

Region 5 Firefighter Rehab Project



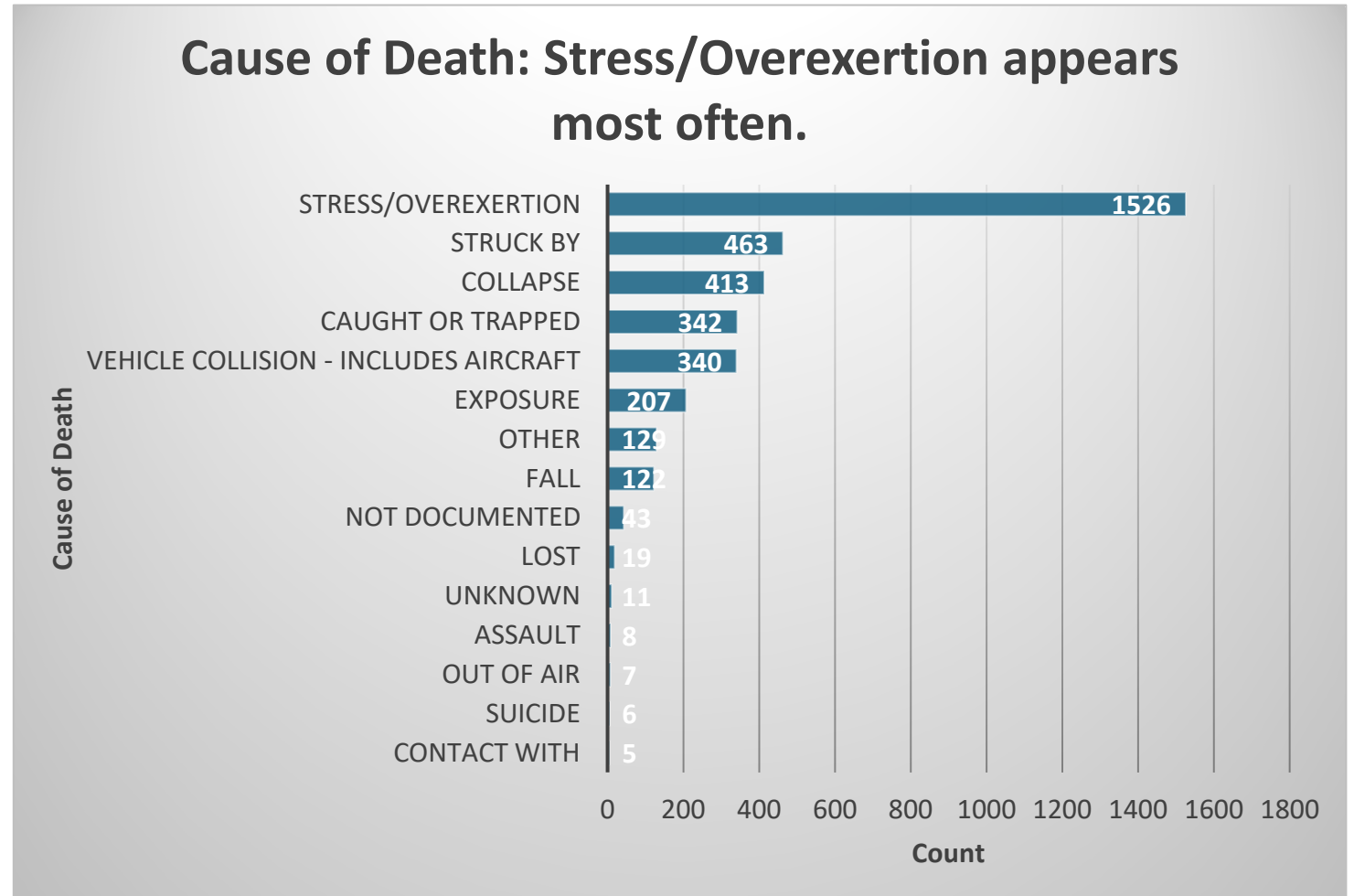
Purpose of Rehab

- Evaluate personnel based on common practice (*NFPA 1584*)
- Identify fire personnel who have exhibited suspicion of a medical problem or meet the critical criteria for a medical emergency.
 - Rehab should be done during incidents and training events
- Treat conditions presented
- Transport as necessary
- **Above All:** *Protecting our family*

