



**KOOTENAI COUNTY
FUNERAL/MEMORIAL
SERVICE MODEL
PROCEDURES
APPENDIX A**



KOOTENAI COUNTY FUNERAL/MEMORIAL SERVICE MODEL PROCEDURES

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KOOTENAI COUNTY FUNERAL/MEMORIAL SERVICE MODEL PROCEDURES

Purpose:

The purpose of this guide is to help establish procedures that will ensure proper support and care for a Fire Department member's family and that appropriate honors are rendered after the death of an active or honorably retired member of the fire department.

Objectives:

- To standardize burial protocol;
- To promote honor and respect for a fallen Fire Department member;
- To establish the lines of authority and responsibilities during notification, funeral and burial proceedings;
- To establish criteria for each type of funeral: Class I, Class II, Class III, and;
- To establish to whom these honors are to be rendered.

Classifications:

LODD: A LODD death shall be defined as involving members who are killed at the scene of an emergency incident or killed responding to or returning from the scene of said incident. This classification death will also include those who are injured at an emergency scene that later die as a result of their injuries. A LODD will not include individuals who die of heart, lung, or other illnesses while not engaging in emergency activities at the time of death.

A LODD death pertains to members of the Department who die while on duty, but not due to injuries sustained while performing emergency activities.

Non-Duty: A Non-Duty death is a death occurring when an active member is off duty and not relating to any emergency activity.

Retirees: Pertains to the death of a retiree of an agency, paid or volunteer.

Notification:

Line of Duty Death (LODD)

The responsible chief officer or designee at the time of the incident will be responsible for contacting the appropriate chief officer; Fire Chief, Deputy Chief, etc.

The Fire Chief and the Chaplain will be responsible for contacting the families of the firefighter's or other department members who have been killed in the line of duty after reviewing proper paperwork (Section 4). If the department member's next of kin are outside the local area, it will be the Fire Chief's responsibility to notify the fire or police department nearest the family, and to arrange that a uniformed officer, preferably from the fire department, and accompanying local Chaplain, contact the family in person. **It is extremely important that the initial contact with family members be from the Fire Chief or their designee whenever possible.**

1. The Fire Chief or their designee has the primary responsibility for contacting their elected officials (City or Fire District) and any other appropriate dignitaries.
2. The Fire Chief or designee will be responsible for notifying the Union Official and review survivor information form.
3. A designated Chief Officer will ensure all stations within the department are notified.
4. The Fire Chief or designee will contact the agency's Honor Guard or one in the immediate area.

Active Members (Off duty death)

Department members that have knowledge of a fellow Fire Service member death are encouraged to notify the appropriate Chief Officer and/or Union Official as indicated.

1. The designated officer will then notify the Department's Chaplain and Administration after receiving and verifying any relevant information of the member's death and any applicable funeral information.
2. Once notified, the Fire Chief or designee will contact the family and offer the Department's assistance.
3. The Fire Chief or designee will contact the Union President or Vice President.
4. An internal notice to all personnel will announce the death and any funeral or memorial arrangements to all stations and personnel.
5. The Fire Chief or designee will contact the agency's Honor Guard or one in the immediate area.

Retiree Deaths

1. The family of the deceased retiree is responsible for contacting the Department if they wish the Fire Department's participation in the funeral service.
2. The announcement should follow a set format, and be from the perspective of the Chief or their designated representative (i.e. Deputy Chief, Division Chief Etc.).
3. A verbal announcement should be followed with written internal notice should be distributed for posting in each Fire Department facility, with a follow up announcement once funeral plans are finalized.
4. After the announcement is made within the department, it may be made available as a formal written statement to the appropriate media outlets with the family's permission.

Sample announcement

I, Chief _____, regret to report the death of _____(number) of our brave firefighters. (Name or names) died at _____(time) (date be necessitated if death was not immediate) while _____(actively working on, responding to, returning from) incident # _____at _____(Location). Funeral arrangements are pending at this time, however a formal announcement of the arrangements, and the department's participation will be made, within the wishes of the family (families).

Additional responsibilities:

1. Funeral arrangements are the ultimate responsibility of the family, but the Fire Department/District or Union will provide assistance if requested.
2. A member selected by the Fire Chief is responsible for coordination of all necessary Department/District personnel before and during funeral services. Additionally, Chief Officer or designee will contact the coordinator of the (local) Honor Guard. The member (i.e. Chief Officer) will ensure that the funeral /memorial service proceeds smoothly.

SECTION 1: FUNERAL GUIDELINES

The following guidelines are for services to be provided to a family by the Fire Department/District if so desired by the family of the fallen member:

Line of Duty Death

Prior to services:

1. Assignment of Family Liaison Officer by Fire Chief (family may have a preference which should be honored).
2. Make transportation arrangements to funeral home/cemetery; family and casket as needed.
3. Offer services of Department Clergy/Chaplain to the family.
4. Offer services of a Chief Officer or other member designated by the Fire Chief and Union representative to assist family in making arrangements.
5. Arrange for Body Bearers and Honor Guard.
6. Arrange for Police escorts for processional to cemetery.

Chapel / Church services:

1. Honor Guard at Casket (During all viewing and visitation at funeral home leading up to funeral service).
2. Fire Apparatus for processional to graveside (as well as standing fast at the funeral home during all viewing and visitation).
3. Honor Guard at service.
4. Color Guard at Service.
5. Pipers and Drum Corps at service.

Graveside Service:

1. Arched aerial ladders with hanging flags at entrance to the cemetery.
2. Fire Apparatus at graveside.
3. Honor and Color Guard.
4. Services of Department Chaplain (at family's request).

5. Flag folding ceremony.
6. Pipers and Drum Corps.
7. Bugler to play Taps.

Off Duty Death

Prior to services:

1. Offer services of Department Clergy/Chaplain to the family.
2. Arrange for Body Bearers and Honor Guard.
3. Upon request, arrange for Police escorts for processional to cemetery.

Chapel / Church services:

1. Honor Guard at Casket.
2. Color Guard at Service.
3. Pipers and Drum Corps at service.

Graveside Service:

1. Honor and Color Guard.
2. Services of Department Chaplain (at family's request).
3. Flag folding ceremony.
4. Bugler to play Taps.

Retiree Death

Prior to services:

1. Offer services of Department Clergy/Chaplain to the family.
2. Upon request, arrange for Body Bearers and Honor Guard.
3. Upon request, arrangement for Police escorts for processional to cemetery.

Chapel / Church services:

1. Honor Guard at Casket, upon request.
2. Color Guard at Service, upon request.

3. Uniformed personnel at service.

Graveside Service:

1. Honor Guard, upon request.
2. Services of Department Chaplain (at family's request).
3. Flag folding ceremony, upon request.

Guidelines for the Funeral / Memorial Service

Line of Duty Death:

1. All available Department personnel to attend in full class "A" dress uniform, including off-duty members.
2. All members will wear a black band (shroud) over their badges from
 - i. The time of death until 24 hours following the completion of the service.
3. All Department/District flags will fly at half-staff from the time of death is announced until at least 24 hours after the conclusion of the services.
4. All regular Department personnel will remain covered (dress hat) while outdoors, except during prayers, and uncovered indoors during the service.
5. All Honor Guard and Body Bearers will remain covered at all times.
6. Seating will be reserved so that the family is nearest the casket, followed by the department's officers, in descending rank, and then by all members of the home department. Following that will be all the visiting uniformed firefighters, from the longest distance to the shortest distance traveled (elected officials will be seated on either side of the firefighters, or directly behind the home department).
7. Upon conclusion of the service, all personnel, except the body bearers and the immediate family will exit the church and prepare for the passing of the casket.
8. The casket will precede the family, filing through the assembled firefighters to the Fire Apparatus or the Funeral Coach of choice.
9. As the casket exits the church the immediate family will follow. The extended family and all other attendees will follow accordingly.
10. The Body Bearers will place the casket into the funeral coach or fire apparatus.

Off-Duty Death (family request):

1. All available Department personnel are asked to attend in full class “A”
 - i. Dress uniform, including off-duty members.
2. All members will wear a black band (shroud) over their badges from the time of death until the conclusion of the service.
3. All Department flags will fly at half-staff the day of the service from
 - i. 0800 hours to the conclusion of the services (lowering of flags may require elected officials approved depending on agency).
4. All regular Department personnel will remain covered (dress hat) while outdoors, except during prayers, and uncovered indoors during the service.
5. All Honor Guard and Body Bearers will remain covered at all times.
6. Seating will be reserved so that the family is nearest the casket, followed by the department’s officers, in descending rank, and then by all members of the home agency. Following that will be all the visiting uniformed firefighters, from the longest distance to the shortest distance traveled (elected officials will be seated on either side of the firefighters, or directly behind the home department).
7. Upon conclusion of the service, all personnel, except the body bearers and the immediate family will exit the church and prepare for the passing of the casket.
8. The casket will precede the family, filing through the assembled firefighters to the fire apparatus or the funeral coach of choice.
9. As the casket exits the church, the immediate family will follow. The extended family and all other attendees will follow accordingly.
10. The Body Bearers will place the casket into the funeral coach or fire apparatus.

Retiree Death:

1. All available Department personnel will be encouraged to attend in full class “A” dress uniform, including off-duty members.
2. All members attending the funeral service will wear a black band
 - i. (Shroud) over their badge.
3. All Department/District flags will fly at half-staff the day of the service from
 - i. 0800 hours to the conclusion of the services.
4. All regular Department personnel will remain covered (dress hat) while outdoors, except during prayers, and uncovered indoors.

5. All Honor Guard and Body Bearers will remain covered at all times.
6. Seating will be reserved so that the family is nearest the casket, followed by the department's officers, in descending rank, and then by all members of the home department. Following that will be all the visiting uniformed firefighters. Officials will be seated on either side of the firefighters, or directly behind the home department.
7. Upon conclusion of the service, all personnel, except the body bearers and the immediate family, will exit the church and prepare for the passing of the casket.
8. The casket will precede the family, filing through the assembled firefighters to the funeral coach of choice.
9. As the casket exits the church, the immediate family will follow. The extended family and all other attendees will follow accordingly.
10. The Body Bearers will place the casket into the funeral coach.

Guidelines for the Processional To, and Assembly at the Graveside

Line of Duty Death:

Note: There are two options for the procession to the graveside; marching and vehicular procession.

Marching processional: It is the responsibility of the Honor Guard Commander to ensure that the order for the marching processional is as follows, and that the bugler is standing by at the cemetery.

