

# TRAUMA & REHABILITATION

## PSYCHOLOGICAL REHABILITATION AFTER SEVERE ROAD INJURY

### The REHABILAID study

REHABILAID is an EU funded project involving an observational, longitudinal, multi-centre study on people sustaining severe injuries from road traffic crashes. It was carried out in three European countries: Greece, Germany, and Italy. A total of seven public hospitals were involved in the study: five in Greece (Region of Crete), one in Italy (Pavia) and one in Germany (Hannover). Participating centres enrolled all patients who were admitted due to road accident involvement in the intensive care units of the selected hospitals over a year (2013-2014). Physical, psychological and financial costs were evaluated at baseline at 6 and 12 months.



### Project team



### Psychological consequences after a road traffic accident

Road traffic accidents often involve a threat to physical integrity and more serious crashes generally involve threatened serious injury or death. Individuals who experience a serious road traffic accident are at increased risk for psychological problems, particularly Post-traumatic Stress Disorder (PTSD) and depression. Psychological problems may cause significant distress or impairment in social, occupational or other important areas of personal functioning and generally cause a person to change his or her personal routine.

### Post Traumatic Stress Disorder

PTSD is an anxiety disorder that some people get after seeing or living through a dangerous event, such as a road traffic accident. People who have PTSD may feel stressed or frightened even when they're no longer in danger.

"I keep seeing my son's face at the back seat of my car... staring at me through the mirror .....I can't get this picture out of my mind...I can't sleep....I can't work...I have these thoughts all day around....."

PTSD may present at any age and can cause many symptoms. These symptoms can be grouped into 3 categories:

(a) *Re-experiencing symptoms* (e.g. flashbacks—reliving the trauma over and over, bad dreams, frightening thoughts), (b) *Avoidance symptoms* (e.g. avoiding places, events, or objects that are reminders of the experience, feeling emotionally numb, guilt or worry, losing interest in activities that were enjoyable in the past, having trouble remembering the dangerous event), (c) *Hyperarousal symptoms* (e.g. being easily startled or tense, experiencing difficulty sleeping and angry outbursts).

It's natural to have some of these symptoms after a dangerous event, such as a serious road traffic accident. Sometimes people have very serious symptoms that go away after a few weeks. This is called acute stress disorder (ASD). When the symptoms last more than a few weeks and become an ongoing problem, they might be PTSD.

<ul style="list-style-type: none"> <li>• <b>REHABILAID facts</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>POST-TRAUMATIC STRESS IN SEVERELY INJURED</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>4 in every 10</b> with subjective stress a month after the accident.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>4 in every 10</b> with subjective stress 6 months after the accident.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>1 in every 5</b> with subjective stress 12 months after the accident.</li> </ul>

<ul style="list-style-type: none"> <li>• <b>WHO IS AT RISK OF STRESS DISORDER</b></li> </ul>
<ul style="list-style-type: none"> <li>• The risk of being affected by stress 12 months after the accident is 73% less than right after the accident.</li> <li>• People who developed post-traumatic stress disorder right after the accident have 3.23 times higher risk of being affected by stress 6 months after the accident.</li> <li>• People who were most severely injured at the lower extremities had 2.84 higher risk of being affected by stress 6 months after the accident and 5.26 times higher risk for being affected by stress 12 months after the accident.</li> </ul>

## Depression

As was the case for ASD and PTSD, involvement in a road traffic accident and the health consequences in the case of injured victims could initiate a depressive response. Major Depressive Disorder is very prevalent among victims.

"I feel so bad when I think about the way my injury happened....I can't look at the mirror any more....this accident has changed my appearance so much.....I used to be well looking and now I will never feel comfortable with the way people react when they see my scars for the first time."

