

Medical Examiner and Forensic Sciences Resources

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Sciences



Search and Rescue

Pandemic

Local Law Enforcement

 Responding to 911 calls

 Responding to welfare checks

Health care facility

 Ambulance & drive up

 Admissions

Search and Rescue

↳ Mass Fatality

↳ First responders

↳ Law enforcement

↳ Fire department

↳ EMS

↳ State resources

↳ Mobile ME & ADFS

↳ SMORT

↳ AL DPS

↳ National Guard?

↳ Out of State resources

↳ DMORT

↳ Mutual Aid States

↳ Private organizations

Search and Rescue

- ↪ Logistical concerns
 - ↪ Manpower availability
 - ↪ Equipment & supplies
 - ↪ Scene location & jurisdiction
 - ↪ Scene safety & security
 - ↪ Weather

Pronouncement of Death

- ↪ Physician vs. Medical Examiner
 - ↪ Determination vs. Pronouncement
- ↪ Time of death vs. time pronounced
 - ↪ Date/time found vs. date/time of death
 - ↪ Time of incident vs. time pronounced
 - ↪ ?Survival time?



Trained Field Teams

- ↳ Mass fatality event

 - ↳ Pandemic events?

- ↳ Tasks of trained field teams

 - ↳ Documentation of decedent location - GPS

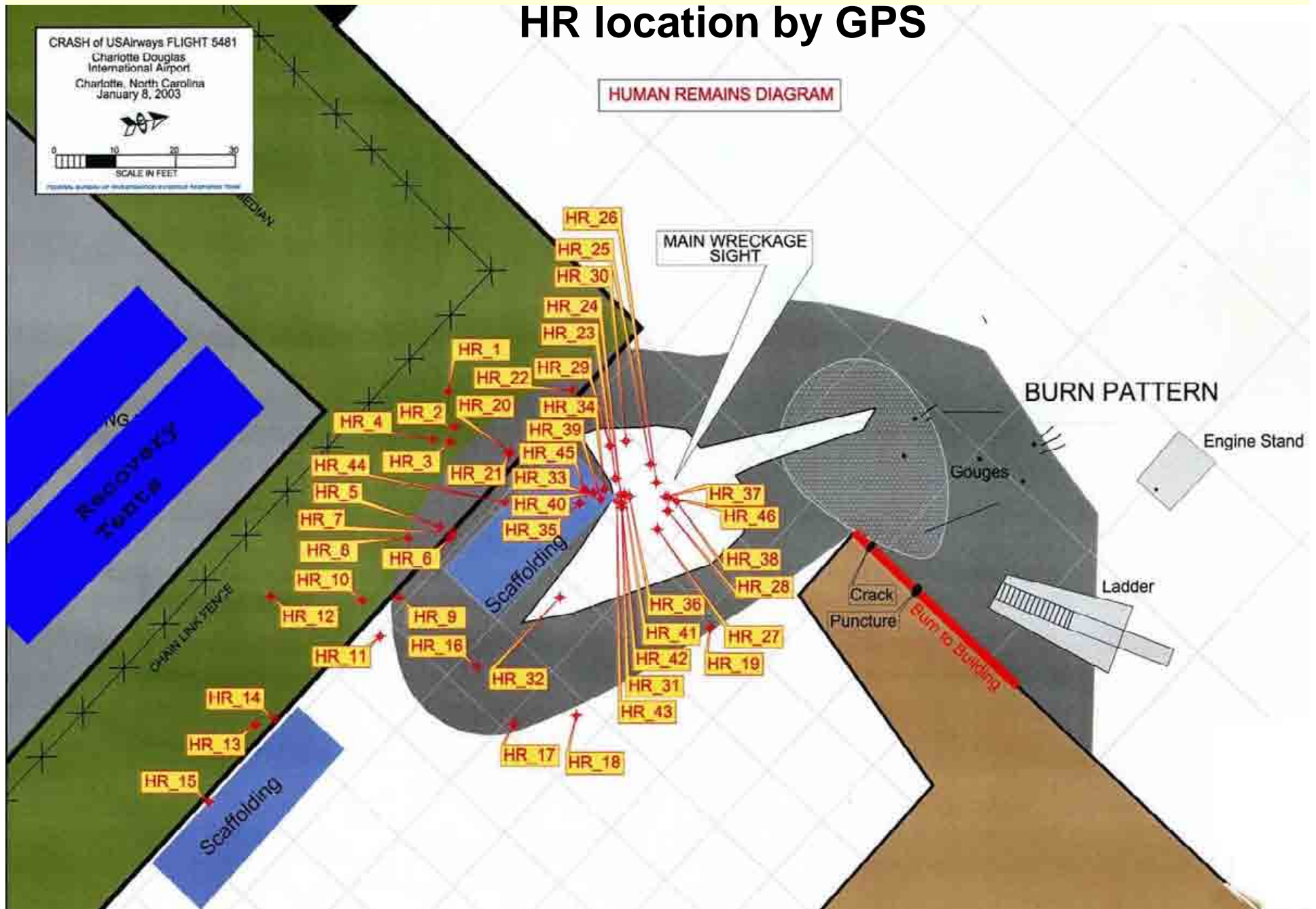
 - ↳ Tagging of decedents

 - ↳ Initial processing of decedents

 - ↳ Prepare for storage and transport

 - ↳ Trained in the various processing procedures and proper chain of custody methods

HR location by GPS



Tagging of Decedents



↪ Permanent tag

↪ Tyvek - puncture-proof, water-proof, mildew resistant and not affected by most chemicals.

