



Ministry of Defence

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Development of Value-Based Health Care preconditions supporting a standard set for military patients in military operations: A DELPHI STUDY

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Value-Based military Health Care



Military health care is under development, which offers the opportunity to conduct research aiming at improving acute healthcare for the military patient. The current medical outcome for the wounded soldier (the patient) is mainly determined by the practitioner (medical possibilities) in consultation with the commander (logistical possibilities). However, current developments in civil healthcare show a more patient-centred care delivery. To initiate a shift to more patient-centred care, the standardization method of International Consortium for Health Outcomes (ICHOM) can be used. However, the principles of military healthcare will need to be taken into account.

The aim of this study is to obtain knowledge and insight into the desired relevant medical outcome for the military patient in acute trauma care during deployment. This will lead to the identification of 'military-oriented' preconditions which are partly a starting point for approaching acute military healthcare based on a value-based healthcare (VBHC) model.

Introduction

The 2-round surveys were split up in two groups: (1) combined surgeons and commanders (N=16), and (2) the wounded servicemen (N=14). The average response rate of the first group was 65% and second group was 75%.

The first group included 9 items in the 1st round and 1 item in the 2nd round, which led to consensus on 10 items. The second group included 7 items in the 1st round and 5 items in the 2nd round, which led to consensus on 12 items (Table 1). After consensus was reached, both groups had included 10 of the exact same items. The second group had included 2 additional items (Table 2). We also looked at the comments, with an average of 6.2 comments per item for the first group. The second group had no substantive comments.

Results

The Delphi study reached consensus between the 2 groups on 10 of the 17 statements after 2 rounds. The second group reached consensus on 2 additional items. Comparison of the ranking of the items among the two groups shows that a significant proportion of the items are similarly ranked (Table 3). This becomes clear after eliminating the largest differences in ranking and the items only included by the second group. Results thereafter show that both groups rank items such as informed consent, proper record keeping and patient safety as the most important (Table 4).

After analysing the comments, there also appeared to be significant differences between the groups. The surgeons had two times as many comments as the commanders and placed more emphasis on the patient, treatment, and legislation, among other things. Commanders placed more emphasis on the process and the feasibility for those items proposing a change. The wounded servicemen group reported that some items were fairly difficult to understand.

Discussion

The preliminary conclusion is that added value is in (1) patients becoming more involved in their patient journey, (2) more appropriate care leading to optimization of health and (3) ultimately achieving a reduction in costs.

Conclusion



Table 1: Results survey rounds 1 & 2

	Survey C&S				Survey WS			
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Number of items	17	6	17	9				
Consensus reached:								
Included	9	53%	1	17%	7	41%	5	56%
Excluded	2	12%	5	83%	1	6%	4	44%
Discordance:								
Unchanged	1	6%	0	0%	9	53%	0	0%
Reformulated	5	29%	0	0%	0	0%	0	0%
New suggested	0	0%	0	0%	0	0%	0	0%
Total included after 2 rounds		10	59%			12	71%	

The study is set up as a qualitative case study, using a 2-round Delphi method. To obtain the initial list of items, we conducted a literature review, reviewing the most current literature on VBHC, patient-centred care, and operational military health care. The outcome was validated by an expert panel of military healthcare and clinical specialists, resulted in a list of 17 items to present to the participants in the Delphi study.

The study focused on trauma care, during missions in Afghanistan (Uruzgan) in the period 2006-2010. Online questionnaires were distributed to a group of **wounded servicemen (WS)**, **military surgeons (S)** and **military field hospital commanders (C)**. The participants scored on a 4-point Likert scale the degree of importance. The data was then analysed, with a score of over 80% on important and very important leading to inclusion.

Methods

Table 2: Included statements after 2 rounds

Item no.	Statement	Consensus on inclusion	
		C&S	WS
2	There is an 'informed consent' between patient and practitioner.	X	X
3	During the preparation (the mission preparation training) for the deployment, the 'procedure in the event of injury' was known in role 2 MTF in Uruzgan.	X	X
5	All of the wounded soldier's wishes for treatment under special circumstances (treatment wishes) were stated in the medical file.		X
6	During the period of deployment at the R2 MTF, there were recognizable moments of consultation between the patient and the practitioner to discuss the treatment process together, known as shared decision making (SDM).	X	X
7	The patient is involved in the time-out procedure at the OR.	X	X
8	By placing more emphasis on consultation and making agreements, by the actors in the medical chain, added value is created for the treatment of the patient and his/her outcome.	X	X
9	Sufficient information must be available when reporting injuries (NATO 9-liner[11]) to the R2 MTF.	X	X
10	Patient safety must not be compromised.	X	X
11	Delay of care in the deployment area must be kept to a minimum in view of its effect on medical outcomes.	X	X
13	Based on the number of patients, it is possible to work event-driven. In which case the established procedures weren't leading, but the circumstances regarding the wounded soldiers.	X	X
14	The registration of the treatment was carried out on time from entry to discharge, which led to a complete patient record.	X	X
17	Depending on the severity of the injury, the military personnel's family must be explicitly involved in any treatment program.		X

Table3: Perceived importance by ranking items (using Mean) per group

C&S item no.	WS item no.
11	13
10	2
14	17
2	14
7	10
3	7
6	3
9	8
8	6
13	9
	11
	5

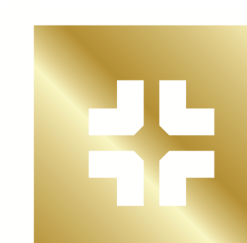
Table 4: Perceived importance by ranking items after elimination differences

C&S item no.	WS item no.
10	2
14	14
2	10
7	7
3	3
6	8
9	6
8	9

The consensus reached should help the groundwork for the preferred ICHOM set of patient-centred outcome measures for trauma patients. Some of the consensus statements support the need for outcome measures for trauma patients, such as preventing delay of care, optimising registration, but also working on shared-decision making and informed consent. These preconditions have added value in both military and civilian care settings.

Future perspectives

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