1. Piper (s) and Drummer(s);
2. Color Guard;
3. Clergy/ Department Chaplain;
4. Apparatus / funeral coach, with body bearers;
5. Immediate family;
6. Fire Chief, Department officers in descending order of rank, and
7. Dignitaries, from local to most broad;
8. Home department uniformed personnel;
9. Visiting Department personnel;
10. Home Department apparatus;
11. Visiting Department apparatus, from the longest to

the least traveled; and

12. All miscellaneous vehicles.

Vehicular procession only. It is the responsibility of the Honor Guard Commander to ensure that the order for the vehicular procession is appropriate as follows, and the piper(s), drummer(s), Bugler, Honor Guard and Body Bearers are standing by at the cemetery.

1. Lead car provided by the funeral home, containing appropriate Clergy;
2. Apparatus / funeral coach – Body Bearers are at the ceremonial site, at ease, waiting for the arrival of the Apparatus at a prearranged area. As the coach comes into view, a salute is rendered prior to movement;
3. Car with immediate family;
4. Fire Chief car followed by Officer cars and dignitaries;
5. Additional home apparatus;
6. Visiting apparatus;
7. All other home department personnel, if in personal vehicles; and
8. All miscellaneous vehicles.

Assembly at Graveside:

1. Two crossed Aerial ladders, with a draped flag, shall be at the entrance to the cemetery so that the entire procession will pass beneath them.
2. The Pipers and Drummers will be assembled approximately 100 feet from the gravesite, and the bugler will stage approximately 20 feet past the gravesite.
3. Fire Walk of Honor: The members of the home agency will line up, in an organized fashion – approximately 12 feet apart, on both sides of the path from the apparatus to the gravesite. All additional uniformed firefighters will fall into ranks behind the home department.
4. Once the firefighters are assembled, the Honor Guard will line up at the beginning of the walk followed by Clergy.
5. At this point the Body Bearers will remove the casket from the vehicle. The commander of the Honor Guard will call “All uniformed personnel Attention - Present Arms”. The Body Bearers will move the casket and flag following the Honor Guard and Chaplain to the

gravesite. (See Honor Guard Manual for entire sequence regarding Body Bearers)

6. The Casket will be followed by the immediate family, Fire Chief, and Officers in descending rank.
7. As the casket exits the hearse, the pipers and drummers will begin to play "Amazing Grace" to be completed as the casket reaches the gravesite.
8. Once the Casket reaches the gravesite, the Command will be given to "Order Arms" and the next Command will be Given to "Fall In"; instructing the firefighters to take their places behind the family.
9. The Body Bearers will lower the Casket to the lowering mechanism and the flag will be removed from the top of the casket (see Flag folding procedure). The Flag will be held over the casket by the members of the Body Bearers until the completion of the 23rd Psalm and the Firefighters prayer (if appropriate), depending on the wishes of the family.
10. At the close of the graveside message (if appropriate), the clergy will then commence "let us pray." At this time all are expected to bow their heads in respect.
11. Once the Clergy has finished prayers, all personnel will re-cover and the Body Bearers will commence the "Flag Folding Sequence".
12. The Senior member of the Body Bearer Detail will be at the right corner of the casket and will be passing the flag. When final adjustments are completed, he/she will left face and await the Chief to move forward to receive the flag.
13. Prior to receiving the flag, the Chief will render a salute. The flag will be passed and the Chief will stand fast until the Senior Body Bearer renders a salute.
14. The Body bearers will stand fast until the completion of the presentation of the flag to the family.
15. The Chief of the Department will make the presentation to the next of kin. Sample statement: *"This flag is presented on behalf of a grateful _____, as a small token of our appreciation for their honorable and faithful service, and the great sacrifice of your loved one."*
16. It is then appropriate for the dispatcher to read this message over the radio *"The members of the _____ wish to thank _____ (name and rank) for his/her # years of services to the citizens of _____, Idaho. Although you are gone you will never be forgotten."*

17. The Honor Guard Commander will ask all uniformed personnel to please rise.
18. At the conclusion of this, the Honor Guard Commander will give the command “Uniformed personnel attention- Present Arms” and the bugler will play Taps. At the completion of Taps the Command to “Order Arms” is given.
19. The Body Bearers will complete their evolution and exit the gravesite.
20. The firefighters will remain standing while the family exits the gravesite
21. At this point the Honor Guard Commander will dismiss the uniformed firefighters.

Off Duty Death:

Vehicular procession only. It is the responsibility of the Honor Guard Commander to ensure that the order for the vehicular procession is appropriate as follows, and the piper (s), drummer (s), Bugler, Honor Guard and Body Bearers are standing by at the cemetery.

1. Lead car provided by the funeral home, containing appropriate Clergy;
2. Funeral Coach – Body Bearers are at the ceremonial site, at ease,
 - i. Waiting for the arrival of the apparatus at a pre-arranged area. As the coach comes into view, a salute is rendered prior to movement.
3. Car with immediate family;
4. Fire Chief car, followed by Officer cars;
5. Additional home apparatus;
6. All other home department personnel, if in personal vehicles; and
7. All miscellaneous vehicles.

Assembly at Graveside:

1. The Pipers and Drummers will be assembled approximately 100 feet from the gravesite, and the bugler will stage approximately 20 feet past the gravesite.
2. Once the firefighters are assembled, the Honor Guard will line up at the beginning of the walk followed by Clergy.

3. At this point the Body Bearers will remove the casket from the vehicle.
4. The commander of the Honor Guard will call "All uniformed personnel Attention - Present Arms". The Body Bearers will move the casket and flag following the Honor Guard and Chaplain to the gravesite. (See Honor Guard Manual for entire sequence regarding Body Bearers)
5. The Casket will be followed by the immediate family, Fire Chief, and Officers in descending rank.
6. Once the Casket reaches the gravesite, the Command will be given to "Order Arms" and the next Command will be given to "Fall In" instructing the firefighters to take their places behind the family.
7. The Body Bearers will lower the Casket to the lowering mechanism and the flag will be removed from the top of the casket (see Flag folding procedure). The Flag will be held over the casket by the members of the Body Bearers until the completion of the 23rd Psalm and the Firefighters prayer (if appropriate), depending on the wishes of the family.
8. At the close of the graveside message (if appropriate), the clergy will then commence by saying "let us pray". At this time all are expected to bow their heads in respect.
9. Once the Clergy has finished prayers, all personnel will re-cover and the Body Bearers will commence the "Flag Folding Sequence".
10. The senior member of the Body Bearer Detail will be at the right corner of the casket and will be passed the flag. When final adjustments are completed, he/she will left face and await the Chief to move forward to receive the flag.
11. Prior to receiving the flag, the Chief will render a salute. The flag will be passed and the Chief will stand fast until the Senior Body Bearer renders a salute.
12. The Body bearers will stand fast until the completion of the presentation of the flag to the family.
13. The Chief of the Department will make the presentation to the next of kin. Sample statement: *"This flag is presented on behalf of a grateful _____, as a small token of our appreciation for the honorable and faithful service, and the great sacrifice of your loved one."*

14. The Body Bearers will complete their evolution and exit the gravesite.
15. The Body bearers will face and march off.
16. At this point the services are concluded.

Retiree Death

Vehicular procession only. It is the responsibility of the Honor Guard Commander to ensure that the order for the vehicular processional is appropriate as follows, and the piper (s), drummer (s), Bugler, Honor Guard and Body Bearers are standing by at the cemetery.

1. Lead car provided by the funeral home, containing appropriate Clergy;
2. Funeral Coach – Body Bearers are at the ceremonial site, at ease, waiting for the arrival of the apparatus at a pre-arranged area. As the Coach comes into view, a salute is rendered prior to movement;
3. Car with immediate family;
4. Fire Chief Car;
5. All other home department personnel, if in personal vehicles; and
6. All miscellaneous vehicles

Assembly at Graveside

1. Once the firefighters are assembled, the Honor Guard will line up at the beginning of the walk followed by Clergy.
2. At this point the Body Bearers will remove the casket from the vehicle.
3. The commander of the Honor Guard will call “All uniformed personnel Attention - Present Arms”. The Body Bearers will move the casket and flag following the Honor guard and Chaplain to the gravesite. (See Honor Guard Manual for entire sequence regarding Body Bearers)
4. The Casket will be followed by the immediate family, Fire Chief and Officers in descending rank.
5. Once the Casket reaches the gravesite, the Command will be given to “Order Arms” and the next Command will be given to “Fall In”, instructing the firefighters to take their places behind the family.

6. The Body Bearers will lower the Casket to the lowering mechanism and the flag will be removed from the top of the casket (see Flag folding procedure). The Flag will be held over the casket by the members of the Body Bearers until the completion of the 23rd. Psalm and the Firefighters prayer (if appropriate), depending on the wishes of the family.
7. At the close of the graveside message (if appropriate), the clergy will then commence by saying "let us pray". At this time all are expected to bow their heads in respect.
8. Once the Clergy has finished prayers, all personnel will recover and the Body Bearers will commence the "Flag Folding Sequence".
9. The senior member of the Body Bearer detail will be at the right corner of the casket and will be passed the flag. When final adjustments are completed, he will left face and await the Chief to move forward to receive the flag.
10. Prior to receiving the flag, the Chief will render a salute. The flag will be passed and the Chief will stand fast until the Senior Body Bearer renders a salute.
11. The Body bearers will stand fast until the completion of the presentation of the flag to the family.
12. The Chief of the Department will make the presentation to the next of kin. Sample statement: *"This flag is presented on behalf of a grateful (City/Department/Fire District), as a small token of our appreciation for the honorable and faithful service, and the great sacrifice of your loved one."*
13. The Body Bearers will complete their evolution and exit the gravesite.
14. The Body bearers will face and march off.
15. At this point the services are concluded.

SECTION 2: SETTING UP A FUNERAL

This section will specifically address issues relating to the viewing, the funeral or memorial service, procession, and the graveside service. Decisions regarding the funeral are the responsibility of the family. However, consideration should be given to the wishes of the deceased if he/she communicated those wishes before death (personnel information packet if available), the family's religious traditions, and Fire Department traditions.

Combining Fire Department traditions with various religious services can create challenges, especially in the area of time management.

Planners must be mindful of the comfort and physical requirements of attendees when scheduling speakers, music, and other protocols in the service.

There are several areas of importance that will be covered to assist the family and the Funeral coordinators in organizing the fallen firefighter's or department member's funeral service.

