# Appendix 1: MAJOR INCIDENT TRIAGE TEST

Study Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Training Venue: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please read the scenario below before answering the questions

You are part of the first ambulance team responding to a major incident where a bus and taxi had collided. The incident occurred on a busy highway and 10 additional vehicles were subsequently involved in the collision. You are tasked to rapidly assess and triage the involved victims.

Using the Triage Sieve algorithm (supplied) for primary triage in major incidents, please indicate the appropriate triage category for the following 20 victims:

1. The driver of the taxi is standing near his wrecked taxi, extremely anxious. He walks towards you and demand the police. You notice a bone protruding through a minimally bleeding wound on his forearm. You do a quick assessment: Blood pressure = 100/60mmHg, Heart rate = 120 / minute, Respiratory rate = 26 / minute.

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| --- | --- | --- | --- | --- | --- |
| Triage Category: |  | Red | Yellow | Green | Blue |

1. A middle aged man has no obvious injuries. He is lying unconscious with a respiratory rate of 8 breaths / minute and a heart rate of 110 / minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. A middle aged man runs towards you screaming for help. His shirt and trousers are stained with blood. He is pressing his left palm over the side of his neck. He removes his hand and a jet of blood shoots from his neck. You ask him to continue applying pressure while you check his vital signs. Blood pressure 110/70mmHg, Respiratory Rate: 28/min, Heart Rate: 130/min.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A 10 year old child’s foot is pinned under the wheel of one of the vehicles. He is talking to you but is in a lot of pain. You count a respiratory rate of 11 breaths per minute and a thready rapid pulse of 103 beats/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. A 26 year old man was ejected him from his car after it caught fire and exploded. You find him 15 metres away from the burning vehicle. He has burn wounds all over his body except for the dorsal surfaces of his feet. The hair on his head and nostrils is charred. He is fully conscious and talks to you but he cannot walk or see. His only complaint is severe pain from the burns around his face. His blood pressure is 76/40 mmHg, Heart rate: 140 bpm, and Respiratory rate: 40 bpm.

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| Triage Category: | Red | Yellow | Green | Blue |

1. The mother of the child in the above question (Q4) is lying away from her son. She responds weakly to your calls and occasionally moans in pain. A loose piece of metal has transected through her right foot and a small pool of blood has collected around her. She has a weak rapid pulse of 150 beats/minute and Respiratory Rate of 27 breaths/minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A young woman, with a bleeding wound on her face is still strapped in the driver’s seat in one of the vehicles. She responds to your voice and instructions. Her respiratory rate is 18 breaths/minute and her heart rate is 120 beats/minute. You open the car door, undo the seat belt and ask her to step out. She is able to walk unaided.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A middle aged woman has deep circumferential burns involving her entire right upper limb. She is also complaining of mild headache and cannot walk. Her vital signs are: Respiratory rate 23 breaths/minute Heart rate: 100 beats/minute, and Blood pressure: 102/72 mmHg.

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| Triage Category: | Red | Yellow | Green | Blue |

1. An elderly man was jogging by the roadside before being hit by a vehicle. He is lying unconscious in a small pool of blood. He has feeble chest movements and you calculate a respiratory rate of 7 breaths/ minute with a Heart rate of 140 beats/minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A 14 year old is crying while seated with her back against a tree next to the road. She cannot stand or walk. There’s minor bruising over her abdomen (left upper quadrant). She is breathing at a rate of 20 breaths/minute and her heart rate is 100 beats per minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. An elderly woman is walking around her wrecked car in continuous circles. She is mumbling to herself and is obviously confused. Her left wrist is injured and deformed. There are no other apparent injuries. Heart Rate: 110 Beats/minute, Respiratory Rate: 20 breaths/ minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A pregnant woman is lying in the middle of the road. She is alert but cannot stand as her left lower leg (tibia) is fractured and protruding through the skin. Her respiratory rate is 28 beats/minute and heart rate is 140 beats/minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A young woman’s head scarf is bloody and she is bleeding through her left ear and left nostril. She is alert, oriented and able to speak to you. She can walk but has a severe headache. Her respiratory rate is 20 breaths/minute and her heart rate 118beats/minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. A 17 year old male, in obvious respiratory distress, is lying on the pavement, unable to stand or walk. There is minor bleeding from his left knee. His respiratory rate is 25 breaths/minute, rapid and shallow. His heart rate 110 beats/min.

