NOKOMIS FIRE DEPARTMENT

INFECTION CONTROL POLICY

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MANAGMENTS COMMITMENT:

The Nokomis Fire Department recognizes the potential exposure of its member to communicable diseases in the performance of their duties and is committed to a program that will prevent or reduce this exposure. Furthermore this department will take whatever measures are feasible to protect the health of its members.

To minimize the risk of exposure, The Nokomis Fire Department will provide its members with proper control protective equipment including disposable medical gloves and disinfecting supplies. The Nokomis Fire Department will also provide initial instruction and continuing education in preventative health care practices so that all employees possess a basic awareness of infectious diseases, understand the risk and severity of various types of exposures and exhibit proper skills in infection control.

Necessary immunizations will be made available to protect member from potential exposure to infectious disease. Appropriate assessment/medical treatment will be provided to exposed members.

The Nokomis Fire Department believes that its members have the right to be fully informed if a patient found to carry a communicable disease and if a probable significant exposure occurred as defined by 10D-93.0681. The responsibility for informing The Nokomis Fire Department will be that of the medical institution receiving the patient and should occur as soon as possible after the medical institution becomes aware of the condition.

PERSONNEL PARTICIPATION:

The Nokomis Fire Department having a volunteer membership, therefore its membership will be referred to as personnel and or members and not employees in this policy. The Nokomis Fire Departments Infection Control Plan requires uniform participation by all affected Members. Any bona-fide infraction to the Infection Control Plan will be subject to the Departments Rules and Regulations concerning Disciplinary Action, which shall include retraining if the infraction is deemed to be through a lack of knowledge and understanding.

In the emergency care setting, the infectious disease status of patients is frequently unknown by fire department personnel. **All patients will be considered infectious. Blood and body fluid precautions will be taken with all patients.**

The exposed Nokomis Fire Department member will notify the **SHIFT PERSON** after any exposure. The **SHIFT PERSON** will contact the **FIRE CHIEF OR HIS DESIGNEE** as soon as possible and have the **EXPOSED MEMBER** transported to the **SAME** medical provider as the **SOURCE. THE FIRE CHIEF OR HIS DESIGNEE** will take the completed *MEDICAL AUTHORIZATION FORM* to the medical provider. After initial treatment is completed , the **EXPOSED MEMBER** will complete the *NOKOMIS FIRE DEPARTMENT EXPOSURE REPORT*. The **EXPOSED MEMBER** will forward the completed *EXPOSURE REPORT* to the **FIRE CHIEF OR HIS DESIGNEE.** If referral to additional **MEDICAL PROVIDER** is needed, another *MEDICAL AUTHORIZATION FORM* will be obtained from **THE CHIEF OF THE DEPARTMENT.**

The **FIRE CHIEF OR HIS DESIGNEE** will document an exposure tracking system on each of its members and will be maintained for the duration of membership plus thirty (30) years.

RYAN WHITE CARE ACT:

The Ryan White Comprehensive AIDS Resources Emergency Act (Public Law 101-381) was enacted mainly to correct a problem of proper notification. This Act requires a person to be named as the "Designated Officer" to act as the go between from the hospital to the Emergency Response Employees (EREs). Throughout the nation hospitals are required by law to contact responding agency personnel of the possible transmission of an infectious disease through a contact of a patient that was treated and/or transported. In many cases the hospitals were following procedures but did not have a contact to pass on this information. With this act it is now mandatory to have a designated person, plus submit this name to the state Public Health Officer.

This Act specifies time frames for proper notification from the hospital to the EREs and what is required to be proper notification. This act also covers the 21 infectious diseases and what is deemed exposure.

The Ryan White Comprehensive AIDS Resources Emergency Act and all of these requirements are addressed in this Infectious Control Plan and are further discussed in detail within.

INFECTION CONTROL OFFICER

The Fire Chief or his designee for The Nokomis Fire Department will be Chief Scott Lane, who will be on file with the State of Florida of HRS.

The Fire Chief or his designee will be the liaison between Nokomis Fire Department and the Infection Control Departments of our four local resource hospitals and Regional Trauma Centers. When notified by the hospital Infection Control Department that our personnel were exposed to an infectious disease during the care and transport of a patient, The Fire Chief or his designee will investigate the incident and notify all personnel who were exposed and ensure that those personnel receive appropriate medical follow-up if needed.

EXPOSURE(S):
The Fire Chief or his designee will be responsible for coordinating efforts surrounding the investigation of an "Exposure".

The Fire Chief or his designee will maintain strict confidentiality when investigating a report of an "Exposure". Confidentiality will be maintained in accordance to Florida Law for both the "*source individual"* and the exposed member(s).

The Fire Chief or his designee will ensure that all *"Exposures"* are properly documented by the member. This documentation is to forward to the Chief for processing and filing.

The Fire Chief or his designee will maintain a data base that will track and document *"Exposures"* on all personnel.

TRAINING:
The Fire Chief or his designee will ensure that all personnel with the potential for *"occupational exposure"* are trained at least annually or with any change on The Departments Infection Control Plan. After the completion of this training program The Fire Chief or his designee will ensure that this Training is documented for each member. This documentation will be place in each members training file.

The Fire Chief or his designee / Safety Committee will ensure that all new members are trained in the Departments Infection Control Plan prior to them starting with the department.

ENFORECEMENT:
The Fire Chief or his designee, Line Officers and Safety Committee member will conduct spot inspections of on-scene and station operations to ensure compliance with the Department Infection Control Plan.

If a spot inspection reveals non-compliance to the Departments Infection Control Plan, The Fire Chief or his designee will immediately correct the unsafe condition and administer disciplinary action which may include mandatory retraining in accordance to the Departments Rules and Regulations. This action is to be coordinated with the Safety Committee.

RESEARCH AND DEVELPOMENT:
The Safety Committee will update the Infection Control Plan on an annual or as-needed basis.

The Fire Chief or his designee / Safety Committee will stay current with new information pertaining to infectious disease, treatment, work control practices, engineering controls and laws. This new information is to be disseminated to all personnel.

EXPOSURE DETERMINATION ON JOB CLASSIFICATIONS

The following job classifications are reasonably anticipated to involve exposure to blood, body fluids or other potentially infectious substances in the performance of their duties.

1. Firefighter – individuals in this job classification, because of the type of work that they perform are considered to have a potential for OCCUPATIONAL EXPOSURE. Their job requires them on a daily basis to be in contact with patients that would expose them to blood, body fluids and parenteral type injuries.

2. Lieutenant – individuals in this job classification, because of the type of work that they perform, are considered to have a potential for OCCUPATIONAL EXPOSURE. Their job requires them on a daily basis to be in contact with patients that would expose them to blood, body fluids and parenteral type injuries.

3. Captain – individuals in this job classification, because of the type of work that they perform are considered to have a potential for OCCUPATIONAL EXPOSURE. Their job requires them on a daily basis to be in contact with patients that would expose them to blood, body fluids and parenteral type injuries.

4. Chief – individuals in this job classification, because of the type of work that they perform are considered to have a potential for OCCUPATIONAL EXPOSURE. Their job requires them on a daily basis to be in contact with patients that would expose them to blood, body fluids and paremteral injuries.

5. Mechanic- individuals in this job classification are required to perform work on all of the Departments Apparatus and do some work on fire equipment. Since the apparatus and fire equipment has the potential of an EXPOSURE, mechanics will be considered to have a potential for OCCUPATIONAL EXPOSEURE.

6. Fire Police and Junior Firefighter – individuals in this job classification, because of the type of work that they perform, are considered to have a potential for OCCUPATIONAL EXPOSURE. Their job does **NOT** require them on a daily basis to be in contact with patients that would expose them to blood, body fluids and parenteral type injuries but they do have the potential of showing up on a scene that could expose them to these elements.

7. Staff – individuals in this job classification do **NOT** have a potential for occupational exposure. This job classification does require education and training in the Infection Control Plan on an annual basis.

The following tasks are reasonably anticipated to involve exposure to blood, body fluids or other potentially infectious materials.

1. Emergency care to injured or ill victims.

2. Rescue of victims from hostile environments including burning structures or vehicles, water, contaminated atmospheres or oxygen deficient atmospheres.

3. Extrication of victims from vehicles, machinery, collapsed excavations or structures.

4. Recovery and / or removal of bodies from any situation cited above.

5. Response to hazardous materials emergencies, both transportation and fixed-site, involving potentially infectious substances.

