

# Triage Decisions of United Kingdom Police Firearms Officers Using a Multiple-Casualty Scenario Paper Exercise

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#### Abbreviations:

UK = United Kingdom

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#### Abstract

**Introduction:** British police officers authorized to carry firearms may need to make judgments about the severity of injury of individuals or the relative priority of clinical need of a group of injured patients in tactical and non-tactical situations. Most of these officers receive little or no medical training beyond basic first aid to enable them to make these clinical decisions. Therefore, the aim of this study is to determine the accuracy of triage decision-making of firearms-trained police officers with and without printed decision-support materials.

**Methods:** Eighty-two police firearms officers attending a tactical medicine course (FASTAid) were recruited to the study. Data were collected using a paper-based triage exercise that contained brief, clinical details of 20 adults and 10 children. Subjects were asked to assign a clinical priority of immediate or priority 1 (P1); urgent or priority 2 (P2); delayed or priority 3 (P3); or dead, to each casualty. Then, they were provided with decision-making materials, but were not given any instruction as to how these materials should be used. Subjects then completed a second triage exercise, identical to the first, except this time using the decision-support materials.

Data were analyzed using mixed between-within subjects analysis of variance. This allowed comparisons to be made between the scores for Exercise 1 (no decision-support material) and Exercise 2 (with decision-support material). It also allowed any differences between those students with previous triage training and those without previous training to be explored.

**Results:** The use of triage decision-making materials resulted in a significant increase in correct responses ( $p < 0.001$ ). Improvement in accuracy appears to result mainly from a reduction in the extent of under-triage. There were significant differences ( $p < 0.05$ ) between those who had received previous triage training and those who had not, with those having received triage training doing slightly better.

**Conclusion:** It appears that significant improvements in the accuracy of triage decision-making by police firearms officers can be achieved with the use of appropriate triage decision-support materials. Training may offer additional improvements in accuracy, but this improvement is likely to be small when decision-support materials are provided. With basic clinical skills and appropriate decision-support materials, it is likely that the police officer can make accurate triage decisions in a multiple-casualty scenario or make judgments of the severity of injury of a given individual in both tactical and non-tactical situations.

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## Introduction

In the United Kingdom (UK), the majority of police officers are not armed on a regular basis. Selected police officers are trained in the use of firearms and are deployed proactively or reactively to incidents in which firearms capability is deemed necessary. Different police forces provide their armed response in different ways, depending on their case load and degree of urbanization, but the reality is that most of these police officers, when not on firearms duty, are engaged in support and traffic roles and do not carry firearms on their person, but firearms are available within their vehicle.

Police officers authorized to carry firearms often receive little or no medical training, and as such, probably lack the knowledge required in order for them to determine the severity of injury or to prioritize treatment. Furthermore, few, if any, police forces have a robust system to enable police officers in a tactical situation to access medical advice and support. This situation is compounded further by the fact that there is no agreement, at a national level, regarding the nature and degree of clinical skills required by firearms-trained officers in both tactical and non-tactical roles. Many police forces rely upon First Aid at Work Training, which operates at a very basic level enabling colleagues to provide rudimentary care following injury or sudden illness in the workplace. Specialist medical training of police firearms officers is inconsistent and the training of prehospital care providers to operate in tactical situations does not exist. For example, in the UK, there is no program similar in nature to the EMT-Tactical program conducted by the Casualty Care Research Center at the Uniformed Services University of Health Sciences in Bethesda, Maryland USA. It also seems likely that these police officers may lack the knowledge and skills not only to provide care beyond basic first aid in both their tactical and non-tactical role, but also to inform their decision-making regarding timing of casualty extraction in a tactical situation. Therefore, it seems unlikely that firearms-trained police officers will have sufficient skills and knowledge to easily and consistently recognize seriously injured individuals beyond the use of a gross description of the injury. While it is recognized that mechanism of injury may be important in determining clinical priority, physiological factors also must be taken into account.<sup>1</sup>

In either tactical or non-tactical situations in which there are multiple victims, the decision-making is more complex. Police officers not only must identify the severity of injury for each victim, but also prioritize treatment based on the clinical needs of each victim, a process commonly referred to as triage for treatment.

