

**INTERNATIONAL CRIMINAL POLICE
ORGANIZATION**

INTERPOL



DISASTER VICTIM IDENTIFICATION

GUIDE

1997

FOREWORD

The first Interpol Manual on Disaster Victim Identification was published in 1984, as the outcome of two years' work by the Organization's Standing Committee on Disaster Victim Identification which set up a special working party on the subject.

Since that time, many disasters have occurred throughout the world and the Standing Committee has recommended that the content of the Manual be re-examined to take account of the experience that has been acquired and of developments in identification techniques.

The Manual has accordingly been reviewed and revised, resulting in the publication of the present "Disaster Victim Identification Guide" which is now being circulated to all Interpol member countries. It is hoped that it will contribute to the efficiency and effectiveness of disaster handling in general and of identification procedures in particular. It is designed to encourage the compatibility of procedures across international boundaries, which is essential in these days of ever-increasing world travel.

The recommendations in this Guide cannot address every possible eventuality but they give sound practical advice on the major issue of victim identification, underlining the importance of pre-planning and training. Such preparation, and an awareness of the many potential demands and difficulties with which police services may be faced, will undoubtedly contribute to successful operations, and thus benefit all involved including victims, relatives and the other agencies with which the police co-operate when disasters occur.

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Chapter 1 **General Remarks**

1.1 **INTRODUCTION**

Disasters, whether natural, technological or man-made, are unfortunately a fact of life. One aspect common to them all is the inevitability of the many police, technical, medical and other investigations that follow. The purpose of this Interpol guide is to promulgate good practice in respect of one type of investigation conducted when lives have been lost: Disaster Victim Identification.

While this document is based on practical experience gained from actual incidents, it is recognized that the guidelines may need to be adapted by member countries to conform to national or regional laws and regulations, or to religious or organizational practices.

Disaster victim identification, normally the responsibility of the police, is a difficult and demanding exercise which can only be brought to a successful conclusion if properly planned and which, of necessity, has to involve the active participation of many other agencies. It is, however, only one aspect of dealing with disasters which will always vary considerably in scale and effect. Nevertheless, the identification procedures described in this Guide can be used in all circumstances, irrespective of the number of victims involved. The ultimate aim of all disaster victim identification operations must invariably be to establish the identity of every victim by comparing and matching accurate ante-mortem (AM) and post-mortem (PM) data.

Chapter 2 refers briefly to some of the general aspects of disaster handling in order to illustrate the way in which the many operations to be undertaken interact, and the need for co-ordination and interaction between them.

Chapter 3 briefly explains identification methods and the reasons for involving several groups of specialists in an integrated operation.

Chapter 4 describes the three major stages in victim identification, namely:

- procurement of ante-mortem information for possible victims (AM data)
- recovery and examination of bodies to establish reliable post-mortem evidence from the deceased (PM data)
- comparison of AM and PM data to identify each body.

Chapter 5 refers to a series of elimination tables which can be used to facilitate a manual data-matching process.

Each member country will have to decide whether or not to use this system or an alternative method such as a computer application.

Liaison between member countries after a disaster or when planning the response to one, aspects of international law, regulations, agreements and conventions and are dealt with in Chapter 6 and the Appendices. Appendix D, in particular, gives the Interpol resolution on

disaster victim identification which was adopted by the General Assembly at its 65th session, held in 1996.

1.2 DISASTER VICTIM IDENTIFICATION COMMISSIONS

In order to achieve, maintain and improve standards, and facilitate international liaison, Interpol recommends that each member country establish one or more permanent Disaster Victim Identification Commissions. They should have a responsibility not only for disaster response, but also for the vital functions of pre-planning and training of key personnel who may by virtue of their position suddenly become involved in, or responsible for, one or more of the many aspects of a disaster including victim identification.

The identification procedures described later in this Guide assume that post-disaster intervention will be organized; they are intended to serve as a sound basis upon which to develop disaster victim identification practices and standardize them in many respects. The advice may be of particular help to member countries which do not have permanent Disaster Victim Identification Commissions.

1.3 DOCUMENTATION

The Interpol Standing Committee on Disaster Victim Identification has developed and refined internationally agreed Disaster Victim Identification Forms which could, in fact, also be used in cases involving a single unidentified body. Use of these forms by all member countries will ensure that comprehensive information is obtained and will also greatly facilitate the transmission of identification data between member countries. The AM and PM data-recording processes described are based on the use of these forms. The forms themselves, with explanatory notes on how to fill them in, are published separately by the Interpol General Secretariat.

It is important that whenever a country introduces forms for its own internal use, the coding system of the internationally approved Interpol forms be strictly respected.

1.4 RELIGION AND CULTURE

Religious and cultural customs differ considerably throughout the world and this fact must be taken into account when planning the response to disaster scenarios. Experience proves that this factor is of particular relevance when dealing with survivors, relatives and the remains of the victims.

Each religious faith and ethnic culture has its own ethical considerations when dealing with the dead and dying. It is not possible to list the requirements and expectations of each individual denomination or persuasion in this Guide, but the importance of sensitivity and understanding when dealing with all victims should never be overlooked.

Nevertheless religious and cultural considerations, however important in their own right, cannot be allowed to compromise the legal processes to which local authorities and investigating agencies may be bound by law.

When planning for disasters, member countries are advised to find out about the needs and wishes of the various faiths. It will then be possible to ascertain the type of assistance that may be available, both for investigators and for the families of victims, from the representatives of those faiths. Such prior understanding will undoubtedly help to avoid conflict between the official agencies and others involved in the aftermath.

Member countries are also advised to try to establish multi-agency "faith community teams" to be called upon for advice and support during times of crisis. Such teams have proved to be of great help in previous incidents and have provided valuable assistance to the injured, bereaved and distressed, as well as to official agencies.

Faith community teams can assist by:

- tending to the dead and injured
- accompanying those required to view bodies
- providing spiritual comfort to survivors, evacuees, families, etc.
- providing advice on religious requirements.

1.5 STRESS AND WELFARE OF PERSONNEL

Stress is a normal reaction to an abnormal situation. The importance of being able to recognize and deal with its effects should not be under-estimated. Everyone involved in a disaster will suffer a degree of stress, but for some this can develop from a normal reaction into a medical disorder with potentially serious physical and psychological consequences.

The greatest risk comes when confronting the abnormal, unfamiliar and sometimes almost overwhelming circumstances inherent in disasters. Dealing with the deceased, survivors and relatives contributes to the unusual and often unexpected pressures on the individual required to respond. It is recommended that contingency plans include provisions to counter the effects of stress on personnel.

Methods of reducing the effects of stress are well researched and documented, and it is not possible to go into detail in this Guide. In summary, proper briefing and preparation of staff is vital and can best be achieved by suitable training for the tasks they will be expected to perform. Of equal importance is de-briefing at the conclusion of the incident or when staff are withdrawn from the operation, not only to review the professional aspects but also to provide an opportunity to discuss personal feelings and reactions. This can be conducted individually or by team, but in each case critical incident stress de-briefing must be considered as of benefit to the individual. Most disasters have revealed a need for long-term counselling for some people. To be effective, both counselling and critical incident stress de-briefing should be conducted by properly trained staff and be seen as a confidential, and often essential, medical service.

During the searching and identification stages a suitable diet can assist in reducing stress. There is a wide range of other helpful techniques such as regular breaks, personnel rotation, gentle exercises, etc., but clearly the choice of methods will depend on the circumstances and must be left to supervisors.

1.6 EQUIPMENT AND PERSONNEL

It is obviously impossible for this Guide to provide an exhaustive list of the equipment needed to deal with all aspects of all disasters.

Requirements will vary, depending on the type of incident (air crash, earthquake, flooding, chemical release), the location (city centre, desert, mountainous area, at sea) the weather (snow, extreme temperatures, monsoon), on the type of personnel being or likely to be used (police, military, volunteers) and on the equipment already available to such personnel in the normal course of their duties.

There are, however, some items which are always needed in certain contexts. A list is given below.

The scene of the incident

- body bags
- body labels
- property bags
- property labels
- body and property stakes
- site demarcation tape or barriers
- stretchers
- ground-clearing equipment
- search and detection equipment
- identification badges/clothing
- maps / aerial photographs
- draughtsman's materials
- photographic equipment

The mortuary

- examination tables
- body storage facilities
- heating/cooling units
- specialist examination instruments
- specimen storage containers
- drainage
- waste disposal
- X-ray machines
- photographic equipment
- fingerprint equipment

Transport

- of bodies from scene, within mortuary, etc.: refrigerated trucks
- of personnel to and from scene
- of evacuees and casualties
- of equipment and ID data files
- for debris / evidence removal
- tow trucks
- recovery vehicles

Administration

- premises
- furniture

Interpol forms
other stationery
weatherproof pens/pencils
files
cabinets
first-aid and medical equipment
petty cash ad hoc expenses and purchases

Communications

radio
telephone
facsimile
computer
photocopiers
dispatch service
management information service
briefing material

Power supplies

scene
mortuary
temporary buildings

Welfare

washing facilities
food and drink
personal protective clothing
advice/counselling service

It will be appreciated that no list can be exhaustive, and any attempt to devise and publish a complete inventory of recommended equipment would not only be futile, but might lead to a false sense of security.

However, many Interpol member countries have drawn up plans and acquired equipment which suits the perceived needs of their particular areas of operation. Their experience will be made available to other countries requesting information either directly or via the Interpol General Secretariat.

Similarly, no definitive guidance can be given on the number of people likely to be required to respond to and deal with a disaster. Again, the type and location of the incident as well as numerous other criteria will need to be taken into account.

One particular piece of advice can, however, be given. Those who have had to deal with disasters on whatever scale will always agree that it is very easy to underestimate the time, number of staff, and amount of equipment that will be required.

Notes:

Chapter 2 Disaster Handling Procedures

2.1 INTRODUCTION

Recommendations will be made in this chapter on the procedures to be followed when a major disaster occurs. The procedures may need to be adapted to the workload involved and the resources available in each case. No mention is made of special procedures adopted in times of war or when a disaster assumes such proportions that a state of emergency is declared although, in principle at least, the same measures have to be taken even in those circumstances.

An attempt has been made to list the procedures in a logical sequence. It should be understood, however, that many activities will be initiated and carried out simultaneously by different offices and people. The circumstances of each disaster may also justify changes in the sequence described.

The titles of officials used in this Guide have been chosen to describe their functions. Member countries will naturally use their own terms where appropriate and, naturally, masculine terms are equally applicable to women.

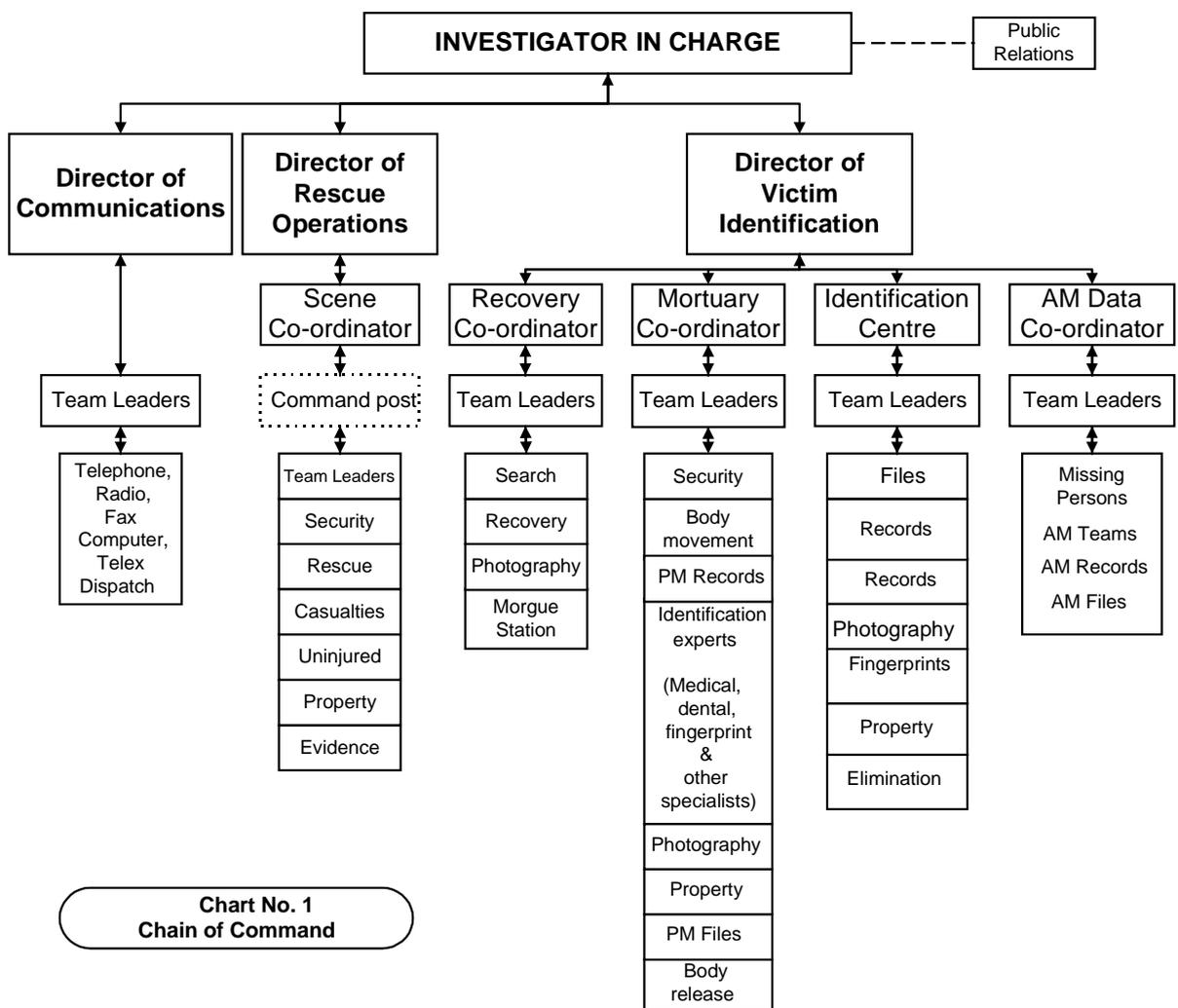


Chart No. 1
Chain of Command

2.2 CHAIN OF COMMAND (see Chart No. 1)

A firm chain of command is essential. If plans do not provide for a senior official (e.g. Commissioner of Police or Supervising Coroner) to take immediate control, an Investigator in Charge must be appointed to assume overall responsibility for the whole operation. Until sufficient additional officers become available he may need to direct and supervise many, if not all, of the initial aspects of the response.

The Investigator in Charge will normally be responsible for co-ordinating efforts to save life and property, to identify the dead and to investigate the cause or causes of the disaster.

The activities for which he will be responsible are so many and varied that he will need several senior police officers to assist him. Apart from supervising the combined operations from beginning to end, he may be required to handle the investigation into the disaster causes himself. However, as all the evidence upon which to base his conclusions will not be available until the rescue and recovery operations have been terminated, all material evidence must eventually be made available to him for evaluation.

The final report will present conclusions regarding the cause or causes but will also, whenever possible include proposals to avoid or minimize the effects of future similar disasters, and may suggest improvements in the response procedures and in ways of managing disaster operations.

For effective control and co-ordination of the various activities the Investigator-in-Charge will need at least three assistants, each responsible for a major aspect of the overall operation:

- ◆ a Director of Communications
- ◆ a Director of Rescue Operations
- ◆ a Director of Victim Identification

Victim identification being the subject of this Guide, the responsibilities of the Director of Victim Identification are described in detail in Chapter 4.

Each Director should be given the authority to obtain and deploy the equipment and staff he needs.

He must also be able to delegate the control of various activities and branches to Co-ordinators who will remain under his command and supervision.

Co-ordinators will need to appoint unit chiefs and team leaders, as appropriate, to handle specific aspects of the response.

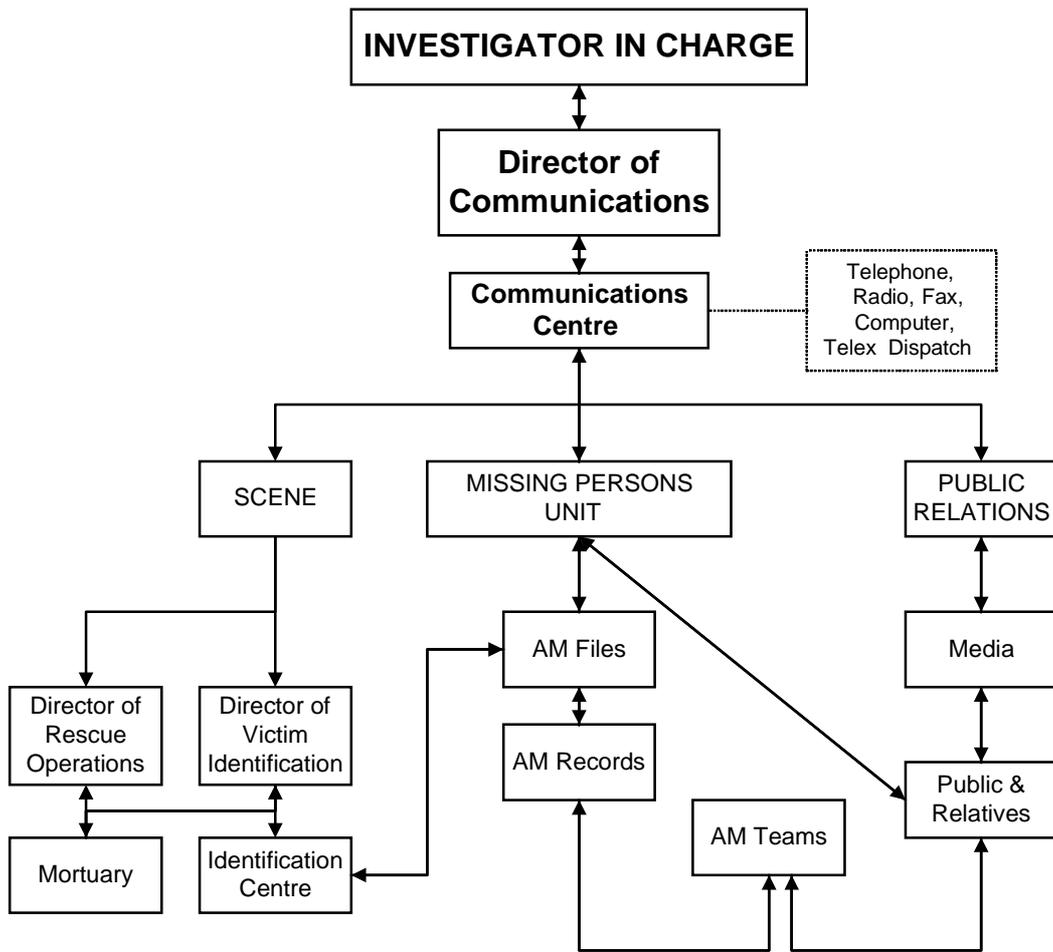


Chart No. 2
Communications: Flow of information

2.3 COMMUNICATIONS (see Chart No. 2)

It is extremely important to establish a communications centre at once. For practical reasons this centre should be established at a major police headquarters which will normally have suitable premises, communications equipment, staff and other essential facilities. Whenever possible an independent switchboard and additional communications channels such as radio, telex, facsimile and computer links should be provided. It is recommended that offices for the three Directors and their various units or teams be provided at or close to this location.