REPORTING OF EXPOSURE TO SELECTED INFECTIOUS DISEASES

DEPARTMENT OF HRS – CHAPTER 10D-28

The attached rules require licensed facilities (hospitals) to notify EMT's, Paramedics or their emergency medical transportation employer and other persons known to have been exposed to a selected infectious disease while treating or transporting ill or injured patient to a licensed facility.

This law covers the reporting of 21 selected infectious diseases. They are as follows:

1. Acquired Immunodeficiency Syndrome (AIDS)
2. Anthrax
3. Syphilis in an infectious stage
4. Diphtheria
5. Disseminated Vaccinia
6. Hansen's Disease
7. Hepatitis A
8. Hepatitis B
9. Hepatitis Non-A Non-B (now identified as Hepatitis C)
10. Legionnaires Disease
11. Malaria
12. Measles
13. Meningococcal Meningitis
14. Plague
15. Poliomyelitis
16. Psittacosis
17. Pulmonary Tuberculosis
18. Q Fever
19. Rabies
20. Rubella
21. Typhoid Fever

To summarize this reporting law, licensed facilities are to notify the transporting agency (fire department) within 48 hours of a confirmed diagnosis. Which could take weeks because of the amount of time it takes for certain tests to run in order to get a confirmed test reading, such as in the case of determining active/infectious tuberculosis in a patient. This notification can be either in writing or verbally.

Verbal notification of such exposure to a selected infectious disease must be followed by written notification within 48 hours of a confirmed diagnosis.

Identification of the EMT, Paramedic or other known persons to have been in contact with the patient during treatment or transport, if notification is made to the EMS provider.

Both written and verbal notification shall contain at a minimum:

A. Name of disease
B. Signs and symptoms of clinical disease
C. Date of exposure to the selected infectious disease
D. Incubation period of disease
E. Mode of spread of the disease
F. Advisement of appropriate diagnosis, prophylaxis and treatment if any
G. *CONFIDENTIALITY* of the patient information must be maintained. The name if the patient shall NOT be disclosed.

The Infection Control Office of our local hospitals will notify our Fire Chief or his Designee of an exposure. Once this notification is made to the Fire Chief or his designee, he will notify the member(s) of the incident with the required information and arrange any follow-up evaluation and treatment if required.

All follow-up evaluation and treatment will be performed by a licensed Health-Care Professional. The initial evaluation and treatment may be performed at any of our local emergency rooms, however if follow-up evaluation and treatment is required it may be referred to another Medical Provider.

MODE OF TRANSMISSION OF INFECTIOUS DISEASE

1. CONTACT TRANSMISSION- Direct and indirect contact

A. DIRECT- direct physical contact takes place between an individual and the infected person.
B. INDIRECT- indirect physical contact takes place between an individual and objects that may have infectious organisms on them (example) Vehicle surfaces, dressings.

2. AIRBORNE TRANSMISSION- the infective organism is introduced into the air by a patient who is coughing or sneezing. Droplets of mucus that carry bacteria or other organisms can then be inhaled by another individual.

3. VECTOR TRANSMISSION- the infective organism is transmitted to an individual by insects, (example) mosquitoes transmit malaria and ticks transmit Rocky Mountain spotted fever. Vector-borne disease rarely presents a great risk to pre-hospital care providers.

4. VEHICLE TRANSMISSON- the infective organism is introduced directly into the body through ingestion of contaminated food, water or by the infusion of contaminated drugs, fluids or blood.

The greatest opportunity for acquiring an infectious disease is through DIRECT and INDIRECT CONTACT. Proper hand washing and wearing gloves will reduce this exposure potential tremendously.

AIREBORNE TRANSMISSION – can present a risk of infection, however is less likely than with DIRECT or INDIRECT. There must be contact with a coughing or sneezing patient, direct contact with sputum or prolonged exposure to the patient. AIREBORNE TRANSMISSION will also occur during suctioning of the airway and during ventilation of the airway through adjunct devices. Wearing eye protection devices and HEPA filter respirators and gloves will reduce this exposure potential tremendously.

In general, actual risk is much less than perceived risk in any infectious situation. Knowledge of how each disease is spread and how to block the spread is a priority for all personnel major protective measure.

HEPATITIS – B VIRUS (HBV)

Hepatitis B (HBV) virus is very potent. A small amount of this virus can infect a person. The Hepatitis B virus is 100 times more infectious that the AIDS virus.

We are at five (5) times greater risk of contracting *Hepatitis B* than any other communicable disease.

The *Hepatitis B* virus is spread through blood to blood contact (an everyday event for emergency medical personnel), parenteral injury and body fluids. This virus is also spread through sexual contact. *Hepatitis B* is now listed as a sexually transmitted disease.

The Hepatitis B Virus infects people of all ages and every year, about 200,000 people are newly infected in the United States. Of this 200,000 90% eventually recover and clear the virus, but over 11,000 will have to be hospitalized and over 20,000 (10%) will become chronically infected with HBV. About 2.5 million people in the United States have chronic Hepatitis B, and more than 4,000 people die each year from Hepatitis B related liver disease.

The signs and symptoms are frequently mistaken for flu or a cold. Many cases of Hepatitis B are passed off as cases of flu and never positively identified. Sometimes there are no symptoms at all.

THERE IS NO CURE FOR HEPATITIS B – but immunity through vaccination gives assurance that you are protected.

INFECTIOUS AGENT: Hepatitis B

MODE OF TRANSMISSION: Blood, parenteral injury, body fluids and sexual contact

INCUBATION PERIOD: 45 days to 180 days with an average of 60 days to 90 days

SYMPTOMS: Flu symptoms, nausea, loss of appetite, fatigue, abdominal pain, diarrhea, jaundice, joint pain

PROTECTIVE MEASURES: Immunization, universal precautions on all patients, use good hand washing technique.

HEPATITIS B VACCINATION PROGRAM

This Department will offer at no expense to its members *Hepatitis B vaccine.* Currently The Nokomis Fire Department will use vaccine provided by Sarasota County. This program is coordinated by Sarasota County Medical Director and follows the recommended guidelines if the U.S. Public Health Service, Florida Law, OSHA and the Centers for Disease Control.

All new members, at the time of their orientation will be offered this vaccine and will receive their first shot prior to them starting to work in emergency response, unless the member has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the member is immune, or the vaccine is contraindicated for medical reasons.

The *Hepatitis B vaccination process* consists of a series of three shots of one (1)cc over a course of 6 months. Because of our occupational exposure, it is recommended that we follow dose schedule number one.

Dose schedule number in consists of a series of three shots, one cc to be given first, one month later the second cc to given and six months from the first shot the third and final shot is to be given.

Four to six weeks after the third and final injection, a tube of blood will be drawn from the member to determine their immune ratio status. This blood test is called *Hepatitis B surface Antibody* (HBSAB).

Approved laboratories will process our blood samples. A copy of the results will be given to the member. Results that indicate a borderline or negative reading will require a booster shot of 1cc of vaccine. A positive reading indicates the immune ratio status is greater than 10 and does not require a booster shot.

Personnel that have borderline or negative test results will be given, at no expense to the member, a booster injection of 1cc of Engerix-B. Four to six weeks after this injection, another tube of blood will be drawn to determine immune status. If the rest results come back as a negative reading, it is assumed that the vaccine will not take. There will be no more booster shots.

When this situation occurs, the employee will be considered at high risk and will be counseled in regards to hepatitis B information again, taking **double** universal precautions, and education to the needle stick protocol to follow in the event of a significant exposure.

The Hepatitis B Surface Antibody (HBSAB) test will be performed on an annual basis to all personnel with occupational exposure.

New personnel starting the vaccination program will be provided with a training program during their orientation on Hepatitis B and the vaccination program. New personnel will also be given an information package to read. This package will include information about Hepatitis B and the vaccine that is being made available to them at the Departments expense.

After going through this orientation process and reading the information package the member will be offered this vaccine. If the member consents to taking the vaccine a consent form will be required to be completed. If the member declines the vaccine, the member is required to complete a declination form.

Any member that declines this vaccine at first can at anytime during their membership request the vaccination. If a member does request the vaccine at later date, it will be provided to them at the Departments expense. Any member that does not complete a declination form will be considered at high risk and will be counseled in regards to Hepatitis B, taking double universal precautions and needle stick protocol to follow.

All consent/declination forms will be filed in the personnel medical file. Each member that receives this vaccine will be entered into a data base for tracking purposes.

Any member that does not show a positive HBSAB test after receiving all the required doses of Hepatitis B vaccine will be considered at high risk and will be counseled in Hepatitis B, taking double universal precautions and the protocol that would be followed in the event of an "*Exposure"*.