What causes MDD? There are a number of alternative models of the etiology of MDD. In the case of crash involvement an environmental model is more applicable rather than a biological model of the etiology of MDD. This suggests that depressive reactions to situational variables relate to a combination of learned responses and cognitive factors, often in the context of inherited and learned predispositions towards particular styles of thinking (Beck, 1972). Crash involvement may lead to self-critical, future-pessimistic cognitions, which are thought to be critical in the development of MDD. This is particularly so for those who may feel responsible for the crash.

According to DSM-IV (American Psychiatric Association, 1994), the occurrence of a Major Depressive Episode involves at least five of the following symptoms in a single two- week period (causing significant distress or impairment in day-to- day functioning): (a) activities most of the day nearly every day, (b) weight loss (change of 5% in a month), (c) insomnia/hypersomnia nearly every day, (d) agitation or retardation nearly every day, (e) fatigue or energy loss nearly every day, (f) feelings of worthlessness or excessive guilt nearly every day, (g) diminished cognitive functioning nearly every day, (h) recurrent suicidal ideation or thoughts of death. Being aware of some of the most common signs of depression is very important. Far too many accident victims ignore the warning signs of depression until it has gotten to a breaking point.

## Treatment of psychological trauma

The treatment of psychological problems in road accident survivors can be beneficial, particularly given the extent of lifestyle restriction that these individuals experience as a result of these problems. However, there seem to be individual factors that may influence treatment response and this necessitates the development of alternative models of care for individuals who do not respond to the available treatments. Traditional approaches to treating emotional trauma include talk therapies, Cognitive-Behavioral Therapy (CBT) and systematic desensitization to reduce reactivity to a traumatic stressor. New forms of treatment of emotional trauma include new, effective forms of psychotherapy and somatic therapies which are psychological and neurological in their focus and application and rely on innate instinctual resources, rather than medications. While cognitive-behavioral therapy doesn't treat the physiological effects of trauma, it can be helpful when used in addition to a body-based therapy such as somatic experiencing or Eye Movement Desensitization/Reprocessing (EMDR).

## • REHABILAID facts

### • DEPRESSION IN SEVERELY INJURED

- **1 in every 2** with depression a month after the accident
- **1 in every 3** with depression 6 months after the accident
- **1 in every 4** with depression 12 months after the accident.

### • WHO IS AT RISK OF DEPRESSION

- The risk of depression at 6 months from the accident is 79% less than right after the accident.
- The risk of depression at 12 months from the accident is 87% less than right after the accident.
- Divorced or widow people have 7.49 times higher risk of being depressed at 6 months after the accident as compared with single.
- People who developed depression right after the accident have 4.77 times higher risk of being depressed 6 months after the accident and 4.81 times higher risk of being depressed 12 months after the accident.
- People who were injured as users of motorized 4 wheel vehicle have nearly 85% decreased risk of developing depression at 12 months as compared with those injured as pedestrians or as cyclists.
- The risk of depression at 12 months from the accident increases by 5% with the age (for every additional year).

## Care pathway after the road traffic accident

Injuries caused by road traffic accidents either receive treatment at the scene of the accident or they are taken to a hospital if they are critical. Many people are not aware of what type of care is offered or available to victims at different stages of healing and this makes it difficult for both the victim and the carers to follow. It is often the case, out of ignorance, people not to make use of services that are available at their health care system, which could meet their needs. The graphical presentation below aims to provide guidance to the victims of road traffic accidents and their carers on the care pathway and the processes involved in the treatment of road traffic injuries in the Region of Crete in Greece. It also aims to facilitate the rehabilitation process through introducing a list of services available for the psychosocial rehabilitation and further support of the victims and their carers in the community.

