EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION

EUROCONTROL

Human Factors Module

Critical Incident Stress Management

HUM.ET1.ST13.3000-REP-01

Edition	**:**	**1.0**
Edition Date	**:**	**31.12.1997**
Status	**:**	**Released Issue**
Class	**:**	**EATCHIP**

EUROPEAN AIR TRAFFIC CONTROL HARMONISATION AND INTEGRATION PROGRAMME

DOCUMENT IDENTIFICATION SHEET

DOCUMENT DESCRIPTION

Document Title

Human Factors Module

Critical Incident Stress Management

EWP DELIVERABLE REFERENCE NUMBER: HUM.ET1.ST13.3000-DEL09

PROGRAMME REFERENCE INDEX:	**EDITION:**	1.0
HUM.ET1.ST13.3000-REP-01	**EDITION DATE**	31.12.1997

Abstract

This document is, within the Human Resources Domain (HUM) one of the Human Factors Modules. These modules deal with human performance. This module provides a model for Critical Incident Stress Management (CISM). It describes the phenomenon of and the different techniques to deal with Critical Incident Stress (CIS). A CISM programme consists of three phases: Information, Training and Support, and addresses different people and services in and outside the organisation. All CISM activity aims to moderate the impact of CIS and to speed up the return to the pre-incident state. CISM should be an integrated part of Human Resources policy.

Keywords

CISM	Peer support	Company policy	Spouse support
Emotion ventilation	Verbalisation	Early intervention	Group support
Training	Evaluation	Psychological support	Reinforcement
Trauma			

CONTACT PERSON: V.S.M. Woldring	**TEL:** 3566	**DIVISION:** DED5

AUTHORS: V.S.M. Woldring, A.-L. Amat

DOCUMENT STATUS AND TYPE

STATUS		CATEGORY		CLASSIFICATION	
Working Draft	☐	Executive Task	☐	General Public	☐
Draft	☐	Specialist Task	☐	EATCHIP	☑
Proposed Issue	☐	Lower Layer Task	☑	Restricted	☐
Released Issue	☑				

ELECTRONIC BACKUP

INTERNAL REFERENCE NAME : HFM_CISM.doc

HOST SYSTEM	MEDIA	SOFTWARE
MS Windows NT	Type : Hard disk	MS Word 6.0
	Media Identification :	

DOCUMENT APPROVAL

The following table identifies all management authorities who have successively approved the present issue of this document.

AUTHORITY	NAME AND SIGNATURE	DATE
Human Factors Expert	V. S. M. WOLDRING	05.12.1997
Chairman of the Human Resources Team	C. P. CLARK	17.12.1997
Senior Director Operations & EATCHIP	W. PHILIPP	18.12.1997

DOCUMENT CHANGE RECORD

The following table records the complete history of the successive editions of the present document.

EDITION	DATE	REASON FOR CHANGE	SECTIONS PAGES AFFECTED
0.1	01.08.1997	Working draft	All
0.2	05.09.1997	Proposed issue	All
1.0	31.12.1997	Released issue	All

CONTENTS

EXECUTIVE SUMMARY

The EATCHIP Human Resources Domain is developing several human factors modules that deal with the management of human performance. This module is about critical incident stress management (CISM). The aim of this module is to present the reader with a concept for CISM and guidelines for implementation.

Chapter 1 defines the scope and purpose of the document and includes a brief overview of current application of CISM in Air Traffic Management.

Chapter 2 presents a generic model for CISM in Air Traffic Management. This chapter explains how CISM works, who should be involved and which legal issues should be considered.

Chapter 3 gives an overview of stress responses to critical incidents and possible consequences. Stress responses are a concern at several levels, safety, well-being and costs.

Chapter 4 outlines the three phases of a CISM programme: information, training and post-incident support.

Chapter 5 describes the different CISM techniques, based on crisis intervention. It explains the techniques of counselling, the one-on-one approach, the seven steps in debriefing and the three phases in defusing. All techniques described intend to moderate the impact of a critical incident and to speed up the return to the pre-incident state.

Chapter 6 provides the reader with ideas on how to inform everyone concerned about the nature of critical incident stress and its consequences. Information is the first step in the implementation of a CISM program.

Chapter 7 deals with the second step which is training, addressing all levels in the organisation - training in stress recognition and counselling techniques, and training in policy and procedures. Reference is made to what has been developed for emergency and rescue personnel.

Chapter 8 explains how to evaluate a CISM programme and underlines the need for reinforcement in order to keep CISM alert.

Chapter 9 describes the involvement of the different members of the CISM team, internal and external, at work and at home.

References, recommendations for further reading, definitions, abbreviations and a list of the contributors can be found at the end of the document.

Critical Incident:

'Any situation faced by a controller which causes him or her to experience unusual strong emotional reactions.'

(Mike Dooling, Air Traffic Controller)

1. INTRODUCTION

The history of critical incident stress management lies in military operations. The first mention of it was during the American Civil War. Soldiers suffering so-called Combat Stress were considered to be in league with the enemy and were ridiculed, imprisoned or even shot. Only in later years was Combat Stress recognised as a human reaction to the horrors of war and intervention techniques were developed to overcome the phenomenon. Nowadays we speak of Critical Incident Stress when we describe our reaction to a shocking event. Incidents and accidents in aviation often have enormous impact on every human and every organisation involved. Critical Incident Stress Management is therefore an important issue in the Human Resources Policy of Air Traffic Services.

"At the end of a night shift, I was in control of the Geneva flight out of Brussels which experienced a bird-strike on take off. The pilot of the B737 reported initially 'Engine on fire'. From the tower I could see that SAB872 did not gain altitude and continued RWY heading. A second call from the pilot stated full emergency: 'Engine number 1 on fire, engine number 2 loss of power'. The B737 overflew Brussels city at 700' and continued on his heading for approximately 10 NM before he was able to resolve part of his problems: extinguish the fire on number 1 and full power for engine number 2. All necessary ground emergency requirements were taken and the aircraft landed safely without anybody injured. Nevertheless, 90% of the passengers did not want to continue their journey that same day and cancelled their flight.

Although the crew was more than satisfied with the way the emergency was handled, I experienced consecutive nightmares afterwards where the B737 crashed in the centre of Brussels. I knew that all necessary precautions were taken and that all possible assistance was rendered to the emergency flight, but nevertheless that did not relieve me from feeling guilty and thinking that maybe I could have done something more".

1.1 Scope

Within the EATCHIP Human Resources Domain the Human Factors Modules seek to provide a better understanding of the factors that influence human performance.

Stress reactions after a critical incident are such a factor, and they are a concern at different levels.

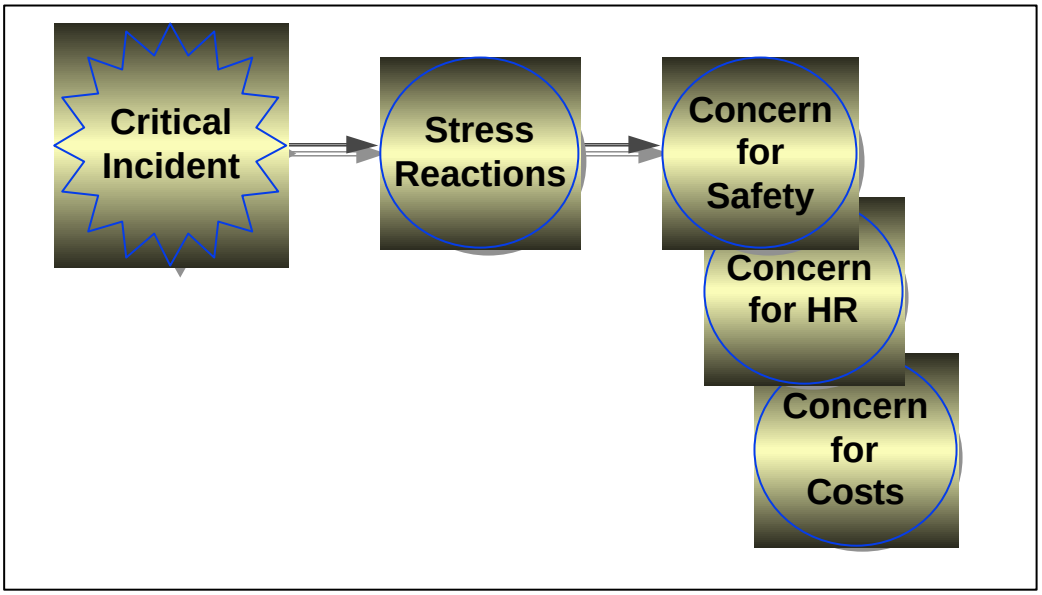


Figure 1: The Critical Incident Stress phenomenon

Critical Incident Stress Management deals with the impact of critical incident stress on human and on organisation and contributes directly to the safety and efficiency of Air Traffic Services (ATS).