HUMAN IMMUNODEFICIANCY VIRUS (HIV)

AND

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The immune system plays a crucial role in our body's defense against disease. Especially important are the white blood cells. These cells include:

B Cells – they produce important infection fighting antibodies (chemical compounds that fight the spread of disease
Agents.

H Cells – helper T cells, these potent white blood cells help B cells produce antibodies that fight invading
germs, viruses etc.

S Cells – Suppressor T cells, this type of cells stops or suppresses production of B cell antibodies after
Infection has been repelled. In a healthy person "helper cells" out number suppressor cells by 2 to 1

HIV destroys the body's immune system. HIV destroys the T cells (B and H cells) which causes the suppressor cells to out number the helper cells, leaving the immune system to weak to fight against certain diseases.

When the immune system is infected by HIV, this virus penetrates and slowly destroys the helper cells be secreting an enzyme. The helper T cell, instead of being a cell of the human immune system, becomes a cell that now manufactures HIV. As the HIV's rapidly reproduce with the helper T cell, the T cell is destroyed. It eventually bursts, releasing thousands of new human immunodeficiency viruses into the blood stream. As this process repeats itself with other T cells, the immune system eventually breaks down because there are far too few helper T cells. Immediately the body responds to this invading virus and the helper cells produce an anti-body to fight it. As the virus progresses it slowly destroys the helper cells and when the ratio of suppressor cells out number the helper cells, the suppressor cells become dominant and call off the attack of this virus. This leaves the immune system too weak to fight against diseases. When this occurs, a patient is diagnosed with AIDS.

AIDS victims do not die from AIDS itself; the human immunodeficiency virus does not cause death. Death results instead from the host of opportunistic infections (many of them cancer) that invade the weakened body of an AIDS victim.

HIV is not AIDS. HIV causes AQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

When the immune system does not function properly, patients develop unusual infections. The two most common are:

1. **Pneumocystis Jirovecii:** Is a lung infection caused by a parasite. Usually its only seen in cancer patients taking certain types of drugs. ***It is the leading cause of death in AIDS patients.***

2. **Kaposi Sarcoma:** Is a form of cancer or tumor usually arising in the skin. Before 1980 it was rare and it was almost always **NON-FATAL.** It usually appeared in elderly men of Mediterranean descent and some young African American men. Today Kaposi Sarcoma is the ***second most common cause of death among AIDS patients.***

AIDS was first recognized in 1978 however it was called GRID (Gay Related Immune Deficiency Disease). In 1980 HIV was identified as the virus and the name of the disease changed to AIDS.

When the human immune system has been crippled or damaged by the human Immunodeficiency virus it produces a variety of symptoms. The most common telltale signs and symptoms if AIDS related complex include:

1. Night sweats (two to three bed changes required due to saturation each night)
2. Persistent low grade fever (generally between 99.5 and 100 degrees)
3. Fatigue
4. Swollen lymph glands, usually affecting those in the neck, behind the ears, under the arms & in the groin.
5. Weight loss of ten pounds or at least percent of body weight that cannot be explained by dieting.
6. Oral Candidiasis (Thrush) white, thick, patchy fungal growth on the tongue, gums or in the lining of the cheeks.
7. Persistent diarrhea (three times a day over a period of weeks and months)
8. Loss of appetite

Serological studies indicate that HIV has spread extensively among certain high risk groups over the past few years.

1. Homosexual men-Surveys of homosexual men and bisexual man conducted in various U.S. locations show infection rates ranging from under 10 percent to as high as 70 percent, with San Francisco having the highest prevalence of infection.

2. Intravenous drug users- There is marked geographical variation in the prevalence of infection among intravenous drug users. In New York City, northern New Jersey and Puerto Rico, the prevalence of infection is 50 to 60 percent.

3. Hemophiliacs- Overall about 70 percent of Americans with hemophilia A are infected with HIV. Approximately 35percent if Americans with hemophilia B are infected.

4. Heterosexual partners of individuals infected with or at high risk of infection with HIV. The prevalence of infection observed among such individuals varies considerably from study to study, ranging from under 10% to as high as 60%.

5. Prostitutes- Female prostitutes are at high risk of infection with HIV not only because they have multiple sexual partners, but because many use intravenous drugs. Prevalence of infection varies from 0 to 57%, with the highest prevalence seen in inner-city areas where drug abuse is common.

HIV is transmitted through blood and body fluids. HIV is primarily a sexually transmitted disease.

Combining all studies of health-care workers documented needle-sticks or mucous membrane exposures to HIV indicate that the upper limit of infection is less than 1 percent. This suggests that direct exposure to a certain minimum number of virus particles is necessary for infection to occur. The dose of virus that causes infection is not known. The results of these studies on individuals who have had frequent contact with HIV/AIDS patients and/or their bodily fluids provide strong evidence that HIV/AIDS is not transmitted through causal contact.

Never the less transmission of HIV to health care workers or household contacts of AIDS patients is possible if recommended sanitary precautions are ignored. There have been at least six reports of incidents where health care workers or care takers of HIV/AIDS patients have become infected after unprotected exposure to the blood and/or bodily fluids of HIC/AIDS patients.

Because of what is known about HIV/AIDS and what we know about the way in which it is transmitted, researchers have been able to develop a series of specific guidelines that can help reduce the risk of becoming infected. Personal risk can be reduce by following these guidelines:

1. Do not have sex with multiple partners or with persons who have had multiple partners (including prostitutes). The more sexual partners you have the greater your risk of sexually contacting an infected person.

2. Do not have sex with someone who has HIV/AIDS.

3. If you do have sex with someone who you think might be infected or someone whose history is unknown to you, take precautions to prevent the exchange of bodily fluids. Use a condom to reduce the chances of spreading the virus and avoid oral-genital contact and open mouth, intimate kissing.

4. Avoid sexual practices that may injure bodily tissues and make it easer for the virus to enter the bloodstream (such as anal intercourse).

5. Do not use intravenous drugs.

6. Do not use items of someone else that might have been contaminated with blood.

7. If you suspect that you might have been infected with HIV of if you are a member of a high-risk group, immediately arrange for HIV testing.

The centers for disease control have published general guidelines for medical personnel to follow when caring for HIV/AIDS patients. The universal precautions include the following:

1. All health care workers should routinely use appropriate barrier precautions to prevent skin and mucous membrane exposure when in contact with blood or other bodily fluids of any patient is anticipated. Gloves should be worn when touching blood and bodily fluids, mucous membranes or non-intact skin of all patients, for handling items or surfaces soiled with blood or bodily fluids and for performing venipuncture and other vascular access procedures. Masks and protective eye wear or face shields should be worn during procedures that are likely to generate droplets of blood or other bodily fluids to prevent exposure of mucous membranes of the mouth, nose, and eyes. Gowns or aprons should be worn during procedures that are likely to generate splashes of blood or other bodily fluids.

2. Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with blood or other bodily fluids.

3. All health care workers should take precautions to prevent injuries caused by needles, scalpels and other sharp instruments or devices during procedures. When cleaning used instruments and during disposal of used needles. To prevent needle-stick injuries, needles should not be recapped, bent or broken by hand. After they are used they should be placed in puncture resistant containers for disposal. The puncture resistant containers should be located as close as practical to the use area.

4. Although saliva has not been implicated in HIV transmission, to minimize the need for emergency mouth to mouth resuscitation, mouth pieces, resuscitation bags or other ventilation devices should be available for use in areas in which the need for resuscitation is predictable.

5. Health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient contact and from handling patient care equipment until the condition resolves.

6. Pregnant health care workers are not known to be at greater risk of contracting HIV infection than health care workers who are not pregnant, however if a health care worker develops HIV infection resulting from perinatal transmission.

There is no cure for HIV/AIDS. At this time there is no vaccine available for immunization, although vaccines and drugs are being developed and some anti-viral drugs are being used to treat HIV/AIDS patients with certain medical conditions. For example, the drug AZT (Azidothymidine or Zidovudine) has been helpful in halting the spread of HIV in some patients as well as DDI (Dideoxyinosine) and DDC (dideoxycytidine). The combination of AZT and DDI have shown positive effects in halting the spread of HIV.

Because of the knowledge that has been gained today about HIV/AIDS, the life if an infected person has been prolonged.

