Mass Fatality Management in the Commonwealth of Va

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Mass Fatality Response & Planning Manager

September 28, 2022

PUBLIC HEALTH PREPAREDNESS SUMMIT

"Resetting for Success"

OFFICE OF THE CHIEF MEDICAL EXAMINER
COMMONWEALTH OF VIRGINIA

Agenda

- About the OCME- What do we really do?
  - Day-to-day-operations
    - VA CODE
  - Capabilities
    - Summary of Offices Across the Commonwealth
    - Virginia State Anatomical Program
    - Prevention
      - Division of Death Prevention
      - Information Intelligence
- Mass Fatality and OCME
  - What kind of Mass Fatality Events are There
    - Most likely Mass Fatality Events
  - Expectations Vs Reality
  - Some VA Mass Fatalities Events
- Epidemics
  - Why isn't pandemics under OCME
  - COVID-19 Pandemic
  - Lessons Learned

What is the OCME?

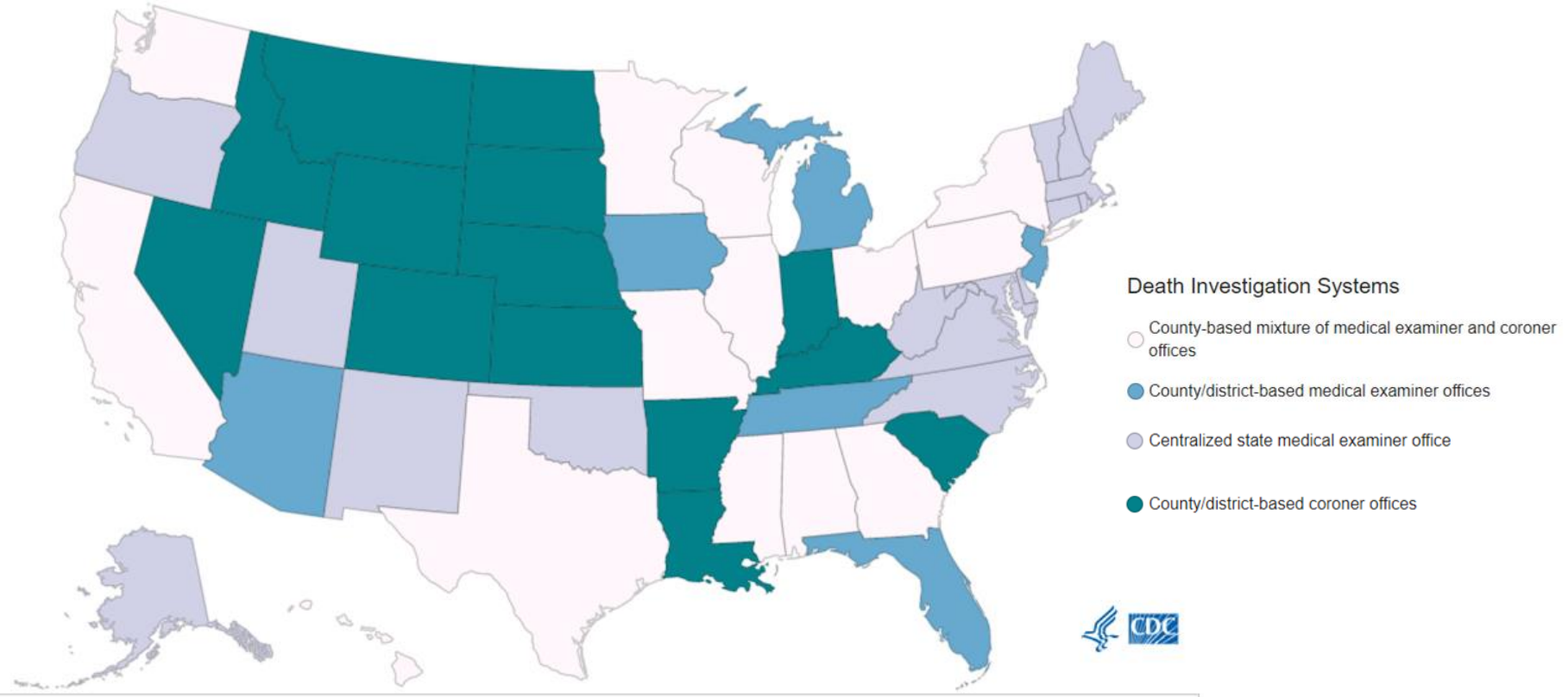
- Coroner Vs ME
- VA OCME Vision
- VA CODE
- Summary of Offices Across the Commonwealth
- Virginia State Anatomical Program
- Division of Death Prevention

Coroner System Vs Medical Examiner System

- Coroners are elected officials and are not uniformly required to be physicians.