There is some evidence that it is not only police officers who may have difficulty in making these decisions; but also prehospital providers, who, in general, do not always perform triage to prioritize for treatment at the scene of a multiple-casualty scenario.<sup>2</sup> When triage for treatment is attempted, the accuracy of their decision-making appears to be variable.<sup>3</sup>

Much of the decision-making for the recognition of the seriously ill or injured is dependent upon knowledge of physiologically normal parameters for vital signs. It seems

that healthcare providers have difficulty estimating the weight of children, and therefore are unable to accurately predict the normal parameters for each of the vital signs in children.<sup>4</sup> Consequently, this is likely to result in poor clinical prioritization of children and the prioritization of children above adults who may have a greater clinical need.

In order to address some of these issues, a number of educational models have been developed to provide firearms-trained police officers with essential patient assessment and treatment skills required to look after an injured colleague or civilian during the time before an ambulance is allowed to approach or the victim can be extracted from a hostile environment. One such model is the FASTAid program, which originally evolved from work with a large, urban, police firearms support unit. Over a period of five years the course has evolved, and now also is delivered to two semi-rural police forces and forms part of the mandatory training for firearms-trained officers in all three force areas. Other police forces and tactical units also are utilizing the program on a more regular basis.

The FASTAid program teaches "tactics first" safety and rapid patient assessment based on an A, B, C approach. The program emphasizes assessment of the airway, examination of the chest, and circulation focusing upon the identification of compressible and non-compressible hemorrhage in order to recognize actual and potentially life-threatening conditions. Learning clinical skills to manage these conditions also forms part of the course and includes manual airway skills, augmented by insertion of a nasopharyngeal tube if necessary, use of high-flow oxygen, and treatment for open wounds and flail segments. Students also are taught to rapidly control external hemorrhage using direct or indirect pressure, windlass, or tourniquet. They also are taught the importance of the mechanism of injury in providing essential clues to potential injuries as well as the benefits of recording serial observations. During the course, students receive a brief introduction to the principles of triage. Upon successful completion of the course, triage-decision materials form part of the officers' medical materials when on operational duty.

Following the heightened security concerns of the last two years and the likelihood that in a major incident, especially when decompensated, non-ambulance emergency service personnel such as police and fire officers may need to undertake initial triage and patient care, it seemed appropriate to examine the extent to which these individuals would be able to undertake such a task. The aim of this study, therefore, was to determine the accuracy of triage decision-making by firearms-trained police officers without assistance in decision-making versus the accuracy of triage decision-making when provided with printed materials to assist in decision-making.

## Methods

*Study design*—The study adopts a quantitative approach utilizing a prospective, experimental same-subject design.

*Sample*—A convenience sample was recruited to the study. Eighty-two police firearms officers from three police force