INFECTIOUS AGENT: Human Immunodeficiency Virus (HIV)

MODE OF TRANSMISSION: Contact with blood or bodily secretions or sexual contact

INCUBATION PERIOD: 2 weeks to 6 months. May take 10 to 20 years to develop AIDS.

SYMPTOMS: At first no symptoms are present as infection progresses fever, with prefuse night sweats,
Weight loss 10 pounds per month, reddish purple skin lesions, pneumonia.

PROTECTIVE MEASURES: Take Universal Precautions

POST-EXPOSURE EVALUATION AND FOLLOW-UP TREATMENT

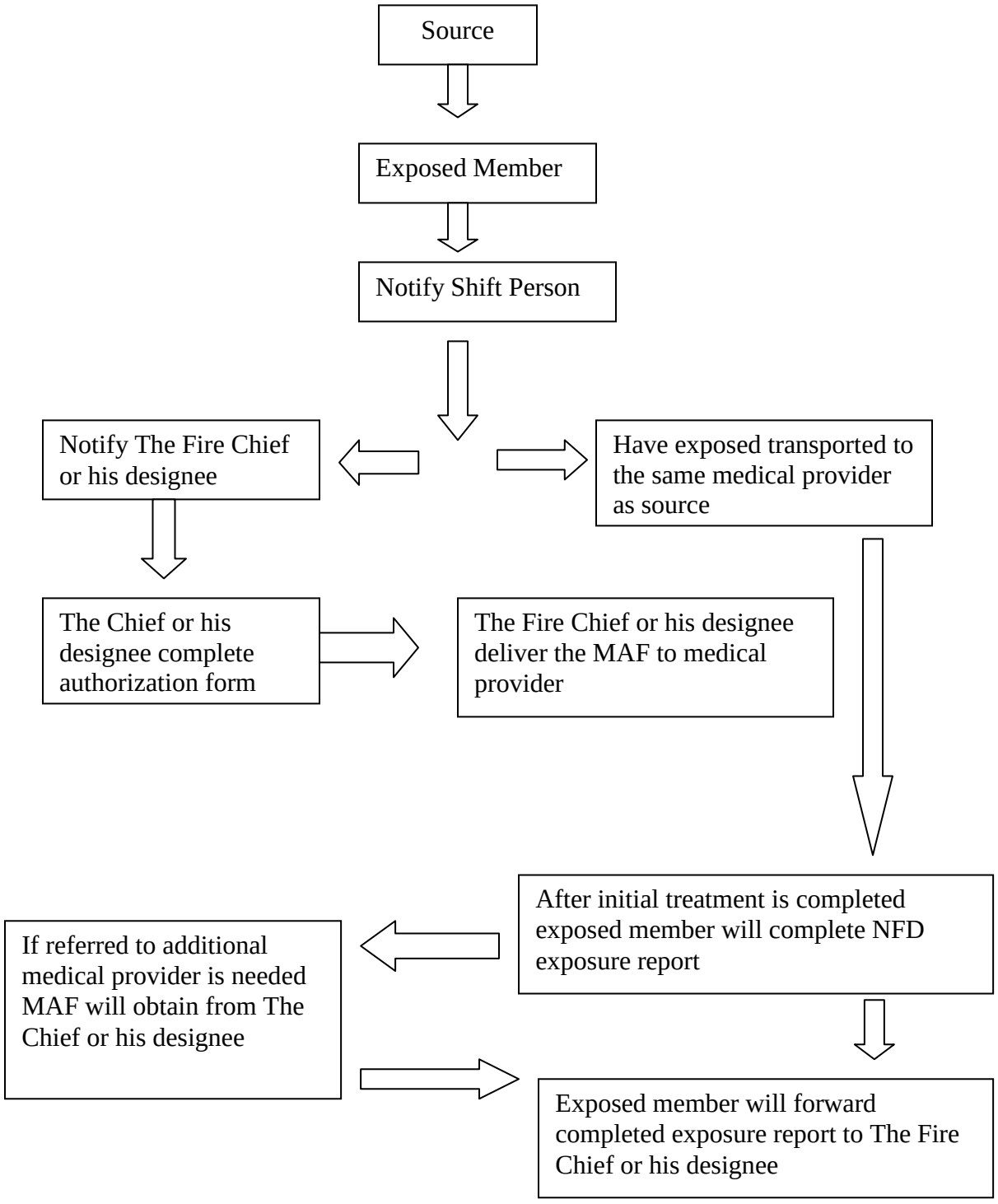
EXPOSURE is defined to be an exposure through *needle stick*, instruments or sharps to the body fluids to which universal precautions apply accordingly to the Center for Disease Control, including without limitations the following body fluids:

1. Blood or any body fluid containing visible blood
2. Semen
3. Vaginal secretions
4. Crebrospinal fluid
5. Synovial fluid
6. Pleural fluid
7. Peritoneal fluid
8. Pericardial fluid
9. Amniotic fluid
10. Laboratory specimens that contain HIV.

Exposure of mucous membranes to the body fluids listed above also constitutes an exposure. Exposure also includes exposure of the skin to the body fluids listed above, when the exposes skin is chapped, abraded or afflicted with dermatitis or the contact is prolonged or involving an extensive area.

SOURCE INDIVIDUAL – Means any individual living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the member.

The expose Nokomis Fire Department member will notify the **SHIFT PERSON** after any exposure. The **SHIFT PERSON** will contact **The Fire Chief or his designee** as soon as possible and have the **EXPOSED MEMBER** transported to the **SAME** medical provider as the **SOURCE**. **The Fire Chief or his designee** will take the completed MEDICAL AUTHORIZATION FORM to the medical provider. After initial treatment is completed the **EXPOSED MEMBER** will complete **The Nokomis Fire Department Exposure Report.** The **EXPOSED MEMBER** will forward the completed EXPOSURE REPORT to **The Fire Chief or his designee**. If referral to additional **MEDICAL PROVIDER** is needed, another MEDICAL AUTHORIZATION FORM will be obtained from **THE FIRE CHIEF.**


Source
Exposed Member
Notify Shift Person
Notify The Fire Chief or his designee
Have exposed transported to the same medical provider as source
The Chief or his designee complete authorization form
The Fire Chief or his designee deliver the MAF to medical provider
After initial treatment is completed exposed member will complete NFD exposure report
If referred to additional medical provider is needed MAF will obtain from The Chief or his designee
Exposed member will forward completed exposure report to The Fire Chief or his designee

EXPOSURES

NEEDLE STICK INJURY/SKIN/MUCOUS MEMBRANE INJURY:

NOKOMIS FIRE DEPARTMENT PERSONNEL SHALL NOT HANDLE NEEDLES OR ANY SHARPS!

Needle stick injuries should not be disregarded. Contaminated needles can transfer diseases such as Hepatitis B, Hepatitis C and HIV from the blood of an infected patient.

The specific treatment of such injuries depends on (1) the *source individuals* availability for testing (2) the results of the *source individuals* blood screening for HBV and HIV (3) the results of the exposed members blood screening for HBC and the *source individuals* liver function studies.

UNKNOWN SOURCE:
The member may not know which *source individual* was in contact with the needle before the member was injured. The exposed member has no way of knowing who had been treated with that particular needle.

The protocol for an "Exposure" from and **UNKNOWN SOURCE** is as follows:

1. If member has not been tested in the past 10 months for HBSAB, then test for HBSAB.

2. Offer member HIV testing 1

3. Offer member immune serum globulin ISG .6CC/KG2

4. If positive HBSAB test- then no Hepatitis B booster is required. If negative HBSAB test then booster with Hepatitis B vaccine.

5. If member never received vaccination for HBV, start process

6. If negative HIV – test 6 weeks 3 month and 6 months

7. If positive HIV – refer to Medical Doctor for follow-up evaluation

8. Any signs or symptoms if illness after significant exposure needs to be reported immediately to The Fire Chief or his designee for follow-up evaluation.

KNOWN SOURCE:
In most cases the member will know who the *source individual* is. If this occurs the following will be used:

1. The *source individual* for HBSAG if the exposed member consents and submits to HIV testing then the *source individual* for HIV. This procedure must be followed according to Florida Law .3

2. If *source individuals* HBSAG is negative than no treatment is required of the exposed member.

3. If *source individuals* HSBAG is positive and the exposed member has not been tested within the past 10 months for HBSAG then test the exposed member for HBSAG. If the exposed member test is negative, then administer Hepatitis B Immune Globulin (HBIG) .06cc/kg. If exposed member had received the vaccination series and has a negative HBSAG then booster with Hepatitis B vaccine.

