC 800 number. Motion tabled.

Motion made to adjourn.

Meeting adjourned at 1844.

BLUE RIDGE MOUNTAIN RESCUE GROUP
P.O. BOX 440
NEWCOMB STATION
CHARLOTTESVILLE, VIRGINIA 22904

TO: Appalachian Search and Rescue Conference Board of Directors
FROM: Jim MacMurray, Chairman Blue Ridge Mountain Rescue Group JCM
RE: Group Report
DATE: Friday, Feburary 1, 1991

1. BRMRG's budget for FY1991 has been completed. We have also applied to keep our current office space. Hopefully, after last year, there will be no problems with this this year.

Expenses		
	Operational	$21,000
	Capital	$1,600
Revenue		
	SAF	$7,500
	Contributions	$13,100
	Fundraising	$2,000

2. Training for Spring 1991 is underway see attached training schedule.

3. All groups are asked make sure that they have mailed copies of their current rosters to the locker.

4. TSAR has submitted proper documentation to be certified as a full member group (see attached). Congratulations!

5. BRMRG has responded to the following searches since last meeting:

Henrico County	Duckworth	4 CQ
		3 FTM
		3 FTL
		1 IS
		2 IC

6. Two car washes and Van Ripers planned as fundraisers this semester.

7. Documentation for our 36 month review is attached.

02FEB91

Blue Ridge Mountain Rescue Group
SPRING 1991 TRAINING SCHEDULE

January	22 Tuesday	Weather	Cabell 242	Stooksbury
	26 Saturday	Semi-Tech	O-Hill	Atwell
	29 Tuesday	Response	Cabell 242	
Feburary	2 Saturday	Gear Location	Locker	
	5 Tuesday	FTL Skills	Cabell 242	MacMurray
	9 Saturday	FTM Test	O-Hill	Atwell
	12 Tuesday	Medical	Cabell 242	Koester
	16 Saturday	Medical	TBA	Koester
	19 Tuesday	ELT Lecture	Cabell 242	Perron
	23 Saturday	ELT Practical	O-Hill	Atwell
	26 Tuesday	Knots	Cabell 242	Chopin
March	2 Saturday	Haul Systems	TBA	Ingle
	5 Tuesday	Air Ops 2 or Human Behavior in SAR	Cabell 242	MacMurray
		SPRING BREAK!		
	19 Tuesday	Map Systems	Cabell 242	MacMurray
	23 Saturday	Orienteering	SNP	MacMurray
	26 Tuesday	Simulation Brief	Cabell 242	
	30 Saturday	Simulation	TBA	
April	2 Tuesday	Advanced Vertical	Cabell 242	Ingle
	6 Saturday	Litter Lowering	Raven's Roost	Ingle
	9 Tuesday	FTL Review	Cabell 242	MacMurray
	13 Saturday	FTL Practical	O-Hill	Atwell
	16 Tuesday	AO Course	Cabell 242	Herbert
	20 Saturday	TSAR Simulation	Great Dismal Swamp	
	23 Tuesday	Epi Class	UVa Hospital	Stooksbury
	27 Saturday	Outing	TBA	MacMurray

Notes
- All **tuesday** night lectures begin at **1900** unless otherwise stated.
- All **weekend** training starts at the **locker** (Peabody B6-C&E) at **0900**.
- Locker Phone Number (804) 924-3472/3.
- Contact James Vann (training deputy) 971-5909 if you have any questions or problems.
- BRMRG business meetings are held on the third wednesday of each month all are encouraged to attend. Time, location, agenda and previous meetings minutes will be posted on the locker door.

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ASRC Communications Secretary Report
February 1991

Review of License Agreements:

Triangle Rescue - Still needed (Verbal Elron - McGee)
First copy of agreement not received.
Second copy has been sent.

VA EMS - Written - For ASRC to use Med Channels (10).
Agreement is being checked, no copies at ASRC

Recoordination of Tatical frequencies license;
There are 8 frequencies available for Tactical use,
and 2 repeater frequencies.
KA8-1942 has only three of the eight Tactical Frequencies.
Cost for Modification:

$ 125 for the first frequency
$ 30 for each additional frequency
$ 35 for FCC Filing Fee

$ 430 Total (Costs are subject to change)

ISSUES

1. Should we get all eight Tactical Frequencies ?
If not, then which ones ?

2. Should we support (get frequencies for) using a Repeater ?

Letter of Agreement with DES and Va.SAR Council:
The Board is asked to approve the issuing of letters of agreement to Va. DES and Va. SAR Council. The letters are to state that; when Conference personel use Conference radio licenses, DES and Va. SAR Council personnel are permitted to operate radios under those licenses. Also, that the Conference requests that DES and Va. SAR Council radios be capable of operating on the four (4) Conference frequencies:

License: KA8 1942 Freq: 155.160, 155.205, 155.280
WNUF 658 151.625

SOUTHWEST VIRGINIA MOUNTAIN RESCUE GROUP
STATUS REPORT
BOD Meeting - February 2, 1991

RE-ORGANIZATION

The group's main focus since October has been to improve the structure of the group. SWVaMRG has, therefore, established a re-organizational committee responsible for ammending the group's constitution. We feel this will improve SWVaMRG's efficiency and capabilities not just as a group, but to the conference as a whole.

TRAINING LEVELS

Several of our members have increased their training level, as shown in the table below.

Training Level	# Members w/ New Status
COQ	5
FTM	7
FTL	1 (from ESARS)
EMT	1
EMT Class	3
First Responder	1

EQUIPMENT

SWVaMRG recently purchased a new rope (310 ft. PMI-Extra, static) and is in the process of updating their locker inventory. This will include both medical and technical equipment, with the final objective being to make SWVaMRG capable of responding as an overhead team.

PREVENTIVE SEARCH AND RESCUE

SWVaMRG is currently coordinating a series of PSAR presentations for schools in the Blacksburg area. Since several members are certified, we plan to present one class per week with SWVaMRG members working in shifts. In this way, we feel we can effectively cover several schools in the area.

RICHMOND SEARCH (01/91)

Six of our members responded to the Richmond search. They consisted of two FTL's, three FTM's, and one COQ.

January 23, 1991

NOTE TO ASRC GROUP TRAINING OFFICERS:

1. the most recent corrected roster of ASRC group training officers is enclosed for your review and use.

2. The proposed ASRC training simulation, during March 22-24, 1991, proposed in southwest Virginia has been cancelled. SWVMRG feels they can not host this activity for at least a year.

3. The ASRC-wide training "Swamp-SAR" exercise hosted by Tidewater Search & Rescue Group is scheduled for April 19-21, 1991.

4. The annual Dogwood 50 Km race on the Big Blue Trail in Shenandoah County, Virginia near Strasburg adjacent to I-81 is scheduled for Saturday, April 20, 1991. This is a SAR operations activity for the ASRC. Information will be forwarded separately to each Group.

5. This is a second request!

Last September I asked Group Training Officers to make pen and ink changes for changes and deletes for all information categories for your group on the most recent copy of the ASRC personnel roster. A copy of the roster was enclosed for your use.

To date, we have only received complete responses from TSAR and AMRG. Partial responses were received from SWVMRG, BRMRG and SMRG.

The type and level of information requested is described in section 2.3 of the ASRC Operations Manual (see attached).

The accuracy and timeliness of the data regarding members in your Group is important. Plans are underway to take this data base to searches for use in ICS operations. Please forward this information to me, not later then February 15 at the following address:

Peter McCabe
11034 Berrypick Lane
Columbia, Maryland 21044

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6. To date work has not started on development of standardized evaluation procedures for existing ASRC training and accreditation standards. I earlier hoped a first step could occur at an informal meeting of GTOs at the 1990 ASRC Annual Meeting in December in Charlottesville. However, not enough GTOs were in Charlottesville.

AMRG has sent their evaluation standards for FTM qualifications.

If your Group has established evaluations procedures or tests for either the FTM or FTL standard, please mail me a copy at your earliest opportunity.

