A Study of the Selection and Control of Exercise Casualties for Hospital Collective Training

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SUMMARY: A project sponsored by HQ AMS TA and executed by an experienced TA Commanding Officer enhanced the effectiveness of Hospital Collective Training by improving the standard of selection and documentation of the input of exercise casualties, and set up the basis of a comprehensive library of casualty cards for future use.

Introduction

Up to and including 1985 there have been complaints about the selection, control, documentation and administration of the exercise casualties on Folding Bed, Mini Mash, Petit Mash and other exercises.

The staffs of the Territorial Army hospitals work in teams in which the medical and nursing officers come from sophisticated hospitals of the National Health Service or private sector, while the servicemen and servicewomen come from employments outside hospitals.

It is on exercises that the servicemen and servicewomen have their own opportunity to be taught the application of nursing skills by the officers with whom they work, and the officers have the chance to accustom themselves to using the equipment available in a wartime hospital, and prepare themselves to treat battle casualties who have been wounded some time previously and transported over long distances.

Commander HQ AMS TA set up a project to enhance the benefit of these exercises by preparing a comprehensive plan for selection, preparation and injection of appropriate exercise casualties into hospitals taking part in collective training, so as to make the exercises as interesting, realistic, credible and stimulating as possible.

The project officer was appointed and the charter for the project promulgated by Headquarters Army Medical Services Territorial Army in July 1984.

The Project Officer had commanded a TA General Hospital, had had cause to complain about the exercise casualties on previous exercises and identified the aims to be pursued as –

1. To produce casualties which were appropriate to the battle scene and the role of the unit.
2. To produce casualties who were happy at the end of the day and who felt that they had learnt something.
3. To produce a library of F Med 26 series of cards which could be used as a template for future exercises.

It was recognised that –

1. It is confusing for a General Hospital to apply primary treatment and evacuate as if it were a Field Hospital.
2. The DS must organise the feeding of exercise casualties before they enter the casualty chain. It is unrealistic, for instance, to feed GSW abdomen resuscitation or on the operating table.
3. Sometimes in the past casualty simulation has been inappropriate or absent.
4. The AMS is dependent on other Arms to produce casualties and unless they are well cared for and learn something, commanders will not allow their soldiers to act as casualties. This refusal to participate only occurred once during one of the 1985 Petit Mash exercises but it spoilt the exercise to a large extent.

Method

An initial approach was made to the Director of Army Surgery for an up to date projection of the proportions of wounds by site and priority (see Table I).

From this and the number of casualties to be available, making allowance for recycling, the cross section of casualties to be admitted to each General Hospital through the formal chain of evacuation and from local incidents was calculated (see Tables II, III and IV). Allowance was made for training needs, including the requirement to include a number of medical cases. Similar Tables were prepared for Field Hospitals.

Casualties to match the requirement thus identified were selected from the "Lillywhite List".

The "Lillywhite List" of battle casualties had been derived from the currently accepted proportions of casualties by diagnosis and perusal of the case notes and case histories of casualties from the Arab-Israeli conflict and other sources, clinical details and survival data being largely derived from actual patients.

F Med 26s were then prepared for the casualties selected, fully documented to conform with the Casualty Treatment Regimes and the Field Surgery Pocket Book.

Table I
Breakdown of 1000 Surgical Battle Casualties
into Casualty Types and Priorities
 (Taken from Annex D to D/AMD/78/3/8 (DA Surg) of 30 July 1984)

	Overall	P1	P2	P3
Abdo (10%)	100	20	80	—
Head and Neck (10%)	100	25	25	50
Burns (10%)	100	15	10	75
Chest (5%)	50	20	20	10
Limbs				
Arms (20%)	200	35	25	140
Legs (35%)	350	65	35	250
Multi/Misc (10%)	100	20	5	75
TOTALS	1000 (100%)	200 (20%)	200 (20%)	600 (60%)