4. If *source individual* and the exposed members are HIV negative, then continue HIV testing on the exposed member at 6 weeks, 3 months, and 6 months.

5. If *source individual* is HIV positive, continue HIV testing on the exposed member at 6 weeks, 3 months and 6 months. If the exposed member becomes HIV positive then this exposed member will be referred to a medical doctor for follow-up evaluation.

IF ANY ACUTE FEBRILE ILLNESS, RASH, AND LYMPHADNOPTHY OCCURS WITHIN 12 WEEKS AFTER THE EXPOSURE, THE EXPOSED MEMBER NEEDS TO SEEK MEDICAL EVALUATION IMMEDIATELY AND SIMULTANEOUSLY NOTIFY THE FIRE CHIEF OR HIS DESIGNEE.

1. HIV testing of the exposed member will be performed in accordance to 10D-93.061, Florida Administrative Code titled; "Immunodeficiency Virus". Consent to test must be obtained from the member. The exposed member will be provided with counseling before the HIV test and counseling will be provided with test results. Both counseling and testing will be performed by personnel that are certified by the State of Florida Health & Rehabilitative Services as Per-Post HIV counselors.

2. Immune Serum Globulin (ISG) is administered to protect the exposed member against Hepatitis non-A, non-B which is now identified as Hepatitis C.

3. Chapter 10D-93.0681 of the Florida Administrative Code titled "Significant Exposure" states that when medical personnel have experienced a significant exposure during the course employment or within the scope of their practice, the identity if the source individual of the significant exposure and the HIV test result of the source individual can be disclosed to the exposed medical personnel provided the significant exposure is documented by a person trained or authorized to document a significant exposure. This can include a licensed physician or designee, employee health nurse or The Fire Chief or his designee.

When medical personnel have experienced an exposure the source of the exposure can be tested *without* informed consent and the identity of the source of exposure and the HIV test result of the source can be disclosed to the medical personnel who experienced the exposure only in compliance with the following:

1. A licensed physician documents that an exposure has occurred and that the HIV test status of the source individual is necessary to determine the course of treatment for the exposed medical personnel/

2. The exposure occurred to the medical personnel during the course of employment or within the scope of his or her practice and:

    a. A blood sample is available that was **obtained** voluntarily from the source individual **prior** to the exposure for purposed other than HIV testing or

    b. The exposure occurred while the medical personnel provided emergency medical treatment to the source individual and a blood sample is available that was drawn during the course of treatment for the medical emergency.

3. The source individual is given the opportunity to consent voluntarily to an HIV test and to the disclosure of the test result to the exposed medical personnel however:

    a. Refuses to give such consent

    b. Cannot be located after a reasonable attempt

    c. Is unconscious, incapacitated, not lucid or is otherwise unable to make an informed judgement as documented by a licensed physician.

4. Prior to performing the HIV test on the available blood sample of the source individual of the exposure, the exposed medical personnel provides his or her blood sample and consents to HIV testing of the sample or provides documentation of a negative test performed within the previous 6 months.

5. Documentation of compliance with this subsection shall be recorded in the exposed medical personnel's record. Medical personnel can disclose documentation, except for the identity of the source individual of the exposure to persons providing or paying for the treatment necessitated by the exposure. This documentation remains subject to the **CONFIDENTIALITY** protection provided in Rule 10-D93.064. Documentation of compliance with this subsection shall not appear in the medical record of the source individual unless the source individual gives written permission to placing documentation within his or her medical record.

6. HIV counseling shall be made available to the source individual of the exposure. When the exposure occurs during the course of emergency medical treatment, HIV counseling Shall be provided when the condition of the source patients permits.

7. A reasonable attempt as defined in rule 10D-93.062(30) shall be made to locate source individuals tested pursuant to F.S> 381.004(3)(i)10. to inform the source patient of the HIV test results. Test results shall be disclosed during post-test counseling in accordance with F.S. 381004(3)(e).

8. Positive preliminary test results of the source individual can be disclosed in accordance with F.S. 381.004(3)(e), to the medical personnel who experienced the exposure or to their licensed physician.

9. All costs of the initial HIV test of the source individual shall be paid by the department of the exposed personnel.

10. Any person who receives an HIV test result pursuant to the provisions of this rule shall maintain the confidentiality provisions of rule 10D-93.064 and F.S. 381.004(f).

TUBERCULOSIS

INTRODUCTION & PURPOSE

Since 1985 the rate of new cases of Tuberculosis in the U.S. population has increased 18 percent reversing a 30 year downward trend. This increase includes a Multi-Drug Resistant strain of Mycobacterium Tuberculosis (MDR-TB) now a serious concern having been reported in over forty states. The new TB strain has become widely resistant to at least one of the known effective drugs and is now discovered to be resistant to the two most effective drugs available for treating this disease. When organisms are resistant to both drugs, the course of treatment increases from six months to 18-24 months and the cure rate decreases from 100% to 60% or less. With these figures showing a dramatic increase, it has become evident a program needs to be instituted for education and prevention.

The purpose of the document is to review the mode and risk of Tuberculosis (TB) transmission in the Health-Care field and to make recommendations for reducing the risk of transmission to health care workers (HCW) patients and volunteers. This document will also discuss the guidelines this Department will following as outlined by the U.S. Department if Labor, Occupational Safety and Health Administration (OSHA) through the "Enforcement Policy and Procedure for Occupational Exposure to Tuberculosis".

INFECTIOUS AGENT: Tubercle Bacillus (Mycobacterium Tuberculosis)

MODE OF TRANSMISSION: Sputum of an infected person

INCUBATION PERIOD: 4 weeks to 12 weeks

SYMPTOMS: Cough, fever, night sweats, weight loss, anorexia and/or chest X-ray changes.

PROTECTIVE MEASURES: Take universal Precautions gloves, eye protection, identify high risk individuals as outlined on page 18. Use of exhaust ventilation, use of high efficiency particulate air (HEPA) filtration.

EPIDEMIOLOGY

In the mid-1980's we thought we were well on our way to eliminate the incidence of TB in this country. In 1989 "The Center for Disease Control" (CDC) published a document, *A Strategic Plan for the Elimination of Tuberculosis in the United States*. The plan's goals were to eradicate this disease by the year 2010. But the plan was never implemented- why, we may never know.

Since 1988 outbreaks of TB including this Multi-Drug Resistant Strain have occurred in many of the larger U.S. Cities hospitals, correctional Institutes and within the many health care worker settings. The CDC reports an investigation in New York where 16 prison inmates and one correctional officer died after acquiring MDR-TB. In another investigation of seven (7) hospitals and one prison, sixteen (16) health care workers have developed active MDR-TB and at least five (5) workers have died.

Resistance of the body to TB depends on two main factors. One is the condition of the body, poor health, fatigue, crowded poor living conditions, poor nutrition or another illness can lower the body's defenses. The second factor is exposure to Tuberculosis bacilli so frequently and such great numbers that even a healthy person cannot escape infection.

What has caused the emergence of this new strain, Mycobacterium Tuberculosis, MDR-TB)?

1. As of September 1992 HIV infected people were the only ones that had presented with MDR-TB. Remember with these individuals their immune system has already been compromised. With the introduction of the various drugs to treat HIV, their immune systems have allowed the TB virus to thrive. However today's figures show that this epidemic as did AIDS, has no preference to race, color or creed.

2. Noncompliance with prescribed medication after hospital discharge. Drug therapy for TB is usually prescribed for a period of 6-9 months. When medication isn't taken for the full course of therapy, the TB organism may become dormant and reemerge as resistant to the drugs prescribed.

3. The most common drugs used for the treatment of TB are Rifampin (RIF) Isoniazid (INH) and Streptomycin. These three drugs may now have little effects on the MDR-TB. Many new drugs have emerged however not with the same authority over the new strain of TB. Many time drug therapy relieves symptoms within a short period of time however, because patients feel better many stop taking their medications.

TRANSMISSION:

Mycobacterium Tuberculosis is carried through the air in infections droplet nuclei of 1 to 5 microns in size. These droplet nuclei may be generated when a person with infectious TB disease coughs, speaks, sings or spits. In an occupational setting workers in close contact with persons with infectious disease are at an increased risk of infection with TB.

The Tubercle Bacilli can enter the lungs in various ways. The source is usually the sputum of an infected person. The bacilli may be spread by droplet infection, which can be carried in the air. When the Tuberculosis bacilli first reach the lungs and begin to multiply there, the body rushes its defenses to the infected area and almost always is successful in inactivating the infection. Some of the bacteria are killed and the rest are covered with though scar tissue. Many normal healthy people who have never had symptoms of Tuberculosis have these scars, which are visible in chest x-rays. Although the imprisoned bacilli remain alive they are powerless. The first infection usually causes no symptoms.