Fatality Statistics

National Firefighter Deaths (1990-2021)

Cause of Death	Count
Stress/Overexertion (S&O)	1526
Struck By	463
Collapse	413
Caught or Trapped	342
Vehicle Collision - Includes Aircraft	340
Exposure	207
Other	129
Fall	122
Not Documented	43
Lost	19
Unknown	11
Assault	8
Out of Air	7
Suicide	6
Contact With	5
Grand Total	3641

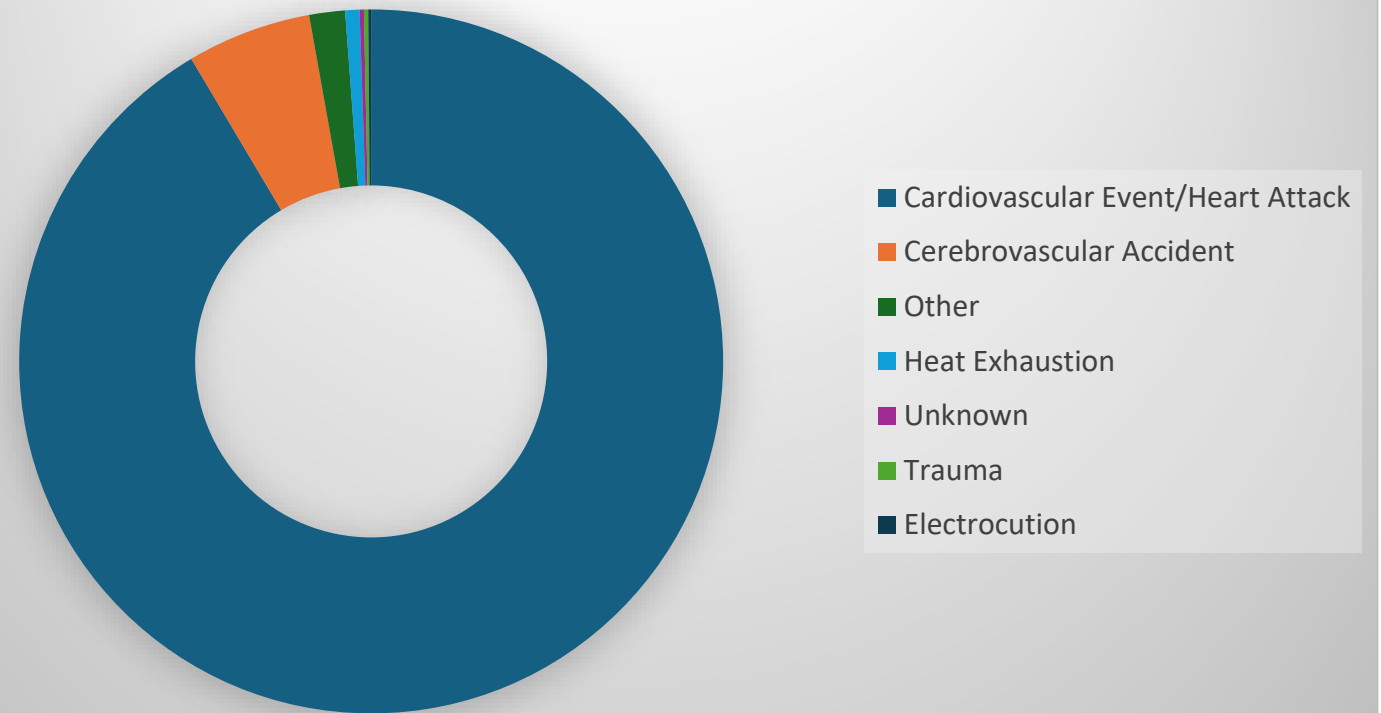


Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

National Firefighter Deaths (1990-2021) cont.

