**Appendix 3.**

**Table 4.** Overview of actions per category of prehospital triage tools, including the applicability for lay people.

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| --- | --- | --- | --- | --- | --- |
| **CATEGORY** | **ACTION** | **TRIAGE TOOLS** | **APPLICABLE FOR LAY PEOPLE + INSTRUCTION HOW TO CHECK** | **POSSIBLE ADJUSTMENTS TO MAKE APPLICABLE TO LAY PEOPLE** | **POSSIBLE INTERVENTION FOR LAY PEOPLE** |
| **AIRWAY****(A)** | Potential A problem | MARCHMETARETTS-HEV | Maybe | Keep it simple: 1. Respirations present after positioning airway2. Visible respiratory difficulties (distress) | Head tilt chin lift or jaw thrust maneuver |
|  | Respirations present | ASAVCESIRAHomebushJumpSTARTMARCHMPTTMSTARTPTTSieve Triage AlgorithmSmartSTARTSTM MASS SALT | Yes:Respiratory movement visible? | NN | 1. Recovery position2. If awake: help with comfortable posture |
|  | Respirations present after positioning airway | ASAVCareFlight triageHomebushJumpSTARTMASSMSTARTPTTSieve Triage AlgorithmSmartSTART | Yes:Open airway by head tilt chin lift or jaw thrust maneuver and look for respiratory movement (look, listen, feel) | Head tilt chin lift and/or jaw thrust maneuver instruction (indication and how to perform) | 1. Head tilt chin lift or jaw thrust maneuver2. Recovery position3. If airway obstruction is suspected: open the mouth and remove possible obstruction |
| **BREATHING****(B)** | Potential B problem | ASAVMETATactical Triage Algorithm | Maybe | Keep it simple: 1. Respiratory rate (per minute): <12 / 12-30 / >302. Visible respiratory difficulties (distress) | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Pulse oximetry (%): <80 without oxygen or <90 with oxygen / <90 without oxygen or <95 with oxygen / 90-95 without oxygen/ >95 without oxygen | RETTS-HEV | No | Visible respiratory difficulties (distress) |  |
|  | Respiratory failure | Medical Triage Algorithm | Maybe | Keep it simple: 1. Respiratory rate (per minute): <12 / 12-30 / >302. Visible respiratory difficulties (distress) | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Respiratory rate (per minute): 8-25 / 26-30 / >30 | RETTS-HEV | No | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | - |
|  | Respiratory rate (per minute): <10 / 10-29 / >29 | Sieve Triage Algorithm | Yes:Count respirations in 10 seconds, multiply by 6. | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Respiratory rate (per minute): <12 / 12-22 / >22 | MPTT | No | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | - |
|  | Respiratory rate (per minute): <20 / 20-50 / >50 | PTT | Yes:Count respirations in 10 seconds, multiply by 6. | Respiratory rate (per minute): <12 / 12-30 / >30 | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Respiratory rate (per minute): <9 / 9-14 / 15-20 / 21-29 / >29 | TEWS | No | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | - |
|  | Respiratory rate (per minute): <9 / 10-24 / 25-35 / >35 | STM | No | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | - |
|  | Respiratory rate (per minute): 0 / 1-5 / 6-9 / 10-29 / ≥30 | Sort | No | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | - |
|  | Respiratory rate (per minute): <15 / 15-45 / >45 | JumpSTART | Yes:Count respirations in 10 seconds, multiply by 6. | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Respiratory rate (per minute): <30 or ≥30 | STARTMSTARTSmartHomebush | Yes:Count respirations in 10 seconds, multiply by 6. | Keep it simple: Respiratory rate (per minute): <12 / 12-30 / >30 | 1. Recovery position2. Head tilt chin lift maneuver3. Help with comfortable posture |
