



UJ TRIAGE PLAN

- Medical Management at Disaster Rescue sites -

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Related documents

UJ documents (e.g. Policies, Regulations, Guidelines, Contracts)	Other (e.g. Legislation, DoE and HEQC directives and guidelines)
<ol style="list-style-type: none"> 1. Emergency Operations Plan 2. Epidemic/Pandemic Preparedness Plan 3. Avian Influenza (H5N1) Management Plan 4. UJ Health plan on Emerging Infectious Disease 5. Chemical Exposure Incidents at UJ 6. UJ SOP Mental Persons; Aggressive Behaviour protocol 7. SOP: UJ Radiation Hazmat incident 8. Occupational Health Disaster Risk Register 9. UJ Oxygen Deficiency Hazard 10. Acute Exposure to Hazardous Chemical Substances 	<ol style="list-style-type: none"> 1. Occupational Health and Safety Act 85 of 1993, as amended 2. Hazardous Substance Act 15 of 1973 3. Disaster Management Act 57 of 2002 4. Nursing Act 33 of 2005 5. Medicines and Related Substances Act 101 of 1965 6. SANS 10366:2012 7. Safety at Sports and Recreational Events Act 2 of 2010.
Stakeholders affected by this document (units and divisions which should be familiar with it):	<ol style="list-style-type: none"> 1. Protection Services 2. Primary Health Care 3. Emergency Response Resources Group 4. PsyCad 5. Human Resources 6. Student Affairs 7. Executive Leadership Group
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TABLE OF CONTENTS

	Page
1. BACKGROUND	3
2. PREAMBLE	3
3. PURPOSE	3
4. AUTHORITY AND IMPLEMENTATION	3
5. SCOPE	4
6. ABBREVIATIONS AND DEFINITIONS	4
7. ROLE OF OCCUPATIONAL HEALTH PROFESSIONALS IN TRIAGE	6
UJ Roving Triage Plan	
8. REVIEW	13
9. REFERENCES	15
10 APPENDICES	16
A UJ Emergency Numbers	16
B Crisis Communication Plan	16
C Notification of a radiation occurrence	19
D Triage	20

UJ TRIAGE PLAN

Medical management at disaster rescue sites

1. BACKGROUND

The unpredictable origin, impacts and scope of a medical emergency at the University of Johannesburg (UJ) provide the background for the design of a Triage (Medical Management) Plan. The Triage Plan assimilates generic emergency medical planning and detailed planning for gas explosions, hazardous chemical spillages and radiation incidents. The format aims to provide a highly adaptable application of guidelines, protocols, human and physical resources to the scene of a disaster.

2. PREAMBLE

The UJ commits to mitigation of disaster risk and preparedness for disaster. A ***caring*** institution conducts effective medical planning, response and recovery of a disaster. The Triage Plan is executed within the legal construct of being 'reasonably practicable'. The Triage Plan becomes operational in tandem with the UJ Emergency Operations Plan, as soon as a State of Emergency is declared at the University.

3. PURPOSE

The purpose of the Triage Plan is to describe the preparation and execution of rapid and efficient medical response to disasters at UJ premises.

4. AUTHORITY AND IMPLEMENTATION

4.1 Triage Plan

The Triage Plan will be activated once the Vice Chancellor or designee declares a State of Emergency at the UJ. The Head: Occupational Health Practice (H OHP) or designee will be responsible for its implementation. The declaration of a State of Emergency at the UJ and the site, nature and scope of the emergency

are determinants of the final logistical arrangements. The Triage Plan will be administered from the Emergency Operations Centre (EOC) in collaboration with internal and external emergency agencies. The subsequent deactivation of the Triage Plan will follow when all phases of managing the emergency have been concluded.

4.2 Membership of the ERRG and ICCG

The H OHP will be a member of the *Emergency Response Resources Group* (ERRG) and/or the *Incident Command Centre Group* (ICCG) in case of a declared emergency.

4.3 Occupational Health Risk Control

Employees and volunteers will not enter an actual disaster site unless the *Incident Scene Commander* (ISC) had determined that it is safe to do so. Employees will also not be allowed to conduct any search and rescue operations, medical treatment or disaster recovery unless appropriate Personal Protective Equipment is available and training has been provided to ensure the immediate safety and long term health of the individual.

5. SCOPE

The Triage Plan will apply to UJ premises/property where a State of Emergency is declared.

