DEPARTMENT: Infection Control **POLICY:** IC-344

SUBJECT: Communicable Disease Precautions

PURPOSE:

To provide guidelines for healthcare providers to follow when admitting patients with known or suspected infectious diseases in order to reduce the risk of transmission of these diseases to other patients, visitors, and staff.

POLICY:

1. Standard Precautions (see Policy IC-320 Blood borne Pathogens Methods of Compliance) are used for all patients admitted to FMDH. The following categories of Communicable disease precautions will be used in addition to Universal / Standard Precautions when ordered:
    a. Airborne Precautions (See Appendix A)
    b. Contact Precautions (See Appendix B)
    c. Droplet Precautions (See Appendix C)
    d. Tuberculosis/AFB Precautions (See Appendix D)
    e. Ebola information including instructions for high level PPE donning and doffing (including checklist for observers).

2. Communicable disease precautions are initiated by the physician or registered nurse based upon the suspected or confirmed diagnosis and/or clinical signs and symptoms present. Communicable disease precautions will remain in effect as specified under each category.

3. A sign specifying the type of communicable disease precautions being used will be attached to the door of the patient's room where it will be visible to visitors and to staff. The color coded signs are available at the nurses' station.

4. Patient Placement
    a. A private room is required to reduce the risk of direct or indirect contact transmission of microorganisms when the patient:
        i. Has poor hygienic habits;
        ii. Contaminates the environment;
        iii. Cannot be expected to assist in maintaining infection control measures (for example, small children, patients with altered mental status); or
        iv. Has a highly a transmissible organism causing the illness.
    b. When there are no private rooms available, patients who are infected with the same microorganism can be assigned to the same room if:
        i. They are not infected with other potentially transmissible microorganisms, and
        ii. The likelihood of reinfection with the same microorganism is minimal.

5. A negative pressure isolation environment can be achieved in room 110. (Refer to facility services policy FS-828 found on FMDH Home drive under support services).

6. FMDH has temporary measures available to ensure negative pressure rising of certain

inpatient rooms for the purpose of airborne pathogen isolation. In the event of a request for isolation room setup:

a. The charge nurse will notify facility services (FS) of the need to set up an inpatient room with anteroom enclosures, and a negative pressure HEPA filter machine in the room.
b. FS will be trained annually in the setup and disassembly of the machine.
c. Upon setup, FS will refresh key nursing staff on how to take periodic negative pressure readings and how to identify any corrective actions, if necessary, in maintaining negative air pressure within the area.

7. When it is necessary to transport an infected patient, it is required that:
    a. The patient wears or uses appropriate barriers (for example, masks, impervious dressings) to reduce the likelihood of transmission of infectious microorganisms to other patients, staff, visitors, and the environment.
    b. Staff in the receiving area/facility is notified of the patient's transfer and of the precautions needed to reduce the risk of transmission of infectious microorganisms. If the transport is to another facility, documentation detailing the infection and organism(s) identified will be included in the transfer packet.
    c. Patients are informed of ways by which they can assist in preventing the transmission of their infectious microorganisms to others.

8. Personal Protective Equipment (PPE)
    a. Standard level PPE
        i. Masks, goggles, and face shields are worn alone or in combination to provide protection to the mucous membranes of the eyes, nose, and mouth when procedures are performed that are likely to cause splashing of blood or other infectious body fluids. Masks are also worn by staff to prevent inhalation of droplets produced by infected patients who are coughing and sneezing.
        ii. The PAPR respiratory system will be used to protect persons from inhaling *Mycobacterium tuberculosis,* and will be used when a patient with suspected or confirmed TB is admitted for care (or whenever circumstances arise requiring an N95 mask)
        iii. Moisture impermeable gowns, and foot covers are worn to protect clothing and skin when splashing of blood or other infectious body fluids is anticipated. Gowns that are worn in an effort to reduce the likelihood of transmitting infectious microorganisms will be disposed of before leaving the patient's room.
        iv. Clean, non-sterile gloves are worn when required.