- a. Initial planning
- b. Viewing/visitation
- c. Scheduling arrangements
- d. Religious services such as Rosaries, traditions, protocols, special music and speakers
- e. Processions, setting up staging areas
- f. Graveside services
- g. The reception after the funeral service
- h. Media participation
- i. Special presentations

The Fire Chief or other Department leaders may wish to consult with other fire departments that may have had recent experience with funeral planning. The National Fallen Firefighters Foundation offers the Chief-to-Chief Network, which pairs the Fire Chief who has just lost a member with a Chief who has experienced a loss in the past. The Foundation can be contacted at (301) 447-1365 for more information.

When assisting clergy that are not familiar with Fire Department funerals, the fire department should provide a description of the guidelines, traditions, and logistical requirements. If possible, have the officiating clergy meet with the Chaplain to discuss these items.

These planning issues will provide an awareness of issues which may be overlooked by the individuals who are planning the funeral or the officiating clergy who are not familiar with fire department traditions.

NOTE: The procedures that are written in this guideline will be written as if the fire department were planning a line of duty death funeral or memorial service. Do not hesitate to adjust these guidelines to the family's or department's needs, and any time constraints.

Planning a large and complex memorial service requires the coordination of many individuals. Those involved in the planning process, Funeral Coordinator, Procession Coordinator, Cemetery Coordinator should be reminded of the need to remain flexible. Expect changes to occur and be able to work with the changes.

Departments should use the "Incident Command System" approach to planning a funeral service and ceremony. The Fire Chief should not hesitate to delegate duties to other individuals. It is advisable to have already appointed individuals who will be coordinators in the event of a death. This will save time in having to pick and choose the right individuals. It is imperative to hold a planning meeting involving the coordinators. The meeting should include, but not be limited to the following key coordinators: The Fire Chief, Chaplain, funeral coordinator, family coordinator, family clergy, honor guard sergeant, procession coordinator, and the grave side coordinator. Prepare to hold additional meetings as needed. To prevent the duplication of efforts, it is imperative that all planners know what tasks have been accomplished and which tasks have yet to be completed. Communication is the key.

Officers and/or the Funeral Coordinator may want to consider a "walk through" for large services on the day prior to the service. This will ensure that the coordinators and planners are in agreement with the order of service and the planning details.

Guidelines

The guidelines described below are to be used as a guide. When planning a service, all agencies and planners should be extremely aware of the time.

- a. The funeral or memorial service should last not more than 1 hour 40 minutes. The coordinators should make every effort, in working with the family, to try to stay within the 100-minute time frame. Special consideration should be given to those attendees who are not accustomed or are not able to sit or stand for long periods of time. If tributes, special music, or readings need to be deleted out of the program to keep within this allotted time, then it should be

done as tactfully as possible.

- b. Consideration to extreme weather conditions; i.e., heat, cold, wind, and rain, should be taken into account and the appropriate cover provided. It may also be advisable to have a Medic Unit
 - i. On standby in case of a medical emergency.
- c. Personnel or members of the department should be advised not to discuss particular funeral protocols with family members. Protocols should only be discussed with the family by the officiators and the coordinators.

Department leaders should recognize that planning and organizing a line of duty death service involves more complex planning issues than when planning the service for a death that was not job-related. Be aware that even a department that is located in a remote or rural area can expect attendance at a line of duty death funeral to be in excess of 500 people.

Viewing/Visitation

Ascertain if the family has a desire to have a viewing or visitation. In many line of duty deaths, viewing is not done due to severe injury. In the event of a horrific or highly publicized death, the Department may want or even need to provide a 24-hour Honor Guard or security at the funeral home beginning with the initial notification.

- 1. Honor Guards should always be in pairs of two or more.
- 2. The viewing or vigil should be discussed with the family and the funeral home prior to arranging for a date, time, and location.
- 3. Find out if the families will be requesting a viewing (open casket) or visitation (closed casket) be held.
- 4. A viewing/visitation is normally held one or two days prior to the funeral, at the funeral home, during hours requested by the family.

The date(s) for the viewing/visitation should be established in accordance with family wishes.

- 1. An Honor Guard should be posted during viewing/vigil hours.
- 2. Immediate family members should be escorted by the Department to and from the viewing/visitation.
- 3. The family may wish to have the Honor Guard step down and leave the room to give them some private time with their loved one. Under these circumstances, it would be proper for

the Honor Guard to stand just outside of the entrance to the room until the family is finished with their private time.

Catholic protocols may include a Rosary service along with the viewing. Coordinate this participation with the officiating priest. Normally, the Honor Guard would post at the head of the casket. If the Honor Guard is not allowed to post near the casket, it would be proper to move the post to the main entrance of the building.

The Rosary service may be held at the funeral home or the church. Should the body need to be transported to a church for the Rosary and then back to the funeral home, an Honor Guard or escort should accompany the body.

It is proper protocol for members of the Honor Guard to wear their uniform hat inside the funeral home. This includes holding post alongside the casket.

Immediate family members should be escorted to and from the Vigil or Rosary service by agency personnel.

Scheduling of Funeral or Memorial Service

The scheduled date for the service must accommodate the needs of the family, facility, clergy, funeral home, cemetery, medical examiner, and the Department.

Coordinators and leaders should also be aware of any major events planned at the facility or in the community which may cause logistical conflicts.

Scheduling the service start time is also critical. Various factors must be considered including: commute traffic, lunch hour traffic, cemetery procession, reception, overall length of service, and other events planned within the community. It is essential to avoid having the funeral procession interfere with either the morning or evening commute in metropolitan areas.

Representatives from various departments have been known to travel long distances to attend a memorial service. Many of them also bring an apparatus from their department.

When scheduling the time of service, consider family members who must travel long distances to attend.

Provide long distance travelers with maps and directions.

Also, be aware that a service scheduled for 10:00 a.m., normally begins for the coordinators, traffic officers, and various other assistance personnel at 7:00 a.m. The day can start even earlier for long distance visitors.

This is a very long and demanding day for those that are planning the service, as well as those that are participating. Every effort should be made to expedite each task. However, do not cause such a rush that important details and plans are overlooked.

The location is one of the most critical elements in funeral planning. In the past, attendance at a line of duty death funeral has reached as many as 5,000 people. Locating and securing a facility with a large seating capacity can be very challenging.

In smaller or midsize communities, or when the death(s) is attributed to extremely traumatic events, it may be necessary to explore unusual alternatives for the service such as: civic centers, gymnasiums, or athletic stadiums.

The use of alternative facilities will also create additional planning challenges such as: lack of a sound system, poor lighting and visibility, etc.

When larger facilities cannot be secured, consider obtaining some form of overflow seating.

If the facility does not have overflow rooms available, it may be advisable to provide audio coverage of the service for attendees who cannot be seated.

If overflow crowds will be required to stand for long periods of time, consideration should be given to providing shelter, water, and portable restroom facilities.

Consideration should be given to uniformed officers who are not seated and must stand in ranks until the conclusion of the service.

Planners should be cognizant of adverse weather conditions. Consideration should also be given to attendees who are not able to be seated.

Be prepared to improvise in order to accommodate as many people as possible.

Seating Arrangements

The Coordinators will need to prepare a seating plan to accommodate the needs of the family, Department, City Officials, visiting dignitaries, visiting departments, and the public.

Depending on the seating layout of the facility, planners will also need to assess the use of ushers.

- a. Normally, ushers should be assigned to the rear of each aisle, and given specific instructions to facilitate the seating plan.
- b. It may be necessary to utilize volunteers or Police
 - i. Department personnel for usher duties.
- c. Many allied law enforcement and other agencies will volunteer their services to the Department. They should be utilized whenever possible.
- d. Attendees that are seeking a good seat usually begin to arrive an hour or more prior to the scheduled start time. Ushers should be assembled and fully briefed on their duties at least an hour and a half before the start of the service.
- e. When faced with having to use a facility that does not have adequate seating capacity, planners will need to develop an effective seating plan to ensure that family members, visiting dignitaries, and agency personnel needs are met first and foremost.

A private room should be provided for the immediate family prior to the start of the service. Immediate family members should normally be scheduled to arrive not more than 15 minutes prior to the start of the service.

A room should be provided for Department leaders and coordinators to gather prior to the service.

A room should be provided for the Honor Guard to practice and rest during guard changes.

Consider seating the deceased member's co-workers with their significant others during the service(s).

Religious Service, Protocols, and Speakers

Religious services take precedence over Fire Department traditions. Planners should meet with the family and the officiating clergy to determine the extent of the Department's involvement.

1. Some clergy members may be inflexible regarding Department protocols. In such instances, it is imperative to have clear direction as to the family's wishes.
2. In some faiths or denominations, the only Department involvement will be the limited participation of an Honor Guard.
3. Certain traditions may have to be performed at the graveside rather than at the church.

When dealing with restrictive religious services, or when the family requests private services, coordinators may want to consider and discuss with the family about having a separate memorial service that will not interfere with religious customs.

1. Agencies opting to hold a separate memorial service should plan the memorial service on a different day from the religious service.
2. It is preferable to have the services conducted by clergy or chaplain who is familiar with Fire Department protocols.

The order of speakers should be assigned from the highest ranking speaker to the lowest. These speakers will normally be followed by eulogies from a family member, and a Department member.

1. Depending on the number of speakers and the time allotted to each speaker, musical selections can be utilized to separate some of the speakers. Music also allows the posted Honor Guards time to change personnel with minimal disruption of the service. Honor Guards should be changed every 15 - 20 minutes to prevent collapsing from fatigue.
2. Each speaker should be limited to 10 minutes.
3. Speakers need to prepare written notes, as well as practice, and time their presentation. As a general rule, notes should be typed, double spaced, using a 14 or larger bold face font.

Specific instructions should be given to attendees regarding the dismissal of the service.

Processions

Processions or motorcades are often desirable but not required. Consideration should be given to the length of time it takes to get a motorcade to its destination, safety, and traffic disruption.

Long motorcades can cause time delays, and may generate citizens' complaints. Processions should be well planned, using the least intrusive route available. Proper planning will minimize traffic congestion, and help prevent unwarranted delays for citizens.

A pre-service procession may also be desirable when there has been a cremation or no graveside service.

When appropriate, written directions to the cemetery should be provided.

1. When possible, the route of the procession should be published in the service bulletin and in the local newspaper.
2. The Department may want to limit the procession to the immediate family members, and employees of the involved department, or local fire departments.
3. Notify allied agencies when their respective jurisdictions will be impacted by either the service or the procession.

Consider delegating parking and traffic control responsibilities to the police agencies that have jurisdictional responsibility. Officers assigned to traffic control details should have clear direction as to the "tail vehicle" in the procession. Prematurely releasing controlled intersections can cause significant delays to the start of the graveside service.

A "Traffic Alert" should be issued to the media so that listeners can avoid the area if possible.