↪ Indelible marker

↪ Unique simple numbering system

↪ HR - #

↪ Can add additional info – team letter, year, county

↪ Attachment method

↪ Zip tie



SMORT


- ↪ State Mortuary Response Team


 - ↪ Main component of field teams

- ↪ Activated whenever a catastrophic event results in mass fatalities and requested by local EMA.

Trained Field Teams

SMORT

 Assist Mobile Count Medical Examiner and ADFS in decedent recovery at the scene, mobile work site and autopsy site duties

 Actual duties will vary depending on the nature of the event, the necessity of decontamination, number and condition of the decedents, and the distance between the scene, mobile work site, and autopsy site

Trained Field Teams

- ↪ SMORT team members will be trained in the necessary techniques to perform all potential duties.
- ↪ Certified by multiple agencies in various aspects of their expected duties.
- ↪ ADFS will assist with training.

Augmenting Field Team Staff

↳ Numbers needed?

↳ Nature of event

↳ Size of event

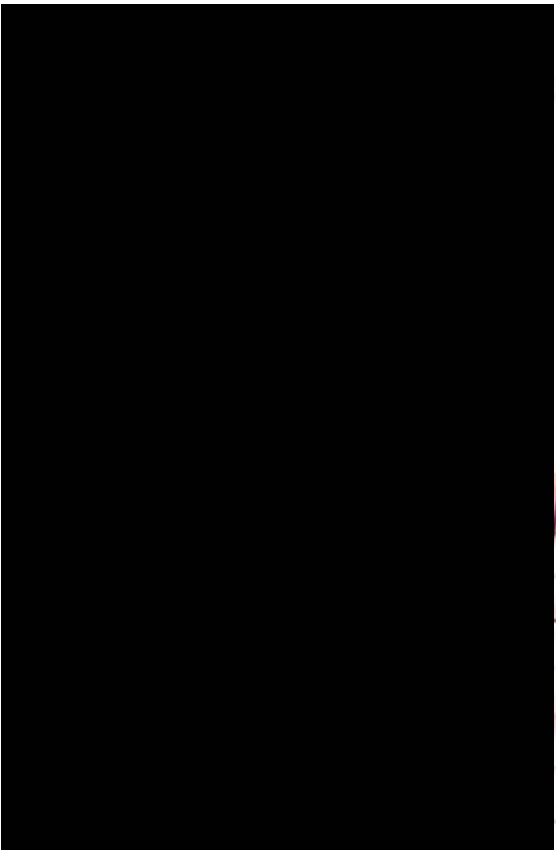
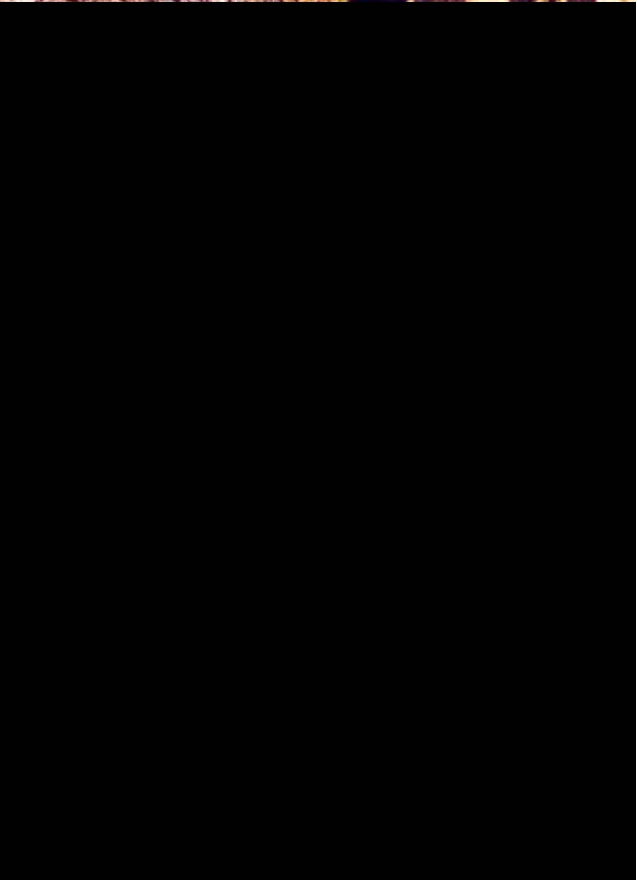
↳ Location of event

↳ Weather

↳ Sufficient to allow rotation of staff

↳ Law Enforcement, Funeral Home staff,
and Emergency Response Personnel





Augmenting Field Team Staff

↳ ADFS

↳ Assists Mobile County Medical Examiner

↳ Pathologists, Death Investigators, Autopsy Technicians

↳ Overwhelming event

↳ DMORT will be requested if the need is greater than SMORT & ADFS can manage.