6. ABBREVIATIONS AND DEFINITIONS

6.1 Abbreviations

APB	<i>Auckland Park Bunting Road Campus</i>
DVC	<i>Deputy Vice Chancellor</i>
EMS	<i>Emergency Medical Services</i>
EOC	<i>Emergency Operations Centre</i>
EOP	<i>Emergency Operations Plan</i>
ERC	<i>Emergency Response Coordinator</i>
ERRG	<i>Emergency Response Resources Group</i>
ICCG	<i>Incident Command Centre Group</i>

ISC	<i>Incident Scene Commander</i>
MEC	<i>Management Executive Committee</i>
SOP	<i>Standard Operating Procedure</i>
UJ	<i>University of Johannesburg</i>
VC	<i>Vice-Chancellor</i>
OH	<i>Occupational Health</i>
APK	<i>Auckland Park Kingsway campus</i>
H OHP	<i>Head: Occupational Health Practice</i>
H PH	<i>Head: Primary Health</i>
HAZMAT	<i>Hazardous Materials</i>

6.2 Definitions

Emergency

Any occurrence, or threat thereof, whether natural, technological, or manmade, in war or in peace, which results or may result in substantial injury or harm to the population or substantial damage to or loss of property.

Disaster

A progressive or sudden, widespread or localized, natural or human-caused occurrence which:

(a) causes or threatens to cause:-

- (i) death, injury or disease;
- (ii) damage to property, infrastructure or the environment; or
- (iii) disruption of the life of a community; and

(b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources.

UJ State of Emergency

A State of Emergency will be declared by the Vice Chancellor or designee in the event of a disaster. It may be called on a single campus, on designated campuses or across the entire University as justified by underlying circumstances.

When thus activated, this plan will be implemented by all assigned officials under the direction of the members of the MEC. These officials will be responsible for all decisions, resource allocation, emergency response and recovery actions during and following any crisis or disaster. The plan shall be

subsequently deactivated by the VC or designee when all phases of managing the emergency have concluded.

Triage

The evaluation and classification of casualties for purposes of treatment and evacuation. It consists of the immediate sorting of patients according to type and seriousness of injury and likelihood of survival, and the establishment of priority for treatment and evacuation to assure medical care of the greatest benefit to the largest number. See also Appendix C

Triage Plan

The background, context, guidelines and protocols for the Medical Management at a Disaster Rescue site.

HAZMAT situations

(a) Radiation incident

An emergency where radio-nuclides, sealed or unsealed radio-active sources, or radio-active waste is involved;

(b) Gas release

An emergency where there is uncontrolled release of gas;

(c) Chemical spillage

An emergency where a Hazardous Chemical Substance leaks or is spilled onto a surface or person (or both) in quantities more than those required for research or experiential learning.

Campus/premises

All grounds owned, operated or under the supervision and control of the University of Johannesburg.

7. THE ROLE OF OCCUPATIONAL HEALTH PROFESSIONALS IN TRIAGE

7.1 Audit and report on the scope and impacts of the emergency or disaster

- (a) Establish contact with external environmental agencies and coordinate emergency response efforts with city and private service providers (City of Johannesburg Disaster- & Environmental Management; Coroner);
- (b) Determine releases of radiation and recommend action to minimize radio-active contamination. (DOH – Directorate Radiation Control /National Nuclear Regulator);

- (c) Coordinate with private and provincial EMS Service providers for needed medical resources;
- (d) Establish priorities for medical personnel. Inventory medical resources available and those needed;
- (e) Provide the MEC and ERRG members with information on public health threats from the disaster event, i.e. radiation, contamination;
- (f) Establish and brief EOC members on location of emergency triage and medical treatment points, using hospitals and community resources;
- (g) Determine whether any hazardous material situations are affected or caused by the emergency at hand and procure necessary resources needed to contain and manage the hazardous material situations;
- (h) Assist emergency personnel in the evacuation and decontamination of individuals and facilities;
- (i) Maintain records of hazardous waste sites and coordinate the disposal of hazardous waste.

7.2 Mobilization of medical teams; triage and transportation of casualties

- (a) In conjunction with EMS, provide transportation and care of individuals from the disaster site to medical facilities and establish a patient tracking system;
- (b) Following the evacuation of an area, establish and operate emergency medical care centers or first aid stations to serve disaster workers/essential workers in the hazard area;
- (c) Organize medical and health teams, survey disaster area for health hazards and sanitation;
- (d) Scope: conduct Triage as follows: ***UJ Roving Master Plan for Triage****.