Table II
Cas Profile for RCZ General Hospitals

Cas from FD Hosps:	Documentation to cover RAP, Fd Amb, Fd Hosp and Transit. All P1 cases will be post-op.	
Abdo	P1 (post-op)	2
	P2	50
Head & Neck:	P1 (post-op)	2
	P2	15
	P3	30
Burns:	P1 (post-op)	2
	P2	5
	P3	45
Chest:	P1 (post-op)	2
	P2	10
	P3	5
Upper Limb:	P1 (post-op)	3
	P2	15
	P3	85
Lower Limb:	P1 (post-op)	6
	P2	20
	P3	155
Multiple/Misc:	P1 (post-op)	2
	P2	2
	P3	45
		500

Table III
Casualty Profile for RCZ General Hospital

Cas from RCZ Fd Ambs:		
Abdo	P1	1
	P2	4
Head & Neck:	P1	1
	P2	1
	P3	3
Burns:	P1	1
	P2	1
	P3	4
Chest:	P1	2
	P2	2
	P3	1
Upper Limb:	P1	2
	P2	1
	P3	6
Lower Limb:	P1	2
	P2	2
	P3	10
Multiple/Misc:	P1	1
	P2	1
	P3	4
Medical:		25
		<hr/> 75 <hr/>

Table IV
Casualty Profile for RCZ General Hospitals

Cas from Local incidents:		Undocumented
Abdo	P1	1
	P2	2
Head & Neck:	P2	1
	P3	1
Burns:	P2	1
	P3	2
Chest:	P1	1
	P2	1
Upper Limb:	P1	1
	P3	3
Lower Limb:	P1	1
	P2	1
	P3	5
Multiple/Misc:	P1	1
	P3	3
Medical:		15
Battleshock:		10
		<hr/> 50 <hr/>

Suitable cases were selected for evacuation from the forward area via RAP, Field Ambulance and Field Hospital; and for local incidents and medical cases sent in from the local RCZ Field Ambulance.

On several occasions the same injury from the “Lillywhite List” was processed as both satisfactory throughout or having “Gone Off”. This proved valuable in varying the casualty input to conform to the training requirement of the Unit.

Throughout reference was made to the Tactical Doctrines for forward and rear Combat Zone Hospitals.

Ex Petit Mash 85 – Phase I

Under the Project Charter the system was tested during the 1985 Petit Mash series of exercises, the Project Officer becoming Casualty Control Officer and Commander HQ AMS TA Exercise Director. Each exercise lasted from Wednesday to Sunday. At the start of the exercise we had available some 300 cards, 200 as if from the FEBA and 100 from locally occurring incidents.

The initial input of casualties was selected so as to help the Hospital Departments get into gear smoothly. (see Table V).

Realism was maintained by local incidents enabling there to be a satisfactory casualty input during the time when casualties from the FEBA would still be in the evacuation chain. This allowed us to keep the casualty proportions reasonably accurate without straining the war picture too greatly.

- For each input of casualties it was determined –
1. Where and when fighting would occur.
 2. Distances between medical units, and time casualties would take to be evacuated between them.
 3. Transit times within units, taking account of casualty loading, and a Table prepared giving the the diagnosis, priority and timings for each casualty (see Table VI).

Photostat copies of the library cards were endorsed with times and dates of injury, time of arrival in each medical unit, and treatments given (see Figure 1).

The F Med 26s were passed to the Casualty Simulation Team as early as possible. Once the casualties had been made up, appropriate splints and dressings were applied and names inserted on F Med 26. They were admitted to the hospital in batches according to the DS “Pink”.

Those reaching evacuation were subsequently recycled, usually with minor injuries to enable them to be released realistically in time for their planned RTU.

Ex Petit Mash 85 – Phase II

After a lull in the battle which permitted the change over of the soldiers detailed as exercise casualties, and enabled the hospital being exercised to do any reorganisation of its layout that was considered appropriate, the scenario led to a heightening of the battle with infantry, tank and artillery casualties being required. The selection and filling in of the F Med 26s became more difficult as the proportions of casualties had to be correct while the injury and unit had to be appropriate eg GSW – Infantry; burns – Armour; explosions – Artillery.

The hard pressed Casualty Simulation Teams were becoming bored with the high proportion of legs and burns required to keep within the bounds of reality. Fortunately the “Pink” included sabotage and Spetznatz incidents from which Cas Control could allow freedom to their imagination and permit the Casualty Simulation Team to demonstrate their versatility in the direction of guard dog bites to buttocks and apparent drownings (Fig. 2 & 3).