Mobile Work Sites

- ↳ Mass fatality events

 - ↳ Pandemic events?

- ↳ Initial processing of decedents after recovery and scene documentation

- ↳ Extent of the initial processing

 - ↳ Necessity of decontamination

 - ↳ Number and condition of the decedents

 - ↳ Size of trained field team +/- assistance



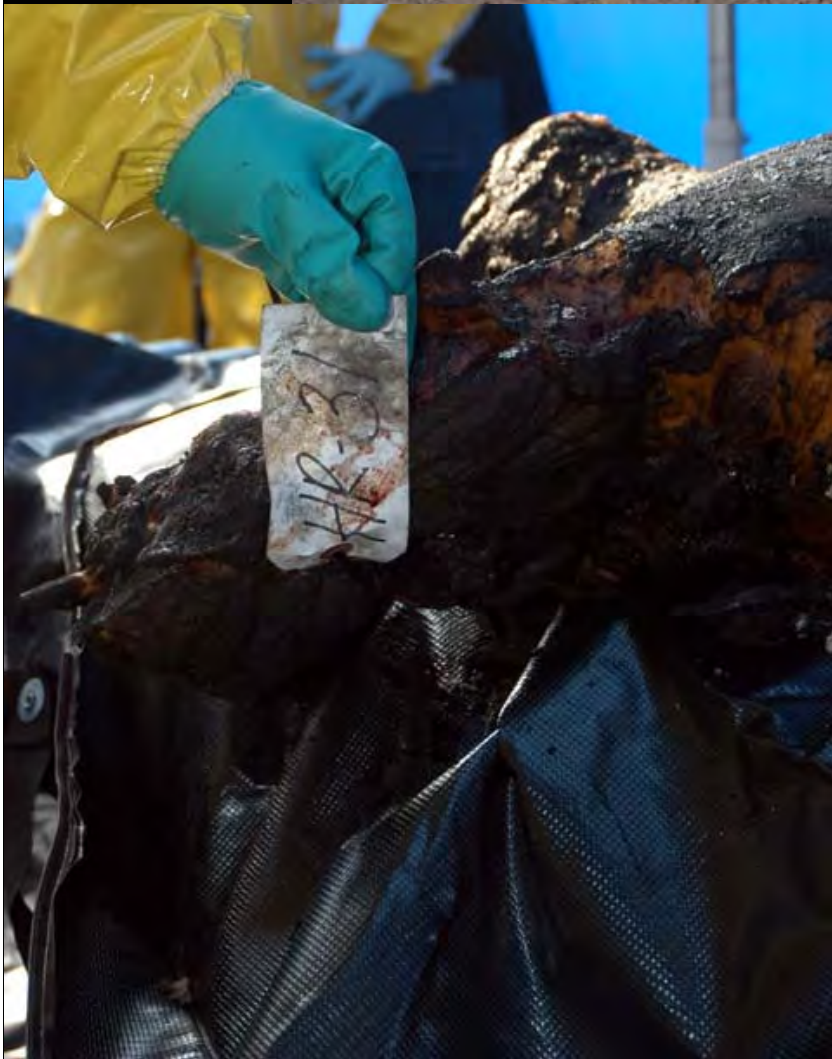
Mobile Work Sites

- ↪ The initial process may include
 - ↪ Photography
 - ↪ Documentation of clothing and personal effects
 - ↪ Fingerprinting
 - ↪ Evidence processing and documentation
 - ↪ Possibly DNA card collection



Mobile Work Sites

- ↪ The decedent's unique identifying number will be documented and recorded on all items collected from the decedent.
- ↪ Place in body pouches for storage and transport to Mobile County Medical Examiner Facility or one of the other ADFS Regional Morgues



Mobile Work Sites

✚ Storage issues

- ✚ Without cold storage decomposition advances rapidly
- ✚ Within 12 to 48 hours in hot climates, decomposition will be too advanced to allow facial recognition
- ✚ Cold storage slows the rate of decomposition and preserves the body for identification.
- ✚ Refrigeration between 2°C and 4°C is the best option.



Mobile Work Sites

↳ Logistical issues

↳ Time delays

↳ Teams arriving at scene

↳ Beginning of recovery and processing

↳ Sufficient amount of necessary supplies

↳ Decedent storage at scene

↳ Transportation of decedents to autopsy site

↳ Food

↳ Overwhelming event - DMORT

Body Removal

↳ Pandemic

↳ EMS

↳ Funeral homes

↳ Private transport
services

↳ ADFS?

↳ ADPH?

↳ DMORT?

↳ Mutual Aid States?

↳ Private industry?

↳ Mass fatality

↳ SMORT

↳ ADFS

↳ Funeral homes

↳ ADPH

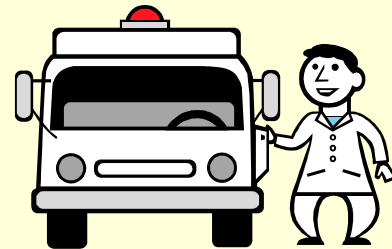
↳ DMORT

↳ Mutual Aid States

↳ Private industry?