    b. High Level PPE
        i. High Level PPE consists of PPE that covers all skin and hair; including impervious gown and boot covers, inner and outer gloves, a fit tested N95 disposable mask, a hood, and full-length face shield.
        ii. High Level PPE donning and doffing must be done under the supervision of a trained observer (see appendix E for a list of trained observers).
        iii. When High Level PPE is utilized a temporary enclosure will be erected by the facility services staff. This enclosure will wall off areas and allow for separate clean and dirty areas. All donning will be performed in the clean area and doffing will only occur in the designated dirty area.

iv. High Level PPE will be utilized on occasions when extremely dangerous, highly infectious, or unidentified pathogens are suspected or diagnosed. If these pathogens cannot be ruled out, High Level PPE will be utilized until the pathogen or disease process can be identified. An easy to identify qualifier for these types of pathogens would be travel history into endemic areas of disease during an active outbreak (for example, travel to West Africa during an Ebola outbreak). Please refer to Appendix E for flow sheet regarding use of high level PPE.

9. Patient-care equipment
    a. Items contaminated with blood or bloody body substances and sharps are handled as outlined in policy IC-320 Blood borne Pathogen Exposure Control Plan.
    b. Handle used patient care equipment in a manner that prevents contamination of the skin or mucous membranes and the transfer of microorganism to other patients and the environment.
    c. Use single use, non-reusable equipment whenever possible for isolated patients, i.e. blood pressure cuffs, tourniquets, etc. These items should be left in the patient's room (if appropriate) to be used throughout the patients stay and discarded following discharge.
    d. Ensure reusable equipment is appropriately cleaned, disinfected, or sterilized before used for another patient.

10. Linen and laundry are transported in a manner that avoids transfer of microorganisms to other patients and the environment.

11. Eating and Drinking Utensils: No special precautions are needed.

12. Routine and terminal cleaning: Thorough cleaning of environmental surfaces, beds, bed rails, bedside equipment, and other frequently touched surfaces is completed after the patient is discharged. (See Environmental Services procedures ES-110 Seven step clinical cleaning).

REVIEW AND REVISION STATEMENT:
This policy will be reviewed and revised as necessary and at least annually by the Infection Control Practitioner, Physician Advisor, DON, FNP, and CEO. (original document date 03/94).

APPENDIX A

Airborne Precautions: Use for patients who are infected with known or suspected microorganisms that are transmitted by airborne droplet nuclei which remain suspended in the air and can be spread within the room and to surrounding areas by air currents. (See Table 1 of Appendix A for list of infections/conditions requiring Airborne Precautions)

1. Patient placement
    a. A private room with negative air pressure which has 6 air changes per hour, and is exhausted to the outside.
    b. The patient must remain within the room.
    c. Doors and windows in the patient's room must remain closed.
    d. If no private is room available, consult with Infection Control Practitioner.

2. Gloves and Hand washing
    a. Hand washing is done before and after all patient contact.
    b. Gloves are needed for standard precautions if contact with blood or bloody body fluids anticipated.

3. Respiratory Protection
    a. Surgical mask will be worn by persons entering the room.
    b. A PAPR respiratory system will be worn by persons entering the room of a patient on TB respiratory precautions.
    c. A N95 mask that is fit tested may also be worn by persons entering the room of a patient on TB respiratory precautions.

4. Gowns: Impervious gowns will be worn if it is anticipated that clothing may come in contact with blood or bloody body fluids.

5. Eye protection will be worn if it is anticipated that clothing may come in contact with blood or bloody body fluids.

6. Patient transport: If transport is necessary, have patient wear a surgical mask to limit the spread of droplet nuclei.