Stress/Overexertion Death	Count
Cardiovascular Event/ Heart Attack	1393
Cerebrovascular Accident	87
Other	25
Heat Exhaustion	10
Unknown	6
Trauma	3
Electrocution	2
Grand Total	1526

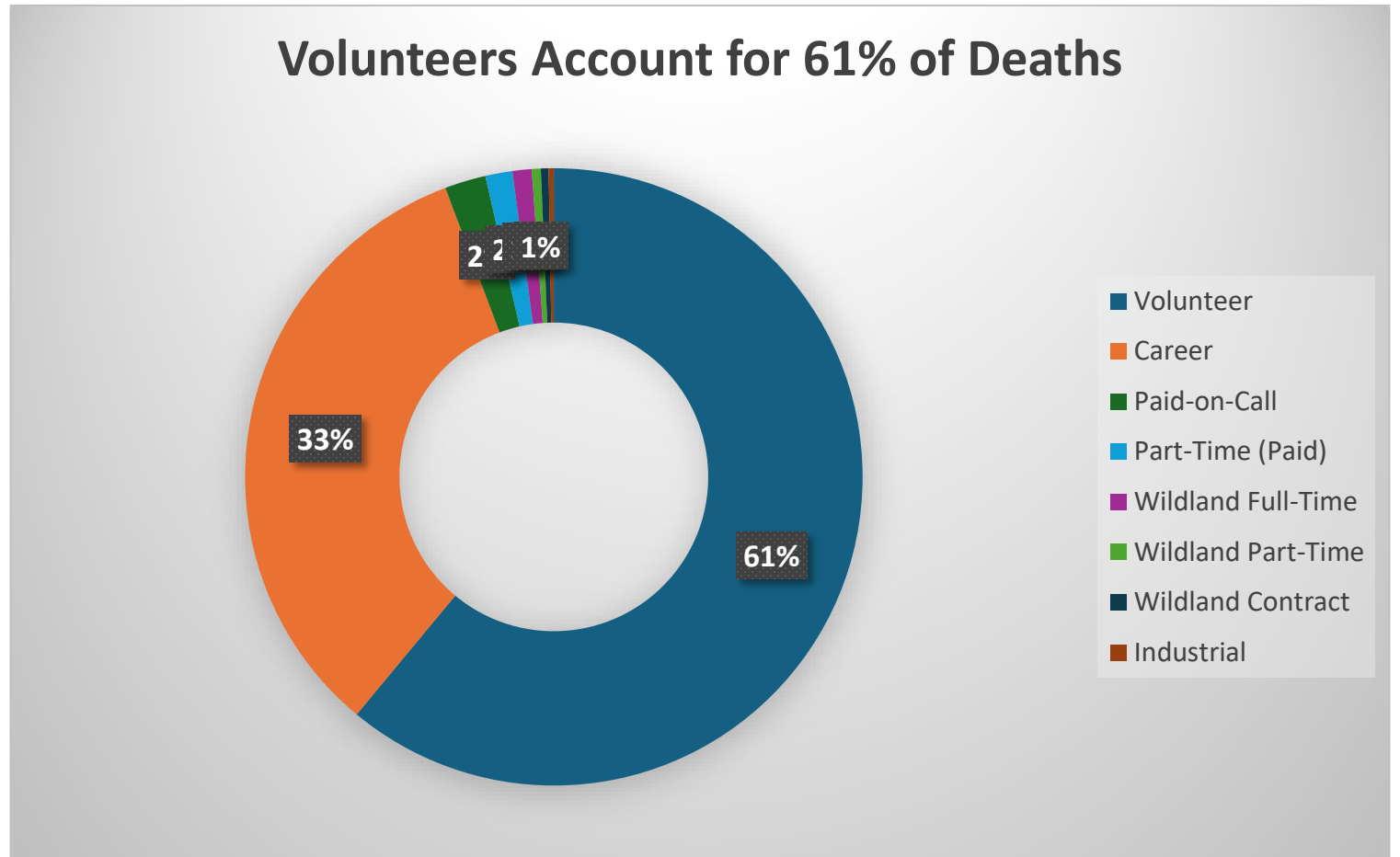
Cardiovascular Event/Heart Attack accounts for the **91.2%** of S&O deaths.



Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

National Firefighter Deaths (1990-2021) cont.

Classification	Deaths
Volunteer	908
Career	495
Paid-on-Call	32
Part-Time (Paid)	21
Wildland Full-Time	15
Wildland Part-Time	7
Wildland Contract	6
Industrial	4
Grand Total	1488

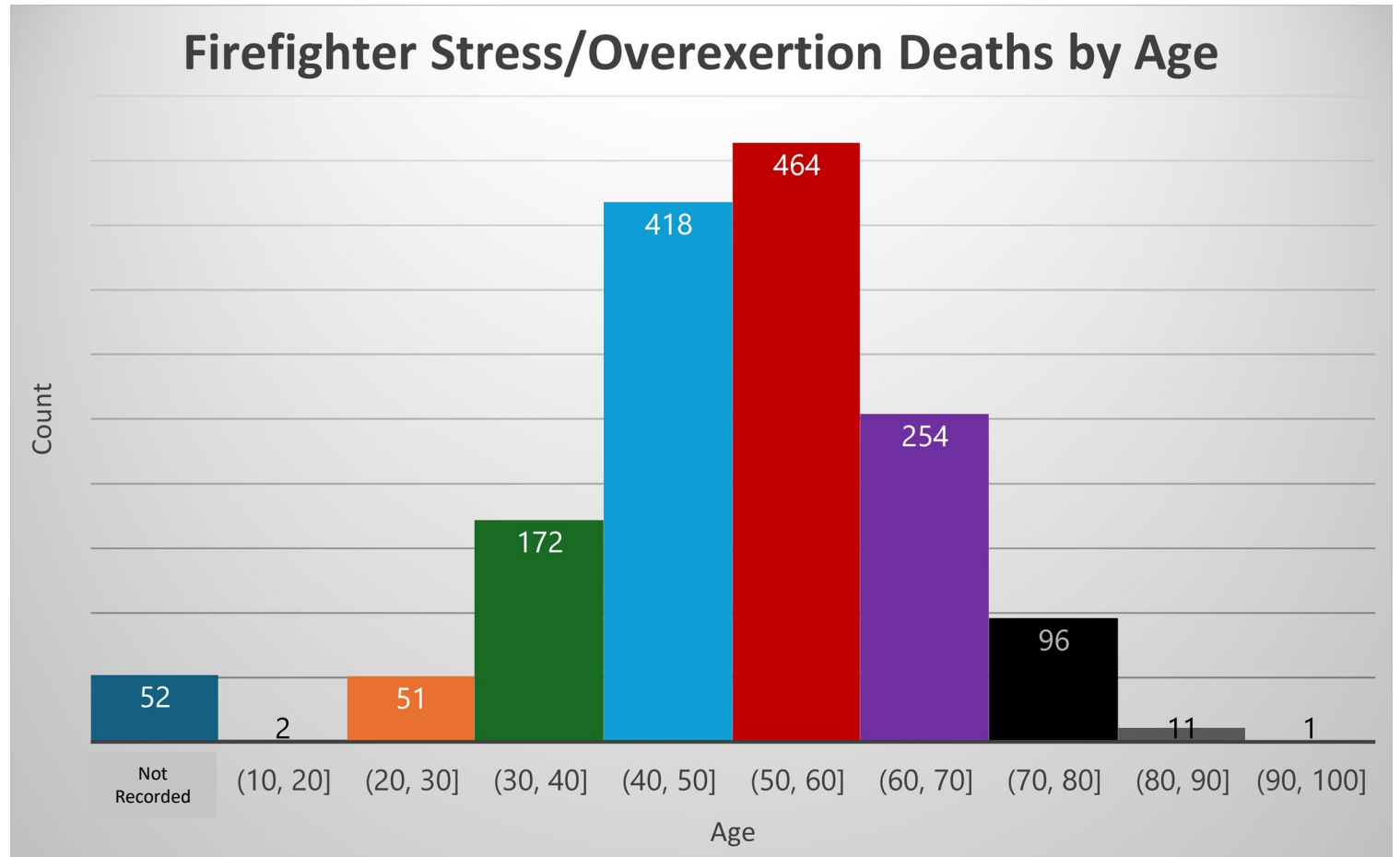


Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

National Firefighter Deaths (1990-2021) cont.

Stress/Overexertion Death

- Youngest age was **17** years old