We need to set a weekend date and place to begin this important task for the Conference. First, the date, then the place.

< Could each of you check your commitments for February 23-24, and get back to me -- not later then February 1 -- if you are available that weekend? If you are not personally available, do you have an alternative or backup person available for February 23-24.

< If we can settle on a date, we can then work on a central location with free lodging.

I am home most evenings after 10:00 PM at (301) 596-5554.

Pete McCabe

APPALACHIAN SEARCH & RESCUE CONFERENCE, INC.
TRAINING OFFICERS

Unit	Training Officer(s)	Home Telephone
Conference	Peter McCabe 11034 Berrypick Lane Columbia MD 21044	(301) 596-5554
AMRG	Dave McCulloch 914 Mina Street Pittsburgh PA 15212	(412) 321-0604
BRMG	John Atwell 132 Harrison Charlottesville VA 22904	(804) 977-3617
(Jan-May 1991)	8645 Ruffin Court Manassas, Virginia 22110	(703) 369-3068
ESAR 616	Megan Gralia 5035 Castle Moor Dr Columbia MD 21044	(301) 730-2736
	Carl Solomon 7302 Hidden Cove Columbia MD 21046	(301) 381-1527
RSAR	Mark Pennington 2732 Grantwood Road Richmond VA 23225	(804) 320-8052
SMRG	William Dixon 4401 South First Road Arlington VA 22204	(703) 979-6568
SWVMRG	Jim Fishenden 1401-C Seneca Drive Blacksburg VA 24060	(703) 953-1022
Tidewater SARG	Mark Eggeman 1226 Waterfront Drive, #201 Virginia Beach VA 23451	(804) 425-0263

Effective thru: JAN 17 1991

- A tarp or similar wet-weather patient covering

2.2 Conference Record-keeping Requirements

The following list is the minimum information which must be kept for official ASRC records. This information is necessary so that the administrative functions of the ASRC have an official information source on its members. Groups must keep pertinent information up-to-date with the ASRC Secretary. The following information must be passed to the ASRC Secretary:

Name
Social Security number
Mailing Address
Phone Numbers (both Home and Work)
Membership Type
Training Qualification(s) and Date of Expiration
Level of Medical Training and Expiration Date
Vehicle Information (car type, capacity, license plate, radio equipment)

2.3 Callout Roster Requirements

The following is a list of minimum information which must be presented upon an official Group Callout Roster. This information is necessary so that ASRC operations function effectively:

Group information (alerting phone #, etc.)
Name
Address (preferable geographic)
Phone Numbers (both Home and Work)
Training Qualification(s)
Level of Medical Training
Vehicle Information (car type, capacity, license plate, radio equipment)

2.4 Thirty-six Month Review

All Certified Groups shall undergo a comprehensive review, to be defined and conducted by the Board of Directors, at regular intervals not to exceed thirty-six months.

2.4.1 Requirements of Review

2.4.1.1 Minimum Equipment

Certified Groups shall maintain minimum equipment requirements as set forth in the ASRC Operations manual, and be prepared to show physical evidence of the existence of such equipment.

BLUE RIDGE MOUNTAIN RESCUE GROUP
P.O. BOX 440
NEWCOMB STATION
CHARLOTTESVILLE, VIRGINIA 22904

TO: Appalachian Search and Rescue Conference Board of Directors
FROM: Jim MacMurray, Chairman Blue Ridge Mountain Rescue Group JCM
RE: Status of Tidewater Search and Rescue Group's conference membership
DATE: Friday, Feburary 1, 1991

TSAR has submitted the following documentation to BRMRG in order to become certified as a full member group of the conference (see attached):

1. Current membership roster
2. Group equipment inventory
3. Current financial records

As per the motion made by Gary Mechtel at the ASRC's general membership meeting 12/1/90, the ASRC BOD has been delegated the authority to certify TSAR as a full member group by the general membership. The BRMRG BOD supports a favorable vote for such.

02FEB91

WILDERNESS AND RURAL LIFE SUPPORT GUIDELINES

Editor:

Robert J. Koester, M.S. *WEMT course coordinator, Virginia Department of Emergency Services. Chairman, Appalachian Search & Rescue Conference (A.S.R.C.)*

The following individuals served as contributing editors.

Albert M. Baker, M.D. *Resident, Dept. of Internal Med. Medical College of Virginia Hospital. A.S.R.C.*
Richard A. Christoph, M.D. *Pediatric EMS Director, University of Virginia Medical Center.*
Keith Conover, M.D. *Department of Emergency Medicine, Mercy Hospital of Pittsburgh. A.S.R.C*
Anne Eckman, EMT *University of Virginia Medical School. A.S.R.C.*
Lorick Fox, REMT-P, PA-C *Cardiac Surgery, McGuire VA Medical Center. Flight Paramedic, A.S.R.C.*
Carol Gilbert, M.D. *Director of Trauma, Roanoke Memorial Hospital. A.S.R.C.*
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William Mackreth, EMT-P *Flight Paramedic, University of Virginia Medical Center. A.S.R.C.*
Diana D. Rockwell, R.N. *Prehospital Coordinator, University of Virginia Medical Center.*

The editors have taken great care to make certain that all guidelines are correct at the time of this printing. However, as our knowledge of wilderness and rural medicine expands, guidelines will change. *Procedures requiring special training by a physician are indicated by italics.* This set of guidelines is not intended to take the place of an education in wilderness and rural emergency medicine. It is intended to provide a set of reminders to practitioners in the field.

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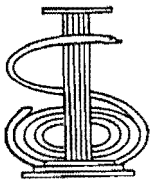

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TABLE OF CONTENTS

GENERAL ORDERS FOR ALL PATIENTS

*Assess scene for safety hazards and chance of trauma.

*Check responsiveness.

*Primary survey (see Appendix C).

*Obtain brief history.

*Reassure patient and keep informed about treatment.

*Perform secondary survey.

*Radio base with the following information as soon as possible.

a.Team identification
b.Radio net security request
c.Patient status code
d.Team location
e.Patient's age, sex, approximate weight
f.Patient's chief complaint, mechanism of injury
g.Description of history of present injury or illness with pertinent negatives
h.Pertinent past history (medications, allergies)
i.Vital signs, mental status, and physical findings
j.Highest level of medical training on team, equipment available; and additional equipment or personnel needed.
k.Treatment provided
l.Estimated time for evacuation to roadhead

*Update report regularly and immediately advise base of important changes.

*Record all notes on Initial Report Form (see back).

*Fill out EMS report form.

*Providers must **not** provide any treatment for which they are not certified.

SHOCK

A. HYPOVOLEMIC SHOCK

*Primary survey (see appendix C).
a.Airway with cervical spine control
b.Breathing
c.Circulation: control of major bleeding
d.Disability (mental status AVPU)
e.Expose and evaluate all injuries. Cover again and insulate to conserve heat

*Vitals every 5 minutes until stable, then every 15 min.

*Perform brief multi-trauma survey.

*Treat for shock.

a.Elevate legs or the foot of Stokes basket if no respiratory distress
b.*Apply MAST if multi-system trauma, or injuries of abdomen, pelvis, or legs. Inflate if systolic Blood Pressure (BP) less than 90 mmHg with clinical signs of shock* **(see appendix B for contraindications)***
c. Keep patient warm

*Administer O_2 - high percentage (see appendix A).

*Splint any suspected fractures.

*Request helicopter evacuation.

B. CARDIOGENIC SHOCK

*Place patient in position of greatest comfort.

*Vitals every 5 minutes including breath sounds until stable then every 15 minutes.

*Administer high percentage O_2 **(see appendix A).**

*Keep patient warm.

*If possible, seek medical command advice before moving.

*Request helicopter evacuation.

* *Italics indicates skill requiring approval of physician.*

C. ANAPHYLACTIC SHOCK
(difficulty breathing, wheezes, generalized hives, and low blood pressure after exposure to possible allergen.)

*ABC's.

*History (e.g. recent insect stings, ingestions, past reactions).

*Assure removal of stinger.