It was during this phase that a local incident was introduced. This was an ambulance crash at the hospital gates and tested the efficiency of the hospital “Crash Teams”. It also enabled the Casualty Simulation Team to exhibit their talents with injuries unencumbered by dressings, and gave a welcome respite to the authors of the F Med 26s.

Extra activity within the hospitals was generated by the Surgical Umpires making the condition of casualties awaiting evacuation deteriorate appropriately.

Ex Petit Mash 85 – Phase III

The exercises each ended with a heavy load of casualties provided by cadets. The gap between the departure of the soldiers provided under Regular Army Assistance and the arrival of the cadets was covered on the ad hoc basis by local AMST A units. The numbers of enthusiastic and helpful cadets, apart from the one occasion when they failed to turn up, strained the capacity of the team of two “F Med 26 authors” to the

Table V
Ex Petit Mash 85
Initial Incidents

Serial	Time	Incidents	Cas No	Diagnosis	Priority
1	1700	Border Incident (4th Bn Light Infantry)	7	Shrapnel Wound (left frontal)	2
			229	GSW left forearm	3
			352	Closed fracture femur	3

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Table VI
Ex Petit Mash 85
Casualties from Battle Group Actions on Day 2

Serial and time	Incident(s)	Cas No	Diagnosis	Priority	Wound	Time of		
						Rap	Fd Amb	Fd Hosp
Serial 12 2115	1 Gordons)	50	Face	P3	1700	1730	1830	1930
	2 Para) in contact	234	Arm	P2			1830	1930
	9/12 L)	259	Arm	P3	1700	1730	1815	1930
		261	Arm & Torso	P3	1700	1730	1830	1930
	via 7 Fd Amb	281	Leg	P2	1730	1815	1900	1945
		326	Leg	P3	1730	1815	1900	1945
		336	Leg & Abdo	P3	1700	1745	1845	1930
		352	Leg	P2	1900		1915	2015
		435	Burn	P2	1700	1745	1845	1930
		473	Burn	P2	1700	1745	1845	1930
Serial 13 2310	2 R Anglian)	42	Head	P3	1900	1930	2030	2130
	6 GR) in contact	49	Head	P3	1930	2000	2045	2145
	17/21 L)	76	Chest	P1	1930	2000	2045	2145
		88	Chest	P2	1900	1930	2030	2130
	via 8 Fd Amb	147	Abdo	P2	1900	1930	2030	2130
		224	Arm	P3	1900	1930	2030	2130
		247	Arm	P2	1930	2000	2045	2145
		253	Arm	P3	1930	2000	2045	2145
		264	Arm	P3	1945	2015	2100	2145
		265	Arm	P3	1945	2015	2100	2145
		277	Knee	P3	2030	2100		2200
		313	Lower	P2	2000	2045	2130	2230
		337	Lower	P3	2000	2045	2130	2230
		344	Lower	P3	2100		2115	2215
		385	Lower	P3	2000	2045	2130	2230
		413	Lower	P3	1930	2015	2115	2230
		414	Lower	P3	1930	2015	2115	2230
		419	Lower	P3	2030	2045	2130	2215
		445	Burn	P2	2000	2045	2130	2230
		471	Burn	P3	2000	2045	2130	2230

limit.

By this time it was realistic to include cases evacuated post-operatively from Field Hospitals so that with invaluable assistance from the Nursing Umpires F Med 26B (Field Nursing Card) and F Med 26C (Field Surgery Card) were prepared to go with the F Med 26s for a number of such cases (Fig 4, 5 & 6).

Results

Preplanning enabled casualties in proportions appropriate to casualty estimates to be admitted to the hospitals being exercised, suitably adjusted to the training needs of the hospitals.

1. It is practical and possible for exercise casualties to be fully and appropriately documented when they reach the hospital being exercised. A good working relationship between the hospital being exercised, the Casualty

Controlling Officer, the exercise DS and the Casualty Simulation Team is vital, and the results of it impressive. There is no place for the use of bogus names on exercise medical documents. The extension of the library of Med 26 etc to include documentation on ambulance trains is desirable.