### Have you been injured in a road traffic accident? What happens after?

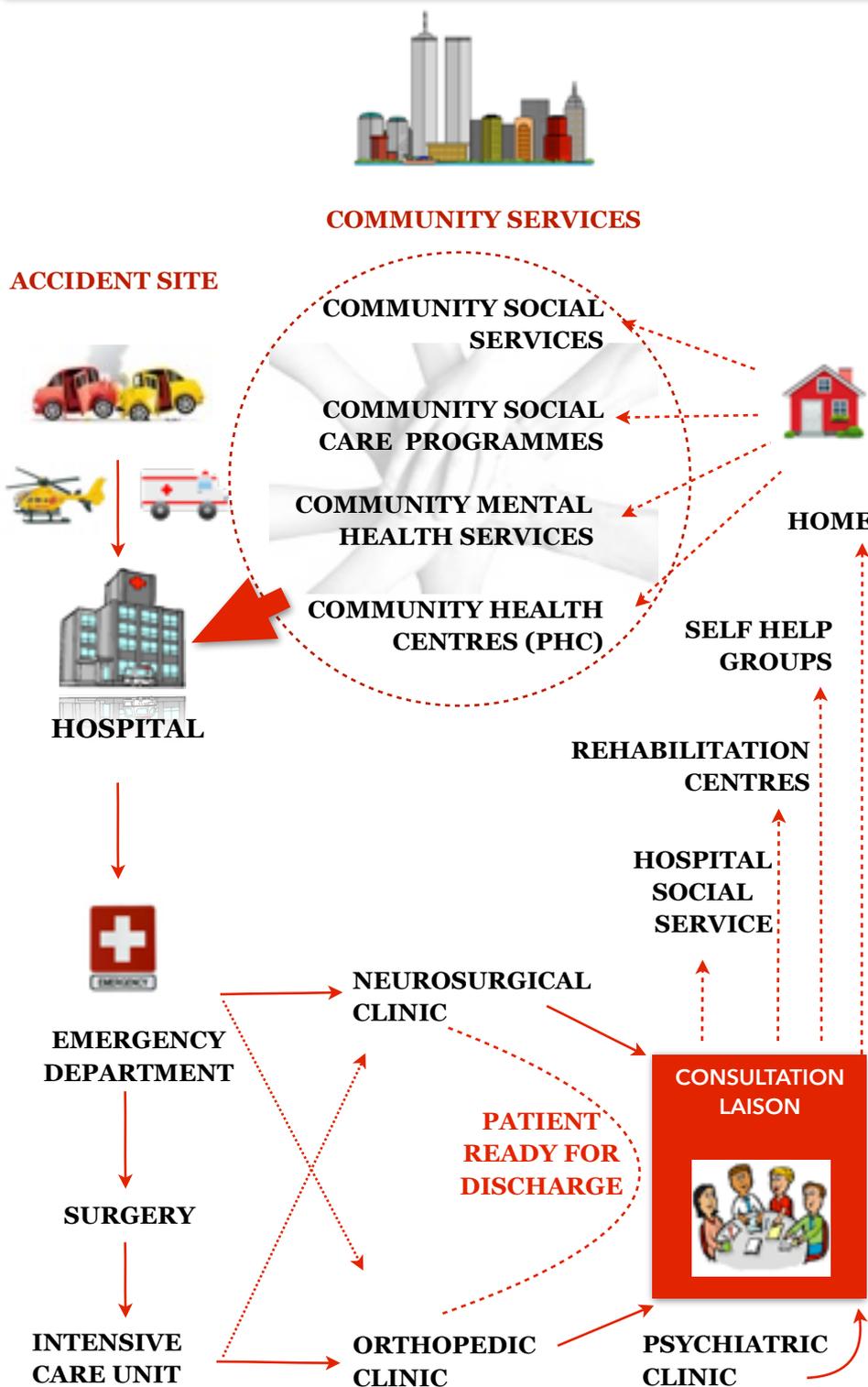
Firstly the medical personnel at the scene assess your medical situation and you are stabilised as best possible. The ambulance will take you to the nearest hospital. It is very important for the hospital to have as much information on hand to make the best possible decision about your treatment. Specific allergies, blood type, religious impacts on treatment and special medical devices such as pacemakers need to be easily accessed by the health care providers. It is wise thus to always have your medical details updated and accessible to close family members in case of an emergency hospital admission. You may undergo a surgery and in critical situations you may need to stay in ICU for several days. Upon stabilizing, you may be transferred to orthopedics or neurosurgical clinic for further treatment and follow up, depending on the body region and functions mostly affected by the injury. A multidisciplinary group of health care providers (Consultation Liaison) will decide whether you can be discharged or referred for further treatment. You can go home as soon as your doctor(s) feels you are well enough. The staff caring for you will plan your return home and this can include any follow-up outpatient appointments, medicines and prescriptions, arrangements for any community support services, any equipment or aids you need at home. Your doctor will talk to you about your after-care. It is important you understand the after-care you need. While at the hospital, you can also speak with the staff of the Social Service Department to help you with support resources in the community. It may take weeks or months to fully recover from an injury or surgery. Your municipal social service will provide a wide range of services to you, usually co-ordinated by a social worker. They can refer you to other support services to help you with your psychosocial rehabilitation and support you with various needs at home such as "Help at home programs". There are also community mental health services to help you deal with psychological distress caused by the injury. Support groups are also available to your community with survivors, family members and friends dedicated to dealing with road accidents. They can empower you, give you a sense of community and teach you new coping styles. A general practitioner at your area's health care centre could undertake follow up of your physical condition in collaboration with your hospital doctor.