The communications centre should also provide services such as document copying, translation and message transmission for the operations at other locations. If it is difficult to set up communications equipment, or if technical breakdowns are liable to occur, provision should be made for a permanently available personal dispatch system.

In many cases it will be expedient to set up the Missing Persons Unit at or near the communications centre, and all enquiries and information concerning potential victims should be directed to that Unit.

A substantial number of public and media enquiries, not all relating to missing persons, must be anticipated. These are best dealt with by a public relations officer, but the Director of Communications, in liaison with the Investigator in Charge should always be ultimately responsible for the release of information to the media; only they can fully assess what has been achieved at any given time and what information can be made public without compromising the operations or investigations

For example, no victim details should be released to the media before families (or perhaps embassies) have been informed in order that relatives do not learn through the press that a family member has been involved.

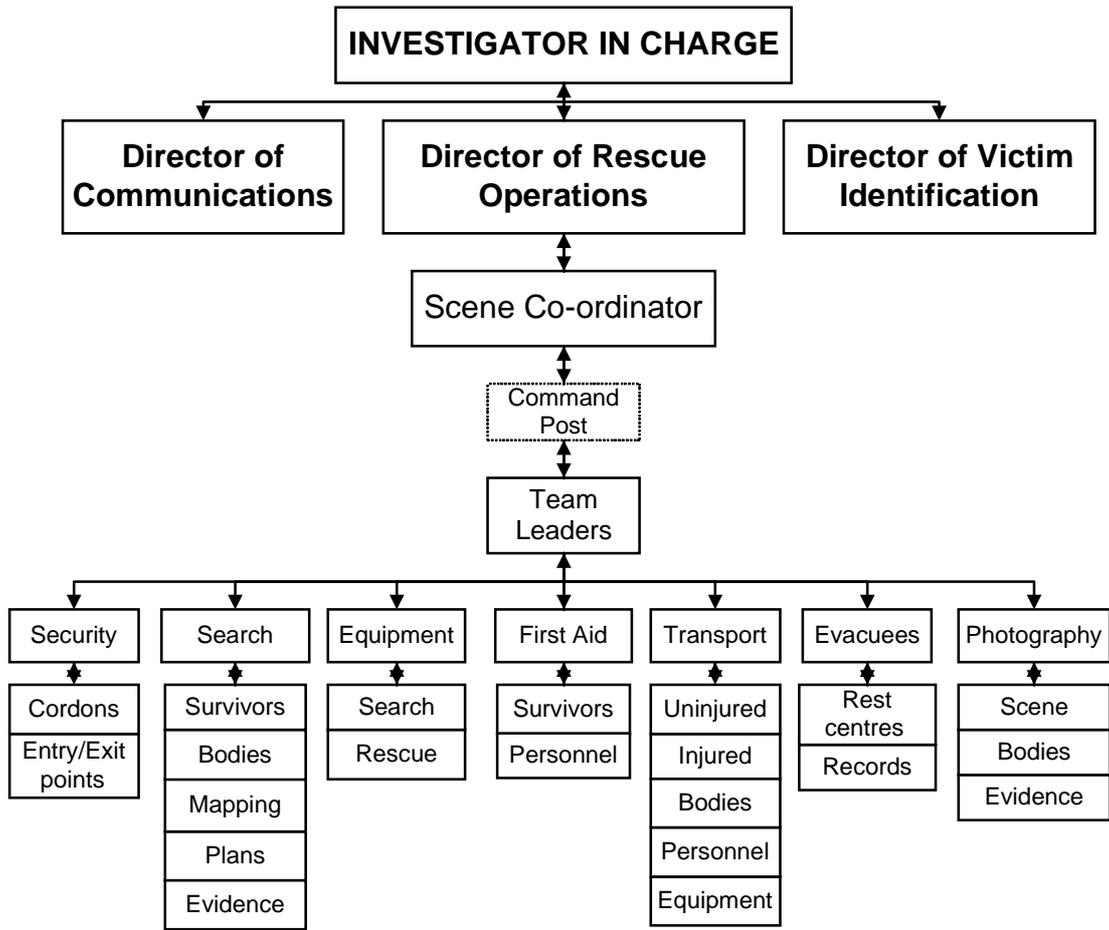


Chart No. 3
Rescue Operations

2.4 RESCUE OPERATIONS (see Chart No. 3)

Rescue operations will be started immediately, often by survivors and members of the public in the vicinity of the incident. Initial reports to the emergency services seldom give sufficient details about the extent of the disaster and the number and condition of victims; the Director of Rescue Operations will therefore need to seek additional information from reliable sources. As with normal police procedures the nearest radio-equipped police patrol should be directed to the scene immediately, to provide accurate information direct from the site. Equally importantly, the officers will represent uniformed authority at the scene.

It is emphasized that the first police personnel to arrive must resist the temptation to become personally involved in the rescue operations. Their primary function at this stage is to obtain and pass on accurate information so that response measures can be assessed and taken. Personal involvement, which could put them out of contact at this critical time, might sever the only vital communications link with the scene. In areas that may not be accessible by vehicle, e.g. in deserts, mountain ranges or woodlands or on snow-covered ground or water, accurate information will be even more difficult to obtain. Helicopters or other aircraft (police, military or civilian) could be used to reconnoitre and report. In aircraft disasters early telephone contact should be made and maintained with the nearest air traffic control centre and with the airline company involved to obtain important information regarding, for example, the aircraft's destination, and details of distress calls and hazardous cargo.

The Director of Rescue Operations must be primarily concerned with rescuing all survivors and with their immediate medical care. He must ensure that hospitals in the area have been alerted, to enable them to begin implementing their emergency plans. For each hospital he must find out its proximity to the incident, how many injured people it can handle, and when it is unable to accept any more casualties.

This information will have a direct bearing on route planning, the type and number of ambulances required, and decisions on where to send different types of casualties. It may be necessary to set up temporary hospital facilities close to the scene, which will involve transporting medical personnel and equipment to the site. Dealing with such problems can often be made easier by prior contingency planning and risk assessment.

Difficulties in locating survivors should be anticipated. It is not unusual for some survivors to flee from a disaster site if they have not been badly injured. They could also have been among the first evacuated before the organized response began and have gone home, or to a hospital, a doctor, or a place of safety, or they could be wandering around in a state of complete confusion.

2.4.1 Scene Co-ordinator

Many people may already be engaged in rescue attempts at the disaster scene; these attempts must be co-ordinated and intensified if the scale of the disaster requires it. A Scene Co-ordinator should be appointed to establish effective control and co-ordination at the scene (see Chart No. 3). He should go to the disaster site immediately and set up a command post at premises likely to provide the best lines of communication with the communications centre.

It may be preferable, or indeed the only option, to establish a command post at the scene, in a tent, suitable building or police command vehicle which has the necessary communications

systems or can rapidly be equipped with them. In such cases the post should be sited at the most convenient entry or exit point on the perimeter of the scene.

Total site security is essential to allow the rescue operations to proceed without interruption, to protect evidence and to protect the public from danger. It may be necessary to fence the site or otherwise clearly demarcate it, and there will be a need for round-the-clock uniformed guards. From the moment a perimeter and entry/exit point have been established, the Scene Co-ordinator must ensure that a personnel check point is also established to log details (name, organization, date and time) of all persons entering and leaving the site. Civilian volunteers and other unofficial personnel present, if of value to the operation, should be listed, organized and given specific tasks under the control and direction of one of the emergency services. Any unauthorized persons not required should be asked to leave the site although, as potential witnesses, their names and addresses should be recorded.

Organized rescue operations generally start with the formation of rescue teams. If possible, each team should consist of a leader and at least two stretcher-bearers. It would be advantageous for a team member to be medically qualified, i.e. a doctor or nurse, or a member of a Red Cross or ambulance team. It is important that team leaders and medical personnel be identifiable by badges, armbands or items of clothing.

Detailed instructions must be given on the area to be searched and how survivors are to be handled. All property, wreckage, bodies, etc. must remain in situ if at all possible.

By this time the Scene Co-ordinator should have received information from the Director of Rescue Operations about casualty collection points, hospitals, and ambulances or other means of transport.

A traffic control unit, parking places, routes in and out, a helicopter pad, etc., may have to be established to facilitate the loading and removal of victims. Traffic management between the scene and the hospitals may be necessary.

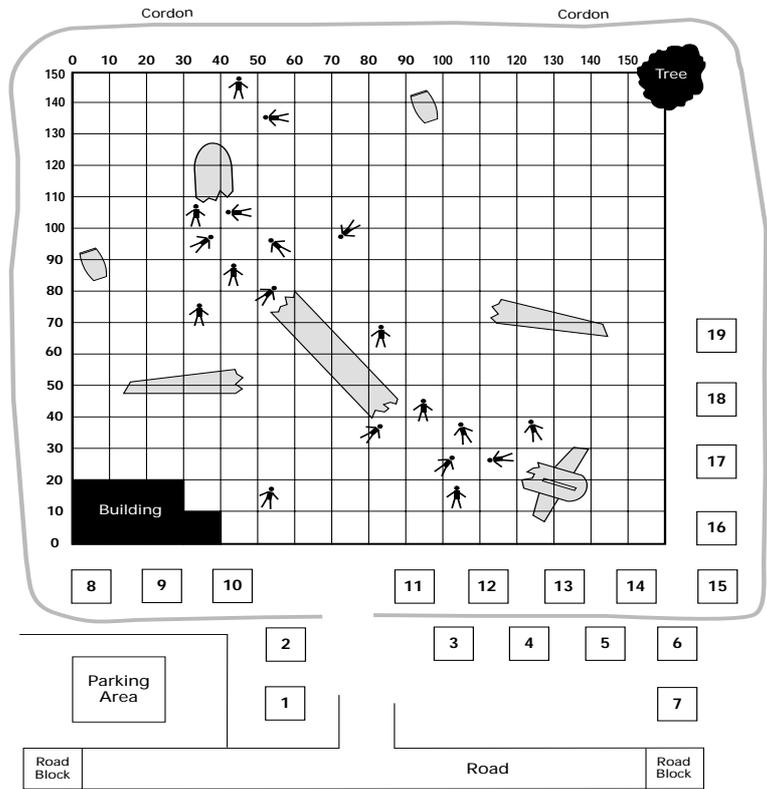
A suitably equipped advance first-aid station, staffed by doctors and nurses and through which all survivors must pass, should be set up at the entry/exit point to the incident site. The primary role of this station is to save life and prepare survivors for transportation. In difficult circumstances this station may have to be expanded into a field hospital, in which case there must be liaison with the Mortuary Branch for dealing with fatalities.

Some of the victims brought to the first-aid point or field hospital may be dead or may die after arrival, in which case they must be transferred to the morgue station (see Chapter 4) and not merely turned away. Consideration may be given to the use of refrigerated trucks which can be used to hold bodies temporarily and transport them, providing the bodies do not become frozen.

It is important to record particulars of all survivors and injured persons at a victim check point set up at this location.

Once survivors have been removed from the site, the responsibilities of the Scene Co-ordinator will change. Fire fighting and debris clearance may still be going on, but technical investigators (e.g. aircraft accident investigators) and victim identification personnel can now start their respective operations under their own commands. The Scene Co-ordinator should continue to provide whatever support is needed by these specialist groups.

Figure 1. Example of a grid over laid on aircraft crash scene



Outside the Cordon

- 1. Transport Team
- 2. Entry / exit guard
- 3. Personnel
- 4. AM File Section
- 5. Public Relations
- 6. Security Personnel
- 7. Catering

Inside the Cordon (Mortuary Branch)

- 8. Equipment
- 9. Command Post
- 10. First Aid and Check Point
- 11. PM File Section
- 12. Bodies examined
- 13. Coffins and body bags
- 14. Dental examination
- 15. Medical examination
- 16. Body storage
- 17. Photographs and fingerprints
- 18. Property
- 19. Body reception

2.4.2 The Grid (see Figure 1)

The investigators, site clearance personnel and victim recovery and identification teams will all need accurate mapping of the disaster area to enable them to search properly and record their findings accurately. For a wide disaster area, aerial photographs can greatly assist in preparing maps or plans, while for buildings, consecutively numbered floor plans may suffice.

For locations such as airport runways, fields and other areas where the site is relatively contained, a grid is recommended. This, briefly, consists of a base line selected from or between fixed and recognizable points on the ground, and parallel lines marked out with tape at 10-metre intervals to form squares in which to search methodically; the grid must cover the whole of the disaster site.

If the incident occurs in rough terrain, experience has shown that a grid, with its regular squares, is often not the most useful system. The better option in such cases is to obtain aerial photographs and maps, or accurately sketch the ground to be covered, and then divide it into sectors based on natural or man-made features such as river banks, hedgerows, fields, roads, cliffs or buildings. These sectors may then have to be further subdivided into smaller, more manageable areas.

A chart corresponding to each sector is then prepared, clearly indicating the grid or the major fixed points, and an appropriate number of copies is made. The other search and recovery operations will be conducted in a similar methodical way, following the body recovery procedures, to ensure that every part of the site is properly searched and that all relevant finds are precisely recorded.

Whatever the system used, the first personnel to enter the search area should be the physical searchers working in a line abreast, followed by the plotters who record any finds on their plans, and then the specialists forming the body, property and evidence recovery teams, the technical investigators and, in appropriate cases, the medical personnel.

Notes:

Chapter 3 Identification Methods

3.1 INTRODUCTION

Accurate identification is achieved by matching AM and PM data obtained from:

- Circumstantial evidence (e.g. personal effects such as clothing, jewellery and pocket contents)
- Physical evidence provided by:
 - external examination, e.g. of general features (description) and specific features (fingerprints)
 - internal examination, e.g. medical evidence, dental evidence and laboratory findings.

3.2 VISUAL RECOGNITION

Visual recognition of a body may be the only criterion accepted in some countries for victim identification. In many cases, however, the results of such an unscientific approach have later proved to be inaccurate.

This can lead to serious embarrassment and distress and may also cause legal difficulties in the victims' home countries. It is best, therefore, to ensure that accurate identification is achieved by evaluating a combination of criteria and not to rely solely on visual recognition.

3.3 PERSONAL EFFECTS

Descriptions of clothing, jewellery and pocket contents should be recorded first. These may **assist** in correct identification, provided a detailed and reliable ante-mortem description of the same objects can be obtained for comparison. It must be borne in mind that loose objects can easily be attributed to the wrong body, whether by mistake or intentionally. Personal effects may constitute valuable circumstantial evidence of identity, but never proof. They are merely factors which, combined with others, make a case for positive identification.

The police may insist that personal property (jewellery, watches, documents, clothing, etc.) be examined by a forensic science laboratory to assist with both identification and the investigations.

3.4 PHYSICAL EVIDENCE

3.4.1 External examination

It is generally agreed that the identification of an unknown body should primarily be based on physical evidence derived from the body itself. Searching for and describing physical

features is best undertaken by a police officer familiar with obtaining descriptions, working with a medical expert such as a police surgeon, forensic pathologist, medical examiner, or coroner. As the identification process will also normally involve establishing the cause of death, a medical expert must participate in the removal and description of clothing and body features.

Such involvement will help in interpreting the injuries found, and possibly assist in determining the cause of death. It is important that the undressing of the bodies and the external and internal examinations form a continuous and structured process.

General features of the naked body should then be described including sex, estimated age, height, build, colour of skin, etc. Some features, e.g. hair and eye colour, are a matter of judgment and may therefore be potentially inaccurate. Taken together with other details, however, they can lead to a positive identification.

Specific features, such as scars, moles, tattoos, and abnormalities, are often unique and thus extremely important if they can be matched with ante-mortem data.

Fingerprints are specific external features. If present on a body, and if ante-mortem prints can be obtained for comparison, they constitute the safest identification means available. They should always be recorded by an expert.

An Interpol fingerprint form has been designed to enable prints to be transmitted between member countries in an agreed format, but the appropriate forms used by individual countries will suffice. There is provision on the Disaster Victim Identification ante-mortem and post-mortem forms for such records.