1. 40-year-old male, unresponsive, no breathing, pulse 120, compound fractured femur. His airway has been opened by a member of the public	16. 22-year-old female, conscious, paradoxical respiration, ventilatory rate 32, pulse 100, remains in the vehicle, but is not trapped
2. 36-year-old male, conscious, fractured radius and ulna, multiple lacerations, ventilatory rate 20, pulse 90. He has made his way from the vehicle and is sitting at the roadside	17. 9-year-old female (length 105cm) fractured lower limbs, unable to move, ventilatory rate 28, pulse 120
3. 35-year-old female, conscious, bilateral fractured femurs, ventilatory rate 22, pulse 115	18. 30-year-old female, conscious, scalp laceration, ventilatory rate 20, pulse 90, unable to get out of the vehicle because of tangled wreckage and trapped casualties
4. 18-month-old female (length 55cm), motionless and unresponsive, no breathing even after opening the airway	19. 40-year-old female, severe laceration to upper extremity, leg injury, unable to move, heavy blood loss, ventilatory rate 20, pulse 130
5. 30-year-old female, conscious, severe bruising to chest, unable to move because of the pain, ventilatory rate 28, pulse 100. She remains in the vehicle	20. 5-year-old female (length 90cm) running around the scene, uncooperative, multiple lacerations, unable to assess respirations and pulse
6. 34-year-old female, unresponsive, blood from nose and right ear, noisy ventilation at a rate of 30, pulse 100	21. 52-year-old male, unresponsive, ventilatory rate 8, pulse 100
7. 16-year-old male, very distressed, lacerations to head, ventilatory rate 26, pulse 90, rushing from casualty to casualty	22. 45-year-old male, conscious, multiple lacerations, unable to move from his current position laying on the floor, no sensation in the lower extremities, ventilatory rate 18, pulse 110
8. 11-year-old male (length 125cm) wandering from casualty to casualty trying to help, ventilatory rate 22, pulse 120	23. 13-year-old male (length 135cm) no obvious injury, lying on the ground, difficult to rouse, ventilatory rate 32, pulse 140
9. 55-year-old male, conscious, sucking chest wound, ventilatory rate 32, pulse 120	24. 20-year-old female, no apparent injuries, unresponsive, placed in recovery position by a member of the public, no breathing, no pulse
10. 35-year-old male, conscious, multiple fractures, ventilatory rate 28, pulse 130, remains trapped in the vehicle	25. 30-year-old male, blood leaking from nose and ears, restless and disorientated, wandering about, ventilatory rate 18, pulse 90
11. 3-year-old male (length 80cm) alert, crying, moving all limbs, ventilatory rate 22, pulse 100	26. 2-year-old male (length 65cm) head injury, ventilatory rate 16, pulse 120
12. 50-year-old female, wandering around in a distressed state, uncooperative - unable to determine ventilatory rate or pulse.	27. 15-year-old male, trying to help other casualties, multiple lacerations, bruising to chest, ventilatory rate 20, pulse 110
13. 20-year-old male, conscious, in considerable pain, fractured tibia and fibula, ventilatory rate 18, pulse 90, remains trapped in the vehicle	28. 60-year-old male, bruising to abdomen, unable to move due to abdominal pain, ventilatory rate 26, pulse 115
14. 4-year-old male (length 90cm) obvious fracture to right arm and right leg, unable to move, ventilatory rate 38, pulse 180	29. 18-year-old female, large flap laceration to upper arm, ventilatory rate 26, pulse 115
15. 2-year-old female (length 60cm) multiple lacerations, not moving, ventilatory rate 16, pulse 120	30. 6-year-old female (length 95cm) large laceration to scalp, alert but distressed, ventilatory rate 24, pulse 156

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**Figure 1**—Casualty descriptors used in Exercises 1 and 2 (ventilatory rates and pulse as per minute)

areas attending a FASTAid course between February 2003 and June 2003 were recruited to the study. Four subjects had received triage training of between 30 and 90 minutes in the preceding five years, a further 31 had received previous training in triage of no more than 30 minutes in the preceding five years, and 46 had received no triage training at all. All 82 officers attending the courses agreed to participate and a 100% response rate was achieved. One candidate was subsequently withdrawn from the study as more than one option had been selected for the majority of the questions.

**Materials**—A paper-based triage exercise was designed based on a similar exercise used in a previous study, but with the addition of children.<sup>5</sup> The exercise included brief clinical details of 30 patients; 20 adults, four children in the height range of 50–80 cm, three children in the height range of 80–100 cm, and three children in the height range

of 100–140 cm (Figure 1). An age was provided as part of the description of each victim. Although age may or may not be known during an incident, those providing the care are likely to estimate this as part of their assessment of the patient. However, it has been reported that healthcare providers experience difficulty in estimating accurately the weight and height of children.<sup>6</sup> It also is likely that estimation of the age of children in an emergency context may be equally inaccurate. To explore this, the age provided for the children in the paper exercise was not necessarily accurate to the stated length of the child.