|  | Thoracic pain | Medical Triage Algorithm | No | Visible respiratory difficulties (distress) | - |
| **CIRCULATION****(C)** | Bleeding | CESIRA | Maybe | Keep it simple: Visible major external bleeding | 1. Stop the bleeding2. Put pressure on wound (including instruction)3. Apply tourniquet (including instruction / add to trauma kit)4. Recovery position5. Help with comfortable posture |
|  | Capillary refill (s) <2 or ≥2 | PTTSieve Triage AlgorithmSmartSTART | No | Keep it simple: Pale skin | - |
|  | External arterial bleeding | ASAVMedical Triage Algorithm | Maybe | Keep it simple: Visible major external bleeding | 1. Stop the bleeding2. Put pressure on wound (including instruction)3. Apply tourniquet (including instruction / add to trauma kit)4. Recovery position5. Help with comfortable posture |
|  | Major Hemorrhage | MARCHSALT | Maybe | Keep it simple: Visible major external bleeding | 1. Stop the bleeding2. Put pressure on wound (including instruction)3. Apply tourniquet (including instruction / add to trauma kit)4. Recovery position5. Help with comfortable posture |
|  | Potential C problem | META | No | Keep it simple: 1. Pale skin2. Visible major external bleeding | - |
|  | Pulse rate (per minute): 50-100 / >100 or <50 / >120 or <40 / >140 | RETTS-HEV | No | Keep it simple: Pale skin | - |
|  | Pulse rate (per minute): <100 / ≥ 100 | MPTT | No | Keep it simple: Pale skin | - |
|  | Pulse rate (per minute): <120 or ≥120 | Sieve Triage Algorithm | No | Keep it simple: Pale skin | - |
|  | Pulse rate (per minute): <40 / 41-60 /61-120 / >120 | STM | No | Keep it simple: Pale skin | - |
|  | Pulse rate (per minute): <41 / 41-50 / 51-100 / 101-110 / 111-129 / >129 | TEWS | No | Keep it simple: Pale skin | - |
|  | Pulse rate <90 / 180< | PTT | No | Keep it simple: Pale skin | - |
|  | Radial pulse | ASAVCareFlight triageHomebushJumpSTARTMARCHMASSMSTARTSALTSAVESmartSTARTSTMTactical Triage Algorithm | No | Keep it simple: Pale skin | - |
|  | Shock | CESIRAMedical Triage Algorithm | No | Keep it simple: Pale skin | - |
|  | Systolic blood pressure (mmHg): <80 / <90 / ≥90 | RETTS-HEV | No | Keep it simple: Pale skin | - |
|  | Systolic blood pressure (mmHg): <71 / 71-80 / 81-100 / 101-199/ >199 | TEWS | No | Keep it simple: Pale skin | - |
|  | Systolic blood pressure (mmHg): 0 / 1-49 / 50-75 / 76-89 / ≥90 | Sort | No | Keep it simple: Pale skin | - |
| **DISABILITY****(D)** | Ability to Walk | ASAVCareFlight triageCESIRAHomebushJumpSTARTMARCHMASSMedical Triage AlgorithmMPTTMSTARTSALTSieve Triage AlgorithmSmartSTARTTactical Triage AlgorithmTEWS | Yes:Ask patient to move | NN | 1. Bring to safety / assembly / dispatch point2. Motivate to help and rescue others if possible |
|  | AVPU | JumpSTARTMARCHRETTS-HEVTEWS | Yes: Is patient alert / confused or somnolent / if not responding give painful stimulus (squeeze shoulder muscle) | Maybe give instruction for painful stimulus | 1. Extract or collect information about situation, patient (AMPLE) and other possible patients2. Recovery position |
|  | Can follow commands | ASAVCareFlight triageHomebushMSTARTSmartSTARTTactical Triage Algorithm | Yes: Ask patient to move limb | NN | 1. Extract or collect information about situation, patient (AMPLE) and other possible patients2. Recovery position |