*Listen to breath sounds for development of respiratory difficulty (wheezing, stridor).

*Elevate legs unless respiratory distress occurs.

*Vitals every 5 minutes until stable then every 15 min.

*Assist patient in administration of their own Epinephrine (Ana-Kit™, Epi-Pen™).

For Adults: Administer a subcutaneous injection of 0.3 ml epinephrine (1:1000)* **(see appendix Q).

**For Children: Administer 0.01 ml/kg epi (1:1000) S.Q. up to a maximum of 0.3 ml.*

**Repeat injection in 10 minutes if needed.*

**Administer 50 mg. (two capsules) oral Benadryl™ (diphenhydramine) to Adults (> 12 y.o.).*

*Keep patient warm.

*Administer O_2 - high flow **(see appendix A).**

*Request helicopter evacuation if unstable.

CARDIAC PROBLEMS

A. SUSPECTED CARDIAC PAIN

*ABC's.

*Take brief history (past history, Angina, MI, CHF, diabetes, hypertension, COPD, meds..).

*Evaluate for heartburn and chest muscle injuries.

*Vitals every 5 minutes until stable then every 15 min.

*Check for pulmonary edema (wheezes, rales).

*Loosen restrictive clothing and place patient in position of greatest comfort.

*Reassure patient.

*Allow patient to take own nitroglycerin 0.4 mg. S.L. every 5 minutes x 3 if needed, and systolic BP > 100 Closely monitor blood pressure. If effectively reduces pain or difficulty breathing, dosage may be repeated

*Administer O_2 - High flow (consider history of COPD).

*Evacuate with medical command approval.

*Consider helicopter evacuation.

B. CONGESTIVE FAILURE
(Fluid in the lungs, shortness of breath, wheezes, rales)

*Treatment same as Suspected Cardiac Pain (see above).

*Keep patient in position of greatest comfort. If possible allow patient to sit up with legs dangling.

*Listen for progression of crackles, rales and wheezes.

*Request helicopter evacuation.

RESPIRATORY

A. ASTHMA

*ABC's. Observe closely for respiratory depression.
*Brief history (past history, medications...).
*Vitals every 5 minutes until stable then every 30 min.
*Place patient in position of greatest comfort.
*Increase oral fluid intake (if History of asthma).
*Assist patient with administration of personal inhaler.
*Administer *warmed*, humidified O_2.

**If severely dyspneic administer 2-3 deep inhalations 1-5 minutes apart of albuterol with a metered dose inhaler. May repeat as long as pulse < 140 and diastolic BP < 100.*

**If albuterol unsuccessful, no history of chest pain, and age 12-45 then administer 0.3mg (0.3ml) 1:1000 epinephrine S.Q.* (see appendix Q).

*Consider helicopter evacuation.

B. HYPERVENTILATION

*Evaluate for and treat other disorders (i.e. Fever, CNS disorder, anxiety, ingestion, hyperglycemia).

*Place patient in position of greatest comfort.

*Reassure patient. Avoid paper bags, monitor for signs of airway obstruction.

C. DYSPNEA (difficulty breathing)

*ABC's.

*Take history (recent trauma, asthma, cardiac disease, insect stings).

*Calm and reassure patient.

*Vital signs every 5 minutes until stable then every 15 minutes. Listen to lungs.

*Place patient in sitting position.

*Loosen restrictive clothing.

*Administer O_2 - high flow. Consider COPD.

CHEST TRAUMA See musculoskeletal protocols.
ANAPHYLACTIC SHOCK See Shock protocols.

GASTROINTESTINAL

A. ACUTE ABDOMEN

*History (past surgery, trauma, eating, pain onset, pain type, blood in stool or urine, nausea/vomiting).

*Abdominal exam (check bowel sounds first, percussion, palpate & check for rebound tenderness and scars).

*Vitals every 15 minutes. Oral temperature every hour.

*Place patient in position of greatest comfort and minimize movement.

*Nothing by mouth.

*Request helicopter evacuation.

B. DIARRHEA/VOLUME DEPLETION

*History (infection, fever, eating, pain onset, pain type, blood in stool, fecal incontinence).

*Abdominal exam (check bowel sounds first, percussion, palpate, scars).

*Vital signs every 15 minutes until stable. Include hourly orthostatic BP.

*Increase clear oral fluids unless contraindicated. Administer formulated oral electrolyte mixtures (see appendix J).

C. NAUSEA/VOMITING

*History.

*Vital signs every 15 min., include hourly orthostatic BP.

*Prevent aspiration of vomitus.
a.Secure patient on side in stokes basket
b.Suction secretions constantly with syringe or other portable suction device if level of consciousness decreased

*Consider helicopter evacuation.

DIABETES

A. HYPOGLYCEMIA
(low blood sugar)

<u>Conscious patient</u>

*Obtain brief history.

*Vitals every 5 minutes including neurological checks until stable, then every 30 minutes.

*Allow patient to take sugar orally.

<u>Unconscious patient</u>

*ABC's. check for med-alert tag.

*Consider other causes of altered mental status (hypothermia, head injury, overdose...).

*Vitals every 5 minutes until stable. Include initial temperature, watch for signs of shock.

*Prevent aspiration of secretions by regular suction. Secure patient on side in the Stokes basket.

*Keep patient warm.

*Carefully administer glucose paste under the tongue.

**Administer Glucagon 1mg (1ml) I.M* (see appendix Q).

*Administer O_2 - high flow, consider COPD.

*Consider helicopter evacuation.

B. HYPERGLYCEMIA
(high blood sugar, ketoacidosis)

*ABC's check for medical alert tag.

*Take history, if available.

*If unsure if patient is hyperglycemic or hypoglycemic, treat for hypoglycemia and observe.

*Vitals every 10 minutes with neurological checks until stable then every 30 min.

*If fully conscious, administer oral fluids.

*Prevent aspiration of vomitus and prepare for vomiting.

*Treat for possible shock.

*Administer O_2 - high flow (consider history of COPD).

*Request helicopter evacuation.

MUSCULOSKELETAL

A. CHEST INJURIES

Broken rib
(point tenderness of rib)

*Assess breath sounds to determine presence of underlying lung injuries.

*Vital signs every 5 minutes until stable.

*Encourage patient to take occasional deep breaths.

*If respiratory distress, administer O_2 - high flow. Consider history of COPD.

*Constantly evaluate for pneumothorax and watch for progression.

Flail Chest
(paradoxical movement)

*ABC's If inadequate respirations, assist ventilations.

*Stabilize segment by constant, firm manual pressure or having patient lie with the injured side down. Consider positive pressure assistance to ventilations.

*Treat flail chest before moving on to other injuries.

*Administer O_2 - high flow (see appendix A).

*Vitals every 5 minutes, including breath sounds.

*Secure bulky soft mass as a splint on top of loose fragment of chest wall with adhesive tape.

*Request helicopter evacuation.

Pneumothorax
(decreased breath sounds, shortness of breath)

*ABC's

*Assess and treat any trauma.

*Administer O_2 - high flow (see appendix A).

*Vitals every 5 minutes until stable then every 15 minutes. Include breath sounds.

*Apply occlusive dressing if needed for chest/neck trauma. Have patient cough, then cover.

*Watch for signs of tension pneumothorax (tracheal deviation, diminishing breath sounds, increasing difficulty breathing).

*Be prepared to suction airway.

*Transport in most comfortable position.

*Request helicopter evacuation.

Perforating Chest Injury

*ABC's.

*Administer O_2 - high flow (see appendix A).

*Close hole immediately with sterile occlusive dressing by having patient cough then cover.

*Do not tape completely, leave one side untaped to create valve-like effect. If dyspnea increases remove dressing & reapply at end of expiration.

*Vitals every 5 minutes including breath sounds until stable then every 15 minutes.

*Assess and treat for trauma.

*Monitor carefully, watch for the signs of a tension pneumothorax.

*Transport in most comfortable position (sitting).

*Request helicopter evacuation.

B. SPRAINS AND STRAINS

*Obtain history and mechanism of injury.