7. Tuberculosis: Refer to Tuberculosis Exposure Control Plan Policy IC-343.

APPENDIX A

Table 1

AIRBORNE PRECAUTIONS		
INFECTION/CONDITION	**PRECAUTIONS IN EFFECT**	**OTHER PRECAUTIONS REQUIRED**
Chickenpox (Varicella)	Place exposed susceptible patients on precaution beginning 10 days after exposure until 21 days after last exposure.	Until all lesions healed. Persons susceptible to varicella should not enter room if other immune care givers available.
Measles (rubeola), all presentations	Duration of illness if immunocompromised, other wise 4 days after onset of rash.	Susceptible HCWs should not enter room if immune care providers are available. For exposed susceptible HCW's, post-exposure vaccine within 72 hrs. or immune globulin within 6 days when available. Place exposed susceptible patients on Airborne Precautions and exclude susceptible healthcare personnel from duty from day 5 after first exposure to day 21 after last exposure, regardless of post-exposure vaccine.
Smallpox	Duration of illness	Until all scabs have crusted and separated (3-4 weeks). Non-vaccinated HCWs should not provide care when immune HCWs are available; N95 disposable mask or PAPR; vaccination within 4 days of exposure provides protection.
Tuberculosis, pulmonary confirmed or suspected laryngeal disease. Draining extra-pulmonary lesion.	When pt with TB is receiving effective therapy, is improving clinically, and has 3 consecutive negative sputum smears collected on different days or TB is ruled out.	TB Respiratory Precautions
Zoster (varicella zoster), localized in immunocompromised patient, disseminated	Duration of illness. Persons susceptible to varicella should not enter room if other immune care givers available.	Contact
Severe acute respiratory syndrome (SARS)	Duration of illness plus 10 days after resolution of fever, provided respiratory symptoms are absent or improving	Airborne Precautions, droplet and contact. Utilize high level PPE. N95 disposable mask or PAPR; aerosol-generating procedures and “super shedders” highest risk for transmission via small droplet nuclei and large droplets. Vigilant environmental disinfection (see www.cdc.gov/ncidod/sars)

APPENDIX B

Contact Precautions: Use for patients who have or are suspected to have an infection which can be transmitted by direct contact with the patient (e.g., touching the patient or touching environmental surfaces in the room that the patient has touched). (See table 1 of Appendix B for a list of infections/conditions requiring Contact Precautions)

1. Patient Placement:
    a. Place the patient in a private room.
    b. If no private room is available, consult with Infection Control Practitioner.

2. Gloves and hand washing:
    a. Wash hands before entering the room and before caring for the patient.
    b. Clean, non-sterile gloves are worn while providing care to the patient.
    c. Change or remove gloves:
        i. After gloves have been in contact with infective material that may contain high concentrations of the infected material (e.g., drainage from the wound or fecal material).
        ii. Before leaving the patient's room.
    d. Wash hands after removing gloves and before leaving the patient's room. Avoid touching any items or environmental surfaces in the patient's room after washing hands.
3. Gown
    a. Is worn when care giver anticipates that clothing may have substantial contact with patient, environmental surfaces or items in the patient's room.
    b. Is worn when the patient has diarrhea, is incontinent, or has drainage from a wound, ileostomy, or colostomy that is not contained by dressings.
    c. Is removed before leaving the patient's room. Avoid touching any items or environmental surfaces in the patient's room after removing gown.

4. Patient transport:
    a. The patient is transported from the room only for procedures which cannot be performed in the room (e.g. C-T scan, surgery).
    b. The transporting department is responsible for notifying the receiving department that the patient had contact precautions in effect.
    c. The receiving department is responsible for maintaining the isolation/communicable disease precautions which are in effect.

5. Patient-care equipment:
    a. Non-critical items will be left in the patient's room until the patient is discharged (e.g., blood pressure cuff, stethoscope, thermometers).
    b. Non-critical items left in the patient's room will be thoroughly cleaned after the patient is discharged.
    c. Non-critical items which cannot be left in the patient's room will be thoroughly cleaned before used on another patient (e.g., scales, pulse oximeters).