3.4.2 Internal examination.

In some countries an external examination is sufficient evidence of the cause of death, but if a victim's identity or cause of death cannot be determined from an external examination, an autopsy may be necessary.

Victim identification cannot be considered as an end in itself: it is an integral and essential part of the overall investigation of the disaster. It should therefore be standard practice to perform autopsies on all disaster victims not only for the identification and cause of death aspects, but also to assist in preventing or minimizing the effects of similar incidents in the future.

It will always be the responsibility of the medical experts - who will be bound by the legal requirements of the country concerned - to determine how detailed these examinations need to be. However, the police investigation may require the examination of specific internal organs or the consideration of particular conditions, and this will require liaison between the police and the medical examiners. At the examiners' discretion, specimens and samples may need to be taken for further specialist investigation.

Medical experts may require that blood types be established or that body fluids be examined for traces of alcohol, drugs, carbon monoxide etc., or that tissue samples be microscopically examined in serology, toxicology or pathology laboratories.

There may be medical findings which will assist with identification, for example signs of previous fractures or surgery, missing organs (e.g. appendix, uterus, kidney), or implants.

3.4.3 Dental examination

Dental evidence is a particularly important and effective method of identification and can often be so accurate that it will positively identify an individual by itself. The examination of teeth and jaws can only be properly carried out by a forensic dental expert who will perform the oral examination as part of the general autopsy. Because of the exact detail which can be obtained from this examination it is accepted procedure for dental experts, when necessary, to remove teeth for sectioning and age evaluation, or jaws (complete or in part) for maceration and radiography, perhaps at forensic dental laboratories.

N.B.: X-ray equipment will be of great advantage in both internal and dental examinations, particularly when an estimate of a victims age is required, and also to discover fractures or other unique identification information. X-ray examination is also a very effective method of locating and identifying evidential material such as bullets or bomb fragments. X-ray equipment, preferably portable, should always be made available in the mortuary.

3.4.4 Genetic identification

Genetic identification techniques provide a powerful diagnostic tool in forensic medicine and can successfully be applied to the identification of disaster victims. An individual's genetic data is the same in all his or her cells and remains constant even after death.

The analysis of a biological sample makes it possible to link an individual to ancestors and descendants, and the data from these analyses can easily be computerized.

Genetic identification techniques currently in use complement other methods commonly used for disaster victim identification, especially when a body has been severely mutilated.

Biological sample analysis can result in:

- the genetic linking of a victim to members of his natural family
- the conclusion that victims were not related
- the matching of body parts.

The sampling must be carried out on all the victims.

It must be remembered, however, that attempts to link a victim with his father or children involve the risk of proving non-paternity.

Obtaining, storing and analysing these samples, from both the victim and potential relative, requires special expertise and should always be undertaken by a scientific or medical expert. Expert advice should also be sought on the most appropriate method of forwarding the samples to their destination, to ensure that security and integrity are maintained.

Notes:

Chapter 4 **Victim Identification**

4.1 INTRODUCTION

In order to identify disaster victims, two different sets of data have to be collected:

- **data on missing persons**, i.e. persons known or thought to have been present when the disaster occurred and are not listed as survivors.
- **data on bodies** recovered from the site.

The data on missing persons should be recorded on the yellow ante-mortem forms; the pink post-mortem forms should be used for data on bodies.

Ante-mortem and post-mortem forms will naturally be filled in by different people, at different times and places, but they will subsequently be taken to the Identification Centre for matching. When a large number of features are found to correspond exactly or some features are characteristic enough to rule out all doubt, a positive identification will have been achieved. Accurate identification will require detailed analysis of the data which should be undertaken by personnel with the necessary expertise.

4.2 MISSING PERSONS BRANCH

A Missing Persons Branch should be established under the command of an AM Data Co-ordinator to deal with ante-mortem records and files. The primary function of the Missing Persons Branch will be to provide a reliable victim list as soon as possible.

4.2.1 Ante-mortem Records Unit

The yellow pages of the Disaster Victim Identification Form will be used by this Unit to record ante-mortem data for all persons reported as possible victims of the disaster. Previous experience on numerous occasions has shown that the number of persons reported as potential victims invariably massively exceeds the number actually involved. An early decision will therefore have to be made on whether to record the data given in initial reports on the Disaster Victim Identification forms immediately or to begin using the forms only when there is some evidence of a person's presence.

The personnel collecting ante-mortem data should be experienced in taking detailed reports and must have a thorough knowledge of the layout and purpose of the Interpol form. Although police officers generally gain this type of experience through routine police duties, they are unlikely to be familiar with the Disaster Victim Identification forms and will need thorough briefing. Other agencies, e.g. the Red Cross, are often willing to help obtain the information required and to assist both police and families.

It is essential that as much detail as possible is obtained and recorded on the Interpol form during the first interview with relatives, friends, etc., and that the identity of the person making the report (the informant), and particulars of how they can be contacted in the future, are recorded. It may be necessary to contact that person at a later stage, to give or obtain further information. It is equally important to ask informants to report again immediately if they receive any news about the assumed victim - for example that the person has returned home, or is otherwise accounted for.

The personnel collecting this data should also be aware of the possibility that the same person may already have been reported missing by someone else and that another form may therefore have been filled in on the same potential victim.

When specific medical or dental information is required, it is important to obtain the names and addresses of family doctors and dentists (present and past), together with as many details as possible of medical and dental history. Advice on the type of details required should be sought from the doctors and dentists attached to the AM Files Unit (see Point 4.2.2).

It should be noted that during this recording stage no reference number is inserted in the box at the top right hand corner of the Disaster Victim Identification form. This box is for the appropriate body reference number to be added, if and when an identification ensues. It may, however, be advantageous to indicate the nationality of the missing person by adding the identification letters used on vehicle registration plates, e.g. CH for Switzerland, F for France, GB for Great Britain.

Most missing person reports will be received by telephone, but relatives and others seeking information may contact a wide range of institutions in different countries. A system of collating the data they provide will have to be established at the Missing Persons Unit.

When all available information has been recorded, the completed forms must be transferred to the AM File Section.

4.2.2 Ante-mortem Files Unit

This Unit will file all ante-mortem reports by family name, alphabetically. It would be advisable to computerize this function in order to facilitate searching, storing the information and checking for "double" reporting, i.e. persons reported more than once. Prior training will therefore be needed.

As indicated above, "double" reporting has frequently occurred during the first few hours following a major disaster. Accordingly, personnel should be aware of the need to check continually for such duplication.

The AM Files Unit is responsible for checking that all ante-mortem reports are complete and for obtaining any missing data. It may be necessary to form "relative liaison teams", comprising local police officers in the different countries concerned, in order to obtain further information (missing data, photographs, medical records, etc.) If a potential victim's finger prints are not already on record, attempts may have to be made to obtain such prints from the person's home or workplace. It may be necessary to set up an ante-mortem fingerprint unit to work on this problem in close co-operation with the post-mortem fingerprint unit.

In many countries medical records will only be handed to the police, in confidence. An AM Medical Unit and an AM Dental Unit should be set up, staffed by qualified doctors and dentists who are entitled to read the records, and are also capable of interpreting and extracting relevant information. These expert groups will need to co-operate closely with the corresponding PM medical and dental personnel who are responsible for filling in the relevant sections of the PM Form.

The Director of Victim Identification should maintain constant liaison with the Directors of Communications and Rescue Operations, so as to be in a position to decide when to start transferring completed AM records to the Identification Centre Files Unit.

4.2.3 Victim List

The immediate responsibility of the AM Files Unit will be to compile as reliable a victim list as possible. In the case of a commercial aircraft crash, for example, a passenger list may quickly become available from the carrier but in other circumstances it will usually take a considerable time before such a list can be established. Caution should always be exercised about the accuracy of any passenger list provided as experience has shown that there are often inaccuracies for a number of reasons. The total number of presumed victims is extremely important, because any decision to stop searching must take into consideration the question of whether the number of survivors and the number of bodies recovered matches the number of people on the victim list.

Perhaps the simplest and most obvious way to begin compiling an accurate victim list is:

- (a) To list all those potentially involved
- (b) To list those known to have survived, whether injured or not
- Then to subtract list (b) from list (a). This gives reasonable starting point.

When the total number of dead victims has been established the AM Files Unit will be able to assess whether the number of bodies plus survivors matches the number on the list of passengers or residents supplied.

There will, of course, be many incidents where it is simply not possible to assess the number of victims accurately, for example in the case of widespread natural disasters.

4.2.4 Victim Checkpoint

It will be helpful to record details of all survivors before they leave the incident site, at a victim checkpoint. This list could be made on a suitable form. In most disasters, however, it may be far more practical to obtain those details at evacuation centres, hospitals, aid points and other locations where survivors may go or be taken. If the survivors are not accounted for as soon as possible, accurate numbers will not be available and much time and effort could be wasted on unnecessary searching.

All bodies and parts brought to the victim checkpoint or first aid station must be given a reference number before removal to a temporary holding area or mortuary. Injured persons may die in ambulances or at first aid facilities. Their bodies must be numbered and moved directly to the mortuary set up for the incident or the body holding area to make certain that they are not "lost" or forgotten.

4.3 VICTIM RECOVERY (see Chart No. 4)

The recovery of dead victims does not start until the rescue of all survivors has been completed. Rescue teams will have been instructed to leave dead bodies and body parts untouched, but many bodies and much evidence may justifiably be moved during attempts to save lives and effect rescues. Body recovery should also be considered as part of the process of locating and safeguarding evidence. It is important for accurate records to be kept under the supervision of a Recovery Co-ordinator.

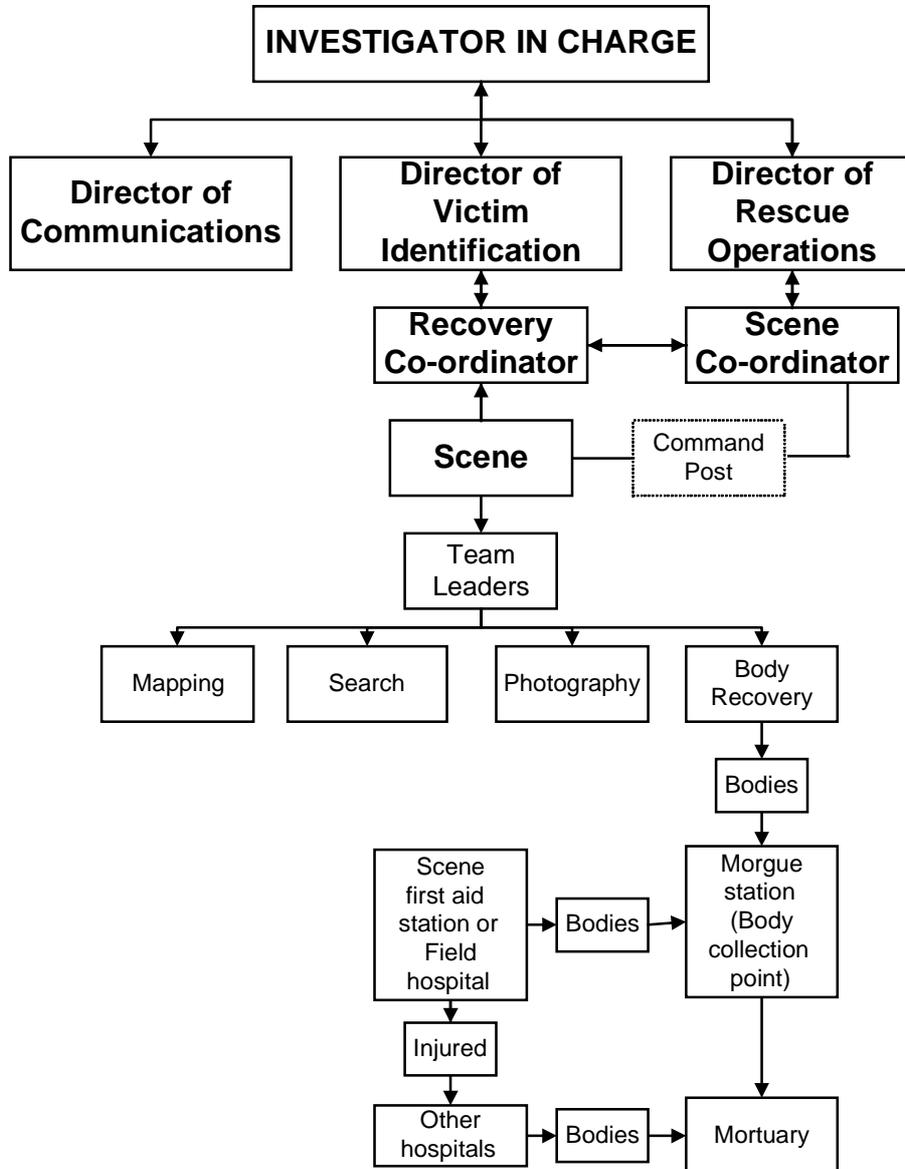


Chart No.4
Body Recovery

4.3.1 Recovery Co-ordinator

The Recovery Co-ordinator must prepare a structured search and recovery phase, in liaison with others such as the air accident investigators, police investigators and safety advisors. This will involve searching for bodies, property and evidence, including wreckage. He will need a map of the scene in order to produce a grid chart or site plan, to ensure thorough searching and the plotting of bodies, wreckage, etc.

4.3.2 Search teams

It is essential for search teams to understand that they are the first of many links in the identification process, and that their conscientiousness in performing their duties may make the difference between success and failure. Their first function will be to locate and mark all bodies and body parts as well as other relevant evidence. It is up to the Recovery Co-ordinator to decide how many people to allocate to a search team, but they should be sufficient in number to be able to locate, record, stake, and label items, and they may be accompanied by medical personnel, photographers or other specialists. It is also recommended that details be kept of the members of search teams and the sectors to which they are allocated, for continuity to be maintained as far as evidence is concerned.

Each search team should be allocated an area (or areas) within the scene - which could be much larger than is immediately apparent, as in the case of a wreckage trail from an aircraft breaking up at altitude. The teams will be responsible for ensuring that a thorough search is carried out and that each body found is given a number. A numbered stake should be placed in or on the ground, immediately adjacent to the body, and this stake will remain when the body is subsequently removed. The bag in which the body is removed should also bear the same number. This number will be the body reference number and will remain with the body throughout the identification procedure.

A similar but quite separate numbering system must be applied to evidence and property location and plotting, but because of the large number of personal effects likely to be on the scene, a decision on whether or not to plot and number individual items of property will depend on the prevailing circumstances.

If numbered body and property labels are available, this will ensure that no numbers are duplicated. Such labels should have space for details of the person who found the body or exhibit and other relevant information such as location, who confirmed life to be extinct, and whether photographs have been taken.

Each search team will mark the location (grid-co-ordinate) at which the item was found on its copy of the grid chart.

The search teams will also complete the "Recovery of Body from scene" page of the pink Disaster Victim Identification form, endorsing it with the body reference number and other required information. Bodies and parts should be described as accurately and concisely as possible.

When body parts are found, care must be taken not to assume that they belong to the nearest body. They should be numbered and described as if they were whole bodies. It will, however, be useful to indicate a part by adding the letter "P" to the reference number, otherwise

difficulties could be experienced in accurately determining the number of victims. Naturally, the quantity of stakes and labels used may exceed the number of victims involved.

Similarly, personal effects found near bodies cannot be assumed to belong to a nearby body. They should be recovered and bagged separately, but cross-referencing the relevant Disaster Victim Identification Form and property record can indicate a possible link.

Dead victims may have been removed from the scene during earlier search and rescue operations, and be held at the victim checkpoint or first aid station. Victims may also have died at those facilities or in hospitals. The Recovery Co-ordinator should delegate to one or more body recovery teams the task of numbering, labelling, listing and removing all such bodies. Care must be taken to ensure that the stakes with corresponding numbers are not used elsewhere.

Searching for bodies and marking them is a tiring task and fatigue can lead to inaccuracies. It is suggested that search teams work for no more than two-hour shifts. It is also strongly recommended that the searching take place in full daylight; even extensive scene illumination has proved insufficient when many search teams are working simultaneously in different parts of an area.

4.3.3 Photography

Photographic personnel should be deployed at the earliest opportunity, to record the scene and all activities.

Photographic and video recording of bodies at the disaster site and within the mortuary is important both for evidence and because, in many cases, it can help the experts to establish the cause of the incident.

Photographers should therefore be attached to search and recovery teams and work in conjunction with them. Body reference numbers must be clearly visible on each exposure and these must be the only numbers used. It should not be necessary to remove body numbers during photography, but if circumstances make this unavoidable the photographer must be responsible for making certain that the correct number is re-attached immediately after photographs have been taken.

Bodies will also need to be photographed at the mortuary, preferably by a separate photographic officer or team (to avoid any risk of contamination). However, only one number must still be used for each body; the use of additional reference numbers will lead to confusion.

A photographer or photographers should be responsible for completing the relevant part of the Disaster Victim Identification PM form and for processing exposed films.

The importance of photographs, films and videos cannot be over-emphasized. In addition to being an aid to investigation, they will also provide a clear record of events which will be extremely helpful for de-briefing, for analysing procedures and performance, and for subsequent training.

4.3.4 Body Recovery teams

Properly briefed and equipped body recovery teams are of vital importance; they should follow the search teams through the site once the latter have located and marked bodies.

Body recovery teams should refer to the grid charts completed by the search teams and should work methodically, clearing the site by sectors. For their health and safety the team members must wear protective clothing comprising at least helmets, overalls, boots and rubber gloves.

Before they remove a body or body part, they should ensure that the body or part, the stake and the body bag all bear the same number.