*Perform neurological and circulatory survey (movement, sensation, pulses, and capillary refill) distal to injury.

*Allow patient to walk only if no gross swelling or ecchymosis, and patient able to walk forward and backwards. If successful, treat with rest, cold (snow, ice, cold water), an elastic bandage, and elevation.

*Otherwise, treat as a fracture.

C. FRACTURES (Fx)

*ABC's, check for and control bleeding.

*Obtain history and mechanism of injury.

*Perform neurological and circulatory survey (movement, sensation, pulses, and capillary refill) distal to injury.

*If distal pulses present, immobilize and splint the Fx and the joints above and below the Fx.

*Apply cold compresses (snow, ice, cold water, instant ice) over site of bruise around Fx.

*If distal pulse absent, apply traction, straighten limb, splint and immobilize, and maintain traction if required. See next step regarding open Fx. If still no pulse, reposition again.

*If open Fx, do not push bones into wound. Splint limbs as they lie. Straighten open Fx with gentle axial traction only if a) distal pulses are absent and cap refill poor or b) splinting necessary to control bleeding or c) splinting necessary for rescue.

*If open Fx, a) if evacuation >2 hrs, and if b) sterile saline or clean water is available, then irrigate wound with copious amounts of fluid under pressure prior to straightening. See next step regarding irrigation technique.

*Prepare a) at least one liter of clean water per each square inch of wound. b) May use Iodine tablets in safe water. c)Irrigate the wound using a 35cc syringe with a 16-19 gauge needle or angiocath after removing needle. Improvise with plastic bag or glove.

*Repeat neurological and circulatory checks frequently after splinting.

*Treat for shock, if indicated.

*Elevate injured extremity whenever possible and not contraindicated.

*Request helicopter evacuation if diminished circulatory or neurological status or if open Fx.

D. DISLOCATIONS

General

*Check movement, pulses, sensation distal to injury.

*If circulation and neurological signs normal, immobilize the involved joints proximal and distal to injury, in position of greatest comfort. If impaired request helicopter evacuation.

Shoulder dislocation

Attempt anterior shoulder dislocation reduction if a) patient evacuation to hospital will take > 6 hr, b) no signs of midshaft fracture present, and c) dislocation occurred within last 4 hours.

**Contact medical command if possible.*

a)Have patient lie face down on a rock, log, or other platform and allow the affected arm to dangle down with 10-15lb weight on wrist or upper arm (see appendix P).

b)*The patient is told to relax and eventually spontaneous reduction may occur (about 1 hour).*

c)After reduction, immobilize arm with sling and swathe, check neurovascular status (see appendix P).

Patella dislocation

**Attempt patella reduction if a) pt evacuation to hospital >6 hr, and b) injury occurred within 2 hours.*

**Flex hip and apply gentle traction that slowly extends the knee while gently pushing the patella back into its normal position.*

*Immobilize knee in extended position from the ankle to the groin and repeat neurological and circulatory status.

Knee dislocation

*Check distal pulses, circulation and neurological status.

*Attempt knee dislocation reduction only if no distal pulses present with poor capillary refill or distal neurological deficits. First attempt contact with Medical Command.

*One person stabilizes the femur proximal to the knee.

*Second person applies in-line traction on the lower leg.

*Repeat neurovascular checks and periodically check for compartment syndrome (see appendix B).

*Splint leg with approximately 15° of flexion.

*Request helicopter evacuation.

Hip dislocation and fracture.

*Check distal pulses, circulation, and neurological status.

*Buddy splint legs together after padding. When available, apply traction device for femur fractures.

*Request helicopter evacuation.

E. NECK/SPINE INJURIES

*In case of high-velocity impact (e.g., fall greater than 15', aircraft crash, motor vehicle accidents) head injury with altered consciousness, unconsciousness associated with trauma, severe facial trauma, any sign or symptom of spine injury (abnormal motor or sensory function, numbness, spine tenderness or pain on neck or back, tingling), or unknown mechanism of injury, then assume spinal cord injury.

*Maintain cervical neutrality on patient's head.

*Apply a stiff cervical collar, if available. Do not hyperextend neck. If not, use available materials to stabilize

the head and neck.

*Vitals every 5 minutes until stable then every 30 min.

*Evaluate, and treat for shock. If stable, may await arrival of more definitive immobilization devices prior to evacuation.

*Place on backboard, KED, vacuum splint or other rigid stretcher, in normal anatomical position, when available.

*Insure backboard or device and lumbar section of the spine (small of the back) well padded.

*Insure knees kept slightly flexed for patient's comfort.

*To prevent aspiration, suction secretions. Anticipate vomiting when packaging patient. Rotate patient as a whole if needed.

*Conduct and document neurological checks every 10-15 minutes.

*Consider helicopter evacuation.

NEUROLOGICAL

A. ALTERED CONSCIOUSNESS

*ABC's with cervical spine control.

*Obtain history (diabetes, drug abuse, trauma, exposure, seizures).

*Vitals every 5 minutes and *initial rectal temperature,* until stable then every 15 minutes.

*Conduct full secondary survey and neurological exam including GCS **see appendix D.** (if GCS less than 13, request helicopter evacuation).

*If indicated administer Glucose paste (sugar) under the tongue. Use caution with the airway.

*Administer high flow O_2 (consider history of COPD).

*Treat for hypothermia, if indicated.

*Prevent aspiration of vomitus and be prepared to suction airway.

B. CEREBROVASCULAR ACCIDENT (stroke)

*ABC's.

*Vitals every 30 minutes and *initial rectal* temperature.

*Conduct and document neurological checks every 15-30 minutes.

*Elevate head 15 to 20 degrees with spinal support.

*Reassure patient.

*Administer O_2- lowflow. Consider COPD.

*Prevent shock.

*Be prepared to suction airway.

C. HEAD INJURY

*ABC's. Assume spinal cord injury, in all severe head injuries.

*Secure a good airway.

*Maintain cervical neutrality.

*Apply cervical collar, if available. If not, use available materials to stabilize the head and neck.

*Vitals every 5 minutes including initial temperature until stable, then every 30 minutes.

*Conduct and document neurological checks every 30 minutes.

*Place on well padded backboard, KED, vacuum splint, or other rigid stretcher in normal anatomical position.

*Elevate head of backboard or head of the Stokes basket if BP >90 and no other signs of shock.

*Administer high flow O_2. Hyperventilate to a rate of 24-30 breaths/minutes, if respirations less than 24 breaths/minute (see appendix A).

*Do **not** aggressively treat mild hypothermia.

*Prevent aspiration of vomitus and be prepared to suction.

*Request helicopter evacuation.

D. SEIZURES

<u>During</u>

*Protect patient from self injury.

*Note sequence and duration of manifestations, urinary/fecal incontinence, tongue biting, or any other trauma.

*If possible, administer O_2 - high flow. Consider COPD.

*Insert nasopharyngeal airway, if required.

*Restraint contraindicated.

*If patient has repeated seizures with persistent decreased consciousness, request helicopter evacuation.

<u>After</u>

*ABC's

*Take history.

*Vital signs every 15 minutes including initial temperature until stable.

*Prevent aspiration.

*Examine for additional trauma. Immobilize spine if indicated.

*Allow patient to rest after seizure. Orient patient to his surroundings.

*Keep environment as calm and quiet as possible.

*Insert nasopharyngeal airway, if required. .

*If patient fully conscious administer oral sugar.

*Transport patient on side.

*Some patients with a known seizure disorder and a single seizure may be able to walk out.

OPHTHALMOLOGIC

A. CONJUNCTIVAL FOREIGN BODY

*Flush with clean water and inspect.

*Lift out with tip of moist cotton applicator. Do **not** get rigid part of applicator near eye (see appendix P).

B. CORNEAL FOREIGN BODY

*Irrigate with water (saline preferable, contact lens solution).

*Do **not** remove if implanted.

*Patch eye and keep moist. Patch both eyes if feasible.

*If impaled object do **not** remove. Treat by placing cup over affected eye.