***UJ Roving Master Plan for Triage**

For application at disaster rescue sites on UJ premises

Notes:

1. The Roving Master Plan for Triage is intended to make provision for **one Triage Team which will be deployed to the scene of the disaster** at any of the UJ premises where a State of Emergency is declared.
2. **APK Campus Health Service (CHS) will be the base** from where triage activities will be coordinated. If this venue should be inaccessible, the Disaster Room at APK will be the alternative initial meeting venue.
3. The H OHP will be responsible for implementation of the Master Plan. In case of this person's absence, the H PH will fulfill this role.
4. One senior member of Protection Services will be allocated to the Triage Team to assist in communication with the ISC, manage security issues at the triage site and assist in arranging bus transport for non-distressed patients to hospital.
5. In case of a **Radiation HAZMAT incident** at UJ (i.e. where radiation sources could be compromised; fire or emergencies close to radiation equipment/sources):
 - 5.1 The relevant Radiation Protection Officer (RPO) is contacted to identify the source
 - 5.2 Rescue workers and first aiders will be allowed on the scene for 30 minutes to conduct initial rescue and control fire.
 - a) If a person is contaminated, contaminated clothes must be removed and kept in store for radiation to decay till background counts are normal, this applies to short and medium half-life activities. For long half-life radio-isotopes the clothes will be disposed of.
 - b) The contaminated person must wash and be monitored for fixed contamination. This will take place at NECSA; after collaboration with the RPO, Head: Occupational Health and Directorate Radiation Control.
 - c) In case of uranium contamination (after UJ facility has been established), showers will be on site for decontamination purposes and contamination will proceed as per National Nuclear Regulator (NNR) licence requirements.
 - d) A medical examination will be performed at the UJ clinic or as determined by the Directorate RC for both contaminated and external exposed person, this includes taking the base line blood sample (day 1), then two weeks, one month, three months and sixth months.

- 5.3 Thereafter the scene will be cordoned off with radiation tape and a pilot light will be placed to mark the source of contamination.
- 5.4 The Directorate of Radiation Control will be contacted. They will determine whether the source had been compromised and what the extent of the contamination is. The Directorate of Radiation Control will summons the relevant Approved Inspection Authorities and appoint service providers to conduct comprehensive recovery of contamination.
- 5.5 A statement will be written of how this occurred.
- 5.6 The University management will be notified.
- 5.7 A section 24 incident will be declared by the Head: Occupational Safety as per the Occupational Health and Safety Act, and Department of Labour notified accordingly.
- 5.8 A written report will be sent to Department of Health: Radiation Control which will be accompanied by a case number from the police in case of serious radiation accident.
- 5.9 Records will be kept.

Radiation emergency numbers

Designation	Contact person	Contact number
UJ RPO	Dr Dazmen Mavunda	072 698 5153
Protection Services	Andre Arendse	011 559 2000/2555
Directorate Radiation Control	Johan Pieterse	012 – 341 2186 082 319 9162
Head: Occupational Safety	Kobus de Bruyn	011 559 6129 082 328 7162
Head: Occupational Health Practice	Elana Venter	011 559 2200 8479 /082 341 0299

6. In case of a **Chemical HAZMAT incident** (Gas Release or Hazardous Chemical Spillage) instant evacuation will take place. H OHP/ISC will contact Enviroserv or Universal Waste who will be dispatched immediately. Refer to the SOP: **Acute Exposure to Hazardous Chemical Substances**
In case of a GAS LEAKAGE,/OXYGEN DEFICIENCY HAZARD
 - (a) Immediate OXYGEN DEFICIENCY HAZARD/Gas leak Risk
 - Assessment to be conducted to establish the
 - 1.1 mechanisms of gas supply/shut down
 - 1.2 HOD of the department to furnish MSDS/other valuable information
 - 1.3 nature of gas release (i.e. type of gas or combination of gases)
 - 1.4 scope of the incident (how many divisions affected)
 - 1.5 dynamics of the incident (will wind direction change; impacts thereof)
 - 1.6 ODH Classification (0-4) to be made by HOD
 - (b) Ensure that first responders (Support Group most of the time) are equipped with appropriate Personal Protective Equipment, such as

- correct masks or breathing apparatus as well as personal oxygen monitors
- (c) Ensure that a buddy-system is adhered to at all responses to scenes
 - (d) Ensure that a trained first aider (carrying oxygen) will accompany the responders to the perimeter of the scene
 - (e) The Head: Occupational Safety/ISC will contact Enviroserv or Universal Waste who will be dispatched immediately
 - (f) Refer to the SOP: **UJ Oxygen Deficiency Hazard**
 - (g) Refer to the SOP: **Acute Exposure to Hazardous Chemical Substances.**
 - (h) For ODH 2 and 3* areas, each person is required to carry their own five-minute escape pack.