Body Removal

- ↪ Logistical concerns
 - ↪ Priority use of resources
 - ↪ Manpower availability
 - ↪ Equipment & supplies
 - ↪ Scene location
 - ↪ Scene safety & security
 - ↪ Weather



State Morgue – Autopsy Sites

↪ ADFS has three fixed morgue sites with various capabilities that will manage up to a maximum of 30 decedents before outside assistance will be necessary.

↪ Huntsville

↪ Storage – 4 decedents

Autopsy – 1 case

↪ Montgomery

↪ Storage – 25 decedents

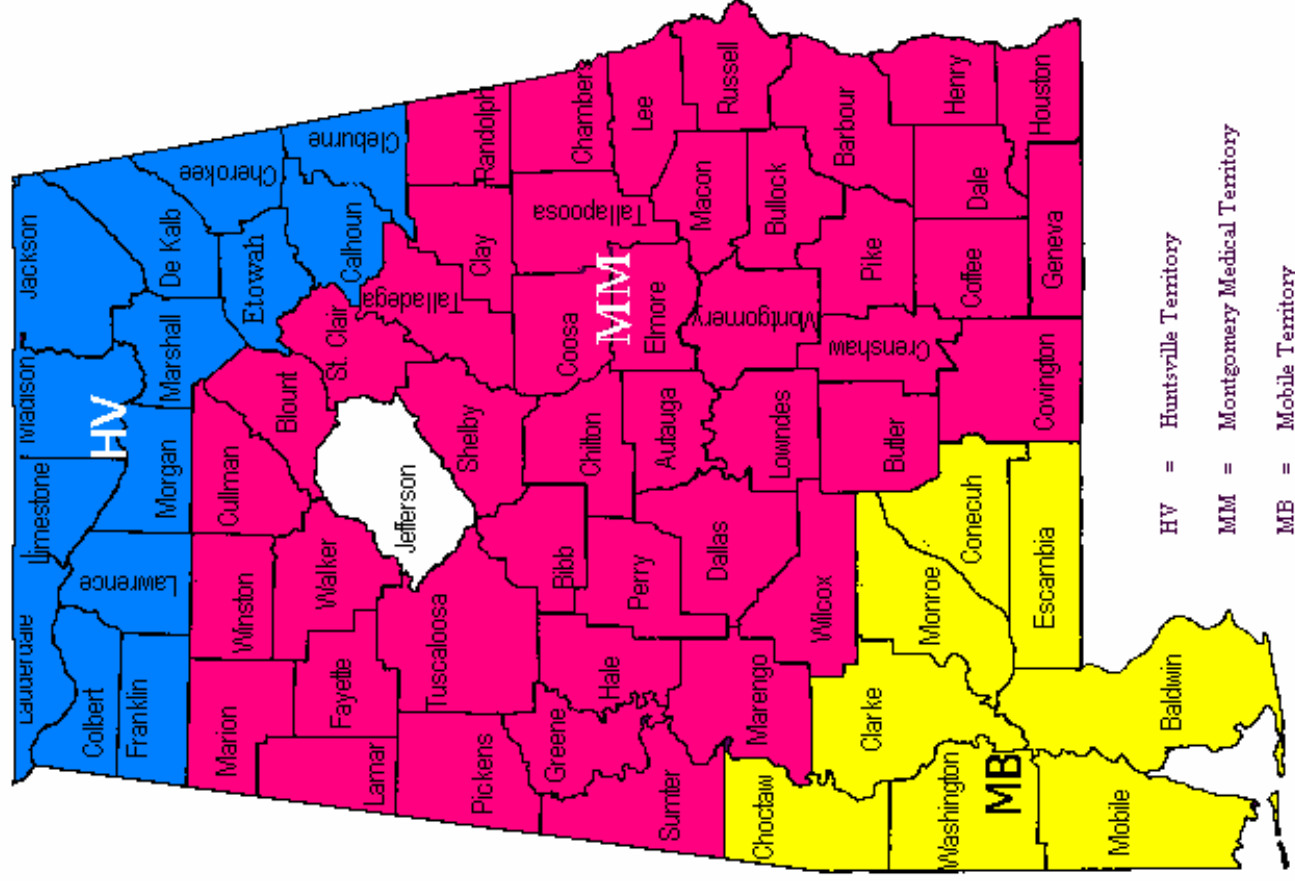
Autopsy – 5 cases

↪ Mobile

↪ Storage – 15 decedents

Autopsy – 5 cases

ADFS DEATH INVESTIGATION TERRITORY OCTOBER 1, 2007



FORENSIC SCIENCES BUILDING

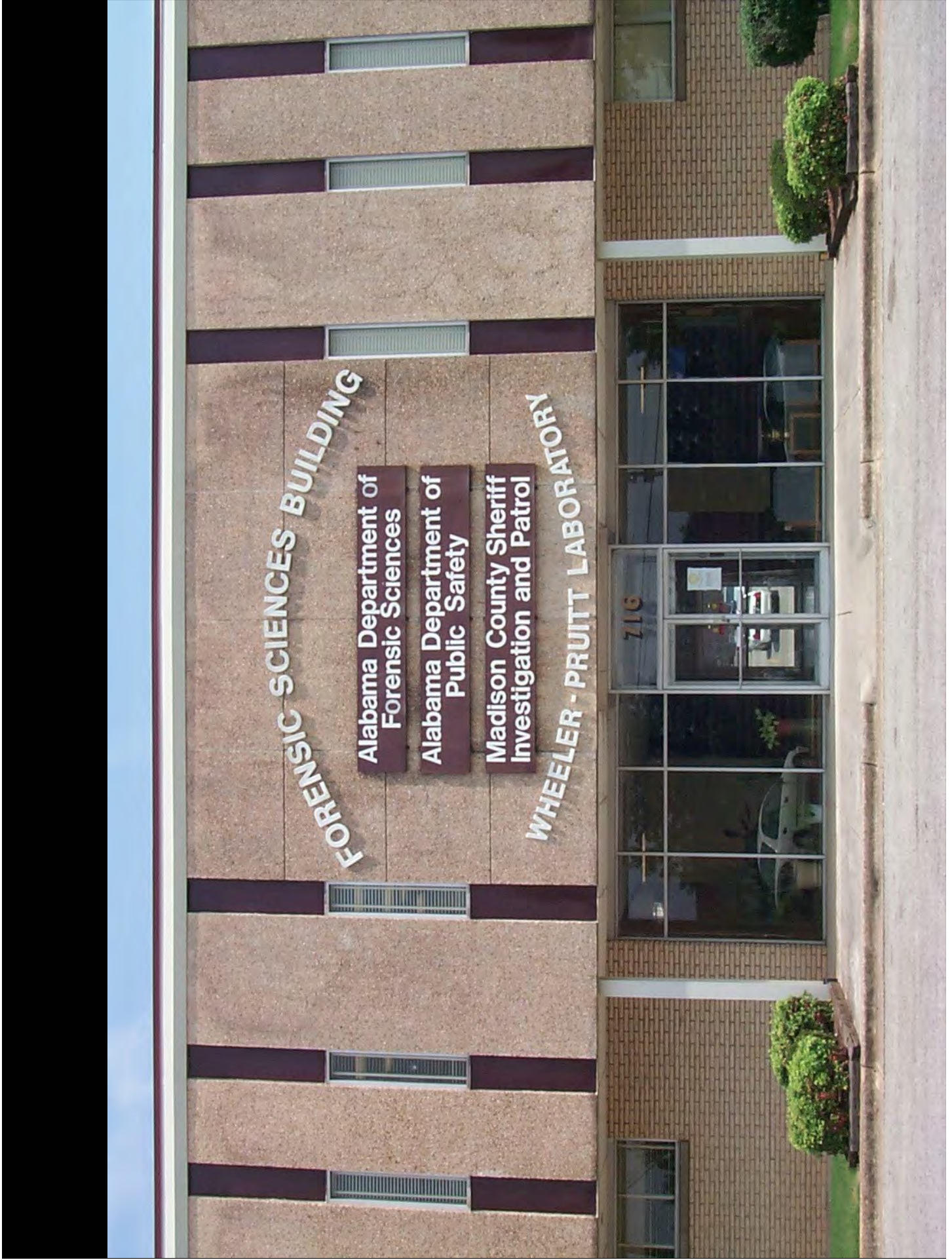
**Alabama Department of
Forensic Sciences**

**Alabama Department of
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**Madison County Sheriff
Investigation and Patrol**

WHEELER - PRUITT LABORATORY

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State Morgue – Autopsy Sites

↪ Logistical issues

↪ Decedent storage

↪ Time delay in team member assembly

↪ Time delay in receiving antemortem decedent information

↪ Identification process

↪ Release of decedents

↪ Food



State Morgue – Autopsy Sites

↳ Assistance – SMORT may be requested to provide assistance at the morgue

↳ Decedent handling

↳ Photography

↳ Evidence processing

↳ Overwhelming event

↳ DMORT will be requested if the need is greater than SMORT & ADFS can manage.

Protection of Staff

↪ Pandemic event

↪ Gloves when touching decedent and contaminated items

↪ Mask and eye protection when potential to generate splashes or sprays of body fluids

↪ Wash hands after decedent contact



Protection of Staff

The recovery of bodies from confined, unventilated spaces should be approached with caution. After several days of decomposition, potentially hazardous toxic gases can build-up. Time should be allowed for fresh air to ventilate confined spaces.

Protection of Staff

↳ Mass Fatality event

- ↳ Victims are normally killed by injury, drowning, or fire
- ↳ Victims are not likely to be sick with epidemic-causing infections (i.e., plague, cholera, typhoid, and anthrax)
- ↳ Few victims will have chronic blood infections (hepatitis or HIV), tuberculosis, or diarrheal disease
- ↳ Most infectious organisms do not survive beyond 48 hours in a dead body. An exception are HBV & HIV