*T*able 1

CONTACT PRECAUTIONS		
INFECTION/CONDITION	**PRECAUTIONS IN EFFECT**	**OTHER PRECAUTIONS REQUIRED**
Clostridium (C. difficile)	For duration of illness (at least 48 hours following resolution of diarrhea).	Full PPE required, hand hygiene with soap and water instead of gel hand rub required. Additional cleaning practices required of patient room, especially upon discharge.
Congenital Rubella	Standard Precautions if nasopharyngeal and urine cultures repeatedly negative after 3 mos. of age.	Place infant on precautions during any admission until 1 year of age unless nasopharyngeal and urine cultures are negative for virus after 3 months of age.
Diphtheria, cutaneous		Until off antibiotic therapy and at least 2 cultures taken 24 hours apart are negative.
Type A hepatitis in diapered or incontinent patients		Maintain Contact Precautions in infants and children <3 years of age for duration of hospitalization; for children 3-14 yrs. of age for 2 weeks after onset of symptoms; >14 yrs. of age for 1 week after onset of symptoms
Herpes simplex (Herpes virus hominis) Neonatal		For duration of illness for infants delivered vaginally or by C-Section if mother has active infection and membranes have been ruptured for >4-6 hours.
Herpes simplex (Herpes virus hominis) Mucocutaneous, disseminated or primary, severe	For duration of illness	
Lice (Head)		Following patient discharge additional terminal cleaning must be performed, including vacuuming of surfaces.
Parainfluenza virus infection, respiratory in infants and young children	Duration of Illness	Viral shedding may be prolonged in immunosuppressed patients. Reliability of antigen testing to determine when to remove patients with prolonged hospitalizations from Contact Precautions uncertain.
Rotavirus	Duration of Illness	Ensure consistent environmental cleaning and disinfection and frequent removal of soiled diapers. Prolonged shedding may occur in both immunocompetent and immunocompromised children and the elderly
Respiratory syncytial virus (RSV)	Duration of Illness	Wear mask. In immunocompromised patients, extend the duration of Contact Precautions due to prolonged shedding.
SARS	Duration of Illness plus 10 days after resolution of fever, provided respiratory symptoms are absent or improving	Airborne Precautions, droplet, and contact. N95 disposable masks or PAPRs. Also eye protection (goggles, face shield); aerosol-generating procedures and “super shedders” highest risk for transmission via small droplet nuclei and large droplet. Vigilant environmental disinfection (see www.cdc.gov/ncidod/sars)
Small Pox	Duration of Illness	Until all scabs have crusted and separated (3-4 weeks). Non-vaccinated HCWs should not provide care when immune HCWs are available; N95 disposable mask or PAPR; vaccination within 4 days of exposure provides protection.
Type A hepatitis in diapered or incontinent patients		Maintain Contact Precautions in infants and children <3 years of age for duration of hospitalization; for children 3-14 yrs. of age for 2 weeks after onset of symptoms; >14 yrs. of age for 1 week after onset of symptoms.

Varicella Zoster (Shingles or Chicken Pox)	Until lesions are dry and crusted	Susceptible HCWs should not enter room if immune caregivers are available; no recommendation for face protection of immune HCWs; no recommendation for type of protection, i.e. surgical mask or respirator for susceptible HCWs. In immunocompromised host with varicella pneumonia, prolong duration of precautions for duration of illness. Post-exposure prophylaxis: provide post-exposure vaccine ASAP but within 120 hours; for susceptible exposed persons for whom vaccine is contraindicated (immunocompromised persons, pregnant women, newborns whose mother's varicella onset is <5days before delivery or within 48 hrs. after delivery) provide VZIG, when available, within 96 hours; if unavailable, use IVIG, Use Airborne Precautions for exposed susceptible persons and exclude exposed susceptible healthcare workers beginning 8 days after first exposure until 21 days after last exposure or 28 if received VZIG, regardless of post-exposure vaccination.
Viral Hemorrhagic Diseases (Ebola, Marburg, Lassa, etc.)	**For duration of illness** **CALL STATE & CDC FOR SPECIFIC INFORMATION FOR SPECIFIC MANAGEMENT OF A SUSPECTED CASE.**	Utilize high level PPE protection. See Appendix E for specific information

APPENDIX C

Droplet Precautions: Use for patients known or suspected to be infected with microorganisms, which are transmitted, by the patient during coughing, sneezing, talking, or the performance of procedures. (See table 1 of Appendix C for a list of infections/conditions requiring Contact Precautions)

1. Patient placement:
    a. Place the patient in a private room.
    b. If no private room is available, consult with Infection Control Practitioner.

2. Mask: Masks are worn whenever working within 3 feet of the patient.

3. Patient transport:
    a. Limit transport of patient from the room to essential purposes only.
    b. If transport is necessary, have patient wear a surgical mask to limit the spread of droplet nuclei.