RISK ASSESMENT:

Sarasota County Health Department reports that on the average over the last 6 years, 18 diagnosis of Tuberculosis have occurred. Even though the nation is seeing a major rise in this disease. I 1993 this county saw a drop in reported cases to a total of 9 confirmed diagnosed. However it is the general consent of those in the Health Program that we will also see a dramatic rise in the near future and now is the time to prepare.

EMS personnel have contact with many of the below outlined risk groups, especially nursing home residents, the homeless and the HIV-infected. This means more attention must be paid to assessing those with possible TB infection.

I. GROUPS AT HIGH RISK

1. Individuals with HIV infection
2. Correctional inmates
3. Residents of long-term care facilities
4. Close contacts of TB patients
5. Foreign-born individuals from countries where TB is reported in high numbers (Asia, Latin America, some Caribbean and European Countries)
6. Alcoholics
7. IV drug users
8. Health care workers who provide service to those in high-risk groups.

II. EXOSURE DETERMINATION: Personnel at risk will include those that have been exposed in any fashion as listed.

1. Repeated, prolonged contact with high-risk groups
2. Direct indoor contact with an infectious TB patient
3. Exposure to a high-risk procedure, one that generates airborne respiratory secretions, such as suctioning, Endotracheal intubation or insertion of EOA, administration of aerosolized medication.

III. PRINCIPLES OF TUBERCULOSIS CONTROL IN THE PRE-HOSPITAL SETTING:

Preventing of Tuberculosis in the pre-hospital care setting requires that all of the following basic approaches be used:

1. Prevention the generation of infectious droplet nuclei
2. Preventing the spread of infectious droplet into the general circulation
3. Reducing the number of infectious droplet nuclei in air contaminated already
4. Following guidelines for cleaning, disinfecting and sterilizing contaminated items
5. Annual TB Screening for all personnel and follow-up testing for those within the exposure arena.

TUBERCULOSIS TESTIN

"ANNUALY"

All personnel will be tested annually for TB by use of the Mantoux Skin Test (TST) using PPD (purified protein derivative) antigen. This provides the most reliable results and is used for diagnostic purpose. All new personnel will be tested. Listed are the steps that will be followed pertaining to the TB testing. All results will be maintained in the personnel medical files.

1. 0.1 ml PPD antigen is injected intracutaneously in an area free of lesions and away from the veins on the left forearm.

2. This will create a wheal of 6-10mm

3. This site will be inspected within 48-72 hours by a medic in this procedure

4. If the results are less than 5mm, this is considered to be a negative reaction and will be documented as a negative testing for TB. No further testing is needed.

5. If the results are between 5mm-10mm, retesting will be done in 10 days on the opposite arm. If the second test is greater than 5mm, this will be documented as a positive result and the member will be sent to a Medical Doctor for further evaluation.

6. If the result from the first test is greater that 10mm, this will be documented as a positive reaction and the member will be sent to a Medical Doctor for further questioning.

TUBERCULOSIS TESTING

"EXPOSURE"

A member will be notified of any EXPOSURE that may occur and the following steps will be used to test this type for exposure.

1. Confirm exposure to Tuberculosis

2. If the source has active Tuberculosis then determine the following:

Does the member already have a base line PPD?

a. If ***yes***, then repeat PPD 10 weeks from the date of exposure. Measure results within 48-72 hours. Of less than 5mm test is documented as negative than no further testing is required. If more than 5mm, member will be referred to Medical Doctor for further evaluation.

b. If ***no***, then perform PPD 2 weeks from the date of exposure and then repeat PPD test in 10 weeks. Any results less than 5mm will be documented as negative and no further testing will be required. Any results greater than 5mm will require that member to be referred to a Medical Doctor for further evaluation.

CONTROL METHODS

UNIVERSAL PRECAUTIONS

Universal Precautions is the name for the Centers of Disease Control's recommended policy for health care workers regarding blood and body fluids of all patients as potential sources of blood borne pathogens. The primary focus is on *Hepatitis B virus* (HBV) and *Human Immunodeficiency virus* (HIV).

All personnel are required to wear gloves and other protective barriers such as tyvek sleeves, gowns, eye and mask protection to reduce the risk of parenteral, mucous membrane and non-intact skin exposures to blood and other body fluids.

Failure to use Universal Precautions will place personnel at risk of exposure and will be subject to disciplinary action.

1. Blood, meaning human blood and including human components and products made from human blood.
2. Semen
3. Vaginal secretions
4. Cerebrospinal fluid
5. synovial fluid
6. Pleural fluid
7. Pericardial fluid
8. Peritoneal fluid
9. Amniotic fluid
10. Saliva in dental procedures
11. Any body fluid that is visibly contaminated with blood
12. Any fluids in which differentiation of body fluid types are difficult or impossible

CONTROL METHODS

ENGINEERING CONTROLS

Engineering controls are those controls meant to eliminate or minimize personnel exposure. Currently The Nokomis Fire Department has policies pertaining to a procedure/device that would eliminate or minimize personnel exposure. As Engineering controls are developed they will be added to this section.

MEDICAL SHARPS SAFETY – Medical sharps is defined as any medical device which has the potential to puncture or lacerate the skin, regardless of contaminated or non-contaminated status. This includes however is not limited to:
Syringe, needles, butterfly needles, per-loaded medications, broken medication ampules, lancets used in blood sugar testing procedures, IV stilettos, surgical scalpels, broken blood vial and blood sampling needles.

UNPROTECTED SHARP: Any medical sharp contaminated or non-contaminated, that is un-sheathed or not under containment.

DISPOSABLE BAD VALVE MASK RESUSCITATORS:

All vehicles have been changed over to disposable bag valve mask resuscitators. This type of system will prevent cross contamination between patients because of improper cleaning. When this system is used it is to either given to the receiving facility or disposed of in accordance to the current guidelines pertaining to bio-hazardous waste.

HEPA RESPIRATOR:

OSHA regulation 29 CFR 1910.134 as of January 6, 1994 states that all employers must develop a complete respiratory program. Reference "**Airway Maintenance during patient care"** for correct procedures.

High-Efficiency Particulate Air (HEPA) particulate respirator: The HEPA mask that this department will be investigating are those that are approved by the National Institute of Occupational Safety and Health (NIOSH). These guidelines state that an approved mask must be adequate to filter out TB bacillus which is 1 to 5 microns in size (a micron is 1/1000 of a millimeter). For this reason the current mask that we are using do not meet this requirement and will be replaced in the future. This policy also stated that these masks must be personally fitted and either disposable or capable of filter replacements. Selection of the **HEPA** filter mask that this department will be using will be selected once OSHA has made final determinations.

CONTROL METHODS

WORK PRACTICE CONTROLS

Work practice controls are alterations in the manner in which a task is performed in an effort to reduce the likelihood of a member's exposure to blood or other potentially infectious materials.

HAND WASHING:

Researchers have concluded that although hand washing technique is usually part of practical and theoretical health care curricula, medical personnel only use appropriate hand washing procedures about 30% of the time. Studies also have indicated that although thorough hand washing is important to prevent infection, health care personnel reported they were to busy to perform the procedure.

In field situations running water for hand washing is not always available. Each unit in this department carries Alcare. This product is of alcohol base and when applied to your hands and rubbed together, friction will cause the solution to evaporate, killing surface organisms. Using Alcare is a temporary preventative measure until personnel are able to perform a more thorough hand washing technique.

Plain soap and water includes the following steps ***EVEN WHEN GLOVES ARE WORN:***

1. Use the Alcare solution in the field
2. Once at the hospital or station wash with approved soap and water.
3. Work up a lather using friction for **15 seconds**
4. Rinse hands with **hot water** and dry them with a paper towel
5. ***IMPORTANT-*** use a paper towel to turn off the faucet

REVIEWING HAND WASHING AGENTS

AGENT	BRAND NAME	ACTION
Bar soaps kill them	Safeguard	helps remove organisms, however does not
	Ivory Dial	
Liquid Soap kill them	Safe'n sure	helps remove organisms, however does not
	Kindness kare	
Povidone Iodine	Beta dine Acu-dyne	Kills staph, strep and fungus organisms

Cont…

All personnel are required to wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

All personnel will remove all personal protective equipment that is visibly contaminated with blood or other potentially infectious material immediately or as soon as possible. This contaminated equipment must be placed in an appropriately designated area or container for storage, washing, decontamination or disposal. **PERSONAL PROTECTIVE EQUIPMENT THAT IS CONTAMINATED WILL BE PLACED IN A RED BIO-MEDICAL WASTE BAG AND DISPOSED OF AS PER DEPARTMENT S.O.G. THAT DEALS WITH BIO-MEDICAL WASTE DISPOSAL.**

All non-disposable equipment will be decontaminated prior to being placed back into service.