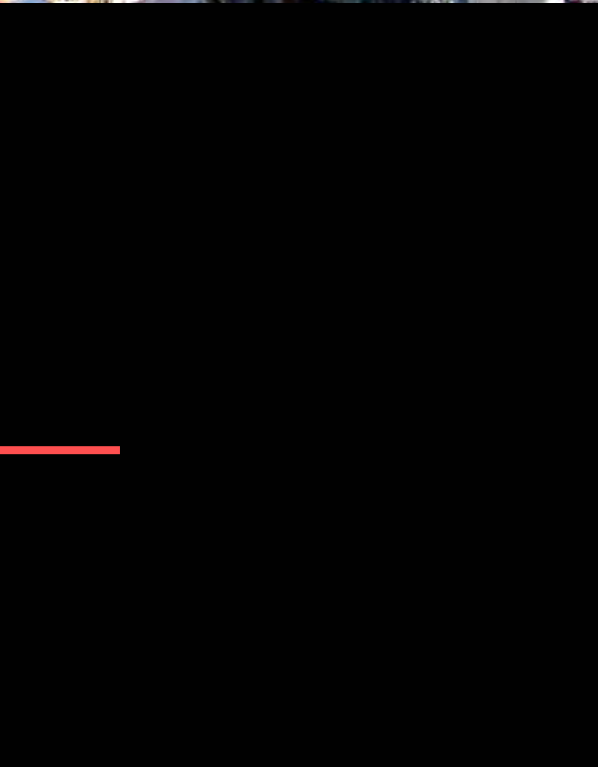
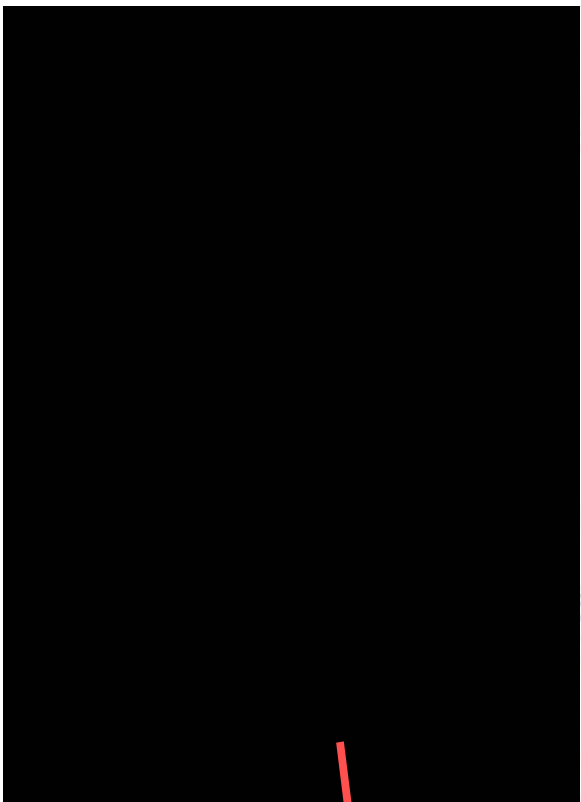
Protection of Staff

↳ Mass Fatality event

↳ Field teams work in hazardous environments (e.g., collapsed buildings and debris) and may also be at risk of injury and tetanus

↳ Team members handling human remains have a risk through contact with blood and feces (bodies often leak feces after death) from the following

↳ Hepatitis B and C, HIV, Tuberculosis, Diarrheal disease



Protection of Staff

↳ Mass Fatality event

↳ Anyone handling a decedent or evidence at the scene, mobile work site, or state morgue must wear the minimum protective gear at all times

↳ Protective gear for the scene and mobile work site to be provided by either State Emergency Management Agency &/or SMORT

Protection of Staff

- ↪ The minimum protective gear
 - ↪ Disposable gloves
 - ↪ Impervious plastic aprons or Tyvek
 - ↪ Face &/or eye protection
 - ↪ Shoe covers or impervious boots
 - ↪ Face masks are unnecessary, but should be provided when there is a potential to generate splashes or sprays of body fluids



Protection of Staff

- ✚ Additional protective gear will be directed by Emergency Response Personnel
- ✚ Logistical issues
 - ✚ Adequate amount of different sizes of protective gear at the scene, mobile site, and autopsy site
 - ✚ Proper training in wearing protective gear
 - ✚ Disposal of used protective gear

Investigation of Death

✚ Pandemic

✚ Local Law
Enforcement

✚ Medical Examiner

✚ Sources

✚ Family

✚ Neighbors

✚ Health care facilities

✚ EMS

✚ Mass fatality

✚ Local Law
Enforcement

✚ Medical Examiner

✚ State/Federal
agencies

✚ DPS & ABI

✚ FBI

✚ NTSB

Documentation

↳ Pandemic event

↳ Information will vary

↳ Location, time of death/discovery, perimortem events, & medical treatment

↳ Mass fatality event

↳ Event information will be the same

↳ Agreed upon time of incident

↳ Agreed upon time of death for all decedents that did not survive initial event

Documentation

- ↪ Field team will document the necessary decedent information at the scene with the assistance of first responders and Law Enforcement
- ↪ Information will be forwarded to Mobile County Medical Examiner to complete the ADFS Report of Death Investigation Form (DFS-18)

Documentation

- ✚ The decedent's unique identifying number will serve as reference point
- ✚ Antemortem information collected for identification will be assigned a unique identifying number (i.e. MP01)
- ✚ Active spreadsheet to follow and ultimately link the decedent and missing person into one case file with unique case number