2. There was general and consistent appreciation from the hospitals being exercised, in particular the ability to vary the casualty input to load particular departments at the request of the Commanding Officers. There was a welcome constructive criticism which helped to correct errors early. There were regrettable gaps in the casualty flow due to nominated exercise casualties not reporting. Proper preparation of the casualties to be injected into the hospital exercise leads to a realistic input and to the correct lessons being learned. The exercise must last long enough for proper routines to be established and

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3671
Medical unit in which trained and Date

CLINICAL NOTES (To be signed by M.O. giving rank and appointment)

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AP 10 Aug
1930

MULTIPLE SPALLS GSW ABD
3 more ? chest
2 more ? left
P 12 68 60/7
DRESSING
dy HAZARDS 18
Bleeding 1000 cc / 600
AP 1000 500 cc / 600
Hemorrhage 15 cc
T 100 0-5 cc
Lungs
STOMACH
G
TO DRUG THERAPY
G 100 80 60/50
DRESSING 1000
dy HAZARDS 18
TO DRUG
G 100 80 110/60
Some blood. Green
TO DRUG
P2
STO
K

Figure 2

MEDICAL IN CONFIDENCE			U.S. ARMY R & F FIELD MEDICAL CARD FORM MEDICAL DE L'AVANT			F MED 21 (Revised 2-52)			
1. Service No. Numero Matricule		2. Rank or Grade		3. Full Name Nom		4. Religion Religion		5. Religion	
6. Sex Sexe		7. Regular Status Régulier / Absent		8. Date of onset of Disturbance in which admitted		9. Married / Single / Widowed		10. Age	
11. Date of Casualty or Illness Date de la blessure ou Maladie				12. Signature Signature		13. Chemical Lésion			
14. Time of reporting Heure				The following has been taken from the patient's				15. Date Date	
16
16. Treatment Given Traitement Donné		Dose		Time Given		Date		Dose	
Morphine/ Morphine		75mg							
Amphetamine / Amphétamine		11mg							
Atropine, Oxime/ Atropine, Oxime									
Tetracycline/ Tétracycline		0.5							
17. Treatment Applied Traitement Appliqué				18. Treatment Applied Traitement Appliqué		YES/NO OUI/NON		Time Heure	
PRINCIPAL DISEASES, etc.									
19. Final diagnosis or principal disease or injury leading to admission									
20. "Principal dematization or sequel of 17"					21. "Secondary diseases or injuries (if aetiologicaly unconnected with 17."				
22. "If these arise after admission, state date of onset"									
23. Nature of any surgical operations (Full details will be given in "Clinical Notes" but NOT here).					24. Special information in accordance with current instructions.				

Medical unit in which treated and Date	CLINICAL NOTES (To be signed by M.O. giving rank and appointment)
S. H. Khan	<p>See previous page box in marshalling yard</p> <p>2. Main head bolts trying to re-tighten</p> <p>Safety taken by guard dog on</p> <p>(C) note</p> <p>4. No more noise from crossing</p> <p>the above exposed.</p> <p>Imp + +</p> <p>Noise deficit</p> <p>P. 90 BP 90/60</p> <p>R. Fine crackling</p> <p>Breathless Penicillin 1 mega b.c.m.s</p> <p>T.T. 0.5</p> <p>Morphine 15mg</p> <p>Hartmann's 1L IV.</p> <p>E.V.A.C. → P₂ STRETCHER</p>
214 H.H.K.	<p>ISQ. Dressing not removed</p> <p>Time 6+ hours → P₂ EVAC</p>

Figure 3

MEDICAL IN CONFIDENCE

R.N./ARMY/R.A.F.
FIELD MEDICAL CARD
FICHE MEDICAL DE L'AVANT

F/MED/26
(Revised 2/84)

1. Service No. Numéro Matricule	2. Rank or Grade	3. Surname Nom	4. Nationality Nationalité	5. Religion
6. (a) Unit Unité	(b) Regt or Corps R.N./R.A.F./Allied	7. Theatre/Fleet or Station in which admitted	8. Married/Single Marié/Célibataire	9. Age
10. Date of Casualty or Illness Date de la Blessure ou Maladie	12. Diagnosis Diagnostic <i>DRAWING UNCONSCIOUS</i>			13. Chemical Casualty
11. Time of Wounding Heure				YES/NO OUI/NON