1.2 Purpose

The aim of this module is to present a model which will better enable the reader to understand and apply the mechanisms of critical incident stress management. This document is intentionally written in a style which is easy to read and understand. It should address operational staff in the execution of their job, trainers in the preparation of course content and documentation, supervisors in managing their teams, and ATS organisations in the set-up and implementation of CISM.

The reference material at the end of the document provides the interested reader with further detailed documentation.

1.3 Critical Incident Stress Management in Air Traffic Services

Critical Incident Stress Management is not widely carried out in the world of ATS. Installation of CISM programmes in ATS was until now basically “disaster-driven”. On 10 July 1989 a DC-10 crashed at the airport of Sioux City. Canada has now a CISM programme installed. On 4 October 1992 a Boeing-747 crashed on an apartment building in a suburb of Amsterdam and in April 1994 a Cityhopper crashed near the Amsterdam airport. The Netherlands now have a CISM programme in place. In 1987 a MD-80 landed in heavy fog at Helsinki Airport and hit a maintenance car on the runway. On request of the tower controllers, who were very shaken by the accident, CISM became operational in Finland in close co-operation with other services at their airports. Germany and Switzerland are in the process of developing a concept - they have decided not to wait for a disaster to implement a Critical Incident Management Programme.

Page intentionally left blank

2. OVERVIEW

2.1 What CISM is

Critical Incident Stress Management is the structured assistance for a **normal** reaction to an **abnormal** event. It is important to realise that it is the critical incident that is abnormal, and that a stress reaction to such an event is a normal human reaction.

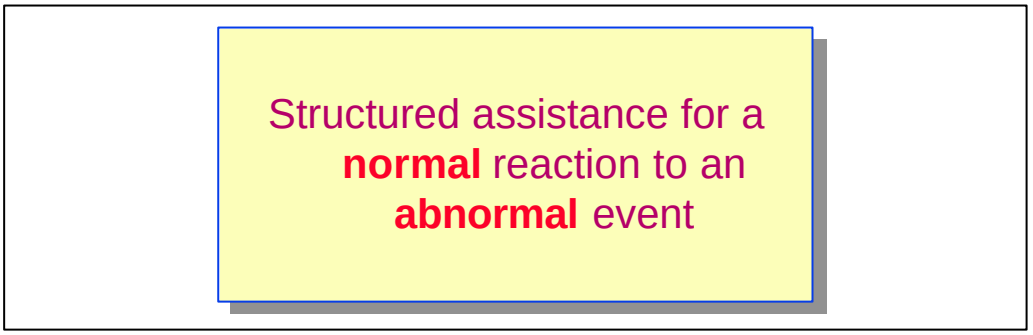


Figure 2: CISM, a definition

This structured assistance can be divided into two areas. The first area - How it works - deals with the human reaction, the emotion and the rational. The second area - Who is involved - defines the victims and the helpers.

2.2 How CISM works

Immediate action oriented intervention encourages a victim of incident stress to do something, to try to understand what is going on, instead of staying in a state of passiveness, shock and confusion.

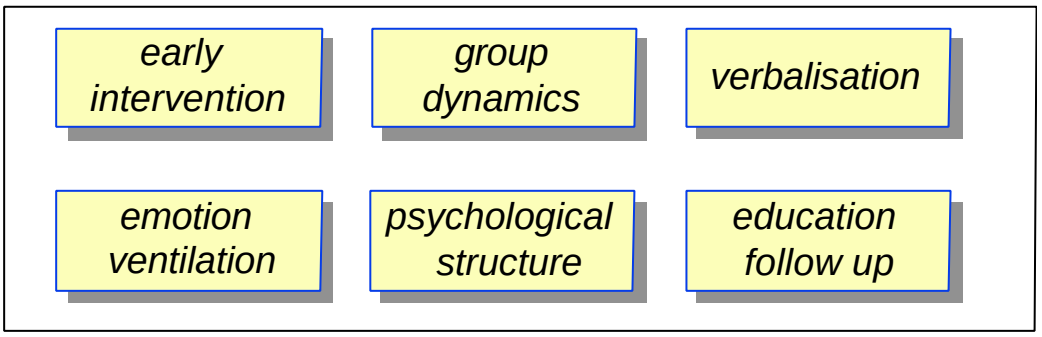


Figure 3: How CISM works

Group support and peer support help to normalise the experience, reduce the sense of isolation and allow the exploration of sensitive issues. This generates feelings of hope. Emotion ventilation relieves. Verbalisation helps to ventilate

and reconstruct the event, gives support in organising thoughts and feelings, enhances reframing and encourages new perspectives. Help in structuring emotions and facts results in rational thoughts. CISM is an integrated programme, and teaches people how to deal with the situation from before to after the critical incident through education and follow-up.

2.3 Who is involved

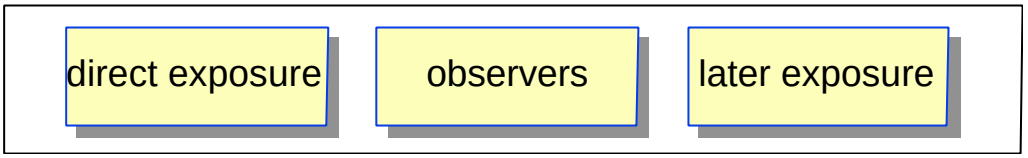


Figure 4: Who is affected

There are three groups of people who can be affected by critical incident stress. In an aviation disaster, there are the passengers and crew who are directly exposed. Then there are observers, ATS and emergency personnel. At a later exposure there are spouses, family and close friends. Apart from the degree of exposure, the level of subjective responsibility, like a feeling of guilt, also affects people. For each victim it is a different experience but for all it is a horrible one.

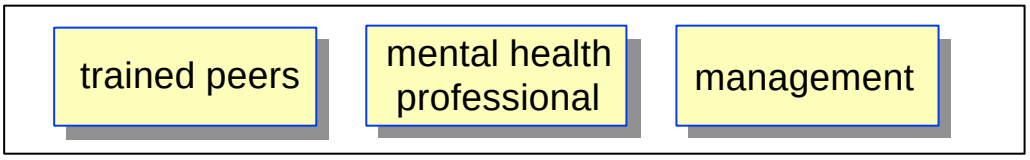


Figure 5: Who is helping

Helpers can be defined in specially trained peers (colleagues) and professionals in mental health (welfare officer, medical doctors, psychologists, psychiatrists) who should preferably be familiar with the world of ATS. Then there is management, responsible for company policy and actively supporting CISM.

2.4 Legislation

The legal component is a third important issue in Critical Incident Stress Management.

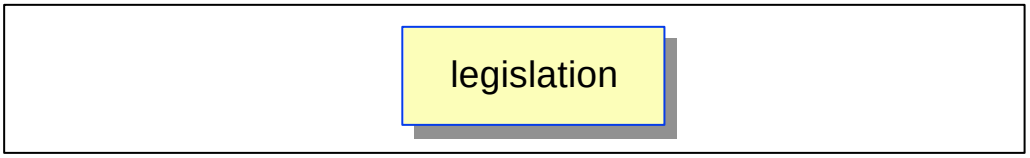


Figure 6: The legal issue

Remember: CISM deals with the **human reaction** to the critical event and is dealt with in complete confidence. Incident/Accident Investigation deals with the **facts** of a critical event. CISM and Incident/Accident Investigation should therefore be completely separate. The people dealing with CISM should not be the same people who deal with the investigation. No link, managerial, organisational or inter-personal, should exist. It is advisable to check national legislation on confidentiality. This should include the legal protection of the volunteering debriefer peer.