- Medical Examiners are physicians who have specialized training in pathology who interpret death circumstances, injury, toxicology reports, and medical conditions to determine cause and manner of death.
  - Average Education 11 - 18 years

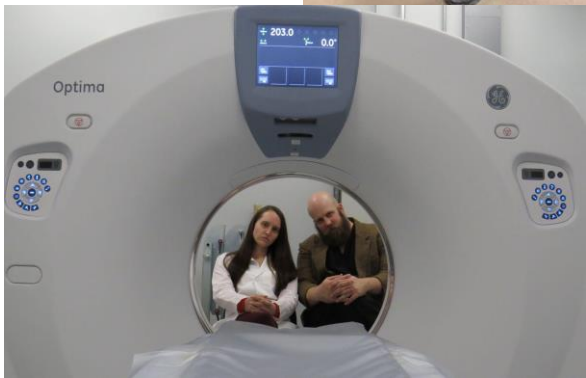
MEDICAL EXAMINER AND CORONER JURISDICTIONS IN THE UNITED STATES - 2019



VA OCME's Vision

The overall vision of the OCME is to be the best medical examiner possible. The following missions form the core of OCME staff members' efforts in accomplishing this goal:

- Conduct medicolegal death investigations.
- Perform autopsies to certify cause and manner of death
- Provide public service to citizens and professional colleagues throughout the Commonwealth.
- Educate peers and professionals on subjects related to death investigation.
- Reduce violent death by conducting surveillance and fatality review.
- Provide support and technical assistance to local fatality review teams.
- Administer the State Anatomical Program.

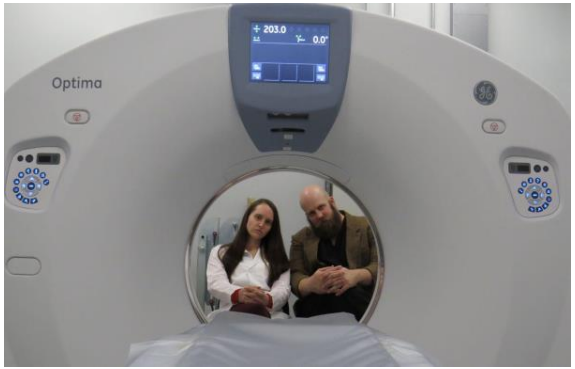


CODE OF VIRGINIA §32.1-283. A. INVESTIGATION OF DEATHS…

Upon the death of any person from **trauma, injury, violence, poisoning, accident, suicide or homicide**, or **suddenly when in apparent good health**, or when **unattended by a physician**, or in **jail, prison, other correctional institution or in police custody**, or who is an individual **receiving services in a state hospital or training center operated by the department of behavioral health and developmental services**, or suddenly as an apparent result of **fire, or in any suspicious, unusual or unnatural manner**, or the **sudden death of any infant,** the office of the chief medical examiner shall be notified by the physician in attendance, hospital, law-enforcement officer, funeral director, or any other person having knowledge of such death.

VIRGINIA'S OCME

- Formed By General Assembly In **1946**
- Statewide Medical Examiner Death Investigation System
    - Chief Medical Examiner Dr. William T. Gormley Since 2014
- 4 District ME Offices, Accredited By The National Association Of Medical Examiners
- Each District Office Staffed By
    - Assistant Chief Medical Examiners
    - Medicolegal Death Investigators
    - Autopsy Technicians
    - Administrative Personnel
    - Security Officers
    - Local Medical Examiners are contractors for Virginia OCME
- State Support
    - Forensic Epidemiologist
    - Chief MDI
    - Program Support
    - Mass Fatality Planner



Virginia Department Of Health
Office of the Chief Medical Examiner of Virginia

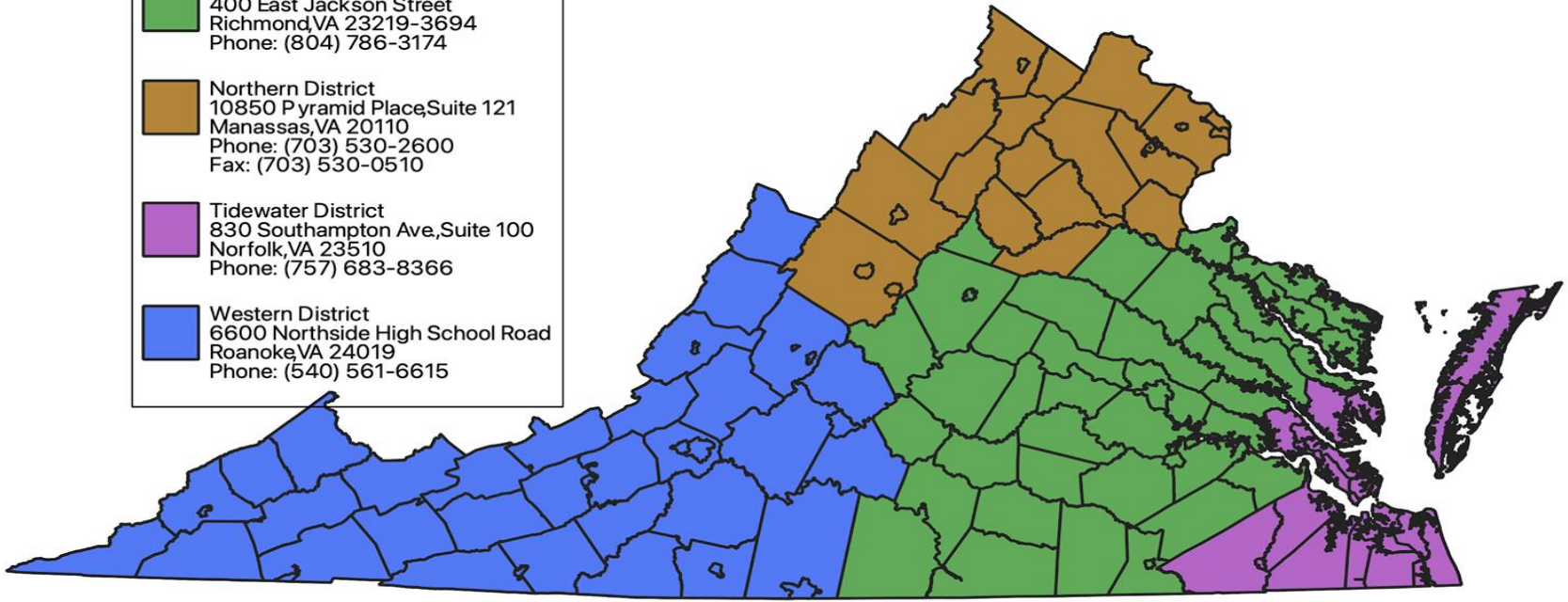
OCME District Offices

Central District
400 East Jackson Street
Richmond,VA 23219-3694
Phone: (804) 786-3174