- Average age is **52.5** years old
- Oldest age was **95** year old



Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

National Firefighter Deaths (1990-2021) cont.

Top 10 Rank in Stress/Overexertion



1	New York	164
2	Pennsylvania	141
3	New Jersey	84
4	Texas	74
5	North Carolina	70
6	California	63
7	Ohio	59
8	Illinois	53
9	MICHIGAN	46
10	Indiana	40
10	Missouri	40

Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

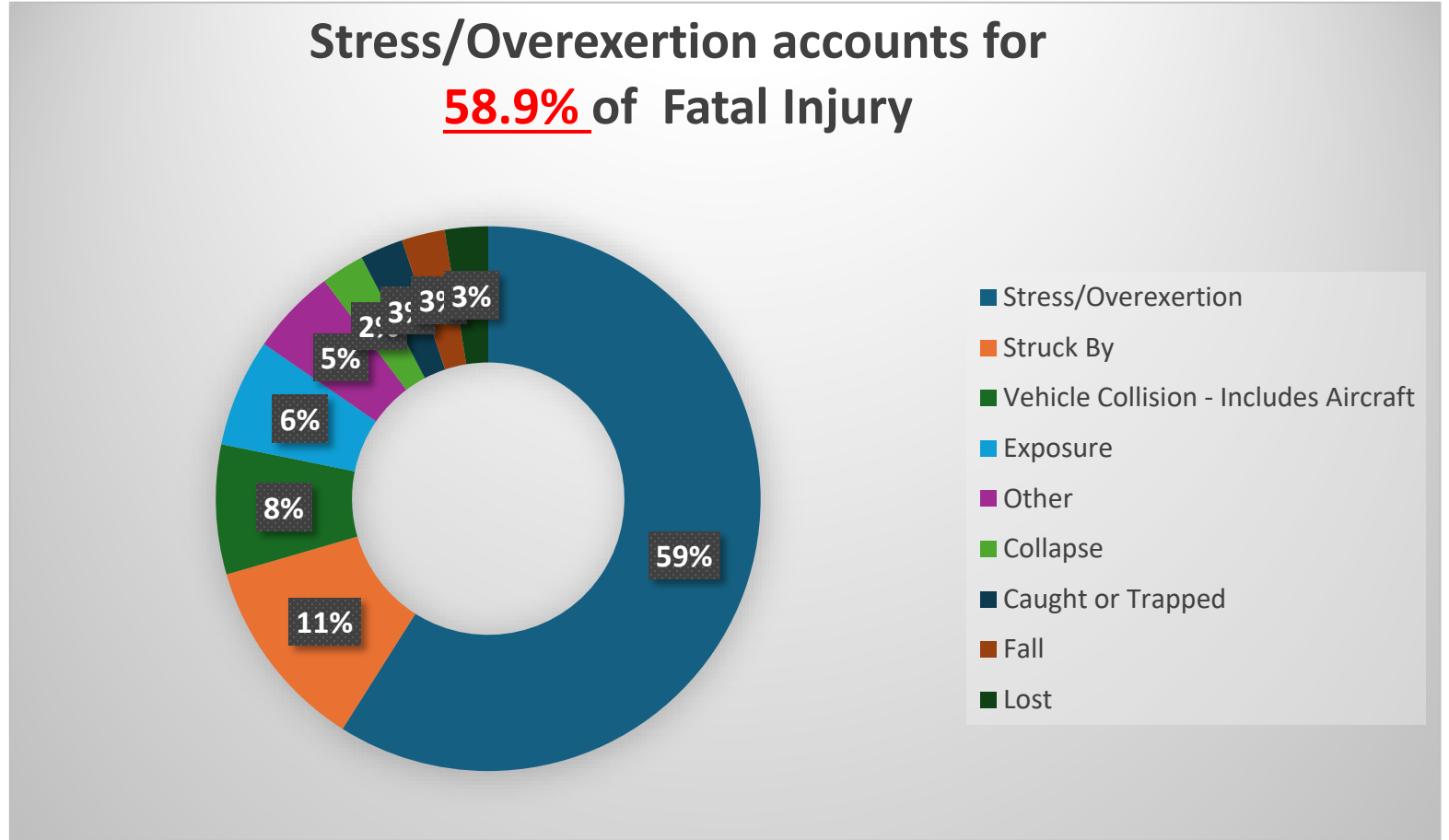
National Firefighter Deaths (1990-2021) cont.