2.5 The spider-model

The four components of Critical Incident Stress Management lead to the following representation:

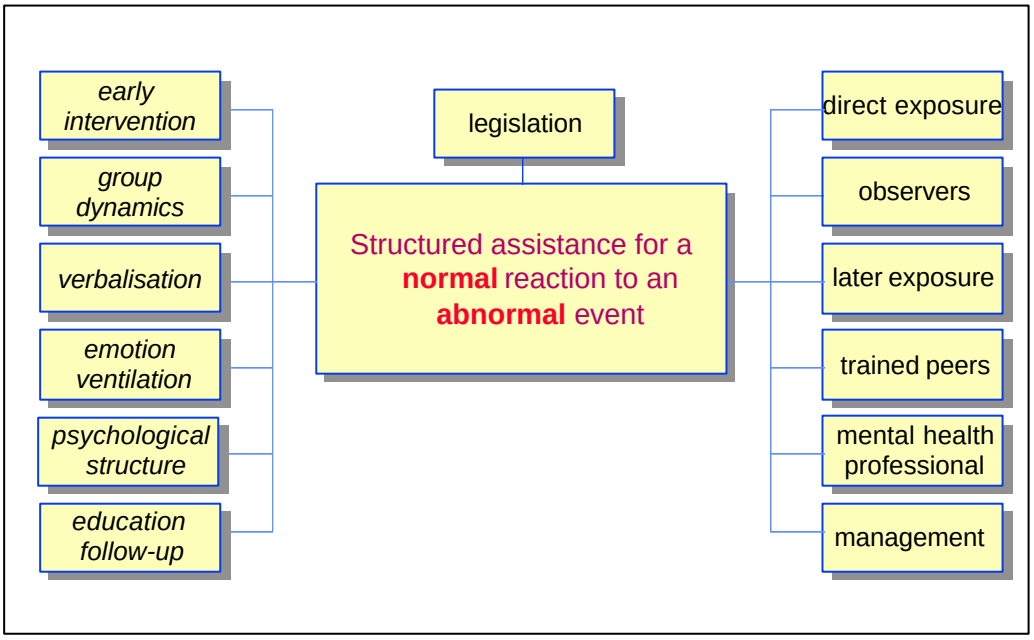
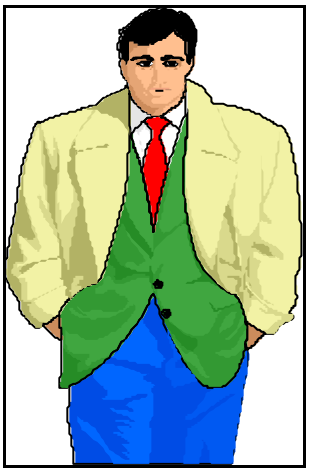


Figure 7: The spider-model

The management of critical incident stress is the structured assistance for a normal reaction to an abnormal event. Trained colleagues and/or mental health professionals help through education, information and interviewing techniques, supported by a clear company policy and procedures. CISM needs to be strictly separated from Incident and Accident Investigation.

"Thinking that I resolved a conflict by putting an aircraft on radar heading and giving a rate of descent, my attention was drawn away to another situation on the radar scope. Although one could say that there are mitigating circumstances as to how the incident happened, it was more than clear that I was responsible for the airmiss. I misjudged the situation. The pilots did not report the airmiss and since in those days our incident investigation cell was one of punishment rather than trying to learn from it, I kept quiet and did not file an incident report either.

This turned out to be my worst nightmare. I was in need of telling others what had happened, in need of evaluating the situation with others. I felt guilty and dishonest and couldn't get my mind away from the radar image. Whenever I was alone, I started crying and felt like a failure. I wanted to tell everybody: 'I'm sorry, I made a mistake' but couldn't since I had chosen not to tell. This state of mind lasted for three weeks and faded only thereafter, it is still hanging in the back of my head. Talking about the incident could have helped me in dealing with it, so now I know that, no matter what the consequences are, I'll report next time!"



3. STRESS REACTIONS

3.1 Critical Incident Stress

Abnormal events cause a series of reactions. These reactions are unpleasant, but they are normal human reactions. Every person will - after a critical incident - experience recurrent and intrusive recollections of the event, including images, thoughts or perceptions. Critical Incident Stress reactions (CIS reactions) influence, for a short or a longer period the functioning of a person. This can happen to anyone at any time. Critical Incident Stress is something that the person feels; the fact that the most reactions are hardly visible for others makes the coping with CIS reactions extra difficult.

Every day, we exercise in handling our daily stress; we deal with its symptoms. The symptoms of CIS are often similar, but their impact is much heavier. A person's balance can break after a critical incident, and the stress symptoms deal with the person instead of the person dealing with the symptoms. Elements that trigger this disequilibrium differ for each person, for each situation and at each moment. And CIS reactions can last for days, weeks or even months. This has nothing to do with personal weakness, it can happen to anyone at any time.

Every shocking event causes feelings of intense fear and helplessness or horror; the event causes a 'psychological wound', a 'trauma'. Many people switch to "automatic pilot" during an incident. Their reactions are remarkably appropriate and important and necessary decisions are taken; procedures are followed to the letter, etc.

Emotions come afterwards and can be recognised by symptoms of:

- intrusion (like nightmares, acting or feeling as if the event were recurring, flashbacks),
- avoidance (like avoidance of conditions related to the event, inability to recall important aspects of the event, loss of interest),
- hyperarousal (like difficulty in concentrating, difficulty in falling or staying asleep, irritability).

These emotions come with questions about the event and the individual's role in it. "What happened?", "Why did it happen?", "Why did I do this...?", "Why did I decide that...?", "How will I react next time?". Each person involved will find his or her own answers to these questions. The questions help the recovery of the internal control systems in a human being.

These repetitive thoughts and emotions can occupy the people involved for days and even weeks after an incident.

3.2 Four categories

Stress reactions to critical incidents show immediately and/or delayed, up to several weeks after the exposure to the incident. Stress reactions can be divided into four categories: physical, cognitive, emotional and behavioural reactions. These categories are listed in the Human Factors Module Stress (Woldring, 1996). Here under is a shortened version.

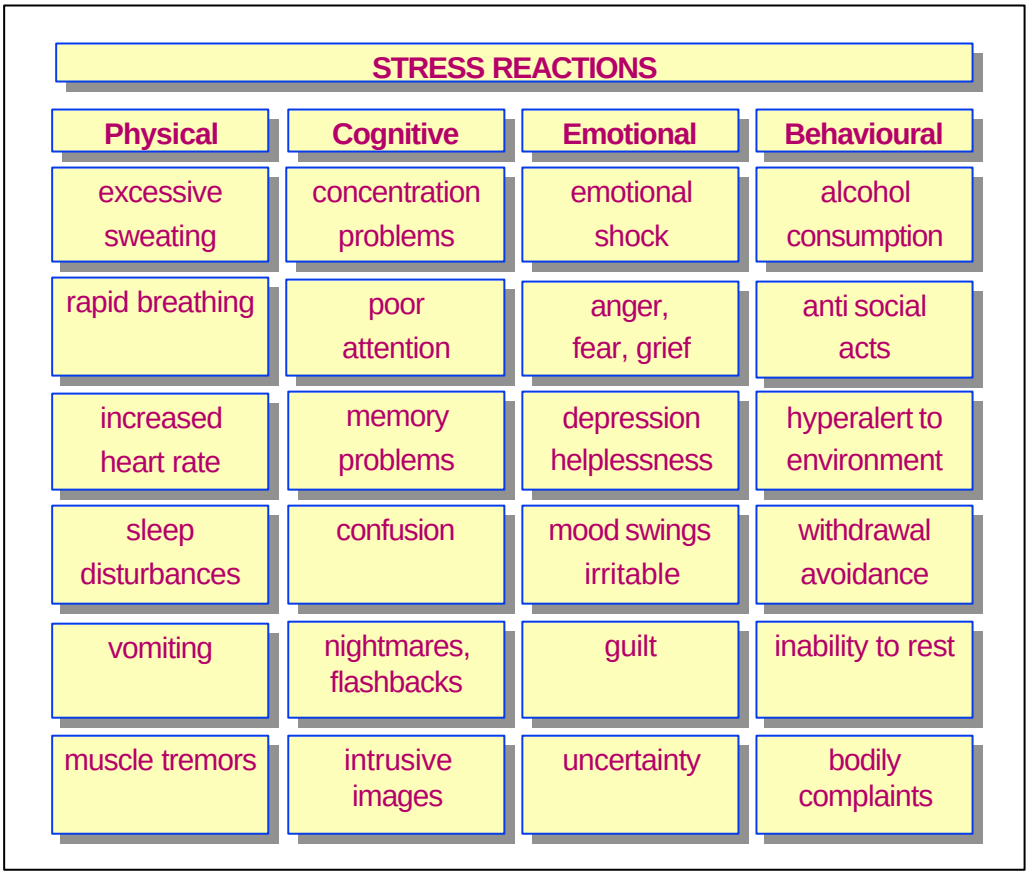


Figure 8: Stress reactions, a selected list

This list is certainly not exhaustive, it is a selection of reactions, different for each person, and different for each situation, each moment.