*See UJ Oxygen Deficiency Hazards SOP, P8

7. In case of a **Biological HAZMAT incident** (needle stick injury; inhalation or skin contact with pathogens)

The person reports to the H OHP or H PH for

- a. Post Exposure Prophylaxis and COID documents.
- b. Blood is taken from both the exposed person and the patient, where possible.
- c. Patient sent to Milpark with UJ insurance letter.
- d. Risk Management is notified for insurance purposes.
- e. First aid spillage kit used to manage small spillages. Waste disposed of in a red plastic bag; sharps in a plastic biohazard bin.
- f. If an OHNP is exposed, the SASOHN Guideline & service is available as well. Refer to **SASOHN Guideline: Sharps Managed**

TRIAGE PROCEDURE

1. A State of Emergency is declared at the UJ.
2. The H OHP instantly attends the briefing at the EOC to determine the exact scope and location of the disaster *See H OHP Checklist
3. Evacuation is ordered by the ISC if applicable
4. H OHP informs medical responders: Netcare911, Milpark; Helen Joseph Hospital and the City of Johannesburg's Disaster Management. If Radiation incident, the RPO is contacted to identify the source.
5. The H OHP contacts the H PH, who informs the Triage Team members (Health Care Workers (HCW): Professional nurses; Basic Life Supporters; First aiders) (See Appendix A for list of emergency numbers) *See H PH Checklist
6. H PH arranges transport of the team to the scene, if required

7. H OHP arranges for Personal Protective Equipment (PPE), medical equipment and supplies to be collected and taken to CHS. *See Triage-Team Checklist
8. T-Team meets at CHS and checks equipment
9. T-Team departs to the scene
10. Classification of type of disaster is performed in collaboration with the ISC, i.e. Radiation or HAZMAT
11. The **Patient Collection Point** is determined and communicated to all. One person from Protection Services (with a flashlight and reflective clothing) is stationed at the ambulance arrival point. Formal **entrance point** and **exit point** for ambulances are decided and staffed by Protection Services.
12. H OHP contacts the relevant regulatory authorities (Dept of Labour; Directorate Radiation Control; Dept of Water and Forestry) in collaboration with the ISC
13. **On scene three triage phases** will be observed:
 - Initial Rapid Assessment**
 - a. HOH, HPH and HCW 's meet at the scene to identify P3's
 - b. The walking wounded; non-distressed (P3) patients are taken to the collection point from where they are transported to hospitals immediately by bus
 - c. HOH and HPH conducts Triage using Smart Tags and applies Health Care professionals and first aiders until Netcare 911 arrives; then in collaboration with paramedics. The most senior medically qualified person will take charge of the Triage activities. In all patients, priorities will be respiration, perfusion and then mental status.

Treatment Phase

- a. After **Triage Tags** have been placed by HOH and HPH, medical management priorities will be P1 (red tag), then P2 (yellow tag); then P3 (green tag). Follow the protocol: ..\..\Disaster management\Triage\wmdTRIAGE3.ppt
- b. Medical staff and resources will be applied in this priority order.
- c. One first aider stays with one patient until stabilized and handed over to paramedic staff with an ambulance.

Continual re-assessment

HOH, HPH and HCW conduct re-assessments and adjust Triage Tags accordingly.

*Triage -Team checklist

1. **General**
 - 1.1 Radio's
 - 1.2 Red bags and Biohazard bins

- 1.3 Clean T-shirts and pants (for HCW's and patients) in case of HAZMAT decontamination
- 1.4 Blankets (emergency and other)
- 1.5 Bottled water
- 1.6 Flashlights & batteries
- 1.7 Clip boards, pen and patient medical record forms

2. Personal Protective Equipment (Nitrile gloves and safety glasses; chemical resistant boots; reflective bibs; disposable aprons; utility jackets)

3. Kit with medical disposables

- 3.1 Dressing trays
- 3.2 Burnshields
- 3.3 Splints
- 3.4 Crepe
- 3.5 Cetrimide
- 3.6 Linen savers
- 3.7 Plaster
- 3.8 First aid scissors
- 3.9 Gauze
- 3.10 Airways No 3, 5 and 8
- 3.11 Ventolin pump

4. Equipment:

- 4.1 Pocket masks
- 4.2 AED
- 4.3 Pupil torch
- 4.4 Accutrend machine, strips and lancets
- 4.5 Baumanometer
- 4.6 Adjustable cervical collars
- 4.7 ENT set
- 4.8 Stethoscopes
- 4.9 Vital signs/ECG monitors with electrodes
- 4.10 Scoop stretcher and spine board c head blocks & spider harness
- 4.11 Oxygen cylinders and 60% re-breathing masks