15. Treatment Given: Traitement Donné	Dose	Time Given	Date	Dose	Time Given	Date	Dose	Time Given	Date
Morphine/ Morphine									
Antibiotic/ (a) Antibiotique									
(b)									
Atropine, Oxygène									
Tetanus/ Tétanos									

16. Tetanus/Antiserum
Gardez Place

YES/NO
OUI/NON

Time
Heure

Date

PRINCIPAL DISEASES, etc.

17. Final diagnosis or principal disease or injury leading to admission

18. "Principal complication or sequel of 17"

"If shown after admission, state date of onset"

19. "Secondary disease(s) or injury(ies) pathologically unconnected with 17"

20. Nature of any surgical operations (Full details will be given in "Clinical Notes" but NOT here)

21. Special information in accordance with current instructions

Medical unit in which treated and Date

CLINICAL NOTES (To be signed by M.O. giving rank and appointment)

93rd Amb

*Flowing from the edge of forehead
face up - blood seen
P80 - P120/30
No obvious injury
Remains to deep pain
P3 Euc.
Came for*

NOTE FOR CAS-SIM TREAT

GABOT MARK ROUND NECK
HIDDEN BY CLOTHING

Figure 4

MEDICAL IN CONFIDENCE		R.N./ARMY, R.A.F. FIELD MEDICAL CARD FICHE MEDICAL DE L'AVANT		F/MED/26 (Revised 2/84)																																									
1. Service No. Numéro Matricule	2. Rank or Grade	3. Surname Nom	4. Nationality Nationalité	5. Religion																																									
6. Unit Unité	7a) Regt or Corps Régiment/Corps	7. Theatre/Force or Station in which admitted	8. Married/Single Marié/Single	9. Age																																									
10. Date of Casualty or Illness Date de la Blessure ou Maladie	12. Diagnosis Diagnostic			13. Chemical Casualty																																									
11. Time of Wounding Heure	Sucking wound @ chest			YES/NO OUI/NON																																									
<div style="display: flex; justify-content: space-around;"> </div>																																													
<table border="1"> <thead> <tr> <th>15. Treatment Given/ Traitement Donné</th> <th>Date</th> <th>Time Given</th> <th>Date</th> <th>Time Given</th> <th>Date</th> <th>Time Given</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Morphine/ Morphine</td> <td>15mg</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Antibiotic: Am. Antibiotique: Am.</td> <td>1 Mega</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Atropine, Oxime,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tetanus/ Tétanos</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						15. Treatment Given/ Traitement Donné	Date	Time Given	Date	Time Given	Date	Time Given	Date	Morphine/ Morphine	15mg							Antibiotic: Am. Antibiotique: Am.	1 Mega							Atropine, Oxime,								Tetanus/ Tétanos							
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20. Nature of any surgical operations (Full details will be given in "Clinical Notes" but NOT here)																																													
21. Special information in accordance with current instructions																																													

Medical unit in which treated and Date	CLINICAL NOTES to be signed by M.O. giving rank and appointment
R.A.P.	<p>Breathing difficult Semi-conscious Haemoptysis - small. Wound sealed. Chest drains. Out 2-3nd drain post 9-10. Wt cast 4. Haemoglobin 1 litre. - Benzyl penicillin. 1 Mega b.i.d. P1. Evac sitting</p>
2nd Lt.	<p>Still bleeding. - 2nd Lt. Breathing easier. P100 BP 110/70. Morphine. 15mg i.v. P2. Evac</p>
2nd Lt.	<p>FB possibly in wound Requires sedation. CxR. - FB present. + Haemoptysis X drained 2 vents. Satisfactory drain removed → P2. Evac</p>

Figure 5

MEDICAL IN CONFIDENCE

R.N./ARMY/R.A.F.
FIELD NURSING CARD

S/MED 26B
(Revised 2/84)