3.3 Some misconceptions

The picture that most of us have about what critical incidents can do to people is often remarkably wrong. There is a list of some known misconceptions:

Misconceptions[1]

Misconception 1: *CISM would only be concerned with the controller directly involved. A critical incident would be less drastic for those who only witnessed the incident; only the controller directly involved would run the risk of being affected by stress reactions.*

Reality: After the crash of the Boeing 747 in Amsterdam many colleagues in Operations and also in other departments were very shaken by the accident. Feelings of helplessness, experienced by those who witnessed the accident, the confrontation with the directly involved colleagues, and the awareness of the fact that this could have happened to anyone made a deep impression.

Misconception 2: *People would become less vulnerable in the long run. Repetitive confrontations with critical incidents would make people able-bodied. Only those who experience a critical incident for the first time would suffer critical incident stress.*

Reality: On the contrary, repetitive or combined incidents, both at home and at work, increase the chance to develop physical and psychological stress symptoms. It is possible to experience two or three incidents pretty strongly, while the next incident suddenly breaks you down.

Misconception 3: *Relativity would help. Remarks like "You were lucky" or "The real victims would have been the crew and the passengers" after a near-collision or a loss of separation would help to shake off the stress reaction to the event.*

Reality: Such remarks irritate and hurt. Colleagues who are shaken by an incident experience relativity as being misunderstood; the enormous fear they felt should not be played down. Relativity does not help, it causes anger. Remarks which diminish the importance of the incident are often felt as being more hurtful than the incident itself.

Misconception 4: *Those who react calmly and adequately can handle their stress better. The person who reacts professionally, calmly and adequately, would have little chance to suffer a stress reaction afterwards*.

Reality: Most people react remarkably well in critical situations. But this reaction does not indicate anything about a possible reaction after the incident, in the shorter and longer term.

Misconception 5: *Talking about the critical incident would worsen the problem. Back to the normal pattern is often seen as being good medicine. Talking about what happened would only worsen things. "It's part of the job, go back to work, don't be a trouble-maker".*

Reality: It is almost as if this thought says: "it is easier to forget or avoid emotions about the incident when you avoid talking about it"; But when we think of the silence at the funeral of a loved one, we easily learn that silence cannot take away sorrow or any other emotion.

[1] from the CISD manual for ATC- the Netherlands, with many thanks to W.Gersteling, Company Counsellor ATC Netherlands.

A B747 was en route and level in the cruise when the aircraft's return disappeared from radar. Repeated attempts to re-establish communication failed. The search and rescue services were alerted. Reports came back to the unit that an aircraft had crashed destroying some houses in a village community. It is not known if the controller, or others involved, received any professional counselling after this event.

3.4 A concern at different levels

Stress reactions are a concern at different levels:

3.4.1 Concern for safety

Any person under extreme strain shows signs of poor concentration, poor prioritisation, confusion and more or other reactions. One needs no explanation to realise that this is simply not safe.

3.4.2 Concern for the human resource

Approximately 86% of persons experiencing CIS will experience some cognitive, physical or emotional reaction within 24 hours after the incident. If unmanaged 22% will have symptoms six months to one year after the event. 4% of people will run the risk of developing post traumatic stress disorder (PTSD) (Dooling, 1996). PTSD is a severe and incapacitating form of stress-related disorder, capable of ending its victim's functional life in a matter of moments while changing, forever, the life of the victim's family (Everly and Lating, 1995).

3.4.3 Concern for high costs

The following table compares the severity of two air disasters in San Diego and Cerritos. Two remarkably similar mid-air collisions, the differences show in the post accident figures - in Cerritos CISM was applied.

Two mid-air collisions Compiled by Mitchell (1979), Duffy (1979), Freeman (1979), Honig (1987)	**San Diego** 1978	**Cerritos** 1986
Total killed	125	82
Plane survivors	0	0
Homes destroyed	16	16
Civilians killed on the ground	15	15
Emergency personnel engaged	300	300
Body parts recovered	>10.000	>10.000
Loss of emergency personnel	29 in 1 year	1 in 1 year
Increase in mental health utilization	31% in 1 year	1% in 1 year
CISM Intervention	Sporadic	12 Debriefings Hot line Follow-up

Figure 9: Comparison of the San Diego and Cerritos air disasters

The differences in losses of emergency personnel after the incident are striking.

Here are two examples to illustrate some costs in ATS:

Finland has spent approximately 20.000 ECU to implement CISM at its airports. This included the installation of the different project-teams, meetings, domestic travelling, two training sessions and brochures.

Germany estimates the cost for establishing a CISM programme at 80.000 ECU, and maintaining the programme will cost 30.000 ECU per year.

The total costs involved in recruiting and training an *ab initio* controller for EUROCONTROL is 670.000 ECU.

The cost of establishing and maintaining a CISM programme pales in comparison to the cost associated with the premature departure of one operationally qualified controller, due to an event-induced stress related medical retirement.

4. THE THREE PHASES OF A CISM PROGRAMME

The management of critical incident stress starts before the incident and is ideally an integrated part of the Human Resources policy of the organisation. CISM consists of three phases: information, training and post incident support.

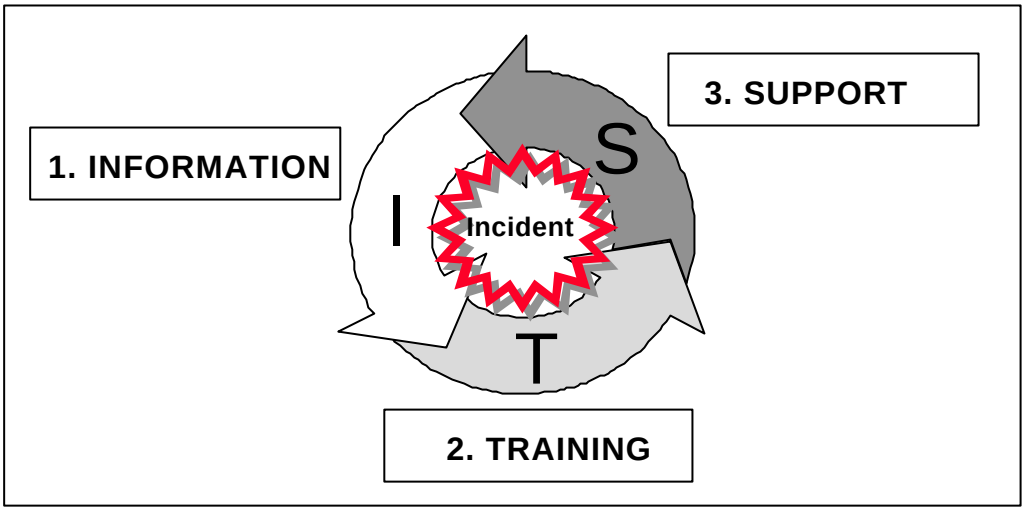


Figure 10: The three phases of CISM

4.1 Phase I: The information phase

The first phase is the awareness or information phase. This first step provides information about the phenomenon, describes potential reactions to critical incidents and explains the different CISM support mechanisms. The information stresses the importance of proactively preparing and coping with unusual critical incidents.

4.2 Phase II: The training phase

Training programmes provide more detailed information about critical incident stress and the management of it. Moreover, volunteers are trained how to support their colleagues immediately after a critical incident. Thus, part of the CISM programme deals with the establishment of training courses.

4.3 Phase III: The support phase

The third phase is carried out through a set of services assisting the person(s) involved in a critical incident. This form of support, offered after a critical event, can take different forms, e.g. an informal chat during the breaks or a more formal meeting, individually or in a group.