All personnel are prohibited from eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses in work area where there is a reasonable likelihood of occupational exposure.

Food and drink must **NOT** be kept in refrigerators, freezers, shelves, cabinets or countertops where blood or other potentially infectious materials are present. Personnel shall not eat or drink in the apparatus.

All personnel are required to perform all procedures involving blood or other potentially infectious materials in such a way as to minimize splashing, spraying, spattering and generation of droplets of blood or other potentially infectious material.

AIRWAY MAINTENANCE DURING PATIENT CARE:

Any procedure that deals with airway maintenance during patient care will require the flowing personal protective gear to be worn by personnel:

1. Eye protection/Face mask
2. High efficiency Particulate Air (HEPA) Filter Respirator
3. Tyvek Sleeves
4. Gloves
5. Gowns/Tyvek Suits*

The purpose of this Personal Protection Equipment is due to the potential exposure of our personnel to blood, respiratory secretions, vomit and other bodily fluids that personnel could come in contact with during the care and maintenance of a patient's airway.

Failure to wear personal protective gear will place personnel at risk of exposure and will be subject to disciplinary action.

Mouth to mouth or mouth to nose ventilation of a patient ***is strictly prohibited.*** This procedure will be performed with a disposable bag valve mask.

Artificial ventilation of a patient will be accomplished through the use of a disposable bag valve mask resuscitator. Disposable bag valve mask resuscitators are to be disposed of in accordance with the current guidelines to bio-hazardous waste.

Any personnel assisting in the following procedures; nasal and/or oral intubation, emergency cricothyrotomy, chest decompression shall be required to wear the following personal protective gear.

1. Eye protection
2. HEPA filter respirator
3. Tyvek sleeves
4. Gloves

Insertion of oral airways will require eye protection, HEPA filter respirators, glove and Tyvek sleeves of the personnel that is performing this skill. Blood and other bodily fluids could be produced during this procedure.

Suctioning of a patients airway, oral, nasal, tracheal, ***does produce*** microscopic particles of blood and bodily fluids during this procedure. Suctioning the airway of a patient will require eye protection, HEPA filter respirators, gloves and tyvek sleeves of the personnel that is performing this procedure.

*If the potential of vomiting exists all personnel will be required to wear eye protection, HEPA filter respirators, gloves, Tyvek sleeves and tyvek gowns or suits.

BLEEDING CONTROL:

Blood from an open artery is bright red in color and spurts under pressure, in time with the beat of the heart. Blood from an open vein is much darker and flows steadily without the spurt. Blood from damaged capillaries is continuous, slow, steady ooze.

All three types of bleeding could produce a serious exposure to emergency personnel if personal protective gear is not worn. Combative patients that are bleeding have the potential of throwing blood which would cause a significant exposure to emergency personnel.

Since blood is a major source of transmitting communicable diseases, especially HBV and HIV. All personnel will be required to use gloves and tyvek sleeves when attempting to control bleeding on a patient.

Patients that are combative and patients that have bleeding from an artery will require personnel to wear gloves, tyvek sleeves, tyvek gowns/suits, eye protection and HEPA filter respirators.

PATIENT ASSESMENT:

Universal precautions will be taken on all patient assessments that are performed by our personnel.

CONTAMINATED RUN REPORTS:

The risk of infection from soiled run reports is low however the risk is there. Run reports stained with blood and/or other bodily fluids or anything else that could resemble blood or bodily fluids, **will not** be handled by Nokomis Fire Department personnel.

CONTROL METHODS

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment is specialized or equipment used by personnel to protect themselves from direct exposure to blood or other potentially infectious materials.

Personal Protective Equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through or to reach the personnel work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Personal protective equipment are items such as latex gloves, tyvek sleeves, HEPA filter respirators, eye protection gear and tyvek gowns or suits. These items are to be stored on each apparatus.

The Nokomis Fire Department will provide the sizes that are needed for your protection. Gloves and other items that are needed by personnel requiring special sizes such as small and X-Large will need to contact the EMS Lt. Officer to obtain these items.

All personnel with a potential for *occupational exposure* will use this personal protective equipment. *Universal Precautions* will be taken on all patients.

Gloves and Tyvek Sleeves will be worn by all personnel when they are in direct contact with blood or other body fluids.

When clothing/uniforms may become contaminated with blood or body fluids, tyvek gowns or suits will be worn.

Eye protection and HEPA filter respirators will be worn by all personnel when they deal with airway maintenance, suctioning of the airway and when there is the potential for blood and body fluids to splatter and on suspected TB patients or known TB patients. On patients that require ventilation *disposable bag valve masks* will be used.

Personal protective equipment is penetrated by blood or other potentially infectious materials; the garment(s) will be removed immediately and replaced. Gloves that are torn will need to be immediately replaced.

Once the patient has been transferred over to EMS/Rescue personnel all personal protective equipment will be removed and disposed of in the proper containers as per the S.O.G. of bio-medical waste disposal.

Decontamination procedures of equipment and apparatus vehicle will require personal protective equipment to be worn by all personnel.

INFECTIOUS WASTE DISPOSAL

The following procedures and guidelines will be implemented and followed by all personnel for the identification and handling of bio-medical waste and sharps.

1. Bio-Medical wastes are defined in the Florida Administrative Code 10D-104.001 paragraph (2) (a)(b)(c) and OSHA's blood borne pathogen standard 29 CFR 1910.1030 (copy attached). A summary of the definitions are included here. Both of these Standards will be referenced by this Department.

Bio-Medical waste - any solid or liquid waste which may present a threat of infection to humans. The term includes however is not limited to non-liquid human tissue and body parts, laboratory and veterinary waste containing human disease causing agents, discarded sharps, human blood, human blood products and body fluids. The following are also included.

   a. Used absorbent materials such as bandages, gauze or sponges supersaturated, having the potential to drip or splash, with blood or body fluids from areas such as operating rooms, delivery rooms, trauma centers, emergency rooms or autopsy rooms.

   b. Devices which retain visible blood adhering to the inner surfaces after use and rinsing such as intravenous tubing and catheters.

   c. Other contaminated solid waste materials which present a significant risk of infection since they are generated in caring for persons requiring strict isolation criteria.

2. It is the intent of this policy that no waste will be left on the site where patient care has been delivered, whether this site is in a private residence, public building or on a public highway, etc.

   a. In the context of this policy all items soiled or contaminated by blood or body fluids during the treatment of patients will be considered to be bio-hazardous and will be handled according to the following procedures.

   b. Before the last Nokomis Fire Department personnel leaves the scene where patient care has been delivered, the area will be policed for waste items.

   c. Nokomis Personnel will ***NOT*** handle any sharp.

If the items are not considered bio-medical they may be disposed of in the regular waste.

If the waste items are considered bio-medical they must be disposed of according to the following procedures.

3. Bio-medical waste, except sharps generated during patient treatment, whether on scene or en route to a receiving facility shall be placed in the "Red Bag". This red bag will have the excess air evacuated from it before it is sealed with the ties provided. DO NOT USE TAPE TO SEAL THE BAG.

    a. This "Red Bag" will be dropped off with the EMS rescue on scene prior to leaving and returning to the station.

    b. "RED BAGS" WILL NOT BE PLACED INTO DUMPSTERS OR RECEPTICLES THAT ARE PART OF THE REGULAR WASTE STREAM.

4. Each "Red Bag" will be sealed to prevent the contents from escaping and will be labeled with the following information.

    a. Name of the generator: NOKOMIS FIRE DEPARTMENT
    b. Address of the generator: 111 PAVONIA RD NOKOMIS FL 34275
    c. Date: that the "Red Bag" was sealed (waste generated)
    d. All "Red Bags" must display the 6'' international biological hazard symbol(pre-printed on the bag)
    e. "Red Bags" are to be dropped off at Sarasota County Station #33 and/or 35 for proper disposal.