Northern District
10850 Pyramid Place,Suite 121
Manassas,VA 20110
Phone: (703) 530-2600
Fax: (703) 530-0510

Tidewater District
830 Southampton Ave,Suite 100
Norfolk,VA 23510
Phone: (757) 683-8366

Western District
6600 Northside High School Road
Roanoke,VA 24019
Phone: (540) 561-6615



May 2022

Virginia State Anatomical Program

- Established in 1919
- VSAP only legal entity authorized to receive donations of humans bodies for scientific studies in VA
- Goal:
  - *“Provide a dignified, respectful and professional means for individuals who wish to donate their bodies to science”*
- Over 400 donors accepted yearly
  - 6 Medical Schools
  - Health Care Programs in Community Colleges

Division of Death Prevention

- Primary goal is to describe deaths in a public health manner in order to keep others alive
- Grant funded
- Partner with other agencies outside and within VDH

- Some Review Teams:
  - Child Fatality Review Team – State and Regional (1994)
  - Family & Intimate Partner Violence Fatality Review – Local and Regional (1999)
  - Maternal Mortality Review Team - State (2001)
  - Adult Fatality Review – Statewide (2008)
  - Adult Fatality Review – Local and Regional (2015)
  - Overdose Review Team – Local and Regional (2017)
  - Enhanced Accidental Opioid Overdose Surveillance (2017)
  - Enhanced Toxicology Testing Supplement (2017)

Mass Fatality and OCME

- How to define a mass fatality
- What kind of Mass Fatality Events are There
- Most likely Mass Fatality Events
- Expectations Vs Reality
- Some VA Mass Fatalities Events
- Lessons Learned

What is a mass fatality event?

- The Virginia Office of the Chief Medical Examiner has defined a Mass Fatality Incident as a single event that overwhelms its local capabilities

  - Threshold is different for each community
  - Caseload
  - Staff availability
  - Number of decedents in the incident

At least 59 dead, more than 500 injured after shooting on Las Vegas Strip

Most likely Mass Fatality Events?

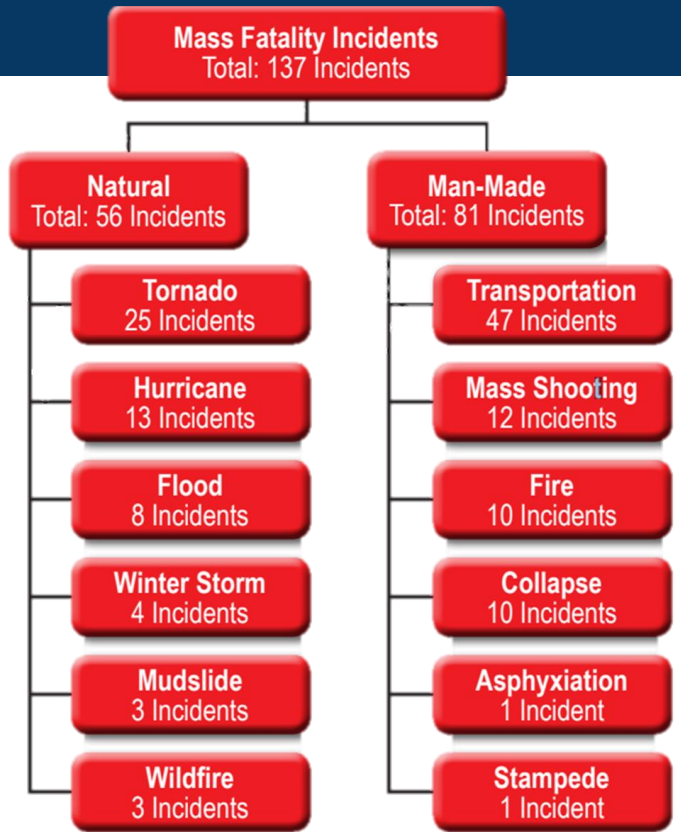


Figure 1: Classification of mass fatality incidents by type and subtypes, including the relative number of incidents for each occurring from 2000-2016.

- Carroll et al. (2017)
  - US
  - Incidents with fatalities ≥10
  - 2000-2016
  - 137 incidents resulting in 8,462 fatalities
- Average number of Mass Fatality incidents between 2000-2016
  - **Per year=8**
    - **Natural ~ 3**
    - **Man Made ~5**

Carroll, E., Johnson, A., DePaolo, F., Adams, B. J., Mazone, D., & Sampson, B. (2017). **Trends in United States Mass Fatality Incidents and Recommendations for Medical Examiners and Coroners**. Academic forensic pathology, 7(3), 318–329. https://doi.org/10.23907/2017.029

What is a mass fatality event?