Page intentionally left blank

5. CISM TECHNIQUES

5.1 Introduction

A stress reaction to a critical incident is more acute than day-to-day stress. Yet prevention and coping techniques as described in the Human Factors Module Stress (Woldring, 1996) remain relevant. A healthy diet, exercise, humour and relaxation exercises help a lot in fighting stress. Lifestyle management is the first CISM technique: it helps effectively in the recovery period after a critical event (Ochberg, 1993). However, as stress may potentially trigger psychological disorder, specific techniques to support CIS "victims" have been developed over the years. These techniques take their roots in various psychological schools and have been developed mainly as a first aid after wars and disasters like earthquakes, floods, fires and air-crashes (Weisaeth et al., 1991).

5.2 Crisis

Much work has been carried out on crisis (Caplan, 1964) which is useful for CISM (Wollman, 1993).

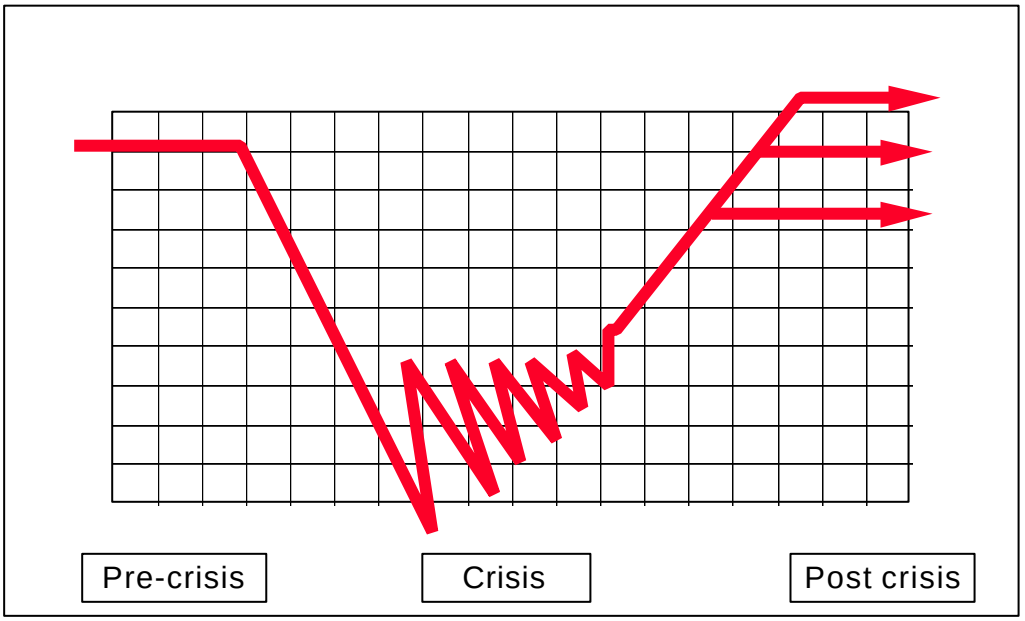


Figure 11: The three stages of crisis

It is normal, following a crisis event, to traverse a period of **confusion** or disorganisation. The typical reaction is then to search for ways of getting out of this crisis state. When, through a **trial and error** process, things have been re-ordered, emotions can be better controlled and the individual can work on a

rational solution to **solve** the crisis, and even benefiting from it and becoming stronger and healthier.

A crisis or a critical event is a turning point in life; when it is resolved, some people will carry with them the stigmatism of the event and will be emotionally injured while others will have used it constructively.

5.3 Two approaches

CISM techniques are mainly developed for peers to help peers. CISM techniques are not therapies but rather interviewing techniques. You don't need a professional background in human sciences to apply CISM techniques, but you do need **training** and **practical exercise**. These aspects are highlighted in later chapters of this document.

5.3.1 Two complementary approaches

CISM techniques can be split into two complementary approaches. The first technique is one-on-one counselling. The helper - preferably a peer - talks with the victim and supports him/her in moderating the impact of the crisis. The second technique is the group session. This technique is preferably guided by a mental health professional. The various witnesses of the same critical incident gather and exchange their experiences. During this session debriefing takes place with the help of a trained peer.

5.3.2 Choice of the technique

Both group and one-on-one techniques are very effective in counterbalancing the effect of critical incident stress (Everly et al, 1997). The two techniques follow the same basic principle. The main difference is that the one on one technique offers the opportunity to design a tailored solution to the problem, while in the group technique the focus is put on normalising the experience.

Important factors in the choice of the techniques applied are:

- cultural differences
- available resources
- time spent after the event
- personality of the stressed individual(s)

5.4 One-on-one approaches

In one-on-one approaches, a supporting peer or a mental health professional facilitates the discussion and guides the other person towards a plan of action: what are you going to do to feel better? (Mitchell et al, 1981). The technique

intends to moderate the impact of critical incident stress and speed up the return to the pre-incident state (or even to a stronger and healthier state).

Communication skills, more specifically active listening, but also knowledge of the CIS phenomenon are necessary. In order to apply this CISM technique.

When helping somebody in crisis after a critical incident, it is important to evaluate in which phase the person is in order to adapt the intervention and make it more efficient. High anxiety, remorse, denial or grief are responses to the acute stress received, and the helper has to be prepared to cope with these during the interview/discussion.

It has been found effective in emergency services crises to start the discussion by asking questions requiring an answer at the cognitive level (the things we know), going then to the emotional level (the things we feel) and finishing back on the cognitive level. Consequently, a way of organising a one on one discussion after a critical event is to:

1. Start by introducing yourself and the role you will play; the confidentiality issue can be underlined at this stage.

2. Ask questions about the critical event - *What happened?-.* Try to stay at the factual level until the operational details have all been gathered. When answering this question, the emotions felt during the event might come back again. Acknowledge them, and steer the discussion towards a complete and as objective as possible description of what happened.

3. Ask questions about the current emotional level - *How are you doing?* -. Make the comparison with common critical incident stress symptoms, and explain that the reaction is normal. **A normal reaction to an abnormal event.**

4. Indicate coping strategies, suggest possible actions, ask an action plan to be established and to meet again later to assess whether the plan works.

5. Close the discussion by reformulating what has been said - from the facts to the action plan passing via the stress reactions.

6. If needed give the name and phone number of a mental health professional.

5.5 Group techniques

CISM group techniques address a group of people (more than three) having experienced the same critical incident. These techniques, as one-on-one techniques, intend to moderate the impact of critical incident stress, and speed up the return to the pre-incident state (or even to a stronger and healthier state).

The most successful group technique for CISM is Critical Incident Stress Debriefing (CISD)(Mitchell et al, 1997). As it deals with groups of more than

three persons CISD might hopefully not be regularly used in ATS. A shorter version of this technique - called defusing - works for smaller groups, and is much more relevant for ATS. We will describe defusing below; however as it is based on the principles of CISD, we will start with an overview of the CISD technique.

5.5.1 Critical Incident Stress Debriefing

CISD is a structured process following 7 steps and guided by a CISM team - debriefer peers and/or a mental health professional. The debriefer peers tackle more operational issues and the mental health professional deals with emotion relief. The number of participants can be from 3 to a maximum of 20 persons. The room chosen is comfortable. A good arrangement is to seat people in a circle. The debriefing lasts up to three hours. No breaks are allowed and a door-keeper (a CISM team-member) could even be put in charge of preventing anybody from entering or leaving the room.