All items should be individually and separately numbered and bagged. It is a matter for medical experts to decide which parts constitute a single body, and this is best achieved during the mortuary examinations. Treating each part in this way will avoid mistakes and cross-contamination by body fluids.

Particulars of the person who recovered each body or part should be recorded.

Experience has shown that it will take time for a Mortuary Branch to become operational. Search and marking operations may well have been completed by that time and a decision may have been taken to start removing bodies from the scene.

In such circumstances, or where bodies need to be transported a considerable distance to the mortuary, it may be necessary to set up a morgue station (i.e. body collection point) to hold bodies pending transportation.

4.3.5 Property Recovery teams

Many effects lying scattered over the area may be very valuable, at least to owners and heirs. Separate property recovery teams must be formed to operate in a similar way to body recovery teams. It must be remembered that personal effects can often be an aid to victim identification and should be kept available for examination by the Mortuary Branch.

Effects should be labelled and bagged separately and if necessary the location from which they were recovered should be marked with a numbered stake. The bags must bear the same numbers as the stake, prefixed with the letter "E" (effects) and with the grid co-ordinate at which the property was located (e.g. E-95-45/86).

4.3.6 Morgue Station

The Morgue Station is an interim holding area for bagged bodies and body parts until transport can be arranged and the mortuary is ready to receive them. Once the Mortuary Branch has become operational the Recovery Co-ordinator will authorize and supervise the transfer. The Morgue Station will keep its own record of bodies received and stored, listing each body reference number, the date and time of receipt, from whom received and where stored. Subsequently details of the transfer (i.e. when, by whom, the mortuary to which the body was taken and the vehicle used for transport) should be recorded.

A transport form may be used; it will give the body reference numbers, the date and time of departure, the name of the driver, details of the vehicle and its destination. It may be convenient to entrust partially-completed PM forms accompanying bodies from the scene or

Morgue Station to the mortuary to the vehicle driver or attendant, although it may be more convenient to have them taken separately to the Mortuary Branch.

If the above guidelines are observed, there will be a full record from the time when the body was first located until it reaches the mortuary. Procedures within the mortuary will provide a continuing record.

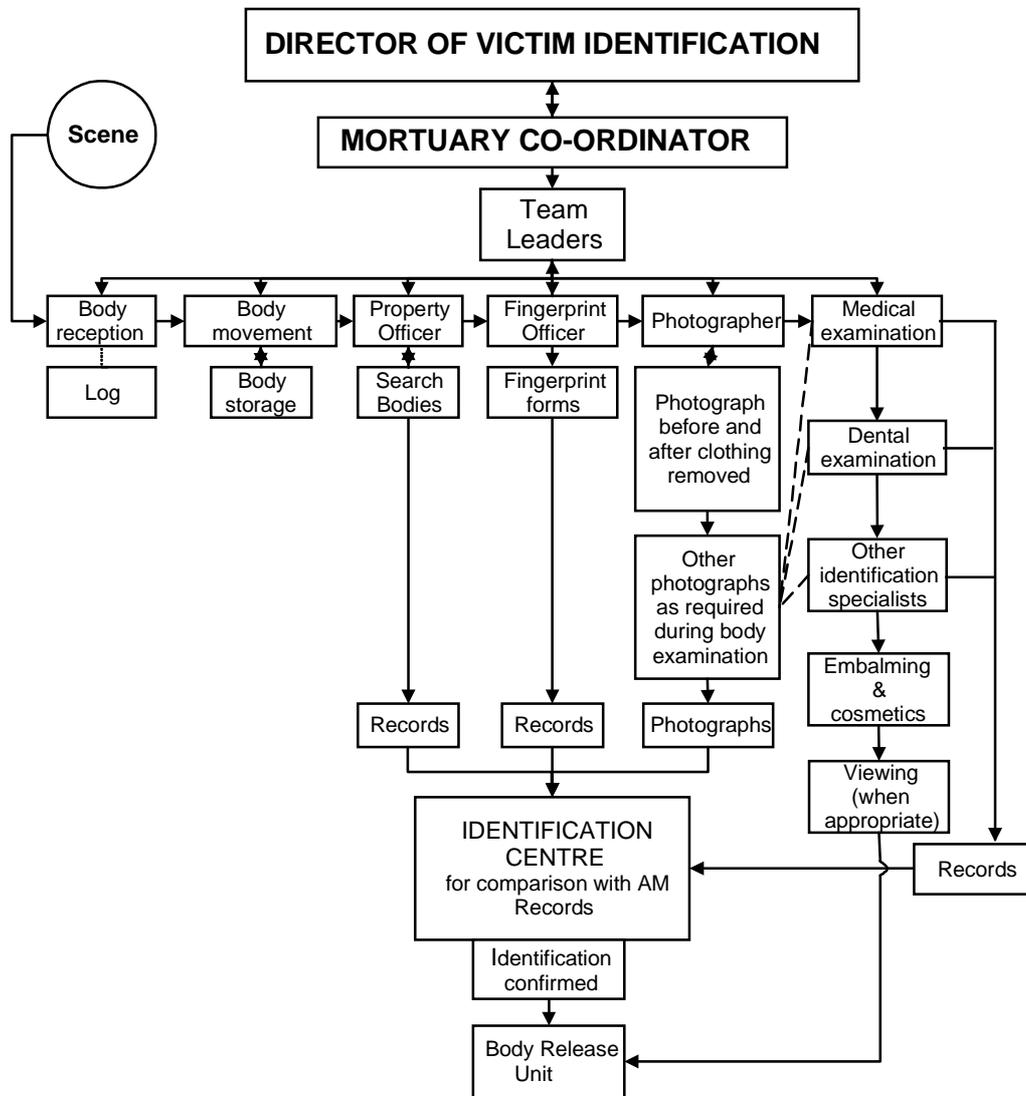


Chart No. 5
Mortuary Branch

4.4 MORTUARY BRANCH (see Chart No. 5)

An early and important decision will need to be made by the Investigator in Charge and the Director of Victim Identification, in consultation with the pathologists, about the location of the Mortuary Branch if it is not pre-planned. An ideal venue, such as a well equipped medical examiners' office will rarely be available. A mortuary will probably need to be established on premises affording the best possible facilities in the circumstances.

Wherever the mortuary is situated, it is important to ensure that there is adequate protection from the elements, suitable accommodation, running water, drainage and security. Ideally there will be facilities to keep bodies refrigerated (not frozen) and consideration could be given to acquiring refrigerated trucks and portable air cooling units or to using ice rinks, providing the bodies and body bags are not in direct contact with the ice.

It may even be necessary, for example in remote areas, to establish this branch on the scene itself, using tents or portable structures for the various tasks to be carried out. In such cases, careful pre-planning is required to ensure that suitable accommodation is also provided for personnel. However, it is generally agreed that the benefits of working in a well-equipped mortuary, even a temporary one, far outweigh the difficulties incurred in transporting bodies away from the scene.

4.4.1 Security Unit

If a secure Mortuary Branch has not been established within the disaster area, a Security Unit will be required. Strict precautions are necessary, not just to allow personnel to work unhindered and in privacy but also to safeguard property which may be present. Also, experience has shown that unauthorized persons will often attempt to gain access to mortuaries.

4.4.2 Body Movement Unit

The Body Movement Unit is responsible for the reception of bodies, for their storage before and after examination, and for movement within and out of the mortuary. Strict control of the movement of every body or part and of its location at any given time is necessary to ensure an effective flow through the various examinations to be carried out. This section should be headed by a senior police officer.

Bodies should be moved on wheeled trolleys or tables. Other methods will prove to be less efficient and more physically tiring for staff.

A Body Reception Point must be selected close to the storage area, where the receiving officer will take responsibility for every body or part brought in. He will need to maintain a Body Storage List showing the body reference number, date, time, from whom received, and where stored.

Storage may depend on the condition of the body and may affect the sequence in which it is to be examined. These details should be discussed with a pathologist from the PM Medical Unit.

If a body has been received without a reference number (i.e. has been removed from the disaster site before being numbered) it must be given a Mortuary Reference Number consisting of a the letter "M" followed by a number which must be attached to the body. Suitable labels and marker pens/pencils should form part of the mortuary equipment. It may well be necessary to begin filling in a Disaster Victim Identification form at this point.

To summarize, bodies and body bags will be marked, for example:

- **46-102/83:** indicating that it is body number 46 removed from the site at grid co-ordinate 102/83
- **47P-103/84:** indicating that it is part number 47 removed from the site at grid co-ordinate 103/84
- **M12:** indicating that it is body or part number 12 which was labelled at the mortuary and therefore does not bear a site co-ordinate.

Note: Bags bearing an "E" number (e.g. E95-45/86) are property bags which should not be stored with the bodies; they should be kept in a property store.

Whenever a body is taken from storage to examination, this must be indicated on the appropriate storage sheet (date and time, and to whom handed). When it is returned from examination this again is indicated on the storage sheet and the receiving officer will then reassume responsibility for the body.

Facilities for the specialized work of embalming may have to be established within or close to the Body Movement Unit. It should be remembered that bodies may have to be re-examined and therefore only identified bodies should be embalmed. Embalming, coffining and the storage of coffins will require substantial space.

Before this Unit hands bodies to the Body Release Unit for disposal, permission must be obtained from the investigator in Charge or the Director of Victim Identification to ensure that no further examinations will be necessary.

4.4.3 PM Records Unit

The PM Records Unit is responsible for collating the post-mortem descriptions and findings for each individual body. An officer from this Unit should be posted at the Body Reception Point in order to accept all copies of the pink Disaster Victim Identification form which arrive with bodies. If the forms do not arrive with the bodies, arrangements must be made to have them transferred from the scene. It will be the responsibility of this officer to number and commence a Disaster Victim Identification PM form for all bodies that arrive without numbers or unbagged. (The "M" numbering system described above should be used).

Each body to be moved into the examination room for physical description should be placed in the custody of a PM records officer. He should follow the body through all the examination stages until it can be returned for storage. He should sign his name on the appropriate storage sheet when he takes over the body, and should have his own PM check list signed by the receiving officer when he returns it.

The PM records officer should be in possession of a pink PM Disaster Victim Identification for each body.

Photography and fingerprinting take far less time than external and internal examinations. The PM records officer may therefore call on a member of the PM Photography or PM Fingerprint Unit at the appropriate times. Members of these sections will keep their own records; the PM records officer only needs to mark the time and the name of the specialist involved on his check list, and indicate whether photographs and fingerprints have been taken.

The PM records officer will be responsible for recording, under dictation, the physical description and features, particulars of clothing and property, and the autopsy findings. However, if two pathologists are participating in the examination, it may be better for one of them to record the autopsy findings because of the technical aspects involved.

Dentists will often operate in teams, one of whom will complete the relevant parts of the Disaster Victim Identification form - again, because of the specific terminology used - whilst others will co-operate in displaying, cleaning and inspecting teeth, or removing jaws.

When physical examinations are completed the body must be re-bagged before being returned to storage; again the body and bag must bear the correct number. The PM records officer should check once more that he is in possession of all parts of the Disaster Victim Identification form concerning that body before he hands the set of documents to the PM Files Unit; if documents are missing because of ongoing specific examinations this fact can easily be established from the PM check list.

4.4.4 Body Examination Unit

The Body Examination Unit will be responsible for providing personnel for the mortuary functions (specialists, attendants, etc.) and the facilities necessary for carrying out body examination procedures effectively (e.g. suitable premises, ventilation, good lighting, running water, tables, instruments, clothing, etc.). The availability of these facilities has often influenced where the Mortuary Branch is located; even if the location is not perfect, it may have to be accepted as the best available in the circumstances.

The premises should cater for the needs of all the various sections involved, (photographs, fingerprints, property, medical, dental, documentation, embalming and viewing) as well as for special facilities for property cleaning, X-rays, specimen photography, etc.

The welfare of the personnel is very important and there must be provision for washing, changing, eating and resting. It is recommended that the staff work two-hour shifts.

In consultation with the specialists involved, the officer in charge of this Unit must decide how many examination points can be set up and the sequence of body examination. If, as recommended, bodies are placed on wheeled tables or trolleys, it is relatively simple to move them from one specialist to another rather than have the specialists continually moving around the mortuary with their equipment.

4.4.4.1 PM Photography Unit

Photographs, preferably in colour, should be taken of each body during the various stages of examination. The photographer should always take full-body and full-face pictures as well as close-ups of specific external findings; he will also be needed during the ensuing internal examination for continuity. The body reference number should be clearly visible in each photograph. Ideally one photographer should be allocated to each body and follow it through every stage. Consequently, the number of photographers may need to equal the number of examination points.

Photographers will keep their own records of exposures for each film, listing the film number, exposure number, body reference number or item, date and time. The records should be signed by the photographer before being handed, together with the exposed film, to the PM Photography Unit for processing.

As property items taken from bodies may need cleaning and disinfecting prior to photography, the PM Photography Unit may receive such items from the PM Property Unit at a later time with a request for photographs to be taken. Similarly the PM Property Unit may receive property found at the disaster scene; after cleaning, the contents may also be forwarded for photography. Separate photographic services may therefore be required.

The PM Photography Unit will be responsible for all films sent out from the Mortuary Branch for processing. When photography of individual bodies or items is complete the results should be forwarded directly to the Identification Centre Photography Unit for inclusion under the appropriate reference number.

4.4.4.2 PM Fingerprint Unit

The PM Fingerprint Unit might well be the smallest of the body examination units as the procedures may require fewer resources, depending on the condition of the body. It will be the responsibility of the PM records officer to call a PM Fingerprint Unit officer at the appropriate time, which is likely to be after clothes have been removed and while clothing and property are being recorded.

The fingerprint expert must ensure that every set of prints is marked with the body reference number. He will keep his own consecutive list of bodies fingerprinted (date, time, reference number, remarks). Completed prints should be forwarded to the Identification Centre Fingerprint Unit for classification and later use.

4.4.4.3 PM Property Unit

Mortuary attendants will be responsible for opening body bags in the presence of a pathologist and the PM records officer; the latter will be responsible for listing all property on the Disaster Victim Identification form.

If loose or separately bagged property is found within the body bag, this should be described and listed first. The clothing should then be searched, and any additional items should be described and listed. Clothing should be systematically removed from the body, examined for names and laundry or dry-cleaning marks, described and listed. Finally, rings, watches, etc. can be removed, described and listed. All property should be bagged, clearly numbered, and cross-referenced with the body number.

Property will be forwarded, as and when necessary, to a cleaning and disinfecting team and to photographers.

These procedures will take some time, and descriptions may therefore have to be forwarded directly to the Identification Centre Property Unit for inclusion under the appropriate reference number and later use. The PM Property Unit will be responsible for keeping all property and personal effects secure, ready for re-examination if necessary, for viewing by relatives when and where appropriate, and for final disposal.

"E" numbered property recovered separately from the disaster scene may have been received and stored earlier. Since such property will be of limited value in victim identification, care should be taken to keep it separate from property found with bodies. "E" numbered bags should be opened last; the contents should be cleaned, if necessary photographed, and then described. In view of the workload which will be experienced by the Identification Centre Property Unit, there should be no attempt to "identify" this loose property and return it to its lawful owners until the victim identification procedures have been completed.

4.4.4.4 PM Medical Unit

A pathologist must always be present during the external examination and description of the naked body. A PM records officer should take dictation and enter information on the appropriate pages of the Disaster Victim Identification PM Form.

A second pathologist may be required to assist with internal examinations and/or take over the recording of findings on Disaster Victim Identification PM Forms. Particular attention must be paid to all possible identifying features, and important findings should be photographed.

It is recommended that an appropriate sample (see 4.5.2.6) be obtained at this stage in case later DNA analysis is deemed necessary. Obtaining, handling, storing and transferring such specimens is the responsibility of the forensic pathologists and odontologists operating in the PM Medical Unit.

When all whole bodies have been examined, the bags containing body parts can be dealt with. If remains of teeth and jaws are found, the PM Dental Unit must be informed. It is at this stage that body parts can often be related and brought together, but only as a result of expert examination by pathologists and/or scientists.

4.4.4.5 PM Dental Unit

Dental examinations can only be carried out by qualified dentists. Laying out, cleaning and describing dentistry in detail can be a lengthy process and dental examinations may therefore delay the flow of bodies through the examination room.

If required the PM Dental Unit will arrange for dental X-ray apparatus to be set up at a convenient place within the examination room (bearing in mind precautions with regard to radiation and power supply). In such cases bodies will have to be moved to this location for exposures. The Unit may also need to arrange for its own special photography of teeth in place or of specimens removed. It will be responsible for X-ray film processing and for adding any additional information to the descriptive section of the Disaster Victim Identification PM Form.

Finally, if teeth or jaws are taken from a body, the Unit will again be responsible for all further handling and for the proper recording of additional data. This may mean that the PM records officer will have to leave the appropriate part of the Disaster Victim Identification PM Form with the PM Dental Unit, which will forward it directly to the Identification Centre Dental Unit when complete.

4.4.5 PM Files Unit

The PM Files Unit will collect PM sets of documents relating to individual bodies from the PM records officer as they are completed. Photographs, final property descriptions and specific medical and dental data may not be available at this stage, and it is therefore imperative for the PM Files Unit to keep track of outstanding data and ensure that it is correctly filed when it is eventually received.

Sets of PM documents should be filed numerically in three groups:

- Those bearing only a number (whole bodies numbered at the scene of the incident)
- Those bearing a number preceded by a "P" (parts of bodies)
- Those bearing a number preceded by the letter "M" (number given at the mortuary)

"E" numbered documents, relating to property, must not be filed in this section but forwarded directly to the Identification Centre Property Unit.

The PM Files Unit will be responsible for keeping files secure until they can be transferred to the Identification Centre Files Unit. For practical reasons, incomplete sets of documents may have to be transferred. Any missing items must be clearly indicated and forwarded later.