For additional information about isolation and precautions for diseases and conditions:

Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, ***June 2007***
http://www.cdc.gov/ncidod/dhqp/pdf/isolation2007.pdf

APPENDIX C

Table 1

DROPLET PRECAUTIONS		
INFECTION/CONDITION	**PRECAUTIONS IN EFFECT**	**OTHER PRECAUTIONS REQUIRED**
Diphtheria (pharyngeal)	Until off antibiotic therapy and at least 2 cultures taken 24 hours apart are negative.	
Epiglotitis caused by H. Influenzae	Until 24 hours after initiation of effective therapy.	
German Measles (rubella)	Until 7 days after onset of rash. Avoid placement in room with an immunocompromised patient.	
Influenza (Seasonal)	5 days unless an immunocompromised person, then duration of illness. Single patient room when available or cohort; avoid placement with high-risk patients.	Mask patient when transported out of room; chemoprophylaxis vaccine to control/prevent outbreak. Use gown and gloves according to prolonged duration of viral shedding (i.e. for several weeks) has been observed; implications for transmission are unknown.
Meningitis, H. Influenzae, known or suspected	Until 24 hours after initiation of effective therapy.	
Meningococcal (Neisseria meningitis) Disease; sepsis, pneumonia, meningitis	Until 24 hours after initiation of effective therapy.	Post-exposure chemoprophylaxis may be applicable if contact with secretions.
Mumps (infectious parotitis)	For 9 days after onset of swelling. Susceptible HCWs should not provide care if immune caregivers are available.	
Mycoplasma pneumonia	Duration of illness.	
Parvovirus B19	For patients with transient aplastic crisis or red blood cell, maintain precautions for 7 days. Maintain precautions for duration of hospitalization when chronic disease occurs in an immunodeficient patient.	
Pertussis (whooping cough)	Until patient has been on effective therapy for 5 days.	Post-exposure chemoprophylaxis for household contacts and HCWs with prolonged exposure to respiratory secretions.

APPENDIX D

TB Respiratory Precautions: Use for patients who are infected with known or suspected microorganisms that are transmitted by airborne droplet nuclei which remain suspended in the air and can be spread within the room and to surrounding areas by air currents. (See Table 1 of Appendix A for list of infections/conditions requiring Airborne Precautions)

1. Patient placement
   a. A private room with negative air pressure which has 6 air changes per hour, and is exhausted to the outside.
   b. The patient must remain within the room.
   c. Doors and windows in the patient's room must remain closed.
   d. If no private is room available, consult with Infection Control Practitioner.

2. Gloves and Hand washing
   a. Hand washing is done before and after all patient contact.
   b. Gloves are needed for standard precautions if contact with blood or bloody body fluids anticipated.

3. Respiratory Protection
   a. Surgical mask will be worn by persons entering the room.
   b. A PAPR respiratory system will be worn by persons entering the room of a patient on TB Respiratory precautions.
   c. A N95 mask that is fit tested may also be worn by persons entering the room of a patient on TB Respiratory precautions.

4. Gowns: Impervious gowns will be worn if it is anticipated that clothing may come in contact with blood or bloody body fluids.

5. Eye protection will be worn if it is anticipated that clothing may come in contact with blood or bloody body fluids.

6. Patient transport: If transport is necessary, have patient wear a surgical mask to limit the spread of droplet nuclei.

7. Tuberculosis: Refer to Tuberculosis Exposure Control Plan Policy IC-343.

Appendix E

Trained Observers

Trained observers are trained staff members who will assist in the donning and doffing process during times when high level PPE is required. The trained observer will make sure all steps and protocols are followed to ensure the safety of the healthcare worker. This will include controlling the environment in which donning and doffing occur. A healthcare worker cannot don or doff high level PPE in a routine manner without a trained observer. A trained observer will be stationed at the area where high level PPE is being employed for the duration of the time that high level PPE is required. The trained observer is the authority in the donning and doffing process. The trained observers will utilize the attached checklists for donning and doffing. These sheets will be collected and submitted to the Infection Control Practitioner. If no one is available to be an observer from the list below, the ICP can designate observers based on previous training exercises and comprehension of the checklists.

Trained Observers: list in not in any particular order.