|  | Conscious | MASS CESIRAMedical Triage AlgorithmPTT | Yes:Does the patient talk back? | NN | 1. Extract or collect information about situation, patient (AMPLE) and other possible patients2. Recovery position |
|  | Cranial trauma   | Medical Triage AlgorithmSAVE | Maybe | 1. Visible major external bleeding2. Ability to walk3. Conscious | 1. Put pressure on wound2. Immobilize or let not move the patient |
|  | EMV <14 | MPTT | No | Keep it simple: AVPU | - |
|  | EMV Motor Response | STM (Sacco Triage Method) | No | Keep it simple: Ability to to move arm or leg | - |
|  | EMV score | SAVESortRETTS-HEV | No | Keep it simple: AVPU | - |
|  | Move arm or leg | MASSPTTSALT | Yes:Ask patient to move limb | NN | Bring to safety / assembly / dispatch point if possible |
|  | Potential D problem | META | No | Keep it simple: AVPU | - |
| **ENVIRONMENT****(E)** | Backbone injury | Medical Triage Algorithm | Maybe | If awake: painful (cervical) spine by movement | Put pressure on woundLet not move patientTalk to the patient. |
|  | Burn injury <50% survival | SAVE | No | Keep it simple: Visible burn wounds | - |
|  | Burns | Medical Triage Algorithm | Yes | NN | Cool with lukewarm water at least 10 minutes if possible, but watch out for hypothermia |
|  | Fractures | CESIRAMedical Triage Algorithm | Maybe | 1. Visible fracture or unnatural bone position2. Visible major external bleeding visible3. Ability to walk | - |
|  | Heat stroke / hyperthermia | MARCHMedical Triage Algorithm | No | Patient has following signs:- Red skin- Sweaty- Feeling hot | - |
|  | Hypothermia | MARCHMedical Triage Algorithm | Maybe | 1. Patient feels or indicates cold2. Patient has following signs:- Pale skin- Blue fingers / lips- Cold skin- Somnolent | 1. Provide shelter2. Cover up with blankets3. Remove wet clothing if dry clothing or blankets are present |
|  | Minor injuries only | SALT | No | Keep it simple: Ability to walk | - |
|  | Other injuries | CESIRA | No | - | - |
|  | Poisoning | Medical Triage Algorithm | No | Dangerous hazards suspected | - |
|  | Potential E problem | META | No | 1. Patient feels or indicates cold2. Patient has following signs:- Pale skin- Blue fingers / lips- Cold skin- Somnolent | - |
|  | Temperature (°C): <32 / >40 or 32-34 / >38 or <35 / 35-38 | RETTS-HEV | No | 1. Patient feels or indicates cold2. Patient has following signs:- Pale skin- Blue fingers / lips- Cold skin- Somnolent | - |
|  | Temperature <35, 35-38.4, >=38.5 | TEWS | No | 1. Patient feels or indicates cold2. Patient has following signs:- Pale skin- Blue fingers / lips- Cold skin- Somnolent | - |
|  | Trauma | TEWS | No | - | - |
| **OTHER ACTIONS** | Age (years): 0-7 / 8-14 / 15-54 / 55-74 / ≥75 | STM (Sacco Triage Method) | Maybe | Keep it simple: Child / adult / elderly | - |
|  | Danger | MARCH | Yes | - | 1. Ensure own safety first2. Secure situation if possible3. Prevent more casualties4. Bring patients into safety |
|  | Deadly injured | ASAV | Maybe | Keep it simple: Respirations present after positioning airway | - |
|  | Likely to survive | SALT | No | Keep it simple: Respirations present after positioning airway | - |
|  | Obvious signs of death | Tactical Triage Algorithm | Maybe | Keep it simple: Respirations present after positioning airway | - |
|  | Organ rescue score (MESS) | SAVE | No | - | - |

**Abbreviations:** NN = not necessary; MCI = mass casualty incident; HTCL = head tilt chin lift; JT = jaw thrust.