During the second part of the data collection, subjects were provided with a copy of the Triage Sieve Algorithm (Figure 2) and a Pediatric Triage Tape (Figure 3). The triage sieve algorithm-based decision-support tool enables the initial prioritization of patients for treatment in a multiple-victim scenario. The prioritization is based upon the assessment of the ability to walk, patency of the airway with simple

Correct Responses	Mean	Range
Exercise 1 (age of child as basis of decision making)	18.06	11–29
Exercise 1 (length of child as basis of decision making)	17.88	10–26
Exercise 2	24.41	15–30
<b>Over-triage</b>		
	<b>Mean</b>	<b>Range</b>
Exercise 1 (age of child as basis of decision making)	5.41 (18.0%)	1 (3.3%)– 16 (53.3%)
Exercise 1 (length of child as basis of decision making)	5.06 (16.9%)	1 (3.3%)– 14 (46.7%)
Exercise 2	3.52 (11.57%)	0 (0.0%)– 11 (36.7%)
<b>Under-triage</b>		
	<b>Mean</b>	<b>Range</b>
Exercise 1 (age of child as basis of decision making)	6.41 (21.4%)	0 (0.0%)– 16 (53.3%)
Exercise 1 (length of child as basis of decision making)	7.06 (23.5%)	1 (3.3%)– 17 (56.6%)
Exercise 2	2.10 (7.0%)	0 (0.0%)– 13 (43.3%)

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**Table 1**—Summary of correct and incorrect responses with extent of over- and under-triage expressed as a percentage in parentheses

maneuvers, ventilatory rate, and capillary refill time or pulse rate. The physiological values used in the triage sieve relate to adult physiology, and therefore, the use of the triage sieve on children would result in them being prioritized above adults with a similar or even greater clinical need. Hodgetts, Hall, Maconochie, and Smart describe a decision-support system, the pediatric triage tape, which attempts to overcome this problem.<sup>7</sup> The triage tape is based upon an adaptation of the triage sieve, but is related to the length of the child and the associated physiological values for a given length (Figure 4). Physiological values are grouped within length ranges: 50–80 cm, 80–100 cm, 100–140 cm, and >140 cm. Revised triage sieve algorithms are provided for the first three length groups with the adult triage sieve algorithm being adopted for the group >140 cm in length.

Although other field triage tools such as the Trauma Score, the Revised Trauma Score, the Prehospital Index, or the Pediatric Trauma Score are reported, they do require a more sophisticated level of assessment, such as measurement of systolic blood pressure or the calculation of the Glasgow Coma Scale Score, thus making them less useful than the triage sieve to non healthcare providers in a tactical situation.<sup>8–12</sup>

*Exercise Description*—At the start of the FASTAid course, subjects were provided with the first exercise. They were asked to complete the paper exercise as if they were the first person at the scene of a multiple-casualty incident. For

	(adjusted for length of child)		(adjusted for age of child)	
	p-value	Effect	p-value	Effect
<b>Correct responses</b>	<0.001	0.672	<0.001	0.648
<b>Over-triage</b>	<0.001	0.209	<0.001	0.263
<b>Under-triage</b>	<0.001	0.572	<0.001	0.498

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**Table 2**—Differences between Exercise 1 and Exercise 2 ( $p < 0.001$ )

each of the casualties described they were instructed to identify the priority for treatment using either P1 (priority 1; immediate), P2 (priority 2; urgent), P3 (priority 3; delayed), or dead. Subjects were allowed 15 minutes to complete the exercise, amounting to 30 seconds per victim. Subjects were advised that the exercise be carried out under examination conditions. At the end of the allocated time, the first exercise was placed in a sealed envelope, and the subjects were provided with a card containing the Triage Sieve Algorithm and a pediatric triage tape. No instruction was given as to how these materials should be used but subjects were allowed to examine the materials for five minutes. Subjects were then instructed to complete Exercise 2, which was identical to Exercise 1, except this time subjects were allowed to use the Triage Sieve Algorithm and pediatric triage tape provided. The time allowed and examination conditions remained the same as Exercise 1.

*Analysis*—Exercises were coded as correct, incorrect over-triage, or incorrect under-triage using the Triage Sieve Algorithm and pediatric triage tape to produce a model answer. Two model answers were produced for the Exercise 1, one using the given age as the basis for decision-making, and the second using the given length as the basis for decision making. Exercise 2 only received one model answer, as the materials provided anticipate decisions to be made on length alone.

The resulting data were analyzed by using mixed between-within subjects analysis of variance. This enabled a comparison to be made between the scores in Exercise 1 and 2 and to observe any effects of previous triage training. The data were analyzed using Wilks' Lambda to examine the differences between scores from Exercises 1 and 2, with the differences between those with triage training and those without explored by a test of between-subject effects.