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| Triage Category: | Red | Yellow | Green | Blue |

1. An elderly woman is lying unconscious next to her vehicle. There’s a wheelchair attached to the roof. You cannot see any chest movements. You open her mouth and find a set of loose dentures in her mouth. You remove them and open her airway with a jaw thrust maneuver. She starts to breath spontaneously at 14 breaths/minute. Her heart rate is 98 beats/minute.

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| Triage Category: | Red | Yellow | Green | Blue |

1. The drunk bus driver was punched by one of his angry passengers. He fell and hit his head against the pavement. He is conscious but cannot stand or walk. His heart rate is 120 beats/minute and respiratory rate 9 breaths/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. A 19 year old girl didn’t wear a seat belt and the impact of the injury pushed her through the car’s windscreen. Both her lower legs (tibias) are broken and she has multiple cut wounds her face and hands. Some wounds have pieces of glass in them. She is fully conscious, with a respiratory rate of 12 breaths/minute and a heart rate of 110 beats/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. One of the drivers are still stuck in his car. A huge metallic pipe (about 10 centimeter in diameter) has pierced through his back and is protruding through the right side of his chest. He is unresponsive, with shallow breaths at 10 breaths/minute. Both his arms have been severed at the elbows. He has a weak carotid pulse of 120 beats/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. A 24 year old man runs towards you, howling in pain!! He is holding his left shoulder which appears to be dislocated. His heart rate is 122 beats/minute and his respiratory rate is 23 breaths/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

1. A 12 year old girl is lying in the road, eyes closed. She responds to painful stimulation but is unable to stand or walk. She is wearing a costume for a school play, which has turned bloody. You notice blood oozing from at her left wrist. Her pulse rate is 132 beats/minute with a respiratory rate of 16 breaths/minute.

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| --- | --- | --- | --- | --- |
| Triage Category: | Red | Yellow | Green | Blue |

# Appendix 2: SURVEY TOOL:

A COMPARISON BETWEEN DIFFERENTLY SKILLED PREHOSPITAL EMERGENCY CARE PROVIDERS IN MASS CASUALTY TRIAGE IN SOUTH AFRICA

Study number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Training Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION A: DEMOGRAPHICS**: (TO BE COMPLETED BY PARTICIPANTS)

|  |  |
| --- | --- |
| **Age:** (Years) |  |
| **Sex:** (tick) | MALE | FEMALE |
| **Duration of Service** (in years): | <1  | 1-2  | 2-3  | 3-4  |  | >5  |

SECTION B: TRAINING:

|  |  |  |  |
| --- | --- | --- | --- |
|  | BLS | ILS | ALS |
| Level of Training (tick): |  |  |  |
| Year Completed |  |  |  |

**Prior Major Incident Training:**

|  |  |  |
| --- | --- | --- |
| Have you had Prior Major Incident Management training? | YES | NO |
| If YES, state details | Where | When ( Year)  |

**SECTION C:** (TO BE COMPLETED BY INVESTIGATORS)

**PHASE 1: PRE-TEST**

|  |  |  |
| --- | --- | --- |
| Correct Triage | Over Triage | Undertriage |
|  |  |  |

**PHASE 2:**

|  |  |  |
| --- | --- | --- |
| MIMMS training completed: | Yes | No |

**PHASE 3: POST-TEST**

WRITTEN:

|  |  |  |
| --- | --- | --- |
| Correct Triage | Over Triage | Undertriage |
|  |  |  |

FACE-TO-FACE:

|  |  |  |  |
| --- | --- | --- | --- |
| Correct Triage | Over Triage | Undertriage | Time taken to complete triage |
|  |  |  |  |
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|  |  |  |  |