Public works agencies should be contacted to determine if the intended routes will be free of hazards, planned construction, or road/ramp closures.

Graveside

The graveside service normally consists of a short religious service and a few department traditions.

The arrival at the cemetery is a very difficult time for family members. If an

extremely long procession is anticipated, it may be advisable to arrange for a family waiting room.

Although it is desirable to have everyone in place before starting the graveside service, the minister may choose to begin before everyone has parked their vehicles, and can be assembled. Ministers often choose to do this in order to alleviate family anxiety at the graveside.

Most cemeteries do not provide sound systems. It can be difficult for attendees to hear what is being said. It is a good idea to obtain a portable sound system so that attendees may hear the committal service and various presentations.

The graveside service is where the Body Bearers will make the flag presentation to the family.

If the family wishes to have a flag ceremony, the Honor Guard will fold the flag and present it to the Fire Chief who will then present it to the family.

The graveside service should be kept short in order to allow people to express condolences to the family at the conclusion of the service.

Reception

A reception is usually planned immediately following the last service.

Arrange for an adequate reception facility, preferably close to the graveside service, or close to the facility used for the memorial service. As a general rule, when there is some distance between the location of the service and the location of the reception, only half the people attending the service will attend the reception.

If a reception is planned immediately following the funeral service at the same facility or at a facility within a very close proximity, planners can anticipate that approximately 75 percent of the attendees will stay for the reception.

1. Arrange for food, drinks, set-up, and clean-up.
2. Finger-Foods, soft drinks, and water will normally be adequate. It is not necessary to arrange for a full-service meal.
3. Receptions should normally last no longer than two hours.

Whenever possible, a route map should be published in the service bulletin, or provided at the service.

Media Participation

Media participation should be discussed with the family. If the family agrees to media participation, coordinators and the PIO or designee should make specific arrangements to accommodate media needs, as well as adamantly respecting the family's privacy.

SECTION 3: PUBLIC SAFETY OFFICERS BENEFIT PROGRAM)

Checklist for Public Safety Agencies Filing a Public Safety Officers Benefit (PSOB) Death Claim

“The PSOB Office extends its condolences to you on the loss of your colleague. The following checklist is provided to simplify the PSOB filing process for you and the fallen Officer’s survivors. Please contact the PSOB Office toll free at 888-766-6513 for assistance with any part of the PSOB claim.”

Step 1

Collect the following information regarding the officer’s line-of-duty death from your agency records.

1. *PSOB Report of Public Safety Officer’s Death* form completed and signed by the head of the public safety agency.
2. Detailed Statement of Circumstances from the initiation of the incident to the pronouncement of the officer’s death.
3. Investigation, Incident, and/or Accident Reports.
4. Death Certificate
5. Autopsy Report, or a statement signed by the head of the public safety agency or the medical examiner explaining that no autopsy was performed.
6. Toxicology Report, or a statement signed by the head of the public safety agency or the medical examiner explaining that no autopsy was performed.
7. Documentation for heart attacks and stroke to include:
 - Detailed statement listing all of the officer’s on-duty actions during the 24-hour period prior to the onset of the heart attack or stroke.
 - Medical records related to the officer’s health, including hospital admission/discharge reports, physician reports, physical examination results, and health risk and wellness evaluations covering the past three years.

Step 2

Collect the following information regarding the member's surviving family/beneficiaries.

1. *PSOB Claim for Death Benefits* form completed and signed by the survivor/claimant
2. Member's current Marriage Certificate, *if applicable*.
3. Divorce Decrees for all the officer's and current spouse's previous marriages, including references to physical custody of children, *if applicable*.
4. Birth Certificates for all the officer's surviving children and step-children, regardless of age or dependency, identifying the children's parents, *if applicable*.
5. For each *child* who was between the ages of 19 and 22 and a full-time student at the time of the officer's death, a copy of the child's transcript and a statement from the school confirming the child's status as a full-time student when the officer passed away.
6. For each *child* who was between the ages of 19 and 22 and not a full-time student at the time of the officer's death, a statement from the child that he/she was capable of self-support.
7. For *each step-child* who, at the time of the officer's death, was either under the age of 19 or between the ages of 19 and 22 and a full-time student.
 - A statement from the child's parent stating that, at the time of the officer's death, the child's principal place of residence was the home of the officer **OR** a statement that the child did not live at the officer's home but was dependent on the income of the officer for more than one-third of the child's support **OR** affidavits from two non-family members explaining how the officer accepted the child as his/her own. *If one of these conditions applies to a step-child who was between the ages of 19 and 22 at the time of the officer's death, a copy of the child's transcript and a statement from the school confirming the child's status as a full-time student when the officer passed away.*
 - For each *step-child* who was between the ages of 19 and 22 and not a full-time student at the time of the officer's death, a statement from the child that he/she was capable of self-support.

Step 3

Mail or fax the above information to the PSOB Office, keeping a complete copy for your records.

Public Safety Officers' Benefits Program
Bureau of Justice Assistance
810 Seventh Street NW
Washington, DC 20531
Fax: 202-616-0314

Because no two PSOB cases are alike, additional information may be requested by the PSOB Office to help clarify or establish the eligibility of claims and beneficiaries according to the PSOB Act and its regulations.

If additional information is necessary, please access Public Safety Officers Benefit Program at the following website:

http://www.ojp.usdoj.gov/ogc/PSOB_Act_and_Regulations__2006.htm

INSERT IAFF BENEFITS HERE

SECTION 4: FUNERAL COORDINATOR CHECKLIST

Order of Funeral Service

Time of Day	Allotted Time (Minutes)	Task	Performed by & Contact Number
	6	Presentation of Colors	
	2	Invocation	
	3	Prayer	
	5	Opening Remarks	
	3	Special Music	
	5	Clergy Remarks	
	2	Scripture Reading	
	5	Clergy Remarks	
	5	Special Music/Poetry Reading	
	10	Dignitary's Remarks	
	5	Fraternal Organization Leader's Remarks	
	10	Fire Chief's Remarks	
	3	Special Music/Special Reading	
	20	Eulogy	
	10	Closing Remarks	
	5	Special Presentation (Slides/Video)	
	3	Closing Prayer	
	2	Benediction	
	3	Dismissal Instruction	
	4	Retire the Colors	

Funeral Information

Item	Date	Time	Location
Visitation/Viewing			
Rosary/Other Religious Ceremony			
Funeral Service			
Staging Area(s)			
Processional			
Graveside Service			
Reception			

SECTION 5: SUPPORT AND CONTACT INFORMATION

Chief: _____ Home Phone: _____

Cell Phone: _____ Pager: _____

Public Information Officer: _____

Home Phone: _____ Cell Phone: _____

Pager: _____

Chaplain: _____ Home Phone: _____

Cell Phone: _____ Pager: _____

Local CISD Team: _____

Phone Number/Hotline: _____

Family Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Hospital Relations Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Funeral Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Benefits Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Department Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Procession Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Cemetery Coordinator: _____

Home Phone: _____

Cell Phone: _____ Pager: _____

Funeral Home: _____

Funeral Director: _____

Phone Number: _____

Cemetery: _____

Phone Number: _____

Police Department: _____

Contact Name: _____

Contact Number: _____

Local Media

Newspaper: _____ Contact: _____

Contact Number: _____

Newspaper: _____ Contact: _____

Contact Number: _____

TV Station: _____ Contact: _____

Contact Number: _____

TV Station: _____ Contact: _____

Contact Number: _____

TV Station: _____ Contact: _____

Contact Number: _____

TV Station: _____ Contact: _____

Contact Number: _____

Various Support Organizations:

Business Name: _____

Contact Name: _____ Phone Number: _____

Business Name: _____

Contact Name: _____ Phone Number: _____

Business Name: _____

Contact Name: _____ Phone Number: _____

Business Name: _____

Contact Name: _____ Phone Number: _____

SECTION 6: FIREFIGHTER AUTOPSY PROTOCOL

(For a complete copy of the protocols, with charts/graphs, please access Federal Emergency Management Agency -United States Fire Administration)

I. BACKGROUND

The United States Fire Administration (USFA) has a major commitment to improving the health and safety of firefighters. This mission has created an accompanying interest in learning about the causes of firefighter deaths and injuries. In the process of researching firefighter deaths, it was determined that there is no standard protocol in forensic medicine that would assist a coroner or medical examiner in determining the cause of a firefighter death.

Responding to this concern, the USFA, in 1993, initiated a project to develop a standard firefighter autopsy protocol. Experts in forensic pathology, toxicology, epidemiology, and medico legal aspects of autopsy, as well as representatives of several national fire service organizations, were selected to serve as a Technical Advisory Committee (TAC), providing guidance, consultation, and review during the development of the protocol. The members of the TAC provided the expertise and experience to develop the actual protocol, which accompanies this report.

The consensus of the TAC is reflected in the protocol, which is intended to provide guidance to medical examiners, coroners, and pathologists on uniform recommended procedures for investigating the causes and contributing factors related to firefighter deaths. The protocol recognizes and addresses those attributes of firefighter casualties which distinguish them from the general population, as well as from civilian fire casualties. These differences include the use of protective clothing and equipment, prolonged exposures to the hazardous environment, and specialized training and duties.

The accompanying documentation is intended to describe the need for the protocol, the situational context under which it was developed, and the major issues that relate to it.

Scope of Problem

Firefighting has been described as one of the nation's most hazardous occupations. The National Fire Protection Association (Karter, 1993) estimates that 1,058,300 people in the United States are either full- or part-time firefighters, including both career and volunteer personnel. The number of career firefighters (253,000) has been rising steadily throughout the past decade, while the number of volunteer firefighters (805,300) is declining. According to statistics compiled jointly by the USFA and the National Fire Protection Association (NFPA), 1,920 firefighters have lost their lives while on duty in the United States

over the past 15 years – an average of 128 per year. Approximately 45 percent of all firefighter duty deaths during this period were attributed to heart attacks.

Improvements in firefighter health and safety standards and practices, particularly in the areas of personal protective equipment, physical fitness, and training, are widely believed to be responsible for a significant downward trend in line-of-duty deaths during the last 15 years. Between 1977 and 1991, the nation experienced a 32 percent drop in the annual number of firefighter line-of-duty deaths. The number of line-of-duty deaths in 1992 was a record low of 74. Notwithstanding the significant drop in firefighter deaths, too many firefighters die needlessly each year.

The statistical analysis of firefighter fatalities accounts for *how* many firefighters have died and to some extent explains *how* they died, but the available data do not explain *why* firefighters die. Moreover, a dramatic downward shift in the total number of firefighter deaths in 1992 (and preliminary statistics for 1993) begs still more questions about what, if anything, is being done correctly to prevent line-of-duty deaths.