1. Service No. Nursing Certificate	2. Rank or Grade	3. Surname Name	Medical unit in which treated
---------------------------------------	---------------------	--------------------	-------------------------------

Date: _____

NURSING NOTES

Admitted from the following theatre - for 12 hrs at 24 hrs for 24 hrs
understandably read in situ - removed after 36 hrs 6 hrs 4 hrs 2 hrs 1 hr
return. Clear drainage wound sites carefully. BBL 180 ml
1 unit blood given 2200 hrs - now appears stable. No further drainage 2200
Understandably read - wound reduced - all observation stable from 24 hrs

Date: _____

TEMPERATURE

41
40.5
40
39.5
39
38.5
38
37.5
37
36.5
36
35.5
35
34.5
34
33.5
33
32.5
32
31.5
31
30.5
30
29.5
29
28.5
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27.5
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12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0

PULSE/BP

160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

RESPIRATION

30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0

PUPIL SIZE

1mm 2mm 3mm 4mm 5mm 6mm 7mm 8mm 9mm 10mm 11mm 12mm

+ reacts - no reaction
C eye closed

Right eye: _____
Left eye: _____

CONSCIOUS LEVEL:
FULLY CONSCIOUS (P)
DROWSY (D)
UNCONSCIOUS (U)
RESTLESS (R)

RESPONDS TO:
QUESTIONS (Q)
PAIN (P)
COMMAND (C)

FLUID BALANCE CHART

DATE	TIME	INTAKE				OUTPUT			NOTES
		ORAL		INTRAVENOUS		URINE	VOMIT	TUBE	
		mls	Nature of Fluid	mls	Nature of Fluid	mls	mls	mls	
	1400				1000 - Hatched				
	1800	100	white	100	Blood		170		Bile Stained
	2200	100	white				150		Trace protein
	0300	100	lin						
	0600	100	lin			20			NAD
	0700	150	orange						
	1000	100	lin						
	1300	100	lin			0			NAD
	1500	150	orange	100	Hatched				
	1700	100	lin			60			NAD
	2200	100	lin	600		50			101 discharged
	0300	150	orange						
	0600	100	lin			50			
	1000	100	lin			50			
	TOTAL								

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FLUIDS TO BE GIVEN OVER PERIOD OF THIS CHART

No	AMOUNT	NATURE OF FLUID	TIME	ROUTE	No	AMOUNT	NATURE OF FLUID	TIME	ROUTE
1	1000 ml	HARTMANS	12 HRS	I.V.	4				
2	1000 ml	BLOOD	4 HRS	I.V.	5				
3	1000 ml	HARTMANS	12 HRS	I.V.	6				

Prescriptions	Date	Time	Dose	Date	Time	Dose	Inn.	Date	Time	Dose	Inn.
Drug (Approved) Name											
Dose	Frequency	Route									
Drug (Approved) Name											
Dose	Frequency	Route									
Drug (Approved) Name											
Dose	Frequency	Route									
Drug (Approved) Name											
Dose	Frequency	Route									
Drug (Approved) Name											
Dose	Frequency	Route									

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Figure 6

MEDICAL IN CONFIDENCE		R.N./ARMY/R.A.F. FIELD SURGERY CARD		F/MED/26C (Revised 2/84)	
1. Service No. Numbers Matricule	2. Rank or Grade	3. Surname Name	4. Age		
ANAESTHETIC RECORD					
5. Operation Proposed <i>Thoracotomy</i>				6. Date	
				7. Time	
8. SURGEON <i>Trent</i>			9. ANAESTHETIST <i>Garnon</i>		
10. PRE-OPERATIVE ASSESSMENT <i>Hemo-pneumothorax from sharp stab bleeding</i>					
11. PREMEDICATION		12. Time Ordered		13. Time Given	14. Signed
15. CHART CODE	Time				
Pulse	180				
Resp	160				
BP	140				
CVP	120				
Spn	100				
Temp	80				
Weight	60				
Height	40				
Time	20				
Time	0				
STP 250	↑				
Qm 50	↑				
PCB 6	↑				
Debit	↑				
Time	↑				
SUMMARY					
Occasional VCB's settled					
O ₂ 24% 24% per h					
N fluids Debit 50 500					
Gland 2 unit					
Hemorrh 1 liter					