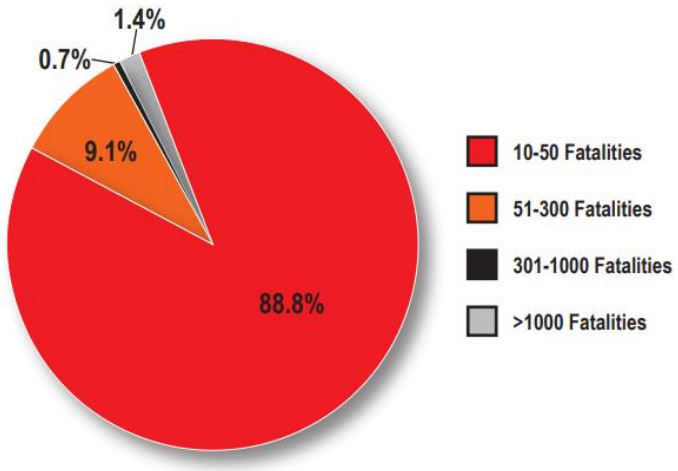


Figure 3: Mass fatality incidents from 2000–2016 by number of fatalities.

Table 1: Categorization of Mass Fatality Incidents by Type and Category From 2000-2016

MFI Type	Category		Incidents		Total Deaths		Average Deaths	
Natural	Wildfire		3		41		14	
	Flood		8		174		22	
	Hurricane	Minus Katrina	13	12	2480	647	191	54
	Mudslide		3		69		23	
	Tornado		25		997		40	
	Winter Storm		4		89		22	
Man-made	Aviation	Minus WTC	24	23	3663	910	153	40
	Bus/Motorcoach		6		80		13	
	Collapse		3		40		13	
	Explosion		7		106		15	
	Fire		10		252		25	
	Marine		3		42		14	
	Motor Vehicle		12		133		11	
	Stampede		1		21		21	
	Rail		2		36		18	
	Asphyxiation		1		19		19	
	Mass Shootings		12		220		18	

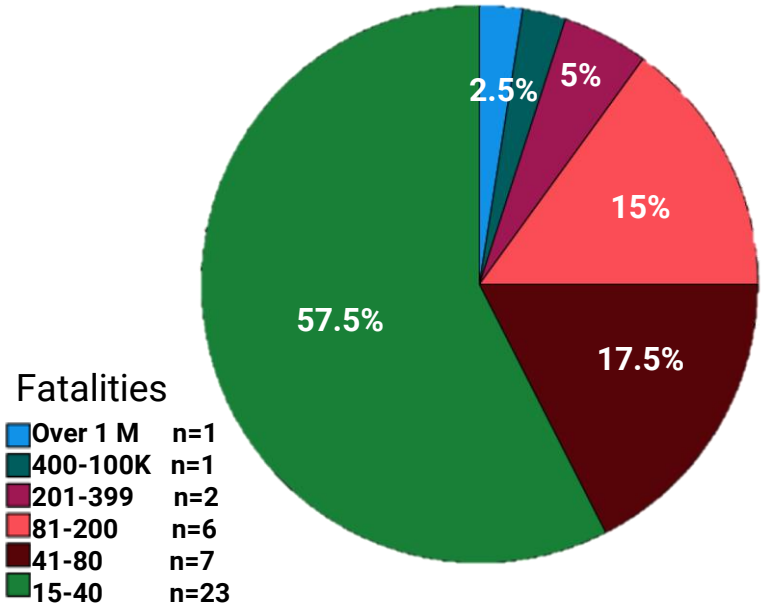
Average Number of Fatalities Per Incident = 62
Average Number of Fatalities Per Incident (excluding WTC and Hurricane Katrina) = 29
MFI - Mass fatality incident
WTC - World Trade Center

Carroll, E., Johnson, A., DePaolo, F., Adams, B. J., Mazone, D., & Sampson, B. (2017). **Trends in United States Mass Fatality Incidents and Recommendations for Medical Examiners and Coroners**. Academic forensic pathology, 7(3), 318–329. https://doi.org/10.23907/2017.029

Most Likely Mass Fatality Events

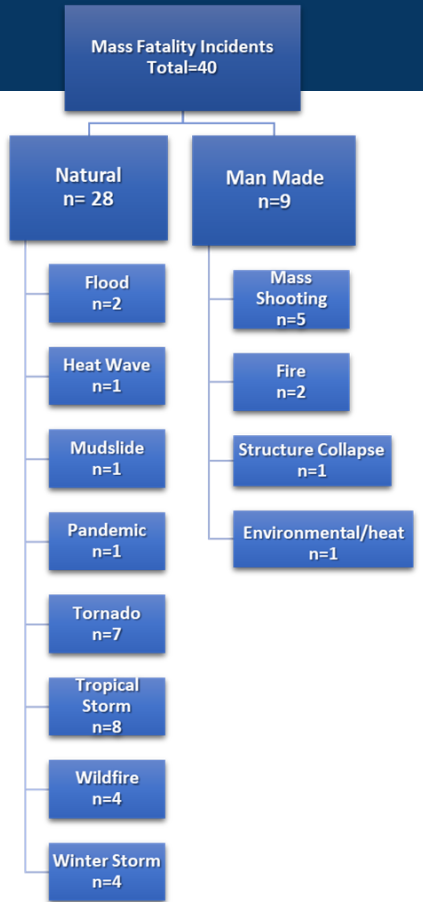
- Santillán, 2022
  - US
  - Incidents with fatalities ≥13
  - 2017-August 2022
  - 39 incidents resulting in 4998 fatalities
    - 1 Pandemic over 1M
- Average number of Mass Fatality incidents between 2016-2022
  - **Per year=7**
    - **Natural ~ 5**
    - **Man Made ~ 2**