*H OHP checklist

- 1. Utility jacket + PPE
- 2. ALS Bag with emergency drugs and IV infusions:
 - 2.1 Drugs
 - To be listed here and add medical regimens in accordance with Resuscitation Council and AHA

- 2.2 IV Therapy
 - Shock: Ringer's Lactate with Grey Jelco
 - TKVO: Normal Saline 0,9% with pink Jelco
- 3. Disaster kit containing
 - emergency numbers
 - stationery
 - event log form
 - key to disaster room
 - Triage Plan
 - Triage Tags (Smart Tags)
- 4. Radio & cell phone
- 5. Satellite phone

*H PH checklist

- 1. Utility jacket + PPE
- 2. ALS Bag with emergency drugs and IV infusions
 - 2.1 Drugs
 - To be listed here and add medical regimens in accordance with Resuscitation Council and AHA
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 - emergency numbers
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 - event log form
 - Triage Plan
 - Triage Tags (Smart Tags)
 - Patient medical record forms
- 4. Radio & cell phone
- 5. Satellite phone

6.3 Record keeping

- (a) Initiate/maintain a log of significant events, messages and phone calls. Pass this on to relief person with instructions to maintain it.
- (b) Maintain proper medical records of patients.

6.4 Networking with internal and external stakeholders prior to, during and after an emergency

Pre-emergency

Establish contact with the coroner to establish temporary morgue to deal with fatalities

Intra emergency

- a. Establish contact with the coroner to establish temporary morgue to deal with fatalities;
- b. Consult the Department of Health to identify sources of supply to augment and/or satisfy expanded medical needs during emergency operations.

Recovery phase

- a. Ongoing review of the plan;
- b. Coordinate with Department of Health if required to test water for contamination and potability.

6.5 Care for Health Care Workers

Pre-emergency

- a. Administer Hepatitis B vaccines
- b. Conduct emergency simulation exercises
- c. Plan decontamination procedure if chemical/radiation exposure
- d. Keep and maintain Disaster Room supplies

Intra emergency

- a. Active Triage and transfer of patients
- b. Food, rest, rehydration and trauma debriefing
- c. Decontamination if radiation or Hazardous Chemical substance
- d. Monitor for safe work practices and PPE
- e. Monitor for occupational injuries and disease

Recovery phase

- a. Prepare to administer inoculations, if warranted by threat of disease
- b. Post-exposure prophylaxis/testing
- c. Complete trauma debriefing
- d. Complete the needlestick protocol and COID procedures if initiated
- e. Vocational rehabilitation.

8. REVIEW OF THE TRIAGE PLAN

This plan will be reviewed every 3 years or when legislative changes become effective.

9. REFERENCES

- a) National Nuclear Regulator. Emergency planning and preparedness. From: <http://www.nnr.co.za/emergency-planning/> (accessed 24 May 2017);
- b) Herbst, CP. 2012. Radiation protection and the safe use of X-ray equipment: laws, regulations and responsibilities. *South African Journal of Radiology* 16 (2): 1-15. From: <http://sajr.org.za/index.php/sajr/article/view/306/405> (accessed 24 May 2017).

10. APPENDICES

- A UJ Emergency numbers
- B Emergency Communication System
- C Notification of a radiation occurrence
- D Triage

APPENDIX A UJ EMERGENCY NUMBERS

UJ EMERGENCY NUMBERS

NETCARE 010-209-8651 (UJ Trigger No) or 082 911

NICD OUTBREAK HOTLINE 082 883 9920

UJ Student crisis line 0-800-777-000

International SOS +27 11 541 1222

Campus Health Service

APK	Elana Venter (Occupational Health) 082 341 0299 Miemie Geya (Primary Health) 082 455 8451	559 3837/2200 M Klaaste 4966 Nthabiseng 3257 Margareth 4969 Sheila 4970
DFC	Miranda Tshabangu-OH; Badiri Pule- PH	559 6748/6132/6544
SWC	Miranda -OH	559 5747/5571/5564
APB	Anne - OH Selva Chetty- PH	559 1272/1619/1238

CONTROL ROOM/security /fire

Andre Arendse 3150

- **APK 2555/3400**
- **APB 1312**
- **DFC 6450**
- **SWC 5555/5523**

HOSPITALS

- **Milpark 480-5600**
- **Garden City 437-5000**
- **Helen Joseph 489-1011**
- **Meldene Medicross 482-2291**