OPERATION NOTES	
Surgeon <i>Trent</i>	Scrub Nurse
Operation performed <i>Thoracotomy</i>	
Incision Findings <i>Left thoracotomy incision Piercing of sharp stab wound Contents of ① effusion but no skin bleeding at only small air leak</i>	
Procedure <i>Blood clot removed. Bleeding internal intercostal ligament Pleura clamped Wound clamped in layers Extensive wound debrided and packed</i>	
Closure	
Drainage <i>Underwater seal - 36</i>	
Laboratory specimen	
POST-OPERATIVE INSTRUCTIONS	
<i>O₂ 24% 24% per h</i>	
<i>Underwater seal to be removed prior to discharge</i>	
<i>Drainage of leaking wounds</i>	
<i>Delayed primary closure 5 days</i>	

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for post-operative patients to reach a General Hospital in a credible time-frame. A proper balance must be struck between maintaining the momentum of the exercise, while allowing the hospital an opportunity to reorganise itself in the light of experience.

3. An adequate supply of exercise casualties is essential, and they must be properly briefed and properly fed. The exercise casualties and the Officers and NCOs accompanying them must be briefed on the exercise and on the importance to the training of the hospital of the part which the exercise casualties would play. The hospital being exercised must have an unambiguous briefing of the "ground rules" for the feeding of casualties (where and when) and on the use of bottles and bedpans.

4. A photocopier is essential at casualty directing staff headquarters. Casualty cards must reach casualty simulation areas as early as possible, over an hour before the input of a group of twenty cases. An enthusiastic and efficient Warrant Officer to co-ordinate casualty simulation and despatch is invaluable.

Subsequent audit of documents removed from casualties evacuated from hospitals showed –

- a. some scrappy note writing;
- b. some departures from Casualty Treatment Regimes;
- c. some patients evacuated with inadequate treatment having been given considering the time and distance to the next chance of hospital treatment.

An adequate library of F Med 26s is essential.

The possibility of basing the casualty card library on a computer or word processor should be investigated, bearing in mind however the added realism of an F Med 26 completed in manuscript, and the need to match the casualty input to the battle scenario and the hour by hour training needs of the hospital being exercised.

Envoi

The Project Officer writes "in October 1984, as a result of my complaints about casualty welfare and casualty simulation on Ex Lionheart and Ex Petit Mash 1983 Brigadier Robinson asked me if I would be willing to act as Casualty Control Officer for Exercise Petit Mash 85. If I had had the wisdom of hindsight I would have been a reluctant volunteer but having agreed I found it a most interesting and instructive exercise and perhaps more TA Training Officers should be encouraged to take an active interest in casualty simulation and control".

The Inspector of Training AMS TA visited a TA General Hospital training in September 1985 and found them to be successfully using casualty cards from the project.

Acknowledgments

The Project Officer and Commander Headquarters Army Medical Services Territorial Army wish to acknowledge the great help and support given to this

project from many sources, in particular, the data supplied by the Director of Army Surgery, the list of battle casualties prepared by Lieutenant Colonel L Lillywhite, MBE, RAMC, the cheerfulness and forbearance of the exercise casualties on the "Petit Mash" exercises, the casualty simulation teams from 16 Field Ambulance, and the splendid Warrant Officer I/C, WO1 A S Berry RAMC.

Note by the Professor of Military Psychiatry

Unfortunately at the time when this project was undertaken the Casualty Template had not been promulgated. This was done on the 6 June 1985. The template makes clear that, whatever the scenario, unrecovered combat stress reactions (battleshock cases) will pass through RCZ General Hospitals in substantial numbers ranging from 1:30 to 1:15 of surgical cases. The "evac to hosp" cases are additional to those which may arise from local incidents, which are correctly shown in Table IV, or may inadvertently be brought in by the RCZ Field Ambulances (Table III). In other words Table II should show 25 battleshock cases where at present it shows none. By the same token Table VI should contain at least one if not two battleshock cases.