C. CORNEAL ABRASION

*Patch both eyes if feasible. Otherwise patch affected eye.

*Apply cool compress.

*Consult an Ophthalmologist for follow-up.

D. SNOW BLINDNESS

*Treat the same as corneal abrasion.

SOFT TISSUE

A. BLEEDING & WOUNDS

Major bleeding

*Rescuer should wear protective clothing.

*Apply pressure with sterile gauze sponges and dressings. Add additional ones as needed. If bleeding persists, reevaluate bleeding site and redirect pressure.

*Elevate legs and/or bleeding site, if not contraindicated. Treat for shock (see **shock guidelines**).

*If severe arterial bleeding persists, place BP cuff (or tourniquet if only one BP cuff is available) on the extremity proximal to wound. Inflate BP cuff 10 mmHg above systolic pressure and clamp tubing. Monitor pressure continuously. If BP cuff tourniquet needed contact medical command to discuss length of time to continue tourniquet.

*If extremity involved, splint if indicated.

*Obtain vitals every 10 minutes (pulses, skin temp, capillary refill).

*When bleeding is controlled, examine for other injuries.

Nosebleed

*Maintain airway. Have patient squeeze nose for 5-10 minutes with head tilted forward.

*Take history and vitals.

*Aspirin contraindicated.

Vaginal Bleeding

*Take history (abdominal pain, menstruation, pregnancy, missed periods, amount of bleeding) and vitals.

*If spotty bleeding patient may slowly walk out. If suspect pregnancy and copious bleeding develops, evacuate on left side. Request helicopter evacuation.

*Do **not** place bandages into the vagina.

Amputated Extremities

*Treat for major bleeding (**see above**).

*Place amputated part (rinsed with sterile saline) in saline moistened gauze and seal in a plastic bag. Keep bag cool with cold water or mixture of ice and water.

*Do **not** immerse part directly in saline or water.

*Do **not** allow part to freeze or come in contact with ice.

*Ensure part is evacuated with patient.

*Request helicopter evacuation.

Wounds

*Minor bleeding: Apply direct pressure with sterile dressing and elevation. If not effective, treat as major bleeding. Consider seeking care for tetanus and rabies.

*Irrigate wound with clean (or sterile) saline or water under pressure; use at least one liter of water per three inches of laceration or each square inch of abrasion (**see Fractures for irrigation technique**).

*Impaled object: Immobilize object in place with bulky dressing. Contact medical command concerning removal or shortening of object if long, rough evacuation.

*Abrasions: Cover with antibiotic ointment and sterile dressing after irrigation. See physician if contaminated, or involves face.

*Infected wound: Clean all foreign bodies from wound and allow to drain. Clean wound daily and apply topical antibacterial and dressing. Apply 30 minute hot soaks three times a day. Immobilize infection site. Evacuate for physician follow up.

*Blisters: a) If no danger of popping then gently clean blister and pad. b) If danger of popping sterilize a pin or obtain sterile needle. Drain blister, apply topical antibacterial and sterile dressing (**see appendix P**).

B. BURNS

*Stop burning process- roll victim on ground. If electrical, properly trained individual should carefully remove victim from electrical contact. Chemical burns require copious amounts of water for at least 20 minutes, especially if in the eyes.

*ABC's.

*Vital signs every 10 minutes until stable.

*Assess for other injuries.

*Remove jewelry and non-adherent clothing.

*Place sheet or plastic liner around patient.

*Apply cold water to first and second degree burns; but to no more than 10% of total body surface area at one time. Monitor core temperature.

*Administer high flow O_2- consider COPD.

*Oral rehydration contraindicated for severe burns (2^{nd} and 3^{rd} degree burns greater than 15% of total body surface area (**see appendix H.**). *If IV fluids unavailable and transport > 6 hrs, administer oral rehydration after*

establishing (1) bowel sounds, (2) passing gas, (3) hunger, (4) normal consciousness, (5) no oral or inhalation burns, and (6) no other contraindications.

*Application of creams contraindicated for all 2nd and 3rd degree burns.

*If burns involve face, hands, feet, genitalia, > 15% of body surface area, or if evidence of respiratory burns (singed nasal hairs, sooty sputum, extensive facial burns), or if patient has underlying medical problems, request helicopter evacuation.

DENTAL

A. ORAL BLEEDING

*Determine if wound is in the oral cavity, or deeper.

*Pack with gauze.

*Apply pressure.

*Take vitals.

*Monitor airway carefully.

B. FRACTURED TOOTH

*Cover with gauze.

C. AVULSED TOOTH
(knocked out)

*Rinse tooth gently in water.

*Immediately insert avulsed tooth into socket.

*Have patient hold tooth firmly in socket.

*If unable to replace tooth and if patient fully conscious, then place tooth in patient's cheek pouch.

*If not possible, place in gauze dressing soaked in water (or patient's saliva). Place moist gauze with tooth in ziplock™ bag.

*Ensure tooth is transported with patient.

CHILDBIRTH

A. GENERAL

*Obtain history (estimated birth date, twins, number of pregnancies, vaginal bleeding, watery discharge, timing of contractions, desire to move bowels).

*Vitals every 5 minutes including timing contractions.

*Administer O_2 - high flow (**see appendix A**).

*Prepare for delivery with gloves and drapes if birth expected within minutes. Inspect perineum. Do not conduct a vaginal exam. Be prepared to dry and provide insulation for baby.

*Request helicopter evacuation.

B. NORMAL DELIVERY

Gently support infants head over perineum. Control expulsion of infant's head by putting gentle pressure on the perineum and guiding the head out.

*Once infant's face has appeared; vigorously suction mouth and nostrils while supporting head.

*Check for cord around infant's neck. If around neck attempt to slip over head. If too tight; clamp and cut at this time (see below).

*Apply gently downward pressure on infant's head until anterior shoulder appears. Then apply upward traction on the head to deliver other shoulder. Again vigorously suction mouth and nostrils. Begin drying infant.

*Clamp the cord 8 inches and 10 inches from the infant. Cut the cord between the clamps.

*Finish drying infant. Be sure to cover head.

*Follow steps outlined in Management of Mother and Placenta (see below).

C. MANAGEMENT OF MOTHER AND PLACENTA

*Allow placenta to deliver spontaneously, do **not** pull on cord.

*Continuously massage fundus (mother's abdomen). Mother may also breast-fed infant if she desires.

*For severe bleeding or if placenta fails to deliver, treat for shock and continue to massage abdomen.

*Save placenta in plastic bag and transport with mother and infant.

D. BREECH DELIVERY

*Take no manipulative action until infant is delivered spontaneously to the umbilicus. Do **not** pull on or place limbs into vagina.

*If infant descends to umbilicus grasp pelvic bones and apply gently downward traction. Do **not** apply traction to legs or back.

*Swing infant's body to left or right (whichever one is easier) to deliver one shoulder. Swing infant's body the opposite direction to deliver second shoulder.

*Apply gently abdominal compression to the mother's uterus while allowing the infant's legs to hang down for 30 seconds (while supporting infant). Maintain abdominal compression and swing infant's legs upward until its body is in a vertical position to deliver the head.

*Vigorously suction infant's mouth and nostrils.

*Clamp and cut cord (see above).

E. PROLAPSED CORD

*Put mother in shock position while resting on one side.

*Place a moistened sterile towel over the prolapsed cord. Do **not** touch the cord itself.

*Arrange quickest possible evacuation.

*If infant begins to deliver, allow delivery to proceed (follow normal delivery, see above).

*Suction infant's mouth and nostrils, clamp and cut cord.

HEAT DISORDERS

A. HEAT CRAMPS (Muscle spasms)

*Seat patient in a cool place and gently stretch the affected muscle.

*Administer oral fluids containing electrolytes, if fully conscious (see appendix J).

*Salt tablets and massages contraindicated.

B. HEAT SYNCOPE (Fainting)

*Have patient lie down in a cool place.

*Vital signs every 10 minutes until stable.

*Check for any trauma due to fall, conduct neuro exam.