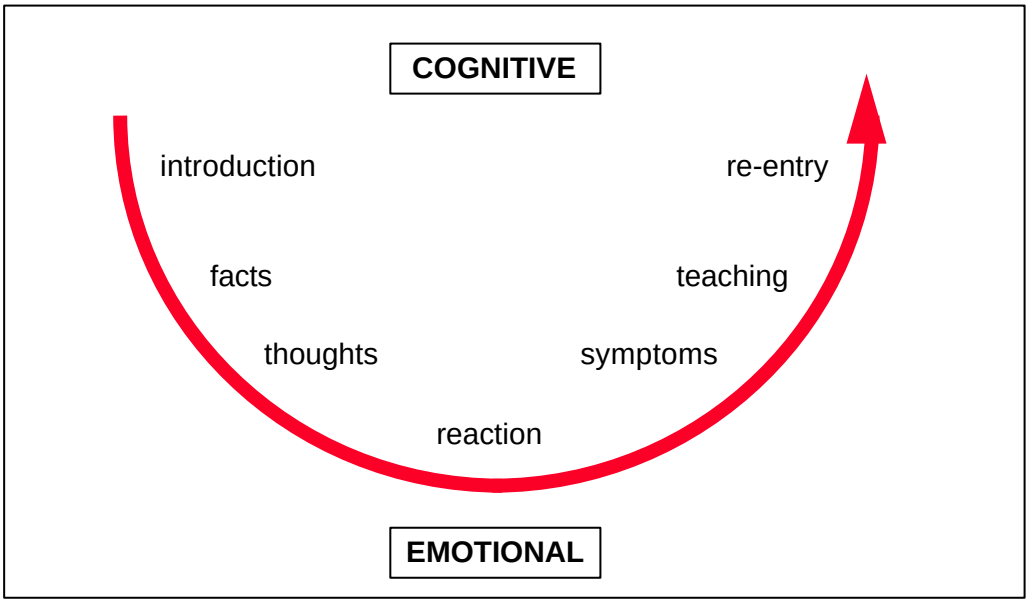


Figure 12: The 7 steps technique

Following the 7 steps technique the CISM team guides participants through cognitive to emotional to cognitive levels so that emotions are relieved in a constructive way (Mitchell et al.,1997). These steps consist of getting people to talk about:

1. who they are (introduction phase)
2. what happened, what is the critical event (fact phase)
3. what they thought at the moment (thought phase)
4. what they felt, what was the worst thing (reaction phase)

5. their symptoms of CIS (symptom phase)

6. then show, by a mini-lecture, that their reactions are normal, that it was the situation that was abnormal (teaching phase)

7. and finally summarise and answer questions (re-entry phase).

5.5.2 Critical Incident Stress Defusing

Defusing is a shorter (20 to 60 minutes) and less formal process. A technique to encourage people to talk is not needed as the group is smaller, and the steps are followed in a somewhat less formal way.

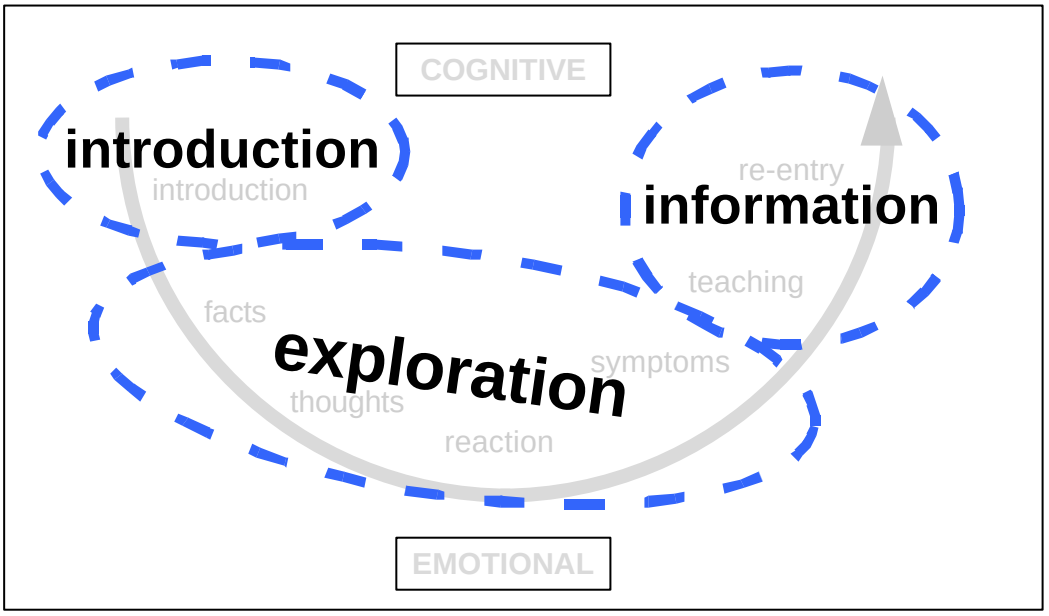


Figure 13: Comparison between debriefing and defusing

The defusing process can be broken down into three phases:

1. *Introduction* phase: The debriefer introduces him/herself, the “rules” of the game and asks each participant to introduce him/herself.

2. *Exploration* phase: This phase corresponds to the fact, thought, reaction and symptoms phases of CISD, grouped and performed more flexibly (within 10 to 30 minutes).

3. *Information* phase: Corresponding to the teaching and re-entry phases of CISD (not to be confused with “our “ information phase of the CISM program).

Defusing means: “to render something harmless before it can do damage” (Mitchell et al., 1997). Defusing must thus be applied as soon as possible - within 24 hours after the event, and can afford to go less deeply into people’s emotion than CISD.

"It offers an opportunity for people involved in a horrible event to talk briefly about that experience before they have time to rethink the experience and possibly misinterpret its true meaning." (Mitchell et al, 1997).

5.6 Conclusion

A set of CISM techniques have been developed and can be used in combination after a critical occurrence. Helper peers can actively support their colleagues. Yet CISM techniques are not improvisations and training and experience in applying these techniques are crucial for the success of a CISM programme.

Moreover, CISM intervention can continue even after defusing or debriefing. Indeed, a follow-up of the counselling sessions is also important to ensure that Critical Incident Stress Management does reach its objectives. Follow-up services can be supplied by helper peers (e.g. an informal chat, a phone-call or a home visit), but it could also consist of professional help and therapy (Shapiro, 1989, Gerbode, 1989).

6. INFORMATION

The earlier CIS is recognised and dealt with, the better individuals feel. It is very important that CISM services are advertised and that information about the nature of critical incident stress and its consequences is widely provided throughout the organisation.

In accordance with the stated policy, the CISM information phase can be carried out by means of the following:

1. Articles in newsletters, guild or union magazines, ATC journals.
2. A personal letter, sent to home addresses so that the individual's family becomes aware of CIS and their helping role in it. A checklist might help in the definition of their helping role.

Figure 14: Checklist for relatives (United Nations, 1996)

3. Sessions or information days with a psychologist, with independent presentations of what is done in other domains. The idea is to create a forum where not only information is transmitted but also where discussions can take place using current experience with CIS in ATS.

4. CISM glossary, including details of contact persons, available in the operational environment. Such a brochure provides information on CIS, the company policy and a description of the CISM services implemented in the organisation. The brochure also lists the names of people to contact both within and outside the organisation.

Page intentionally left blank

7. TRAINING

The information phase provides a basic overview of what CISM is about. Yet awareness of CIS is only the first step. A natural and efficient way to continue the education on CISM is to introduce it into the current training programmes. Most of the ATS personnel become involved in a CISM programme: the operational team can be exposed to a critical incident, or they may want to help their colleagues (peer debriefers), and management decides on the CISM policy and procedures, it provides contact persons but may also carry out the first aid after a critical event (supervisor intervention). Training should thus address all levels in the organisation.

As mentioned before, CISM training should be integrated in traditional training curricula, as human factors and stress management in particular should be. In such a course, an instructor or a CISM expert teaches individuals how to recognise psychosomatic reactions, using realistic case studies or films. A very good example for a video has been produced by the International Critical Incident Stress Foundation, Ellicott City, Maryland, USA.

Peer debriefers receive in addition specific training in CISM techniques and training in how to deal with a CISM solicitor (Andersen, 1995). Their role in counselling is mainly to facilitate the elicitation of facts - what happened -; communications skills are therefore very important. A basic course on communication and interviewing techniques provides a good opportunity to check for the do's and don'ts and predispose to a more efficient interview. However, as these techniques can not only be developed by theory, but rather come with practice, and as the possibilities to practice are quite low, it is important that the peer's personality and attitudes fit naturally for the role.

Instructor profiles and instructional techniques specific to human factors training, course content and organisation are extensively described in the publication *Human Elements Training For Emergency Services, Public Safety and Disaster Personnel:* An Instructional Guide to Teaching Debriefing, Crisis Intervention and Stress Management Programs. (Mitchell et al.,1994).

Page intentionally left blank

8. EVALUATION AND REINFORCEMENT

8.1 Evaluation

The evaluation assesses whether the CISM programme meets the goals set in the organisation policy, whether the resources involved and methods used are appropriate, but also whether the programme is indeed used within the scope it has been set up for. If there is abuse of CISM services, evaluation feedback can trigger changes in CISM programme design (review the information phase content, the message vehicled by training), and also at the policy level (change of information strategy, procedures to stop abuse). An evaluation report can be compiled through questionnaires sent to the persons helped. However, the evaluation should remain qualitative and anonymous (the number of incidents or names of people should not be mentioned). In the Netherlands the CISD team discusses the quality of the services provided and internally assesses the level of success or failure of their own intervention.