THE DATE OF GENERATION OF THE BIO-MEDICAL WASTE MUST BE WRITTEN ON THE LABLE AT THE TIME EACH "RED BAG" IS SEALED/

5. Any bio-medical waste which is mixed with hazardous waste shall also be managed as hazardous waste in accordance with established requirements of the Florida Department of Environmental Regulations. The Fire Department in whose jurisdiction the EMS call is taking place will be contacted to manage the hazardous waste that has been generated and/or discovered during the call.

6. Any bio-medical waste which is mixed with radioactive waste shall also be managed as radioactive waste. The Fire Department in whose jurisdiction the EMS call is taking place will be contacted to manage the radioactive waste that has been generated and/or discovered during the call.

All personnel handling bio-medical waste will observe universal precautions wearing protective clothing as warranted. As a minimum all personnel will wear protective gloves. In case a surface becomes contaminated with spilled or leaked bio-medical waste the surface will be cleaned with a solution of industrial strength detergent to remove visible soil and shall be disinfected with 1:10 dilute solution of Sodium Hypochlorite (laundry bleach 5%) containing 100 parts per million available free chlorine.

HOUSEKEEPING PRACTICES/DECONTAMINATION

APPATARUS

Apparatus may be a source of infection due to bacteria that can reside on equipment surfaces. When an apparatus is cleaned routinely the possibility of contracting and transferring these bacteria's are greatly reduced.

Cleaning the apparatus involves two important steps – washing and disinfecting. *Cleaning* is defined as the physical removal of visible surface debris. The use of soap and water and the application of elbow grease is essential, for the reason that disinfection cannot be accomplished unless surface debris has been removed. After washing an apparatus, disinfect the internal surfaces with chemicals to kill infectious pathogens and reduce the possibility of cross contamination.

The approach to this procedure should be a common sense approach. Clean the unit on a regular basis or when heavily soiled.

Special attention needs to be taken on making sure that actual work areas are washed and disinfected.

Although no specific disinfectant solutions are recommended, the Centers for Disease Control suggest using an environmental Protection Agency registered germicidal/viricidal agent.

All personnel involved in decontamination procedures for apparatus and equipment will observe universal precautions. As a minimum, all personnel will wear protective gloves. PERSONNEL FAILING TO COMPLY WITH THIS REQUIREMENT WILL BE SUBJET TO DISCIPLINARY ACTION IN ACCODANCE TO THE DEPARTMENTS RULES AND REGULATIONS.

Decontamination will be done at the station after returning from the call. Equipment contaminated with blood or body fluids will be contaminated in the *decontamination room*. All disposable items used on the patient will be disposed of in accordance ti the policy pertaining to bio-medical waste disposal.

MEDICAL EQUIPMENT CLEANING AND DISINFECTING

EQUIPMENT BEING RETURNED FOR REPAIR OR REPLACEMENT:

It will be the responsibility of the station personnel to assure that all medical equipment being returned to the department for repair or replacement is properly cleaned and disinfected and a 708 is attached verifying equipment has been disinfected and by whom.

708 – MEDICAL EQUIPMENT DISINFECTED FORM

This requirement is also mandated by manufactures receiving any returned medical equipment. Equipment must be wiped clean of any foreign material and disinfected appropriately by using approved cleaner. Equipment not properly cleaned will be documented and reported to the Fire Chief or his designee for proper action.

STETHOSCOPES:

The stethoscope is often ignored as a potential carrier of bacteria. Studies show that colonization of the bell or diaphragm may occur. Staphylococcus Aureus, Serratia and Pseudomonas organisms were isolated from 8% of the stethoscopes in this study.

Since stethoscopes may harbor pathogenic organisms, all stethoscopes will be cleaned after they are used in examining infected patients and will be cleaned on a daily basis. Stethoscopes will be washed and disinfected with approved cleaners.

RESPIRATORY EQUIPMENT:

Disposable Bag Valve Mask Devices- used for ventilation will be disposed of in accordance to the current guidelines pertaining to bio-hazardous waste. **The Nokomis Fire Department will not re-use disposable bag valve mask devices.**

Oral Airways- this device used in airway management are to be disposed after use. They are to be disposed of in accordance to the current on bio-medical waste disposal.

DEPARTMENTAL UNIFORMS AND FIRE GEAR:

Personnel Uniforms – Protection against contaminating should be a great consideration before a uniform gets contaminated. This department does supply tyvek items that have the potential of covering most areas that could come in contact with possible blood/body fluids. It is also mandatory that all personnel have available a spare uniform at the station in case contamination does happen. Uniforms contaminated with blood and/or body fluids can be handled in the following procedures:

DEPARTMENTAL UNIFORMS:

1. For most contaminations the articles of clothing can be cleaned at the station. Only those articles that are "Super Saturated", (defined as an article that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed), will be placed in a "Red Bag" to be sent out to a commercial vender that is licensed in commercial cleaning and decontamination.

2. Universal precautions including appropriate personal protective equipment (gloves, eye protection) are to be used when cleaning uniforms that are contaminated with blood/body fluids.

3. The area that is contaminated with blood/body fluids should first be washed with approved cleaner and then rinsed with warm water.

4. The area should then be cleaned with hydrogen peroxide.

5. The area should then be cleaned with either liquid wisk, liquid tide, liquid cheer or liquid fab.

6. The uniform should then be air dried. **DO NOT PLACE IN THE SUN LIGHT.**

7. Those articles that are "Super Saturated", (defined as an article that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed), will be placed in a "Red Bag" to be sent out to a commercial vender that is licensed in commercial cleaning and decontamination. Personnel are to contact the Fire Chief or his designee for direction.

FIRE GEAR:

1. Contaminated with blood and/or body fluids can be cleaned with the following procedures.

2. Universal precautions are to be taken when cleaning fire gear that is contaminated with blood or body fluids.

3. The area that is contaminated with blood or body fluids should first be sprayed with **"Approved" cleaner, disinfectant or sanitizer.**

4. Rinse the area with warm water and scrub off if needed.

5. Spray the area again with "Approved cleaner"

6. The bunker gear should then be air dried. Do not rinse out the approved cleaner. ***DO NOT PLACE IN SUNLIGHT.***

7. Those articles that are "Super Saturated", (defined as an article that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed) will be placed in a "Rd Bag" to be sent out to a commercial vender that is licensed in commercial cleaning and decontamination. Personnel are to contact The Fire Chief or his designee for further direction.

RECORD KEEPING AND DOCUMENTATION

The exposed Nokomis Fire Department member will notify the **SHIFT PERSON** any exposure. The **SHIFT PERSON** will contact The Fire Chief or his designee as soon as possible and have the **EXPOSED MEMBER** transported to the **SAME** medical provider as the **SOURCE**. The Fire Chief or his designee will take the completed *MEDICAL AUTHORIZATION FORM* to the medical provider.

After the initial treatment is completed the **EXPOSED MEMBER** will complete the Nokomis Fire Department exposure report. The **EXPOSED MEMBER** will forward the completed *EXPOSURE REPORT* to The Fire Chief or his designee. If referral to additional **MEDICAL PROVIDER** is needed, another *AUTHORIZATION FORM* will be obtained from **THE CHIEF OF THE DEPARTMENT.**

The Fire Chief or his designee will document an exposure tracking system on each of its members and will be maintained for the duration of the membership plus (30) years.

TRAINING AND EDUCATION OF PERSONNEL

All personnel with an *OCCUPATIONAL EXPOSURE* will be trained on the Infection Control Plan every year.

All personnel certified in the State of Florida as an EMT or Paramedic will receive a minimum two (2) hours of in-service training on HIV/AIDS.

All new personnel will receive training and education on the Departments Infection Control Plan during their orientation. This training program will be completed prior to them starting to work in emergency response.

This training program shall contain the following elements:

1. Definitions
2. Infection Control Officers roles and responsibilities
3. Exposure Determination in job classifications
4. Identification of the 21 Infectious Disease and 10D-28
5. Mode of transmission
6. Hepatitis-B Virus (HBV)
7. Human Immunodeficiency Virus (HIV) and AIDS
8. Tuberculosis
9. Control methods
    a. Universal Precautions
    b. Engineering Controls
    c. Work Practice Controls
    d. Personal Protective Equipment

10. Hepatitis-B Vaccination Program
11. Post-exposure evaluation and follow-up treatment
12. Infectious Waste Disposal
13. Housekeeping practices and decontamination
    a. Apparatus
    b. Equipment
    c. Uniforms and Fire Gear
14. Record keeping and Documentation
15. Training and Education

All personnel upon completion of this training program will receive certificates of completion and a copy will be placed in their personal file.