The check list of contents (printed on the front of the Disaster Victim Identification Forms) can be used for this purpose. It should be noted that if photocopying is necessary, yellow and pink documents will appear in black and white. Copying on appropriately coloured paper will avoid any possible mistakes but, if this is not possible, documents should be constantly checked (upper left corner) to establish whether they refer to a missing person or dead body. To minimize confusion it is strongly recommended that all copies be clearly marked "COPY".

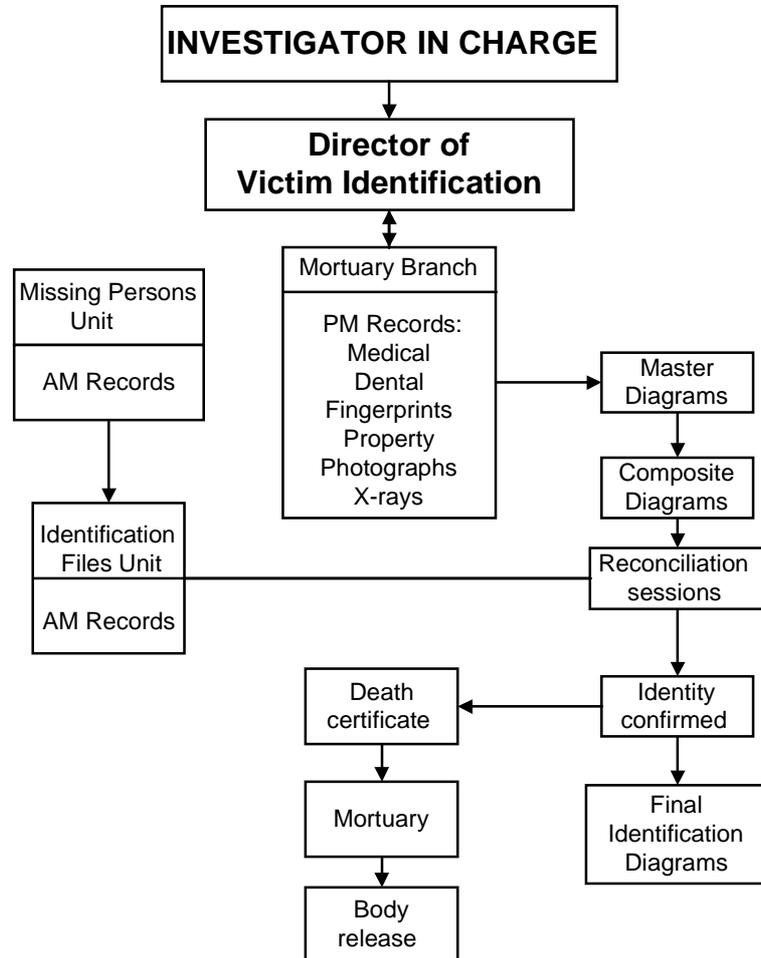


Chart No. 6
Identification Centre: Flow Chart

4.5 IDENTIFICATION CENTRE (See Chart No.6)

The Identification Centre compares AM and PM documents forwarded from the AM and PM Files Units.

The Centre comprises an Identification Files Unit and a number of specialized sections, the latter responsible for comparing the technical portions of the AM and PM data. Results obtained from the specialized sections are fed back to the Identification Files Section to be combined into one master list of results.

For practical reasons AM and PM File Sections should be established close to their respective sources of information. The Identification Centre, on the other hand, can be set up independently wherever adequate facilities are available (offices, a copying service, computer assistance, projectors, etc.); however it will prove far more convenient if the centre can be established as an extension either of the Missing Persons Branch (in the Communications Centre) or of the Mortuary Branch. If appropriate, personnel from the AM and PM File Sections could be transferred to the Identification Files Section as their workload decreases.

The Identification Centre can save considerable time by using a computerized matching program to suggest the most likely possible matches quickly, and to establish potential eliminations with a high degree of probability. It is essential to remember, however, that any computer program is merely an aid, and that final conclusions and decisions can only be made after personal evaluation of all the data available.

4.5.1 Identification Centre File Section

The Identification Centre Files Section will take charge of the AM and PM document sets as they arrive. It must continue to liaise with the AM and PM File Sections for as long as they are operating, i.e. until a final Victim List has been established, complete sets of AM documents have been received for all names on the list, and complete sets of PM documents have been received for all unidentified bodies.

The Identification Centre Files Section will start by setting up a collection of AM Files in alphabetical order and a collection of PM Files in numerical order, the latter subdivided into files bearing only a number, files bearing the letter "M" and files "P". It is recommended that the sub-file of numbers preceded by a "P" should be held back for the time being because the likelihood of body parts being identified independently is small.

It may, however, be possible to match and correlate body parts later this will be for experts in the Identification Centre Medical Section to undertake once they have finished comparing "whole body" data with AM data. Accordingly, the Identification Centre File Section will ultimately be concerned with one AM file and one PM file (whose number may or may not be preceded by an "M") per victim. These two sets of files now have to be rearranged.

4.5.1.1 File Subdivision

The primary function of the Identification Centre File Section is to facilitate the comparison being undertaken by the specialist sections.

It is generally unnecessary to compare all AM and PM data if both groups of records can be effectively sub divided into clearly defined groups, but it is accepted that in some cases it may be impossible to group PM data, perhaps, for example, because bodies are severely mutilated.

The number and type of subdivisions will clearly depend on the circumstances of the incident, but it may be considered useful when possible, to sort both AM and PM data into categories such as:

Race/skin colour:	Caucasoid Mongoloid Negroid
(Estimated) Age :	under 15 15 - 70. over 70 .
Sex:	male or female

This would already constitute 18 possible groups, within which, at least in the first instance, the most likely comparisons could to be attempted first. This system will also reduce the number of AM data files in circulation at any one time.

It is not always clear from the outset whether a body will be easy, difficult or impossible to identify, and it is therefore most important to adopt a systematic approach to the comparison process.

Experts in the various sections will know what priority and weight to attribute to the various features used for identification in each of their fields. However, experience has shown that even if everyone concerned hopes for quick identifications, the temptation to look first for "easy characteristics" should be resisted: this will not expedite the overall process and, if attempted, may generate an unmanageable flow of paperwork. Also, in many cases, the bodies may prove to be not as easily identifiable as was hoped and further comparisons will be required.

All the specialized sections must be instructed to conduct their comparisons systematically and express their conclusions clearly as "identity", "uncertain" or "elimination" in each case. One method of reaching such conclusions and recording them, which has been tried and tested, is the Elimination Diagrams system described in detail in chapter 5.

4.5.2 Specialized Sections

4.5.2.1 Identification Centre Photography Section

While this section is established to provide photographic records of the findings made by the expert sections, there may well be other photographs included among the Am data on the

missing persons. Comparing such private photographs with PM photographs to establish common features (e.g. hairstyle, deformities), may well prove useful.

4.5.2.2 Identification Centre Fingerprint Section

This section will be manned by experts trained in assessing fingerprint evidence. Its first task is to classify all PM prints taken by the PM Fingerprint Unit. Although fingerprint evidence is not dependent upon sex, race and age, it may be more expedient in disasters to file and compare them based on such groupings rather than by conventional classification. Whichever system is used, AM and PM fingerprints both need to be filed under similar categories.

4.5.2.3 Identification Centre Property Section

The Identification Centre property Section will deal with the identification of all personal effects removed from the bodies, often in liaison with the Identification Centre Photography Section.

In principle, its staff will compare written data (AM reports and PM property descriptions) with the actual property removed from a body, and/or with the photographs of such items. They will have the advantage of being able to re-examine property before reaching a conclusion. As stated above, property is of limited value for elimination or identification, but could well support other evidence.

This Section will also be responsible for determining ownership of other property recovered independently from the disaster scene and contained in "E" numbered bags.

4.5.2.4 Identification Centre Medical Section

The work of this Section will involve the comparison of a large number of physical features. Whilst totally incompatible features will result in elimination, similar "general" features should not be considered as more than possible evidence of identification.

Specific features (external as well as internal) may offer good chances of identification and elimination. This Section should therefore conduct its comparisons methodically and in detail.

When all comparisons have been completed, this Section must begin trying to match body parts (in "P" numbered bags) and to bring the various parts of a single body together, wherever possible. The use of a standard anatomic sketch of the human body, included in the Disaster Victim Identification AM and PM sets of forms, may be of assistance in this respect.

The Identification Centre Files Section must ensure that whenever various body parts are reunited, all the relevant sets of PM data are collated and submitted for comparison with AM data.

4.5.2.5 Identification Centre Dental Section

A large number of specific details can be compared in this section which gives it particular potential for bringing about eliminations as well as identifications. The amount of work involved will dictate the number of specialists required.

One possible way of working would be to display a single AM record at a time, so that the team of dentists can compare it with the PM records they have completed. This will also give them an opportunity of discussing and agreeing on their findings.

Whilst computer matching may speed up this process by rapidly establishing eliminations and possibilities, once again the final judgment must be made by a professional expert and be based on personal evaluation of the evidence.

It should be anticipated that this part of the identification process may cause a bottleneck because of the amount of detail to be compared, including photographs and X-rays. It is clearly important to provide the necessary technical equipment to assist in making these comparisons.

The Identification Centre Dental Section may also be required to examine and fragmentary dental remains and cross-check them with individual bodies. When there is a match, the Identification Centre Files Section must ensure that all sets of documents relating to dental features are attached to the relevant sets of documents for the rest of the body.

Note: It is strongly recommended that any original AM dental or medical X-rays available be obtained and used for comparison purposes. Transcribing or copying could reduce the quality of the information.

4.5.2.6 DNA Analysis

Because the analytical procedures used in genetic identification are extremely sensitive, it is essential to prepare, preserve and transfer all samples to a laboratory which uses precisely defined methods, as listed below.

- Sampling should take place during the autopsy, **and** the samples should be transferred to a forensic science laboratory immediately
- The samples must be taken from the least affected material (cardiac blood, bone marrow, teeth, brain tissue muscle, bone, hair)
- The persons taking the samples must wear protective clothing (e.g. gloves, facemasks)
- Details of the procedures to be used must be provided by the laboratory

4.5.3 Identification Board

The responsibility of the Identification Board is to:

- check the results of comparisons made by the various specialized sections
- locate and reconcile possible inconsistencies
- combine the results into one final list of identifications.

The Board will ultimately be responsible for the final identification of each individual victim and should therefore be composed of the most experienced identification experts involved in the whole operation, i.e. the chiefs of the various specialized sections, headed by the Director of Victim Identification or his deputy.

Any "immediate" identifications made by the Identification Board can be separated from the outstanding data but will need to be entered in a file of Bodies Identified, still classified into the appropriate victim Groups. Sets of AM and PM documents for all identified bodies should be filed in pairs, in individual binders each of which should be marked with the victim's name and body number. The binders should then be filed numerically.

The Identification Board will need to decide whether, and when, individual identification documents should be compiled and death certificates issued, e.g. as soon as identity is confirmed, once a day or at less frequent intervals. In some countries a one-page death certificate will suffice to allow a body pass to be issued, whereas others may require a complete body description which will involve much more clerical work. It would be very helpful to appoint a separate Body Release Section to handle this task.

It must be borne in mind that as long as there are still unidentified bodies, there will always be the possibility that some or all of those previously identified have to be re-examined. For this reason, body release should not be unduly precipitated and embalming, for instance, should not be carried out until absolutely necessary.

4.5.4 Body Release Section

Body release will involve a number of practical issues most effectively dealt with by a specific Body Release Section working in liaison with the Body Movement Section in the Mortuary Centre.

The Body Release Section should be the office through which the Director of Victim Identification informs families that all procedures in respect of their relatives have been completed. This information should always reach the family before any relevant press releases are made.

There will inevitably be a number of questions to answer before a body can be repatriated and it is recommended that a check list be drawn up. The use of a standard format will ensure that all the relevant information can be obtained from families including, the answers to the following questions:

- has a funeral director been engaged (if so, name and address)?
- if not, should the body be embalmed?
- should the body be repatriated?
- should the body be buried/cremated locally?
- should a funeral service be held (religion)?
- will the family provide the coffin and transport?
- if not, where should the body be sent?
- to whom should personal belongings be sent?
- should any such belongings, including jewellery, be buried with the victim?

Relatives may wish to view the deceased before burial or cremation; in such cases the Director of Victim Identification should be consulted. By referring to the PM documents, he can advise on the condition of bodies and their suitability for viewing. Substantial assistance can be given by Social Services personnel to visiting relatives and, indeed, to the staff required to work in this area of the operation.

A large amount of space and sufficient personnel will be required to carry out the wide range of duties performed in the Body Release Section. For example, coffins must be ordered and stored, and arrangements may have to be made for embalming, facial reconstruction of those to be viewed, shrouding and coffining (if metal lids are used they will require soldering) one or more funeral ceremonies (even for those not identified), transportation, etc.

The Director of Victim Identification will issue a Release Certificate for each body identified; it should bear the body reference number and the name of the person whose body has been identified, as well as a check list of accompanying documents (identification document, death certificate, copy of the autopsy report where requested, body pass), the instructions given by the family, the date and time when the coffin left the Section, and by whom and where it was taken. It should be signed upon completion by the Officer in Charge of the Body Release Section and returned to the Identification Files Section.

For international regulations on the transportation of dead bodies between countries see Appendices.

Notes:

Chapter 5 Elimination Tables

5.1 INTRODUCTION

It is often possible, especially when the number of fatalities is relatively small, to identify victims using the completed AM and PM forms alone, but help may be provided by the use of “elimination tables”. These are designed to bring together the results of comparisons made by all specialist units (medical, fingerprint, dental, photography, property, etc.) and to culminate in a final identification table.

Obviously each member country will decide whether or not to use a system of this type, but elimination tables, which are best prepared by the Identification Files Unit, can undoubtedly break down a complicated process into more manageable segments and provide a clear picture of what has been achieved.

The Interpol Elimination Table consists of a grid with the names of missing persons in a particular category listed vertically, and “blocks” of body reference numbers marked at the top of the vertical columns. The result of comparing AM and PM data will be marked in the squares to indicate either "elimination", "uncertain" or "identification". Each body number and each missing person's name will eventually have only one square in common, i.e. where data matches, and the body is identified.

In order to make the procedure easier it is recommended that the tables be presented in categories of ten missing persons' names and ten body reference numbers (see Chart No. 1). The ten names should be made up from the categories referred to in Unit 4.5.1.1 of this guide (age, race, sex) to reduce the number of unnecessary comparisons; it would be an obvious waste of effort, for example, to compare the AM details of a 5-year old male with the PM findings of a female estimated to be over 70 years of age.

Ideally, names should be listed alphabetically and body numbers numerically, but in practice this will almost certainly be impossible because the forwarding of completed sets of AM and PM documents cannot be delayed merely for this purpose.

It can be seen from the specimen tables included in this guide that for each of the categories there will be blocks of ten AM and ten PM records, with as many categories and blocks as necessary. Records for each of these blocks must be kept together.

When the first ten sets of AM documents for one of the categories has been received they can be arranged (alphabetically if possible) on the elimination table: the first page of the table should be marked “Part A” in the left margin. The next ten AM sets pertaining to the same category, when received, are similarly recorded on a second page marked "Part B". The same procedure will then continue until the total number of AM sets has been listed. When joined together vertically, the various pages will make one long list.

When the first ten sets of PM documents for this category have reached the Identification Files Unit they can be arranged in numerical order, the reference numbers entered on the Elimination Table "Part A" and the number "1" entered as the block number. This table can then be photocopied and distributed, together with the relevant AM and PM records, to specialist units for completion. Each copy must be marked in the top right corner with the name of the specialist unit to which it was sent. If within this category there are further table pages (B, C, D etc.) they must be endorsed with the same ten reference numbers as Part A (same sequence, same place) and all be marked "block 1".

When the next ten body reference numbers for this category become available they can again be arranged in numerical order, completed in the same order, with the names of the missing persons in that category, and the page marked with the relevant letter.

Tables in the second and subsequent blocks are consecutively numbered "2", "3", "4" etc. - and each block must be attached to a complete set of tables containing missing persons' names marked Part A, B, C etc.. These blocks of ten body numbers will subsequently be joined together to make a larger, wider list.

It is important to keep the AM and PM document sets together in their blocks and not allow them to become mixed with other AM documents from the same categories.

The separate elimination tables are eventually collated as a single master table upon which the findings of each specialist unit can be seen.

Briefly, the purpose of this system is to:

- (a) make the comparison process more manageable
- (b) speed up the process and avoid unnecessary comparisons,
- (c) ensure that the PM data from every unknown body within a given category is compared with the AM data
- (d) ensure that all specialist units are using the same procedure
- (e) provide a basis from which a master table can be constructed.

5.2 SPECIALIST UNITS

The chiefs of each specialist unit will be responsible for supervising comparison procedures and ensuring that elimination tables are endorsed with the result of each comparison undertaken. Each unit chief should be carefully and thoroughly briefed before operations begin, in order to ensure that standardized methods are used.

If the elimination table described here is used, the following three markings are the simplest and most effective with which to show results.

- When a result is an elimination, the appropriate square should be marked with a cross (X) in black.
- When a result is uncertain, the square should be marked with a dash (-) in black.
- When the result is an identification, the square should be marked with a circle (O) in red (to make the result more clearly visible).

An example of a completed table is shown in Figure 2 where the circle (which will be in red on the actual form) shows a positive identification. It should be noted that once such an

identification has been made, it is no longer necessary to compare other AM data with the body or PM data with the name, unless some doubt arises in the future.