Firefighter Deaths During 2024

52

Michigan Firefighter Deaths (1990-2021)

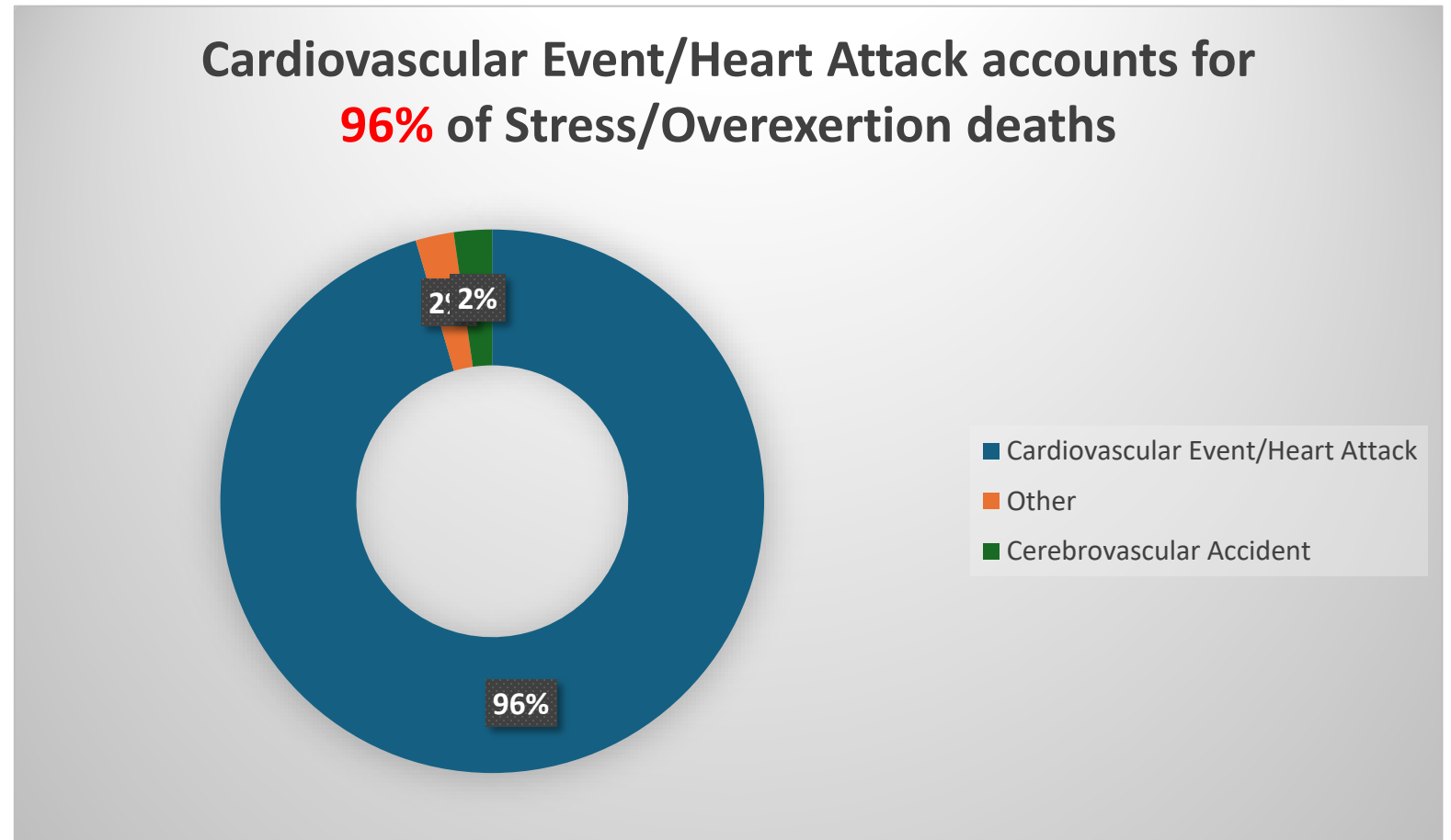
Cause of Fatal Injury	Count
Stress/Overexertion	46
Struck By	9
Vehicle Collision - Includes Aircraft	6
Exposure	5
Other	4
Collapse	2
Caught or Trapped	2
Fall	2
Lost	2
Grand Total	78



Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

Michigan Firefighter Deaths (1990-2021) cont.

Stress/Overexertion	Count
Cardiovascular Event/ Heart Attack	42
Other	1
Cerebrovascular Accident	1
Grand Total	44



Source: <https://apps.usfa.fema.gov/firefighter-fatalities/>

Operations

Rehab Operations

- **Rehab Officer Reports to IC**
 - Primarily Paramedics
 - Fill out an appropriate rehab sheet
 - Informs supervising department of conditions
 - Local ambulance company keeps a copy while the supervising fire department also receives a copy.
 - One sheet per department is preferable
 - Rehab unit does not leave scene to transport
 - If an ALS Unit is not available, a Company or Line Officers, MFRs, and basic-EMTs may also serve in this function as long as all duties and responsibilities of the position are known and completed

Rehab Criteria

- NFPA common practice to evaluate the following:
 - Firefighters who deplete (2) 30-minute SCBA cylinders
 - **or** using a single 40/60 minute SCBA cylinder
 - **or** 40 minutes of strenuous work
 - **or** Firefighters who are symptomatic for any medical emergency
 - MI, CVA, Heat Exhaustion, Dehydration, Smoke Inhalation, etc.



Rehab Criteria cont.

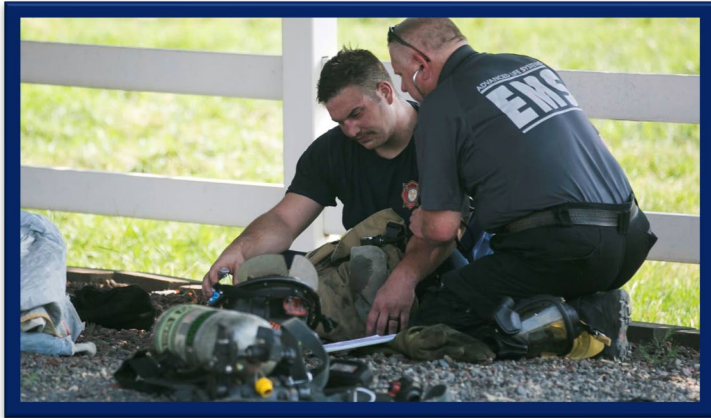
- NFPA supporting standards
 - *1500 Standard on Fire Department Occupational Safety, Health, and Wellness Program (2021)*
 - *Emergency Operations*
 - *1584 Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*
 - *Incident Scene and Training Rehabilitation*

Rehab Criteria cont.

