

# EMERGENCY FIRST AID RESPONDER SYSTEM

## EXECUTIVE SUMMARY



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## 1. HISTORY AND INTRODUCTION

The township of Manenberg, just outside Cape Town, is infamous for its high rates of crime violence, accidents and medical emergencies. These township emergencies overwhelm the local emergency medical system, and because ambulances are delayed most patients risk facing a prolonged period without any medical care. For patients with altered mental status or with airway, breathing or circulatory compromise, minutes can mean the difference between life, permanent injury, and even death.

To address this need, the Emergency First Aid Response System was developed in 2009 as a massive expansion of a simple first aid training course started by six Stanford University students back in 2008. The system was designed to sustainably equip Manenberg township citizens with the emergency skills needed to keep near-death patients alive until higher care was available.

Trained township residents are known as Emergency First Aid Responders (EFARs), and are certified by the University of Cape Town, Stellenbosch University and the Emergency Medicine Society of South Africa. The EFAR's aim is to provide immediate care to a patient until an ambulance arrives. Being community members themselves, EFARs are in a unique position to reduce the time period in which an injured patient may be without care.

In demonstration of their commitment to the project, a partnership agreement has been signed between the University of Cape Town's Division of Emergency Medicine and the Manenberg Health Committee.

Thus far, over 700 Manenberg community members, and some from the surrounding area, have become certified EFARs. Approximately half of these EFARs have collected a specialized First Aid Kit containing materials (nitrile gloves, bandages, disposable CPR breathing mask and air-tight chest seal) useful in administering first aid.

The project has successfully moved into the first stages of sustainability. EFAR courses continue to be held at the Manenberg People's Centre, taught by the EFAR Head Community Instructor (a current EFAR trained in instructing others). Certified EFARs are also organized via a monthly support group which keeps their training up to date and allows them to debrief their experiences in treating emergency patients.

The next stage involves training enough community members to support a "one EFAR per block" model, and establishing EFAR-manned stations where EFARs can receive an emergency dispatch notice signalling that an EFAR's assistance is required.

## 2. THE EFAR SYSTEM OVERVIEW

The Emergency First Aid Response (EFAR) System is both a passive and a coordinated process to deal with emergencies. By training large amounts of people, EFARs are spread throughout the community and they can be called upon by their peers during an emergency, or they may already be present at an emergency scene. However, to provide a more structured EFAR response, EFARs are also divided into Block and Station EFARs and cooperate with local EMTs and paramedics to provide care for emergency patients.

### 2.1 BLOCK EFARS

The entire Manenberg community is divided into “blocks”. A block is defined as a cluster of residences in which residents are somewhat familiar with one another. This can be part of or an entire street, an apartment complex, or a collection of houses and neighbourhoods.