As the overall identification procedure draws to a close, a number of difficult cases may become more obvious. If PM fingerprints are available for these cases, but no AM prints, the Identification Fingerprint Unit may be asked to obtain AM prints from the homes (or workplaces, etc.) of missing persons who, according to the grouping, are "possibles".

PART A	Sex Group	Male	Block 1	Specialist Section: MEDICAL									
	Race Group	white		Body Numbers									
	Age Group	15-70		02	03	07	13	19	26	27	38	41	51
	Brown B	31	X	-	-	X	-	-	-	X	-	-	
	Dupres A.	52	X	-	X	-	-	X	-	-	-	-	
	Forest R	17	-	-	-	X	-	-	X	-	-	X	
	Herman R	29	-	X	-	-	-	X	-	-	X	-	
	Johanson P	48	-	X	-	-	O	-	-	X	-	-	
	Limon R	66	X	-	X	X	X	X	X	-	-	X	
	Neville C	58	-	X	-	-	X	-	-	-	X	-	
	Pierot P	51	-	-	X	-	-	-	X	-	-	X	
	Reville T	22	-	-	-	-	X	-	X	X	-	-	
	Smith A	37	X	-	X	-	X	-	-	X	-	-	

Elimination

Positive Identification

Uncertain

Figure 2
Standard Elimination Diagram
showing findings of Medical Section

5.3 UNIT MASTER TABLES

The sets of AM and PM documents returned from the various specialist units will need to be filed by the Identification Files Unit, whilst the various elimination tables should be kept in their respective age/sex/race, etc. categories.

Once all the tables have been received from the specialist units, they can be combined into a single “unit master table” (one for each of the specialist units) as follows.

1. All marked "Block 1" are organized and taped together so that the names column runs from top to bottom in alphabetical order. It is recommended that the sheets overlap so that only the names are visible, and not the table heading.
2. All subsequent blocks are similarly placed in order to produce several long lists.
3. The various blocks can then be placed side by side in numerical order, overlapping and joined.

A large master table can be constructed (see Figure 3) for each specialist unit and these will then be passed to the Identification Board. The importance of listing missing persons and body numbers identically on each sheet can now be appreciated.

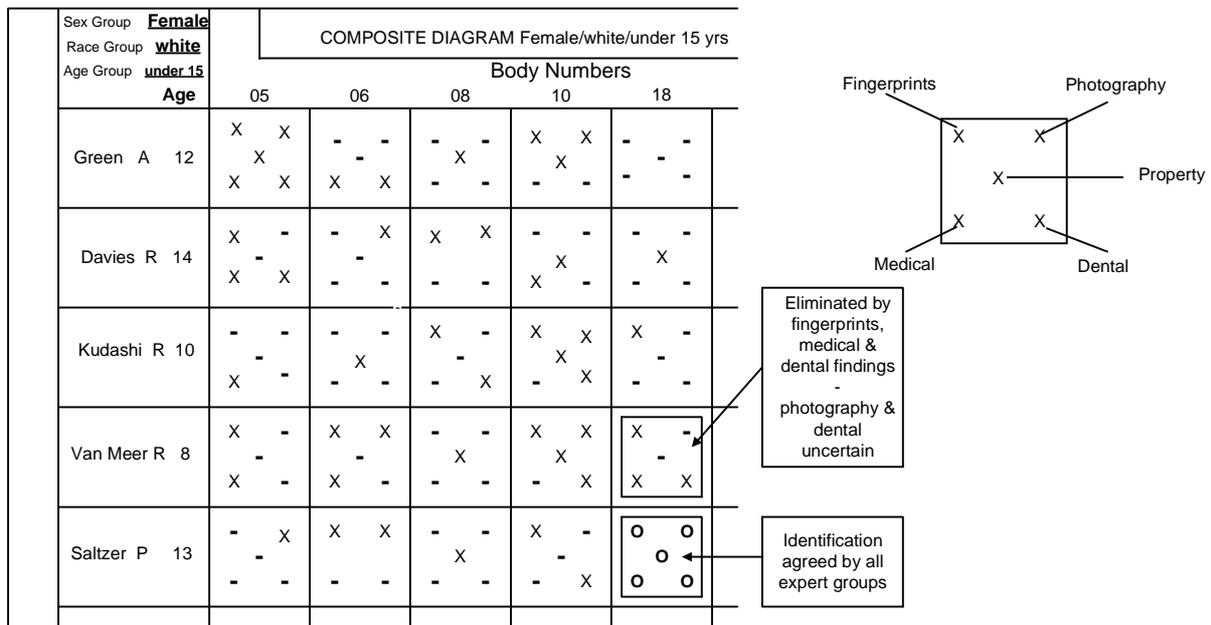


Figure 3
Part of master table for marking findings

5.4 IDENTIFICATION BOARD

The Identification Board will be concerned only with examining the master tables produced by each unit, and each unit chief will be responsible for producing a master table on the basis of the tables filled in by the different groups of his own unit. He should verify that each page bears the name of his unit and that all single sheets making up the master table are from the same group. Only if this process is performed accurately, can incorrect identifications be avoided.

Next, unit chiefs should check that there are no double identifications in any of their units' master tables, by seeing whether there are two or more red circles (positive identifications) in any vertical column or horizontal row. If a double identification is found, the AM and PM documents must be re-examined. This is best undertaken in consultation with the experts who carried out the original comparisons.

The next step is to turn each dash (uncertain) into a cross (eliminated) in every horizontal and vertical column in which there is a confirmed identification. It is suggested that this is done in green, to distinguish new crosses from earlier eliminations.

Eventually, if each missing person is linked to a body, the table will show only one red circle in each row and column, and crosses in all other squares.

Theoretically, if a single dash (i.e. uncertain) remains in any row the body concerned has been identified by elimination if the missing persons list was accurate in terms of total numbers and names. However, the aim should always be to obtain factual evidence of identity in every case.

This process will be time-consuming but will culminate in specialist units all agreeing on the identification of each body. It will also make it possible to prepare a composite table for each category of victims, since information will have been supplied by all specialist units in the same order and format.

Part	Sex Group <u>Male</u> <u>white</u> Age Group <u>15 - 70</u> Age			Block 1		Specialist Section: Medical						Block 2		Specialist Section: Medical					
				02	03	07	13	19	26	27	38	41	51	05	17	18	22	31	36
A	Brown	B.	31	X	-	-	X	-	-	-	X	-	-	-	X	X	-	-	-
	Dupres	A.	52	X	-	X	-	-	X	-	-	-	-	X	X	-	-	-	X
	Forest	R.	17	-	-	-	X	-	-	X	-	-	X	-	-	-	-	X	-
	Herman	R.	29	-	X	-	-	-	X	-	-	X	-	-	X	-	X	-	X
	Johanson	P.	48	-	X	-	-	o	-	-	X	-	-	-	-	-	X	-	X
	Limon	R.	66	X	-	X	X	X	X	-	-	-	X	-	-	X	-	-	-
	Neville	C.	58	-	X	-	-	X	-	-	-	X	-	X	-	-	-	X	-
	Pierot	P.	51	-	-	X	-	-	-	X	-	-	X	-	-	-	X	-	-
	Reville	T.	22	-	-	-	-	X	-	X	X	-	-	-	-	X	-	-	X
	Smith	A.	37	X	-	X	-	X	-	-	X	-	-	-	X	-	-	X	-
B	Jackson	B.	44	-	-	-	X	-	-	-	X	-	-	X	X	-	-	-	-
	Sunara	S.	19	-	-	X	-	-	-	X	-	-	-	-	-	-	X	-	-
	Goldblum	A.	31	-	-	-	-	-	X	X	X	-	-	-	-	-	-	X	-
	Sanchez	V.	28	-	-	-	X	-	-	-	-	X	-	-	-	X	-	-	X
	Vicarez	F.	56	X	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-
	Tomas	D.	39	-	-	X	-	-	-	X	-	-	-	X	o	-	-	-	-
	Carter	R.	27	-	-	-	-	X	X	-	-	-	X	-	-	-	X	-	-

Figure 4
ID Medical Section Master Chart
(reduced)

5.5 COMPOSITE TABLES (see Figure 4)

Having agreed on each identification, the five specialist units (fingerprints, photography, property, medical, dental) are then able to combine the unit master tables into a composite table for each category of victim i.e. age/sex/race, etc.

It is recommended that each square on the composite table be filled in with the findings of each of the five specialist units using the symbols X, O or -. It will be much more manageable if each specialist category enters its finding (symbol) in the same part of each square on each table. For example, fingerprints - top left corner, photography - top right, property - centre, medical - bottom left and dental - bottom right. In this way identification by fingerprints, for example, can be located quickly.

Dashes (uncertain) show that one or more specialist units were unable to reach a conclusion. If, however, a square contains both crosses (elimination) and circles (identification) this will highlight a discrepancy that can only be resolved by reconsidering the relevant AM and PM data. In such cases, if the positive identification was based on fingerprints or teeth and dental records it could be accepted as valid, but in all other cases discrepancies must be re-examined.

If, for example, twelve categories of victims were established (e.g. by permutations of age, sex and colour) the result will be twelve composite tables showing the agreement reached for each body and missing person.

On completion, all composite tables must again be checked for errors that may have occurred in transferring details and, in particular, for any double identifications.

The result of this whole operation will be that a number of composite tables (twelve in the above example), containing no inconsistencies, have been created. These can then be used to construct the final identification table.

5.6 FINAL IDENTIFICATION TABLE

The Identification Board can now use the composite tables for the different categories of victims (age, sex, colour etc.) to decide which identifications are to be accepted as final. Those decisions will be recorded on a final identification chart which will be similar in appearance to unit master tables but will have the appropriate title. The same system of marking as before (i.e. X and O) should be used. It is suggested that, when examining the findings shown on the composite tables, the Board should begin by accepting the identifications based on fingerprints or teeth and dental records, these being the most reliable.

The squares containing two or more circles, indicating a positive identification by two or more specialist units should be located. Where at least one of those identifications is based on fingerprint, medical and/or dental evidence, it can probably also be deemed correct.

It will be apparent that the final identification table does not show individual unit results. No dashes (uncertain) will appear, and crosses (elimination) will only be shown when there is already an accepted identification recorded in that column or row (shown by a circle). At this point, the final identification table represents the "immediate identifications" that have been obtained from the first round of expert comparisons in all five units.

It has been found that an enlarged version of the final identification table can be of considerable help in keeping Identification Centre personnel aware of the current situation at a glance. If provided, it must be regularly updated solely by members of the Identification Board to avoid the risk of incorrect entries liable to cause confusion. It may not be practical to use this enlarged version for evidence purposes.

5.7 RECONCILIATION SESSIONS

The immediate identifications, in cases where adequate data was available, will have been relatively easy for the Identification Board. The remaining cases, however, will require more detailed consideration because the evidence may not be quite as clear. A number of reconciliation sessions should therefore be planned involving the chief of the Identification Files Unit and additional experts as necessary.

5.7.1 First Reconciliation Session

In preparation for the first reconciliation session the **twelve** completed composite tables should again be examined and a list should be made of the cases (squares) in which a red circle (identified) appears. The specialist units responsible for these results should be reconvened to consider the appropriate AM and PM documents and ascertain the reliability of each result, bearing in mind that the available data may be all that there is to work with.

At the first reconciliation session the Unit Chiefs involved should submit the results of their units' deliberations. The Board will discuss each individual case and decide whether to accept the identification suggested. When identifications are accepted they should be indicated by drawing a large circle in the relevant square on the composite table and endorsing the final identification table and the large-scale table accordingly.

The Identification Board should then deal with the eliminations as, at this stage, all the remaining squares on the composite tables will contain only crosses and dashes. It is suggested that all squares containing two or more crosses (eliminations) are accepted as such and that a large cross be drawn on the relevant square. Once again, these eliminations must also be shown on the final identification table and the large-scale table.

5.7.2 Second Reconciliation Session

In preparing for the second reconciliation session the cases (squares) in which only one elimination mark appears (i.e. one cross and four dashes) should be listed. With the assistance of this list, the specialist units involved should examine the relevant AM and PM documents in detail; once again, that may be the only information available. As stated above, most eliminations will probably originate in the Identification Medical and Dental Units so that it may only be necessary to convene representatives of those two units.

The unit chiefs should submit their units' results relating to the single eliminations recorded on their unit tables. The Board will then discuss each individual case and decide whether or not to accept the elimination, in which case the fact must be clearly recorded on the composite table by drawing a large cross in the appropriate square and endorsing the final identification table and the large-scale table accordingly.

At this point the question of correct body grouping may need to be addressed. The following procedure is recommended.

(1) If the total number of bodies recovered equals the number of names on the victim list, first check that all victim categories contain the same number of bodies as victim names. Should this not be the case it is obvious that a mistake or mistakes have been made, possibly in an age category rather than sex or race.

There are three possibilities:

- A body too many in a particular category means that a body has been misplaced from another category to that one;
- A body too few in a given category means that it must have been misplaced from that category to another;
- Even if there is the same number of bodies as names in a given category, there is still the possibility that two mistakes were made in categories.

(2) If the number of bodies recovered does not equal the number of names on the victim list, this may account for discrepancies in the number of bodies or names in any of the victim categories. This should be kept in mind when the following steps are taken to try to find out where mistakes were made.

- Each of the composite tables should be checked for victim names which show a full horizontal row of eliminations; in such cases a body belonging to that particular category has either not been recovered or been wrongly assigned to another category.
- Each of the composite tables should be checked for body numbers which show a full vertical column of eliminations; in such cases, the body concerned should not be in that category.

5.7.3 Subsequent Reconciliation Sessions

A list should be made of all the mistakes found in this way, and representatives of the Identification Medical and Dental Units should be reconvened to examine the relevant sets of AM and PM documents. Since incorrect age grouping is the most probable cause of mistakes, there will only be one other victim category to which the wrongly assigned body can belong: either the older category or the younger one. A "block X" of elimination tables for that other category should be prepared, complete with heading and all victim names.

The data relating to the wrongly assigned body can now be compared with the data on all the missing persons listed by the specialist units; these comparisons have not, in fact, been made before. The results must be notified to the Identification Board for inclusion in the composite table, corrections being made as necessary. If one or more identifications result from these new comparisons, they must be recorded as described earlier, as must the accompanying eliminations, and all the above processes must be repeated as new possibilities may have become apparent.

5.7.4 Final Reconciliation Session

The Identification Board will now be ready for its final and most difficult reconciliation session. The composite tables as corrected, need to be examined for vertical rows in which all squares but one are crossed. In such cases the corresponding sets of AM and PM data should

be scrutinized by the expert panel which will consider identification by exclusion. If this can be undertaken the ensuing results should be marked on the Disaster Victim Identification forms and the final identification table. Similarly the composite tables should be examined for horizontal rows in which all squares but one have been crossed; if any such cases are found, the above process is repeated.

By this time the number of "open" squares in the composite table will have been considerably reduced and it is possible that these last identifications by exclusion will have resulted in the elimination of half the open squares in another row. The process of searching for vertical and horizontal rows with only one open square should therefore be repeated every time a new identification has been made and the accompanying eliminations listed; this is a sort of chain reaction which has to be followed through to the end.

Next, vertical and horizontal rows with two open squares must be located. Again, the expert panel should investigate whether in any such case, and knowing that there are only two identity possibilities left, a re-evaluation of AM and PM data could lead to an identification. For such a re-evaluation the expert panel should have all data material available (photographs, X-rays, specimens, laboratory findings, etc.). At this final stage, information about characteristics such as blood type will probably be of decisive importance in reaching a conclusion.

If successful, this process again creates a chain reaction which must be followed through to the end. A search for rows and columns with three or more open squares may then have to be conducted.

By now, the number of bodies still unidentified will probably be small, and the experts may be very familiar with the data. This is the time to take even the remote possibilities listed below into consideration.

- Could one of these bodies be an unreported missing person who is not on the victim list?
- Could one of these persons have been put in the wrong category in respect of sex, race or colour?
- If PM fingerprints are available can AM prints be obtained?
- If characteristic jewellery or other property has been taken from one of these bodies, can further enquiries be made to try to have relatives or friends confirm or reject ownership?
- If specific external features have been noted, can personal or family photographs be obtained for comparison?
- If specific internal features have been found, can hospital or physicians' records, including X-rays and plaster models, be obtained for comparison from school, military, or other sources?
- If dental work has been carried out, can records be obtained for comparison?
- Can old dentures, that might fit one of the remaining bodies be found at a missing person's home?
- In spite of all previous enquiries, could there be one or more persons on the victim list who are not actually victims?
- Could a wrong name have been put on the victim list by mistake, or fraudulently by someone trying to change his or her identity?

It will be apparent that resolution of the final cases will depend to a great extent on finding additional AM data for comparison with PM findings. This may require further visits to relatives.

Given that there will be occasions when it is not possible to identify every body (e.g. when there is no AM data for comparison and no missing person report) the Investigator in Charge will need to decide when to draw the identification procedure to a close. In such cases, all PM data must remain on file for later comparison if required. An alphabetical list of victims and a corresponding numerical list of bodies identified will constitute the record of the result of the whole operation.

Those who have experienced the final stages of victim identification will recognize the tedious and tiring processes described here. Only by using a computer programme, or the elimination table and its derivatives (master, composite, final etc.) can the Director of Victim Identification maintain consistent and effective control of these processes. It is a step-by-step operation that will only be successful if a clear and comprehensive overview of results is continually maintained.

The formal conclusion of the identification operation will be the issue of an identification document, a death certificate and - for foreign nationals - a body pass, for each identified body.