*Evaluate patient for hypoglycemia, CVA, history of seizures, heart problems, and cardiac arrhythmias. Check orthostatic BP.

*Administer oral fluids containing electrolytes and sugar, once fully conscious (see appendix J).

C. HEAT EXHAUSTION

*Have patient sit or lie down in a cool place.

*Vitals every 10 minutes including initial temperature until stable.

*Elevate feet.

*Remove constricting clothing and excessive clothing.

*Begin gentle evaporative cooling with tepid water and fanning.

*Administer oral fluids with electrolytes if possible (see appendix J).

*Be prepared to clear airway if vomiting occurs.

D. HEAT STROKE
(neurological impairment with elevated temperature)

*ABC's.

*Rapidly remove clothing, cool patient by moistening skin with tepid water while fanning vigorously. Cover extremities with wet, light clothes or sheet.

*Vitals every 5 minutes including temperature until stable then every 15 minutes.

*Conduct and document neurological checks every 15 minutes.

*Evaluate and treat for shock.

*Provide shade.

*Administer high flow O_2 (see appendix A).

*Do not apply ice directly to skin.

*Do not give or use alcohol.

*Do not give Aspirin, Ibuprofen, or Acetaminophen.

*When core temperature below 102° F, stop active cooling, but continue to monitor temperature throughout evacuation. Be prepared to reinitiate cooling.

*Be prepared to clear airway if vomiting occurs.

*Request helicopter evacuation.

COLD DISORDERS

A. FROSTNIP

*Recognize early, in team members and self.

*Apply warm hand to affected area or place in armpits. Do **not** rub, massage, or apply snow.

B. FROSTBITE

*Check vitals including temperature every 10 minutes until stable.

*Evaluate and treat for hypothermia.

*Determine extent and severity of frostbite.

*Gently remove restrictive clothing, jewelry, etc., from affected area.

*Wrap in bulky sterile dressings to protect from pressure.

*Provide insulation to prevent further cooling.

*Elevate and immobilize area.

*Administer O_2 - low flow (**see appendix A**).

*Do **not** rewarm in field unless transport greatly delayed (>12 hr) and **no** possibility of refreezing. Then rewarm with 105-110° F water. Water temperature must be monitored using a thermometer. Extremity should be as straight as possible without touching sides of container.

*Rubbing and massage contraindicated.

*Tobacco, alcohol, and caffeine contraindicated.

C. HYPOTHERMIA

Mild 37-32° C
98-90° F
shivering:

*Avoid rough handling. Do **not** place in head up position.

*Prevent further heat loss.

- provide shelter
- insulate from the ground
- If clothes damp, remove, dry skin, provide layer of dry clothes
- Wrap in space blanket or plastic bag and provide as much insulation as possible
- Cover head and feet

*Record vitals every 10 minutes, including initial temperature until stable.

*Direct auscultation of the heart should be used to determine pulse rate, if not palpable peripherally.

*Evaluate for co-existing disorders (trauma, drug overdose, hypoglycemia) Conduct neurological checks.

*Administer *warmed, humidified* O_2. Consider COPD.

*Add heat.

- Administer warm sugared fluids. Do **not** give if patient not fully alert, has abdominal disorders, or if surgery required.
- Place in sleeping bag protected from elements. Place second person in bag if required
- Hot packs must be less than 110°F and placed on the neck, groin, and armpits

8.Alcohol, caffeine, and nicotine contraindicated.

Severe < 32° C
< 90° F

Shivering stops, inability to walk.

ABC's. Auscultate heart for at least 3 minutes if no carotid pulse present.

*CPR must **not** delay patients removal from field.

*Be as gentle as possible. Do **not** place in head up position.

*Prevent further heat loss.

- provide shelter
- insulate from ground
- if clothes damp, **cut off**, dry skin gently, provide layer of dry clothes
- wrap in space blanket or plastic bag
- cover head and feet (do **not** rewarm feet)
- place in sleeping bag

*Prevent aspiration.

*Record vitals every 5 minutes *including initial rectal temperature.* When vitals stable record every 15 minutes. Heart rate should be determined by direct auscultation of the heart. Conduct neurological checks.

*Administer *warmed humidified* O_2 -high flow.

*Evaluate for co-existing disorders.

*Do **not** give oral fluids, massages, alcohol, caffeine, or nicotine.

*Request helicopter evacuation.

POISONINGS; VENOMOUS BITES & STINGS

A. SNAKEBITE (pit viper)

*ABC's.

*Identify snake if no delay or risk.

*Check vitals every 10 minutes.

*Reassure patient and keep patient quiet.

*Remove constricting items.

*Check bite site and irrigate wound (see **fractures**).

*Suction with a high negative pressure pump (no cutting required) if bite within 15 minutes.

*Splint and immobilize limb at heart level.

*Do **not** cut skin, use cold therapy, give alcohol, apply electric shock, or administer aspirin.

*Consider helicopter evacuation.

*If bitten individual is alone, then slowly walk out.

B. SNAKEBITE (coral snake)

All of the above.

*If bite is on extremity, apply loosely wrapped elastic bandage on entire limb starting 4 inches proximal to the puncture site.

*Loosen if distal pulses or venous blood return decreased.

C. TICK REMOVAL

*Use plastic gloves (tissue, cloth, etc) and/or forceps, when available.

*Grasp tick as close to head as possible.

*Pull tick out perpendicular to skin using steady pressure.

*Avoid twisting tick while pulling.

*Avoid squeezing tick.

*Examine attachment site to insure all parts removed.

*If parts remain, treat as topical splinter.

*Wash hands, especially if gloves or forceps were unavailable.

*Advise patient to discuss incident with the patient's personal physician.

D. SCORPION STINGS

*ABC's.

*Evaluate sting site and clean.

*Apply dressing and cold compresses.

*Splint or immobilize site.

*If possible and safe, save scorpion for identification.

*Consider helicopter evacuation in severe cases.

E. INSECT STINGS

*Obtain brief history.

*Remove stinger, if present, by teasing or scraping.

*Check vitals.

*Remove constricting items (rings, cloths, etc.).

*Clean wound.

*Apply Sting-Kill™ or meat tenderizer.

*Apply cold compress.

*Observe 15-30 minutes for allergic reaction.

*See **Shock** for **Anaphylactic** protocol.

F. SPIDER BITE

*Obtain brief history.

*Save specimen.

*Check vitals every 5 minutes until stable.

*Clean wound.

*Remove constricting items.

*Apply cold compress.

*Remove patient from field for physician follow-up.

*Observe 15-30 minutes for allergic reaction.

*See **Shock** for **Anaphylactic** protocol.

G. INGESTED POISONS

*ABC's

*Take history.
a)what taken
b)when, how much, symptoms

*Determine Glasgow Coma Scale Score **see appendix D.**

*Vitals every 5 minutes until stable then every 15 min.

*Check for gag reflex if not alert.

*Have Medical command contact poison control center.

*If instructed and patient conscious, administer activated charcoal (Use adult unit doses of premixed charcoal).

*If instructed and patient conscious, administer Syrup of Ipecac (**see appendix Q**):

Age	dose
< 8 months	**do not** administer
9-11 months	10 ml
1-12 years	15 ml
> 13 years	30 ml

15ml = 1 tbsp

*Administer 12-24 ozs of fluids after Syrup of Ipecac.

*Collect emesis and bring to hospital, if feasible.

*Administer second dose if no vomiting in 30 minutes. Administer no more than two doses.

*Do **not** allow patient to sleep, especially after administration of Ipecac.

LIGHTNING

ABC's.

*CPR if needed, primary and secondary survey.

*In multi-patient triage, treat pulseless and breathless patients first.

*Prolonged rescue breathing may be required.

*Administer O_2 - high flow (see appendix A).

*Vitals every 5 minutes until stable then every 15 min.

*Examine for trauma.

*Assume head injury (cerebral edema), cervical and lumbar spinal damage (see head injury section for proper treatment), or pulmonary edema possible.