Epidemiological studies of firefighter mortality conducted in recent years provide interesting insights into how firefighter health and mortality rates compare to other population groups, but they too fall short of explaining conclusively why firefighters die (especially any individual firefighter). The interest in occupational health factors relates to the frequency of sudden deaths due to heart attacks, as well as chronic conditions which include respiratory disorders, heart disease, and cancer.

Rationale for the Protocol

The autopsy protocol was developed to give guidance to qualified professionals on the specific procedures that will be most appropriate in performing an autopsy on a deceased firefighter. The recommended procedures are intended to address the complex relationship between the firefighter and the inherently dangerous work environment where the duties of a firefighter must be performed. **It has been assumed that the user will be qualified, skilled and experienced in performing autopsies, as the protocol is intended only to provide guidance on the special considerations that should apply to a firefighter autopsy.**

It is hoped that a uniform firefighter autopsy protocol will lead to a more thorough documentation of the causes of firefighter deaths for three purposes:

- 1) To advance the analysis of the causes of firefighter deaths to aid in the development of improved firefighter health and safety equipment, procedures, and standards;

- 2) to help determine eligibility for death benefits under the federal government's Public Safety Officer Benefits Program, as well as state and local programs; and
- 3) To address an increasing interest in the study of deaths that could be related to occupational illnesses among firefighters, both active and retired.

The work environment of the firefighter is inherently dangerous. To survive in that environment, the firefighter routinely uses protective clothing, respiratory protection, safety equipment, and standard operating procedures intended to reduce the level of risk, but which cannot eliminate all risks. It is extremely important, in the event of a failure of those protective systems, to fully and carefully determine what, if anything, may have gone wrong and how, if possible, similar occurrences may be able to be prevented from happening again. An autopsy may provide some of the essential evidence to make those determinations.

The specific issues relating to the determination of eligibility for death benefits are discussed in Part IV of this document. Several areas of interest in the study of chronic health issues are addressed in Part III of this document.

NFPA 1500, Standard on Fire Department Occupational Safety and Health, section 8-4.3, recommends, "If a member dies as a result of occupational injury or illness, autopsy results, if available, shall be recorded in the health data base."

* * *

II. MEDICOLEGAL AUTOPSY PROCEDURES IN THE UNITED STATES

The need to investigate and understand the cause of death, particularly when it occurs under unusual, confusing, or ambiguous circumstances, is almost universal. Nearly every country has established requirements for the medico legal investigation of unforeseen, unnatural, or violent deaths, usually including workplace accidents and job-related deaths. However, unlike some other industrialized nations, no national system of death investigation exists in the United States. Death investigation in the United States falls under the authority of state and local officials.

Legal structures governing death investigation vary considerably among the 50 states, the District of Columbia, and the territories. Depending on the jurisdiction, the official responsible for determining the cause and manner of death may be a coroner or medical examiner. Most firefighter deaths are investigated as unusual or unforeseen deaths according to state laws and regulations, and a high level of discretion is afforded to coroners and medical

examiners in the manner of fulfilling their duties and responsibilities. Only one state, Maryland, specifically requires a medico legal investigation of all firefighter deaths. Other states, such as New Jersey, have designated the Division of Fire Safety as the lead agency for investigating fire service accidents, but have established no autopsy requirements.

Two publications attempt to organize and describe medico legal autopsy requirements in the United States:

Combs, D.L., R. G. Parrish, and R. Ing. *1992 Death Investigation in the United States and Canada*, 1992. Atlanta: Centers for Disease Control, U.S. Public Health Service; and

Wecht, C. H. 1989. *United States Medico legal Autopsy Laws*, 3rd. ed. Arlington, VA.: Information Resources Press.

Notwithstanding the differences among the various systems, all death investigation systems are intended to respond to questions of who died, how and why a death occurred, and (as applicable) who is responsible for the occurrence. This information in turn may be used in legal proceedings, to compile vital statistics, to evaluate medical care and treatment, and to compile factual information on clinical, anatomical, pathological, physiological, and epidemiological subjects for research purposes.

When Is An Autopsy Required?

An autopsy is not performed as a part of every death investigation. In most cases, the determination of the need to perform an autopsy is a discretionary responsibility of the coroner or medical examiner. The issuance of a death certificate does not require an autopsy and only a death certificate is needed to qualify for most insurance and death benefit programs. The coroner or medical examiner may determine that no autopsy is required in any situation where there is sufficient other evidence to make conclusive determinations on the cause and manner of death. Frequently, no autopsy is conducted when a firefighter death is believed to have been caused by natural causes, such as cardiac ischemia, even when it occurs on the scene of or responding to a fire or emergency incident (see Goode, 1990).

Many coroners and medical examiners have had to limit the number of autopsies performed because of cost and time constraints. Fiscal pressures have increased as the number of death investigation cases has increased, particularly those involving violent deaths. The cases in which an autopsy is most likely to be omitted include those where there is a known and undisputed cause of deaths often fall within these parameters. Autopsies are sometimes omitted because of the religious or personal preferences of the deceased and his or her family.

The failure to conduct autopsies appears to be of significant concern throughout the medico legal community. Performing autopsies, even in cases of prolonged illness or involving individuals with prior medical histories, would be valuable in conclusively determining the cause of death, gaining a more detailed understanding of injury and disease processes, and evaluating the quality of medical care. According to some in the death investigation profession, a decline in the level of interest in pathology and forensic pathology among medical students has led to a shortage of trained professionals to conduct these procedures.

Autopsies are usually performed to establish or verify the cause of death, or to gather information or evidence that would be helpful in an investigation. Without an autopsy, specific causes, contributing factors, and underlying conditions may go undiscovered and unreported. In the case of firefighter fatalities, this lack of information may significantly hamper our understanding of the hazards of firefighting and limit the ability to develop more effective ways to prevent firefighter deaths and injuries.

* * *

III. OCCUPATIONAL ASPECTS OF FIREFIGHTING OF SPECIFIC CONCERN TO AUTOPSY

Firefighter fatalities often result from complicated scenarios. Due to the nature of the occupation, a firefighter's death could be caused by a wide variety of single factors or a combination of several factors. For example, a firefighter could die from a stress-induced heart attack caused by simple over-exertion; or a firefighter could die from asphyxiation which is actually caused by the failure of his or her breathing apparatus; or a firefighter could die from hypothermia, resulting from being trapped in a structural collapse while fighting a fire on an extremely cold day. A firefighter's death could be caused by the inhalation of toxic products of combustion, burns, traumatic injury, exposure to hazardous materials, radiation, a variety of other singular causes, or a combination of factors.

A better understanding of the actual causes of firefighter deaths, including all of the causal factors, will require a thorough examination of the protective clothing and equipment that are involved in the incident, a detailed analysis of the situation, and the details that can only be obtained through an autopsy. Such as carboxyhemoglobin levels and the presence of toxic products in the respiratory and circulatory systems.

Firefighter Death Classification

The joint USFA/NFPA annual analysis of firefighter line-of-duty deaths uses nine categories to describe the mechanism of injury, which are defined in NFPA 901, Uniform Coding for Fire Protection. Statistics are compiled according to the cause of death as listed on the death certificate for each cause, when incident reports and witness accounts are available. The nine causal categories reported in the USFA/NFPA system are:

- Fell/slipped
- Struck by
- Overexertion/Strain
- Fire Department Apparatus Accident
- Caught/Trapped
- Contract with/Exposure to
- Exiting or Escaping/Jumped
- Assaulted
- Other

While cardiac arrest and other stress-related fatalities are the leading cause of fireground deaths, this classification system does not differentiate the causes of cardiac- and stress-related cases; all are classified as “Overexertion/Strain.” Although firefighting effects of job-related stress have not been clearly established or differentiated, particularly as they affect mortality and morbidity.

The annual USFA/NFPA report also describes firefighter fatalities according to the nature of the death (i.e., the medical cause death), using the following fifteen categories:

- Cardiac arrest
- Internal trauma
- Asphyxiation
- Crushing
- Burns
- Drowning
- Stroke
- Electrocutation
- Hemorrhage
- Gunshot
- Aneurysm
- Fracture
- Heat Stroke
- Pneumonia
- Other

It should be noted that the USFA/NFPA categories do not correspond with International Classification of Disease (ICD-9) or SNOMED (Standardized Nomenclature of Medicine) cause categories.

Trends in Line-of-Duty Deaths

The overall downward trend in line-of-duty deaths has been primarily driven by the downward trend in deaths during fireground operations or while at the fire scene. Fireground deaths account for more than half (963) of all firefighter duty deaths over the last 15 years. Training deaths increased significantly from an average of 5.2 deaths per year during the first 9 years to 11.5 deaths per year during the last 6 years of the period. Responding to and

returning from alarms accounted for 26.3 percent of the deaths over the 15-year period.

Heart attacks lead all categories of line-of-duty deaths. Between 1977 and 1991, 45 percent of all firefighter deaths resulted from cardiac disorders, most from myocardial infarction. The proportion of deaths resulting from heart attacks has varied from 33.6 percent to 53.9 percent over the 15-year period.

Fahy (1993) reported that an NFPA study of fatal firefighter heart attacks conducted for the United States Fire Administration determined that about 40 percent of the firefighters who died on duty from heart attacks between 1981 and 1990 (and for whom medical documentation was available) had prior histories of cardiac ischemia, myocardial infarction, or coronary artery bypass surgery. An additional 39 percent had prior histories of acute atherosclerosis (defined as more than 50 percent occlusion); most of these cases involved occlusions greater than 70 percent. Any of these conditions could have represented sufficient cause for disqualification from continued firefighting duty under the provisions of NFPA 1582, *Medical Requirements for Firefighters*, which was adopted in 1992.

The adoption of health maintenance and physical fitness requirements for firefighters is a controversial subject and the requirements of NFPA 1582 have not been widely adopted. This subject is further complicated by the provisions of the Americans with Disabilities Act (ADA), which may restrict the ability of fire departments to limit the duties of high risk individuals.

Investigation of Line-of-Duty Deaths

Fire suppression and emergency operations are inherently dangerous; however, the data on firefighter line-of-duty deaths presented by the statistics in this document suggest that a significant proportion of firefighter deaths, particularly those on the fireground, are preventable. The International Association of Fire Chiefs (IAFC) has developed the *Guide for Investigation of a Line-of-Duty Death*, which provides a systematic approach to the overall investigation of fireground fatalities. The IAFC guide notes that an autopsy should be requested for every line-of-duty death and the results of the autopsy should be included in the report of the investigation.

