THE ROLE OF DENTAL HEALTH WORKERS IN DISASTER MANAGEMENT

Management, Repatriation and Rescue - Infrastructure Needs

Sydney 8th-9th May 2008

WHAT IS A DISASTER?

An overwhelming ecological disruption occurring on a scale sufficient to require outside assistance.

PAHO 1980
Why Identify Human Remains?

Cultural and humanitarian reasons
The need for:
1) the authorities to be able to return the correct body to the next-of-kin.
2) people to know the fate a family member with certainty.
3) people to understand the circumstances of the death of a family member.
4) the bereaved an opportunity to grieve.
5) the next-of-kin to dispose of the remains and to mark the end of the person’s life with appropriate ceremony.
6) entire communities to heal themselves and move on.

Phase 1
Scene
Coroner
Police
Scene Investigator
Pathologist
Odontologist
Anthropologist

Phase 2
PM Data
Property
Fingerprints
Pathology
DNA
Dental
Anthropology

Phase 3
AM Data
Physical
Property
Dental
Medical
Fingerprints
DNA

Phase 4
Reconciliation and Board Presentation
Phase 1 - The Scene

- Major Crime Scene - Security
- Remains in situ
- Pathologist/Anthropologist/Dentist/Coroner
  - Photograph & record location
  - Search of the scene for human remains
  - Individually tagged - unique reference number
The Scene: Need for the Forensic Odontologist

- Discovery of dental evidence, facial bones and other skeletal fragments.
- Preservation / stabilisation of dental and skeletal evidence.
- Protection of evidence during recovery and transportation to the mortuary.

Phase 2 - PM Data Collection

- External descriptions – clothing/tattoos
- Photographs
- Fingerprints
- DNA
- Pathology examination – internal descriptions
- Dental examination
Storage

- Prevention of decomposition
- Easily accessible
- Safe
- Ideal temperature 4 degrees
- For long term storage -18 degrees
Mortuary Facilities

- Suitable building
- Secure cold storage area
- Examination process
- Documentation process
- Identification
Use local facilities

Autopsy Suite

- Very good lighting
- Power
- Water
- Non-slip floors
- Benches
Temporary mortuary
Ideal Family Viewing area

- Not part of DVI process
- However often needed
- Dignified
- Completely separate from mortuary operations
- Quiet/ Reflection areas
Dental

- Large area
  - Many personnel
- Isolated for X-rays
- Dark Room/Portable developer
- Separate from the mortuary
- Quality Assurance area

Procedural Sequence

- Post-mortem examination and charting
- Use PINK Interpol forms and FDI notation.
- Radiography (14 x-rays per body).
- Photography (Polaroid and Digital).
- Tooth extraction for DNA.
- All evidence gathered to be signed and dated as per audit trail.
- Secure pouch delivered to Radiography room.
Chain of evidence critical.
Labeling procedures must be perfect.
3 odontologists required.
- 1 developer
- 2 checkers
Other issues

- Rostering of Staff
  - Two shifts
  - Compulsory breaks
  - Require time for complete cleaning
  - Shifts should not overlap

- Common Language
Occupational Health and Safety

- Easily forgotten in the rush
- Maintain existing standards
- Appropriate Personal Protection Equipment
  - Eye-wear
  - Clean and Dirty Areas
  - Gloves
  - Safety Officer

Phase 3 - AM Data Collection

- YELLOW Interpol DVI Form and FDI notation
- International inquiries
- Interpreters
- Odontology transcribers
- Investigators (CIB)
Phase 4 - Reconciliation and Board Presentation

MATCHING ANTE MORTEM RECORDS WITH POST MORTEM EXAMINATION FINDINGS

RECONCILIATION:-CRITERIA FOR POSITIVE IDENTIFICATION

- Post-mortem cf Ante-mortem written charts.
- Post-mortem cf Ante-mortem radiographs.
- Study models.
- Mouthguards.
- Photographic superimposition.
Dental Reconciliation Results

- Positive Identification - established
- Possible Identification
- Insufficient Dental Information
- Exclusion - non-identification
Thailand as at 5th November 2005
Methods used for identification. Primary method listed first.

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Number of times each method used

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<tr>
<td>Fingerprints</td>
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<tr>
<td>Physical</td>
<td>256</td>
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Quality Audits

- Essential
- Final check of all paper work
- All numbering correct
- All sections complete
- All writing eligible
- All samples taken, correctly labelled
Debriefing

- Operational briefing
  - effectiveness of the operation
- Critical Incident Stress Debriefing
  - occupational health & safety issues
- Recommendations for management of future incidents

Questions

- How would a disaster impact on your organisations?
- Is your organisation prepared?
- Does your organisation have a plan?
Conclusions

- International Focus
  - Being prepared (training and logistics)
  - Getting it right
  - Doing it properly
- Cultural issues
- Time and Money
- People Considerations

“Show me the manner in which a nation cares for its dead and I will measure with mathematical exactness, the tender mercies of its people, their loyalty to high ideals and their respect for the laws of the land.”

_William Gladstone_
Dr. Anthony J. Hill

Victorian Institute of Forensic Medicine
57-83 Kavanagh Street
Southbank 3006
Melbourne
Australia

e-mail - anthonyh@vifm.org

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Ms. Jodie Leditschke
Ms. Rebecca Quake
Dr. Richard Bassed