FINGERPRINTS

BADAM	SOURCE/AVAILABLE	NA	STATUS
SREENIVASAN	FBI Lab. on: Indian Government 10 and 11-03		Missing FBI Lab.
PEARSON	ID'd Dental 1-10-03		
SHEPHERD	NP KNOWN ID'd by Dental 1-13-03		
ALBURY, ROBIN	Dental ID'd 1-10-2003		
ALBURY, NICHOLAS	Dental ID'd 1-10-2003		
LYONS	ID'd Dental 1-11-03		
FORTE	Dental ID'd 1-10-03		
SYLVIA	Dental ID'd 1-11-03		
STIDHAM	Dental ID'd 1-11-03		
COYNER	ID'd by Dental, radiographs & other 1-11-03	Re: DUE	
DUBOIS	ID'd by Dental 1-13-03		
CONGDON	DENTAL ID'd 1-10-2003		
GEZZER	Source: Unknown per FBI 1-13-03, per FBI - unknown prints		
SPIAK	Source: Unknown per FBI ID'd by Dental 1-13-03		
DEMARTINO	ID'd by Dental 1-11-03		
SULLIVAN	ID'd Dental 1-10-03		
KRASASS	ID'd by Dental 1-10-03		
ALBURY, CATHYIN	ID'd Dental 1-10-2003		
LESLIE	FBI		ID'd 1-10-03
GIBBS	FBI		ID'd 1-10-03

MEDICAL RECORDS - X-RAY

BADAM	SOURCE/AVAILABLE	NA	STATUS
SREENIVASAN	Source: X-Ray from Dental Hospital, India		Source: X-Ray from Dental Hospital, India
PEARSON	ID'd Dental 1-10-03		
SHEPHERD	Medical records ID'd by Dental 1-11-03		Received 1-11-03 1-13-03
ALBURY, ROBIN	Dental ID'd 1-10-03		
ALBURY, NICHOLAS	Dental ID'd 1-10-03		
LYONS	Dental ID'd 1-11-03		
FORTE	Dental ID'd 1-10-03		
SYLVIA	Dental ID'd 1-11-03		
STIDHAM	Dental ID'd 1-11-03		
COYNER	Source: Dental, radiographs & other 1-11-03		1-11-03 Dental, radiographs & other 1-11-03
DUBOIS	ID'd by Dental 1-13-03		
CONGDON	Dental ID'd 1-10-03		
GEZZER	Source: Dental		
SPIAK	ID'd by Dental 1-12-03		
DEMARTINO	Dental ID'd 1-11-03		
SULLIVAN	ID'd Dental 1-10-03		
KRASASS	Medical records received 1-10-03 ID'd by Dental 1-10-03		
ALBURY, CATHYIN	ID'd Dental 1-10-2003		
LESLIE	ID'd Dental 1-10-03		
GIBBS	ID'd Dental 1-10-03		

Decedent Identification

↳ Identifying

↳ Visual with supporting documentation

↳ Photo ID, family, neighbors, law enforcement

↳ Photograph of identifying marks, scars, tattoos

↳ Issues

↳ Available information

↳ Body condition



Body Identification

✚ Pandemic event

✚ Identification will start with the local Law Enforcement.

✚ Mass fatality event

✚ Method of identification of decedents will be determined by the Medical Examiner at the time of examination, both at the mobile work site and autopsy site














Body Identification

- ✚ Methods of identification used will include but not limited to:
 - ✚ Fingerprint comparison
 - ✚ Dental radiograph/chart comparison
 - ✚ Boney radiography comparison
 - ✚ DNA comparison
- ✚ General body stature and personal effects used for preliminary identification

Body Identification

- Local Law Enforcement will be required to obtain antemortem samples of for the comparison process
 - Fingerprints
 - Dental records
 - Radiographs
 - Reference DNA sample
- Unique identifying number assigned

LAST NAME, FIRST NAME, MIDDLE NAME, SUFFIX				FBI NO.		SOCIAL SECURITY NO.		HHS/CLIAA/OUT NO.		OCA	
<input type="text"/>				<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
DATE OF BIRTH YYYYMMDD				SEX	RACE	HEIGHT	WEIGHT	EYES	HAIR	PLACE OF BIRTH	
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Body Identification

- ✚ Process may begin at the mobile work site depending on the necessity of decontamination and number and condition of the decedents
- ✚ Process will include documenting clothing and personal effects, taking fingerprints, and identification photographs
- ✚ DNA samples may be taken