1. Saralyn Potter
2. Joy DePuydt
3. Nick Dirkes
4. EMS staff member
5. Employee health nurse
6. Someone from GCL
7. Member of IC committee

High Level PPE Donning Checklist. (pt. label here)

Date/Time: _____
Trained Observer: _____
Staff Member Donning: _____

Initials	Task to be completed.
_____	Assemble and inspect all required PPE (inner gloves, outer gloves, gown, tall boot covers, face shield, N95 mask, and hood).
_____	Ask staff member to remove all personal items, if they have hydrated, and if they have used the bathroom. Take and record staff member's temperature. _____ (temperature).
_____	Ask Staff member to perform hand hygiene.
_____	Ask the staff member to put on inner gloves (These are the short nitrile gloves).
_____	Put on tall boot covers. Pull up as high as they will go.
_____	Put on gown. Ensure that gown is large enough to allow free movement. Inner gloves cuffs should be tucked under the sleeves of the gown.
_____	Put on the N95 mask. (Must be fit tested) check for seal. Top straps above ears, lower straps on back of neck.
_____	Put on hood. All hair should be tucked in and all skin of neck should be protected.
_____	Put on outer gloves. (These are long). They should fit over the cuffs of the gown.
_____	Verify integrity of PPE. Are there any holes, gaps, skin or hair exposed? Can the staff member move freely without compromising the PPE? Have the staff member move arms and bend at waist to make sure they can move freely.
_____	Have staff member disinfect outer gloves.

All steps were followed and observed by the trained observer:

Signature: _____

Time/date: _____

High Level PPE Doffing checklist (read across). (Pt label here)
Date/Time: _____
Trained Observer: _____
Staff Member Doffing: _____
Trained Observer please initial at each step.

1._____Inspect the PPE for visible contamination, holes, or tears prior to removing any PPE. If any of the PPE is visibly contaminated, instruct staff member to wipe the area with an approved disinfecting wipe.	**2**._____Instruct the staff member to perform hand hygiene (HH) on outer gloves (using alcohol based hand rub (ABHR)).
3._____Have the staff member remove the outer gloves. Dispose of outer gloves.	**4.**_____Inspect the inner gloves for any visible contamination, tears, or breeches. Instruct staff member to perform HH with ABHR. If breeches were noted, remove the gloves, re-perform HH with ABHR and don new gloves. **If NO breeches**, proceed to next step.
5._____Instruct staff member to remove face shield. Remind them to not touch the front of the shield as this area is considered contaminated. Dispose of shield	**6**._____Instruct staff member to perform HH with ABHR.
7._____Instruct the staff member to remove the hood. You may assist in unfastening if applicable. Dispose of hood.	**8**._____Instruct staff member to perform HH with ABHR.
9._____Instruct staff member to remove the gown. Remind staff member to not touch the front of the gown, or the clothing or skin under the gown. Instruct the staff member to pull the gown out and away from the body, rolling the gown inside out as it is removed, touching only the inside of the gown. Dispose of the gown. Instruct staff member to perform HH with ABHR.	**10**._____Instruct staff member to sit in the designated chair for removing boot covers. Instruct the staff member to remove the boot covers, taking care to not touch the pant legs or shoes underneath. Dispose of the boot covers.
11._____Instruct staff member to perform HH with ABHR.	**12**._____Instruct the staff member to remove the inner gloves. Do not contaminate the bare hands by touching the outsides of the gloves. Discard the gloves.
13._____Instruct staff member to perform HH with ABHR. **Don a new pair of inner gloves**.	**14**._____Instruct the staff member to remove the N95 mask. Instruct the staff member to tilt head forward and **remove the bottom strap first** taking care not to touch the front of the mask. Then remove the top straps, touching only the straps. Discard the mask.
15._____Instruct staff member to perform HH with ABHR.	**16**._____Instruct the staff member to sit in the designated chair for disinfecting shoes. Hand the staff member disinfecting wipes and instruct them to wipe down all surfaces of their shoes. Discard wipes.
17._____Instruct staff member to perform HH with ABHR**. And remove gloves.**	**18**._____Instruct staff member to perform HH with ABHR. The staff member is now free to leave the doffing area. Instruct the staff member to shower and change into fresh scrubs. (This step must happen if shift change, the staff member is to leave the High Level PPE area, or if any sign of visible contamination or breech in PPE).

All steps were followed and observed by the trained observer:

Signature: _____

Time/date: _____