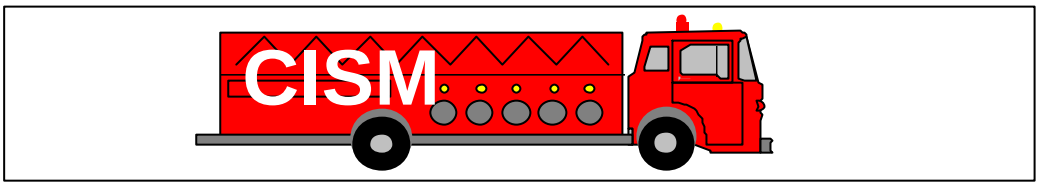


Figure 15: CISM is always on stand-by

The evaluation is made through regular re-assessment as a CISM programme, like a fire brigade, is always on stand-by. It may be needed at any moment and for a long period of time.

8.2 Reinforcement

A reinforcement programme is needed to keep the CISM programme alive. When implementing such a programme, procedures and policy are established to:

1. Maintain and renew the CISM team. It may happen that peer helpers are affected by the experiences of their colleagues. They run the risk of developing so-called compassion fatigue. (Edwards, 1993). In order to prevent this phenomenon, debriefer peers should be supported by the mental health professional and if needed, CISM for the CISM team should be provided.

2. Reinforce the awareness of the phenomenon. The content of the message is the same but should regularly be updated or modified by new examples illustrating CISM and CISM services.

Page intentionally left blank

9. WHO IS INVOLVED?

We previously mentioned the existence of a CISM team. We referred to debriefer peers and mental health professionals. We also mentioned management both as a first support and as a policy and procedures maker. All these play a role in the CISM programme, and as we will see below, the list can be extended.

9.1 Debriefer peers

Debriefer peers are colleagues, selected from all staff levels and trained to support their colleagues stressed by a critical incident. They assist in defining the educational programme and the need for CISM after the critical incident. They provide individual support through discussions or on-the-job (one-on-one approach), they lead CISM meetings (group debriefings or defusings), and they are “a person to talk to”, even after CISM interventions (follow-up activities). As they are not fully qualified psychologists, they deal with the factual debriefing or discussion, rather than with the emotional part If a debriefer peer judges that the situation requires the intervention of a mental health professional, he/she advises the CISM solicitor on whom to contact and what to do. As a general rule, the debriefer peer reports this action to the mental health professional of the CISM team.

As mentioned in the section on training, debriefing peers do follow a specific training course both on CIS and CISM techniques. However, training does not guarantee a good debriefer peer. Personal characteristics, position and image in the organisation are also very important.

Choosing the right people as debriefing peers is crucial, a peer debriefer should be:

- trustworthy and inspiring confidence
- an experienced controller
- respectful of others
- sensitive and able to listen to the needs of others
- emotionally mature and stable
- aware of the limits of the CISM techniques
- aware of his/her own limits

Moreover, a key point is that the debriefer peer is a **volunteer**. He is willing to follow the adequate training programme, he is prepared to be indirectly exposed to critical situations, and to apply CISM techniques to support colleagues stressed by a critical event. It may occur, however, that the first volunteer is not the best or most suitable. There are no career implications for debriefer peers, no premiums or rewards. It is important to separate help in the context of peer support from any managerial function.

According to local culture, a debriefer peer can be selected[2] by the management in charge of the CISM programme or elected by the peers themselves, based on the criteria predisposing him/her to be a good debriefer peer. However, it is important that the chosen peer is credible both to the workforce and to the management.

9.2 Professional psychological support

Depending on the stated policy and on the impact of a critical event, the psychological support is provided either by the debriefer peer only, by a professional in mental health, or partly by the debriefer peer and partly by the professional.

Professional support can also be provided by outside specialists. Criteria for choosing a mental health professional are listed by Mitchell et al (1990). Visits to units should be arranged for them to become more familiar with the ATS domain. It is also recommended to establish a list of checked mental health professionals who can be contacted in case of emergency. The International Critical Incident Stress Foundation can provide you with a list of the CISM specialists close to your location who can be contacted in case of emergency or who can help you to create your CISM program.

9.3 Management, health services, staff representation and relatives

By introducing CISM into company policy management is de facto one of the primary movers in the CISM programme. As CISM can also be viewed as a multidisciplinary help, CISM policy takes advantage of the fact that it is designed by a broadly composed steering committee.

In some countries, co-operation with local support services such as local health services or rescue support teams has proved to be very beneficial. Indeed, CISM techniques are also employed in non-ATS domains and this experience should be exploited. Finland, for example, has organised the CISM programmes at their airports in close co-operation with the local health services. Their experiences in doing so are very positive.

Staff representatives ideally form part of this committee. We have already mentioned their role during the information process. Any other participation (like feedback on the CISM programme) is encouraged.

As we suggested earlier, relatives and close friends are also involved in CISM (Wittrup, 1991). Their privileged knowledge of the person involved can be of great value, mostly if it is combined with information on critical incident stress and if the guidance on how to support the individual is followed.

[2] The agreement of the peer is obviously a sine qua non condition to his/her participation in the CISM team.

An aircraft ran out of fuel over a small stretch of water inbound and fairly close to his destination airfield. The pilot ditched the aircraft in the water, but unfortunately drowned. The controller concerned was shaken by the incident but since there was no reason to feel in any way culpable, quickly came to terms with what happened. The controller felt that the fact that he had support from his spouse greatly enhanced his mental recovery, and as a consequence felt no need for professional counselling. However, the wife of the dead pilot requested to see the controller concerned, since he was the last person to talk to her husband. The controller agreed and as a result felt that it was not only of benefit to the pilot's wife, but also to himself.

9.4 24 hours availability

Like the fire brigade, the CISM team is on duty 24 hours a day, 7 days a week. Its help should be available at any moment and it should be easy to access. The CISM information brochure mentions all names and phone numbers. Alarm systems like beepers and portable tele-phones are very useful in an adequate CISM program.

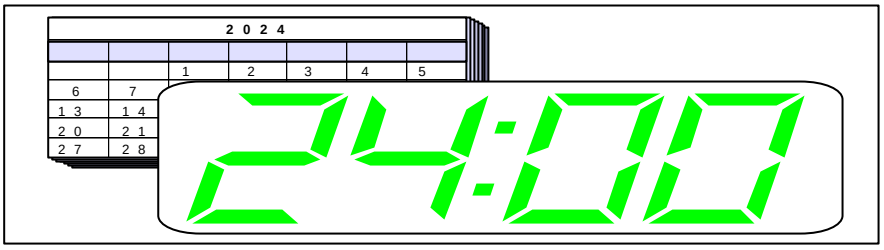


Figure 16: 24 hours. availability

9.5 Passive and active support

CISM support is ideally always there, in the background. Anyone can, at any moment approach the peer, at work or at home. It does happen, however, that someone chooses not to reach out for a supporting hand, for whatever reason. In such a case an active approach, formal or informal, often helps; the example below illustrates this.

In a heavy traffic situation I must have overseen one aircraft, therefore my traffic picture was incomplete. I only realised the situation when a pilot reported that "it was pretty close"; even my trainee had not seen the severity of the situation. The situation was immediately under control again.

I was a bit surprised when our welfare officer asked to see me, but I have to admit, I felt a great relief after our meeting. That one consultation helped me to analyse the incident in a rational way and basically opened the door to a constructive meeting with the pilot concerned.

REFERENCES

Andersen, D. R. (1995). Critical incident response program: a Canadian perspective. *Proceedings of the 21st conference of the EAAP. Vol3. Human factors in aviation operations.* 129-134. Ray Fuller, Neil Johnston, Nick McDonald (Eds). Avebury: Cambridge, UK.

Caplan, G. (1964). *Preventive principles of psychiatry*. Basic Books: New York.

Dooling, M. (1996) Critical incident stress management*. EUROCONTROL workshop on unusual incidents*. Luxembourg, April 2-4.

Edwards, R. (1995) Compassion fatigue: when listening hurts. *American Psychological Association Monitor*. September.

Everly, G.S., Mitchell, J.T., (1997*) Innovations in Disaster and Psychology, Volume Two : critical incident stress management, a new era and standard of care in crisis intervention*. Chevron: Ellycott City, MD.