Notes:

Chapter 6 International Co-operation

6.1 INTRODUCTION

The growth in international travel that has occurred in recent years will undoubtedly continue, and this will considerably increase the likelihood of foreign nationals being involved in disasters whether they be natural, caused by man or caused by failures in technology. Land, sea and air transport are undoubtedly the sectors where the risks are greatest but, whatever the cause of the disaster, there will almost certainly be an ensuing need to identify victims and an expectation that this will be done in each and every case. The identification of victims and investigation of the cause of the incident will generally be within the jurisdiction of the country in which the disaster occurred, but may directly affect nationals or residents of other countries and be affected by the legal systems of those countries.

In the case of aircraft disasters, for example, the country in which the aircraft was registered will become involved, as will the country where it was manufactured. As a result ICAO Contracting States have agreed upon certain minimum standards and procedures in respect of technical investigations, and these are accepted by all the countries and agencies concerned. Additional recommended procedures are also included in various international agreements. If these agreements did not exist, each country with an interest in the case would have to re-investigate the incident to its own required standard.

However, no such international standards or agreements currently exist in respect of the identification of disaster victims. One consequence of this can be doubt in one country about the conclusions reached in another country. Such doubts are often unfounded, but it must be acknowledged that, on occasions, there have been incorrect or no identifications as a result of using unsatisfactory methods. Distrust may also arise if insufficient documentary evidence is made available after the event as proof of identification. Some countries have therefore felt obliged to carry out - or perhaps duplicate - the identification processes, using their own systems and resources; that could have been avoided had agreed standards been in force.

The identification of a foreign victim cannot always be achieved without the co-operation of the authorities of that person's home country. Information about a missing person is essential but, if the person's own country's authorities do not have confidence and trust, they may withhold information and retain material for their own later use. There have been extreme cases where all material has been withheld. This will clearly seriously hamper the identification process: citizens of foreign countries involved in a disaster may remain unidentified, and the accurate identification of other victims may also be compromised.

6.2 LIAISON BETWEEN MEMBER COUNTRIES

The following recommendations endeavour to ensure:

- smooth and efficient co-operation, either through Interpol or directly between member countries, in the identification of victims;
- the basic human rights of victims and next-of-kin with regard to accurate identification whenever possible, irrespective of the origin of the deceased.

6.3 INTERNATIONAL IDENTIFICATION STANDARD

6.3.1 Responsibilities of the Interpol General Secretariat

It is recommended that the General Secretariat, under the authority of the General Assembly, should:

- (1) Maintain a Standing Committee on Disaster Victim Identification responsible for:
 - recommending measures for improving identification procedures and international co-operation in the identification processes,
 - recommending improvements to, and the updating of, the Interpol Disaster Victim Identification Forms and Guide, as experience is gained and new techniques are discovered,
 - updating and circulating recommendations on methods, procedures and Disaster Victim Identification documentation to member countries;
- (2) Encourage member countries to accept and apply the Standing Committee's recommendations;
- (3) Remind member countries of Resolution AGN/65/RES/13 (Appendix D) when dealing with incidents involving foreign nationals;
- (4) Ask for reports on the identification processes which took place after all known disasters in member countries;
- (5) Publish annual reports on disasters and keeps computerized records of such information to be made available - on diskette or by other means - to all member countries upon request.

6.3.2 Responsibilities of Member Countries

In preparation for circumstances where disaster victim identification might be required, each member country is advised to take the following steps.

- (1) Establish a Disaster Victim Identification Liaison Team affiliated to its National Central Bureau (NCB) and comprising a police officer, a forensic pathologist and a forensic odontologists whose names should be circulated to all member countries on a list kept up to date by the General Secretariat. The members of this team should:

- be familiar with the Interpol disaster victim identification procedures, forms and recommendations,
- be responsible for all contact, via Interpol if necessary, with the NCB of a country in which a disaster has occurred,
- be responsible for providing ante-mortem information on the Interpol form in an Interpol language, and for transmission of the form to the relevant country's Disaster Victim Identification Team,
- be responsible for the transmission of all identification evidence to the country concerned,
- ensure that, if a disaster occurs, their own regional and national authorities are informed of the procedures described in the Interpol Disaster Victim Identification Guide, including these recommendations.

(2) Establish a multidisciplinary Disaster Victim Identification Team (police officers, forensic pathologist, forensic odontologist, etc.).

- advise and assist the local police when a body or bodies are found which cannot rapidly be identified by someone who knew the missing person or persons and when circumstances suggest that identification may be difficult,
- assist with disaster victim identification operations in another country.

6.3.2.1 If a disaster occurs on their territory, member countries should take the following action:

- immediately assume responsibility for identification,
- notify all other countries whose citizens may be involved via Interpol,
- obtain ante-mortem details on the Interpol Disaster Victim Identification Forms,
- accept assistance from disaster victim identification personnel from countries whose citizens are involved,
- make permanent evidential records of disaster victim identification material and data, and offer other countries' disaster victim identification personnel an opportunity to examine such records and material,
- offer assisting Disaster Victim Identification Teams the opportunity to give their opinions on the identification of their citizens,
- allow assisting Disaster Victim Identification Teams to examine physical evidence pertaining to the identification of their fellow citizens,
- record all identification evidence on Interpol Disaster Victim Identification forms,

It is also strongly recommended that they:

- invite disaster victim identification personnel from other countries whose citizens are known to be involved, or if the task of identification is likely to be particularly difficult,
- allow assisting disaster victim identification personnel to visit and examine the incident site,
- allow appropriate visiting disaster victim identification experts to take part in or witness post-mortem examinations and subsequent data comparison,
- ask assisting disaster victim identification personnel to sign identification documents,
- provide opportunities for disaster victim identification personnel from other countries to attend as observers, in order to gain experience.

6.3.2.2 Member countries whose citizens are missing in a disaster should:

- promptly answer all requests for information and assistance from the country on whose territory the incident has occurred,
- immediately notify the relevant country when their nationals are reported as potentially involved,
- rapidly provide full ante-mortem information on their missing citizens, including fingerprints, DNA samples, X-rays, dental records, etc., on Interpol forms and in an Interpol language,
- provide disaster victim identification expert assistance and equipment if requested,
- keep copies of any documents sent to another country,
- sign the identification documents completed by the country in which the incident has occurred, seeking permission to do so if necessary.

6.4 CONCLUSION

Victims of disasters may not all be citizens of the country in which the disaster occurs. Whenever foreign nationals are or may be involved, the country dealing with identification should rapidly establish and then maintain close co-operation with the home countries of potential victims. It is preferable for a liaison officer from each of the countries involved to be attached to the disaster victim identification operation, for liaison purposes and to ensure that information is shared.

If a large number of victims are from a foreign country in which there is an established Victim Identification Commission, greater assistance from that country - in terms of expertise and equipment - could be sought. Although an expert group from a foreign country will normally work under the authority of the country inviting it to participate, there have been incidents in which the country dealing with the disaster did not possess the required expertise and resources. There have been cases where some or all responsibility for identification has been delegated to the foreign group.

There are no international agreements on co-operation or the delegation of responsibility for disaster victim identification. Member countries are therefore advised to explore the possibility of one or more of their identification experts travelling immediately to the country in which an incident has occurred when their citizens are or may be victims. This would necessitate keeping a list of such experts with particulars of personal data, passport numbers and expiry dates, vaccinations and expiry dates, and photographs to facilitate visa applications. For each key person, alternatives should be listed in case that person is not available at the critical time. All those on the list must be prepared to travel at very short notice, and the important questions of personal insurance and remuneration on such occasions must be agreed on beforehand.

It may be possible for identification experts to be granted temporary diplomatic status on such occasions or, in the case of a commercial aircraft accident, be affiliated to a technical investigation commission for which international regulations already exist (viz. the ICAO Standards and Recommended Practices, Annex 13 to the Chicago Convention on International Civil Aviation).

Finally, the formation of one or more Interpol-approved International Identification Commissions may be considered the best way of assisting a member country, or other

organizations such as the United Nations, whenever expertise and resources for handling victim identification are scarce or where impartiality is necessary.

Notes:

INTERNATIONAL REGULATIONS FOR BODY TRANSPORT
League of Nations

International Arrangement concerning the conveyance of corpses
Signed at Berlin, February 10th, 1937

Desirous of avoiding the difficulties resulting from differences in the regulations concerning the conveyance of corpses, and considering the convenience of laying down uniform regulations in the matter, the undersigned Governments undertake to accept the entry into their territory, or the passage in transit through their territory, of the corpses of persons deceased on the territory of any one of the other contracting countries on condition that the following regulations are complied with:

A. General Regulations

ARTICLE 1

For the conveyance of any corpse by any means and under any conditions, a special *laissez-passer* (*laissez-passer* for a corpse) complying as far as possible with the model annexed hereto, and in any case stating the surname, first name and age of the deceased person, and the place, date and cause of decease, shall be required; the said *laissez-passer* shall be issued by the competent authority for the place of decease or the place of burial in the cases of corpses exhumed.

It is recommended that the *laissez-passer* should be made out, not only in the language of the country issuing it, but also in at least one of the languages most frequently used in international relations.

ARTICLE 2

Neither the country of destination nor the countries of transit shall require, over and above such papers as are required under international conventions for the purpose of transports in general, any document other than the *laissez-passer* provided for in the preceding Article. The said *laissez-passer* shall not be issued by the responsible authority, save on presentation of:

- (1) A certified true copy of the death certificate;
- (2) Official certificates to the effect that conveyance of the corpse is not open to objection from the point of view of health or from the medico-legal point of view, and that the corpse has been placed in a coffin in accordance with the regulations laid down in the present Arrangement.

ARTICLE 3

Corpses must be placed in a metal coffin, the bottom of which has been covered with a layer of approximately 5 cm. of absorbent matter such as peat, sawdust, powdered charcoal or the like with the addition of an antiseptic substance. Where the cause of decease was a contagious disease, the corpse itself shall be wrapped in a shroud soaked in an antiseptic solution.

The metal coffin must thereupon be hermetically closed (soldered) and fitted into a wooden coffin in such a manner as to preclude movement. The wooden coffin shall be of a thickness of not less than 3 cm.: its joints must be completely water-tight: and it must be closed by means of screws not more than 20 cm. distant from one another, and strengthened by metal hoops.

ARTICLE 4

Conveyances of the corpses of persons deceased by reason of plague, cholera, small-pox or typhus shall not be authorised as between the territories of the Contracting Parties until one year at the earliest after the decease.

B. Special Regulations

ARTICLE 5

In the case of transport by rail, the following regulations shall apply over and above the general regulations contained in Articles 1 to 4:

- (a) Coffins must be conveyed in a closed wagon, save where they are handed over for conveyance in a closed hearse, and remain in the same.
- (b) Each country shall be responsible for fixing the time limit within which the body must be removed on arrival. Where the consignor produces satisfactory proof that the corpse will effectively be removed within such time-limit, the coffin need not be accompanied.
- (c) No articles may be transported along with the coffin other than wreaths, bunches of flowers and the like.
- (d) Coffins must be despatched by the speediest route and, as far as possible, without trans-shipment.

ARTICLE 6

In the case of motor transport, the following regulations shall apply over and above the general regulations contained in Articles 1 to 4:

- (a) Coffins must be conveyed preferably in a special hearse or, failing such, in an ordinary closed van.
- (b) No articles may be transported along with the coffin other than wreaths, bunches of flowers and the like.

ARTICLE 7

In the case of transport by air, the following regulations shall apply over and above the general regulations contained in Articles 1 to 4:

- (a) Coffins must be conveyed either in an aircraft specially and solely used for the purpose or in a special compartment solely reserved for the purpose in an ordinary aircraft.
- (b) No articles may be transported along with the coffin in the same aircraft or in the same compartment, other than wreaths, bunches of flowers and the like.

ARTICLE 8

In the case of transport by sea, the following regulations shall apply over and above the general regulations contained in Articles 1 to 4:

- (a) The wooden coffin containing the metal coffin in accordance with the provisions of Article 3 must itself be packed in an ordinary wooden case in such a manner as to preclude movement.
- (b) The said case, with its contents, must be so placed as to exclude any contact with foodstuffs or articles for consumption and to preclude inconvenience to the passengers or crew of any kind.

ARTICLE 9

Where decease takes place on board ship, the body must be preserved under the same conditions as those provided for in Article 8 above. The documents and certificates required under Article 2 shall be made out in accordance with the law of the country whose flag the vessel flies, and transport shall take place in the same manner as in the case of a corpse shipped on board.

Where the decease takes place less than 48 hours before the arrival of the vessel in the port at which the burial is to take place, and the material required for the strict observance of the provisions laid down in paragraph (a) of Article 8 is not available on board, the corpse, wrapped in a shroud soaked in an antiseptic solution, may be placed in a coffin of solid wood of planks of not less than 3 cm. thick with watertight joints, closed by screws. The bottom of the coffin must previously have been covered with a layer of approximately 5 cm. of absorbent material such as peat, sawdust, powdered charcoal or the like with the addition of an antiseptic substance. The coffin must thereupon be fitted into a wooden case in such a manner as to preclude movement. The provisions of this paragraph shall not apply where death was due to one of the diseases specified in Article 4.

This Article shall not apply to vessels whose voyages do not exceed 24 hours, if in the event of a decease on board they hand over the corpse to the competent authorities as soon as they arrive at the port at which it is to be handed over.

C. Final Provisions

ARTICLE 10

The provisions, both general and specific, of the present Arrangement embody the maximum requirements (other than in the matter of charges) which may be stipulated in connection with the acceptance of corpses coming from any one of the contracting countries. The said countries remain free to grant greater facilities, either by means of bilateral arrangements or by decisions in particular cases arrived at by common accord.

The present Arrangement shall not apply to the conveyance of corpses between frontier districts.

ARTICLE 11

The present Arrangement applies to international transport of corpses immediately after decease or exhumation. Nothing therein contained shall in any way affect the regulations in force in the respective countries in respect of burial and exhumation.

The present Arrangement shall not apply to the transport of ashes.

D. Protocol Clauses

ARTICLE 12

The present Arrangement shall bear today's date, and may be signed within six months as from that date.

ARTICLE 13

The present Arrangement shall be ratified, and the instruments of ratification shall be transmitted to the German Government as soon as possible.

As soon as five ratifications have been deposited, the German Government shall draw up a proces-verbal to that effect. It shall transmit copies of the proces-verbal to the Governments of the High Contracting Parties and the Office International d'Hygiene publique. The present Arrangement shall come into force on the 120th day after the date of the said proces-verbal.

Every subsequent deposit of ratifications shall be put on record by means of a proces-verbal drawn up and communicated in accordance with the procedure laid down above. The present Arrangement shall come into force in respect of each of the High Contracting Parties on the 120th day after the date of the proces-verbal putting on record the deposit of its ratifications.

ARTICLE 14

Countries not signatories to the present Arrangement may accede to the same at any time from the date of the proces-verbal putting on record the deposit of the first five ratifications.

Each accession shall be made by means of notification through the diplomatic channel of the German Government. The said Government shall deposit the act of accession in its archives; it shall immediately notify the Governments of all the countries Parties to the Arrangement and the Office International d'Hygiene publique notifying the date of deposit. Each accession shall take effect on the 120th day from that date.

ARTICLE 15

Each of the High Contracting Parties may declare at the time of signature, ratification or accession, that by its acceptance of the present Arrangement it does not intend to undertake any obligation in respect of all or part of its colonies, protectorates, overseas territories or territories placed under its suzerainty or mandate; in which case the present Arrangement shall not apply to territories in respect of which such a declaration has been made.

Each of the High Contracting Parties may later notify the German Government that it intends to make the present Arrangement applicable to all or part of its territories which were the subject of the declaration provided for in the previous paragraph; in which case the Arrangement shall apply to the territories named in the notification on the 120th day from the date of the deposit of the same in the archives of the German Government.

Likewise, every High Contracting Party may at any time after the expiry of the time limit specified in Article 16 declare that it intends that the application of the present Arrangement to all or part of its colonies, protectorates, overseas territories or territories placed under its suzerainty or mandate shall cease; in which case the Arrangement shall cease to apply to the territories which are the subject of such declaration one year after the deposit of the same in the archives of the German Government.

The German Government shall notify the Governments of all the countries Parties to the present Arrangement and the Office International d'Hygiene publique of the notifications and declarations made under the above provision, communicating to them the date of deposit of such notifications or declarations in its archives.

ARTICLE 16

The Government of any country Party to the present Arrangement may, at any time after the Arrangement has been in force in respect of the Government for five years, denounce it by written notification communicated through the diplomatic channel to the German Government. The German Government shall deposit the notice of denunciation in its archives. It shall immediately notify the Governments of all the countries Parties to the Arrangement and the Office International d'Hygiene publique, communicating to them the date of deposit. Every denunciation shall take effect one year after that date.

ARTICLE 17

The signature of the present Arrangement may not be accompanied by any reservation which has not been previously approved by those High Contracting Parties who are already signatories. Likewise, ratifications or accessions accompanied by reservations which have not been previously approved by all countries Parties to the Convention shall not be put on record. In faith whereof the respective Plenipotentiaries, provided with full powers recognised in good and due form, have signed the present Arrangement.

Done at Berlin on February 10th, 1937, in one single copy which shall remain deposited in the archives of the German Government, and certified true copies of which shall be communicated through the diplomatic channel to each of the High Contracting Parties.

Annex to Appendix A

Laissez-passer for a corpse

All legal regulations concerning the placing in the coffin having been observed, the corpse of
(name, first name and profession of the deceased; in the case of children, profession of father and mother) deceased on at,
by reason of
(cause of decease), at the age of
years (exact date of birth if possible), is to be conveyed
..... (means of transport),
from (place of departure)
via (route),
to (place of destination)

The transport of this corpse having been duly authorized, all and sundry authorities over whose territory the corpse is to be conveyed are requested to let it pass without let or hindrance.