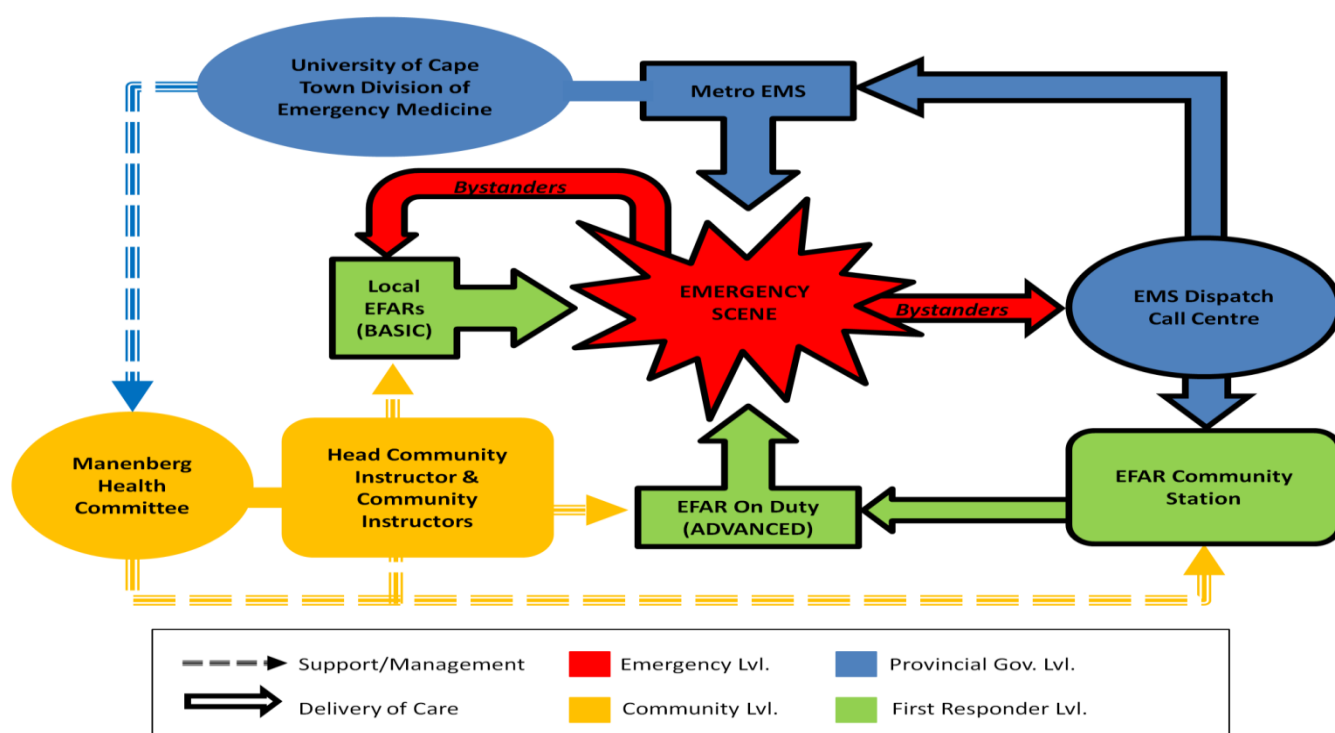
Multiple EFARs may be living in a block, but one EFAR is designated and known by the other block residents as the Block EFAR. During an emergency, residents can call upon the Block EFAR from his or her residence. To qualify to be a Block EFAR, an individual must have a Basic EFAR certificate and must also have attended at least two of the six available advanced training sessions provided at scheduled times throughout the year. Block EFARs can provide an instantaneous response to emergencies.

### 2.2 STATION EFARS

Multiple blocks are grouped together into larger regions. These regions are defined as an area served by one EFAR Station. The stations are staffed by Station EFARs and are equipped with emergency medical supplies and communication equipment. In the event of an emergency in a station’s region, when an ambulance is called the EMS dispatch also sends a signal to the EFAR Station so that the Station EFARs can respond to the incident as well. Because Station EFARs are more numerous and are located within the community, they arrive on scene much quicker than the ambulance. Station EFARs are different from other EFARs in that they are dispatched by emergency phone calls and that they also have more advanced training and have access to comprehensive medical equipment. In addition, Station EFARs are responsible for overseeing all the Block EFARs in their region.

To qualify to be a Station EFAR, an individual must have a Basic EFAR certificate and must also have attended all six advanced training sessions provided at scheduled times throughout the year. Upon completion of the sixth session, these individuals are allowed to take the Advanced EFAR training course. Thereafter, they will have an Advanced EFAR certificate.

### 2.3 COORDINATING BLOCK AND STATION EFARS WITH THE REST OF THE EMS



### 3. BASIC EFAR TRAINING COURSE

#### 3.1. COURSE DESCRIPTION

A minimum of two courses must be held per month - one on a week day, one on a weekend day unless otherwise directed by UCT and the Manenberg Health Committee. The main teaching venue is the Manenberg People's Centre. Other potential sites are high schools, primary schools, and NGO offices.

A minimum of 10-15 students should be present for each course. A maximum of 25 students are allowed for each course. This is the ideal number; however, it can be adjusted as needed. Those permitted to take the course that day will be on a first come first serve basis. The teaching materials required are: laptop, projector, DVD for course instructors, blankets, bandaging practical supplies.