**Results**

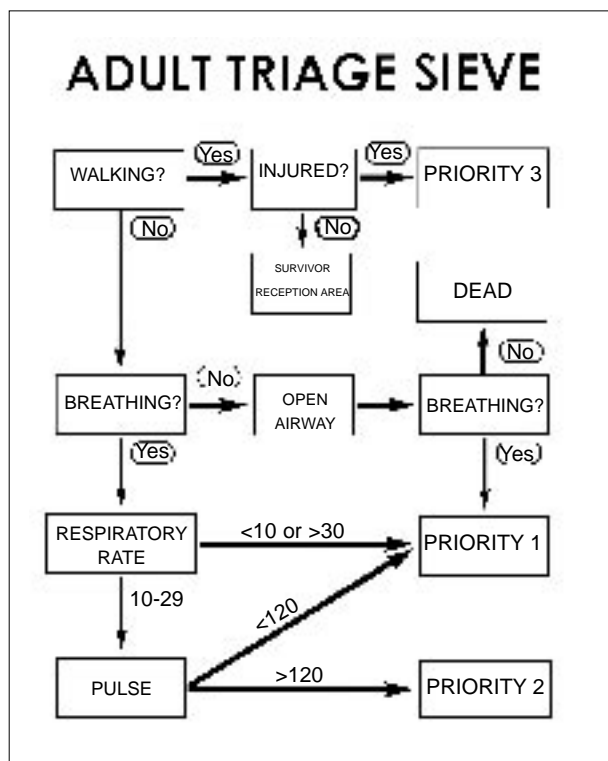
No subject identified the discrepancy between age and length in respect to the children in the paper exercise. The scores for both Exercise 1 and 2 are summarized in Table 1.

There is a large and significant improvement in total correct answers between Exercise 1 and Exercise 2 ( $p < 0.001$ ).

	(adjusted for length of child)		(adjusted for age of child)	
	p-value	Effect	p-value	Effect
Correct responses	<0.001	0.145	<0.001	0.198
Over-triage	>0.05	-	<0.05	0.063
Under-triage	<0.05	0.83	<0.05	0.084

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**Table 3**—Differences between those with triage training and those without ( $p < 0.05$ )



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**Figure 2**—The Triage Sieve Algorithm

There is an associated significant reduction in the extent of over- and under-triage between Exercise 1 and 2, with the greatest improvement being the reduction in under triage rates ( $p < 0.001$ ) (Table 2).

The difference between those with triage training and those without is statistically significant at the level of  $p < 0.05$ , however the extent of any difference is small. Where the length of the children is assumed to be correct, there is no significant difference in over-triage between those with triage training and those without. The extent of the differences is expressed as effect size, which Cohen describes as small (0.01), moderate (0.06) or large (0.14).<sup>13</sup> The results of this analysis are summarized in Table 3. There was no statistically significant difference between those officers who had 30–90 minutes triage training when compared with those who had received <30 minutes triage training.



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**Figure 3**—The Pediatric Triage Tape

However, given that only four officers had received the longer training, it may be difficult to detect differences with such small numbers of subjects. The distribution of correct answers and the extent of over- and under-triage are illustrated in Table 4.

**Discussion**

The use of the Triage Sieve Algorithm and the pediatric triage tape to generate the model answer relies upon the acceptance that the tools are valid, in that they correctly identify clinical priority in any given patient. As yet, the tools have not been validated with any scientific rigor and it is likely such evaluation will not occur given the difficulties both scientifically and ethically of conducting randomized trials and exploring patient outcome. However, the prehospital community has adopted the triage sieve and, to a lesser extent, the pediatric triage tape as assessment tools that are based upon accepted clinical reasoning in the absence of empirical evidence. Therefore, it seems reasonable to accept that the triage assessment tools, with all their limitations, offer a more reliable and objective way of assigning clinical priority than making a judgment based on apparent severity of injury. This may be of even more significance for the individual with no healthcare background who has no previous experience on which to base judgments about apparent severity.