Mass Fatality incidents from 2017-2022 by Number of Fatalities



Most Likely Mass Fatality Events

Year	Frequency
2017	11
2018	8
2019	3
2020	6
2021	8
2022	4
Total	40



MFI Type	Category	Incidents	Total Deaths	Average Deaths
Man Made	Mass shooting	5	150	30
	Structural collapse	1	98	-
	Enviromental/Heat	1	53	-
	Fire	2	51	25.5
	Transportation	3	53	17.5
Natural	Flood	2	61	30.5
	Heat wave	1	300	-
	Mudslide	1	21	-
	Pandemic	1	1000000+	-
	Tornado outbreak	7	240	34.3
	Tropical cyclone*	8	3443	50
	Wildfire	4	167	41.75
	Winter Storm	4	361	90.25
	Total	40		
		Avg	53.05263158	

* Hurricane Maria over 2982 fatalities not included in average

Pandemic fatalities not included in average

OCME'S Mission in a Mass Fatality Event

- The Office of the Chief Medical Examiner (OCME) will effectively manage a fatality incident resulting from a chemical, biological, radiological, nuclear, or explosive (CBRNE) event or any other catastrophic event such as a hurricane, flood, or plane crash that causes a large number of fatalities.

- OCME will ensure the
  - complete collection and examination of the dead,
  - determination of the nature and extent of injury,
  - recovery of forensic, medical and physical evidence (associated with remains)
  - identification of the fatalities using scientific means,
  - and certification of the cause and manner of death.

  All activities will be sufficiently documented for admissibility in criminal and/or civil courts.

- The OCME will continue to complete the daily non-event demands of the community.

OCME's Levels of Response

1

- Initially the OCME will send a team to the incident site to assist with the recovery and documentation of human remains and associated evidence.
- Depending on number of fatalities OCME will manage the Temporary Holding Area

2

- At the facility for forensic processing (temporary morgue or OCME district office) the OCME will work to conduct examinations on each decedent recovered from the incident site

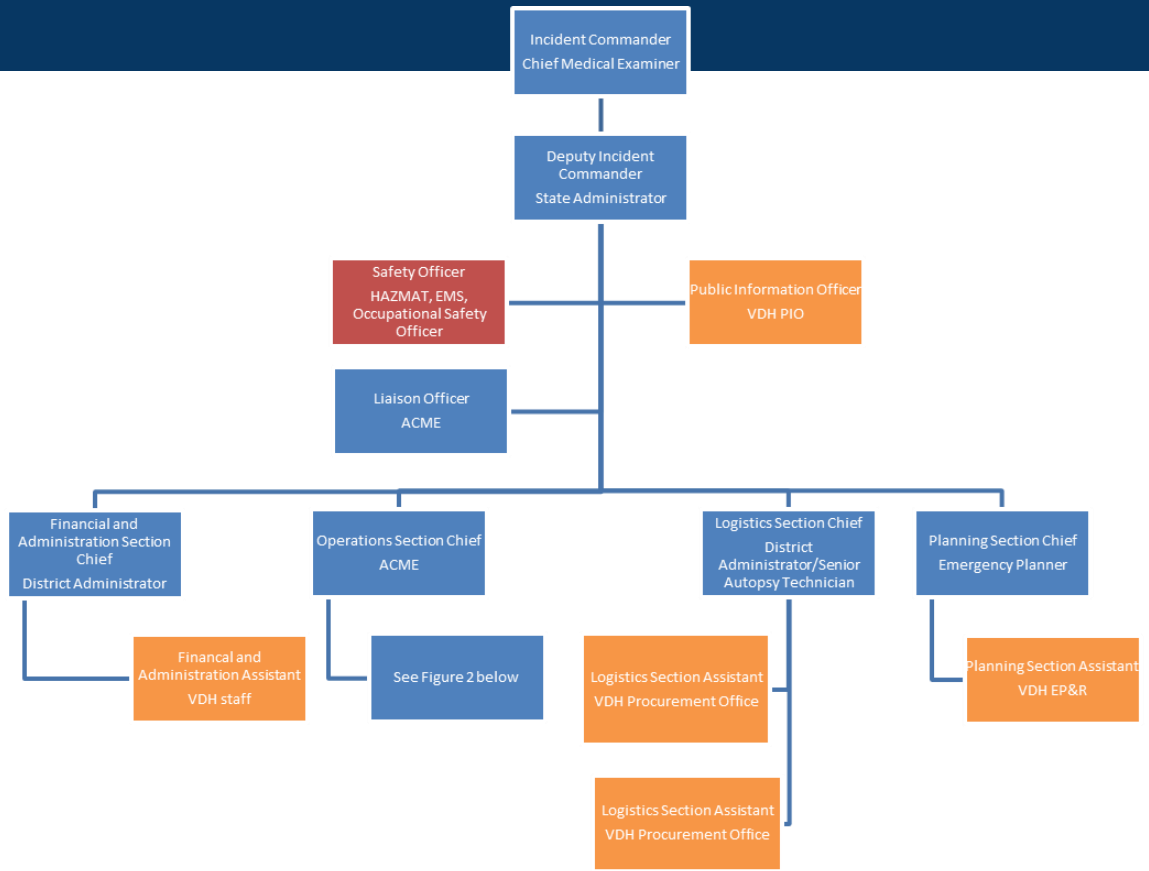
3

- The Family Assistance Center (FAC) should be established as quickly as possible by the responsible agency/locality
- The OCME will establish an Antemortem Data Group at the FAC to interview families to collect antemortem information and collect DNA samples from blood relatives for possible identification of decedents.