- Evaluation Components
 - Blood Pressure
 - Heart Rate
 - Respiratory Rate
 - Pulse Ox
 - Temperature

Proposed Vital Sign Guidelines

After 20 minutes of rest with gear removed in climate conditions warranting removal:



1. Systolic blood pressure must be **less than 160**
2. Diastolic blood pressure must be **less than 100**
3. Heart rate must be **less than 110**
4. Oral temperature must be **less than 100.6**
(Ear temperature probe preferred)
*Consider temperature of fluid intake affecting this measurement
5. Firefighters have been re-hydrated as indicated
(at least 16 oz. of fluid) and re-warmed/
cooled as indicated by incident.
6. Personnel are mentally prepared to return to the incident area

Proposed Vital Sign Guidelines cont.

If any personnel exhibiting vital signs outside of the values stated previously, a mandatory extension of an additional 15 minutes in the rehab area will be required.

If vital signs have not returned to the acceptable ranges after the additional 15 minutes, the firefighter shall be considered to be injured and will not be permitted to return to active duty.



Proposed Vital Sign Guidelines cont.

The IC will be notified. The supervisor or department will then be contacted and transportation directions will be given.

Proposed Vital Sign Guidelines cont.

The following criteria serves as guidelines for transporting personnel involved in emergency operations to the hospital for further evaluation **after at least 35 minutes** in the Rehab Unit:

1. Diastolic blood pressure **greater than 130**
2. Diastolic blood pressure **greater than 110 and symptomatic**
3. Diastolic blood pressure is **less than 110 and symptomatic**
4. Systolic blood pressure **greater than 200** and remains greater than 200 after 15 minutes of rest
5. Heart rate **above 140 after 15 minutes** of rest or **less than 60 with accompanied hypotension**
6. Symptoms of CO exposure. (headache, nausea, vomiting, LOC) w/ elevated CO level.
7. Any other emergent condition not outlined above

Proposed Rehab Log



R5MCAN INCIDENT REHAB PROFILES

Guidelines for RELEASING Personnel from Rehab for Additional Assignments (After 20 minutes in Rehab)	Guidelines for TRANSPORTATION of personnel to hospital (After 35 minutes in Rehab)
<ul style="list-style-type: none"> ✓ Gear should be removed except cold weather ✓ Rehydration with at least 16 - 32 oz of water ✓ Minimum of 20 minutes in Rehab 	<ul style="list-style-type: none"> ❖ ANY emergency condition shall be treated and transported as soon as possible
<p style="text-align: center;"><u>VITAL SIGNS</u></p> <ul style="list-style-type: none"> • Systolic B/P less than 160 • Diastolic B/P less than 100 • Heart rate less than 110 • Oral temperature less than 100.6 <p style="text-align: center;">Any personnel who exceed these limits must stay in Rehab an additional 15 minutes.</p>	<p style="text-align: center;"><u>VITAL SIGNS</u></p> <ul style="list-style-type: none"> • Systolic B/P greater than 200 • Diastolic B/P greater than 130 • Diastolic B/P greater than 110 and symptomatic • Diastolic B/P less than 110 and symptomatic • Heart rate above 140 or less than 60 with hypotension • Oral temperature greater than 100.6 • Symptoms of CO exposure (headache, nausea, vomiting, LOC) w/ elevated CO levels
<p style="text-align: center;"><u>General Considerations</u></p> <ul style="list-style-type: none"> • Mentally prepared to return <ul style="list-style-type: none"> ○ Oriented ○ No Critical Incident Stress symptoms • Turnout gear in good condition • SCBA refilled/checked • Entire crew prepared and ready 	<p style="text-align: center;"><u>Procedure</u></p> <ul style="list-style-type: none"> • Crew is considered to be out of service until manpower is evaluated by SSO • Notification of the patients immediate supervisor by SSO • Treat/transport per system SOG
<p style="text-align: center;"><u>Release to scene through Staging</u></p> <ul style="list-style-type: none"> • Return Accountability Tag to company officer 	

SIDE WITH SAFETY: THE FF's FAMILY IS COUNTING ON YOU!