It is particularly important that this realism should be maintained on exercises not only so that hospital staff learn the correct clinical and organizational management of battleshock cases but also so that they have this aspect of battlefield medicine constantly in mind. If not, doctors and nurses alike regularly miss the cases which present heavily disguised as a physical disorder. This happens over and over again both in peace and in war.

Note from DMSD

EXERCISE CASUALTIES – HOSPITAL COLLECTIVE TRAINING

The AMS TA paper rightly attempts to provide a realistic exercise workload for general hospitals but does not go far enough in constructing the likely casualty intake. General hospitals are deployed in 3 different situations demanding 3 separate casualty intake templates:

- In the Rear Surgical Complex (RSC).
- In the Rear Combat Zone (RCZ).
- In the RCZ but reinforced with specialist teams.

This differentiation is important as the simplified casualty flow diagram below will demonstrate. In particular the AMST A paper takes no cognizance of the flow of post operative Priority 2 casualties from the RSC.

Having said that the paper is a commendable step in the right direction to correct a long standing weakness in war hospital exercises. It has highlighted the problem of adequate documentation and 'clinical input' from preceding echelons of medical care. Without the right casualty input, including relevant documentation, the major hospital exercises are wasted.

The Medical Directorate plans to have produced, by the end of 1986, a casualty evacuation chain model which will identify the appropriate templates for each type of hospital in all echelons. Armed with this AMS TA will be able to refine and complete the good work they have done so far.

JOURNALS/PUBLICATIONS RECEIVED

The following Journals/Publications have been received and are available in the Royal Army Medical College Library.

JOURNALS

Archives of Surgery; Annals of Clinical Research; Annals Chirurgiae et Gynaecologiae; Australian & New Zealand Journal of Surgery.

British Medical Journal; Bulletin of the World Health

Organisation; Boletín de la Oficina Sanitaria Panamericana; Bulletin of the Pan American Health Organisation; Bulletin of Endemic Diseases (Min. Health, Baghdad, Iraq); Bulletin of the Academy of Military Medical Sciences, Beijing, China; Central African Journal of Medicine; Genitourinary Medicine (British Medical Assocn); Giornale Di Medicina Militare.

Hellenic Armed Forces Medical Review; Indian Journal of Medical Research, The; Journal of the Royal Society of Medicine; Journal of the Royal Society of Health; Journal of Medical Virology; Journal of International Medical Research, The; The Lancet.

Military Review; Medecine et Armees; Military Medicine; Medical Journal of Australia, The; Medecine Tropicale; Medicina Militar; National Defence Medical Journal, Tokyo; Pakistan Armed Forces Medical Journal.

Quarterly Journal of Medicine; Royal Engineer Journal, The; Revista Del Servicio De Sanidad De Las Fuerzas Armadas; Royal Army Pay Corps Journal; Royal Pioneer, The; Revue Internationale Des Services De Sante; Revista Sanitaria Militar; Revista De Sanidad De La Defensa Nacional.

Scottish Medical Journal; South African Medical Journal; Tropical Diseases Bulletin; Transactions and Studies of the College of Physicians of Philadelphia; Update-The Journal of the Postgraduate General Practice; Ulster Medical Journal, The.

Wehr-Medizinische Monatsschrift; World Health Forum – WHO; WHO Chronicle.

PUBLICATIONS

Bulletin of the International Civil Defence Organisation; Environmental Health Criteria 43-50; Genitourinary Medicine – British Medical Association; Management of Diarrhoea and use of Oral Rehydration Therapy – A Joint WHO/UNICEF Statement; UNICEF; Medicine – International Agency for Research on Cancer – Oxford Univ Press; Multiple Choice Tutor-Radiological Anatomy, Physics and Techniques-A Coral & A T Irvine-Pub. Wm Heinemann; Public Health Paper-Community Response to Alcohol Related Problems – WHO No: 8; Quantity and Quality of Breast Milk-Report on the WHO Collaborative Study on Breast Feeding Supplement to WHO Chronicle Vol 39 – WHO; Treatment and Prevention of Acute Diarrhoea – WHO; WHO Chronicle Vol. 39; WHO Regional Publications; European Series No: 17 – WHO; WHO Technical Report Series No's: 714-729 – WHO.