4

- Once a positive, scientific identification is made, the OCME will notify the i**nvestigating law enforcement agency** so that proper next-of-kin notification can be made and remain can be released to NOK.

OCME's Levels of Response



OCME Staff

HAZMAT, EMS,

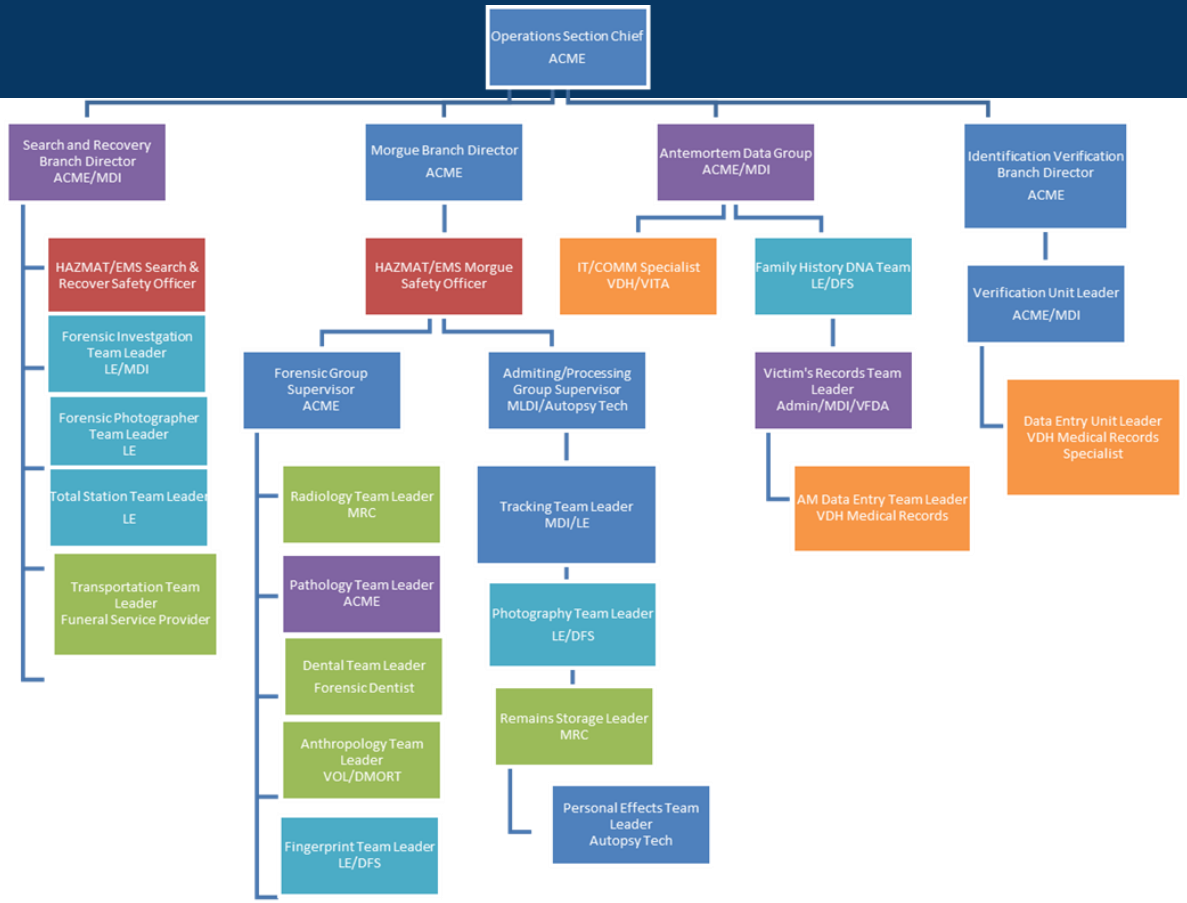
OCME, DMORT, LE, DFS

VDH STAFF (Not OCME)

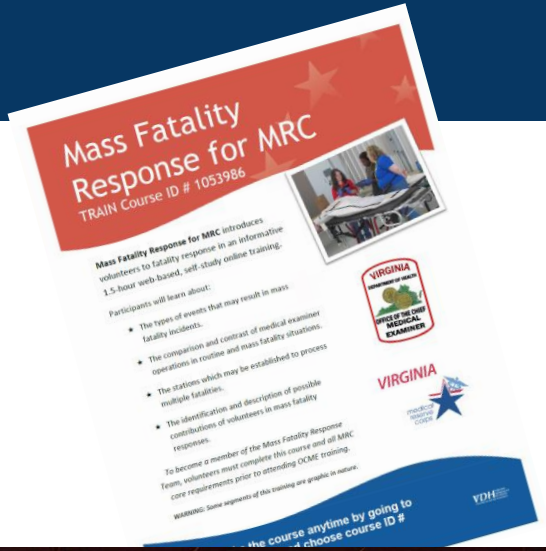
Volunteers (Red Cross, MRC)

Law Enforcement, MLDI

OCME's Levels of Response



OCME's Plans



Support Annex G (VA OCME Mass Fatality Plan) to the Virginia Department of Health EOP

