

Annexure 17:

Roles and Responsibilities of the Forensic Anthropologist for DVI

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1. Introduction

Depending on their training, Forensic Anthropologists (FAs) are experts in the recovery and analysis of human remains that may present in different states of preservation, including (but not limited to) decomposing, skeletonized, fragmentary, or burned. Such expertise has proven to be integral to the investigation of a range of disaster scenarios.

As the complexity of a disaster scene increases, so does the need to employ a broader range of expertise. DVI investigations benefit from the involvement of FAs because disasters are often characterized by compromised or highly fragmented human remains and decreased states of preservation.

FAs strengthen the multi- and cross disciplinary approach to the DVI operation through their specific expertise in:

- Skeletal anatomy (including differentiating between human and non-human bone)
- Managing collections of commingled human remains
- Skeletal trauma analysis, (infrequently relevant for identification)
- Managing compromised remains
- Taphonomy (e.g., distinguishing between ante-mortem, peri-mortem trauma and post mortem alterations in bones)
- Anatomic features which may aid identification

The FA is an integral part of the multidisciplinary DVI team, in scenarios resulting in fragmented and/or compromised remains. The FA must operate with regard to, and in collaboration with, police personnel and other forensic experts involved in the DVI response. The FA must liaise closely with the DVI-operation manager.

While similar guidelines have been presented by different national or international organizations (NIJ report, ICRC, ICMP, SWGANTH) and academic societies (ISFG Recommendation), the present guidelines are specifically geared towards the role of FAs working under the umbrella of INTERPOL during a mass disaster response.

2.1 The Disaster Site

FAs may have expertise in locating, mapping, documenting, and recovering compromised human remains. FAs may contribute valuable expert opinions and advice during the initial assessment of a disaster site and can assist in determining the scope of, or the anticipated time needed for, a full recovery of the human remains and associated material. A preliminary assessment at the scene will benefit from the inclusion of a FA who has specific expertise in areas such as distinguishing, documenting and recovering compromised human remains and determining associations between human remains and other evidence of potential value to the investigation and identification process.

At the disaster site, the specific expertise of FAs can contribute to the search for, mapping, and recovery of human remains and associated evidence. This includes:

- Preliminary assessment at the disaster sites, such as condition and the potential number of victims, assessment of degree of corporeal compromise etc.;
- Differentiating human from non-human or non-biological material (triage);
- Mapping and recording the location of the human remains accurately, including their relation to other material (e.g., airplane wreckage, personal items, etc.);
- Setting the strategy for the recovery of human remains and associated evidence;
- Limiting or even preventing commingling of human remains at the disaster site.

Inclusion of an FA in the initial assessment of the scene provides valuable expertise in the evaluation of the condition and initial number of victims at the disaster site which is critical to the strategy planning for subsequent recovery, recording and mortuary operation. Data collected *in situ*, before the scene is disturbed, contributes significantly to the efficacy and efficiency of identification.

2.2 The Mortuary

In a DVI mortuary, a strategic managerial decision to implement triage will ensure that commingling is addressed effectively and efficiently, particularly in events with compromised remains. At the triage station, FAs should be tasked with a variety of duties, each dictated by the disaster context and the number and condition of the human remains. Such tasks may include identifying and separating commingled remains, articulating fragmentary elements if collected in the same recovery bag (i.e., skull fragments), removing non-human or non-biological material, and, in large-scale incidents characterized by severe fragmentation, applying a probative index to prioritize remains through the mortuary.

In addition to a triage station, a separate anthropology station may be required in a DVI mortuary as a distinct operational unit. This station would focus specifically on bone fragment identification, estimation of the minimum number of individuals and determining biological profiles (sex, age, stature, etc.). This work also includes reconstructing skeletal trauma to help establish the manner of death and identifying trauma and/or pathologies to help individualize victims, thereby contributing to identification and reconciliation. Furthermore, FAs are effective technical scribes or assistants to radiographers, pathologists, odontologists, photographers and DNA technicians as they are comfortable working within the reporting language of all disciplines.

Thereby, the forensic anthropologist plays an important role in the mortuary phase of DVI for the purposes of triage or where remains are severely compromised. The specific nature of a disaster will likely direct the best use of the FA expertise.

2.3 Reconciliation, Quality Assurance (QA) and Quality Control (QC)

Following the Reconciliation Board's determination of identity based on reviewing the data files, DVI management in conjunction with local jurisdiction and the established command structure should consider instituting a final forensic anthropological review and check of the physical remains in events with fragmented and/or compromised remains. Prior to the release of the remains to the next of kin, a final anthropological review adds an additional layer of verifiable quality assurance and control that serves to maintain a high level of trust with the victims' families.

FA's expertise is therefore useful to the reconciliation phase, specifically in quality assurance and control in cases as described above. A final check of the remains prior to their release is a simple measure that adds an additional level of confidence to identifications and the audit trail.

2.4 The Debrief

The final phase of a DVI mission, the debrief, provides an opportunity for those involved to review the effectiveness of each phase and make recommendations for managing future incidents. FA may be represented from the scene, through the mortuary operations to the final quality control. Also, past debriefs have highlighted the effectiveness of the FAs contribution to what should be a multi-disciplinary review of parts of the DVI operation, or the DVI operation as a whole. It is therefore appropriate that an active role of FAs is established in the operational and strategic debriefs as mentioned elsewhere in this Interpol DVI guide.

Due to the role of FAs in all phases of a DVI mission, they should be involved actively in the revision of the DVI operation and the provision of recommendations for future learning (i.e. the debrief).

Key

NIJ: National Institute of Justice

ICRC: International Committee of the Red Cross

ICMP: International Commission on Missing Persons

SWGANTH: Scientific Working Group for Forensic Anthropology

ISFG: International Society for Genetics

Conflict of interest declaration

The authors have submitted no conflict of interest declaration.