# Care pathway for road accident victims

From the accident to the psycho-social rehabilitation after road injury: The case of Crete region

December 2015

## • PUBLIC SERVICES FOR VICTIM SUPPORT (REGION OF CRETE)



### HOSPITAL PSYCHIATRIC DEPARTMENTS

1. Psychiatric Department, PAGNI University Hospital of Heraklion, Greece  
tel. +30 2810 392402, 392766.
2. Child Psychiatry Unit, PAGNI University Hospital of Heraklion, Greece, tel. 2813402025.
3. Psychiatric Division, Venizeleio-Pananeio General Hospital of Heraklion, Greece  
tel. +30 2810 368481, 2810 368050-052.
4. "Iatropedagogiko kentro", Venizeleio-Pananeio General Hospital of Heraklion, Greece, tel. +30 2810 281223.
5. Psychiatric Department, General Hospital of Rethymno, Greece  
tel. +30 28310 87308, 87227.
6. Psychiatric Department, General Hospital of Chania, Greece, tel. +30 28210 22686-682.
7. Day Hospital, Sitia, Greece, tel. 2843024314.

### COMMUNITY MENTAL HEALTH CENTERS

1. Mental Health Centre of Heraklion (kentro psychikis ygeias), Greece  
tel. +30 2810 333402
2. Mental Health Centre of Heraklion (kentro psychikis ygieinis), Greece  
tel. +30 2810 244409
3. Mental Health Centre of Rethymno (kentro psychikis ygeias), Greece  
tel. +30 28310 20799
4. Mental Health Centre of Lasithi (kentro psychikis ygeias), Greece  
tel. +30 28410 82300
5. Mental Health Centre of Chania (kentro psychikis ygeias), Greece  
tel. +30 28213 40500-516

### COMMUNITY SOCIAL SERVICES AND SOCIAL CARE

- General Directorate of Public Health and Social Care, Region of Crete, Greece  
tel. +30 2813 412510
- Social Service Department (operated in all municipalities)
  - Help at Home programs (operated in all municipalities)

### PRIMARY HEALTH CENTRES

7th Health Region of Crete, Greece  
tel. +30 2813 404400.

- 16 health centers in Crete Region (6 Heraklion, 4 Rethymno, 3 Chania 3 Lasithi)

### REHABILITATION CENTRE

National Rehabilitation Centre  
Ilion, Attica, tel. 210 2314103-4  
Private Rehabilitation Centre, Chania, Greece, Τηλ.282110200.

### SUPPORT GROUPS

Road Accident Victims' Support Association – Road Safety Observatory  
Rhodes, Greece, tel. 22410 92409, +30 6946 443419.  
Panhellenic Association SOS-Road Traffic Crimes, Athens Greece, tel. +30 6971542433 – +30 6977229631 (free of charge victim support groups).  
Panhellenic Association of Assistance and Solidarity for Families of Road Accident Injured, Chania, Greece tel. 2821088992.

## • RECOMMENDATIONS FOR ROAD ACCIDENT VICTIMS

### WHAT SIGNS TO NOTICE

Most people who are involved in a road traffic accident won't develop an anxiety disorder. If you are not among them, you may experience:

- Flashbacks or bad dreams about the accident.
- Stress when exposed to reminders of the accident.
- Feelings that your life is not real.
- Avoidance of thoughts, feelings or conversations associated with the accident.
- Guilt about the accident.
- Difficulty in concentrating or sleeping.
- Irritability.
- Frequent attempts to avoid activities, thoughts, or emotions that remind you of the accident.
- Decreased interests or emotional numbness.

### WHEN TO SEEK MEDICAL ADVICE

Most people recovering from a road traffic injury generally focus first on physical recovery and they postpone the treatment of any psychological symptoms. It is very important for you to tell doctors if you are feeling anxious or distressed. Especially if:

- your symptoms are worrying you or they are causing your friends' and relatives' concern.
- your symptoms are preventing you from doing your normal daily activities.
- your symptoms have lasted longer than three months after the road traffic accident. In this case you may suffer from an anxiety disorder, such as post-traumatic stress disorder.

### WHAT TO DO

In order to heal from psychological trauma, you must resolve the unpleasant feelings and memories you've long avoided. Otherwise they will return again and again. Some simple but helpful things to do are the following:

- Give yourself time. Be patient with yourself and what you are feeling. Anxiety is normal for everyone and time can be very helpful.
- Talk to a friend, a family member or someone you feel comfortable with, about the accident. Just talking about your experiences may help you manage your anxiety. Avoid spending much time alone.
- Look after yourself. When people feel anxious they often neglect themselves. Take good care of your lifestyle. Eat well, sleep well and do some exercise.
- Avoid alcohol and drugs that have not been prescribed by your doctor. Sometimes people start drinking more than they used to do without realizing that. Be very careful not to lose control of the amount of alcohol you are consuming.
- Take some time for yourself. Do some enjoyable activity.
- Join in a support group for trauma survivors. Being with others who are facing the same problems can help reduce your sense of isolation and hearing how others cope can inspire you and remind yourself of your strengths and reclaim your sense of power.

## • RECOMMENDATIONS FOR FRIENDS, RELATIVES & SUPPORTERS OF ROAD ACCIDENT VICTIMS

### WHAT TO DO

- Be patient and understanding. Your loved one will need time to heal from emotional or psychological trauma.
- Be patient with the pace of recovery. Response to trauma is different and may take more time to you loved one to heal.
- Don't judge your loved one's reaction against your own response or anyone else's.
- Offer practical support to help your loved one get back into a normal routine. That may mean help with housework, for example, or simply being available to talk or listen. They may need your help but be shy to ask or not want to be a burden to you.
- Don't pressure your loved one into talking but be available when they want to talk. Some trauma survivors find it difficult to talk about what happened. Let them know you are there to listen whenever they feel ready.
- Help your loved one to socialize and relax. Encourage them to participate in physical exercise, seek out friends, and pursue hobbies and other activities that bring them pleasure.
- Your loved one may become irritable, withdrawn, or emotionally distant. Don't take it personally. This is probably a result of the trauma and may not be related with you or your behaviour.

**BE PATIENT**  
**BE AVAILABLE**  
**OFFER PRACTICAL HELP**  
**LISTEN**  
**ENCOURAGE**



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