Support Annex G – VA OCME Mass Fatality Plan

VDH, Office of Emergency Preparedness
Office of the Chief Medical Examiner

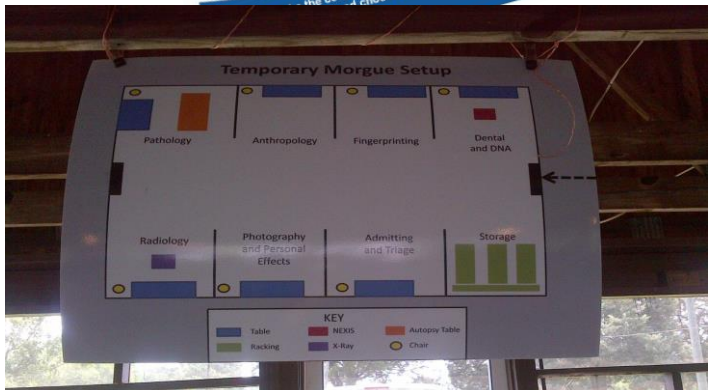
Office of the Chief Medical Examiner

Executive Summary for a Mass Fatality Incident (MFI)

This document is a resource for senior leadership at local, regional, state, and federal levels when dealing with mass fatality incidents. It presents a brief outline of the roles, responsibilities, and response plans of the Office of the Chief Medical Examiner (OCME) in the event of a mass fatality incident. The OCME staff routinely reviews and practices the plan through exercises and drills.

The OCME has three major responsibilities:

- Assist Law Enforcement with the scientific identification of the deceased
- Certify the cause and manner of death for each death
- Collect evidence which may be necessary for criminal prosecution

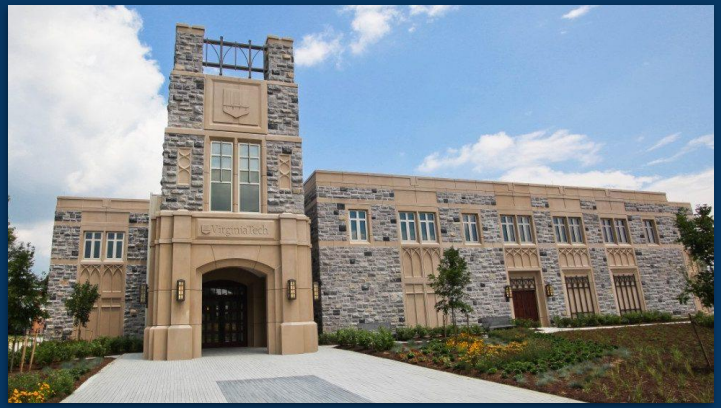


VA Mass Fatality Events

- VA TECH Mass Shooting
- Stafford Plane Crash
- VA Beach Shooting
- Other Significant Events
  - Bridgwater College Shooting
  - Fatality Tracking

VA TECH Mass Shooting

April/16/2007



- Incident started around 7am in dormitory, then school building around 9am
- 32 Fatalities plus shooter
- OCME first notified at around 7:30 about first incident by Perdiem Investigator
    - 2nd Perdiem at 11:30 am notified about the multiple fatalities at Norris Hall
- WOCME arrives to scene at 1:30pm for operational meeting
- 5pm first fatality transported to WOCME
    - 8:45 Last fatality transported to WOCME
- By end of the day, 2 IDs were completed
- 3 days to complete all ID and released all decedents.

Stafford Plane Crash

08/12/2016

- Plane traveling from Louisville to Shelbyville, IN to Shannon (Stafford) Airport
- Attempted to land and hit several trees on both sides of runway
- Crashed in wooded area at **1231hrs 8/12/2016**
  - ME Arrival On scene at 1900hrs
  - Departed scene at 0000hrs 8/13/2016
- 6 Victims total- all needed to be identified via scientific means (DNA, DDS)
    - Some international students

VA Beach Shooting

May 31, 2019

- 1608 Shots Fires Isolated event
- Located inside building: multiple floors
- Known amount of victims
- Most victims had ID/or within their designated office space
- Visually ID'd, no need for scientific identification
- **OCME notified 1635 hrs**
  - 2100: OCME Investigator on-scene - Recovery Lead
  - 2300: Tidewater OCME Investigative Team

- June 1 0700: All 12 victims & 1 assailant received by OCME office and OCME investigators leave the scene
- June 1 1700: 9 victim postmortem examinations complete
- June 2nd all Examinations completed

Source: Investigator Rob Robinson

Bridgewater College Active Shooting

02/01/2022

- At approximately 1:20 p.m. Feb. 1, 2022, the Bridgewater College Police Department and et. al, responded to a report of an active shooter on the Bridgewater College campus.
- 2 officers had responded to a call of a suspicious individual on campus. After a brief interaction, the 27-year-old shooter shot and killed the 2 officers.
- Suspect was apprehended shortly after
- **OCME notified at 1830 hrs**
  - MDI arrived at the scene at 2047 hrs (about 1 ½ hrs of travel from district office to scene)
  - Only one MDI at scene- scene was manageable
  - MDI departed the scene at 2215 hrs.