There has been a significant decline in the number of firefighter deaths during fireground operations, particularly from exposure to combustion products, which appears to be related to the increased use of better protective equipment. Firefighter deaths due to cardiac ailments remain a significant concern, as do traumatic injuries from vehicle accidents and training accidents.

Evaluating the thermal performance of various types of firefighting protective clothing is an example of an area where considerable insight can be

gained through accurate anatomical descriptions obtained from an autopsy. Toxicological studies can help investigators better understand the effectiveness of SCBA use and operating procedures on preventing fireground exposures to hazardous atmospheres. Evaluations of body fat, muscle development, and special coronary studies can help develop a database on the relative fitness of firefighters. These types of studies will help reinforce lessons which should help the fire service improve fireground operating procedures, protective equipment, training, and physical fitness. They can also help support the development and use of criteria for regular medical evaluations for firefighters.

If the number of line-of-duty deaths continues to decline it will become more difficult to evaluate improvements in firefighter safety through the mortality statistics. This will place increased emphasis on the need for a detailed investigation and documentation of each and every line-of-duty death. It is a matter of compelling public interest that information about the cause and manner of all firefighter line-of-duty deaths should be thoroughly and systematically collected. The autopsy results should be an important part of the record in each case.

Fire Toxicology

A complete understanding of the cause of a firefighter's death must include some consideration of toxicological agents that may have been involved and how they may have interacted with the deceased's biological processes and systems to cause death. For instance, did the inhalation of carbon monoxide result in cardiac ischemia and subsequent cardiac arrest? Did a toxin enter the body through some route other than the respiratory system? Did protective clothing or self-contained breathing apparatus (SCBA) fail to protect the user, or was the user's air supply depleted? These conditions are often accompanied by other injuries which may or may not themselves have caused death, such as crushing forces or prolonged exposure to high radiant heat levels.

Toxicology reports in most autopsies document the positive and negative findings of a series of tests conducted to detect specific substances which may have caused death. Such tests commonly include tests for the presence of pharmacological agents and illegal drugs. In the case of fire victims, the toxicology report should include blood, urine, other toxicants (and their biomarkers), as well as alcohol and drugs.

The most common products of combustion are carbon monoxide and either soot or ash, however, acrolein, cyanide, formaldehyde, hydrogen chloride, phenol, phosgene, polyaromatic hydrocarbons (PAHs), nitrogen oxides, sulfur oxides, water vapor, and carbon dioxide may also be present. Blood tests for the presence of ethyl alcohol are typically conducted to determine whether the deceased was under the influence of an intoxicating beverage at the time of death. Urinalysis should include tests for the presence of common narcotics,

barbiturates, amphetamines, hallucinogens, or cannabinoids. Tests for other prescription and non-prescription drugs are occasionally performed to detect such compounds as common steroids, analgesics, and other indicators of co-existing illnesses/conditions, as well as of drugs used in emergency resuscitation attempts.

Personal Protective Equipment

Detailed knowledge of the manner of death requires, among other things, an evaluation of the performance of the firefighter's personal protective equipment, which includes protective clothing and breathing apparatus. There is voluminous anecdotal evidence that failure to use proper protective equipment has been responsible for many of firefighter injuries, illnesses, and deaths.

The use of self-contained breathing apparatus (SCBA) has significantly reduced the number of firefighter injuries and deaths that are attributable to smoke inhalation. While thermal and respiratory injuries remain a concern in cases of firefighter autopsies, the widespread use of SCBA has introduced new considerations into the evaluation of these injuries. For example, knowing that a firefighter's death was the result of inhalation of combustion products, when the firefighter was using a SCBA, would indicate the need to fully evaluate the performance of the SCBA.

Experts may need to be consulted to determine how a firefighter's protective clothing and equipment performed or failed to perform. The National Institute of Occupational Safety and Health and several independent consultants are available to assist in the evaluation of personal protective equipment.

Non Line-of-Duty Deaths

Because of their repetitive exposure to toxic environments and carcinogens, many firefighters are concerned that they are at a higher risk to die prematurely, particularly as their longevity on the job increases. The causes of firefighter deaths that may occur off-duty (or no line-of-duty) can sometimes be attributed to one exposure or to a series of exposures to toxins. There have been some major, well documented exposures of firefighters to certain known carcinogens. It has been suggested, for instance, that fires in occupancies manufacturing or storing chemicals in Elizabeth, New Jersey and Fort Lauderdale, Florida is responsible for increased incidence of cancer among the firefighters who fought these blazes.

In recent years, as many as 29 cases of cancer, including 19 cancer deaths, have occurred among the approximately 100 firefighters who fought a fire in 1968 at the Everglades Fertilizer Plant in Fort Lauderdale, Florida. All but one of these cases was diagnosed after the firefighter had retired or resigned from the fire department. This case prompted the National Institutes of Occupational

Safety and Health (NIOSH) to initiate an epidemiological study of firefighters involved in the Everglades fire.

It can be very difficult to directly attribute a non-line-of-duty death to a line-of-duty exposure, especially if the exposure occurred years before the death. Comprehensive autopsies of firefighters whose death may have been caused by a line-of-duty exposure could help establish a better understanding of the relationship between exposures and premature deaths, however this will require much better data be obtained and maintained than is currently the norm.

Many fire departments have mandated physical requirements and medical examinations for firefighters. Regular medical exams and physical testing can track a firefighter's physical and medical status from hire to retirement, and can serve as a baseline against which to compare, especially after an incident or series of incidents where a firefighter may be concerned that an exposure has jeopardized his or her health. Records of exposures to particular toxins should be kept by the fire department along with the medical records. Such documentation would be valuable in determining whether an exposure led to medical problems, or whether a non-line-of-duty death is related to firefighting or other emergency or occupational activities.

The firefighter autopsy protocol is primarily intended to be applicable to line-of-duty deaths; however it would also be appropriate for non-line-of-duty deaths where an occupational factor is suspected to be involved in the cause of death. For most firefighter deaths which are not duty-related or which involve former firefighters, existing clinical autopsy procedures consistent with the individual's medical history should be appropriate. The USFA firefighter autopsy protocol has been designed to uncover pertinent forensic information consistent with the distinct occupational aspects of firefighting.

Firefighter Health

Several studies have looked at the frequency of premature death rates among active and retired firefighters. Rubin (1992) has described the relationships between the hazards of fire suppression and the risk of premature death from heart disease or cancer as "Firefighter's Disease". He notes that relatively little research has been conducted on firefighter mortality and morbidity or the medical treatment of firefighters.

Rubin proposes that a concern for firefighter health should begin with prevention. He suggests that diet, lack of exercise, and lifestyle may be as responsible for premature firefighter deaths as any job-related exposure. The relationships of lifestyle, exercise, and diet with firefighter mortality appear to be more than just conjecture. Epidemiological studies have demonstrated that firefighters are much less likely than the general population to die from natural causes at a given age, early in their careers, because they must be healthier

than the average person to pass the rigorous health and fitness standards in order to be hired or approved for volunteer duty. The death rate for firefighters catches up with the rest of the population by their retirement age, which suggests that the so-called “health worker effect” diminishes with time, especially if the individuals do not take care of themselves. This takes into account the factor that firefighters tend to retire at a younger age than the general population.

* * *

IV. PUBLIC SAFETY OFFICERS BENEFIT PROGRAM

The Bureau of Justice Assistance of the U.S. Department of Justice administers the Public Safety Officer Benefits (PSO) program, which was established by Congress to provide death benefits to family members of “public safety officers found to have died as the direct and proximate result of a personal injury sustained in the line of duty.”

Evaluation Criteria

Title 28, Part 32 of the Code of Federal Regulations outlines the eligibility, criteria for receiving benefits under this program. Claimants are required to demonstrate that the injury resulting in the death of the public safety officer was the direct result of activities performed in the line of duty. Several claims have been filed in cases where the death resulted from disease or chronic health conditions that were not clearly related to a specific on-duty event. Many of the claims involving deaths resulting from chronic health conditions, such as coronary artery disease, hypertension, and cancer, have been denied because casualty could not be clearly and convincingly demonstrated.

Several states have adopted statutes or regulations that establish a presumption in the case of firefighters, that any cardiac or pulmonary disease is occupationally related. Most of these presumptive regulations were adopted in an era when firefighters were routinely exposed to products of combustion without respiratory protection. Some states have more recently extended this presumption to cover cancer as well.

To determine when cardiac deaths could be considered duty-related under the PSOB regulations, an expert panel was convened by the Law Enforcement Assistance Administration, in April 1978 to consider the relative contributions of carbon monoxide and heart disease in firefighter deaths. As a result of this meeting, a standard was established for evaluating claims involving heart attacks, based on evidence that carbon monoxide can increase the susceptibility of an individual to a sudden myocardial infarction. This standard requires that in order to be considered eligible for PSOB compensation, non-smoking firefighters must have a blood

carboxyhemoglobin (COHb) level above 10 percent by volume and those firefighters who smoke must have COHb levels above 15 percent by volume. Even if these criteria are met, benefits can still be denied if the medical examiner or coroner performing the autopsy and the pathologist reviewing the case for PSOB determine that carbon monoxide inhalation was not a significant factor in the death or the COHb level found was not a direct causal factor as defined in the PSOB regulations.

In addition to the requirement to demonstrate that the personal injury was incurred in the line of duty, PSOB awards are contingent upon a finding that the death was not caused by intentional misconduct, grossly negligent conduct, or intoxication of the deceased. The Department of Justice has never denied a PSOB claim on the basis of intentional misconduct or gross negligence on the part of the deceased, and denials for intoxication have been rare.

Program History

Between 1976 and 1992, 1,428 firefighter claims were reported to the PSOB office. During this period, 855 cases were approved and 603 were denied. (The additional cases include 30 carried over from previous years). The majority of the cases denied involved coronary artery or related cardiovascular diseases without supporting evidence of elevated COHb levels.

The PSOB regulations do not require that an autopsy be performed to document the cause of death. Only a death certificate must be provided to establish death and indicate the proximate causes; however, cases can be delayed or complicated by failure to provide toxicological evidence to support the cause of death or rule that intoxication is approximately half of the cases processed; however, the overwhelming majority of those for which claims were denied involved cases where no autopsy was performed. PSOB officials point out that of the claims denied, the majority involved cardiac deaths which were unlikely to qualify, even if autopsies had been performed.

Issues and Concerns

Due to the substantial number of firefighter line-of-duty deaths caused by heart attacks, firefighters have expressed considerable interest in the standards used to evaluate these cases. Although it is generally accepted that carbon monoxide exposure can cause cardiac ischemia and subsequent death, considerable disagreement exists regarding the assumption that exposure to combustion products should be the sole determinant to qualify individual heart attack cases as job-related. Many individuals and organizations in the fire service content that several job-related factors conspire to increase a firefighter's risk of acquiring heart disease.