CITY JOC PETE WITHINSHAW 082 584 4336

Shaun Harrison
Alet Rautenbach

Public Health Reg B

Busi Matsoane

083 288 0806

DOH

Local authority

Antonia Barnard

082 464 9543/4076845

Gauteng Comm Disease Joy Mnyaluza 082 335 3134/3553867

SAFETY

Kobus de Bruyn HOD	6129/082 328 7162
APK Willem Kilian	4221
DFC Alet/Susan	6146
APB Anzani Rautenbach	1445
SWC Nora Ramakogoa	5513

HAZMAT

RPO Dr Dazmen Mavunda C1 lab 116	072 6985153
DIRECTORATE RADIATION CONTROL	012-341 2186
(Johan Pieterse)	082 319 9162
ENVIROSERV (Hazardous Chemical Release & Gas Explosion)	0 800 147 112
(Eugene Bothma)	082 379 5083
NATIONAL LASER CENTRE (NLC)	
(Henk v Wyk/ Thomas du Plooy)	012 841 3511
	082 443 1128
BUDGET WASTE (Johan van Zyl)	073 7320071

Rescue / 4 X 4 club (Off road Rescue)

- **Ivor Rimmer** **082 326 3020**
- **Bruce Hepburn**

POISON CENTRE

AfriTox W-Cape Poison Centre	0861 555 777
Bloemfontein Medical Faculty Poison centre	082 491 0160
Universitas Hospital Poison centre	051 405 3557
Prof Alfred Muller: Chemistry	011 559 2359

DIRECTOR: EMERGENCY COMMUNICATION – AMATEUR CLUB

- **Francois Botha** **083 585 3847**

Plumbing APK

- **Gideon Maartens 8439 s/c** **082 802 7689**

ELECTRICAL EMERGENCIES APK

- **Andre van der Watt 083 632 3443**
- **Bertus Booyens (3042) 082 820 8051 Bennie 082 802 3468**

<ul style="list-style-type: none"> • Bossie (Air con) 8618 (s/c) 2485 • EGOLI GAS 011 726 3138
Emergency Number 011 – 726 4702 Anand Brijlal (Safety Officer) 082 493 6573
SATTA EMS Gerry Mclintock 082 611 7999
GAUTENG Disaster Management CENTRE Colin Diner 011355 5041

APPENDIX B CRISIS COMMUNICATION PLAN

To be developed by the Business Continuity team

APPENDIX C NOTIFICATION OF A RADIATION OCCURRENCE

DEPARTMENT OF HEALTH

DIRECTORATE, RADIATION CONTROL, PRIVATE BAG X82, BELLVILLE, 7535 ☎ (021) 948 6182; Fax no. (021) 946 1589

NOTIFICATION OF RADIATION OCCURRENCE

NAME AND ADDRESS OF LICENCE / AUTHORITY HOLDER:

Tel no: _____

Fax no: _____

Email: _____

Licence / Authority no: _____

SOURCE OF RADIATION (Please mark with an X)		MEDICAL AND VETERINARY USE OF DIAGNOSTIC X-RAY EQUIPMENT (Please mark with an X)	
X-ray unit or accelerator	Radio-isotope	PRMD <u>above</u> lead rubber apron ¹	PRMD <u>below</u> lead rubber apron

A. CAUSE OF RADIATION OCCURRENCE (Particulars must be furnished below or on a separate page)

B. MEASURES TO PREVENT RADIATION OCCURRENCE OR RE-OCCURRENCE (Particulars must be furnished below or on a separate page)

C. PARTICULARS OF RADIATION WORKERS AND/OR PUBLIC INVOLVED

Name	Identity No.	BIN OR Badge No	Magnitude of exposure	Accumulated lifetime dose

E. DECLARATION BY LICENCE HOLDER

I hereby declare that the aforementioned information is true and correct to the best of my knowledge.

Name Signature Date

1. Personal Radiation Monitoring Device (PRMD)

Simple triage is used in a scene of mass casualty. So to sort patients into those who need critical attention and immediate transport to the hospital and those with less serious injuries. This step is required before transportation becomes available. The categorization of patients based on the severity of their injuries can be aided with the use of printed triage tags or colored flagging.

In advanced triage, doctors may decide that some seriously injured people should not receive advanced care because they are unlikely to survive. Advanced care will be used on patients with less severe injuries. Because treatment is intentionally withheld from patients with certain injuries, Advanced triage has ethical implications. It is used to divert scarce resources away from patients with little chance of survival in order to increase the chances of survival of others who are more likely to survive.

In Western Europe, the criterion used for this category of patient is a trauma score of consistently at or below 3. This can be determined by using the triage Revised Trauma Score (TRTS), a medically validated scoring system incorporated in some triage cards.