Course format (approximately 4-5 hours needed to administer):

- Diagnostic Assessment (if needed) (30-45mins)
- Module 1 (30mins) - Being an EFAR
- Module 2 (30mins) - Unconscious patients
- Practical 1 (30-45mins) - CPR
- Break 10-15mins
- Module 3 (30-45mins) - Violent injuries
- Practical 2 (30mins)- Bandaging, splinting using available materials
- Module 4 (30- 45mins) - Medical illnesses
- Review (10mins)
- Final Exam (30mins)

#### 3.2. FINAL EXAM, CERTIFICATES, ID CARDS AND FIRST AID KITS

The Final Exam is divided into the four modules. To pass the exam, individuals must score at least 75% on the whole exam, and also score at least 60% on each module. There is no limit to how many times an EFAR student may take the exam. If a student has failed, she/he can return to another training session to re-take the exam.

Upon successful completion of the course, certified EFARs are presented by a personalized certificate, a personalized ID card, and a first aid kit consisting of one pair of nitrile gloves, one airtight chest seal, one CPR breathing mouthpiece, and two first aid dressings. Certificates and ID cards can be replaced for a minimal maintenance fee.

First aid kit refills are available at the Manenberg People's Centre. Only items used to treat a patient in an EMERGENCY will be replaced. To obtain a refill, EFARs must: 1) show their EFAR ID Card, 2) complete an application form, and 3) complete a Patient Care Report.

## 4. SUPPLEMENTARY DAYS

### 4.1. FOLLOW UP SESSIONS

At regular intervals after initial EFAR course training, EFARs are re-tested and interviewed for research purposes.

### 4.2. SUPPORT GROUP SESSION

A support group session aims to provide a structured manner to support the EFARs and to increase their involvement in the EFAR program. These sessions are held every month and are open to both certified EFARs and any interested community member.

Each support group session includes the following topics:

- Trauma counselling: An opportunity to allow EFARs to express and discuss their feelings after treating a patient. This could be a discussion with the whole group or a private session with a trauma counsellor.
- Feedback / Questions from EFARs: Opportunity for the Quality Coordinator to obtain feedback from the EFARs regarding their concerns, ideas for how the EFAR project can be improved etc.
- Refresher course: One of the four modules (Being an EFAR, Unconscious Patients, Violent Injuries and Medical Illnesses) is reviewed to keep the knowledge fresh. The module to be reviewed can be decided by the EFARs in attendance or the session leader will choose a module.
- Additional training: Attendees are given a lesson on an advanced topic not included in the regular EFAR course. The topic can be selected by the attendees of previous Support Groups or by the Quality Coordinator.
- Case studies: Examples of emergencies are used to challenge the EFARs and to train them more on how to act in real life emergencies.
- Practicals and First Aid Kit: Attendees are given practice on CPR, first aid bandaging/splinting, and any other additional skills that they choose.
- Announcements and logistics: Explanations are given to the EFARs on upcoming events, organization of the block and station system, cooperation from the local clinics and trauma centres, and other logistics.

### 4.3. TRAIN THE TRAINER COURSE

To train additional Community Instructors, a Train the Trainer course can be held. The EFAR training course will be re-taught with special focus on teaching skills such as public speaking, professionalism and computer skills. To become a Community Instructor, the EFAR needs to show a high level of skill, motivation and commitment. Candidates for the Train the Trainer course will be handpicked by Quality Coordinator, the Head Community Instructor and The Manenberg Health Committee.

## 5. RESEARCH

Research is a critical component of the EFAR System. The following research projects have either been completed, or are currently under way.

- Needs assessment of emergencies in the community
- EFAR System modelling: maximizing effect with limited community resources
- EFAR training and education: who scores the best / worst and why
- EFAR skill retention
- EFAR use of skills: what, when, where and why
- The EFAR System's effect on morbidity and mortality
- Triage scores for the EFAR System
- The psychological impact of the EFAR training
- Community perception on emergencies and emergency personnel
- Adaptations of the course for specific needs, such as a paediatric course for nursery workers
- Universal strategy for establishing a customized system in a new location

Previous and ongoing research projects were developed by academics both fully associated with the EFAR System and those just visiting. We invite all academics to start their own projects with us, or to collaborate with one of our ongoing projects.