Similar arguments surround the question of chronic conditions such as cancer. Department of Justice officials indicate that only two claims have been paid in the last 15 years for cancer deaths. Both of these cases involved police officers who died of testicular cancer and in each case there was substantial evidence that the cancer resulted from a single job-related exposure. While it has been established that firefighters routinely operate in environments filled with toxic and carcinogenic compounds, no firefighter cancer death claims have been approved under the PSOB regulations.

* * *

SECTION 7: LIST OF HONORS

Posting of United States Flag at Half-Staff: Why, When, and for How Long.

1. Line of Duty: Host Agency (insert agency here)
 - a. Authorized by the City Manager, Mayor, Governor or Fire Chief if provided in internal SOP or District policy.
 - b. Flags will be lowered from the point of notification through and until
 - i. 1700 hours on the day of the service, but not more than ten (10) days from the date of the incident.

Line of Duty: Surrounding Agencies

2. Authorized on day of service from 0800 until 1700 hours.
3. Other agencies include all fire and police agencies in Kootenai County and the adjoining counties in Idaho and Washington State.

Exception: When a LODD death occurs to fire during a mutual aid event it will be treated the same as a LODD for the host agency.

Off-Duty Death: Active Bellevue Fire Department or Bellevue Police Department Member

1. Flags lowered day of service from 0800 until completion of the service.

Retiree Death

1. Flags lowered day of service from 0800 until completion of the service.

Wearing of Badge Shrouds: Why, When, and for How Long.

Line of Duty: (Insert Agency Name here)

2. Authorized by the Fire Chief.
3. Shrouds will be worn by all on-duty personnel over their badges from the point of notification through and until 1700 hours on the day of the service, but not more than ten (10) days from the date of the incident.

Line of Duty: Surrounding agencies

- a. Authorized on day of service from 0800 until 1700 hours.

Other agencies:

Exception: When a LODD death occurs to fire during a mutual aid event it will be treated the same as a LODD for the host agency.

Off Duty Death: Active Member (insert agency here)

1. Flags lowered day of service from 0800 until completion of the service.

Retiree Death

2. Flags lowered day of service from 0800 until completion of the service.

APPENDIX 1: CONFIDENTIAL INFORMATION FORM (VOLUNTARY)

Name of Employee: _____ Employee ID # _____

Date of Hire: _____

Date of Birth: _____ Social Security Number _____

Resident Address: _____

Home Phone: _____

Cellular Phone: _____

Station Assigned: _____

Division Assigned: _____

Other Place of Employment

Business: _____

Phone: _____

Supervisor: _____

Address: _____

Veteran: Yes _____ No _____ If Yes, What Branch _____

Entitled to a Military Funeral: Yes _____ No _____

Do you desire a Military Funeral: Yes _____ No _____

Do you desire the American Flag on your casket: Yes _____ No _____

FAMILY INFORMATION

Name of Spouse or Significant Other:

_____ Date of Birth: _____

Address, if different: _____

Home Phone: _____ Work Phone: _____

Pager/Cell Phone: _____

Specified Visiting/Calling Hours: Yes _____ No _____

From _____ To _____

Name of Child: _____

Date of Birth: _____ Phone: _____

Address: _____

Name of Child: _____

Date of Birth: _____ Phone: _____

Address: _____

Name of Child: _____

Date of Birth: _____ Phone: _____

Address: _____

Name of Mother: _____

Phone: _____

Address: _____

Name of Father: _____

Phone: _____

Address: _____

Name of Mother-in-law: _____

Phone: _____

Address: _____

Name of Father-in-law: _____

Phone: _____

Address: _____

Name of Sibling: _____

Phone: _____ Relationship: _____

Address: _____

Name of Sibling: _____

Phone: _____ Relationship: _____

Address: _____

Name _____ of _____ Sibling:

Phone: _____ Relationship:

Address: _____

Name of Sibling: _____

Phone: _____ Relationship: _____

Address: _____

Name of Ex-Spouse: _____

Date of Birth: _____

Address: _____

Home Phone: _____ Work: _____

Contact Ex-Spouse: Yes _____ No _____

Contact In-Laws: Yes _____ No _____

Other Individual(s) Name: _____

Phone: _____ Relationship: _____

Address: _____

Other Individual(s) Name: _____

Phone: _____ Relationship: _____

Address: _____

Contact Individuals: Yes _____ No _____

FUNERAL ARRANGEMENT INFORMATION

Do you have any prearranged funeral plans? Yes _____ No _____

Are there any prearranged cremation plans? Yes _____ No _____

Has a cemetery plot been purchased? Yes _____ No _____

Plot Number: _____ Cemetery: _____

Is there a cemetery preference? Yes _____ No _____

Name: _____

Phone: _____

Address: _____

Is there a funeral home preference? Yes _____ No _____

Name: _____

Phone: _____

Address: _____

Do you request a Fire Department funeral? Yes _____ No _____

Do you request the service of the Chaplain? Yes _____ No _____

Do you attend a local church regularly? Yes _____ No _____

Denomination: _____

Church Name: _____

Address: _____

Pastor: _____ Phone: _____

Would you like for the Pastor to be contacted? Yes _____ No _____

Member of a fraternal organization? Yes _____ No _____

If yes, is their participation requested? Yes _____ No _____

Name of the person making arrangements if different from spouse/significant other: _____

Phone: _____

Address: _____

Is there a preference? Burial _____ Cremation _____

If cremation, is there a preference for disposition of the ashes?

Home _____ Cemetery _____ Scattering _____

Open Casket? Yes _____ No _____

If open, type of clothing? Uniform _____ Civilian _____

Who will deliver the Eulogy? _____

List preferences for Pall Bearers:

_____	_____
_____	_____
_____	_____
_____	_____

Do you desire flowers? Yes _____ No _____

Are the flowers to be omitted in lieu of a favorite charity, agency or organization?

Yes _____ Name of Organizations: _____

No _____

Favorite Songs: _____

Favorite Poem: _____

Favorite Readings: _____

Favorite Bible Verse: _____

OTHER INFORMATION

Do you have a Will? Yes _____ No _____

Location: _____

Are you an organ donor? Yes _____ No _____

What are your wishes regarding life support measures? _____

Do you have an attorney? Yes _____ No _____

Name: _____

Phone: _____

Address: _____

Please list any insurance policies you have.

Insurance Company	Policy #	Location of Policy
_____	_____	_____
_____	_____	_____
_____	_____	_____

Do you have any special requests, wishes, or directions that you would like to be cared for in the event of your death or serious injury?

This form will be confidential and sealed in your Personal Information Packet. In the event of your death or serious injury, this form will be utilized to ensure that you are cared for.

Signature: _____ Date: _____

Next of Kin – Signature: _____ Date: _____

Notary Seal

**CONFIDENTIAL FORM! NOT TO BE RELEASED EXCEPT UPON THE
EVENT OF THE DEATH OR INJURY OF THIS INDIVIDUAL.**

APPENDIX 2: SURVIVOR INFORMATION FORM (VOLUNTARY)

This form is to be given to the next of kin in the event of an injury or death.

CONFIDENTIAL

Name of Employee: _____

Date of Birth: _____ Social Security Number: _____

Residence Address: _____ Home Phone: _____

_____ Cellular Phone: _____

This form to be given to _____ Relation

Phone: _____

Station Assigned: _____

Division Assigned: _____

PROCEDURES FOR INJURY

Hospital: _____ Doctor

Allergies _____

Medication _____

Blood Type _____

Do you wish heroic measures to be taken? Yes _____ No _____

If blood transfusion is necessary, do you wish to have one? Yes _____ No _____

MY WISHES FOR MY FUNERAL

Funeral Home

Name: _____

Phone: _____

Address: _____

Cemetery

Name: _____

Phone: _____

Address: _____

Do you wish for your funeral to be private? Yes _____ No _____ If yes, do you wish for a separate memorial service for the Department? Yes _____ No _____

Do you wish for a visitation? Yes No _____

Do you wish for a graveside service? Yes No _____

Entitled to a military funeral? Yes No _____

Do you desire a military funeral? Yes No _____

Do you desire the American Flag on your casket? Yes No _____

Do you wish to be buried in a casket? Yes No _____

Do you wish to be cremated? Yes _____ No _____

If yes, where do you want your ashes to be placed or disposed?

Do you wish to have an open casket during visitation? Yes _____ No _____

Do you wish to have an open casket during funeral? Yes _____ No _____

Do you request the service of Chaplain? Yes _____ No _____

Do you have a Pastor? _____

Would you like for the Pastor to officiate the service? Yes _____ No _____

Do you wish to have another person officiate at the graveside services?

Yes _____ No _____ If Yes, who? _____

If you are a member of fraternal organization, would you like their participation?

Yes _____ No _____

What type of burial clothing? Uniform _____ Civilian _____

Who will deliver the Eulogy? _____

Do you desire flowers? Yes _____ No _____

I would like these songs: _____

I would like these poems read: _____

I would like these Bible verses read: _____

Do you have any special requests, wishes, or directions that you would like to be cared for in the event of your death or serious injury? _____

This form will be confidential and sealed in your Personal Information Packet. In the event of your death or serious injury, this form will be utilized to ensure that you are cared for.