*Immobilize spine.

*Examine for, and treat burns.

*Fluid restrictions in hypertensive and normotensive victims.

*Constantly check for delayed neurological, physiological, circulatory, and behavioral manifestations.

*Monitor for compartment syndrome (painful swollen limbs, progressive loss of sensory and motor function). Repeat examination every 30 minutes.

*Request helicopter evacuation.

HIGH ALTITUDE ILLNESSES

A. GENERAL TREATMENT

*Vital signs every 5-30 minutes, including lung sounds.

*Descend 2,000 feet or more until symptoms resolve, if possible.

*Increase fluids.

*Increase carbohydrates in diet.

*Avoid heavy exertion, moderate exercise best.

*Never leave patient alone.

*Sedatives, tobacco and alcohol contraindicated.

B. MILD ACUTE MOUNTAIN SICKNESS (AMS)
(headaches, shortness of breath, insomnia, anorexia, nausea)

*Descend 2,000 feet, more if possible.

*Take 10 deep breaths every 6 minutes unless dizziness or tingling of the hands develop.

*Administer 2L/min O_2 via cannula, if available.

C. MODERATE TO SEVERE AMS
(see mild symptoms, plus difficulty walking in a straight line and/or decrease in level of consciousness)

*Descend at least 2,000 feet, more if possible.

*Administer 2L/min O_2 via cannula, if available.

D. HIGH ALTITUDE CEREBRAL EDEMA
(decreased consciousness, impaired judgement, coma, hallucinations)

*ABC's.

*Descend at least 3,000 feet (at once), more if possible.

*Administer 2L/minute O_2 via nasal cannula.

*Request helicopter evacuation.

E. HIGH ALTITUDE PULMONARY EDEMA
(weakness, cyanosis, difficulty breathing, audible sounds [crackles] in chest, cough)

*ABC's.

*Descend 2,000-4,000 feet or more until symptoms resolve.

*Keep the patient warm.

*Minimize physical exertion.

*Have patient breath through pursed lips.

*Administer 6-10L/minute O_2 via mask.

*Request helicopter evacuation.

F. CEREBRAL THROMBOSIS
(visual field defects, isolated loss of sensation, decreased consciousness, other neurological problems occurring over several days)

*ABC's.

*Administer 2L/minute O_2 via cannula, if available.

*Immediate evacuation to hospital.

*Request helicopter evacuation.

PSYCHIATRIC

*Quiet and supportive reassurance is always indicated. Help orient the patient.

*Maintain good eye contact, paraphrase statements. Explain everything thoroughly.

*Clearly explain all actions and procedures.

*Give honest answers balanced by judicious omissions.

*Remember that unconscious patients may comprehend sounds, including conversations.

*Avoid changing medics.

*Remove disruptive individuals from the team.

*Remove anxious individuals from stressful situations.

*Obtain temporary detaining order if possible, and necessary. Discuss this ahead of time with the family and law enforcement agency.

*Obtain adequate force before restraint is attempted. Do not provoke the patient.

*Do not blame the patient for accident.

*Do not be flippant or dishonest.

*Do not tell victim how to feel.

*Do not expect too much or too little.

*Do not appear hurried.

*Do not expect praise or thanks for your actions.

*Above all, listen to the patient and care!

APPENDIX

A. OXYGEN DELIVERY SYSTEMS

*Administer high-flow O_2 to any patient who appears hypoxic with pallor, cyanosis, tachypnea, or labored breathing. Humidify O_2 in the presence of asthma or hypothermia or if therapy will be long term.

*Administer high flow O_2 to any trauma, shock, or cardiac patient by using a non-rebreather mask, unless mask not tolerated, or O_2 supply limited.

*Administer low flow O_2 to COPD patients (½-1L/min.). If in respiratory distress and patient fails to respond to lowflow then increase to high flow. **Be prepared to ventilate all COPD Patients!**

% O_2

B. PNEUMATIC COUNTER PRESSURE DEVICE
Medical Anti-Shock Trousers (MAST)

*Place MAST on patients suspected of hemorrhage from multi-system trauma, or on injuries to the abdomen, pelvis, or legs.

*Do not use MAST if major chest injuries, penetrating trauma, isolated head injuries, pulmonary edema, or hypotension due to medical illness.

*If above conditions satisfied and suspect shock (signs of shock and systolic blood pressure < 90 mmHg.); inflate suit until the systolic blood pressure is between 100-110 mmHg.

*If using MAST for isolated injuries to legs, inflate only appropriate leg section. Do **not** inflate pelvic section only.

*Leaks and changes in elevation and temperature significantly alter suit pressure. Therefore, monitor suit pressure continuously.

*Monitor for compartment syndrome (painful swollen limbs, pain out of proportion to injury, or progressive loss of sensory and motor function). Repeat exam every 30 minutes.

*Attempt to contact medical command concerning deflation of suit if complications arise.

*If unable to contact medical command deflate suit after 6 hours. Slowly deflate abdominal section first and then the leg compartments. Stop deflation if BP falls more than 5-10 mmHg.

I. WILDERNESS C.P.R. GUIDELINES

In some states, EMS agency personnel are allowed to determine that an individual is dead, if the following conditions exist;
*Lethal injury where survival is impossible.
*Rigor Mortis- rigidity of muscles.
*Dependent lividity- ecchymosis lower half.
*Decomposition.
If doubt exists, then the patient should be treated as viable.

A. INDICATIONS FOR CPR

*If patient **not** breathing, begin ventilation.
*If patient pulseless, begin compressions (In suspected hypothermia subjects, check pulse for at least 3 minutes and auscultate the heart for at least one minute).

B. CONTRAINDICATIONS TO CPR

*Any respirations or motion evident.
*Written (Physician) Do Not Resuscitate status.
*Danger to rescuers.
*Injury not compatible with life.
*Compressions impossible (i.e. chest frozen).
*Victim submerged more than 1 hour.
*In cases of severe hypothermia if CPR delays evacuation.

C. DISCONTINUATION OF CPR

*Resuscitation successful.
*Exhaustion of rescuer.
*Rescuer or team placed in danger.
*Provision of definitive care.
*If cardiac arrest sustained longer than 30 minutes in normothermic patients.

In some cases, discontinuation of CPR prior to definitive care may be indicated for reasons other than part C. However, discontinuation of CPR may only be ordered by a physician.

J. ORAL ELECTROLYTE REPLACEMENT SOLUTIONS

A. SOLUTIONS

1.**World Health Organization (WHO) Formula**
(2% glucose, 90 mEq/L Sodium).

Oralyte™, Pedialyte™, Packaged mixes.

2.**ERG™ or Gatorade™** (6% glucose and 50-90 mEq/L Sodium).

3.Homemade sugar/salt solution

Sugar3-4 Tsp/L(1-2% Solution)
Salt ½Tsp/L(30 mEq/L)

4.Oral Fluid Replacement Solution

Sodium Chloride	½ Tsp/Liter
Sodium Bicarbonate	½ Tsp/Liter
Potassium Chloride	¼ Tsp/Liter
Table sugar	12 Tsp/Liter

5.US Public Health Service Formula

Glass #1	Glass #2
8 oz. Fruit Juice	½ Tsp Baking Soda
½ Tsp honey	8 oz. clean water
1 pinch salt	

Equal amounts should be drunk from each glass, alternating between the two.

B. ADMINISTRATION

*The WHO Formula may be used whenever possible.

*Mild dehydration in children require solution #2 to be diluted by 100%.

*Serious dehydration dictates solution #1. Adults may use solution #2 diluted by 100% in emergencies.

*8 oz. of water may be slowly given safely in adult cases, if sipped slowly, unless nausea or decreased consciousness exists.

K. INDICATIONS FOR AEROMEDICAL EVACUATION

General Criteria

*Flooding, mud, or snow makes roads unsafe and hinders carry-out evacuation.

*Terrain makes ground carry-out or road evacuation dangerous to the rescuer and/or patient.

*Time required for ground carry-out threatens the patient or affects the safety of the rescuers; or strains all resources.