The use of advanced triage may become necessary when medical professionals decide that the medical resources available are not sufficient to treat all the people who need help. This has happened in disasters such as volcanoes, thunderstorms, and rail accidents. In these cases some percentage of patients will die regardless of medical care because of the severity of their injuries. Others would live if given immediate medical care, but would die without it.

In this extreme case, any medical care given to people doomed to die can be considered to be care withdrawn from people who might live if they had been given it. It becomes the task of the disaster medical authorities to put aside some victims, to avoid saving one life at the expense of several others.

Triage is now also applied in system development. Requirements and design options are triaged to avoid wasting effort on ideas that will obviously never succeed.

Simple Triage and Rapid Treatment

Simple triage and rapid treatment

S.T.A.R.T. (Simple Triage and Rapid Treatment) is a simple triage system that can be performed by lightly-trained lay and emergency personnel in emergencies. It is not intended to supersede or instruct medical personnel or techniques. It may serve as an instructive example, and has been (2003) taught to California emergency workers for use in earthquakes. It was developed at Hoag Hospital in Newport Beach, California for use by emergency services. It has been field-proven in mass casualty incidents such as train wrecks and bus accidents, though it was developed for use by CERTs and firemen after earthquakes.

Triage separates the injured into four groups: The **deceased** who are beyond help, the injured who can be helped by **immediate** transportation, the injured whose transport can be **delayed**, and those with **minor** injuries, who need help less urgently. However these descriptive words are by no means standard and different regions use different designations.

In the UK and Europe, triage is similar to the USA, but the categories used are **dead**, those who are pronounced as such by a medically qualified person or paramedic who is legally qualified to pronounce death, the **immediate** category, who have a trauma score of 3 to 10 (RTS) and need immediate attention, the **urgent** category, who have a trauma score of 10 or 11 and can wait for a short time before transport to definitive medical attention, and **delayed** patients, who have a trauma score of 12 (maximum score) and can be delayed before transport from the scene.

A simplified but effective description of the S.T.A.R.T. is taught in the Israeli army to non-medical personnel: the injured who are lying on the ground silently should be prepared for **immediate** transportation, injured lying on the ground but screaming are injured whose transportation can be **delayed**, and the **walking wounded** need help less urgently. A non-medical personnel has no authority to tag an injured person as **deceased**.





A Triage Tag is a quick and easy way to communicate a patient's priority to others.



Color-coded flagging tape can be used to mark patients in a triage situation.

The evaluation and classification of casualties for purposes of treatment and evacuation: it consists of the immediate sorting of patients according to type and seriousness of injury and likelihood of survival, and the establishment of priority for treatment and evacuation to assure medical care of the greatest benefit to the largest number.

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Simple triage and evacuation

Simple triage identifies which persons need advanced medical care. In the field, triage also sets priorities for evacuation to hospitals. In START, persons should be evacuated as follows:

- **Deceased** are left where they fell, covered if necessary; note that in S.T.A.R.T. a person is not triaged "deceased" unless they are not breathing and an effort to reposition their airway has been unsuccessful.
- **Immediate** or Priority 1 (red) evacuation by MEDEVAC if available or ambulance as they need advanced medical care at once or within 1 hour. These people are in critical condition and would die without immediate assistance.
- **Delayed** or Priority 2 (yellow) can have their medical evacuation delayed until all **immediate** persons have been transported. These people are in stable condition but require medical assistance.
- **Minor** or Priority 3 (green) are not evacuated until all **immediate** and **delayed** persons have been evacuated. These will not need advanced medical care for at least several hours. Continue to re-triage in case their condition worsens. These people are able to walk, and may only require bandages and antiseptic.

A popular Triage Tag is the Smart Tag with its unique folded design means that effective triage is quick and simple, but most importantly it allows casualties to be re-triaged without having to replace the tag. It has been adopted as the standard triage tag for New York, Connecticut, Philadelphia, Boston and Nevada.

Advanced triage

In advanced triage systems, secondary triage is typically implemented by paramedics, battlefield medical personnel or by skilled nurses in the emergency departments of hospitals during disasters, injured people are sorted into five categories.

If immediate treatment is successful, the patient may improve (although this may be temporary) and this improvement may allow the patient to be categorized to a lower priority in the short term. Triage should be a continuous process and categories should be checked regularly to ensure that the priority remains correct. A trauma score is invariably taken when the victim first comes into hospital and subsequent trauma scores taken to see any changes in the victim's physiological parameters. If a record is provided back in time, the receiving hospital doctor can see a historical trauma score going back in time to the incident. This should allow more

definitive treatment to be carried out earlier than might otherwise be the case.