Gerbode, F. A. (1989) *Beyond psychology: an introduction to metapsychology*. Menlo Park, CA: IRM.

Mitchell, J.T., Bray, G.P. (1990) *Emergency services stress. Guidelines for preserving the health and careers of emergency services personnel*. Brady Prentice Hall Career & Technology : Englewood Cliffs, NJ.

Mitchell, J.T., Everly, G.S. (1994) *Human elements training for emergency services, public safety and disaster personnel: an instructional guide to teaching debriefing, crisis intervention and stress managment programs*. Chevron: Ellycott City, MD.

Mitchell, J.T., Everly, G.S. (1996) *Critical incident stress debriefing. An operation manual for the prevention of traumatic stress among emergency services and disaster workers*. Second edition. Chevron: Ellycott City, MD.

Mitchell, J.T., Resnik, H.L.P. (1981) *Emergency response to crisis*. Chevron: Ellycott City, MD.

Ochberg, F. M. (1993) Posttraumatic therapy. *International Handbook of Traumatic stress syndromes*. John P. Wilson and Beverley Raphael (Eds). Plenum Press: New York.

Shapiro, F. (1989). Eye movement desentization : a new treatment for post-traumatic stress disorder. *Journal of behavior therapy and experimental psychiatry, 20*, 211-217.

United Nations (1995). *Mission readiness and stress management*. Office of human resources management, New York. Internet version: http://www.un.org/Depts/OHRM/stress.htm

Weisaeth, L., Eitinger, L. (1991). Research on PTSD and other Post-Traumatic reactions: European literature. *PTSD Research quaterly, volume 2*, no. 2 and 3, Spring and Summer. US National center for post-traumatic stress Disorder.

Wittrup, R.G. (1991) Posttraumatic stress disorders and the role of the family. In *critical incidents in policing*. Revised version. 387-389. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Woldring, V.S.M. (1996). *Human factors module - Stress*. EUROCONTROL: Brussels.

Wollman, D. (1993). Critical incident stress debriefing and crisis groups: A review of the literature. *Group, 17*, 70-83.

FURTHER READING

Brende, J. O. (1991) Twelve themes and spirital steps: a recovery program for survivors of traumatic experiences. *In critical incidents in policing*. Revised version. 39-54. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Britt, J. M. (1991) U.S. secret service critical incident peer support team. *In critical incidents in policing*. Revised version. 55-61. James, T. Reese, James M. Horn and Christine, Dunning. U.S (Eds). Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Campbell, A.D. (1995) The establishment of the Delta-ALPA critical incident response program. *Proceedings of the 21st conference of the EAAP. Vol3. Human factors in aviation operations*. 135-139. Ray Fuller, Neil Johnston, Nick McDonald (Eds) . Avebury : Cambridge, UK.

Dunn, B. (1995) Not only the sharp end: a flight attendant's viewpoint. *Proceedings of the 21st conference of the EAAP. Vol3. Human factors in aviation operations*. 117-122. Ray Fuller, Neil Johnston, Nick McDonald (Eds). Avebury : Cambridge, UK.

Dunning, C. (1991) Mitigating the impact of work trauma: administrative issues concerning intervention. In *critical incidents in policing*. Revised version. 73-82. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Everly, G.S. (1995) *Innovations in Disaster and Psychology, volume one : applications in emergency services and disaster response*. Chevron: Ellycott City, MD.

Frederick, C. J. (1986) Post traumatic stress responses to victims of violent crime: information for law enforcement officials. *In Psychological services for law enforcement*. 341-349. James T. Reese and Harvey, A. Goldstein (Eds). Washington, D.C.

Fuller, R. A. An overview of the process of peer support team development. (1191). *In critical incidents in policing*. Revised version. 99-105. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Garrison, W. E. (1991) Modelling inoculation training for traumatic incident exposure. *In critical incidents in policing*. Revised version. 107-117. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S.

Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Hartsough, M. (1991) Stresses, spouses, and law enforcement: a step beyond. *In critical incidents in policing*. Revised version. 131-137. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Puckett, S. M. (1991) The little book of stress management: biblical principles for stress reduction. *In critical incidents in policing*. Revised version. 277-288. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Reese, J. T. (1991) Justifications for mandating critical incident aftercare. *In critical incidents in policing*. Revised version. 289-295. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Solomon, R.M. (1991) The dynamics of fear in critical incidents: implications for training and treatment. *In critical incidents in policing*. Revised version. 347-357. James, T. Reese, James M. Horn and Christine, Dunning (Eds). U.S. Department of Justice, Federal Bureau of Investigation : Washington, D.C.

Turnbull, G. (1995) Debriefing British POWs after the Gulf War and released hostages from Lebanon: lessons learnt for use in a wide variety of critical situations including aviation. *Proceedings of the 21st conference of the EAAP. Vol3. Human factors in aviation operations*. 122-128. Ray Fuller, Neil Johnston, Nick McDonald (Eds). Avebury : Cambridge, UK.

Van der Velden, P. G., Kleber, R. J., Gersteling, W.H. (1996) *Critical incidents in the work of air traffic controllers; Frequency, impact and assistance*. ATC The Netherlands.

DEFINITIONS

For the purposes of this document, the following definitions shall apply:

CISM Techniques: Techniques to help people who have experienced a critical incident. These techniques intend to moderate the impact of critical incident stress, and speed up the return to the pre-incident state.

Critical Incident: Any situation faced by a person which causes him or her to experience unusual strong emotional reactions.

Critical Incident Stress: The psychological, cognitive, emotional and/or behavioural reaction to a critical incident. This reaction is a **normal** human reaction to an **abnormal** event.

Critical Incident Stress Debriefing: One or more group sessions in which the different witnesses of the same critical incident gather and exchange their experiences. CISD is a structured process following 7 steps and guided by a CISM team - debriefer peers and/or a mental health professional.

Critical Incident Stress Defusing: Defusing is a similar but shorter and less formal process than debriefing. CISD is a process following 3 steps and guided by a CISM team - debriefer peers and/or a mental health professional.

Debriefer Peers: Debriefer peers are colleagues, selected from all staff levels and trained to support their colleagues stressed by a critical incident. They assist in defining the educational programme and the need for CISM after the critical incident.

One on one Approach: In one-on-one approaches, a supporting peer or a mental health professional facilitates the discussion and guides the other person towards a plan of action.

Post Traumatic Stress Disorder: A severe and incapacitating form of stress-related disorder, capable of ending its victim's functional life in a matter of moments while changing, forever, the life of the victim's family.

Page intentionally left blank

ABBREVIATIONS AND ACRONYMS

For the purposes of this document, the following abbreviations and acronyms shall apply:

ATC	Air Traffic Control
ATS	Air Traffic Services
CIS	Critical Incident Stress
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
DED	Directorate EATCHIP Development
DEL	Deliverable
EATCHIP	European Air Traffic Control Harmonisation and Integration Programme
ET	Executive Task
EWP	EATCHIP Work Programme
HUM	Human Resources (Domain)
IMC	Instrument Meteorological Conditions
NE	North East
PPL	Private Pilot's Licence
PTSD	Post Traumatic Stress Disorder
REP	Report
RWY	Runway
ST	Specialist Task
VOR	VHF Omnidirectional Radio Range

Page intentionally left blank

CONTRIBUTORS

The CISM study group wishes to acknowledge the contribution of Thomas L.R.J.Creten; his advice and active support were invaluable in the development of this document.

Name	Organisation/State
Chairman	
Mr. Michael WOLDRING	EUROCONTROL, DED5
Secretary	
Ms. Anne-Laure AMAT	EUROCONTROL, DED5
Members of the Study Group	
Mr. Patrick BAREAU	FRANCE
Ms. Debbie WESTLEY	UNITED KINGDOM
Mr. Willem GERSTELING	THE NETHERLANDS
Mr. Eddy GERITS	BELGIUM
Mr. Stefan HERRMANN	GERMANY
Mr. Alex SKONIEZKI	GERMANY
Ms. Eveline THÜR	SWITZERLAND
Mr. Mats NYBERG	FINLAND
Ms. Inge VANDER EYKEN	EGATS
Mr. Roland VERMEIREN, m.d.	EUROCONTROL, DHR
Ms. Olga ZHURBYN	EUROCONTROL MUAC

Page intentionally left blank