*Patient requires more advanced levels of medical personnel or equipment than rescue team has available.

Patient Criteria

A patient with any of the following conditions, injuries, or illnesses becomes a candidate for aeromedical evacuation.

*Shock, severe burns, or multiple systems injuries (two or more organ systems involved).

*Flail chest, pneumothorax, perforating chest injury, or any severe chest pain.

*Crushed pelvis or any traumatic amputation.

*Altered consciousness, suspected spinal injury, and/or head injury.

*Heat stroke, severe hypothermia, burns, poisonous animal bite, poisonous ingestion, or lightning strikes.

*Systolic blood pressure below 90 mmHg with two or more readings.

*Respiratory rate less than nine or more than 30/min.

*Pulse rate less than 50 or more than 110/minute.

*Acute abdomen, GI bleeding, significant hematuria.

*Conditions with a potential for airway compromise.

*Complicated delivery or serious vaginal bleeding.

N. HELICOPTER HANDSIGNALS

Helicopter handsignals should only be used by personnel properly equipped and trained.

O. HELICOPTER PASSENGER BRIEFING

P. MEDICAL PROCEDURES

Q. LISTED GUIDELINE DRUGS

NOTICE: The indications and dosages of drugs in this book have been carefully checked and recommended by the wilderness medical community at the time of this printing. Standards for usage and dosage may change. The medications described do not necessarily have specific approval by the Food and Drug Administration for use in the diseases and dosages for which they are recommended. The manufacturer's package insert is the best source of information on FDA opinion. The reader should note that ultimate responsibility rests with the prescribing physician, medical command, or the operational medical director.

ACTIVATED CHARCOAL

DOSAGE:50-100g P.O.
PED DOSAGE:25-50G OR 1G/Kg

USE IN FIELD:To treat certain cases of poisoning and overdoses.

SIDE EFFECTS:None.

COMMENTS:Administered with water orally. If combined with sorbitol may cause liquid stools in one hour.

ALBUTEROL (Proventil, Ventolin)

DOSAGE:2-3 deep inhalations (90mcg/actuation) 1-5min. apart.

USE IN FIELD:Asthmatics, especially asthmatic symptoms in patients over age 45 or history of cardiac disease.

SIDE EFFECTS:Fine finger tremor, mild tachycardia, decreased BP.

DIPHENHYDRAMINE (Benadryl)

DOSAGE:25-50 mg (0.5-1 ml) deep I.M.
PED DOSAGE:1 mg/Kg

USE IN FIELD:Severe allergic reaction, antiemetic.

STORAGE:Drug is stable after freezing. Container should be checked for cracks or leakage. Store in light-resistant container.

COMMENTS:50 mg/ 1ml Causes severe drowsiness.

SYRUP OF IPECAC

DOSAGE:30ml (2 tbsp) P.O. followed by 12-24 ozs of water.
PED DOSAGE:1-12 years of age give 15ml: 9-11 months give 10ml: less than 8 months do not administer.

USE IN FIELD:To induce vomiting in selected cases of poisoning.

SIDE EFFECTS:Increased danger of aspiration. Do not use with pregnant women or before activated charcoal.

EPINEPHRINE 1:1000

DOSAGE:0.3 mg (0.3ml) S.q. May repeat every 10-20 minutes up to three doses.
PED DOSAGE:0.01 mg/Kg (0.01ml/Kg) up to 0.3 mg.

USE IN FIELD:Systemic allergic reaction. Severe asthma attack.

SIDE EFFECTS:Tachycardia, jitteriness.

STORAGE:Darkens upon exposure to light and air. Oxidation causes a color change to pink, then brown. Should be stored at 25C: avoid freezing. Heat above 40C may inactivate the product.

COMMENTS:1mg/1ml Unless life threatening allergic reaction, do not give to known cardiac patient, a patient over 45, if pulse is greater than 140/min on an adult, or greater than 180 on a child. May be ordered to inject 0.3 ml sublingually for severe anaphylactic shock.

GLUCAGON

DOSAGE:1 mg or 1 unit (1 ml) I.M. May repeat in 20 minutes if patient does not become awake and alert.
PED DOSAGE:1 mg also.

USE IN FIELD:Unconscious diabetic or in coma of unknown origin.

STORAGE:Cloudy or thick diluent should not be used. Do not use if exposed to temperatures greater than 95 F for extended period.

COMMENTS:1mg/1ml. Must be liver glycogen present to be effective.

R. SUGGESTED PERSONAL MEDICATIONS

ANTACID WITH SIMETHICONE (Mylanta II, Gellusil II, Riopan II)

DOSAGE:1-2 tablets as needed (max 12/day).

USE IN FIELD:Heartburn, ulcer pain, indigestion, gas pain.

SIDE EFFECTS:Diarrhea.

COMMENTS:Drink a full glass of water with each dose. Antacid also neutralizes tetracycline and chloroquine.

ASPIRIN

DOSAGE:Two 325mg tablets every 6 hours.

USE IN FIELD:Moderate pain, high grade fever, headache, frostbite, muscle injury, or sunburn.

SIDE EFFECTS:Sensitivity, bleeding, ringing in ears, upset stomach.

COMMENTS:Do not give to children under 18 years of age, or to patients with heat stroke, abdominal pain, or history of gastric ulcers.

CALAMINE-DIPHENHYDRAMINE (Caladryl)

DOSAGE:Topical, apply to skin 2-3 times daily.

USE IN FIELD:Drys out rash due to plant contact.

COMMENTS:Only available as a liquid. Take precautions for spills.

DIPHENHYDRAMINE (Benadryl)

DOSAGE:1-2 25 mg tablets every 6-8 hours as needed.

USE IN FIELD:Allergies, itching, sleeplessness, mild nausea, motion sickness.

SIDE EFFECTS:Drowsiness.

COMMENTS:Antihistamines may worsen sleep patterns at high altitudes. Do not use for Asthma.

HYDROCORTISONE 0.5% (Cort-aid)

DOSAGE:Topical, apply to skin 2-3 times daily.

USE IN FIELD:Rash, swelling due to insect bite or plant contact.

SIDE EFFECTS:Makes infections worse. Thins skin.

COMMENTS:Do not use for sunburn or if rash worsens. Minimize use in groin and face region.

IBUPROFEN (Advil, Motrin, Nuprin)

DOSAGE:200-400mg every 6 hours.

USE IN FIELD:Moderate pain, high grade fever, headache, sunburn, menstrual cramps, frostbite, muscle injury.

SIDE EFFECTS:Rare, upset stomach.

POVIDONE-IODINE (Betadine) BACITRACIN; NEOSPORIN

DOSAGE:Topical, apply thin layer 2-5 times daily.

USE IN FIELD:Antibiotic for minor burns, abrasions, cuts, lacerations, and blisters.

SIDE EFFECTS:Neosporin contains neomycin which may cause skin reactions.

COMMENTS:Povidone-iodine becomes inactive once dry.

PSEUDOEPHEDRINE WITH TRIPOLINE (Actifed)

DOSAGE:1-2 tablets every 6-8 hours as needed.

USE IN FIELD:Nasal congestion, sinus congestion.

SIDE EFFECTS:Dry mouth, fast pulse, drowsiness.

COMMENTS:Do not give if uncontrolled high blood pressure. May use nasal spray.

CLOTRIMZOLE (Lotrimin)

DOSAGE:Topical, apply to skin 2 times daily.

USE IN FIELD:Antifungal for athlete's foot, or in groin.

SIDE EFFECTS:Redness, blistering, peeling, and itching.

COMMENTS:Dry skin well before applying.

LOPERAMIDE (Immodium A.D.)

DOSAGE:1-2 (2mg) capsules after each unformed stool (up to 8/day, for 2 days.

USE IN FIELD:Diarrhea causing cramps or compromised activities.

SIDE EFFECTS:Dry mouth, drowsiness.

COMMENTS:Do not use if acute abdomen, bloody stool, or known bacterial cause. Try clear liquid diet before using antidiarrheal.