Fatality Tracking for Other Events

Number of Fatalities Attributed to Severe Weather in Which Statewide Fatality Surveillance was Requested, November 2013 to April 2019

Year of Event	Type of Weather Event	MVA	Hypothermia (cold)	Blunt trauma, not MVA	Hyperthermia (hot)	Fire	Drowning	Plane Crash	Carbon Monoxide Poisoning	Total Deaths from Storm
2013	Winter Storm (November 27, 2013)	2	---	---	---	---	---	---	---	2
	Winter Storm (December 8-10, 2013)	---	1	---	---	---	---	---	---	1
2014	Winter Storm (January 4-5, 2014)	2	---	---	---	---	---	---	---	2
	Winter Storm (January 21, 2014)	2	1	---	---	---	---	---	---	3
	Winter Storm (January 28, 2014)	---	2	---	---	---	---	---	---	2
	Winter Storm (February 12-13, 2014)	2	---	---	---	---	---	---	---	2
	Winter Storm (March 2-4, 2014)	3	2	---	---	---	---	---	---	5
	Tornados on Eastern Shore (July 24, 2014)	---	---	3	---	---	---	---	---	3
2015	Winter Storm (January 13-14, 2015)	2	---	1	---	---	---	---	---	3
	Winter Storm (January 23, 2015)	1	---	---	---	---	---	---	---	1
	Winter Storms (February 15-18, 2015)	10	6	5	---	---	---	---	---	21
	Winter Storm (March 5-6, 2015)	3	4	---	---	---	---	---	---	7
	Heat Wave (June 18-24, 2015)	---	---	---	3	---	---	---	---	3
	Hurricane Joaquin (October 2-5, 2015)	2	---	---	---	---	---	---	---	2
2016	Winter Storm Jonas (January 22-27, 2016)	4	7	---	---	---	---	---	---	11
	Winter Storm (February 13-16, 2016)	3	1	---	---	2	---	---	---	6
	Tornados (February 24-25, 2016)	---	---	4	---	---	1	---	---	5
	Heat Wave (July 23-26, 2016)	---	---	---	4	---	---	---	---	4
	Heat Wave (August 12-19, 2016)	---	---	---	2	---	---	---	---	2
	Hurricane Matthew (October 8-9, 2016)	1	---	---	---	---	1	---	---	2
2017	Winter Storm (January 6-11, 2017)	---	1	---	---	---	1	---	---	2
	Winter Storm (March 13-14, 2017)	---	---	1	---	---	---	---	---	1
	Winter Storm (December 8, 2017)	3	---	---	---	---	---	---	---	3
2018	Winter Storm (January 2-6, 2018)	5	2	1	---	1	---	---	---	9
	Winter Storm (March 12-13, 2018)	3	---	---	---	---	---	---	---	3
	Severe Weather (April 15, 2018)	---	---	---	---	---	---	1	---	1
	Flooding (May 30, 2018)	---	---	---	---	---	1	---	---	1
	Hurricane Florence (September 17-18, 2018)	1	---	1	---	---	2	---	---	4
	Hurricane Micheal (October 11, 2018)	1	---	---	---	---	5	---	---	6
	Winter Storm (December 11-14, 2018)	---	2	1	---	---	---	---	---	3
2019	Winter Storm (January 12, 2019)	1	---	---	---	---	---	---	---	1
	Winter Storm (February 19-20, 2019)	---	1	1	---	---	---	---	---	2
	Severe Thunderstorms/Tornado Warnings (April 15, 2019)	---	---	2	---	---	---	---	---	2
	Heat Wave (July 16-21, 2019)	---	---	---	5	---	---	---	---	5
2020	Heat Wave (July 19-22, 2020)	---	---	---	5	---	---	---	---	5
	Hurricane Isias (August 3-4, 2020)	---	---	1	---	---	---	---	---	1
	Winter Storm (December 16-17, 2020)	1	---	---	---	---	---	---	---	1
2021	Winter Storm (February 6-8, 2021)	---	---	1	---	---	---	---	---	1
	Ice Storm (February 13-16, 2021)	1	2	---	---	1	---	---	3	7
	Winter Storm (February 18-19, 2021)	---	2	---	---	---	---	---	---	2
	Heat Wave (June 29-July 1, 2021)	---	---	---	1	---	---	---	---	1
	Heat Wave (August 11-13, 2021)	---	---	---	1	---	---	---	---	1
	Hurricane Ida (August 31-September, 2021)	1	---	---	---	---	1	---	---	2
	Severe Weather (October 28-29, 2021)	---	---	---	---	---	1	---	---	1
2022	Winter Storm (January 2-4, 2022)	1	4	2	---	1	---	---	3	11
	Winter Storm (January 28-29, 2022)	---	---	---	---	---	---	---	1	1
Total		55	38	24	21	5	13	1	7	164

Epidemics

- Why aren’t pandemic fatalities under OCME?
- COVID-19 Pandemic
  - Lessons Learned

OCME & COVID-19

Does OCME have a role in Epidemics?

- Code of Virginia § 32.1-283
  - They are considered natural OCME will not take jurisdiction of fatalities
    - ID of pathogen
    - Identification issues/ unattended deaths
    - Due to Bioterrorism, OCME may need to take jusridisticiton od deaths since it will be considered a Homicide manner of death
- During COVID-19 OCME had a role as a SME in fatality management
  - Fatality Management Task Force

Lessons Learned

- Federal Resources and DMORT
  - Resources tied with their respective state
- Mass Fatality Management Task Force
  - **It's a must** and should be established ASAP to start collaboration and identify needs & capabilities
  - Should happen in any event that may require mass fatality management

Questions?

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SCAN ME

Acknowledgements:

All 4 OCME Districts for all their hard work

Rosie Hobron, OCME Frs. Epidemiologist for data