## 6. ORGANISATION AND LOGISTICS

To sustain the project, a partnership agreement has been signed between the University of Cape Town, the Manenberg Health Committee, and the Head Community Instructor. The Head Community Instructor will assume leadership over the course on behalf of the Manenberg Health Committee and the University of Cape Town's Division of Emergency Medicine. Other organizations can also contribute to the project by working within the authority of the Manenberg Health Committee.

### 6.1. DEFINITION OF ROLES AND RESPONSIBILITIES (SEE CHART ON PAGE 10)

#### 6.1.1. UNIVERSITY OF CAPE TOWN, DIVISION OF EMERGENCY MEDICINE

##### *Professional Support*

- Accredit the EFAR training;
- Ensure the quality of the training, and oversee the course's accuracy and standards;
- Ensure that the Head Community Instructor and all other instructors are properly trained and certified;
- Provide qualified students, doctors or volunteers to help design or teach the course;
- Advise the Manenberg Health Committee and the Head Community Instructor on logistics of the project;
- Keep a register of all certified EFARs.

##### *Finance the program*

- Compensate the Head Community Instructor for days worked;
- Replenish funds into the EFAR System bank account, which will be managed by the Manenberg Health Committee.

##### *Print course/system materials*

- Print all relevant course/system materials;
- Print EFAR certificates and ID cards, as well as laminate the ID cards;
- Drop off all printed materials in a secure place easily accessible to the Head Community Instructor.

#### 6.1.2. MANENBERG HEALTH COMMITTEE

##### *Oversee the Head Community Instructor*

- Manage the EFAR system bank account;
- Document relevant expenses, and reimburse the Head Community Instructor with funds from the EFAR System bank account;
- Document days worked by the Head Community Instructor, and report it to UCT.

##### *Support the course and Head Community Instructor*

- Schedule general community courses, as well as find leads in organizations to train;
- Advertise and recruit for general community courses;
- Provide the Manenberg People's Centre as a teaching venue, along with teaching equipment for sessions taught at the centre;
- Find volunteering opportunities for EFARs;
- Assisting with contacting EFARs for meetings and follow up sessions;
- Report to UCT.

#### 6.1.3. HEAD COMMUNITY INSTRUCTOR

##### *Oversee the course*

- Pick up and prepare course materials;
- Run and teach the course;
- Grade and submit exam scores and names/IDs of those certified to UCT;
- Pick up and deliver certificates and ID cards to certified EFARs;

##### *Oversee all other community instructors*

- Recruit and train other community instructors as needed;
- Manage all other community instructors and delegate responsibility to them, as needed.

*Oversee the EFAR system and other related activities*

- Report to the Manenberg Health Committee and UCT;
- Keep a register of all certified EFARs;
- Organize and run a support group for certified EFARs;
- Announce volunteering opportunities to EFARs;
- Run follow-up sessions that will assist with analysis and quality control of the course.

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#### 6.1.4. QUALITY COORDINATOR

*Oversee the course*

- Ensure that the Head Community Instructor and all other instructors are properly trained and certified;
- Ensure the quality of the training, and oversee the course's accuracy and standards.

*Oversee the EFAR system and other related activities*

- Provide administrative and logistical support;
- Keep a register of all certified EFARs;
- Advise the Manenberg Health Committee and the Head Community Instructor on logistics of the project;
- Run follow-up sessions that will assist with analysis and quality control of the course.
- Organize and run a support group for certified EFARs;
- Report to UCT.

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## 6.2. OVERVIEW OF MEETINGS

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### EFAR PROJECT COMMITTEE

A committee formed to manage the EFAR project. Members of the committee are: Lee Wallis (Chairman, University of Cape Town), Heike Geduld (University of Cape Town), Jared Sun (founder), Jeffrey Tran (Head of Research), Christine Jansen and Marian Kinnes (Manenberg Health Committee), Michelle Klaassen (Head Community Instructor) and Suleiman Henry (Community Instructor) and the Quality Coordinator. Meetings are scheduled quarterly and as needed.