BODY #RR	B #	DOX/SUC	PRINTS	DENTAL	AUTOPSY	XRAY	FUNERAL HOME	FH NOTIFIED (DATE/TIME)	BODY RELEASED (DATE/TIME)	ID CONFIRMED AS:
HR 10	20	F	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		McEwen	11-13 14:45	1-11-03 13:00	LESLIE (Optim)
HR 9	21	W/M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		J.T. McEwen	1-11-03 17:00	1-11-03 17:00	ST. HAMM, P.
HR 13	22	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		H/W	1-11-03 17:30	1-12-03 9:30	K.T. Coyner
HR 14	23	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		H/W	1-11-03 17:30	1-13-03 14:10	S. DUBOIS
HR 16	24	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		H/W	1-12-03 17:00	1-11-03 17:00	B.R. Sylvia
HR 17	25	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		Green FH	1-11-03 17:45	01-11-03 17:45	M. Congdon
HR 30	26	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		McEwen	1-11-03 17:50	01-11-03 17:50	GIBBS (OFFICE)
HR 23	27	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		Green FH	1-11-03 17:59	1-11-03 17:59	S. Krassas
HR 26	28	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		855-1800	1-12-03 12:00	1-12-03 15:15	J.M. Spink
HR 27	37	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		H/W	1-12-03 12:00	1-13-03 14:15	N. Albury
HR 28	36	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		ATC B. B. B. B.	1-12-03 12:00	1-13-03 14:15	R. Albury
HR 31	35	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		ATC B. B. B. B.	1-12-03 12:00	1-13-03 14:15	E. Fonte
HR 32	30	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		JONES F.H.	1-11-03 17:44	1-12-03 08:35	R. R. Lyons
HR 33	29	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		JONES F.H.	1-11-03 17:44	1-12-03 08:35	M. Sullivan
HR 35	34	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		McEwen	1-11-03 17:44	1-12-03 08:35	I. Pearson
HR 38	33	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		H/W	1-11-03 17:44	1-12-03 08:35	F.S. DeMartino
HR 41	32	F	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		ATC B. B. B. B.	1-11-03 17:44	1-12-03 08:35	C. SHEPHERD
HR 37	31	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		JAMES F.H.	1-11-03 17:44	1-12-03 08:35	
HR 24	39	F	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		ATC B. B. B. B.	1-11-03 17:44	1-12-03 08:35	
HR 25	38	M	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		CFC	1-11-03 12:56	1-13-03 14:15	
HR 42	40	F	✓ 2/2/03	✓ MESA per N.T.S.B.	✓ MESA per N.T.S.B.		ATC B. B. B. B.	1-11-03 12:56	1-13-03 14:15	

Body Identification

↪ Process will be completed at the autopsy site

↪ Forensic Pathologists

↪ Forensic Scientists

↪ Forensic Odontologists

↪ Forensic Anthropologists



Identifiers

Dental

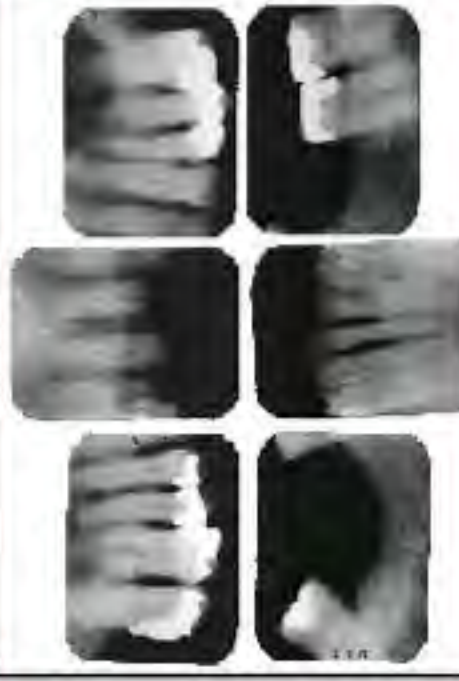
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Zoom ID# GOLFING GOLFING ABE J DOB: 5/27/1961 DLC: 4/1/1997 Male White



Zoom

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Print Comparison

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Body Identification

↳ Logistical issue

↳ Time frame from event to final identification is dependent on

↳ Recovery time

↳ Initial processing time

↳ Decedent examination time

↳ Receipt of antemortem comparison materials

↳ Time for actual identification process

↳ Overwhelming event – DMORT

Protocols

➤ Do you have one???

➤ Can your daily procedures be modified?

➤ Develop protocols for Pandemic & Mass fatality events

➤ Need for outside assistance?

➤ When?

➤ What resources needed?

➤ Source of assistance

Protocols

↳ Pandemic

↳ Need to address capabilities and procedures for managing numerous deaths and loss of manpower over a prolonged period

↳ Mass fatality

↳ Need to address capabilities and procedures for managing numerous deaths occurring in a single event

Conclusion

↳ Pandemic event

- ↳ Local Law Enforcement

- ↳ Medical Examiner

↳ Mass Fatality event

- ↳ Trained Field Team – SMORT

- ↳ Assisted by local personnel & Medical Examiner

↳ Mobile work site

- ↳ Initial processing of decedents

- ↳ Extent determined by event

- ↳ Storage of decedents

Conclusion

↳ Mass Fatality event

↳ State morgue/autopsy site

↳ Main work site for decedent examination and identification

↳ ADFS has three fixed sites with varied capability

↳ SMORT to assist

↳ Staff protection

↳ Risk from environment and decedents

↳ Minimum gear to be augmented as needed

↳ Hand washing!

Conclusion

↳ Mass Fatality event

↳ Documentation

- ↳ Local Law Enforcement and Medical Examiner

- ↳ Decedent information vs. missing person information

↳ Identification

- ↳ Role of local Law Enforcement

- ↳ Mobile site vs. Autopsy site