The accuracy of triage decision-making by police firearms officers included in this study appears to be of a high standard even without the use of materials to support their decision-making. When the decision-support material is introduced, accuracy appears to improve dramatically. This improvement is not entirely unexpected, given that the model response or answer is based upon this material. However, it does suggest that both the Triage Sieve Algorithm and the Pediatric Triage Tape can be easily understood and intuitively followed. It is likely that if this were not the case, the degree of improvement would be less, accuracy would deteriorate as errors were made in calculating priority, and the effect size would be considerably smaller. The fact that subjects were provided with the decision-support materials for a short period of time and were

<b>Pre-test</b>										
<b>Patient</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<i>Correct</i>	8.6	82.7	50.6	51.9	64.2	84.0	84.0	82.7	67.9	40.7
<i>Over</i>	91.4	17.3	8.6	48.1	3.7	na	16.0	17.3	na	Na
<i>Under</i>	na	na	40.7	na	32.1	16.0	na	na	32.1	59.3
<b>Patient</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<i>Correct</i>	92.6	77.8	61.7	53.1	40.7 (49.9)	35.8	70.4	33.3	76.5	59.3
<i>Over</i>	7.4	22.2	8.6	na	na (40.7)	na	8.6	2.5	na	40.7
<i>Under</i>	na	na	29.6	46.9	59.3 (9.9)	64.2	21.0	64.2	23.5	na
<b>Patient</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29*</b>	<b>30</b>
<i>Correct</i>	81.5	65.4	61.7	65.4	28.4	23.5 (59.3)	82.7	55.6	50.6	53.1 (27.2)
<i>Over</i>	na	7.4	ns	34.6	71.6	na (23.5)	17.3	6.2	48.1	27.2 (na)
<i>Under</i>	18.5	27.2	38.3	na	na	76.5 (17.3)	na	38.3	na	19.8 (72.8)
<b>Post-test</b>										
<b>Patient</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<i>Correct</i>	55.6	70.4	88.9	91.4	92.6	91.4	85.2	82.7	95.1	58.0
<i>Over</i>	44.4	29.6	2.5	8.6	2.5	na	14.8	17.3	na	na
<i>Under</i>	na	na	8.6	na	4.9	8.6	na	na	4.9	42.0
<b>Patient</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18*</b>	<b>19*</b>	<b>20*</b>
<i>Correct</i>	55.6	100	76.5	92.6	87.7	92.6	87.7	74.1	81.5	91.4
<i>Over</i>	44.4	0	11.1	na	na	na	12.3	2.5	na	7.4
<i>Under</i>	na	na	12.3	7.4	12.3	7.4	0.00	22.2	17.3	Na
<b>Patient</b>	<b>21*</b>	<b>22*</b>	<b>23*</b>	<b>24*</b>	<b>25*</b>	<b>26*</b>	<b>27*</b>	<b>28*</b>	<b>29*</b>	<b>30*</b>
<i>Correct</i>	96.3	88.9	88.9	88.9	65.4	80.2	85.2	88.9	22.2	76.5
<i>Over</i>	na	7.4	na	9.9	33.3	na	13.6	3.7	76.5	8.6
<i>Under</i>	2.5	2.5	9.9	na	na	18.5	na	6.2	na	13.6

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**Table 4**—Test responses expressed as percentages; Adjusted for age, in parentheses (\*1 subject (1.2%) failed to respond, complete the paper in the allocated time, and did not provide a response to the indicated items; na = not available)

offered no instruction as to how the materials should be used, reinforces the notion that the materials are relatively intuitive.