Signature: _____ Date: _____

**CONFIDENTIAL FORM! NOT TO BE RELEASED EXCEPT UPON THE
EVENT OF THE DEATH OR INJURY OF THIS INDIVIDUAL.**

October 1994

UNITED STATES FIRE ADMINISTRATION
Firefighter Autopsy Protocol

PROTOCOL	DISCUSSION
<p>I. Preliminary</p> <p>A. Circumstances of Death</p> <ol style="list-style-type: none">1. Line-of-Duty<ol style="list-style-type: none">a. Fire suppression activityb. Other official activity2. Non Line-of-Duty<ol style="list-style-type: none">a. Active firefighter, unrelated activityb. Former firefighter activity <p>B. Medical Records Review</p> <ol style="list-style-type: none">1. Fire department injury/exposure records2. Current medical conditions/medications<ol style="list-style-type: none">a. Prescribedb. Over-the-counterc. Administered by paramedics <p>C. Complete Work History</p> <ol style="list-style-type: none">1. Length of fire combat duty2. Other jobs held during fire service3. Jobs held after fire service <p>D. Scene Investigation</p> <p>E. Scene Photography</p> <p>F. Jurisdiction/Authority to Conduct Autopsy</p>	<p>Firefighters are subject to many uncommon occupational hazards, including toxic and superheated atmospheres, explosions, falls, crushing/penetrating forces, contact with fire, electricity, or hazardous materials, and extremely strenuous and stressful physical activities.</p> <p>The autopsy results may be essential to determine why or how a firefighter was incapacitated, how the activity related to the cause of death, and whether protective equipment performed properly. Having a clear picture of the nature of firefighting operations that were taking place (and to which the deceased was assigned) will assist in identifying possible mechanisms of injury. If the firefighter was reported missing, try to determine the time of last contact or the length of time between the initial report and the finding of the body.</p> <p>The fire department should have an officer or internal Line-of-Duty Death Investigation Team assigned to conduct a death investigation. Other investigators may include the police, the state fire marshal (or other state officials), and/or federal/state agencies responsible for occupational safety and health. Consult with these officials as necessary.</p> <p>In conducting the medical records review, obtain documents which pertain to the incident. Document the occupational history of the deceased, including the number of years assigned as a "combat" firefighter, any history of unusual exposures (or changes in frequency of exposure) to hazardous substances, and any relevant occupational medical history. Finally, all recent medical history should be reviewed, including documentation of any attempts at on-scene resuscitation.</p>

PROTOCOL	DISCUSSION
<p>II. <u>Initial Examination</u></p> <p>A. Identification of Victim</p> <p>B. Document Condition of Personal Protective Equipment (PPE)</p> <ol style="list-style-type: none"> 1. Refer to PPE Identification Diagrams for standardized nomenclature PPE description should include: <ol style="list-style-type: none"> a. Turnout coat b. Turnout pants c. Helmet d. Gloves e. Boots f. Self-Contained Breathing Apparatus g. Personal Alert Safety System (PASS) h. Protective hood i. Clothing worn under turnouts 2. Use photographs to enhance documentation <p>C. Maintenance of Custody of Equipment</p>	<p>Exercise caution when handling contaminated personal protective equipment (PPE), especially from hazardous materials incidents, as residue may be harmful to those involved in the autopsy.</p> <p>PPE should be sealed in a metal can/drum if fire accelerants or other volatile/toxic chemicals are suspected to be present; otherwise PPE should air-dry and preserved for examination. Preservation of the original state of PPE, including clothing, is essential. PPE should be considered as evidence, and handled accordingly. The Death Investigation Team should perform or assist in the evaluation/documentation of PPE condition and performance. Documentation of the chain of custody of the PPE is required, especially as it may be examined by a number of individuals. Upon completion of any examination, PPE should be secured in an evidence storage area. (International Association of Fire Chiefs. 1993. <i>Guide for Investigation of a Line-of-Duty Death</i>, Fairfax, VA: pp. 14, 19)</p> <p>Observations and photos recorded at the scene should indicate whether the deceased was found wearing self-contained breathing apparatus (SCBA) and/or other PPE. If SCBA and personal alert safety system (PASS) are user-controlled, were they properly activated or working at the time of discovery of the deceased? A swab from the inside of the SCBA face piece may help in determining operability.</p> <p>A qualified specialist should inspect the PPE and note any damage. The National Institute for Occupational Safety and Health (NIOSH) can assist in the determination of any contribution of the deceased's SCBA to the death. PPE manufacturers may be able to assist in evaluating damage, but PPE should <u>not</u> be returned to the manufacturer for examination (because of concerns about product liability). Breathing apparatus filter cartridges, if any, should be retained.</p>

PROTOCOL	DISCUSSION
<p>III. <u>External Examination</u></p> <p>A. Document Condition of Body</p> <ol style="list-style-type: none"> 1. Photograph 2. Radiograph <p>B. Document Evidence of Injury</p> <p>C. Document Evidence of Medical Treatment</p> <p>D. Collect Evidence from External Surfaces</p> <ol style="list-style-type: none"> 1. Swabs of nasal/oral soot or other substances 2. Hair 3. Injection Sites <p>E. Collect Vitreous Fluid</p> <p>F. Document Burns</p> <ol style="list-style-type: none"> 1. Location 2. Degree 3. Etiology 4. Percentage of body surface area(BSA) <p>G. Biopsy Skin Lesions</p>	<p>Firefighters are trained to provide emergency medical care for fire casualties. Of particular importance is that <u>resuscitative efforts for fellow firefighters are likely to be heroic and prolonged</u>. This fact should be taken into account when examining the body for evidence of medical intervention <u>and</u> when interpreting the results of blood gas assay.</p> <p>Note the presence of soot or other unidentified substances on the skin and place samples (swabs) in a sealed container.</p> <p>Certain internal samples (such as soot swabs and vitreous fluid) which can be done before the body is opened are taken at this point because collection can be accomplished in a more controlled manner, thus reducing the potential for cross-contamination of the surfaces.</p> <p>Hair samples should be about the thickness of a finger, pulled out so as to include the roots, tied around the middle, with the proximal and distal ends marked, and stored in a plastic evidence bag.</p> <p>Vitreous fluid should be taken from both eyes. Vitreous fluid can be used to corroborate blood alcohol levels.</p>

PROTOCOL	DISCUSSION
<p>IV. <u>Internal Examination</u></p> <p>A. Document Evidence of Injury</p> <p>B. Document Evident of Medical Treatment</p> <p>C. Describe Internal Organ System</p> <p>D. Collect Samples for Toxicological Analysis</p> <ol style="list-style-type: none"> 1. Blood (2 x 20cc red- and grey-top tubes) 2. Urine (20 to 30cc) and/or trimmed bladder 3. Bile (all available) or Gallbladder (ii bile unavailable) 4. Cerebrospinal Fluid (up to approx. 30 ml) 5. Soot swabs from airway <ol style="list-style-type: none"> a. Tracheal b. Bronchial 6. Representative sampling of gastric and duodenal contents (50g: note total amount) 7. Take and retain fresh-frozen samples <ol style="list-style-type: none"> a. Lung 100g b. Kidney 100g c. Liver 100g d. Spleen 100g e. Skeletal muscle (Psoas or Thigh) 20g f. Subcutaneous fat 20g g. Section of bone with marrow (3-4 cm) h. Brain 100g 8. Additional specific samples to be taken: <ol style="list-style-type: none"> a. Tied-off lower lobe of right lung (store 	<p>Soot swabs should be obtained from the upper and lower airways as well as from the inside of the SCBA face piece. These will assist in the determination of SCBA usage and operability.</p> <p>Not any unusual odors/colors of anything found during the internal examination.</p> <p>Fresh-frozen samples of vital organs should be taken and retained a minimum of 90 days, preferably longer as storage space permits.</p> <p>An area of growing interest is the cancer rate of firefighters. Potentially cancerous tissue should be biopsied and saved. Additionally, histological type and the exact location of the tumor (if site-specific) within an organ should be documented in detail.</p> <p>In the case of incinerated remains, bone marrow or spleen may be the only source of tissue for toxicological studies, especially for those establishing carbon monoxide levels.</p> <p>Gastric and duodenal contents should be representative. Solid dosage forms should be removed, counted, and analyzed.</p> <p>When taking lung samples, use the right lung because aspirated foreign materials have a greater propensity to lodge in the right lung.</p>

<p>in arson debris paint can)</p> <ul style="list-style-type: none">b. Peripheral blood from leg vein (fluoridated and red-top tubes)c. Any specimens taken in field or during hospital resuscitationd. Sample hematomase. Any other sites should be labeled	
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PROTOCOL	DISCUSSION
<p>V. <u>Toxicological Examination</u></p> <p>A. Urine Screen/Analysis</p> <ol style="list-style-type: none"> 1. Volatile compounds (e.g., Benzene, Hydrocarbons including accelerants, Ethanol) 2. Psychoactive substances (e.g. Opiate derivatives, Marijuana metabolites, Cocaine metabolites, Stimulants, Phencyclidine) <p>B. Blood Analysis</p> <ol style="list-style-type: none"> 1. Carboxyhemoglobin, Methemoglobin, Sulfhemoglobin 2. Volatile compounds (see A.1 above) 3. Other (e.g., Hydrocyanic Acid, Fluoride) 4. Confirm results of positive urine screen <p>C. Subcutaneous Fat Analysis</p> <ol style="list-style-type: none"> 1. Organic compounds, including: <ol style="list-style-type: none"> a. Herbicides b. Pesticides 2. Polychlorinated Biphenyls (PCBs) <p>D. Soot Screen (from swabs)</p> <ol style="list-style-type: none"> 1. Metals, including: <ol style="list-style-type: none"> a. Arsenic b. Antimony c. Lead 2. Organics, including: <ol style="list-style-type: none"> a. Pesticides b. Herbicides c. Vinyl Chloride d. Acrylonitrile 	<p>The toxicological analysis performed for firefighters should be of a higher order than that performed for civilian fire casualties. In addition to ascertaining blood levels of various toxic products that are commonly found in a fire environment, it is beneficial to know about the presence of any judgment-impairing substances. This may be important in the determination of eligibility for death benefits as well as for determining casualty.</p> <p>Determination of specific levels of metals, organic compounds, and gross particulate matter should be conducted because firefighter exposure to these substances is believed to be greater than that for civilians. Additionally, this information may yield important clues about the cause, manner, and mechanism of firefighter death.</p> <p>Use vitreous fluids or bile to confirm presence of ethanol in either blood or urine.</p> <p>Use caution when noting the presence of Hydrocyanic Acid as it can be produced by bacterial decomposition within the tissues of the deceased.</p> <p>Check for the presence of PCBs in the subcutaneous fat, as this will help in the determination of a history of exposure.</p>

<p>e. Acrolein 3. Particulate analysis</p>	
<p>PROTOCOL</p>	<p>DISCUSSION</p>
<p>VI. <u>Microscopic Examination</u> A. Findings of Microscopic Examination</p>	<p>Representative samples of all organs and body systems should be collected. The sections should be microscopically examined for malignant neoplasms and other abnormalities, including suggestive pre-malignant changes.</p>
<p>VII. <u>Summary of Pathological Findings</u> A. Medical Facts 1. Correlation</p>	<p>State objective findings related to gross and microscopic examinations. Correlate physical circumstances, toxicological analyses, and other investigative studies to pathological findings.</p>
<p>VIII. Conclusions A. Discrepancies 1. Inconsistent observations 2. Differences between death certificate and subsequent findings B. Conclusions 1. List diagnoses on a separate page 2. Cause and manner of death</p>	<p>Include determination of cause and manner of death. Describe discrepancies between evidence collected or observations of eyewitnesses and the autopsy findings.</p>

