

PRION LAB SAMPLE HANDLING

- St. Joseph Medical Center Tacoma, WA
 St. Clare Hospital Lakewood, WA
 St. Elizabeth Hospital Enumclaw, WA
 St. Francis Hospital Federal Way, WA
 St. Anthony Hospital Gig Harbor, WA
 Highline Medical Center Burien, WA
 PSC

PURPOSE

To define the laboratory policy for handling samples that may be infected or suspected of being infected with a group of protein particles known as prion particles.

BACKGROUND

Creutzfeldt-Jakob Disease (CJD) or a variant (vCJD) are the most common diseases containing the prion particle. A protein test called 14-3-3 is also related to CJD and other neuro-degenerative disease. Requests for this protein test should follow this policy.

SAMPLE RISK OF INFECTIVITY

The risk for healthcare transmission of prion particles is dependent upon the probability that an individual has or will develop the disease, the level of infectivity in the individual specimen type, and the route of exposure. Risk assessment and prevention of exposure through the use of personal protective equipment and disposable equipment are the best means to reduce any risk of transmission in the healthcare setting.

Infectivity Level	Tissue / Specimen Type
High	Brain, spinal cord, eye, pituitary gland
Low	Kidney, liver, lung, lymph node / spleen, placenta, cerebrospinal fluid (CSF)
No known transmission risk	Heart, skeletal muscle, peripheral nerves, adipose tissue, gingival tissue, intestine, adrenal gland, thyroid, prostate, tears, sweat, sputum, stool, urine, semen, breast milk, blood

RELATED DOCUMENTS

CHI Franciscan Creutzfeldt-Jakob Disease Management Protocol 911.00.

PRECAUTIONS FOR POTENTIALLY INFECTIVE SPECIMEN TYPES

- Standard precautions for blood and body fluid exposure apply. Personal Protective Equipment (PPE) consisting of a face shield, gloves and lab coat is required to handle specimens.
- Minimize the number of different staff involved in the sample handling to a minimum.
- Once received in the laboratory, sample aliquots must be labeled with the word "Prion" somewhere on the sample in permanent marker or with a taped label.
- PPE is discarded after one use after handling a potentially infective sample, and before touching any other surfaces to prevent cross contamination.
- Extended soaking of all equipment used during sample analysis in a fresh 10% bleach solution for 1 hour is required.
- Equipment is discarded, after soaking in freshly made 10% bleach, into a container provided by Environmental Services (ES).

COMMUNICATION

The CHI Franciscan Prion and Creutzfeldt-Jakob Disease Management protocol 911.00 is activated when there is an admission, diagnosis, or surgical procedure scheduling of a patient with known or suspected CJD/vCJD or other prion disease.

1. The Microbiology manager, Main Lab, or Pathologist (on-call if after hours) is notified as part of the Infection Control Team and notifies other managers, supervisors, MT Coordinator or tech in charge when the protocol has been implemented.
2. Once the sample has been delivered to the lab, the manager, supervisor, coordinator or tech in charge is notified. This notification is critical for the proper handling and disposal of the sample and equipment after testing.
2. Environmental Services (EVS) must be contacted to deliver a special waste disposal container to the laboratory for disposal of all prion suspected specimens and any other infectious material generated. EVS must be contacted to deliver a disposal container when extra frozen samples of these identified potential risk samples are to ready to be disposed.
3. When special waste is ready for pickup, EVS is notified by the tech in charge or MT Coordinator. This special waste should be picked up by EVS within an hour of notification.

SAMPLE PACKAGING AND TRANSPORT

Specimens from Prion protocol patients will arrive and be "handed off" to laboratory or pathology staff. The samples will arrive double bagged and the word "Prion" will be marked on the outside of the bag during hand off.

NOTE: The staff member who identifies the specimen should notify the Microbiology manager, other manager, supervisor, MT Coordinator, or tech in charge that a sample is in the laboratory.

SAMPLE HANDLING AFTER IMPLEMENTATION OF THE PROTOCOL

Hematology, Microbiology, and Pathology have department specific procedures for managing these samples within the department.

REFERENCE

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