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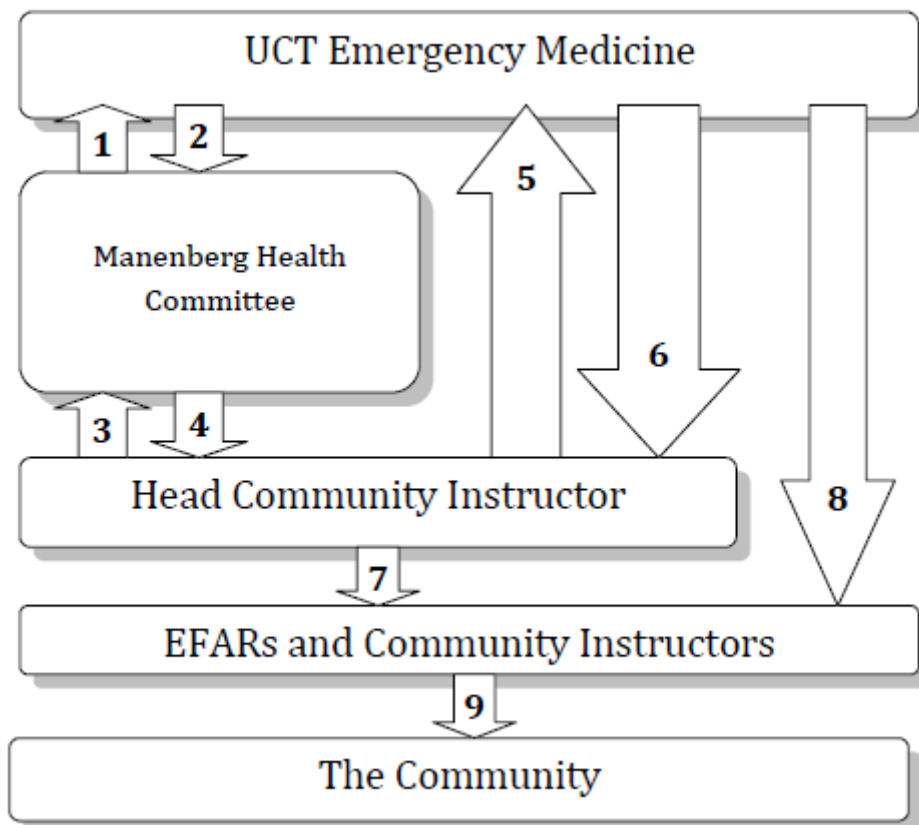
### MANENBERG HEALTH COMMITTEE

The Manenberg Health Committee is a forum of several NGOs that commits itself to promoting adequate health care facilities in the area. They meet every second Wednesday of the month at the Manenberg Clinic.

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### MEETING BETWEEN HEAD OF EMERGENCY MEDICINE AND QUALITY COORDINATOR

Meetings are scheduled once every two weeks.



1. Expense reports, number of days worked by Head Community Instructor;
2. Funds for the EFAR System bank account, general support and guidance;
3. Days worked, expense reports;
4. Reimbursement for relevant expenses, students for training (scheduling and advertising for classes), teaching venue and equipment, leads on organizations to be trained, leads on volunteering opportunities, support and guidance;
5. Requests for printing, scores/names/ID#s/date of the certified, results of system follow-up
6. Compensation, printing and laminating, ensure quality of curriculum and that instructor is qualified, support and guidance;
7. Training, leads on volunteering opportunities, support and guidance;
8. Accreditation, leads on volunteering opportunities, support and guidance;
9. Emergency First Aid.

## 6.3. CONTACT LIST

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### UNIVERSITY OF CAPE TOWN

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Ronel Louw: [Cplouw@pgwc.gov.za](mailto:Cplouw@pgwc.gov.za)  
*Personal Assistant Lee Wallis*

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### MANENBERG

Manenberg People's Centre: 021-691-2200  
*Community Centre in Manenberg, Christine Jansen's office*

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*Member of Manenberg Health Committee*

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*Community Instructor*

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*Quality Coordinator*

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### OTHER

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*Member of Rotary Club of Kirstenbosch, sponsors of the First Aid Kit*