Black / Expectant

They are so severely injured that they will die of their injuries, possibly in hours or days (large-body burns, severe trauma, lethal radiation dose), or in life-threatening medical crisis that they are unlikely to survive given the care available (cardiac arrest, septic shock, severe head or chest wounds); they should be taken to a holding area and given painkillers to ease their passing.

Red / Immediate

They require immediate surgery or other life-saving intervention, first priority for surgical teams or transport to advanced facilities, "cannot wait" but are likely to survive with immediate treatment.

Yellow / Observation

Their condition is stable for the moment but requires watching by trained persons and frequent re-triage, will need hospital care (and would receive immediate priority care under "normal" circumstances).

Green / Wait (walking wounded)

They will require a doctor's care in several hours or days but not immediately, may wait for a number of hours or be told to go home and come back the next day (broken bones without compound fractures, many soft tissue injuries).

White / Dismiss (walking wounded)

They have minor injuries; first aid and home care are sufficient, a doctor's care is not required. Injuries are along the lines of cuts and scrapes, or minor burns.

Note that this scale is more complex than simple triage. Medical professionals should refer to professional texts and training references when implementing advanced triage; this listing is only for a layman's understanding.

Some crippling injuries, even if not life-threatening, may be elevated in priority based on the available capabilities. During peacetime, most amputations may be triaged "Red" because surgical reattachment must take place within minutes—even though in all probability, the person will not die without a thumb or hand.

Triage in France

In France, the triage in case of a disaster uses a four-level scale:

- DCD: *décédé* (deceased), or *urgence dépassée* (beyond urgency)
- UA: *urgence absolue* (absolute urgency)
- UR: *urgence relative* (relative urgency)
- UMP: *urgence médico-psychologique* (medical-psychological urgency) or *impliqué* (implied, i.e. lightly wounded or just psychologically shocked).

This triage is performed by a physician called *médecin trieur* (sorting medic). This triage is usually performed at the field hospital (PMA–*poste médical avancé*, i.e. forward medical post). The absolute urgencies are usually treated onsite (the PMA has an operating room) or evacuated to a hospital. The relative urgencies are just placed under watch, waiting for an evacuation. The involved are addressed to another structure called the CUMP–*Cellule d'urgence médico-psychologique* (medical-psychological urgency cell); this is a resting zone, with food and possibly temporary lodging, and a psychologist to take care of the brief reactive psychosis and avoid post-traumatic stress disorder.

In the emergency room of a hospital, the triage is performed by a physician called MAO–*médecin d'accueil et d'orientation* (reception and orientation physician), and a nurse called IOA–*infirmière d'organisation et d'accueil* (organisation and reception nurse). Some hospitals and SAMU organisations now use the "Cruciform" card referred to elsewhere.

Triage in the UK

In the UK, the commonly used triage system is the Smart Incident Command System , taught on MIMMS (Major Incident Medical Management (and) Support). The UK Armed Forces are also using this system on operations worldwide. This grades casualties from Priority 1 (most urgent) to Priority 4 (expectant, i.e. likely to die).

Another system is the Cruciform and Manchester triage.

Triage in Canada

In the mid-1980s, The Victoria General Hospital, in Halifax, Nova Scotia, Canada, introduced paramedic triage in its Emergency Department. Unlike all other centres in North America that employ physician and primarily nurse triage models, this hospital began the practice of employing Primary Care level paramedics to perform triage upon entry to the Emergency Department. In 1997, following the amalgamation of two of the city's largest hospitals, the Emergency Department at the Victoria General closed. The paramedic triage system was moved to the city's only

remaining adult emergency department, located at the New Halifax Infirmary. In 2006, a triage protocol on whom to exclude from treatment during a flu pandemic was written by a team of critical-care doctors at the behest of the Ontario government. The protocol was published in the Canadian Medical Association Journal.^[1]

Reverse triage

In addition to the standard practices of triage as mentioned above, there are conditions where sometimes the less wounded are treated in preference to the more severely wounded. This may arise in a situation such as war where the military setting may require soldiers be returned to combat as quickly as possible. Other possible scenarios where this could arise include situations where significant numbers of medical personnel are among the affected patients where it may be advantageous to ensure that they survive to continue providing care in the coming days especially if medical resources are already stretched.

Alternative Care Facilities

Alternative Care Facilities (ACFs) are places that are setup for the care of large numbers of patients, or are places that could be so set up. Examples include schools, sports stadiums, and large camps that can be prepared and used for the care, feeding, and holding of large numbers of victims of a mass casualty event.