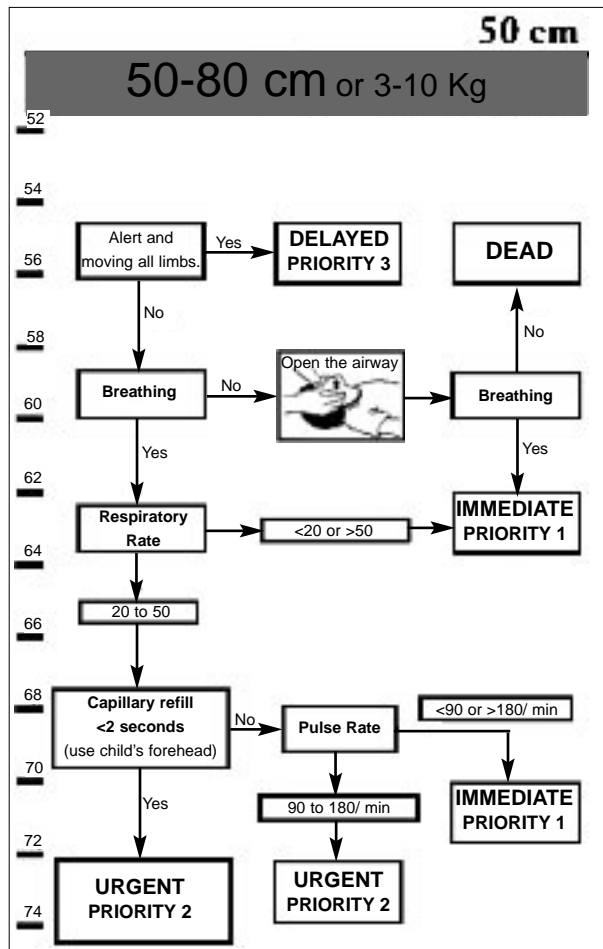
It could be argued that improvement simply occurred from repeating the test, as the officers may have been able to quickly answer the questions they believe they answered correctly in Exercise 1, leaving more time to consider the questions they were unsure of. This is possible, but appears unlikely, as there are several examples from the data where questions answered in Exercise 1 were answered incorrectly in Exercise 2.

The greatest improvement occurred in the reduction of under-triage, which suggests that the use of the decision-support materials reduces the number of cases where casualties are assigned a priority below that indicated by clinical need. It also is important to note that this is not at the expense of over-triaging other cases.

Previous triage training appears to make a relatively small difference in the accuracy of decision-making,

though the difference is statistically significant. Given this, the cost:benefit of providing triage training and update within a large organization may be of questionable value. It may prove to be more cost-effective to make the decision-support materials widely available with less emphasis on detailed triage training, though further work must be accomplished in this area.

The failure of any of the subjects to recognize the discrepancy between age and length of the children in the exercises supports the notion that estimating age of children is difficult. This, coupled with the likelihood that non-healthcare professionals will not be familiar with the normal range of age appropriate physiological parameters, makes the accurate assessment of children improbable. The results of this study support this notion with dramatic improvement in the accuracy of prioritization of children between Exercise 1 and Exercise 2.



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**Figure 4**—Section of Pediatric Triage Tape illustrating physiological values corrected for size

Given that accuracy of triage decision making improves with the use of the decision-support materials in a major incident scenario, then the same materials also may be helpful to police firearms officers or others with little or no emergency care experience in differentiating the severely-

injured single casualty from the less seriously injured. This facility may be of critical importance in the tactical situation and help those involved make informed decisions regarding the urgency of need in the extraction of a victim from a tactical scenario.

This study has only considered the accuracy of decision making of firearms trained police officers, it has made no attempt to examine their ability to collect the clinical data to inform these decisions. These individuals will need training in basic clinical skills so they are able to open an airway, assess the rate of breathing, and take a pulse in adults and children. This type of training can be delivered at a fairly rudimentary level, but will have cost:benefit implications for the organization in question.

### Conclusion

In conclusion, it appears that there is great potential to provide accurate triage decisions in a mass-casualty scenario with the use of triage decision-support materials such as the Triage Sieve Algorithm and the Pediatric Triage Tape. These decisions potentially could be made by people with little or no healthcare experience provided they had the skills to assess vital signs across the age range. Furthermore, in tactical scenarios, the use of these materials may aid in making informed decisions regarding the urgency of individual casualty extraction.

Training in triage may only slightly improve decision making by itself, and therefore, may be of little benefit. However, if training is required in basic clinical assessment, then basic triage training could be part of that package. This study suggests that the triage decision-support materials may improve the triage decision-making of non-healthcare providers, and in order to capitalize on these benefits, decision-support materials should be immediately available to those who may be placed in a position requiring them to make triage decisions.

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