COUNCIL OF EUROPE

AGREEMENT ON THE TRANSFER OF CORPSES

Signed at Strasbourg, October 26th, 1973

The member State of the Council of Europe, signatory hereto,

Considering that there is an increasing need to simplify formalities relating to the international transfer of corpses,

Bearing in mind that the transfer of corpses does not create a risk to health even if death was due to a communicable disease provided that appropriate measures are taken, in particular with regard to the imperviousness of the coffin,

Have agreed as follows:

ARTICLE 1

- 1) The Contracting Parties shall apply, as between themselves, the provisions of this Agreement.
- 2) For the purpose of this Agreement, transfer of corpses is understood to be the international transport of human remains from the State of departure to the State of destination; the State of departure is that in which the transfer began; in the case of exhumed remains, it is that in which burial had taken place; the State of destination is that in which the corpse is to be buried or cremated after the transport.
- 3) This Agreement shall not apply to the international transport of ashes.

ARTICLE 2

- 1) The provisions of this Agreement embody the maximum requirements which may be stipulated in connection with the despatch of corpses from, their transit through, or their admission to the territory of a Contracting Party.
- 2) The Contracting Parties remain free to grant greater facilities either by means of bilateral agreements or by decisions arrived at by common accord in special cases and in particular in the case of transfer between frontier regions.

For such agreements or decisions to be applicable in any given case, the consent of all the States involved must be obtained.

ARTICLE 3

- 1) Any corpse shall, during the transfer, be accompanied by a special document (*laissez-passer* for a corpse) issued by the competent authority for the State of departure.
- 2) The *laissez-passer* shall include at least the information set out in the model annexed to the present Agreement; it shall be made out in the official language or one of the official languages of the State in which it was issued and in one of the official languages of the Council of Europe.

ARTICLE 4

With the exception of the documents required under international conventions and agreements relating to transport in general, or future conventions or arrangements on the transfer of corpses, neither the State of destination nor the transit State shall require any documents other than the *laissez-passer* for a corpse.

ARTICLE 5

The *laissez-passer* is issued by the competent authority referred to in Article 8 of this Agreement, after it has ascertained that:

- (a) all the medical, health, administrative and legal requirements of the regulations in force in the State of departure relating to the transfer of corpses and, where appropriate, burial and exhumation have been complied with;
- (b) the remains have been placed in a coffin which complies with the requirements laid down in Articles 6 and 7 of this Agreement;
- (c) the coffin only contains the remains of the person named in the *laissez-passer* and such personal effects as are to be buried with the corpse.

ARTICLE 6

- 1) The coffin must be impervious; the inside must contain absorbent material. If the competent authority of the State of departure consider it necessary the coffin must be provided with a purifying device to balance the internal and external pressures. It may consist of:
 - (i) either an outer coffin in wood with sides at least 20 mm. thick and an inner coffin of zinc carefully soldered or of any other material which is self destroying;
 - (ii) or a single coffin in wood with sides at least 30 mm. thick lined with a sheet of zinc or of any other material which is self destroying.

- 2) If the cause of death is a contagious disease, the body itself shall be wrapped in a shroud impregnated with an antiseptic solution.
- 3) Without prejudice to the provisions of paragraphs 1 and 2 of this Article the coffin, if it is to be transferred by air, shall be provided with a purifying device or, failing this, present such guarantees of resistance as are recognised to be adequate by the competent authority of the State of departure.

ARTICLE 7

If the coffin is to be transported like an ordinary consignment, it shall be packaged so that it no longer resembles a coffin, and it shall be indicated that it be handled with care.

ARTICLE 8

Each Contracting Party shall communicate to the Secretary General of the Council of Europe the designation of the competent authority referred to in Article 13, paragraph 1, Article 5 and Article 6, paragraphs 1 and 3 of this Agreement.

ARTICLE 9

If a transfer involves a third State which is Party to the Berlin Arrangement concerning the conveyance of corpses of 10 February 1937, any Contracting State to this Agreement may require another Contracting State to take such measures as are necessary for the former Contracting State to fulfil its obligations under the Berlin Arrangement.

ARTICLE 10

- 1) This Agreement shall be open to signature by the member States of the Council of Europe, who may become parties to it either by:
 - (a) Signature to it without reservation in respect of ratification or acceptance, or
 - (b) Signature with reservation in respect of ratification or acceptance, followed by ratification or acceptance.
- 2) Instruments of ratification or acceptance shall be deposited with the Secretary General of the Council of Europe.

ARTICLE 11

- 1) This Agreement shall enter into force one month after the date on which three member States of the Council shall have become Parties to the Agreement, in accordance with the provisions of Article 10.
- 2) As regards any member State who shall subsequently sign the Agreement without reservation in respect of ratification or acceptance or who shall ratify or accept it, the Agreement shall enter into force one month after the date of such signature or after the date of deposit of the instrument of ratification or acceptance.

ARTICLE 12

- 1) After the entry into force of this Agreement, the Committee of Ministers of the Council of Europe may invite any non-member State to accede thereto.
- 2) Such accession shall be effected by depositing with the Secretary General of the Council of Europe an instrument of accession which shall take effect one month after the date of its deposit.

ARTICLE 13

- 1) Any Contracting Party may, at the time of signature or when depositing its instrument of ratification, acceptance or accession, specify the territory or territories to which this Agreement shall apply.
- 2) Any Contracting Party may, when depositing its instrument of ratification, acceptance or accession or at any later date, by declaration addressed to the Secretary General of the Council of Europe, extend this Agreement to any other territory or territories specified in the declaration and for whose international relations it is responsible or on whose behalf it is authorised to give undertakings.
- 3) Any declaration made in pursuance of the preceding paragraph may, in respect of any territory mentioned in such declaration, be withdrawn according to the procedure laid down in article 14 of this Agreement.

ARTICLE 14

- 1) This Agreement shall remain in force indefinitely.
- 2) Any Contracting Party may, insofar as it is concerned denounce this Agreement by means of a notification addressed to the Secretary General of the Council of Europe.
- 3) Such denunciation shall take effect six months after the date of receipt by the Secretary General of such notification.

ARTICLE 15

The Secretary General of the Council of Europe shall notify the member States of the Council and any State which has acceded to this Agreement of:

- (a) any signature without reservation in respect of ratification or acceptance;
- (b) any signature with reservation in respect of ratification or acceptance;
- (c) the deposit of any instrument of ratification, acceptance or accession;
- (d) any date of entry into force of this Agreement, in accordance with Article 11 thereof;
- (e) any declaration received in pursuance of the provisions of paragraphs 2 and 3 of Article 13
- (f) any notification received in pursuance of the provisions of Article 14 and the date on which the denunciation takes effect;
- (g) any communications made to him under Article 8

In witness whereof the undersigned, being duly authorised thereto, have signed this Agreement.

Done at Strasbourg, this 26th day of October 1973, in the English and French languages, both texts being equally authoritative, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary General of the Council of Europe shall transmit certified copies to each of the signatory and acceding States.

Annex to Appendix B
Laissez-passer for a corpse

This laissez-passer is issued in accordance with the Agreement on the Transfer of Corpses, in particular Articles 3 and 5 (1).

Authority is hereby given for the removal of the body of:

Name and first name of the deceased

died on at

State cause of death (if possible) (2) and (3)

at the age of years

Date and place of birth (if possible)

The body is to be conveyed

..... (means of transport)

from (place of departure)

via (route)

to (destination)

The transport of this corpse having been duly authorised, all and sundry authorities of the States over whose territory the corpse is to be conveyed are requested to let it pass without let or hindrance.

Done at on

Signature of the competent authority

Official stamp of the competent authority

(1) The text of Articles 3 and 5 of the Agreement is to appear on the reverse side of the laissez-passer

(2) The cause of death should be stated in English or French or in the numerical WHO code of the international classification of diseases.

(3) If cause of death is not stated for reasons of professional secrecy then a certificate indicating the cause of death should be placed in a sealed envelope accompanying the corpse during transport and be presented to the competent authority in the State of destination. The sealed envelope, which shall bear some external indication for identification purposes, shall be securely attached to the *laissez-passer*.

Alternatively, an indication should be made on the *laissez-passer* as to whether the person died of natural causes and of a non-contagious disease.

If this is not the case, the circumstances of death or the nature of the contagious disease should be indicated.

**PAN AMERICAN
HEALTH ORGANISATION**

**WORLD HEALTH
ORGANISATION**

**XVII PAN AMERICAN SANITARY CONFERENCE
XVIII REGIONAL COMMITTEE MEETING**

RESOLUTION XXIX

Adopted in Washington, October 7th, 1966

INTERNATIONAL TRANSPORTATION OF HUMAN REMAINS

THE XVII PAN AMERICAN SANITARY CONFERENCE....

Resolves

- 1) To approve and transmit to the Governments of the Organization the following Declaration and Regulations concerning the International Transportation of Human Remains:

DECLARATION

The greater ease of communications today and the considerable increase in tourism make the international transportation of human remains a matter of practical interest that justifies the establishment of uniform standards.

The international transportation of human remains should be simplified so as not to increase the problems of the families with complicated and unnecessary procedures that appear to overlook the moral and social considerations involved in such cases.

It is possible to simplify the administrative procedures involved in obtaining authorization for the international transportation of human remains if it is borne in mind that, contrary to a deep rooted opinion, a corpse does not constitute a health risk even when death was due to a quarantinable or communicable disease, since its power to infect disappears when it is suitably embalmed.

Embalming might become the general practice in the countries of the Americas since it is the most appropriate method of preserving human remains; however, this in no way implies that other, simpler, and equally effective methods, cannot also be used.

DEFINITIONS

Article 1. International transportation of human remains is understood to be the shipment of the body from the country where the death occurred to the country of its final destination after either death or disinterment.

Article 2. The transportation of bodies between frontier districts within 48 hours after death shall not be subject to these standards.

Article 3. For the purpose of these standards an impervious coffin shall be any container or box, of whatever material, which can be hermetically sealed and so maintained by plastic or rubber gasket or by metal or similar material which has been soldered or welded. The body may also be encased in a plastic container which has been sealed by heat or by adhesive materials prior to being placed in a non-impervious coffin, and which, for the purpose of these standards, will be considered the same as an impervious coffin.

DOCUMENTATION

Article 4. For international transportation of human remains, the following documents shall be required:

- (a) An official certificate of cause of death issued by the local registrar of death, or similar authority;
- (b) A statement by the person authorized to prepare the remains, certified by an appropriate authority, indicating the manner and method in which the body was prepared and indicating that the coffin contains only the body in question and necessary clothing and packing;
- (c) A transit permit stating the surname, first name and age of the deceased person, issued by the competent authority for the place of death, or the place of burial in the case of exhumed human remains, and;
- (d) Copies of the documentation required under subparagraphs a, b, and c shall accompany the shipment of remains. The outside of the coffin should bear an immovable plaque or other appropriate marking, in a conspicuous place, indicating name, age and place of final destination of the body.

HEALTH MEASURES

Article 5. The human remains shall be subject to the following measures:

- (a) Thorough washing with an effective disinfectant; disinfection of all orifices; packing of all orifices with cotton saturated with an effective disinfectant; wrapping in a sheet saturated with an effective disinfectant; and placing in an impervious coffin; or,

- (b) Proper embalming (arterial and cavity) and placement in an impervious coffin; or,
- (c) Proper embalming (arterial and cavity) and encasement in a plastic container which has been sealed by heat or by adhesive materials prior to placement in a non-impervious coffin.

SHIPMENT REQUIREMENTS

Article 6. Human remains prepared for international shipment must be placed in an impervious coffin. Where the cause of death was a quarantinable disease, as defined in the International Sanitary Regulations, the human remains must be embalmed (arterial and cavity) and placed in an impervious coffin.

The impervious coffin must thereupon be hermetically sealed and may be shipped without any other covering (except in the case of shipment by sea), or for protective purposes may be fitted in a wooden box, or one made of other material, so as to prevent movement; or may be wrapped in a specially designed fabric.

TRANSPORTATION BY LAND, AIR OR SEA

Article 7. The following regulations shall apply to the transportation by rail:

- (a) The impervious coffin may be transported in the baggage compartment of a passenger car.
- (b) Each country shall be responsible for fixing the time limit within which the body must be removed at its final destination.

In case of transportation by road the impervious coffin must be conveyed preferably in a closed hearse or failing such, in an ordinary closed van (truck) or automobile, placed in such a way as to prevent movement.

The impervious coffin may be conveyed also in the baggage compartment of a passenger aircraft or in a cargo aircraft and may be equipped with a vent or safety valve provided that precautions are taken to prevent the escape of liquids or nauseous gases.

In case of transportation by sea the impervious coffin, in order to preclude movement, must be packed in an ordinary wooden case, or one made of other material, or may be placed in specially designed fabric container.

COMMON PROVISION

Article 8. Regardless of the mode of transportation, wreaths, flowers and other similar funeral articles may be sent with the coffin only when it is permitted by the provisions in force in the country to which it is being sent.

FINAL PROVISIONS

Article 9. The above formalities may be reduced either through bilateral arrangements or by joint decision in particular cases.

Article 10. The transportation of remains exhumed after the period established in the local provisions in force have elapsed, and the transportation of ashes, shall not be subject to health or other special measures.

- 2) To recommend to the Governments that they apply the above mentioned regulations in the way they deem most appropriate.
- 3) To invite the Governments to inform the Bureau of the steps taken to implement the above mentioned regulations so that he may report them to the other Governments and to the Governing Bodies of the Organization.
- 4) To urge the Director that he endeavour to ensure in the way he deems the most appropriate that the Governments of the Organization take appropriate measures to implement in their territories the regulations on International Transportation of Human Remains mentioned in the first operative paragraph of this resolution.
- 5) To recommend to the Director that he transmit this resolution to the Director-General of the World Health Organization.

INTERPOL RESOLUTION
DISASTER VICTIM IDENTIFICATION

BEARING IN MIND, firstly, that a Working Party was set up to draft a Disaster Victim Identification (DVI) Form (49th General Assembly session, Manila, 1980) and secondly that, in view of the increasing importance of the subject, a Sub-Committee composed of police officers, forensic pathologists and forensic odontologists was established in 1986;

NOTING THAT the said Sub-Committee has now finalised a modified and computerised version of the DVI Form and a modified version of its associated DVI Guide (previously DVI Manual), which should prove entirely satisfactory and which have been adopted by the Working Party, now being recognised as the Interpol Standing Committee on DVI;

RECOGNISING the basic human right of individuals to be properly identified after death and that the identification of disaster victims continues to be of increasing international importance with regard to police investigations, in addition to other legal, religious and cultural requirements;

The ICPO-Interpol General Assembly, meeting in Antalya from 23rd October 1996 to 29th October 1996, at its 65th session:

ADOPTS the said Form and its associated Guide;

RECOMMENDS THAT all the Organisations member countries use the Disaster Victim Identification Form in all appropriate circumstances including cases in which there is only one victim to be identified;

AUTHORISES the Secretary General to adapt the DVI Form and the associated Guide whenever appropriate, pursuant to technical developments and/or other professional needs in the field;

DECIDES THAT the Working Party on DVI, now recognised as, and in the future to be named “The Interpol Standing Committee on Disaster Victim Identification”, shall;

- (a) Comprise representative police officers, forensic pathologists and forensic odontologists, and may, from time to time co-opt specialists from other organisations as appropriate (e.g. U.N. Department of Humanitarian Affairs, airline operators, forensic science services).
- (b) Consider relevant previous incidents, identifying technical developments and experience from which improvements to procedures and standards in DVI matters, including documentation, technology, computerisation, education and training may be made.

Appendix D

- (c) Ensure that the DVI Forms and Guide to DVI Procedures are maintained so as to provide the best possible practical assistance and advice to member countries.
- (d) Make recommendations to enhance co-operation, liaison, information exchange and practical assistance between member countries and with other relevant national and international agencies and organisations when planning for, or responding to, disasters.
- (e) Meet regularly to achieve these aims and disseminate advice and recommendations on good practice promptly to member countries.

RECOMMENDS that member countries;

- (a) Establish a Disaster Victim Identification Team comprising suitable police officers, forensic pathologists and forensic odontologists, or, as a minimum, appoint an officer responsible for Disaster Victim Identification matters, such teams or officers being the central contact point in their own countries when their citizens are involved in a disaster, or when otherwise requested to assist another member country.
- (b) Regularly advise each other and the General Secretariat of DVI experiences and lesson learnt from incidents.
- (c) When appropriate seek the assistance, as participants or observers, of DVI Liaison Officers and/or Teams from countries whose citizens are victims of the disaster.
- (d) Upon request from a member country, provide such DVI assistance as may be necessary, to that member country.
- (e) Provide the General Secretariat with relevant details of DVI Teams established in their country.
- (f) Co-operate closely so that decisions about the admission of foreign DVI Teams/Officers can be taken rapidly.

REQUEST the Secretary General to:

- (a) Publish and make available to member countries the DVI Form and the associated Guide to DVI procedures in the established Interpol languages.
- (b) Maintain and circulate a list of DVI Teams/Officers in member countries.
- (c) Periodically publish information on disasters, in particular, identification matters.

Appendix D

- (d) Bring to the attention of the Standing Committee any information supplied by member countries.
- (e) Maintain a list of DVI training courses in different countries and the potential for participation by foreign trainees.

ABROGATES the following resolutions:

- (a) AN/37/RES/4 (1968) Disaster Victim Identification Form
 - (b) AGN/49/RES/2 (1980) Identification of Disaster Victims
 - (c) AGN/50/RES/3 (1981) Victim Identification Form
 - (d) AGN/51/RES/7 (1982) International Assistance in the Identification of Disaster Victims
 - (e) AGN/55/RES/14 (1986) Identification of Disaster Victims
 - (f) AGN/58/RES/10 (1989) Disaster Victim Identification Form.
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Notes: