Tri-City Medical Center
Oceanside, California

Environment of Care Manual
Equipment Management

SUBJECT: **Medical Equipment Management Plan**

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A. **SCOPE:**

1. The Medical Equipment Management Program is designed to assure proper selection, of the appropriate medical equipment to support a safe patient care and treatment environment. The Program will assure effective preparation of staff responsible for the use, maintenance, and repair of the equipment, and manage risks associated with the use of medical equipment technology Finally, the Program is designed to assure continual availability of safe, effective equipment through a program of planned maintenance, timely repair, ongoing education and training, and evaluation of all events that could have an adverse impact on the safety of patients or staff as applied to the building and services provided at Tri-City Healthcare District.
2. The program is applied to Tri-City Healthcare District medical center and offsite care locations. \
3. The Medical Equipment Management Plan describes the processes it implements to manage the effective, safe, and reliable operation of medical equipment as well as provide a safe environment for patients, staff members, visitors, and other individuals in the hospital. Directly or indirectly, the Medical Equipment Management Plan involves every person in the hospital who uses, maintains, or is associated with medical equipment.

B. **FUNDAMENTALS (RISKS):**

1. The sophistication and complexity of medical equipment continues to expand. Selecting new medical equipment technology requires research and a team approach.
2. Patient care providers need information to develop an understanding of medical equipment limitations, safe operating conditions, safe work practices, and emergency clinical interventions during failures.
3. Medical equipment may injure patients or adversely affect care decisions if not properly maintained.

C. **OBJECTIVES:**

1. The Objectives for the Medical Equipment Program are developed from information gathered during risk assessment activities, annual evaluation of the previous year's program, performance measures, and environmental tours. The Objectives for this Plan are:
   a. To increase training, both formal and informal for all resident technicians.
   b. Develop departmental rounds to ensure medical equipment safety within the facility.
   c. Keep the medical equipment inventory current and accurate.
   d. Minimize risks to patients, users, and the environment.
   e. Maintain the highest level of availability of medical equipment to clinical users.
   f. Reduce the need for premature replacement of equipment.
   g. Comply with applicable laws, regulations, standards, and codes.

h. Continually seek opportunities for quality improvement and cost reduction.
i. Reduce unnecessary workload that does not produce positive impact of care delivery.

D. **ORGANIZATION & RESPONSIBILITY:**

1. The Hospital Governing Board receives regular reports of the activities of the Medical Equipment Management Program from the Environmental Health and Safety Committee. They review the reports and, as appropriate, communicate concerns about identified issues, and regulatory compliance. They provide support to facilitate the ongoing activities of the Medical Equipment Program.
2. The Chief Operating Officer (COO) receives regular reports of the current status of the Medical Equipment program through the Environmental Health & Safety Committee. The COO reviews the reports and, as necessary, communicates concerns about key issues and regulatory compliance to the medical staff, nursing, Clinical Engineering, and other appropriate staff.
3. The Manager of Clinical Engineering with COO support assures that the Medical Equipment Program is implemented in all key clinical areas. The program manages a variety of activities, including tracking of rental or leased equipment, warranty repairs, and contract services. The Program also assists in the management of the activities of specialty service contractors providing services to other departments, such as radiology, laboratory, respiratory care, and surgery and anesthesia.
4. The Manager of Clinical Engineering implements the in-house medical equipment maintenance program and tracks maintenance provided by original equipment manufacturers, and other contractors who provide maintenance and repair services for specific items of equipment.
5. Department heads orient new staff to their department and, as appropriate, specific uses of medical equipment. When requested, the Clinical Engineering Technicians provides assistance.
6. Individual staff members are responsible for learning and following job and task specific procedures for safe medical equipment operation.

E. **PERFORMANCE ACTIVITIES:**

1. The performance measurement process is one part of the evaluation of the effectiveness of the Medical Equipment Program. Performance measures have been established to measure important aspect of the Medical Equipment Program.
2. The following fundamental performance indicators will be monitored:
   a. SM completion rate benchmark is 95% or greater.
   b. Repair completion rate within 30-days benchmark is 85% or greater.
   c. Critical/High Risk Equip SM Mthly Completion rate is 100%.
   d. Use Error Percentages
   e. Could not Duplicate Percentages per year
   f. Equipment found without PM Safety Sticker <1%
3. As they occur:
   a. Safe Medical Device Act of 1990 (SMDA)
   b. Incident investigations
   c. Device recalls and alerts

F. **PROCESSES FOR MANAGING MEDICAL EQUIPMENT:**

1. The hospital plans activities to minimize risks in the environment of care – EC.01.01.01 EP7
   a. The hospital has a written plan for managing medical equipment. The organization develops and maintains the Medical Equipment Management Plan to effectively manage the medical equipment risks of the staff, visitors, and patients at Tri-City Healthcare District.
2. The hospital manages safety and security risks- EC.02.01.01 EP11
   a. The hospital responds to product notices and recalls. The Manager of Clinical Engineering responds and acts on medical equipment notices and recalls. Any notices or recalls (OEM voluntary or FDA) which are affected on any devices or equipment in the

facility will be acted on immediately and reported to the EHSC meeting. The Department Director (owner of the equipment) and Risk Manager will be notified of the notice or recall and action taken. The notice or recall will be annotated on the EHSC medical equipment report until the issue is resolved. This will also be discussed at the EHSC meeting to all members.

3. The hospital manages medical equipment risks - EC.02.04.01 EP1
   a. The hospital solicits input from individuals who operate and service equipment when it selects and acquires medical equipment. Tri-City Healthcare District utilizes a capital committee to select and assure the proper equipment is selected. The Capital Committee is made up of (at a minimum) Information Technology, Clinical Engineering, Nursing, Facility Management, Finance and Materials Management.
4. The hospital manages medical equipment risks - EC.02.04.01 EP2
   a. The hospital maintains a written inventory of all medical equipment. Tri-City Healthcare District maintains an electronic and written inventory of all medical equipment. This includes all Critical/High Risk equipment. The Manager of Clinical Engineering evaluates new types of equipment before initial use to determine whether to include this equipment in the inventory.
   b. Written criteria are used to identify risks associated with medical equipment. The risks include, equipment function, physical risks associated with use, and equipment incident history as it relates to patient safety. The risks identified are used to assist in determining the strategies for maintenance, testing, and inspection of medical equipment. In addition, the identified risks are used to guide the development of training and education programs for staff that use or maintain equipment.
   c. Equipment requiring a program of planned maintenance is listed as part of a maintenance inventory. The list includes equipment maintained by in-house staff as well as equipment maintained by vendors.
5. The hospital manages medical equipment risks - EC.02.04.01 EP3
   a. The hospital identifies high-risk medical equipment on the inventory for which there is a risk of serious injury or death to a patient or staff member should the equipment fail.
      i. Note: High-risk medical equipment includes life-support equipment. The Manager of Clinical Engineering identifies the activities used for maintaining, inspecting, and testing all of the medical equipment in the inventory used for the diagnosis, care, treatment, and monitoring of patients thus assuring safety and maximum useful life. The determination of the appropriate activity is made as part of the initial evaluation of equipment. Critical/High Risk equipment is identified and scheduled according to manufacturer recommendations. They are tracked using IDesk.
   b. Potential activities selected to ensure reliable performance include:
      i. Predictive maintenance based on manufacturer's recommendation.
      ii. Reliability-centered maintenance based on equipment history.
      iii. Interval-based inspections based on specified intervals between tests, inspections, or maintenance activity.
   c. Tri-City Healthcare District's Clinical Engineering Department follows manufacturer's recommendations for predictive (scheduled) maintenance including frequency and task (or the activity that requires MORE frequent inspections). Any changes of maintenance strategy and specific tasks shall be based on the experience accumulated locally or elsewhere, upon approval of the Environment of Care/Safety Committee or appropriate hospital authority.
6. The hospital manages medical equipment risks - EC.02.04.01 EP4
   a. The hospital identifies the activities and associated frequencies, in writing, for maintaining, inspecting, and testing all medical equipment on the inventory. These activities and associated frequencies are in accordance with manufacturers' recommendations or with strategies of an alternative equipment maintenance (AEM)

program. The Manager of Clinical Engineering identifies the frequencies for inspecting, testing, and maintaining medical equipment on the inventory in accordance with Manufacturers' recommendations. The frequency of scheduled (planned) maintenance is determined based on manufacturer recommendations, risk levels, and current hospital experience. The frequency of maintenance is determined at the time of initial evaluation of the medical equipment.

b. A work order is used to manage the work for each scheduled maintenance event. Work orders are issued for maintenance performed by in-house staff and by contractors. The Manager of Clinical Engineering manages the work order generation and completion process via IDesk. The Clinical Engineering Technicians perform assigned work orders and review prior to filing. Work done by outside contractors is tracked to assure the work is completed in accordance with the terms of a contract.

c. In addition, other departments manage performance testing and daily user maintenance of sterilizers.

7. The hospital manages medical equipment risks - EC.02.04.01 EP5
   a. The hospital's activities and frequencies for inspecting, testing, and maintaining the following items must be in accordance with manufacturers' recommendations:
      i. Equipment subject to federal or state law or Medicare Conditions of Participation in which inspecting, testing, and maintaining must be in accordance with the manufacturer recommendations, or otherwise establishes more stringent maintenance requirements.
      ii. Medical laser devices.
      iii. Imaging and radiologic equipment (whether used for diagnostic or therapeutic purposes).
      iv. New medical equipment with insufficient maintenance history to support the use of alternative maintenance strategies Note: Maintenance history includes any of the following documented evidence:
         1) Records provided by the hospital's contractors.
         2) Information made public by nationally recognized sources.
         3) Records of the hospital's experience over time.
   b. The Manager of Clinical Engineering identifies the frequencies for inspecting, testing, and maintaining medical equipment on the inventory in accordance with Manufacturers' recommendations. The frequency of scheduled (planned) maintenance is determined based on manufacturer recommendations, and can be more often based on risk levels, and current hospital experience. The frequency of maintenance is determined at the time of initial evaluation of the medical equipment.
   c. A work order is used to manage the work for each scheduled maintenance event. Work orders are issued for maintenance performed by in-house staff and by contractors. The Manager of Clinical Engineering manages the work order generation and completion process via IDesk.
8. The hospital manages medical equipment risks - EC.02.04.01 EP6
   a. A qualified individual(s) uses written criteria to support the determination whether it is safe to permit medical equipment to be maintained in an alternate manner that includes the following:
      i. How the equipment is used, including the seriousness and prevalence of harm during normal use.
      ii. Likely consequences of equipment failure or malfunction, including seriousness of and prevalence of harm.
      iii. Availability of alternative or back-up equipment in the event the equipment fails or malfunctions.
      iv. Incident history of identical or similar equipment.
      v. Maintenance requirements of the equipment.
   b. The Manager of Clinical Engineering assists in the development of written

procedures that are followed when medical equipment fails. These procedures include emergency clinical interventions and the location and use of backup medical equipment. The leader of each department that uses Critical/High Risk medical equipment develops and trains staff about the specific emergency procedures to be used in the event of failure or malfunction of equipment whose failure could cause death or irreversible harm to the patient dependent on such equipment.

c. These emergency response procedures provide clear, specific instructions for staff responding to an emergency and provide information about notifying appropriate administrative staff of the emergency, actions required to protect patients from harm, contacts for spare equipment or repair services, and contacts to obtain additional staff to manage the emergency.

d. Each department leader maintains copies of applicable emergency procedures in accessible locations in their departments. Departmental staff receives orientation and ongoing education and training about the emergency procedures.

e. Each department Director/Manager reviews the department specific medical equipment emergency procedures annually.

9. The hospital manages medical equipment risks - EC.02.04.01 EP7

a. The hospital identifies medical equipment on its inventory that is included in an alternative equipment maintenance program. The Manager of Clinical Engineering will bring any alternative equipment maintenance programs to the Environmental Health & Safety Committee for approval before using the alternative measures. There are no alternative maintenance programs currently being used.

10. The hospital manages medical equipment risks - EC.02.04.01 EP8

a. The hospital monitors and reports all incidents in which medical equipment is suspected in or attributed to the death, serious injury, or serious illness of any individual, as required by the Safe Medical Devices Act of 1990. The Risk Manager is responsible for monitoring and reporting all incidents in which medical equipment is suspected in or attributed to the death, serious injury, or serious illness of any individual, as required by the Safe Medical Devices Act of 1990. The Risk Manager collects information about potentially reportable events through the incident reporting and investigation process. The Risk Manager and appropriate clinical staff conduct investigations of medical equipment incidents to determine if the incident is reportable under criteria established by the Food and Drug Administration. Clinical Engineering will help in the investigation only when instructed by Risk Management.

b. The Risk Manager uses the Sentinel Event Process to investigate and document reportable incidents. The Risk Manager reports for the Environmental Health & Safety Committee on those incidents determined to be reportable. The Risk Manager is also responsible for completing all reports and handling other communications with medical equipment manufacturers and the FDA required by the Safe Medical Devices Act.

c. Appropriate changes in processes and training are made through the performance improvement process. The changes are communicated to all appropriate staff.

11. The hospital manages medical equipment risks - EC.02.04.01 EP9

a. The hospital has written procedures to follow when medical equipment fails, including using emergency clinical interventions and backup equipment. The Manager of Clinical Engineering assists in the development of written procedures that are followed when medical equipment fails. These procedures include emergency clinical interventions and the location and use of backup medical equipment. The leader of each department that uses Critical/High Risk medical equipment develops and trains staff about the specific emergency procedures to be used in the event of failure or malfunction of equipment whose failure could cause death or irreversible harm to the patient dependent on such equipment.

b. These emergency response procedures provide clear, specific instructions for staff responding to an emergency and provide information about notifying appropriate

administrative staff of the emergency, actions required to protect patients from harm, contacts for spare equipment or repair services, and contacts to obtain additional staff to manage the emergency.

c. Each department head maintains copies of applicable emergency procedures in accessible locations in their departments. Departmental staff receives orientation and ongoing education and training about the emergency procedures.

d. Each department Director/Manager reviews the department specific medical equipment emergency procedures annually.

12. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP1

a. Before initial use and after major repairs or upgrades of medical equipment on the medical equipment inventory, the hospital performs safety, operational, and functional checks. (See also EC.02.04.01, EP 2). The Clinical Engineering staff will test all medical equipment on the inventory before initial usage and perform safety, operational, and functional checks. The inventory includes, equipment owned by Tri-City Healthcare District, leased, and rented from vendors. These inspection, testing and maintenance documents are maintained in the Clinical Engineering Department for review. The Manager of Clinical Engineering manages the program of scheduled inspection and maintenance.

13. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP2

a. The hospital inspects, tests, and maintains all high-risk equipment. These activities are documented. (See also EC.02.04.01, EPs 3 and 4; PC.02.01.11, EP 2). The Manager of Clinical Engineering assures that scheduled testing (inspects, tests and maintains) of all Critical/High Risk equipment is performed in a timely manner. Reports of the completion rate of scheduled inspection and maintenance are presented to the Environmental Health & Safety Committee. If the monthly rate of completion falls below 100%, the Manager of Clinical Engineering will present an analysis to determine the cause of the problem and make recommendations for addressing it. These inspection, testing, and maintenance documents are maintained in the Clinical Engineering Department for review.

14. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP3

a. The hospital inspects, tests, and maintains non–high-risk equipment identified on the medical equipment inventory. These activities are documented. The Manager of Clinical Engineering assures that scheduled testing (inspects, tests and maintains) of all Non Critical/Non High Risk equipment is performed in a timely manner. Reports of the completion rate of scheduled inspection and maintenance are presented to the Environmental Health & Safety Committee. If the monthly rate of completion falls below 95%, the Manager of Clinical Engineering will present an analysis to determine the cause of the problem and make recommendations for addressing it. These inspection, testing and maintenance documents are maintained in the Clinical Engineering Department for review.

15. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP4

a. The hospital conducts performance testing of and maintains all sterilizers. These activities are documented. The Manager of Clinical Engineering is responsible for the maintenance and documentation of maintenance of all types of sterilizers used at Tri-City Healthcare District. Maintenance documentation to include SMs are maintained in IDesk (the Clinical Engineering Medical Equipment Database) and filed into the equipment file for review.

b. Records of load testing (performance) and regular user maintenance are maintained by Sterile Processing Department (SPD) and Perioperative Services Department, respectively.

16. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP5

a. The hospital performs equipment maintenance and chemical and biological testing of water used in hemodialysis. These activities are documented. The Manager of

Clinical Engineering is responsible for managing the service and maintenance of the dialysis units performed by Fresenius. The service maintenance records are also entered into IDesk the Clinical Engineering shop medical equipment database and filed into the equipment file for review.

b. Engineering is responsible for managing the chemical and biological testing of water used in hemodialysis at Tri-City Healthcare District by Fresenius. The program of maintenance includes, regular cleaning and disinfection of all dialysis equipment, and testing for compliance with biological and chemical standards for the dialysis water supply. Documentation of the testing and maintenance activities is maintained in the Dialysis storage room for review.

17. The hospital inspects, tests, and maintains medical equipment - EC.02.04.03 EP14
    a. Qualified hospital staff inspect, test, and calibrate nuclear medicine equipment annually. The dates of these activities are documented. The Manager of Clinical Engineering assures that scheduled inspecting, testing, and calibrating (for the service and Scheduled Maintenance) of the Nuclear Medicine Camera and related equipment is performed in a timely manner at least annually. The service maintenance records are also entered into I-Desk the Clinical Engineering shop medical equipment database and filed into the equipment file for review.
18. The hospital collects information to monitor conditions in the environment. EC.04.01.01 EP1
    a. The hospital establishes a process(es) for continually monitoring, internally reporting, and investigating the following:
        i. Medical or laboratory equipment management problems, failures, and use errors
            1) Note 1: All the incidents and issues listed above may be reported to staff in quality assessment, improvement, or other functions. A summary of such incidents may also be shared with the person designated to coordinate safety management activities.
            2) Note 2: Review of incident reports often requires that legal processes be followed to preserve confidentiality. Opportunities to improve care, treatment, or services, or to prevent similar incidents, are not lost as a result of following the legal process. Medical/Laboratory equipment management problems, failures, and use errors will be reported to the EHSC by Clinical Engineering on the EHSC report. All use errors will have in-service education and follow-up.
19. The hospital collects information to monitor conditions in the environment. EC.04.01.01 EP10
    a. Based on its process (es), the hospital reports and investigates the following: Medical/laboratory equipment management problems, failures, and use errors. (See also EC.04.01.03, EP 1) Medical/Laboratory equipment management problems, failures, and use errors will be reported to the EHSC by Clinical Engineering on the EHSC report.
20. The hospital collects information to monitor conditions in the environment. EC.04.01.01 EP12
    a. The hospital conducts environmental tours every six months in patient care areas to evaluate the effectiveness of previously implemented activities intended to minimize or eliminate environment of care risks. (See also EC.04.01.03, EP 1).Clinical Engineering participates on the multi-disciplinary team which conducts environmental safety tours every 6-months in patient care areas and annually in non-patient care areas at Tri-City Healthcare District .
21. The hospital collects information to monitor conditions in the environment - EC.04.01.01 EP15
    a. Every 12 months, the hospital evaluates each environment of care management plan, including a review of the plan's objectives, scope, performance, and effectiveness. On an annual basis, Manager of Clinical Engineering evaluates the objectives, scope, performance, and effectiveness of the Plan to manage the medical equipment risks to the staff, visitors, and patients at Tri-City Healthcare District. The basis for the evaluation will include but not be limited to the medical equipment performance standards and the EHSC Committee reports on medical equipment issues (supported

from IDesk). The goal of the annual evaluation is to continually improve processes and outcomes to improve the patient experience.

22. The hospital addresses NPSG.06.01.01 - Improve the safety of clinical alarm systems. (EP 1-3 are completed) (EP 4-5 will be accomplished in 2015)
    a. EP 1 - Leaders establish alarm safety as a hospital priority.
    b. EP 2 - Prepare an annual inventory of alarms used in the hospital and identify the default alarm settings. (For more information, refer to Standard EC.02.04.01)
    c. EP 3 - Based on the annual inventory, identify the most important alarms to manage.
    d. EP 4 - Establish policies and procedures for managing the alarms identified in EP 3 above that at a minimum address the following:
        i. Whether specific alarms are needed or unnecessarily contribute to safety concerns.
        ii. When alarms can be disabled.
        iii. When alarm parameters can be changed.
        iv. Who in the organization has the authority to make decisions about disabling alarms and changing alarm parameters.
        v. Monitoring and responding to alarms.
        vi. Checking individual alarms for accurate settings, proper operation, and detectability.
    e. EP 5 - Educate staff about alarm policies and procedures.

G. **INFECTION CONTROL**

1. Clinical Engineering staff will observe the hospitals infection-control policies and procedures, including current CDC hand hygiene guidelines, in order to minimize the risk of cross-contamination to patients and clinicians. In addition, Clinical Engineering employees are required to follow the blood borne pathogens exposure control plan (including training, universal precautions, engineering and safe work practices, personal protective equipment usage, and post-exposure evaluation and follow-up) developed by Aramark Healthcare Technologies as required by OSHA per 29 CFR 1910.1030.

H. **PATIENT INFORMATION PRIVACY (HIPAA):**

1. As a service provider, Clinical Engineering staff do not use or disclose protected health information (PHI), as defined by the Health Insurance Portability and Accountability Act of 1996 – HIPAA, specifically the Standards for Privacy of Individually Identifiable Health Information. Any disclosure of protected health information to Clinical Engineering staff that occurs in the performance of their duties (such as what may occur while repairing a piece of medical equipment) is limited in nature, occurs as a by-product of the maintenance duties, and cannot be reasonably prevented. Such disclosures are incidental and permitted by the HIPAA Privacy Rule (45 CFR 164.502(a)(1)).
2. On the other hand, Clinical Engineering staff shall follow policies and procedures established by client to protect PHI, including attending required training and assisting clients in identifying privacy risks and practicing risk reduction measures. Specifically, the Technology Managers and CE staff is instructed to:
    a. Assist in identifying and recommending preventive measures for PHI theft risks for medical devices that are exposed to non-authorized employees, patients and visitors.
    b. Work with the Information Technology department to remove all PHI from equipment that is sent out for repair or disposal.
    c. Not use or disclose any information (oral, transmitted, or recorded in any form or medium) that relates to the health (past, present, or future) of or provision of healthcare to an individual.

I. **EMERGENCY PREPAREDNESS AND MANAGEMENT:**

1. Clinical Engineering staff will observe the client's emergency preparedness and management

policies and procedures in order to provide care to the population served by the client in the case of local, regional, and national emergencies.

J. **GOALS AND OJECTIVES FOR FY 17:**

1. **Assess the entire inventory of medical scales throughout the organization for the ability to locked-down the scale to Kilograms only (not able to readout in pounds). Scales where the ability to lockdown is not an option will have a visual reminder sticker added to the front of the device to alert care providers of the risk and to ensure that kilograms are always used for patient safety. Measurement will be the total number of hospital scales/number of scales locked-down to Kg. only and/or labeled with the warning to use Kg. only.**
2. **Increase use of DEFECTIVE stickers on medical devices in need of repairs, by creating a schedule of rounding of all departments and providing on-the-spot education to management and frontline staff. Measurement will be to have 90% or greater of medical devices in need of repair to have the proper use of a defective sticker when sent down to Bio-Med.**

SUBJECT: **Safety Plan**

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Board of Directors Approval Date(s):	**06/15**

A. **EXECUTIVE SUMMARY:**

1. Each environment of care poses unique risks to the patients served, the employees and medical staff who use and manage it, and to others who enter the environment. The Environment of Care Safety (EC) Program is designed to identify and manage the risks of the environments of care operated and owned by Tri-City Healthcare District. The specific risks of each environment are identified by conducting and maintaining a proactive risk assessment. An environmental safety program based on applicable laws, regulations, and accreditation standards is designed to manage the specific risks identified in each healthcare building or portions of buildings housing healthcare services operated by Tri-City Healthcare District.
2. The Management Plan for Environmental Safety describes the risk, safety, and daily management activities that Tri-City Healthcare District has put in place to achieve the lowest potential for adverse impact on the safety and health of patients, staff, and other individuals, coming to the organization's facilities. The management plan and the environmental management program are evaluated annually to determine if they accurately describe the program and that the scope, objectives, performance, and effectiveness of the program are appropriate.
3. The program is applied to the Medical Center and all offsite clinics and care sites owned and operated by Tri-City Healthcare District. The Management Plan for Environmental Safety and associated polices extends to all inpatient and outpatient service line programs, ancillary services, support services and all facilities including patient care and business occupancies of Tri-City Healthcare District. The plan also affects all staff, volunteers, medical staff and associates including contracted services of Tri-City Healthcare District.

B. **PRINCIPLES:**

1. The identification of specific risks faced by patients and employees, and others is essential for designing safe work areas and work practices.
2. The identified risks and proven risk management practices are used to design procedures and controls to reduce the threats of adverse outcomes. In addition, the identified risks and the procedures and controls are used to educate staff to effectively use work environments and safe work practices to minimize the potential for adverse impact on them, patients, and other individuals coming into the environment.
3. Ongoing monitoring and evaluation of performance, assessment of accidents and incidents, and regular environmental rounds are essential management tools for improving the safety of the environment. The knowledge developed using these management tools is used to make changes in the physical environment, work practices, and increase staff knowledge.

C. **OBJECTIVES**

1. Perform an initial proactive risk assessment of the buildings, grounds, equipment, staff activities, and the care and work environment for patients and employees to evaluate the potential adverse impact on all persons coming to the facilities of Tri-City Healthcare District.
2. Perform additional risk assessments when changes involving these issues occur.
3. Analyze accidents, incidents, and occurrences to identify root cause elements of those incidents.
4. Make changes in the procedures and controls to address identified root causes of incidents.
5. Conduct environmental "EOC" rounds in all areas of the hospital and affiliated medical practices. Staff making rounds evaluates the physical environment, equipment, and work practices. Rounds are conducted in all support areas at least annually and all patient care areas at least semi-annually.
6. Present quarterly reports of EC management activities to the environmental Health & Safety Committee. The reports from each EC area manager will identify key issues of performance and regulatory compliance, present recommendations for improvement, and provide information about ongoing activities to resolve previously identified EC issues. The Safety Officer coordinates the documentation and presentation of this information.
7. Assure that all departments have current organization-wide and department specific procedures and controls designed to manage identified risks.
8. Review the risks and related procedures and controls at least once every three years to assure that the EC programs are current.
9. Assign qualified individuals to manage the EC programs and to respond to immediate threats to life and health.
10. Perform an annual evaluation of the management plan and the scope, objectives performance and effectiveness of the environmental safety program.
11. Design and present environmental safety education and training to all new and current employees, volunteers, members of the medical staff and others as appropriate.

D. **PROGRAM MANAGEMENT STRUCTURE:**

1. The Director of Safety (Safety Officer), Director of Risk Management/Quality Improvement, Director of Regulatory Compliance and Infection Control, and the Director of Engineering work as the Environmental Safety Leadership Team (ESLT) to develop the environmental safety program. They collaborate with leaders throughout the organization to conduct appropriate risk assessments, develop risk related procedures and controls, develop staff education and training materials, and manage day-to-day activities of the environmental safety program. They also collaborate with the Patient Safety Committee to integrate environment of care safety concerns into the Patient Safety program.
2. The Environmental Safety Leadership Team coordinates the development of reports to the Environmental Health & Safety Committee. The reports summarize organizational experience, performance management and improvement activities, and other environmental safety issues.
3. The Environmental Health & Safety Committee monitors and evaluates the processes used to manage the environment of care. Members of the Environmental Health & Safety Committee are appointed by the Committee Chair. The Environmental Health & Safety Committee meets a minimum of four (4) times per year. During each meeting one or more EC performance management and improvement reports is presented. In addition, reports of the findings of environmental rounds, incident analysis, regulatory changes and other issues are presented as appropriate. The Committee acts on recommendations for improvement, changes in procedures and controls, orientation and education, and program changes related to changes in regulations.
4. The Committee assigns individuals or groups responsibility for developing solutions to identified issues. Finally, the Committee maintains a tracking log to assure identified issues are acted on and that analysis of activities after implementation of changes demonstrates that the changes

are effective.

5. Membership of the Committee includes representation from Nursing Administration, Facilities Management, Risk Management, Quality Improvement, Human Resources, Senior Administration, Bio-Medical Services, Education, Medical Staff, Physician representation, Infection Control and others as deemed appropriate.
6. The Board of Directors of Tri-City Healthcare District receives regular reports of the activities of the environmental safety program from the Environmental Health & Safety Committee. The Board reviews the reports and, as appropriate, communicates concerns about identified issues back to the Safety Officer. The Board collaborates with the CEO and other senior leadership to assure budget and staffing resources are available to support the environmental safety program.
7. The CEO or designee of Tri-City Healthcare District receives regular reports of the activities of the Environmental Safety Program. The CEO or designee collaborates with the ESLT and other appropriate staff to address environmental safety issues and concerns.
8. The Emergency Management Program contains provisions for management staff on duty to take immediate, appropriate action in the event of a situation that poses an immediate threat to life, health, or property.
9. The Human Resources Department with the assistance from the Education Department and other leadership staff are responsible for the development and presentation of appropriate materials for orienting new staff members to the organization, the department to which they are assigned, and task specific safety and infection control procedures. The orientation and ongoing education and training emphasize patient safety.
10. Department leaders are responsible for assuring that all staff actively participates in the environmental safety program by observing established procedures and conducting work related activities in a manner consistent with their training. Department leaders also participate in the reporting and investigation of incidents occurring in their departments and in the monitoring, evaluation, and improvement of the effectiveness of the environmental safety program in their areas of responsibility.
11. Individual staff members are responsible for being familiar with the risks inherent in their work and present in their work environment. They are also responsible for implementing the appropriate organizational, departmental, and job related procedures and controls required to minimize the potential of adverse outcomes of care and workplace accidents.

E. ELEMENTS OF THE ENVIRONMENTAL SAFETY MANAGEMENT PROGRAM:

1. Appointment of Environmental Safety Leadership (EC.01.01.01 EP1)
   a. The CEO appoints a team of qualified individuals to assume responsibility for the development, implementation and monitoring of the environmental safety management program. The Environmental Safety Leadership Team (ESLT) includes the Director of Safety (Safety Officer), Director of Risk Management/Quality Improvement, Director of Regulatory Compliance and Infection Control, and the Director of Engineering.
   b. The ESLT coordinates the development and implementation of the environmental safety program and assures it is integrated with the patient safety, infection control, risk management, and other programs as appropriate.
   c. The ESLT maintains a current knowledge of environmental safety laws, regulations, and standards of safety, assesses the need to make changes to procedures, controls, training, and other activities to assure that the environmental safety management program reflects the current risks present in the environment of Tri-City Healthcare District.
2. Designation of Persons to Intervene When Immediate Threats to Life, Health, or Property are identified (EC.01.01.01 EP2)
   a. The Emergency Management program includes specific response plans for Tri-City Healthcare District that address implementation of an appropriate intervention whenever conditions pose an immediate threat to life or health, or threaten damage to equipment

or buildings. The response plans follow the Hospital Incident Command System (HICS) all hazards response protocol. An appropriate event incident commander is appointed at the time any emergency response is implemented.

b. The Immediate Threat Procedure is included in the Emergency Operations Plan. The procedure lists the communications and specific actions to be initiated when situations posing an immediate threat to patients, staff, physicians, or visitors or the threat of major damage to buildings or property. The objective of the plan is to identify and respond to high risk situations before significant injuries, death or loss of property occurs.

c. The CEO has appointed the Safety Officer, the Nursing Administrative Supervisor on duty, and the Administrator on Call to exercise this responsibility. These individuals are to assume the role of incident command and to coordinate the mobilization of resources required to take appropriate action to quickly minimize the effects of such situations.

3. Environmental Safety Management Plan (EC.01.01.01 EP3)
   a. The Environmental Safety Management Program is described in this management plan. The Environmental Safety Management Plan describes the procedures and controls in place to minimize the potential adverse impact of the environment on patients, staff, and other people coming to the facilities of Tri-City Healthcare District.
4. The hospital identifies safety risks associated with the environment of care (EC.01.02.01 EP1)
   a. The ESLT of Tri-City Healthcare District performs proactive risk assessments to identify risks that create the potential for personal injury of staff or others or adverse outcomes of patient care. The purpose of the risk assessments is to gather information that can be used to develop procedures and controls to minimize the potential of adverse events affecting staff, patients, and others. The risk assessments use information from sources such as environmental "EOC" rounds, the results of root cause analysis (RCA), incident reports, and external reports such as The Joint Commission Sentinel Event Alerts, **CDPH All Facilities Letters (AFLs), Cal/OSHA standards,** and FDA product recall notices.
   b. The ESLT coordinates the risk assessment process with the Director of Engineering, department Directors and others as appropriate.
5. The hospital takes action to minimize or eliminate identified safety risks in the physical environment (EC.02.01.01 EP3)
   a. The results of the risk assessment process are used to create new or revise existing procedures and controls. They are also used to guide the modification of the environment or the procurement of equipment that can eliminate or significantly reduce identified risks. The procedures, controls, environmental design changes, and equipment are designed to effectively manage the level of environmental safety in a planned and systematic manner.
6. Development and Management of Policies and Procedures (LD.04.01.07 EP1 & EP2)
   a. The Safety Officer follows the administrative policy for the development of organization-wide and department specific policies, procedures, and controls designed to eliminate or minimize the identified risks. The Safety Officer assists department leaders with the development of department or job specific environmental safety procedures and controls.
   b. The organization-wide policies and procedures and controls are available to all departments and services on the organizational intranet. Departmental procedures and controls are maintained by department directors. The department directors are accountable for ensuring that all staff are familiar with organizational, departmental, and appropriate job related procedures and controls. Department directors are also accountable for monitoring appropriate implementation of the policies, procedures and controls in their area(s) of responsibility. Each staff member is accountable for implementing the policies, procedures and controls related to her/his work processes.

c. The policies, procedures and controls are reviewed when significant changes in services occur, when new technology or space is acquired, and at least every three years.
d. The Safety Officer assists with the reviews of policies and procedures with department heads and other appropriate staff.

7. The hospital maintains all grounds and equipment (EC.02.01.01 EP5)
   a. The Director of Engineering (Facilities Management) is responsible for managing the appearance and safety of the hospital grounds. In addition, the Director of Engineering is responsible for assuring that the equipment used to maintain the grounds is in proper operating condition and that grounds staff is trained to operate and maintain the equipment.
   b. The Director of Engineering (Facilities Management) is responsible for scheduling the work required to maintain the appearance and safety of hospital grounds. The Engineering staff and Security Officers make regular rounds of the grounds to identify unsafe conditions. The Security Manager and Engineering staff reports all deficiencies to the Director of Engineering (Facilities Management) for appropriate action.
8. The hospital responds to product notices and recalls (EC.02.01.01 EP11)
   a. The Director of Safety and the Director of Materials Management coordinate a product safety recall system. Tri-City Healthcare District utilizes the NRAC E-Class system that is designed to quickly assess safety recall notices; to respond to those that affect Tri-City Healthcare District; and to assure all active safety recalls are completed in a timely manner.
   b. A quarterly report of safety recall notices that required action to eliminate defective equipment or supplies from Tri-City Healthcare District is presented to the Environmental Health & Safety Committee by the Director of Safety.
9. The hospital prohibits smoking (EC.02.01.03 EP1 & EP2)
   a. Tri-City Healthcare District has developed a Smoke Free Environment policy. The policy prohibits smoking of any kind (*ie: cigarettes, cigars, pipe, chewing tobacco, e-cigarettes and vapor producing devices)* in any hospital building or grounds by all, including staff, visitors and patients.
   b. Tri-City Healthcare District has identified alternatives to tobacco products that are offered to all. Tri-City Healthcare District has developed tobacco replacement product resources to assist staff and patients with smoking cessation as desired. Staff may purchase tobacco replacement products via Employee Health at a discounted cost.
10. The hospital takes action to maintain compliance with its smoking policy (EC.02.01.03 EP6)
    a. The procedures for managing the use of smoking materials are followed and enforced by all leadership and staff.
11. The hospital monitors conditions in the environment (EC.04.01.01 EP1 - EP11)
    a. The Director of Risk Management coordinates the design and implementation of the incident reporting and analysis process. The Director of Safety (Safety Officer) works with Risk Management to design appropriate processes to document and evaluate patient and visitor incidents, staff member incidents, and property damage related to environmental conditions.
    b. Incident reports are completed by a staff member or witness to whom a patient or visitor incident is reported. The completed reports are forwarded to Risk Management. Risk Management works with appropriate staff to analyze and evaluate the reports. The results of the evaluation are used to eliminate immediate problems in the environment.
    c. In addition, the Director of Risk Management and the Safety Officer collaborate to conduct an aggregate analysis of incident reports generated from environmental conditions to determine if there are patterns of deficiencies in the environment or staff behaviors that require action. The findings of such analysis are reported to the Environmental Health & Safety Committee and the Patient Safety Committee, as

appropriate. The Safety Officer provides summary information related to incidents to the CEO and other leaders, including the Board of Directors, as appropriate.

d. The Safety Officer coordinates the collection of information about environmental safety, patient safety deficiencies including identification of opportunities for improvement from all areas of Tri-City Healthcare District.

e. The Environmental Health & Safety Committee and the Patient Safety Committee are responsible for identifying opportunities for improving environmental safety, for setting priorities for the identified needs for improvement, and for monitoring the effectiveness of changes made to any of the environment of care management programs.

f. The Chairperson of the Environmental Health & Safety Committee prepares quarterly reports to the leadership of Tri-City Healthcare District. The quarterly reports summarizekey issues reported to the **EHSC & PSC** ~~C~~committees with their recommendations. The quarterly report is also used to communicate information related to standards and regulatory compliance, program issues, objectives, program performance, annual evaluations, and other information, as needed, to assure Hospital leaders that management responsibilities have been carried out. **Semi-Annual reports are provided to the Board of Directors related to EC.**

12. Environmental tours are conducted every six months in patient care areas (EC.04.01.01 EP12)
    a. Environmental "EOC" rounds at Tri-City Healthcare District are conducted throughout the year on a schedule prepared by the ESLT. Each patient care area is scheduled for an environmental tour every six months. The Safety Officer with the ESLT coordinates correction of identified deficiencies with the appropriate department director(s).
    b. Additional environmental "EOC" tours are performed when construction or other activities create unusual risks that may require design and implementation of a plan to manage Interim Life Safety Measures, Infection Control Risk Measures, Proactive Construction Risk Management Measures, or other temporary issues.
    c. The ESLT analyzes the results of the environmental tours to determine if deficiencies are corrected in a timely manner and to determine if there are patterns or trends that require action to improve practices or environmental conditions.
13. Environmental tours are conducted annually in non-patient care areas (EC.04.01.01 EP13)
    a. Environmental "EOC "rounds at Tri-City Healthcare District are conducted throughout the year on a schedule prepared by the ESLT. Each non-patient care area is scheduled for an environmental tour annually. The Safety Officer with the ESLT coordinates correction of identified deficiencies with the appropriate department director(s).
    b. Additional environmental "EOC" tours are performed when construction or other activities create unusual risks that may require design and implementation of a plan to manage Interim Life Safety Measures, Infection Control Risk Measures, Proactive Construction Risk Management Measures, or other temporary issues.
14. The hospital uses its tours to identify deficiencies, hazards, and unsafe practices (EC.04.01.01 EP14)
    a. The ESLT manages a process of environmental "EOC" rounds designed to evaluate staff knowledge and skills, observe current environmental and patient safety practices, and to evaluate environmental conditions. Findings of the environmental rounds are used as a resource for improving environmental and patient safety procedures and controls, updating orientation education and education programs, and improving staff performance.
    b. The ESLT analyzes the results of the environmental tours to determine if deficiencies are corrected in a timely manner and to determine if there are patterns or trends that require action to improve practices or environmental conditions.
15. Every twelve months the hospital evaluates each environment of care management plan including a review of the scope, objectives, performance, and effectiveness of the program described by the plan. (EC.04.01.01 EP15)
    a. The Director of Safety (Safety Officer) coordinates the annual evaluation of the management plans associated with the Environment of Care functions.

b. The annual evaluation examines the management plans to determine if they accurately represent the management of environmental and patient safety risks. The review also evaluates the operational results of each Environment of Care program to determine if the scope, objectives, performance, and effectiveness of each program are acceptable. The annual evaluation uses a variety of information sources. The sources include aggregate analysis of environmental rounds and incident reports, findings of external reviews, benchmarking programs or assessments by regulators, accrediting bodies, insurers, and consultants, minutes of Safety Committee meetings, and analytical summaries of other activities. The findings of the annual review are presented to the Environmental Health & Safety Committee by the end of the first quarter of the fiscal year. Each report presents a balanced summary of an Environment of Care program for the preceding fiscal year. Each report includes an action plan to address identified weaknesses.

c. In addition, the annual review incorporates appropriate elements of The Joint Commission's required Periodic Performance Review (PPR). Any deficiencies identified on an annual basis will be immediately addressed by a plan for improvement.

d. Effective development and implementation of the plans for improvement will be monitored by the Safety Officer.

e. The results of the annual evaluation are presented to the Environmental Health & Safety Committee. The Committee reviews and approves the reports. Actions and recommendations of the Committee are documented in the minutes.

f. The annual evaluation is distributed to the Chief Executive Officer, Board of Directors, organizational leaders, the Patient Safety Committee, the Quality Assurance Performance Improvement Committee and others as appropriate. The manager of each Environment of Care program is responsible for implementing the recommendations in the report as part of the performance improvement process.

16. Analysis and actions regarding identified environmental issues (EC.04.01.03 EP1 – EP3)
    a. The Environmental Health & Safety Committee receives reports of activities related to the environmental and patient safety programs based on a quarterly reporting schedule. The Committee evaluates each report to determine if there are needs for improvement.
    b. Each time a need for improvement is identified the Committee summarizes the issues as opportunities for improvement and communicates them to the leadership of the hospital, the quality improvement program, and the patient safety program.
17. Improving the Environment (EC.04.01.05 EP1 – EP 3)
    a. When the leadership of the hospital, regulatory compliance, quality improvement, or patient safety concurs with the Environmental Health & Safety Committee recommendations for improvements to the environment of care management programs, a team of appropriate staff is appointed to manage the improvement project. The Environmental Health & Safety Committee works with the team to identify the goals for improvement, the timeline for the project, the steps in the project, and to establish objective measures of improvement.
    b. The Environmental Health & Safety Committee also establishes a schedule for the team to report progress and results. All final improvement reports are summarized as part of the annual review of the program and presented to hospital, performance improvement, and patient safety leadership.
18. Orientation and Ongoing Education and Training (LD.03.01.01 EP6 & EP8; HR.01.04.01 EP1 & EC.03.01.01 EP1 – EP3)
    a. Orientation and training addressing the environment of care is provided to each employee, contract staff and volunteer. All Licensed Independent Practitioners (LIP) receive orientation to the Environment of Care in accordance with the Medical Staff policies and bylaws.
    b. In addition, annual EOC training is provided and documented via NetLearning.
    c. The Human Resources Department with participation from the Education Department

coordinates the general New Employee Orientation (NEO) program. New staff members are required to attend the NEO program within 30 days of their date of employment. The Human Resources Department with participation from the Education Department maintains attendance records for each new staff member completing the general orientation program.

d. New staff members are also required to participate in orientation to the department where they are assigned to work. The departmental orientation addresses job related patient safety and environmental risks and the policies, procedures and controls in place to minimize or eliminate them during routine daily operations.

e. The Safety Officer collaborates with the EC managers, department leaders, the Director of Risk Management/Quality, Director of Regulatory Compliance and Infection Control, the Patient Safety Officer and others as appropriate to develop content materials for general and job related orientation and continuing education programs.The Safety Officer gathers data during environmental rounds and other activities to determine the degree to which staff and licensed independent practitioners are able to describe or demonstrate how job related physical risks are to be managed or eliminated as part of daily work. In addition the Safety Officer evaluates the degree to which staff and licensed independent practitioners understand or can demonstrate the actions to be taken when an environmental incident occurs and how to report environment of care risks or incidents.

f. Information about staff and licensed independent practitioner knowledge and technical skills related to managing or eliminating environment of care risks is reported to the Environmental Health & Safety Committee. When deficiencies are identified action is taken to improve orientation and ongoing educational materials, methods, and retention of knowledge as appropriate.

F. GOALS/OBJECTIVES FOR FY17:

~~19.~~**1. Create a Workplace Violence Prevention (WPV) Committee to address the new 2016/2017 Cal/OSHA WPV prevention standards. Measurement of success will be the creation of the committee, regularly attended meetings and a plan in place to meet the requirements within the allotted timeframe provided by Cal/OSHA.**

2. Complete WPV risk assessments for all departments, services throughout the medical center and off-site locations.

~~F.~~G. RELATED DOCUMENTS:

1. Administrative Policy - Smoke Free Environment #205

~~G.~~H. REFERENCES:

1. The Joint Commission/NFPA Life Safety Book for Health Care Organizations (2013)

SUBJECT: Security Management Plan

ISSUE DATE: 01/97
REVIEW DATE(S): 01/99
REVISION DATE(S): 07/00, 04/03, 12/05, 12/11

Department Approval Date(s):	**05/15, 06/16**
Environmental Health and Safety Committee Approval Dates(s):	**06/15, 09/16**
Professional Affairs Committee Approval Date(s):	**06/15**
Board of Directors Approval Date(s):	**06/15**

A. **EXECUTIVE SUMMARY**

1. Each environment of care poses unique security risks to the patients served, the employees and medical staff who use and manage it, and to others who enter the environment. The security management program is designed to identify and manage the security risks of the environments of care operated and owned by Tri-City Healthcare District. The specific risks of each environment are identified by conducting and maintaining a proactive risk assessment. A security management program based on applicable laws, regulations, and accreditation standards is designed to manage the specific risks identified.
2. The Management Plan for a Secure Environment describes the security risk and daily management activities that Tri-City Healthcare District has put in place to achieve the lowest potential for adverse impact on the security of patients, staff, and other individuals, coming to the organization's facilities. The management plan and the Security Management Program are evaluated annually to determine if they accurately describe the program and that the scope, objectives, performance, and effectiveness of the program are appropriate.
3. The scope of the program is applied to the medical center and all offsite care centers owned and operated by Tri-City Healthcare District. The Security Management Plan and associated policies extend to all inpatient and outpatient service line programs, ancillary services, support services and all facilities including patient care and business occupancies of Tri-City Healthcare District. The plan also affects all employees, volunteers, medical staff and associates including contracted services of Tri-City Healthcare District.

B. **PRINCIPLES**

1. Security is a system made up of human assets and technology.
2. Visible and clandestine components of the system are used to reduce the potential for criminal activity, the threat of workplace violence, and to increase feelings of security among patients, staff, and others coming to Tri-City Healthcare District.
3. Initial and ongoing assessment of security threats is essential for timely identification of changes in the types of security threats facing Tri-City Healthcare District.
4. Collection and analysis of information about adverse security events provides information to help predict and prevent personal violence, crime, and other incidents.
5. Staff awareness of security is an essential part of an effective program. Tri-City Healthcare District orients and trains all staff to basic components of the security program and to techniques for managing security risks related to work areas or daily activities.

C. **OBJECTIVES**

1. Perform an initial proactive risk assessment of the buildings, grounds, equipment, staff activities,

and the care and work environment for patients and employees to evaluate the potential adverse impact on all persons coming to the facilities of Tri-City Healthcare District.

2. Perform additional risk assessments when changes in the campus design or patterns of security events indicate a change in the security threat level.
3. Analyze security incidents and occurrences to identify root cause elements.
4. Conduct ongoing random security patrols in all areas of the medical center, affiliated business offices and outpatient facilities. Staff making rounds evaluates the physical environment, equipment, and work practices. Rounds are conducted in all support areas and all patient care areas at least once per day.
5. Present reports of Environment of Care management activities to the Environmental Health & Safety Committee quarterly. The reports identify key issues of performance and regulatory compliance, present recommendations for improvement, and provide information about ongoing activities to resolve previously identified security issues. The Security Manager coordinates the documentation and presentation of this information.
6. Assure that departments have current organization-wide and as needed department specific procedures and controls designed to manage identified security risks.
7. Review the risks and related procedures and controls at least once every three years to assure that the security program is current.
8. Assign qualified individuals to manage the program and to respond to immediate security threats.
9. Perform an annual evaluation of the management plan and of the scope, objectives performance and effectiveness of the security program.
10. Design and present security education and training to all new and current employees, volunteers, members of the medical staff, contract staff and others as appropriate.
11. Provide timely response to emergencies and requests for assistance.
12. Communicate with law enforcement and other civil authorities as needed.
13. Manage access to the grounds, buildings, and sensitive areas of Tri-City Healthcare District.\

D. **PROGRAM MANAGEMENT STRUCTURE**

1. The Board of Directors of Tri-City Healthcare District receives regular reports of the activities of the Security program from the Environmental Health & Safety Committee. The Board reviews the reports and, as appropriate, communicates concerns about identified issues back to the Safety Officer.
2. The Board collaborates with the CEO and other senior leaders to assure budget and staffing resources are available to support the Security Program.
3. The CEO or designee of Tri-City Healthcare District receives regular reports of the activities of the Security program. The CEO or designee collaborates with the Security Manager and other appropriate staff to address security issues and concerns.
4. The Security Manager works under the general direction of the CEO or designee. The Security Manager, in collaboration with the Safety Officer, is responsible for managing the Security Program. The Security Manager reports program findings to the Environmental Health & Safety Committee. The reports summarize organizational experience, performance management and improvement activities, and other security issues.
5. Department leaders are responsible for orienting new staff members to the department and to job and task specific security procedures. The orientation and ongoing education and training emphasize patient safety. Department heads are also responsible for participating in the reporting and investigation of incidents occurring in their departments.
6. Individual staff members are responsible for learning and following job and task specific procedures for secure operations.

E. **ELEMENTS OF THE SECURITY PLAN**

1. Appointment of Security Leadership (SEC.EC.01.01.01 EP1)
   a. The CEO of Tri-City Healthcare District appoints the Safety Officer, and selects a

qualified individual capable of overseeing the development, implementation and monitoring of the security program. The Safety Officer's job is defined by a job description. The CEO or a designee evaluates the competence of the Safety Officer annually.

b. The Security Manager coordinates the development and implementation of the security program and assures it is integrated with the patient safety, information management, and other programs as appropriate. The Security Manager's job is defined by a job description. The CEO or a designee evaluates the competence of the Security Manager annually.

c. The Security Manager maintains a current knowledge of laws, regulations, and standards of security. The Security Manager also continually assesses the need to make changes to procedures, controls, training, and other activities to assure that the security management program reflects the current risks present in the environment of Tri-City Healthcare District.

2. Designation of Persons to Intervene When Immediate Threats to Life, Health, or Property are identified (EC.01.01.01 EP2)

a. The Emergency Management program includes specific response plans for Tri-City Healthcare District that address implementation of an appropriate intervention whenever conditions pose an immediate threat to life or health, or threaten damage to equipment or buildings. The response plans follow the HICS (Hospital Incident Command System) all hazards response protocol. An appropriate Incident Commander is appointed at the time any emergency response is implemented.

b. The Immediate Threat Procedure is included in the Emergency Operations Procedure manual. The procedure lists the communications and specific actions to be initiated when situations posing an immediate threat to patients, staff, physicians, or visitors or the threat of major damage to buildings or property. The objective of the procedure is to identify and respond to high risk situations before significant injuries, death or loss of property occurs.

c. The CEO has appointed the Safety Officer, the Nursing Administrative Supervisor on duty, and the Administrator on Call to exercise this responsibility. These individuals are to assume the role of incident command and to coordinate the mobilization of resources required to take appropriate action to quickly minimize the effects of such situations.

3. Management Plan for a Secure Environment (SEC.EC.01.01.01 EP4)

a. The Security Management Program is described in this management plan. The security management plan describes the policies, procedures and controls in place to minimize the potential that any patients, staff, and other people coming to the facilities of Tri-City Healthcare District experience an adverse security event.

4. Proactive Risk Assessment (SEC. EC.02.01.01 EP1)

a. The Security Manager of Tri-City Healthcare District coordinates proactive risk assessments to identify risks that create the potential for personal injury of staff or others or adverse outcomes of patient care. The purpose of the risk assessments is to gather information that can be used to develop procedures and controls to minimize the potential of adverse events affecting staff, patients, and others.

b. The Security Manager works with department directors, managers, the Patient Safety Officer, Risk Management and others as appropriate.

c. The Security Department will be responsible for enacting proactive security measures as follows:

i. Scheduling patrolling of the Medical Center and parking lots to help prevent work place violence/accidents.

ii. Locking/unlocking of exterior doors, departments, and associated rooms; on-going inspections of all sensitive areas throughout the Medical Center.

iii. Ensuing that all employees and physicians properly display their photographic identification badges at all times.

iv. Submitting reports to the Director of Engineering pertaining to security and safety violations, including but not limited to: defective lighting, damaged equipment, unsafe situations or conditions that may present a danger to others.
v. Maintaining unrestricted locations for the timely loading and unloading of persons seeking medical treatment in the Emergency Department and Women's Center. Security will also ensure a location for long-term vehicle parking.
vi. Monitoring the Security Department CCTV.
vii. Providing campus escort services 24 hours per day as needed for employees and visitors.

5. The hospital takes action to minimize or eliminate identified security risks in the physical environment (EC.02.01.01 EP3)
   a. The results of the risk assessment process are used to create new or revise existing procedures and controls. They are also used to guide the modification of the environment or the procurement of equipment that can eliminate or significantly reduce identified risks. The procedures, controls, environmental design changes, and equipment are designed to effectively manage the level of security in a planned and systematic manner.
   b. Tri-City Hospital District has elected to implement the Non-Violent Crisis Intervention Program (NVCI) for the mandated training of staff in compliance with the California Health and Safety Code Section 1247.7 and 1257.8. This training includes:
      i. General safety measures.
      ii. Personal safety measures.
      iii. The assault cycle.
      iv. Aggression and violence predicting factors.
      v. Characteristics of aggressive and violent patients and victims.
      vi. Verbal and physical maneuvers to diffuse and avoid violent behavior.
      vii. Strategies to avoid physical harm.
      viii. Restraining techniques.
      ix. Resources available to employees coping with violence (stress debriefing, employee assistance programs, etc.).
   c. A condensed version of the NVCI program will be offered to ancillary staff routinely assigned to the Emergency Department. Ancillary department managers will be responsible for determining staff appropriate for this training.
6. Development and Management of Policies and Procedures (LD.04.01.07 EP1 & EP2)
   a. The Security Manager follows the administrative policy for the development of organization-wide and department specific policies, procedures, and controls designed to eliminate or minimize the identified risks. The Security Manager assists department leaders with the development of department or job specific environmental safety procedures and controls.
   b. The organization-wide policies, procedures and controls are available to all departments and services on the organizational intranet. Departmental policies, procedures and controls are maintained by department directors. The directors are responsible for ensuring that all staff is familiar with organizational, departmental, and appropriate job related policies, procedures and controls. Department directors are also responsible for monitoring appropriate implementation of the policies, procedures and controls in their area(s) of responsibility. Each staff member is responsible for implementing the policies, procedures and controls related to her/his work processes.
   c. The policies, procedures and controls are reviewed when significant changes in services occur, when new technology or space is acquired, and at least every three years. The Security Manager coordinates the reviews of procedures with department leaders and other appropriate staff.
7. Identification of Patients, Staff, and Others Entering the Facility (SEC.EC.02.01.01 EP7)
   a. The identification of staff is an interdisciplinary function. Several Directors share

responsibility for designing identification systems and establishing procedures and controls to maintain the effectiveness of the systems.

b. The current systems in place at Tri-City Healthcare District include photographic ID badges for all staff, volunteers, students, contracted staff and members of the medical staff, password systems to limit access to authorized users of information system applications, physical security systems to limit access to departments and areas of the hospital, and distinctive clothing/badges to facilitate rapid visual recognition of critical groups of staff.

c. The identification of patients is also an interdisciplinary function. The current system includes personal identification of patients in medical records and by use of various arm band systems.

d. The identification of others entering Tri-City Healthcare District is managed by the Security and Materials Management Departments. The Security Manager in collaboration with the CEO or designee and other appropriate staff provides a secure environment that requires identification of all contractors/vendors and the badging of visitors to the various areas of the facility. The Director of Materials Management manages the procedures for identification of vendors. The Security Manager takes appropriate action to remove unauthorized persons form areas and to prevent unwanted individuals from gaining access to Tri-City Healthcare District.

8. Identification and Management of Security Sensitive Areas (SEC.EC.02.01.01 EP8)

a. The following areas have been designated as sensitive areas:

i. Emergency Department.
ii. Behavioral Health **and Crisis Stabilization** Units.
iii. Maternal Child Health.
iv. Neonatal Intensive Care Unit.
v. Pharmacy Department.
vi. Human Resources Department.
vii. Adult Critical Care Unit.
viii. Information Technology.
ix. Administration.
x. 3rd Floor Center Tower ~~California Department of Corrections~~**Progressive Care** Unit.
xi. Medical Records Office and Storage areas.
xii. Nuclear Medicine Hot Lab.

b. Staff in each sensitive area participates in training addressing the unique risks of the area and the procedures and controls in place to manage them. Key personnel and security staff receive specialized training related to processes in high risk security areas.

c. The Security Plan has a program for the inspection, preventative maintenance and testing of the following security equipment:

i. Emergency Department:
1) Electronic access control.
2) Panic buttons.
3) Closed Circuit Television (CCTV) cameras.
4) Security Officer Station – Posted 24 hours per day.

ii. Behavioral Health Units:
1) Electronic access control.
2) CCTV.

iii. Maternal Child Health Units:
1) Electronic access control.
2) Access Control System CCTV.
3) Department policy in place for identifying visitors.
4) Department procedure for uniquely identifying mother-infants.
5) Teaching program to educate parents or guardians to explain the security

processes.
6) Unique identification for staff members.

iv. Neonatal Intensive Care Unit:
1) Electronic access control.
2) The Maternal Child Health units are protected with both active video surveillance systems on entrances and exits of the units. Additionally, the unit has electronic access control systems for entrances and exits that alarm if unauthorized entry or exit occurs.

v. Pharmacy Department:
1) Electronic access control.
2) Infrared Security System.

vi. Business Office:
1) Electronic access control.
2) Panic button.
3) Local area surveillance system.

vii. Human Resources department:
1) Panic buttons.
2) Access Control System CCTV.

viii. Adult Critical Care Unit:
1) Electronic access control.

ix. Patient Representative Office:
1) Panic button.

9. Management of Security Incidents Including an Infant or Pediatric Abduction (SEC.EC.02.01.01 EP9)

a. The Security Manager has developed procedures for rapid response to breaches of security. The on-duty Security Officers and local police have the manpower and technological resources to respond to a wide variety of incidents. The Security Manager or a designee is responsible for assessing breaches of security and determining what resources are required to respond effectively.

b. The Security Manager, Safety Officer and the Director of Women's and Children's Services are responsible for the design and management of systems to reduce the threat of abduction of infants or children and to respond to any threats of or actual abductions.

c. A Code Adam is announced over the paging system, as well as selected radios when a potential or actual abduction has occurred.
i. All available staff responds per the Patient Care Services Code Adam.
ii. The Code Adam plan is tested at least annually and the responses are documented, evaluated, critiqued and as appropriate corrective activity, additional training, or program improvements are made.

d. The Security Manager and the Director of Women and Newborn Services are required to conduct at least one abduction drill annually. In addition, activations of the abduction alert system and all attempted or actual abductions of infants or children are treated as security incidents and reported and analyzed appropriately.

10. The hospital monitors conditions in the environment (EC.04.01.01 EP1 – EP11)

a. The Director of Risk Management coordinates the design and implementation of the incident reporting and analysis process. The Security Manager works with the Director of Risk Management to design appropriate forms and procedures to document and evaluate patient and visitor incidents, staff member incidents, and property damage related to environmental conditions.

b. Incident reports are completed by the staff member or witness to whom a patient or visitor incident is reported. The completed reports are forwarded to Risk Management. Risk Management works with appropriate staff to analyze and evaluate the reports. The results of the evaluation are used to eliminate immediate problems in the environment.

c. In addition, the Director of Risk Management and the Security Manager collaborate to conduct an aggregate analysis of incident reports generated to determine if there are patterns of deficiencies in the environment or staff behaviors that require action. The findings of such analysis are reported to the Environmental Health & Safety Committee and the Patient Safety Committee, as appropriate, as part of quarterly Environmental Safety reports. The Committee Chairpersons provide summary information related to incidents to the CEO and other leaders, including the Board of Directors, as appropriate.

d. The Security Manager works with the Environmental Health & Safety Committee to collect information about security deficiencies and opportunities for improvement from all areas of Tri-City Healthcare District. Appropriate representatives from hospital administration, clinical services, support services, and a representative from each of the six environments of care functions use the information to analyze safety and environmental issues and to develop recommendations for addressing them.

e. The Environmental Health & Safety Committee and the Patient Safety Committee are responsible for identifying important opportunities for improving environmental safety, for setting priorities for the identified needs for improvement, and for monitoring the effectiveness of changes made to any of the Environment of Care Management Programs.

f. The Safety Officer and the Patient Safety Committee prepare a quarterly report to the leadership of Tri-City Healthcare District. The quarterly report summarizes key issues reported to the Committees and the recommendations of them. The quarterly report is also used to communicate information related to standards and regulatory compliance, program issues, objectives, program performance, annual evaluations, and other information, as needed, to assure leaders of management responsibilities have been carried out.

11. Every twelve months the hospital evaluates each environment of care management plan including a review of the scope, objectives, performance, and effectiveness of the program described by the plan. (EC.04.01.01 EP15)

a. The Safety Officer coordinates the annual evaluation of the management plans associated with each of the Environment of Care functions.

b. The annual evaluation examines the management plans to determine if they accurately represent the management of environmental and patient safety risks. The review also evaluates the operational results of each EC program to determine if the scope, objectives, performance, and effectiveness of each program are acceptable. The annual evaluation uses a variety of information sources.

c. The sources include aggregate analysis of environmental rounds and incident reports, findings of external reviews, benchmarking programs or assessments by regulators, accrediting bodies, insurers, and consultants, minutes of Safety Committee meetings, and analytical summaries of other activities. The findings of the annual review are presented to the Environmental Health & Safety Committee by the end of the first quarter of the fiscal year. Each report presents a balanced summary of the Environment of Care program for the preceding fiscal year. Each report includes an action plan to address identified weaknesses.

d. In addition, the annual review incorporates appropriate elements of The Joint Commission's required Periodic Performance Review. Any deficiencies identified on an annual basis will be immediately addressed by a plan for improvement. Effective development and implementation of the plans for improvement will be monitored by the Safety Officer.

e. The results of the annual evaluation are presented to the Environmental Health & Safety Committee. The Committee reviews and approves the reports. Actions and recommendations of the Committee are documented in the minutes. The annual evaluation is distributed to the Chief Executive Officer, the Board of Directors, organizational leaders, the Patient Safety Committee, and others as appropriate. The

manager of each Environment of Care Program is responsible for implementing the recommendations in the report as part of the performance improvement process.

12. Analysis and actions regarding identified environmental issues (EC.04.01.03 EP1 – EP3)
    a. The Environmental Health & Safety Committee receives reports of activities related to the environmental "EOC Rounding" program at least quarterly.
    b. The Committee evaluates each report to determine if there are needs for improvement. Each time a need for improvement is identified; the Committee summarizes the issues as opportunities for improvement and communicates them to the leadership of the hospital and the Patient Safety Committee as indicated.
13. Improving the Environment (EC.04.01.05 EP1 – EP3)
    a. When the leadership of the hospital, quality improvement, or patient safety concurs with the Environmental Health & Safety Committee recommendations for improvements to the environment of care management programs, a team of appropriate staff is appointed to manage the improvement project. The Environmental Health & Safety Committee works with the team to identify the goals for improvement, the timeline for the project, the steps in the project, and to establish objective measures of improvement.
    b. The Environmental Health & Safety Committee also establishes a schedule for the team to report progress and results. All final improvement reports are summarized as part of the annual review of the program and presented to hospital, quality improvement, and patient safety leadership.
14. Orientation and Ongoing Education and Training (LD.03.01.01 EP6 & EP8; HR.01.04.01 EP1 and EC.03.01.01 EP1 – EP3)
    a. Orientation and training addressing the environment of care is provided to each employee, contract staff and volunteer. All Licensed Independent Practitioners (LIP) receive orientation to the Environment of Care in accordance with the Medical Staff policies and bylaws.
    b. In addition, annual EOC training is provided and documented via NetLearning.
    c. The Human Resources Department with assistance from the Education Department coordinates the general New Employee Orientation (NEO) program. New employees are required to attend the general NEO orientation program within 30 days of their date of employment. The Human Resources Department and the Education Department maintains attendance records for each new staff member completing the general orientation program.
    d. New staff members are also required to participate in orientation to the department where they are assigned to work. The departmental orientation addresses job related patient safety and environmental risks and the policies, procedures and controls in place to minimize or eliminate them during routine daily operations.
    e. The Safety Officer collaborates with the Environment of Care leaders, the Director of Quality Improvement, Infection Control, Patient Safety Officer and others as appropriate to develop content materials for general and job related orientation and continuing education programs. The content and supporting materials used for general and department-specific orientation and continuing education programs are reviewed as part of the annual review of each Environment of Care program and revised as necessary.
    f. The Safety Officer gathers data during environmental EOC rounds and other activities to determine the degree to which staff and licensed independent practitioners are able to describe or demonstrate how job related physical risks are to be managed or eliminated as part of daily work. The EOC Rounds evaluate the degree to which staff and licensed independent practitioners understand or can demonstrate the actions to be taken when an environmental incident occurs and how to report environment of care risks or incidents.
    g. Information about staff and licensed independent practitioner knowledge and technical skills related to managing or eliminating environment of care risks is reported to the Environmental Health & Safety Committee. When deficiencies are identified action is

taken to improve orientation and ongoing educational materials, methods, and retention of knowledge as appropriate.

F. GOALS AND OBJECTIVES FOR FY2017

1. **Complete an assessment of the parking lot camera coverage with HCI and create and action plan for installation of cameras throughout the campus to improve visibility of the parking lot. Add signage throughout the parking lot alerting individuals that cameras are in use.**
2. **Creation of the Outpatient Psychiatric Crisis Stabilization Unit (CSU) in BHU. Measure of success will be the unit is opened and operational with CDPH approval.**
3. **Add the following safety precautions to the CSU for both patient and staff safety:**
   a. **Fixed post officer**
   b. **Cameras and monitors to improve observation of the patients**
   c. **Add key pad door locks to strengthen access control to key locations**
   ~~b.~~**d. Creation of a new close observation room on the Inpatient side (pending OSHPD approval)**

~~F.~~G. RELATED DOCUMENTS:

1. Patient Care Services Code Adam Policy

~~G.~~H. REFERENCES:

1. The Joint Commission **Standards**
~~1.~~**2. Cal/OSHA Workplace Violence Prevention requirements**

Tri-City Health Care District
Oceanside, California

Infection Control Policy Manual

ISSUE DATE: 9/95

SUBJECT: Aerosol Transmissible Diseases and Tuberculosis Control Plan

REVISION DATE: 9/01; 9/02; 10/03; 10/06; 10/08, 7/09; 10/09; 7/11; 8/14

Infection Control Department Approval:	~~10/15~~10/16
Infection Control Committee Approval:	~~10/15~~10/16
Pharmacy & Therapeutics Committee Approval:	n/a
Medical Executive Committee Approval:	~~11/15~~10/16
Professional Affairs Committee Approval Date:	01/16
Board of Directors Approval:	01/16

A. **TUBERCULOSIS AND AEROSOL TRANSMISSIBLE EXPOSURE CONTROL PLAN**
INTRODUCTION:

1. Legal mandates and regulatory agencies such as California Code of Regulation Title 8, Occupational Safety and Health Administration and the Centers for Disease Control and Prevention have set the standards for the implementation of an Aerosol Transmissible Diseases (ATD) including Tuberculosis Exposure Control Plan.

B. **PURPOSE AND POLICY:**

1. It is the policy of Tri-City Medical Center to provide care to patients with ATD's with a minimum risk of transmission to others. The Infection Control Committee will provide assistance in ensuring compliance with the policy. The plan includes:
   a. Source Control Procedures including cough etiquette / respiratory hygiene.
   b. Implementation of an effective triage system and early identification of suspects and active cases
   c. Engineering control measures
   d. Respiratory protection programs
   e. Education and training of employees
   f. Evaluation and treatment of employees exposed to ATD's
   g. Protection of patients, employees and visitors from exposure to ATD's. These include:
      i. Pathogens requiring Airborne Precautions;
         1) Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, e.g. Anthrax/Bacillus anthracis
         2) Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)
         3) Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out
         4) Measles (rubeola)/Measles virus
         5) Monkeypox/Monkeypox virus
         6) Novel or unknown pathogens
         7) Severe acute respiratory syndrome (SARS)/SARS-associated coronavirus (SARS-CoV)
         8) Smallpox (variola)/Varioloa virus (see vaccinia for management of vaccinated persons)

9) Tuberculosis (TB)/Mycobacterium tuberculosis -- Extrapulmonary, draining lesion; Pulmonary or laryngeal disease, confirmed; Pulmonary or laryngeal disease, suspected
   a) Any other disease for which the CDC or CDHS recommends airborne infection isolation

ii. **Diseases requiring Droplet Precautions;**

1) Diphtheria/Corynebacterium diphtheriae – pharyngeal
2) Epiglottitis, due to Haemophilus influenzae type b
3) Group A Streptococcal (GAS) disease (strep throat, necrotizing fasciitis, impetigo)/Group A streptococcus
4) Haemophilus influenzae Serotype b (Hib) disease/Haemophilus influenzae serotype b -- infants and children
5) Influenza, human (typical seasonal variations)/influenza viruses
6) Meningitis caused by the following organisms:
   a) Haemophilus influenzae, type b known or suspected
   b) Neisseria meningitidis (meningococcal) known or suspected
7) Meningococcal disease/Neisseria meningitidis: sepsis, pneumonia (see also meningitis)
8) Mumps (infectious parotitis)/Mumps virus
9) Mycoplasmal pneumonia/Mycoplasma pneumoniae
10) Parvovirus B19 infection (erythema infectiosum, fifth disease)/Parvovirus B19
11) Pertussis (whooping cough)/Bordetella pertussis
12) Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,
13) Pneumonia caused by the following organisms:
   a) Adenovirus
   b) Chlamydia pneumoniae
   c) Mycoplasma pneumoniae
      i) Neisseria meningitidis
   d) Streptococcus pneumoniae (use droplet precautions if evidence of transmission within a patient care unit or facility)
14) Pneumonic plague/Yersinia pestis
15) Rubella virus infection (German measles) (also see congenital rubella)/Rubella virus
16) Scarlet fever in infants and young children/Group A streptococcus,
17) Serious invasive disease
18) Viral hemorrhagic fevers due to Lassa, Ebola, Marburg, Crimean-Congo fever viruses, and Hantaviruses

iii. Ebola disease: Special considerations: Please refer to Tri City Medical Center Ebola Plan for management of a patient with confirmed or suspected Ebola.

1) Patients are screened at Triage and/or admission to the facility
2) place patient in negative pressure room C26
3) Patients without symptoms of bleeding, vomiting, diarrhea or clinical condition that may warrant invasive or aerosol-generating procedures must wear Extended PPE (Covers all surfaces of the body including head and neck, coverings for the eyes, mouth, nose and skin). The hair must be completely enclosed. Full face shield with surgical N95 respirator or higher.
4) Patients with symptoms of bleeding, vomiting, diarrhea or clinical condition that may warrant invasive or aerosol-generating procedures or overall worsening of symptoms: must wear Extended PPE (Covers all surfaces of the body including head and neck, coverings for the eyes, mouth, nose and skin). The hair must be completely enclosed. PAPR

with full cowl or hood.

5) PAPR with extended PPE should be used prior to entering a patient's room with suspected or confirmed Ebola.

C. **SCOPE:**

1. The Tuberculosis Control and Aerosol Transmissible Diseases Plan applies to all inpatient and outpatient services

D. **RESPONSIBILITY:**

1. The Tuberculosis Control and Aerosol Transmissible Disease Program will require the participation of the following personnel:
   a. The Infection Control Officer and the Infection Preventionist are responsible for overseeing the plan. This includes, but is not limited to implementation of the plan for the facility; development of policies and procedures to support the implementation of the plan; reporting of suspected and diagnosed cases of ATD's and Tuberculosis as defined in under CA title 22 to the Infection Control Committee and county department of health. It is also the responsibility of the Infection Preventionist to evaluate the risk assessment at least annually.
   b. The Environment of Care Officer is responsible for implementation and maintenance of current standards to meet the requirements of the California Code of Regulation Title 8, Title 24 and the guidelines from the Centers for Disease Control and Prevention.
   c. Employee Health Services is responsible for employee TB skin testing and interpretations; conducting investigation regarding employee exposure to ATD's and TB; maintaining employee TB skin test conversion data; reporting employee conversion and diagnosed cases to the Infection Control and Safety committees annually; and managing and counseling health care workers who have active ATD's. Employee Health is responsible for developing and implementing policies and procedures related to the respiratory protection program. Employee Health is also responsible for screening, testing, and provision of immunizations as indicated and seasonal influenza vaccination administration and declination statement documentation.
   d. Department Directors are responsible for implementation of the TB and ATD Control Plan in their respective areas, providing educational training to all employees before exposure to a source case; maintaining documentation of personnel training; notification of the Infection Preventionist and Facilities Management when active TB patients or patients with other ATD's are admitted to their area.
   e. Administrative Supervisor is responsible for implementation of the TB control plan in the hospital during the hours of 1600-0800 and on weekends and holidays; and overseeing the reporting and discharge of suspected or confirmed cases of ATD or Tuberculosis on weekends and holidays.
   f. The Director of Education is responsible for including TB and ATD control plan in orientation of new employees and annual OSHA required training related to ATD's.
   g. The Director of Environmental Services is responsible for developing, implementing and monitoring procedures for cleaning rooms occupied by a patient with ATD's.
   h. The Facilities Director is responsible for monitoring and verifying ~~air changes and~~ air pressures daily on Airborne Infection isolation rooms, when in use, and reporting of air changes and air pressures to the Infection control and Safety committees annually.
   i. The Director of Pulmonary Services is responsible for developing, implementing and monitoring procedures for high-hazard procedures.
   j. The **Facilities Directo**~~Director of Engineering~~ is responsible for maintaining and cleaning of portable HEPA recirculators and providing portable HEPA recirculators to units as needed.
   k. Microbiology Supervisor is responsible for the notification of the local health authority according to California and Federal regulations of ATD's and TB. The Employees are responsible for early identification of suspects and active cases of ATD's and TB; early

implementation of Airborne Precautions; knowledge of Tuberculosis and ATD control plan; reporting of cases to the Infection Preventionist and/or the Public Health Nurse; compliance with all protective practices; attendance of New Employee Orientation Program and annual OSHA required education; and reporting noncompliance and unusual occurrences using a quality review report.

l. The Physicians play an important part in TB and ATD Control by maintaining a high index of clinical suspicion.
   i. Physicians should place all HIV positive patients with infiltrates in Airborne Precautions until three sputum concentrated smears are negative for AFB or until a diagnosis other than tuberculosis is clearly established.
   ii. Place all new admits with a history of fever, weight loss and cough or pneumonia greater than 2-3 weeks in Airborne Precautions if no clear etiologic agent is identified.
   iii. Treat all highly suspected tuberculosis cases with antituberculosis medications pending sputum results.
   iv. Consider ATD in patients with temperature greater than 100 degrees F and cough. ATD may also be considered in the presence of rash with fever.
   v. Implement control measures when ATD is suspected.

E. **AVAILABILITY OF THE PLAN:**

1. The Tuberculosis and ATD Control Plan will be available via the Intranet in the Infection Control Manual in every department. OSHA required education will be conducted at the new employee orientation program and all other employees are required to complete an annual review. The written plan will be reviewed and updated annually and as indicated by regulations.

F. **FUNDAMENTALS OF TUBERCULOSIS INFECTION CONTROL:**

1. Some segments of the U.S. population have a higher risk for TB because they are more likely to have been exposed or because their infection is more likely to progress to active TB after infection. TB is carried in the air after being generated when persons with pulmonary or laryngeal TB sneeze, cough, speak or sing. These particles are carried on air currents and stay afloat for a long time. Infection occurs when a person inhales the germs into their lungs. Usually within 2-10 weeks after infection, the immune response limits further multiplication and spread but some bacteria can remain dormant for years (latent infection). People with normal immune systems have a 5-10% lifetime risk of the latent infection progressing to active disease. Factors that influence infection include the concentration (number) of the bacteria in the air and duration of exposure. Exposure in a relatively small space with inadequate ventilation can increase the risk of infection. Persons who are immunocompromised are more likely to become infected and to also develop active disease. The transmission, epidemiology and pathogenesis of TB were all considered in our plan. An effective program requires early identification, isolation and effective treatment of persons who have active disease.
   a. The most effective control measure is to ensure rapid identification, isolation, diagnostic evaluation and treatment of persons likely to have TB.
   b. The next level of effective control is the use of engineering controls (i.e. airflow, dilution, filtration and exhaust of air)
   c. The final and least effective control is the use of respiratory protection.

G. **TUBERCULOSIS RISK ASSESSMENT:**

1. Risks assessment will be performed annually by the Infection Preventionist and reviewed by the Infection Control and Environment of Care Committees. The purpose of this assessment is to evaluate the risk of transmission of Tuberculosis so that appropriate interventions can be developed. The assessment will include:
   a. Community TB profile from public health department data
   b. Number of infectious TB patients treated in outpatient and inpatient areas.
   c. Drug susceptibility patterns of TB patients

d. Analysis of healthcare workers PPD test results by area
e. Review medical records for appropriate precautions, timing of specimens, duration of precautions and timely communication with public health.
f. Observation of practice and review of engineering controls.

2. Considerations for determining the hospital's risk classification will be based on the following:

VERY LOW RISK	There are no TB patients admitted to the facility during the preceding year
LOW RISK	The employee PPD conversion rate in an area is not higher than in areas with increased occupation exposure to Tuberculosis Fewer than 6 patients were admitted to area during the preceding year There is no evidence of person-to-person transmission No clusters of HCW PPD conversion
INTERMEDIATE RISK	Same as Low Risk with the addition of six or more TB patients admitted to the area during the preceding year.
HIGH RISK	PPD conversion rate is higher in areas without occupational exposure to Tuberculosis. Clusters of HCW PPD conversion. Evidence of person-to-person transmission. More than 6 patients admitted to an area.

3. Early identification of suspected and active TB patients can initiate prompt treatment and prevent transmission of the disease. This is the most effective method for controlling the spread of tuberculosis, an Administrative Control. A suspected case of TB is defined as:
   a. A patient with unexplained cough, cough with bloody sputum, and/or a cough lasting longer than 3 weeks
   b. A patient with unexplained fever, night sweats, weight loss and anorexia
   c. Readmission of patients recently diagnosed with Tuberculosis
4. A high index of suspicion for Tuberculosis should be maintained for the following
   a. Patients requiring high-risk procedures such as aerosolized pentamidine and sputum induction for Acid Fast Bacilli (AFB)
   b. Patients who belong to a group with a higher prevalence of TB infection: medically under-served, foreign born from a developing country, homeless, current **or past justice involved** ~~or past prison inmate~~, alcoholic, injecting drug-user, elderly, or extended contact with an active TB case.
   c. Patients who belong to a group with a higher risk to progress from latent TB to active disease: immunocompromised (HIV, organ transplant, or on high dose steroids), silicosis, status post gastrectomy or jejunoileal bypass surgery, >10% below body wt, chronic renal failure, diabetes mellitus, infected within past two years, or child >5 years old.
5. In outpatient areas where patients with undiagnosed Tuberculosis may be present, precautions must be taken to minimize the risk of transmission.
   a. Instruct patients to cover their mouths with a handkerchief or tissue, and give them a surgical mask to wear. Tissues and masks must be readily available in the waiting areas.
   b. Questionnaires will be utilized in all outpatient areas and Emergency Department to assist in the early identification of suspected cases. See Appendices A and B for a flow cart and sample questionnaire.
   c. Patients with symptoms suggestive of Tuberculosis will be removed from the common area and placed in a designated waiting area.
   d. Patients unable to wear a mask can be placed outside with appropriate supervision until an appropriate room is available.
6. For departments in main hospital building without a built in negative pressure room, staff shall obtain HEPA recirculator from the Engineering department to enhance circulation in the exam or treatment room to be used by the patient. Contact Engineering for placement assistance.

Please note: The patient must be placed in an AIIR room within 5 hours of identification.

a. HCW wear N95 particulate respirators and visitors wear surgical masks when entering this area.
b. If the patient is suspected or known to have infectious TB, the room must remain vacant for one hour after the patient leaves. The door is to remain closed and the filter running.
c. Personnel may enter the area but must continue to wear respiratory protection until the time has lapsed.

7. For off-site areas, the patient will be asked to wear a mask while inside the building.
8. Any possibility of TB as a diagnosis should be communicated by telephone to other departments, prior transporting the patient to those areas.
9. Patients seen in the ED with confirmed or suspected Pulmonary or Laryngeal TB might require hospitalization to control the spread of infection. See Page 10 for algorithm.
   a. Emergency Department rooms should remain closed for 30 minutes after the patient leaves to ensure 99.9% removal of contaminants. Personnel may enter the room before this time has lapsed but must wear an appropriate respirator.

H. **MANAGEMENT OF HOSPITALIZED PATIENTS WHO MAY HAVE ACTIVE TB:**

1. Health Care Workers who are the first points of contact should ask questions that will facilitate identification of patients with signs and symptoms suggestive of TB. See the Admission Database screening questions.
2. Upon identification of a patient with active or suspected Tuberculosis, the nurse must place the patient in an Airborne Illness Isolation Room (AIIR) (i.e. negative pressure room: C-26, 143, 243, 443, 287, 387, 487,200 and ~~Forensic~~**Progressive Care Unit (PCU)** Rooms 301, 312 and 326). The door must be closed and the HEPA filter running. Post the Airborne Precautions sign, outside the room.
   a. If a designated room is not available, notify the charge nurse and the bed coordinator of the need for an Airborne Precautions room. Remove any roommates and call Engineering for the HEPA filter. Keep the door closed and post the Airborne Precautions sign. HCW wear N95 particulate respirators and visitors wear surgical masks when entering this room.
   b. Patients with TB must not be placed together in the same room unless they have culture- confirmed TB, have drug susceptibility test available on current specimens obtained during the present hospitalization, have identical drug susceptibility patterns on these specimens and are on effective therapy.
3. Reporting:
   a. The Unit Secretary notifies Engineering (by placing a worker order) and the Infection Control office that an Airborne Precautions room is in use for tuberculosis.
   b. The charge or patient's nurse must notify the Infection Preventionist of the patient's name, medical record and room number. Phone call is used.
   c. On weekends and holidays, the charge nurse or the primary nurse will notify the Public Health Nurse by calling cell phone number (619) 540-0194. Go to http://www.sdcounty.ca.gov/hhsa/programs/phs/documents/TB-216TBSuspectCaseReport.pdf for a copy of the report.
   d. Laboratory Results: Hospitals and health care providers are required by law to report TB to protect the public. This must be done within one day of identification of the case or suspected case.
   e. The Microbiology department will notify the nursing unit and the Infection Preventionist of a positive AFB smear or culture results. A fax report of all positive AFB smears and cultures is sent to the Public Health.
   f. The Infection Preventionist or designee is responsible for reporting to public health. Tuberculosis (TB) Program Nurses are available 8:00 a.m. to 5:00 p.m., 7 days a week and all holidays on cell phone number (619) 540-0194 TB control does not have personnel available between the hours of 5:00 p.m. and 8:00 a.m. Persons with routine questions or questions about TB exposure should call phone number (619) 692-8610

after 8:00 a.m. on the following day.

g. Person wanting to report a case of TB after 5 P.M. should do one of the following:
   i. Call pager (619) 540-0194 after 8:00 a.m. the following day to report directly to TB RN if they feel there is urgency about reporting; or
   ii. Leave a message on the Tuberculosis RN voice mail (619) 692-8610 and their call will be returned on the next working week day. Message should include patient's name, date of birth, facility name, reporter's name and phone number, and contact person at facility who will be available for more patient information.

h. Person requesting Discharge Approval should:
   i. Contact TB RN between 8:00 a.m. and 5:00 p.m.

i. Physicians from emergency rooms requesting recommendations regarding patients they suspect may be infectious after 5 P.M., should do the following:
   i. If patient is homeless or from congregate setting (SNF, school dormitory, etc.) and has clinical picture consistent with TB, we recommend to admit and rule out infectiousness.
   ii. If patient has a home and is otherwise medically stable (not in need of admission) patient can be sent home, obtain one sputum for AFB smear and culture prior to release, start on medication if indicated. Direct caller to contact TB RN on phone number (619) 692-8610 after 8:00 a.m. on the following day.

j. Persons calling about patients who are leaving against medical advice (AMA):
   i. Have facility get as much locating information as possible on patient (including address/phone of relatives or friends)
   ii. Call intake RN between 8 am and 5 pm; after hours call 8:00 a.m. the next day
      1) Go to http://www.sdcounty.ca.gov/hhsa/programs/phs/documents/TB-216TBSuspectCaseReport.pdf for the report form.

4. Health-care workers (fit-tested and approved for use) will wear an N-95 respirator when entering the patient's room. See the Respiratory Protection Program under the Employee Health section.
5. The nurse will initiate the Tuberculosis Management protocol and the Communicable Disease teaching protocol.
6. Pediatric patients with suspected or confirmed TB must be evaluated for potential TB according to the same criteria, as are adults. Parents and other visitors of pediatric patients must be evaluated for TB as soon as possible. Until they are evaluated, they must wear surgical masks when in areas of the facility outside of the child's room.
7. Diagnostic and treatment procedures must be performed in the Airborne Precautions rooms to prevent transporting to other areas of the facility. If the procedure cannot be done in the isolation room, the patient must wear a surgical mask during transport. Procedures should be scheduled at times when they can be performed rapidly and the areas are less crowded.
8. Limit the number of persons entering an isolation room to a minimum. All visitors (except HCW who have been fit-tested for an N95 respiratory) wear a surgical mask when entering an Airborne Precautions room.
9. Facilities will verify airflow rates and negative pressures at the time the negative pressure room is established. Negative pressures will be verified daily and a log maintained by Facilities department.
10. Cough-inducing procedures will not be performed on patients who have or may have active Tuberculosis unless the procedures are absolutely necessary and can be performed with appropriate precautions.
    a. The patient is in an Airborne Precautions room.
    b. The portable air filtration system has been set-up in a regular room.
11. Health care workers must wear respiratory protection (Powered Air Purifying Respirator- PAPR) when present in rooms or enclosures in which cough-inducing procedures are being performed on patients who may have infectious Tuberculosis. See high hazard procedures.
12. After completion of the cough-inducing procedures, patients who may have infectious Tuberculosis will remain in the Airborne Precautions room until the coughing subsides. (If

transport is necessary, patient will be provided with a surgical mask to wear.) Outpatients will wear surgical masks until outside the hospital.

13. Before the Pulmonary Function Testing room is used again, after the booth has been in use, the HEPA filter is kept on and the door to the room closed for 1.5 hours. Healthcare workers entering the room before the 1.5 hours are over will wear an N95 respirator (see high hazard procedures)
14. Bronchoscopy considerations
    a. The bronchoscopy room for all inpatient and outpatient procedures will be a negative pressure room. The air filtration system will remain in use whenever a suspect case is performed. Respiratory protection will be worn. The patient waiting for bronchoscopy will be provided a surgical mask and escorted to a non-communal waiting room.

I. ADDITIONAL CONSIDERATIONS FOR SELECTED AREAS:

1. Operating Rooms
    a. Elective procedures on patients with tuberculosis should be delayed until the patient is no longer infectious.
    b. If procedures must be performed, they should be done in OR rooms ~~with anterooms~~ with door closed and traffic at a minimum.
    c. Personnel present when operative procedures are performed on patients who have infectious tuberculosis should wear respiratory protection rather than standard surgical masks alone. Valved or positive-pressure respirators are not appropriate for use during procedures requiring surgical masks.
    d. Procedures should be done when other patients are not present in the operating suite e.g., end of day) and when minimum number of personnel are present. This applies to pulmonary and non-pulmonary sites.
    e. A bacterial filter placed on the patient endotracheal tube or at the expiratory side of the breathing circuit of the anesthesia machine may be useful in reducing the risk of contamination of anesthesia equipment or discharge of tubercle bacilli into the ambient air when anesthesia is being administered to a patient with possible tuberculosis.
    f. The pulmonary TB patient should be monitored during recovery in an individual room meeting Airborne Isolation room ventilation requirements.
    g. Surgery Suites should be closed for one hour after the patient leaves to ensure 99.9% removal of contaminants. Personnel may enter the room before this time has lapsed but must wear an appropriate respirator.
2. Autopsy Room
    a. Due to the probability of the presence of infectious aerosols, autopsy rooms should be at negative pressure with respect to adjacent areas, with room air exhausted directly to the outside of the building. ASHRAE recommends that autopsy rooms have ventilation that provides 12 total **air changes per hour** (ACH).
    b. Personnel performing autopsies on patients who may have had tuberculosis should wear respiratory protection (see high hazard procedures)
    c. In-duct HEPA filtered air re-circulation or UVGI may be used as a supplement to the recommended ventilation.
    d. The autopsy room should remain closed for one hour after the patient leaves to ensure 99.9% removal of contaminants. Personnel may enter the room before this time has lapsed but must wear an appropriate respirator.
    e. Deaths caused by a known or suspected contagious disease constituting a public health hazard are reportable to the Medical Examiner's Office. Autopsy performed on these cases will be performed by the medical examiner.
3. Home Health Services
    a. HCWs entering the home of a patient with confirmed or suspected TB or ATD should wear respiratory protection.
    b. The patient should be taught to cover mouth and nose with a tissue when coughing or sneezing.

c. Educate patient regarding importance of taking medication (and administering directly observed therapy).
d. Immunocompromised persons or young children living in home with TB patient should be temporarily relocated until patient is no longer infectious.
e. Cough-inducing procedures should be performed on patients with infectious tuberculosis only if absolutely necessary. If their performance is required a well-ventilated area away from other household members should be used (for example, go outside or open a window). HCWs will wear respiratory protection during the procedure
f. Specific processes and procedures pertaining to ATD's in the home are found in the Home Health Care policy manual.

J. **DIAGNOSTIC EVALUATION:**

1. Diagnostic evaluation should include the following:
   a. Medical history and evaluation - The probability of TB is greater among patients who have positive PPD test results or a history of positive PPD results, who have previously had TB or who have been exposed to someone with TB, or who belong to a group at high risk for TB.
   b. Mantoux skin test (PPD skin test) – is placed by the specially trained staff and read at 48- 72 hours after injection. Results are to be documented in the Medical Record.
   c. QuantiFERON-TB Gold (QFT-G) test can be used in any situation a Mantoux PPD skin test is indicated. A positive result has the same significance as a positive PPD skin test, and neither a positive PPD nor a positive QFT-G by itself warrants Airborne Precautions.
   d. Chest radiograph - radiographic abnormalities that strongly suggest active TB include upper lobe infiltrates, particularly if the cavitations are seen, and patchy or nodular infiltrates in the apical or sub apical posterior upper lobes or the superior segment of the lower lobe. The MD may include the words "cavitary lesion", "granuloma disease" or "suspected tuberculosis" in the results.
   e. Microscopic examination and culture of sputum or other appropriate specimen. Three sputum specimens should be collected 8–24 hours apart, and at least one should be an early morning specimen, induced, or bronchoalveolar lavage (BAL). (See Table 1).This will assist in determining if the patient is infectious. Although direct AFB smears are available in house, concentrated smears performed by our reference laboratory are preferred and are included with orders for a TB culture. Since neither a direct nor a concentrated smear has sufficient sensitivity to exclude a diagnosis of tuberculosis, cultures must also be ordered.
   f. Initiating Treatment: Patients who have confirmed active TB or who are considered highly likely to have active TB should be started promptly on appropriate treatment in accordance with the current guidelines.
   g. Drug susceptibility should be performed on all initial isolates from patients with TB.
   h. Contact Infection Control at Ext. 5696 or 7410 for the latest recommendations.

K. **AIRBORNE PRECAUTIONS:**

1. Airborne Precautions can be discontinued as soon as the diagnosis of TB has been ruled out, when another diagnosis is confirmed, or when the patient is no longer infectious.
   a. Airborne Precautions can be discontinued:
      i. In a patient with active tuberculosis when the patient is on effective therapy, improving clinically, and has had three consecutive negative concentrate sputum AFB smears
      ii. In a patient with suspect tuberculosis as soon as the diagnosis of TB has been excluded by three negative AFB sputum smears taken 8-24 hours apart with at least one from an early morning specimen, induced specimen, or BAL OR when another diagnosis is confirmed
2. Continued isolation throughout the hospitalization should be considered for patients who have multi-drug resistant tuberculosis (MDR-TB) because of the tendency for treatment failure or

relapse.

L. **DISCHARGE:**

1. Before leaving the hospital, TB patients must be approved for discharge by the Public Health Department. A discharge plan must include all of the following prior to approval from the TB Control Officer (This form can be accessed at: http://www.sdcounty.ca.gov/hhsa/programs/phs/documents/TB-273TuberculosisDischargeCarePlan.pdf)
   ~~1.~~**a. Patients in the Progressive Care Unit (PCU): Specific notification(s) must be obtained prior to discharging justice involved patients:**
      ~~a.~~**i. The Department of Health TB Control to the specific county in which the justice involved patient is residing**
      ~~2.~~**ii. The Public Health Department of the prison.**

~~3.~~**2.** Three consecutive negative sputum smears from concentrate or approved living arrangements so that TB isolation can be maintained. For example, the accepting facility has an airborne precautions room available or the house and household contacts have been evaluated and cleared by the TB County public health nurse.

~~4.~~**3.** A confirmed outpatient appointment (date/time/place) with a provider (name and phone number) who will manage the patient's care until cured.

~~5.~~**4.** Sufficient medication to take until the outpatient appointment. Contact Pharmacy for assistance with take-home medications.

~~6.~~**5.** Placement into case management (e.g. DOT) or outreach programs of the public health department.

~~7.~~**6.** The charge nurse,~~ or~~ shift supervisor**, patients nurse or Case Manager,** will notify the Public Health Department at (619) 692-8610 prior to the anticipated discharge and obtain approval.
   i. Public Health requires at least two days prior to discharge to review the case. On weekends and holidays, obtain approval from the on-call TB County public health nurse at cell phone number (619) 540-0194

~~8.~~**7.** Cleaning of the room after a known or suspected TB patient is moved or discharged:
   a. The patient is infectious or might be infectious and **was not in a negative pressure** and HEPA filtered room: Post the Airborne Precautions sign and keep the door closed. Call Engineering for a HEPA filter. Plug in the filter, turn it on and close the door. Post a sign that specifies the appropriate time period from the table below. TCMC staff may enter the room during this time (i.e. to clean) but must wear an N95 respirator until the time period has elapsed. After the time period has ended, discontinue Airborne Precautions and return the HEPA filter to Engineering.

Area	Length of Time Room is Closed
Orthopedics/Rehab (1N/S)	Two hours
Maternal/Child	Two Hours
South	Two hours
3 N/S	Two hours
Pavilion	One hour
E/W Tower	One hour
Surgery	One hour
Radiology	One hour
Emergency Department	30 minutes
Bronchoscopy area	30 minutes

~~9.~~**8.** The patient is still infectious and **was in a negative pressure room**: keep the Airborne Precautions sign posted, leave the HEPA filter running and close the door for one more hour. Post a sign that specifies this time period. TCMC staff may enter the room during this time (i.e. to clean) but must wear an N95 respirator until the time period has elapsed. After the one-hour

period has ended, discontinue Airborne Precautions.

~~10.~~**9.** The patient is no longer infectious or TB has been ruled out: no special precautions needed. The door may be immediately opened and the room cleaned as usual.

M. **ANNUAL TUBERCULOSIS SCREENING:**

1. Auxiliary and Employees: See the Employee Health section 7.1, TB Surveillance and Respiratory Protection policies.
2. Physicians: the Medical Staff Office sends an annual screening survey to each physician on staff. PPD testing for physicians is required and available in Work Partners.

N. **AEROSOL TRANSMISSIBLE DISEASE CONTRO EXPOSURE DETERMINATION**

1. A list of ~~tall~~ job classifications in which employees have occupational exposure is available in the Infection Control Manual Employee Health Respiratory Protection Program.

O. **ISOLATION PRECAUTIONS**

1. Standard Precautions and Transmission based precautions including cough etiquette, Airborne Precautions, Droplet Precautions and Contact Precautions are outlined in the Infection Control Manual: Standard and Transmission based Precautions (IC.5), Type and Duration of Precautions for Selected Infections and Conditions (IC.5.1); Pregnant Health Care workers (IC.5.2).

P. **HIGH HAZARD PROCEDURES:**

LOCATION	**COMMON HIGH HAZARD PROCEDURES REQUIRING THE USE OF: AN N-95 RESPIRATOR for patients with known or suspected droplet infectious disease POSITIVE AIR PURIFYING RESPIRATOR (PAPR) FOR PATIENTS WITH KNOWN OR SUSPECTED Airborne Infectious Disease**
ACCU, PACU, ED and Bronchoscopy Suite	Intubation and Extubation Sputum Induction Endotracheal & Tracheostomy Tube Care Bronchoscopy
Medical / Surgical Units	Sputum Induction Endotracheal Intubation
Pulmonary Services	Sputum Induction Pulmonary Function Tests Bronchoscopy Aerosolized administration of pentamidine or other medication
Operating Rooms	Intubation and Extubation Bronchoscopy Tracheotomy Thoracotomy Lung Biopsy Endotracheal & Tracheostomy Tube Care
Recovery	Endotracheal & Tracheostomy Tube Care Intubation or Extubation
Pathology	Autopsy

Q. **SOURCE CONTROLS AND ENGINEERING CONTROLS IN SPECIFIC HOSPITAL AREAS**

1. Throughout the facility cough etiquette is used in waiting areas. Signs with instructions are posted in these areas in Spanish and English. Patients are provided tissues and are asked to

wear surgical masks to prevent droplets from disseminating into the environment. Alcohol hand hygiene solutions are made available for patient use. Bilingual signs are posted in waiting areas instructing patients to "Cover your cough."

2. Emergency Department
   a. Engineering Controls during a surge of patients with ATD is addressed in the TCMC Infection Control Policy IC15.0 Influx of Infectious Patients: *Epidemic Influenza or other respiratory transmitted disease*.
   b. At the point of triage, ED staff shall screen and identify patients with symptoms of ATD and implement source control by placing a surgical mask on the patient and asking the patient to keep the mask on during their visit. If the patient cannot tolerate a surgical mask, tissues shall be provided and patients shall be instructed to cover their cough.
   c. Staff wears PAPR's during high hazard procedures (listed above) for disease spread by the airborne route.
   d. N-95 respirators or PAPR's are used during patient contact for diseases spread by airborne route.
   e. Surgical masks are used during patient contact for diseases spread by the droplet route. N95 mask is used by staff during high hazard procedures for disease spread by the droplet route.
   f. Patients with diseases known to be transmitted by the airborne route, including novel viral infections, will be prioritized for Airborne Infection Isolation Room (AIIR) C-26.
   g. When room C-26 is not available a private room is used.
   h. When there are no private rooms available, patients are asked to keep their mask in place and use tissues to prevent droplet aerosolization.
   i. Patients may be cohorted in designated rooms or bays when indicated.
   j. Patients suspected of having ATD's are provided with disposable nebulizer units with expiratory filters or multi-dose inhalers as clinically indicated.
   k. There are no special environmental cleaning recommendations for TB or r/o TB patients.
   l. Rooms shall be cleaned between patients using the hospital approved disinfectant.
   m. When used for a patient with ATD, room C-26 shall remain empty with Airborne Precautions sign posted and door closed for 30 minutes prior to being used by another patient.
3. Nursing Units
   a. Patients who are admitted with airborne transmissible diseases are admitted to AIIR's on nursing units.
   b. Airborne Precautions are initiated and followed in accordance with CDC recommendations for Transmission Based Precautions. A TB quicklook is posted outside each AIIR for step by step instructions on initiating and maintaining proper airflow.
   c. Doors are kept closed.
   d. Patients in Droplet precautions do not need AIIR's for routine care. However, high hazard and cough inducing procedures performed as part of the clinical care of patients in both Airborne and Droplet Precautions will be done in AIIR. See chart above (section P) for selection on type of respirator.
   e. Portable HEPA filtration units can be used to facilitate AIIR. Engineering installs and maintains these devices. Place a work order for installation and monitoring.
   f. Airborne Infection Isolation rooms shall remain empty with Airborne Precautions sign posted and door closed for designated time (see L.2.a) when a patient with Airborne transmissible disease has occupied the room.
4. Pulmonary Services
   a. Bronchoscopy for patients in Airborne or Droplet Precautions will be performed in an AIIR.
   b. N-95 respirators or PAPR's are used during Bronchoscopy.
   c. In areas where AIIR is not available, aerosolized medications are administered using disposable nebulizer units with expiratory filters or multi-dose inhalers as clinically

indicated.

d. Aerosolized medications may be administered using traditional routes while the patient is in an AIIR. The HCW should wear an N-95 or PAPR during this treatment (see high hazard procedures).
e. Bronchoscopy suite will remain closed for the designated time (see L.2.a) when procedure is performed on a patient with known or suspected ATD.
f. Expiratory filters are used for intubated patients with known or suspected ATD during transport.

5. Surgical Services
   a. The Surgical Suite is a positive pressure environment.
   b. Patients in Airborne and Droplet Precautions should have elective procedures delayed for the duration of illness. When this cannot be accomplished, surgery should be scheduled as the last case of the day.
   c. Provide surgical mask for patients during transport.
   d. Expiratory filters can be used for intubated patients during transport.
   e. A portable HEPA unit should be utilized in the OR suite during intubation and extubation to supplement air cleaning but should not be used during surgery. HCW's shall wear N-95 respirator or PAPR See high hazard procedures.
   f. Airborne precautions are maintained in the Post Anesthesia Care Unit. Post-operative patients are placed in a private recovery room with a portable HEPA unit.
   g. Surgical suite shall remain empty for designated time (see L.2.a) with door closed when a procedure has been performed on a patient with known or suspected ATD.
6. Maternal Child Health Services (MCH)
   a. Neonatal Intensive Care Unit (NICU)
      i. The NICU has a dedicated AIIR.
      ii. Neonates born to mothers with diseases known to be spread by Airborne Route are placed in the AIIR until the neonate is found to be non-infectious.
      iii. Prior to entering the unit, visitors are screened for signs of ADT and immunization history. Visitors are asked not to visit for duration of illness.
   b. Labor and Delivery and Post-Partum
      i. Labor rooms may have portable HEPA units installed for mothers who have suspected ATD.
      ii. Healthcare workers follow Standard and Transmission based Precautions as indicated using the appropriate N-95 respirators or PAPR's for Airborne Precautions.
      iii. Rooms 200 and 201 are an AIIR and are used for MCH patients who require Airborne Precautions or need high hazard procedures.
7. Behavioral Health
      i. Patients who develop symptoms of ATD will be assessed by the physician to determine the need for medical intervention.
      ii. Source control will be implemented including masking the patient, use of tissues and hand hygiene.
      iii. If ATD illness is suspected (see list above) the patient will be asked to remain in their room and wear a surgical mask while awaiting admission to the hospital for further treatment.
      iv. If the patient is unable to wear a mask and non-compliant with containing respiratory secretions with tissues. Healthcare workers will wear appropriate PPE based on the transmission of the suspected illness (Droplet or Airborne transmission).
      v. If droplet precautions are indicated (see list above) and the patient is medically stable, the patient may remain on the BHU and Droplet precautions will be instituted and maintained for the duration of illness.
      vi. Airborne precautions cannot be implemented in the BHU. The need for admission to the hospital will be assessed on a case by case basis.

vii. Patients who are identified as needing and AIIR will be transferred within five hours of identification.

8. Laboratory Services
   a. Methods of implementation for ATD exposure control in are found in the Laboratory Medicine Biosafety Plan.
   b. For respiratory protection in Laboratory Services: See Employee Health & Wellness Policy: Respiratory Protection Program Policy
9. Facilities Management Staff
   a. Facilities Management staff will wear N-95 respirators when entering an AIIR housing patient(s) with known or suspected ATD.
   b. N-95 respirators are required when repairing, replacing, or maintaining air systems or equipment that may contain or generate aerosolized pathogens.
10. Personal Protective Equipment
   a. The respiratory protection program policy (Employee Health and Wellness Manual) describes requirements of PPE used for ATD protection in accordance with 29CFR1910.134 and CCR Title 8, section 5144.
   b. Respiratory Protection including N-95 respirators or PAPR's is required in any hospital location in the following circumstances:
      i. Entering an Airborne Isolation Room occupied by a patient with an airborne transmitted ATD
      ii. Entering an Airborne Precautions room that is occupied or has been occupied within the past hour by a patient with active untreated airborne illness including pulmonary or laryngeal TB.
      iii. Entering a regular room where a patient with active or untreated pulmonary or laryngeal TB is undergoing or has undergone within the past 8 hours any high-hazard medical procedure.
      iv. Providing services that involve the need to be in close prolonged contact with a patient with active untreated airborne transmissible illness including pulmonary or laryngeal TB.
      v. Attending high hazard procedures.
   c. Respirator Shortages
      i. In the event of reported shortages of N-95 respirators the following is recommended (notification received from supplier but still able to meet historic usage):
         1) TCMC will maintain a cache of N-95 respirators in accordance with the disaster plan.
         2) Materials Distribution staff will perform in-house inventory to determine available stock and develop a timeline for inventory depletion.
         3) According to available stock, N-95 respirators will be prioritized for distribution to Pulmonary Services ICU, and Emergency Department for use in high hazard procedures.
         4) Re-use of N-95 respirators for known or suspected Tuberculosis patients over a 12 hour shift unless the respirator is contaminated (e.g. visibly soiled) or the integrity of the respirator is disrupted (e.g. torn, cracked nose piece).
         5) Reuse of N-95 respirators is acceptable during the care of patients with other ATD's under the following circumstances:
            a) A protective face shield (no surgical mask) is donned over the respirator to protect the respirator from contamination of ATD .
            b) The respirator integrity remains intact
            c) During the care of intubated and ventilated patients (closed circuit suction systems).
      ii. In severe respirator shortages (less than 30 days of stock available in house, when supplier cannot meet the demand or can only supply an alternative N-95)

the following steps may be considered:

1) Prioritize available N-95 for high hazard procedures.
2) Provide surgical grade masks for employees who are not provided a respirator due to the implementation of prioritized respirator use.
3) Contact Local Public Health Officer for possible acquisition of N-95 respirators from local or state stockpiles.
4) Alternate manufacturer's respirators may be used in cases of tuberculosis and other airborne illnesses. Fit testing will be waived in a declared state of emergency.
5) Except during high hazard procedures, surgical masks may be used for H1N1 influenza.
6) PAPR's may be used.
7) The Infection Control Officer, Infection Preventionist, and the Safety Officer will determine if Internal Disaster Code Orange is warranted based on patient surge, physical and staffing resources.
8) When there is no option for providing N-95 respirators, surgical masks will be provide to the employee

iii. Positive Air Purifying Respirators (PAPR's)

1) PAPR's used for bronchoscopy are maintained in Respiratory Care Department
2) SPD stores and maintains all other PAPR's
3) Units are cleaned, disinfected using a hospital approved disinfectant and tested after each use.
4) Disposable hoods are used

11. Admissions and transfers of patients with known or suspected Airborne transmissible ATD.
    a. Airborne transmissible ATD suspect cases shall be identified, and the individuals shall be given disposable tissues, hand hygiene materials and the patient will be masked until an AIIR is available. Transfer to an AIIR shall be facilitated within five (5) hours of identification.
    b. If an AIIR is not available, patients shall be transferred to a facility with AIIR availability.
    c. If the physician determines that transfer to another facility AIIR would be detrimental to the patient's condition the patient need not be transferred. In this case, employees will use N-95 respirators when entering the room or area housing the individual. The patient's condition will be reassessed every 24 hours to determine if transfer is safe and the determination shall be documented.
12. Influenza Season
    a. From November 1 to March 31, all employees, volunteers, contract workers or others covered under the ATD standard must wear a standard surgical mask while on duty in the hospital. This requirement does not apply to anyone who has received the current influenza vaccine as recommended by the County of San Diego Public Health and Centers for Disease Control and Prevention.
    b. The enforcement dates are subject to change based on the recommendations of the hospital's Infection Control Committee.
    c. Non-compliance with this requirement is subject discipline as outlined in the hospital's Human Resources policy.

R. **MEDICAL SERVICES**

1. Vaccinations are offered to employees free of charge (Employee Health and Wellness Manual: Immunization Policy).
2. Medical Services shall be provided to employees who have occupational exposure to ATD's.
3. Medical Services may include vaccinations, tests, examinations, evaluations, determinations, procedures and medical management and follow-up.
4. Medical Services shall be conducted in accordance with EHS policies

S. **TRAINING**

1. Training is provided during the New Employee Orientation Process and annually through computer based education modules.
2. Opportunity is provided for questions to be answered by an infection control professional.
3. Respirator Fit testing
   a. Medical screening and training is performed in accordance with Employee Health and Wellness Manual: Respiratory Protection Program.

T. **REVIEW SCHEDULE**

1. The ATD plan will be reviewed annually by the Infection Control Committee.
2. Employees will assess the effectiveness of the program in their respective areas annually during the Annual Work Survey and deficiencies will be corrected

U. **RELATED DOCUMENTS:**

1. Infection Control **Policy**~~Manual~~: ~~Infection Prevention and Control~~ Risk **A**~~a~~ssessment and Surveillance Plan~~-IC.2~~
2. Infection Control Manual: Epidemiologic Investigation of a Suspected Outbreak~~-IC.3~~
3. Infection Control Manual: Healthcare Associated Infections, Defined~~-IC.4~~
4. Reducing Facility Acquired Infections~~-IC. 13~~
5. Employee Health and Wellness Manual: Immunization
6. Employee Health and Wellness Manual: Employee Health: Respiratory Protection

V. **REFERENCES:**

1. Centers for Disease Control & Prevention, Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis In Health Care Settings, 2005. MMWR 2005; 54 (No RR-17). .
2. Centers for Disease Control & Prevention, Guideline for Environmental Infection Control in Health Care Facilities, 2003.
3. Centers for Disease Control & Prevention H1N1 guidance, Seasonal Influenza and vaccine Guidance www.cdc.gov
4. California Department of Public Health, Occupational Health Branch. (2015, August). Respirator Selection Guide for Aerosol Transmissible Disease. Retrieved on September 28, 2015 from: http://www.cdph.ca.gov/programs/ohb/Documents/HCResp-ATD-RespSelectGuide.pdf
5. California Department of Public Health (2015, January 20). Interim Guidance on Personal Protective Equipment (PPE) to be used by Healthcare Workers in the Inpatient Hospital Setting during Management of Patients with Suspected or Confirmed Ebola Virus Disease in California. Retrieved from: http://www.cdph.ca.gov/programs/cder/Documents/CDPH%20-%20PPE%20Guidance%20for%20Management%20of%20Ebola%20Patients%20in%20an%20Inpatient%20Setting%20-FINAL%201-20-2015%20POSTED.pdf
6. Respiratory Hygiene/Cough Etiquette in Healthcare Settings www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm
7. OSHA Directives CPL 2.106- Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis US Department of Health and Human Services. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=1586&p_text_version=FALSE
8. Cal-OSHA Aerosol Transmissible Diseases Standard, August 5, 2009
9. New Guidelines for Purified Protein Derivative (PPD) Skin Test Interpretation and Treatment Modalities for Tuberculosis Infection. Pulmonary Perspectives, April 2001 Volume 18, Issue 1
10. Cadena, J. (2014) Tuberculosis and other Mycobacteria. In P. Grota (Ed.), *APIC Text of Infection Control and Epidemiology 4th Ed.*, 95:1-20.
11. TB Respiratory Protection Program In Health Care Facilities Administrator's Guide U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service Centers for Disease Control and Prevention National Institute for Occupational Safety and Health September 1999

TABLE 1
Criteria for Infectiousness and placement in high risk setting (~~Forensic~~PCU Unit only)

CATEGORY	SETTING	CRITERIA
TB suspect - Not on treatment for suspect active TB	~~Forensic Unit~~**PCU**	3 consecutive respiratory specimens, including one early AM or induced sputum, or BAL, collected at least 8 hours apart, are AFB smear negative
TB case or suspect on treatment for active TB -AFB smear positive -No risk factor for MDR-TB	~~Forensic Unit~~**PCU**	1. 3 consecutive respiratory specimens, including one early AM or induced sputum, or BAL, collected at least 8 hours apart, are AFB smear negative 2. At least 14 daily doses of treatment for TB, preferably by directly observed therapy (DOT), taken and tolerated; and 3. Clinical improvement
TB case or suspect on treatment for TB -AFB smear negative X3 -No risk factor for MDR-TB	~~Forensic Unit~~**PCU**	At least 5 daily doses of treatment for TB taken and tolerated
TB case or suspect on treatment for TB -At increased risk for MDR-TB	~~Forensic Unit~~**PCU**	1. Obtain direct genetic test, if available, for Rifampin resistance 2. If direct genetic test not available, while phenotypic DST for Rifampin is pending, other criteria for patients with known MDR-TB, or criteria for patients not at increased risk of MDR-TB, or criteria for patients not at increased risk of MRD-TB may be applied, at the discretion of the local TB controller
Known MDR-TB case	~~Forensic Unit~~**PCU**	1. 3 consecutive respiratory specimens, including one early AM or induced sputum, or BAL, collected at least 8 hours apart, are AFB smear negative 2. At least 14 daily doses of treatment for TB, preferably by directly observed therapy (DOT), taken and tolerated; and 3. Clinical improvement 4. At least 2 consecutive negative sputum cultures without a subsequent positive culture

Reference:

CDPH/CTCA (2005). Guidelines for the assessment of tuberculosis patient infectiousness and placement in high and low risk settings. California Department of Public Health and California Tuberculosis Controllers Association.

EMERGENCY DEPARTMENT TUBERCULOSIS DECISION TREE
APPENDIX A

Patient has signs and symptoms or chest x-ray compatible with TB

AND

Unstable housing or resident in a group setting
OR
Acutely ill or needing invasive diagnostic or therapeutic procedure
OR
Strong likelihood that patient will **not** follow-up with outpatient work-up

↓

Admit to Medicine and place on Airborne Precautions
For assistance
contact the TB Control Program or Infection Control at the numbers below.

AND

Stable, non-group housing
AND
Not acutely ill or needing invasive diagnostic or therapeutic procedure
AND
Strong likelihood that patient will follow-up with outpatient work-up

↓

Discharge the patient with a written plan for outpatient care & surgical masks to wear
AND
Instruct the patient to remain on home isolation[1] until infectiousness is ruled out
AND
Alert the TB Control Program ASAP, but no longer than 24 hours.

[1]Home isolation: Stay alone in a separate room with the door closed, as much as possible. Keep a window slightly open at all times. When alone in this room, you do not need to wear a mask. Please be sure to sleep and eat while alone in this room. Persons entering this room need to wear a mask. If you leave the room, you need to wear a mask. For example, when you use a shared bathroom or go to the doctor's office wear a mask.

TB Control in San Diego County is available 7 days a week from 0800 to 1700 only. Weekdays call TB Control at (619) 692-8610 and on Weekends and holidays call cell phone number (619) 540-0194 OR Leave a message on the Tuberculosis RN voice mail (619) 692-8610 and your call will be returned on the next working week day. Messages should include patient's name, date of birth, facility name, reporter's name and phone number, and contact person at facility who will be available for more patient information. Also leave a message at TCMC Infection Control: call ext. 7410 or 5696

Tri-City Medical Center

Welcome to Tri-City Medical Center. Our commitment to you, our patient, is to give you the highest quality care. In order to do that, we need your help. Please answer the questions below, so that we can take better care of you. If there are any questions you do not understand, please ask for help from one of our employees.

If you are filling this out for someone else, please answer the questions as if you were that person.

Medical Record Number _____

Name _____ Date _____
(Please Print Clearly)

1. Have you had any of these problems?

	Please circle your answer	
Cough longer than 3 weeks?	Yes	No
Do you cough up blood?	Yes	No
Do you have night sweats?	Yes	No
Have you lost weight?	Yes	No
If you have lost weight- how much?		
Have you lost your appetite?	Yes	No
Do you have a fever	Yes	No

2. Have you ever had?

	Please circle your answer	
A positive skin test for TB?	Yes	No
Active Tuberculosis?	Yes	No
Lived or worked with someone who had TB?	Yes	No
Have you lived outside the United States for longer than one month?	Yes	No

3. What country were you born in? _____

4. Have you had?

	Please circle your answer	
Severe coughing spasms, that interfere with eating, drinking and breathing?	Yes	No
Fever with painful swollen salivary glands on one side or both sides of your face under your jaw?	Yes	No
Fever with chills, cough, runny nose watery eyes and unexplained diffuse rash or blister type skin rash?	Yes	No
Fever with headache, stiff neck, or changes in your mental status.	Yes	No

THANK YOU

Tri-City Medical Center

Bienvenido/a a Tri-City Medical Center. Nuestro compromiso con usted, como paciente nuestro/a, es ofrecerle una atención médica de la más alta calidad. Para lograr esto, necesitamos su ayuda. Tenga la bondad de contestar las preguntas a continuación, y así le podremos atender mejor. Si hay preguntas que no entiende, pida ayuda a un miembro de nuestro personal.

Si está ayudando a otra persona a llenar este formulario, por favor, conteste las preguntas como si usted fuera la persona a quien ayuda.

Número de historial medico _____

Nombre _____ Fecha _____
(Escriba claramente en letra de molde)

1. ¿Ha tenido usted alguna de las condiciones siguientes?

	Marque sus respuestas con un círculo	
¿Tos durante más de 3 semanas ?	Sí	No
¿Ha expectorado sangre al toser?	Sí	No
¿Ha experimentado usted sudores nocturnos?	Sí	No
¿Ha experimentado pérdida de peso?	Sí	No
Si ha perdido peso, ¿cuánto ha perdido?		
¿Ha experimentado pérdida de su apetito?	Sí	No
¿Tiene usted fiebre?	Sí	No

2. ¿Ha tenido usted alguna vez una de las siguientes condiciones?

	Marque sus respuestas con un círculo	
¿Una reacción positiva en la piel por una prueba de tuberculosis?	Sí	No
¿Ha padecido activamente de tuberculosis?	Sí	No
¿Ha vivido o trabajado con alguien que sufría de tuberculosis?	Sí	No
¿A vivido afvera de los Estodos Unidos por mas de un mes?	Sí	No

3. ¿En qué país nació? _____

4. ¿Ha tenido…

	Marque sus respuestas con un círculo	
¿espasmos de tos graves que le impidan comer, beber o respirar?	Sí	No
¿fiebre con inflamación y dolor en glándulas salivales de uno o ambos lados de su rostro debajo de la mandíbula?	Sí	No
¿fiebre con escalofríos, tos, secreciones nasales, ojos llorosos y erupciones difusas o erupciones con ampollas sin explicación?	Sí	No
¿fiebre con dolor de cabeza, rigidez en el cuello o cambios del estado mental?	Sí	No

Tri-City Medical Center
Oceanside, California

INFECTION CONTROL MANUAL

SUBJECT: Standard and Transmission-Based Precautions

ISSUE DATE: 11/99
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A. **PURPOSE:**

1. The Centers for Disease Control and Prevention (CDC) and the Hospital Infection Control Advisory Council (HICPAC) published the Guidelines for Isolation Precautions in Hospitals in 2007. Changes were made to include respiratory hygiene/cough etiquette practices. Masking for spinal procedures and application of PPE prior to entering the room of a patient in Droplet or Contact Precautions
2. The current guidelines continue to support two levels of precautions, Standard Precautions and Transmission-based Precautions. Standard Precautions are the primary strategies to be used in the care of all patients to protect both healthcare workers and patients. Transmission-based Precautions are designed only for the care of specified patients, or patients known or suspected to be infected or colonized with epidemiologically important pathogens transmitted via airborne, droplet, or contact with dry skin or contaminated objects.

B. **POLICY:**

1. For immunocompromised patients see Patient Care Services (PCS) Neutropenic Precautions
   a. Use Standard Precautions, with emphasis on hand hygiene.
   b. Private room preferred. If semi-private room is used, select a roommate with no identified infection, including respiratory tract, urinary tract, or skin/wound infection.
   c. A patient is not required to wear a standard surgical mask when out of the room.
2. Physicians' role
   a. If a patient is known or suspected to be infected with a highly transmissible disease, or if a patient is infected or colonized with an epidemiologically important microorganism, appropriate isolation precautions should be **ordered for the patient.**~~written in the physician's order forms.~~
   b. In addition to hand washing before and after patient contact, wearing gloves before and discarding gloves and washing hands after touching any body substance, physicians need to evaluate their interaction with patients, and use barriers such as masks, eyewear and **gown**~~apron~~ based upon anticipated contact with infectious materials.
   c. Physicians should be aware of their ~~status in regard to~~ current vaccination **status regarding** (rubella, measles, varicella, hepatitis B) and participate in the Medical Center's annual tuberculosis screening program. All physicians who have frequent contact with blood and body fluids should be immunized against **h**~~h~~epatitis B.
3. The role of nurses and other direct care providers is to:
   a. Assure that isolation orders are entered **and proper isolation signage is posted outside of the patients room.**~~.~~
   b. Perform hand hygiene before and after patient contact, wearing gloves before and discarding gloves and washing hands after touching any body substance. **Direct care**

providers~~Nurses~~ need to evaluate their interaction with the patient and use barriers such as masks, eyewear, **and** ~~and~~ gown~~s and/or aprons~~ based upon possible and anticipated contact with infectious aerosols, splashes, vomitus, etc. that may result during the contact.

c. If a patient has a disease that requires Transmission-based precautions, the nurse is responsible to triage persons wishing to enter the patient's room.

d. Any direct care provider who uses reusable equipment for a patient in contact precautions is responsible to disinfect that item before it is used for another patient.

e. The nurse **and or caregiver** is responsible to communicate to receiving departments the isolation status of a patient. This is accomplished by completing the **Off Unit Transfer/Assessment: Type of Isolation/Precautions in the electronic medical record (EMR)**~~"hand off communication form" isolation section.~~

4. All direct care providers need to know their own hepatitis B, chicken pox, rubella and measles status and participate in the Medical Center's annual TB skin testing program. This participation is required by the hospital.

5. All direct care providers who have frequent contact with blood or body fluids should be immunized against **h**~~H~~epatitis B. Free hepatitis vaccination is a benefit of employment at Tri-City Medical Center.

6. Specimen Labeling
   a. Standard Precautions tell us to consider all bodily fluids as potentially infectious regardless of the patients diagnosis. Standard precautions need to be utilized while handling all specimens. (In 1990, the Clinical Laboratory established formal policies requiring that all specimens be handled as if potentially infectious. To place "blood and body fluid precautions" on specimen conveys the notion to others to treat this particular specimen with caution, but other specimen without the labeling need not be handled as carefully. ~~S~~ If needed, it is permissible to note the patient's diagnosis on laboratory requests, pathology requests, radiology request, etc. Please note that it is illegal in the state of California to note a person's HIV status on requests).

7. Handling of soiled linen from patients' rooms
   a. All linen must be handled in a consistent and identical manner because there are no "infectious linen" designations under Standard Precautions. All linen leaves the Medical Center in unmarked plastic bags. The contract laundry, also regulated by OSHA and the state, requires workers to wear protective barriers when handling soiled linen at all times. Linen should be handled minimally.

8. Dishware and eating utensils
   a. The combination of hot water and detergents used in dishwashers is sufficient to decontaminate dishware and eating utensils. Therefore, no special precautions are needed for dishware (e.g., dishes, glasses, cups) or eating utensils; reusable dishware and utensils may be used for patients requiring Transmission-Based Precautions.

9. Disposal of waste from patients' rooms
   a. All trash generated from individual patient rooms follow general hospital waste guidelines. If waste is saturated and/or dripping with blood place in the red "Biohazard" trash. See Infection Control Policy: Blood borne Pathogen Exposure Control Plan.

10. All closed system fluid filled containers (e.g., Pleur-evac, auto transfusion, etc.) are to be disposed of as follows:
    a. Obtain a red "biohazardous" plastic bag from the soiled utility room.
    b. Place the container into the bag and tie it securely by gathering the circumference and using a single knot to close the bag. Be sure to reinforce the bag if there is a leak or if leaking is anticipated.
    c. If a patient's room does not have a "biohazard" waste receptacle, carry the red bag to the soiled utility room and place it into the labeled biohazard barrel.
    d. All suction canister liners and tubing should be changed every 24 hours or when ¾ full,

whichever comes first. Suction canisters liners may be emptied in the hopper or treated with a Liquid Treatment System (LTS). Once the contents solidify, the LTS, the canister liner and its contents are discarded in the regular trash.

11. Wound Dressings
    a. All wound dressings are to be disposed of in a manner as to confine and contain any body fluids that may be present. Wound dressings dripping with blood or bloody body fluids should be discarded in a red biohazard bag and placed into the biohazard barrel. Dressings with small amount of blood can be disposed of in the regular trash. Examples of these are IV dressings, trach site dressings, bandaids**, gauze or** ~~or~~ cotton balls used in fingerstick glucose testing,
    b. Small dressings can be enclosed in a disposable glove used to remove the dressing. Pull the glove off inside out containing the dressing inside of it. The dressing and gloves can be discarded into the regular trash container in the patient's room.

C. **STANDARD PRECAUTIONS:**

1. Standard Precautions are designed to reduce risk of transmission of blood-borne pathogens transmission of pathogens to and from mucus membranes and non-intact skin.
    a. All blood, body fluids, secretions, excretions (except sweat) are handled as if potentially carrying bloodborne pathogens. Clean gloves are required when touching non-intact skin and mucus membranes.
2. Elements of Standard Precautions
    a. All personnel should implement Standard Precautions at all times regardless of the patient's diagnosis
    b. Hand Hygiene: See Infection Control Policy: Hand Hygiene
        i. Respiratory Hygiene/Cough Etiquette education of healthcare facility staff, patients, and visitors is accomplished through New Employee and Physician Orientation, the patient hand book and signage posted at cough etiquette stations provided throughout the hospital. Tissues are provided along with hand hygiene solution and adult and child sized masks in patient waiting areas throughout the hospital.
    c. Gloves
        i. Wear gloves when touching blood, body fluids, secretions, excretions, contaminated objects, mucous membranes and non-intact skin.
        ii. Change gloves between tasks and procedures on the same patient when moving from one body site to another.
        iii. Remove gloves after use, before touching uncontaminated items and environmental surfaces, and before going to another patient.
        iv. Decontaminate hands immediately after removing gloves.
    d. Masks, Eye/Face Shields:
        i. Wear a mask, eye protection or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures and activities that are likely to create splashes or sprays of blood, body fluids, secretions and excretions. (See Infection Control Policy: Blood borne Pathogen Exposure Control Plan, Appendix: Standard Precautions: Personal Precautions Equipment Table)
        ii. Wear a mask for insertion of catheters or injection of material into spinal or epidural spaces via lumbar puncture procedures (e.g., myelogram, spinal or epidural anesthesia).
    e. Gown
        i. Wear gown or plastic apron to protect the skin and prevent soiling of clothing during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions or cause soiling of clothing.

3. Flowers and Potted Plants
    i. Designate care and maintenance of flowers and potted plants to staff not directly involved with patient care
    ii. If plant or flower care by patient-care staff is unavoidable, instruct the staff to wear gloves when handling the plants and flowers and perform hand hygiene after glove removal
4. Patient Care Equipment
    a. Handle used patient care equipment contaminated with blood, body fluids, secretions and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and the environment.
    b. Ensure that reusable equipment is properly cleaned **and disinfected** before it is used for the care of another patient.
    c. Single use items should be discarded.
5. Environmental Control
    a. Routine cleaning and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces per protocol.
6. Safe injection practices – see PCS Medication Administration policy. The following practices apply to the use of needles, cannulas that replace needles, and, where applicable intravenous delivery systems:
    a. Use aseptic technique to avoid contamination of sterile injection equipment.
    b. Do not administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use.
    c. Multi-dose vials should be dedicated to a single patient whenever possible. If multidose vials must be used both the needle or cannula and syringe used to access the multidose vial must be sterile.
7. Do not keep multidose vials in the immediate patient treatment area and store in accordance with the manufacturer's recommendations; discard if sterility is compromised or questionable.

D. **TRANSMISSION-BASED PRECAUTIONS:**

1. Transmission-based Precautions are used in addition to Standard Precautions for diseases that require extra barriers to prevent transmission.
    a. Types of Transmission-based Precautions:
        i. Airborne Precautions
        ii. Droplet Precautions
        iii. Contact Precautions
    b. **Communicate and n**~~N~~otify receiving department/services if patient requires **T**~~t~~ransmission-based **P**~~p~~recautions (i.e. Airborne, Contact or Droplet Precautions).
2. Airborne Precautions
    a. In addition to Standard Precautions, use **A**~~a~~irborne **P**~~p~~recautions for patients known or suspected to be infected with microorganisms transmitted by airborne droplet nuclei.
    b. Place patient in an Airborne Infection Isolation room AIIR with at least 6-12 air exchanges per hour, HEPA filtration and negative pressure. If the AIIR rooms are not available Engineering can assist with a temporary set-up. Every effort must be made to place a patient in an AIIR within 5 hours of identification.
    c. Wear respiratory protection (N95 respirator or Powered Air Purifying Respirator) when entering the room. See the Infection Control Policy: ATD: Tuberculosis Control Plan for more information.
    d. Minimize patient dispersal of microorganisms by placing a surgical mask (not an N95 respirator) on the patient during transport.
3. Droplet Precautions
    a. In addition to Standard Precautions, use Droplet Precautions for a patient known or

suspected to be infected with organisms that are transmitted by droplets

b. Place the patient in a private room or cohort patients who have the same infection with the same microorganism.
c. Wear masks when entering the patient room.
d. Mask patients during transport.

4. Contact Precautions
   a. In addition to Standard Precautions, use Contact Precautions for specified patients known or infected or colonized with epidemiologically important microorganism that can be transmitted via direct contact with the patient or equipment in the patients environment such as MRSA and VRE. (See Infection Control Policy: **M~~m~~anagement of P~~p~~atient**s with MDRO's)
   b. Place patient in a private room or cohort patients who are carrying the same microorganisms. When a private room is not available and cohorting is not achievable, consider the epidemiology of the microorganism and the patient population when determining patient placement. First try to select someone with no invasive lines (IV, central line, foley, trach, etc.) or open wound. If this is not possible, then select someone with an invasive line that carries a low risk of infection, such as a peripheral IV or NG tube. Consultation with infection control staff is advised when there are questions about patient placement.
   c. Gloves
      i. Wear gloves whenever touching the patient's intact skin or surfaces and articles in close proximity to the patient (e.g. medical equipment, bed rails) Don gloves upon entry into the room or cubicle.
   d. Gowns
      i. Wear a gown whenever anticipating that clothing will have direct contact with the patient or potentially contaminated environmental surfaces or equipment in close proximity to the patient. Don gown upon entry into the room or cubicle.
      ii. Remove gown and gloves and observe hand hygiene before leaving the patient-care environment
   e. Dedicate the use of non-critical equipment to a single patient, when possible
   f. Clean and disinfect commonly used items before use of another patient with hospital approved disinfectant
   g. Patient transport
      i. Remove and dispose of contaminated PPE and perform hand hygiene prior to transporting patients on Contact Precautions. Don clean PPE to handle the patient at the transport destination.

E. **RELATED DOCUMENTS:**

1. PCS Neutropenic Precautions
2. PCS Medication Administration policy
3. Infection Control Policy: ATD: Tuberculosis Control Plan
4. Infection Control Policy: Blood borne Pathogen Exposure Control Plan

F. **REFERENCES**

1. 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*
2. Sehulster LM, Chinn RYW, Arduino MJ, Carpenter J, Donlan R, Ashford D, Besser R, Fields B, McNeil MM, Whitney C, Wong S, Juranek D, Cleveland J. Guidelines for environmental infection control in health-care facilities. Recommendations from CDC and the Healthcare Infection

Control Practices Advisory Committee (HICPAC). Chicago IL; American Society for Healthcare Engineering/American Hospital Association; 2004.

3. Grota, P. (Ed.). (2014) APIC Text of Infection Control and Epidemiology (4th ed). Washington DC: Association for Professionals in Infection control and Epidemiology, Inc.

Tri-City Health Care District
Oceanside, California

Infection Control Policy Manual

ISSUE DATE: 9/01	**SUBJECT: Waterborne Illness**
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A. **INTRODUCTION**

1. Legionellosis is a collective term describing infection produced by the pathogen Legionella, a bacterium found in water environments. Most hospital hot water systems are colonized with Legionella, which is introduced into institutional water distribution systems from public/municipal water systems (that do not routinely screen water for the presence of Legionella). Since legionellae is chlorine tolerant, it will survive many of the standard municipal water treatment protocols. The transmission of Legionella in healthcare facilities is by the Inhalation of aerosolized water contaminated with Legionella bacteria.

B. **PURPOSE**

1. This plan describes how the organization will establish and maintain a utility systems management program to reduce the potential for organizational-acquired illness related to waterborne illness. The plan provides processes to decrease the risk of transmission through contaminated patient care equipment. Steps for investigation of outbreaks and remediation are outlined if potential nosocomial infections were identified.

C. **SCOPE**

1. This plan applies to all aerosolizing water systems in Tri-City Medical Center (for example: cooling towers, domestic hot water taps, evaporative coolers, and etc.) and to all immunocompromised patients admitted to the hospital.
2. Program Administration
   a. The **Director of Safety/**Environment of Care ~~Officer~~ is responsible for the implementation, maintenance and administration of the **Environmental Health & Safety Committee.**~~JCAHO's Environment of Care Committee~~.
   b. To assist the **Director of Safety/**Environment of Care ~~Officer~~ in carrying out their duties the **Environmental Health & Safety** ~~Environment of Care~~ Committee and following specific people will be contacted as needed.
3. Engineering
4. Infection Control Department
5. Microbiology Laboratory Manager
   a. Engineering is responsible for the following (See Appendix A)
      i. Perform an initial assessment of the environmental risk from the plumbing system. Identify factors with potential to amplify growth of waterborne microorganisms such as the domestic hot water heater, dead legs of low flow conditions, water temperature, and maintenance.
      ii. Perform an initial assessment of the environmental risk from the heating, cooling and humidifying system that produces aerosolized water or involves standing water.

iii. Develop and document maintenance schedules to decrease risk (i.e. drift eliminators, cleaning cooling towers and use of an effective biocide) using recognized experts such ASHE. Infection Control Department is responsible for the assessment of the clinical risk of the organization's patient population including the following: (See Appendix B)

iv. Identify the treatment/care areas for patients at greatest risk of contracting Legionellosis.

b. Ongoing surveillance for facility acquired Legionellosis.

i. Microbiology Laboratory: Preprinted order for bronchoscopy specimen includes include screening legionella.

ii. Laboratory methods used at Tri-City Medical Center for diagnosis of legionella infection include the following

6. Urinary antigen is relatively inexpensive, simple, and rapid.
7. Enzyme-linked immunoassay (EIA)
8. Legionella cultures
   a. **If the culture grows positive for Legionella, our Laboratory will perform serotyping for Legionella species. If it is not serogroup 1, the Laboratory will final the report out as Legionella species, not Legionella pneumophila serogroup 1.**~~Positive cultures are sent to the Microbial Diseases Laboratory (MDL) of the California DHS for confirmation and serotyping.~~

D. **RISK ASSESSMENT**

1. See Appendix A for a table outlining the environmental assessment.
2. See Appendix B for a table outlining the clinical risk of TCMC's patient population.
3. See Appendix C for a table of remediation water treatment methods.
4. See Appendix D for a Legionella Fact Sheet.

E. **PRIMARY PREVENTION**

1. Develop a management plan as a result of the assessment that includes standard operating procedures (SOP's) for maintenance and operation of water systems
   a. Develop a system to document and log findings as a result of these SOP's such as temperatures, blow down of hot water tanks, cooling tower inspections etc.
   b. Maintenance and audit program for any systems that are currently installed to limit Legionella amplification in aerosolizing systems such as cooling towers and /or potable water treatment systems (e.g. copper silver or chlorine dioxide).
   c. Inspect cooling towers/evaporative coolers to ensure that they are in proper condition and operate as designed. Install drift eliminators.
   d. Use an oxidizing biocide continuously to prevent the formation of biofilms and control biological growth. (E.g. bromine, chlorine, iodine, chlorine dioxide, ozone, etc.) And intermittently a non-oxidizing biocide (e.g. DBNPA, isothiazoline, etc.).
   e. Maintain towers according to manufacturers recommendations. If the tower/cooler is subject to **extended**~~seasonal~~ shutdown, equipment should be cleaned and treated prior to shutdown and again before starting up.
2. Incorporate Infection Control strategies in the facilities patient care policies.
   a. Use sterile water or rinsing nebulization devices and other semi-critical respiratory-care equipment after such items have been cleaned and /or disinfected.
   b. Use sterile water to fill reservoirs of devices used for nebulization.
   c. Use sterile water to flush nasogastric tubes.
   d. Large-volume room air humidifiers use is discouraged and those used are subjected to high-level disinfection daily and filled with sterile water.
   e. Protecting patient-care devices and instruments from inadvertent tap water contamination during room cleaning
3. Remediation (if an outbreak of Legionellosis is suspected or identified)

4. Outbreak is defined as at least one case of laboratory-confirmed case of legionellosis that occur in patients who have been hospitalized continuously for >10 days before the onset of illness and/or a possible case (i.e., laboratory-confirmed infections that occur 2 - 9 days after hospital admission.
5. A multidisciplinary team, comprised of members of the Infection Control and **Environmental Health & Safety Committees** ~~Environment of Care Committees~~ will be utilized to organize the facilities response. A report will be made to the appropriate public health agencies.

Epidemiologic Investigation	Environmental Investigation
Review medical and microbiologic records.	Risk factors among potential environmental exposures (e.g., showers, cooling towers, respiratory-therapy equipment, etc.)
Initiate active surveillance to identify all recent or ongoing cases	Collect water samples from environmental sources implicated by epidemiologic investigation
Develop a line listing of cases by time, place, and person.	Other aerosolized water sources
Determine the type of epidemiologic investigation needed for assessing risk factors. Case-control study - Cohort study	
Gather and analyze epidemiologic information Subtype strains of Legionella spp. cultured from patients & environmental sources Review autopsy records and include autopsy specimens in diagnostic testing	

Control Measures: if water is contaminated with Legionella spp.	Remediation of potable water: in response to identified nosocomial cases
Restrict patients from taking showers and provide clean water for sponge baths	Superheating of water (at least 149oF)
Provide sterile water for drinking, tooth brushing, or for flushing nasogastric tubes.	"Shock" hyperchlorination >10 mg/L of chlorine in water
Remove showerheads and faucet aerators monthly for cleaning.	
Use a 1:100 solution of chlorine bleach to disinfect showerheads and aerators.	
Cooling towers should be designed and constructed so that tower drift is directed away from the hospital's air intake system and the volume or aerosol drift is minimized.	

~~6.~~F. RELATED DOCUMENTS:

~~7.~~1. **Engineering Infection Control: Managing Biological Agents to Prevent Waterborne Illness**~~Reduction of Facility Acquired Infections IC. 13~~
~~8.~~2. **Infection Control Policy:** Surveillance Program ~~IC. 2~~
~~9.~~3. **Infection Control Policy:** Epidemiologic Investigation of a Suspected Outbreak ~~IC. 3~~
~~10.~~ ~~Definitions of Facility Acquired Infections IC. 4~~

~~F.~~G. REFERENCES:

1. CDC - Guideline for Preven**ting Health Care Associated Pneumonia, 2003**~~ntion of Nosocomial Pneumonia~~

~~http://www.cdc.gov/ncidod/hip/pneumonia/pneu_mmw.htm~~**http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5303a1.htm**

2. CDC - Guideline for Environmental Infection Control in Healthcare Facilities ~~www.cdc.gov.env/hcw.htm~~**http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf**

~~2.~~3. **ASHRAE 188: Legionellosis: Risk Management for Building Water Systems http://www.cdc.gov/legionella/health-depts/ashrae-faqs.html**

~~3. Minimizing the Risk of Legionellosis Associated with Building Water Systems: Maryland Dept of Public Health http://www.dhmh.state.md.us/html/legionella.htm~~

4. Legionnaires' **Disease Fact Sheet**~~disease FAQ: http://www.hcinfo.com/ldfaq.htm~~**http://www.cdc.gov/legionella/downloads/fs-legionnaires.pdf**

~~5. Comparison chart of active potable water treatment methods by Johns Hopkins Hospital: http://www.hopkins-heic.org/infectious_diseases/water_table.htm~~

~~6.~~5. **Joint Commission Environment of Care Standard (EC.02.05.01)**~~JCAHO Standard EC. 1.7 (formerly EC.1.9) http://www.jcaho.org/standards_frm.html\~~

6. OSHA Technical Manual, Section III: Chapter 7, Legionnaires Disease http://www.osha-slc.gov/dts/osta/otm/otm_iii/otm_iii_7.html

Environmental Risk Assessment

1) Municipal water is treated with chloramine. Data suggests that use of monochloramine is effective in eradicating Legionella. Monochloramines can reach distal points in a water system and can penetrate into bacterial biofilms more effectively than free chlorine.

EQUIPMENT	Location	Scale, Rust, or Biofilm Growth	Water Temp.	COMMENTS
Domestic Cold Water	Oceanside Main @ Thunder Dr. 10"	None	Ambient	Oceanside receives water from Municipal Water District of Southern California, all water treated with Chloramine Disinfectant @ 2.5 to 3.0 mg / l level. All backflow regulators are inspected and tested annually.
	Oceanside Main @ Vista Way, 10"	None	Ambient	Same as above.
	Vista Irrigation Main @ Thunder Dr., 8"	None	Ambient	Same as above.
	Hospital piping system.	None	Ambient	Entire domestic cold water system is run in copper and brass piping to prevent scale, rust or bio-film.
	(2) 10,000 gallon refill tanks on Pavilion roof top.	None, tanks are rubber lined.	Ambient	Tanks are opened and inspected annually. Tanks are not used for storage but replenished constantly. Water is supplied up to tanks and then pressure and gravity feed down to building.
Domestic Hot Water	Steam fed Heat Exchangers (6) throughout hospital	None	Monitored by computer to supply Title 22 required temperature water, 105 to 120 degrees F.	Domestic hot water piping is all run in copper and brass to prevent scale, rust or bio-film. All hot water systems are circulated constantly in order to provide constant temperature at sinks.
Reverse Osmosis and De-Ionized Water	Throughout facility, main system in penthouse of center tower, booster tanks located at Lab and 2 Pavilion.	None	Ambient	This system is highly filtered and treated water (Ultra Violet). System main function is for Dialysis and is routinely tested and monitored by our in-house laboratory.
Irrigation Water	Grounds	None	Ambient	Irrigation water is supplied from Vista Irrigation District (VID) who obtains their water from MWD, same as above.
Heating Hot Water	Throughout Facility, used for heating only, does not come in contact with patients.	None	Varies depending on outside air temperature, usually 140 degrees F. in winter, 120 degrees F. in summer.	Closed loop system, chemicals installed to stabilize water to prohibit corrosion of system.

EQUIPMENT	Location	Scale, Rust, or Biofilm Growth	Water Temp.	COMMENTS
Chilled Water	Throughout Facility, used for cooling (air conditioning), does not come in contact with patients.	None	Varies depending on outside air temperature and demands of building, usually ranges between 42 to 55 degrees F.	Closed loop system, chemicals installed to stabilize water to prohibit corrosion of system.
Condenser Water Loop	Isolated to the Central Plant only. Cooling Tower is part of Air Conditioning System. Located 300 ft. away from main building.	Minor Bio-film, potential for rust and scale.	Temperature ranges between 78 to 95 degrees F. depending on outside air temperature and load on the system.	Requires most attention to ensure bio-film is kept to a minimum. Water is treated with sulfuric acid, bleach and biocides. A carefully designed and monitored program has been developed by Trident Technologies Water is tested daily by facilities staff to ensure we are within parameters.
Thermal Ice Storage Loop	Isolated to Central Plant only. Part of Air Conditioning system.	None	Temperature range is from 18 to 40 degrees F.	Glycol and water mix to specific gravity mix, closed loop system.
Steam Loop	Throughout, used for sterilization of instruments, heating hot water & domestic hot water through heat exchangers & humidification.	None	Average Temperature is 300 degrees F.	Basically a closed loop system except for discharge at sterilizers and humidifiers. Due to high temperature, not an issue.

Infection Control Risk Assessment

1) No cases of nosocomial Legionellosis have been identified at Tri-City Medical Center within the past ten years.
2) Legionnaires cultures are performed on bronchoscopy cultures and urinary Legionella antigen test is available in house.

High-Risk Patients	Unit	Prevention Strategies
Chemotherapy and Oncology	~~IMC~~**TELEMETRY**	Showers 1) The degree to which contaminated water is aerosolized into respirable droplets; 2) The proximity of the infectious aerosol to the potential host
COPD	Pulmonary Services	Sterile water used in nebulizers
End-stage renal disease	Dialysis	Filters are used in water lines in dialysis units, for the purpose of providing bacteria-free water for instrument reprocessing. Additionally, a reverse osmosis (RO) unit is usually added to the distribution system leading to PE areas.
Endoscopy	Surgery Services	Filters are used in water lines **for** the bronchoscope and endoscope washer/disinfectors.
Others	**ICU**~~ACCU~~, ~~IMC~~**TELEMETRY**, Med/Surg, Surgery, Pediatrics, Maternal/Child Services, NICU and ED	• Naso-gastric tubes are flushed with sterile water. • Reusable respiratory treatment devices that aerosolize fluids are rinsed with sterile water after use.

Comparison Chart of Water Disinfection Methods in a Hospital Environment

Item	Disinfection System								Combination Disinfection Systems	
	Super Heating & Flush	Auto - Chlorinating / Inhibitor System	Auto-Chloramine System (Mono-Chloramine)	Chlorine Dioxide	Copper-Silver Ionization System	Ozoniation	Ultraviolet	Ultraviolet & Auto-Chlorinating / Inhibitor System	Ultraviolet & Auto - Chloramine System (mono-chloramine)	Ultaviolet & Chlorine Dioxide
USED ON DOMESTIC COLD WATER SYSTEM	No	Yes	Yes	Yes	FEASIBLE - RETURN LOOP WITH FIXTURE / EQUIPMENT BACK FLOW PREVENTION REQUIRED	Yes	Yes	Yes	Yes	Yes
USED ON DOMESTIC HOT WATER SYSTEM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CHEMICAL UTILIZED	None	SODIUM HYPOCHLORITE	CHLORAMINE (CHLORINE & AMMONIA)	CHLORINE DIOXIDE (SODIUM CHLORITE)	COPPER & SILVER (MINERALS)	NONE	NONE	SODIUM HYPOCHLORITE	CHLORAMINE (CHLORINE & AMMONIA)	CHLORINE DIOXIDE (SODIUM CHLORITE)
BY-PRODUCT	None	TRIHALOMETHANES (THM'S)	TRIHALOMETHANES (THM'S) (FAR LESS THAN CHLORINE)	SOME CHEMICAL DECOMPOSITION IN FORM OF CHLORITE AND CHLORATE	NONE	BROMATE	OZONE	TRIHALOMETHANES (THM'S)	TRIHALOMETHANES (THM'S) (FAR LESS THAN CHLORINE)	SOME CHEMICAL DECOMPOSITION IN FORM OF CHLORITE AND CHLORATE
EFFECTIVE MAX. pH	None	7.8 pH	9 pH	10 pH	8 pH	NA	NA	7.8 pH	9 pH	10 pH
TASTE & ODORS	None	YES - CAN CAUSE TASTE AND ODOR PROBLEMS	YES - CAN CAUSE TASTE AND ODOR PROBLEMS	NONE (BELOW .8 PPM) - REMOVES MOST TASTE AND ODORS PROBLEMS	NONE	YES - WILL ADD ODOR	NONE - PROVIDED HIGH INTENSITY OZONE LAMPS ARE NOT USED	YES - CAN CAUSE TASTE AND ODOR PROBLEMS / ONLY IF HIGH INTENSITY OZONE LAMPS ARE USED	YES - CAN CAUSE TASTE AND ODOR PROBLEMS / ONLY IF HIGH INTENSITY OZONE LAMPS ARE USED	NONE (BELOW .8 PPM) - REMOVES MOST TASTE AND ODORS PROBLEMS / ONLY IF HIGH INTENSITY OZONE LAMPS ARE USED
IMPACT ON EQUIPMENT AND SYSTEMS	Potential	POTENTIAL CORROSION PROBLEMS	MINIMAL POTENTIAL CORROSION PROBLEMS	MINIMAL POTENTIAL CORROSION PROBLEMS	MINIMAL POTENTIAL DEPOSITION OF COPPER ON MILD STEEL / LOCALIZED CORROSION - NONE REPORTED	POTENTIAL CORROSION PROBLEMS	POTENTIAL - CORROSION PROBLEMS IF HIGH INTENSITY OZONE LAMPS ARE USED	POTENTIAL CORROSION PROBLEMS / ADDITIONAL CORROSION PROBLEMS IF HIGH INTENSITY OZONE LAMPS ARE USED	MINIMAL POTENTIAL CORROSION PROBLEMS / ADDITIONAL CORROSION PROBLEMS IF HIGH INTENSITY OZONE LAMPS ARE USED	MINIMAL POTENTIAL CORROSION PROBLEMS / ADDITIONAL CORROSION PROBLEMS IF HIGH INTENSITY OZONE LAMPS ARE USED

IMPACT ON DIALYSIS EQUIPMENT	None	NONE (BELOW 4 PPM) - CARBON FILTERS AND RO EQUIPMENT EFFECTIVELY REMOVES CHLORINE AND BY-PRODUCTS	SIGNIFICANTLY DIFFICULT TO REMOVE CHLORAMINES (MONO-CHLORAMINES) AND BY-PRODUCTS AT 4 PPM AND BELOW - CARBON FILTERS EFFECTIVE, RO MEMBRANE NOT EFFECTIVE, MEMBRANE DAMAGE	NONE (BELOW .8 PPM) - CARBON FILTERS AND RO EQUIPMENT EFFECTIVELY REMOVES CHLORINE DIOXIDE AND BY-PRODUCTS	INFORMATION CURRENTLY NOT AVAILABLE	INFORMATION CURRENTLY NOT AVAILABLE	NONE	NONE (BELOW 4 PPM) - CARBON FILTERS AND RO EQUIPMENT EFFECTIVELY REMOVES CHLORINE AND BY-PRODUCTS	SIGNIFICANTLY DIFFICULT TO REMOVE CHLORAMINES (MONO-CHLORAMINES) AND BY-PRODUCTS AT 4 PPM AND BELOW - CARBON FILTERS EFFECTIVE, RO MEMBRANE NOT EFFECTIVE, MEMBRANE DAMAGE	NONE (BELOW .8 PPM) - CARBON FILTERS AND RO EQUIPMENT EFFECTIVELY REMOVES CHLORINE DIOXIDE AND BY-PRODUCTS
ENVIRONMENTAL & HEALTH EFFECTS	WATER IS AT SCALDING TEMPERATURE	PRODUCES CARCINOGENIC THM'S.	PRODUCES CARCINOGENIC THM'S (less than chlorine).	NONE - DOES NOT PRODUCE THM'S AND CAN DESTROY SOME THM'S.	COPPER IS ACUTELY TOXIC TO MANY AQUATIC SPECIES AT LEVELS LOW AS 50 PPB. SYSTEM OPERATES BETWEEN 200 - 600 PPB COPPER, 10 TO 60 PPB SILVER.	NONE - BROMITE IDENTIFIED AS AN ANIMAL CARCINOGEN - EFFECTS ON HUMANS UNKNOWN	NONE	PRODUCES CARCINOGENIC THM'S.	PRODUCES CARCINOGENIC THM'S (less than chlorine).	NONE - DOES NOT PRODUCE THM'S AND CAN DESTROY SOME THM'S.
EPA APPROVED PRIMARY DRINKING WATER DISINFECTANT	No	YES (below 4 ppm)	YES (below 4 ppm)	YES (below .8 ppm)	NO	NO	NO	YES (below 4 ppm)	YES (below 4 ppm)	YES (below .8 ppm)
BREAKS DOWN BIOFILM (AT NOMINAL OPERATING CONDITIONS)	Yes	NO @ BELOW 50 PPM - MINIMAL ABOVE 50 PPM (SYSTEM OPERATES BETWEEN 2 - 3 PPM)	NO - (SYSTEM OPERATES AT 2-3 PPM)	YES	YES / NO - DEPENDING ON PPM	NO	NO	NO @ BELOW 50 PPM - MINIMAL ABOVE 50 PPM (SYSTEM OPERATES BETWEEN 2 - 3 PPM)	NO - (SYSTEM OPERATES AT 2-3 PPM)	YES
INHIBITS BIOFILM (AT NOMINAL OPERATING CONDITIONS)	No	MINIMAL	MINIMAL	YES	YES / NO - DEPENDING ON PPM	NO	NO	MINIMAL	MINIMAL	YES
SHORT TERM RESIDUAL EFFECTIVENESS AGAINST LEGIONELLA (SYSTEM NOT OPERATING)	YES - (APPROX. ONE WEEK)	YES	YES - FAR LESS EFFECTIVE AS CHLORINE	YES	YES	NO	NO	YES	YES - (FAR LESS EFFECTIVE AS CHLORINE)	YES

ONG TERM ESIDUAL FFECTIVENESS GAINST EGIONELLA YSTEM NOT PERATING)	None	NONE	NONE	MINIMAL - SOME RESIDUAL PROTECTION UNTIL BIOFILM IS RE-ESTABLISHED - NONE FOR BULK WATER	YES FOR HOT WATER SYSTEMS ONLY - (LONG TERM STUDIES [4 YEARS] INDICATE LEGIONELLA MAY DEVELOP A TOLERANCE TO SILVER)	NONE	NONE	NONE	NONE	MINIMAL - SOME RESIDUAL PROTECTION UNTIL BIOFILM IS RE-ESTABLISHED NONE FOR BULK WATER
LUSHING EQUIRED AT LL FIXTURES T START UP ND ON ERIODIC BASES	Yes	YES	YES	YES	YES	YES	YES	YES	YES	YES
HLORINE HOCKING OF ATER SYSTEM EQUIRED RIOR TO YSTEM PERATING HOCKING FFECTS BULK ATER ONLY - O EFFECT ON IOFILM)	NA	YES	YES	NOT REQUIRED	NOT REQUIRED	YES	YES	YES	YES	NOT REQUIRED
STIMATED FOR 600 GPM YSTEM (NOT ISTALLED)	NA	$9,000 (approx.)	$9,000 (approx.)	$12,000	$36,000	NOT AVAILABLE	$27,000	$36,000 (approx.)	$42,000 (approx.)	$39,000
STIMATED ISTALLATION OST	NA	$5,000 (approx.)	$5,000 (approx.)	$3,000	$5,000	NOT AVAILABLE	$10,000	$15,000 (approx.)	$15,000 (approx.)	$13,000
STIMATED NNUAL AINTENANCE OST	$12,500 (PER EVENT)	$8,000	$8,000	$16,650 @ 1 LB ClO2 OR $28,250 @ 2 LBS ClO2	$25,250	NOT AVAILABLE	$12,600	$20,600	$20,600	$20,000 @ 1 LB ClO2 OR $32,000 @ 2 LBS ClO2

Prepared by Gregory Bova - JHH Facilities Engineering *(Last updated January 30, 2001)*

Fact Sheet for Legionellae

Infection and Disease

Legionellae are bacteria. When legionellae are present in aquatic environments, the risk of catching an infection depends on several factors: conditions favorable for growth of the organism, a way of releasing the bacteria (e.g., aerosolization of colonized water), the organism reaches a site where it is capable of causing infection, which specific strains of bacteria are involved, and the susceptibility of the host. Over 40 species of *Legionella* have been identified; *L. pneumophlla* appears to be the easiest to catch and causes approximately 90% of cases of Legionellosis. Older persons and those who smoke tobacco or have chronic lung disease are more likely to become infected. Persons whose immune system is decreased (certain drugs or underlying medical conditions) are at particularly high risk.

Habitats

Legionellae bacteria are commonly present in natural and man-made water environments. The organism is occasionally found in other sources, such as mud from streams and potting soils. In natural water sources and municipal water systems, legionellae are generally present in very low or undetectable concentrations. However, under certain circumstances within manmade water systems, the concentration of organisms may increase markedly, a process termed "amplification." Conditions that are favorable for this amplification include water temperatures of 25-42^{0}C (77-108^{0}F), stagnation, scale and sediment, biofilms, and the presence of amoebae.

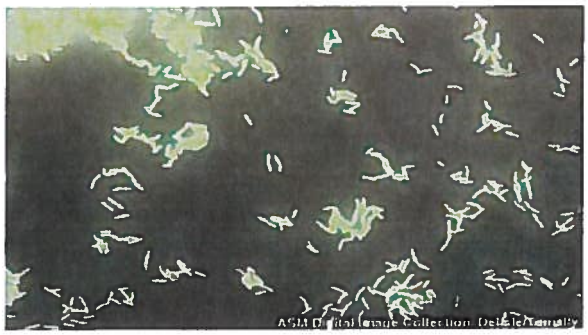
Legionellae infect and multiply within several species of free-living amoebae, as well as ciliated protozoa. The initial site of infection in humans with Legionnaires' disease is the pulmonary macrophage. These cells engulf legionellae and provide an environment that is remarkably similar to water protozoa. Within these cells the bacteria can grow and multiply. Hence, legionellae may be considered protozonotic; i.e., they naturally infect free-living amoebae and incidentally infect the phagocytic cells within human lungs under certain circumstances.

There is an indication that certain materials influence growth of Legionella. Natural rubbers, wood, and some plastics have been shown to support the amplification of *Legionella,* while other materials such as copper inhibit their growth. Generally, *Legionella* thrive in diverse, complex microbial communities because they require nutrients and protection from the environment. Controlling the populations of protozoa and other microorganisms may be the best means of minimizing *Legionella.*[2]

Transmission of Legionnaires' Disease

Investigations of outbreaks of Legionnaires' disease supply most of the information we have about how the disease is passed to humans. These studies suggest that, in most instances, transmission to humans occurs when water containing the organism is aerosolized in respirable droplets (1-5 micrometers in diameter) and inhaled by a susceptible host. A variety of aerosol-producing devices have been associated with outbreaks of Legionnaires' disease, including cooling towers, evaporative condensers, showers, whirlpool spas, humidifiers, decorative fountains, and a grocery store produce mister. Aspiration of colonized drinking water into the lungs has been suggested as the mode of transmission in some cases of hospital-acquired Legionnaires' disease.

The most effective control for most diseases, including Legionellosis, is prevention of transmission at as many points as possible in the disease's chain of transmission. If one preventive measure fails, others will be in place and act as fail-safe mechanisms. With this philosophy in mind, it may be desirable to design measures to prevent transmission of Legionellosis at as many points as possible in the disease's chain of transmission. The ~~Prevention of~~ Waterborne Illness policy outlines the **preventative** steps Tri-City Medical Center has taken to break this chain of transmission.



Tri-City Medical Center
Oceanside, California

INFECTION CONTROL MANUAL

SUBJECT: **Zika Virus**

ISSUE DATE: **NEW**
REVISION DATE(S):

Infection Control Department Approval Date(s):	**10/16**
Infection Control Committee Approval Date(s):	**10/16**
Pharmacy and Therapeutics Approval Date(s):	**n/a**
Medical Executive Committee Approval Date(s):	**10/16**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	

A. **DEFINITION:**
1. Zika virus is a member of the virus family Flaviviridae and the genus Flavivirus. It is spread by daytime-active Aedes mosquitoes, such as A. aegypti and A. albopictus. Its name comes from the Zika Forest of Uganda, where the virus was first isolated in 1947. Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses. Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. From 2007 to 2016, the virus spread eastward, across the Pacific Ocean to the Americas and the Caribbean leading to the 2015–16 Zika virus epidemic.

B. **TRANSMISSION**:
1. Zika virus is primarily transmitted to humans through the bite of an infected Aedes species mosquito (Ae. aegypti and Ae. albopictus). In addition, Zika virus can be transmitted from a pregnant women to her fetus, and through sex. It is very likely that Zika can be transmitted through blood transfusion. The Zika virus remains in a person's blood an average of 7 days after being infected. Zika virus is not transmitted through the air or directly from one person to another through casual contact.

C. **SYMPTOMS:**
1. Many people infected with Zika virus won't have symptoms or will only have mild symptoms. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. Symptoms of Zika are similar to other illnesses spread through mosquito bites, like dengue, yellow fever, chikungunya, and West Nile. There is an association between Zika and Guillain-Barre syndrome, a disease affecting the nervous system.
   a. The most common symptoms are: fever, rash, joint pain, conjunctivitis (red eyes). Others include muscle pain & headache. Symptoms can last for several days to a week.
   b. Zika during pregnancy can cause birth defects of the fetal brain called microcephaly (small head and brain) and other brain defects. Other problems have been detected among fetuses and infants infected with Zika virus before birth, such as defects of the eye, hearing defects, impaired growth and developmental delays.

D. **PRECAUTIONS:**
1. All healthcare personnel when providing any care to a suspected or confirmed Zika patient should follow Standard Precautions per Infection Control (IC) Policies: Standard and Transmission Based Precautions and Bloodborne Pathogens Exposure Control Plan.
   a. Standard precautions include, but are not limited to:
      i. Hand hygiene

ii. Gloves
iii. Gown
iv. Mask and eye protection to avoid direct contact with blood and other potentially infectious material, including laboratory specimens.

E. **DIAGNOSIS & TESTING:**

1. Diagnosis of Zika is based on a person's recent travel history, symptoms, and test results. Testing will be performed based on Centers for Disease Control and Prevention (CDC) current recommendations.
2. Healthcare providers wishing to have a patient tested for Zika virus MUST contact the local San Diego County Public Health Epidemiology department for consultation and approval at (619)-692-8499.
   a. For after hours, weekends or holidays call 858-565-5255 and ask for the Epidemiology Duty Officer.
3. The healthcare provider will be directed by the Epidemiologist to fill out a CDPH-Viral and Rickettsial Disease Lab Specimen Submittal form which is required when testing is requested:
   a. **http://www.cdph.ca.gov/programs/vrdl/Documents/VRDL_General_Human_Specimen_Submittal_Form_Lab300.pdf**.
4. The healthcare provider must submit a copy of this form to the Laboratory in order for a specimen to be ordered and processed. Contact the Laboratory to obtain specimen at ext 7906 or 7907.
5. Staff should contact Infection Prevention & Control at extension 7410 or 5696 with any suspect cases.

F. **OCCUPATIONAL EXPOSURE:**

1. Immediately report the exposure to staff Supervisor, Charge Nurse or Manager as per Employee Health & Wellness policy: Guidelines for Reporting Exposure.
2. Employee Health Services will institute appropriate follow up.

G. **FORMS:**

1. General Purpose Specimen Submittal Form Sample

H. **RELATED DOCUMENT(S):**

1. IC Policy: Standard and Transmission Based Precautions
2. IC Policy: Bloodborne Pathogen Exposure Control Plan
3. Employee Health and Wellness Policy Manual: Guidelines for Reporting Exposures Policy

I. **REFERENCE LIST & EXTERNAL LINK(S):**

1. http://www.cdc.gov/zika/about/overview.html
2. http://www.cdc.gov/zika/pdfs/key-zika-considerations.pdf
3. http://www.cdph.ca.gov/HealthInfo/discond/Documents/ZIKAVirusFAQsforHealthCareProviders.pdf
4. http://www.cdph.ca.gov/programs/vrdl/Documents/Zika_Testing_VRDL_Quicksheet.pdf
5. http://www.cdc.gov/zika/pdfs/when-to-test-zika.pdf
6. https://www.osha.gov/Publications/OSHA3855.pdf
7. http://www.cdc.gov/zika/pdfs/testing_algorithm.pdf

General Purpose Specimen Submittal Form Sample

California Department of Public Health – Viral and Rickettsial Disease Laboratory
General Purpose Specimen Submittal Form

Priority Level | Patient ZIP Code

Patient Last Name | First Name

Date of Birth | Submitter Specimen #

Medical Record # | CalREDIE Incident #

Age | Units | Sex

Disease Suspected

Test(s) Requested

Disease Onset Date | Sample Collection Date

Specimen Type | Description | Details (if applicable)

Public Health Department Submitter

*Please call the VRDL at (510) 307-8535 when submitting any high priority samples. Specialty forms for respiratory disease encephalitis, West Nile Virus, Hantavirus Pulmonary Syndrome (HPS), Severe Pediatric Respiratory, viral gastroenteritis, and other syndromes are also available at http://www.cdph.ca.gov/programs/ViralVPages/CurrentVRDLSpecimenSubmittalForms.aspx

Submit sample(s) to:
Viral and Rickettsial Disease Laboratory
California Department of Public Health
850 Marina Bay Parkway
Richmond, CA 94804
Phone (510) 307-8585
Fax (510) 307-8579

CLINICAL INFORMATION (FILL IN OR CHECK AS PERTINENT)

Deceased patient date of death

Patient is Not Ill
- ☐ Vaccine response (if so, specify response and include date of last immunization)
- Date
- Case contact to:
- ☐ Mother of infant with congenital disease
- Other
- Is patient immunocompromised? ☐ Yes ☐ No

General
- ☐ Fever (describe below)
- ☐ Chills
- ☐ Generalized aches
- ☐ Joint aches/stiffness
- ☐ Malaise
- ☐ Conjunctivitis
- ☐ Headache
- ☐ Jaundice
- ☐ Lymphadenopathy
- ☐ Hepatosplenomegaly
- ☐ Hepatitis
- ☐ Rash (describe w/ onset date below)

Central Nervous System
- ☐ Meningitis
- ☐ Encephalitis
- ☐ Paralysis (describe below)

Gastroenteritis ☐ Individual ☐ Outbreak

Respiratory
- ☐ Upper respiratory infection
- ☐ Cough
- ☐ Croup
- ☐ Pharyngitis
- ☐ Bronchitis/bronchiolitis
- ☐ Pneumonia
- ☐ ARDS (Acute Respiratory Distress Syndrome)

Cardiovascular ☐ Myocarditis/Pericarditis

Urogenital
- ☐ Urethritis
- ☐ Cervicitis
- ☐ Vaginal lesion(s)
- ☐ Penile lesion(s)

Skin
- ☐ Lesion(s)
- ☐ Eschar

Oral
- ☐ Mouth lesion(s)
- ☐ Lip lesion(s)

Congenital
- ☐ Congenital Disease (describe below)

Please provide other clinical findings and/or pertinent laboratory data. (Required for fever, rash, paralysis, and congenital disease.)

Travel information (including location and dates) required for suspected viral and Rickettsial diseases not endemic in California.

Original Submitting Facility | Phone

Original Submitting Physician | Fax

Lab 350
(Revised 05/30/2016)

Tri-City Medical Center
Oceanside, California

MEDICAL STAFF POLICY MANUAL

ISSUE DATE: 4/09	**SUBJECT:** Disaster Privileges
REVISION DATE: 9/09	**POLICY NUMBER:** 8710-553

Medical Staff Department Approval:	08/16
Credentials Committee Approval:	08/16
Pharmacy and Therapeutics Approval Date(s):	n/a
Medical Executive Committee Approval:	11/16
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval:	

A. **PURPOSE:**

1. To provide a process to credential and grant Disaster Clinical Privileges or Practice Prerogatives to Volunteer Practitioners and/or Allied Health Professionals (AHP's), as appropriate, in the event of a disaster when the HICS plan has been activated and the hospital is unable to meet immediate patient care needs.

~~1.~~2. SCOPE and RESPONSIBILITY includes the Medical Staff Services Department of Tri-City Medical Center or Designee and the designated Disaster Coordinator.

~~2. To identify criteria for granting disaster privileges to non-members of Tri-City Medical Staff when the TCMC Emergency Management Plan has been activated and/or the immediate needs of the organization are unable to meet immediate patient needs.~~

B. **DEFINITIONS AND TERMS:**

~~1. Disaster Privileges: Disaster Privileges are time-limited privileges, which may be granted to physicians and allied health professionals (AHP) when the emergency management plan has been activated and the organization is in need of additional resources and appropriate expertise to handle the immediate patient needs during a disaster. The Chief Executive Officer (CEO), chief of staff, or designee may grant such privileges (also refer to Medical Staff Policy #4045: Emergency Preparedness Management).~~

1. The following definitions shall apply for purposes of this policy and procedure only.
   a. Practitioner: A physician (M.D., D.O.), podiatrist (D.P.M.), dentist or oral maxillofacial surgeon (D.D.S., D.M.D.)
   b. Allied Health Professional or AHP: All health care professionals other than Practitioners, as defined above, who are classified as Dependent practitioners to work as a physician extender under the direction of a supervising physician and required by law and regulation to have a license, certificate or registration to practice their profession and.
   c. Surgical Tech, Orthopedic Tech shall be credentialed as follows:
      i. If a "tech" is employed by another hospital, they will be sent to Human Resources for appropriate credentialing.
      ii. Any "tech" who is not employed by another hospital will be credentialed per this policy.
   d. Volunteer Practitioner or AHP: A Practitioner who is not currently a member of the medical staff of Tri-City Medical Center, or an AHP who has not been credentialed as an AHP by the facility.
   e. Disaster Clinical Privileges: Clinical Privileges granted to a Practitioner, as defined above, pursuant to this policy and procedure.
   ~~a.~~f. Disaster Practice Prerogatives: Practice prerogatives granted to an AHP, as

defined above, pursuant to this policy and procedure.

~~C. POLICY:~~

~~1. In the case of a disaster in which the disaster plan has been activated and the hospital is unable to handle the immediate patient needs, the Chief of Staff, or in the absence of Chief of Staff, the Vice-Chief of Staff, may grant disaster privileges.~~

~~a. In the absence of the Chief of Staff and Vice-Chief of Staff and Department Chair(s), the CEO or designee may grant the disaster privileges consistent with this policy.~~

~~b. The grant of privileges shall be on a case-by-case basis at the sole discretion of the individual authorized to grant disaster privileges within 72 hours to determine whether the disaster privileges shall be continued.~~

~~2. The verification process of the credentials and privileges of individuals who receive disaster privileges, shall be developed in advance of a disaster situation. This process shall begin as soon as the immediate disaster situation is under control, and shall meet the following requirements in order to fulfill important patient care needs:~~

~~a. Identifies in writing the individual(s) responsible for granting disaster privileges.~~

~~b. Describes in writing the responsibilities of the individual(s) responsible for granting disaster privileges.~~

~~c. Describes in writing a mechanism to manage the activities of individuals who receive disaster privileges. There is a mechanism to allow staff to readily identify these individuals.~~

~~d. Addresses the verification process as a high priority.~~

~~e. Ensures the verification process of the credentials and privileges of individuals who receive disaster privileges begins as soon as the immediate situation is under control.~~

~~3. The process for disaster privileges is identical to the process established under the medical staff bylaws for granting temporary privileges to fulfill an important patient care need.~~

~~4. Members of the medical staff shall oversee those granted disaster privileges.~~

~~D.~~C. **PROCEDURE:**

1. **Upon presentation to the hospital, Volunteer Practitioners and/or AHPs shall be directed to the Hospital Representative responsible for disaster credentialing under the HICS plan.**
   a. **Volunteer Practitioners and/or AHPs must sign in and present required identification as follows:**
      i. **A valid government-issued photo identification issued by a state or federal agency (e.g., driver's license or passport), and at least one of the following:**
         1) **A current hospital photo ID badge that clearly identifies professional designation;**
         2) **A current license, certificate or registration to practice, as appropriate;**
         3) **Identification indicating the individual is a member of a Disaster Medical Assistance Team (*DMAT*), or Medical Reserve Corps (*MRC*), Emergency System for Advanced Registration of Volunteer Health Professionals (*ESAR-VHP*), or other recognized state or federal organizations or groups;**
         4) **Identification indicating that the individual has been granted authority to render patient care, treatment and services in disaster circumstances (such authority having been granted by a deferral state, or municipal entity); or**
         5) **Identification of Volunteer Practitioners by current hospital or medical staff members(s) who possess personal knowledge regarding the Practitioner's ability to act as a licensed independent practitioner during a disaster and of Volunteer AHPs by current hospital member(s) who possess personal knowledge regarding the**

AHP's qualifications.

b. Required Documentation on the Disaster Privileges/Prerogative Approval Form:
   i. Name of Practitioner or AHP (printed and signed)
   ii. Specialty or AHP Category
   iii. Office Address and Phone Number
   iv. Professional License/Certificate/Registration Number and Expiration Date
   v. Driver's License or Passport Number and Expiration Date
   vi. Date of Birth
   vii. Name of Professional Liability Insurance Carrier and Limits of Liability
   viii. Name of Professional School and Year of Graduation
   ix. Hospital Affiliation(s) and Staff Status

c. Verification Process:
   i. The hospital Representative shall verify professional licenses/certificates/ registrations as follows:
      1) Primary Source Verification:
         a) Query the appropriate licensing/certification/registration board on-line, e.g.= Medical Board of California website = *www.medbd.ca.gov* – use for M.D.s, D.P.Ms and PAs; California Osteopathic Medical Board = *www.ombc.ca.gov* – use for D.O.s, California Board of Registered Nursing = www.rn.ca.gov – use for R.N.F.A.s, N.P.s, C.N.M.s and other R.N.s; Board of Behavioral Sciences = www.bbs.ca.gov --- use for M.F.C.C.s and L.C.S.W.s; California Psychology Board = www.psychboard.ca.gov –use for clinical psychologists, and print verification if possible.
      2) If computer access is not available, a copy (if possible) of the Practitioner's or AHP's professional license/certificate/registration and driver's license or other identification shall be made and attached to the Disaster Privilege/Prerogative Approval Form. If a copier is not available, the Hospital Representative shall perform a visual verification of the above documents, and document such verification.
      3) If primary source verification of professional licensure/certification/ registration cannot be accomplished at the time of initial credentialing, it must be performed as soon as the immediate situation is under control and completed no later than seventy-two (72) hours from the time the Volunteer Practitioner or AHP presented to the campus. In extraordinary circumstances when primary source verification cannot be completed within seventy-two (72) hours (e.g., no means of communication or lack of resources) it shall be accomplished as soon as possible. In this extraordinary circumstance, the following must be documented:
         a) Why primary source verification could not be performed in the required timeframe;
         b) Evidence of the Practitioner's or AHP's demonstrated ability to continue to provide adequate care, treatment, and services;
         c) Attempt(s) to rectify the situation as soon as possible.
      4) The Medical Staff Services Representative or designee shall query the National Practitioner Data Bank (NPDB) and other sources as needed as soon as the emergency situation has been contained.
      5) Primary source verification shall not be required if the Volunteer Practitioner or AHP has not provided care, treatment and services under the Disaster Clinical Privileges or Practice Prerogatives, as

appropriate.

d. Who May Grant Disaster Clinical Privileges/Practice Prerogatives:
   i. As described in the Medical Staff Bylaws, the Chief Executive Officer (CEO) or Chief of Staff or their designees may grant Disaster Clinical Privileges or Practice Prerogatives. The option to grant Disaster Clinical Privileges or Practice Prerogatives to Volunteer Practitioners and/or AHPs shall be made on a case-by-case basis in accordance with the immediate needs of the hospital's patients, based on the qualifications of the Volunteer Practitioners and/or AHPs.

e. Temporary Badges:
   i. So that they may be readily identified, Volunteer Practitioners and/or AHPs shall be issued badges containing the following information:
      1) Name
      2) Specialty or AHP category
      3) Practicing with Disaster Clinical Privileges or Practice Prerogatives, as appropriate.

f. Oversight:
   i. The Medical Staff shall oversee the care, treatment, and services provided by a Volunteer Practitioner or AHP who has been granted Disaster Clinical Privileges or Practice Prerogatives. Oversight shall be accomplished whenever possible by partnering the Practitioner or AHP with a current credentialed medical staff member or AHP, as appropriate, to observe or mentor the Volunteer Practitioner or AHP. If partnering is not possible, oversight shall be by clinical record review. A Volunteer Practitioner or AHP may be assigned additional responsibilities by the Medical Staff Officer designated under the *HICS* plan.

g. Termination of Disaster Clinical Privileges/Practice Prerogatives:
   i. A Practitioner's or AHP's Disaster Clinical Privileges or Practice Prerogatives shall be terminated immediately in the event that any information received through the verification process or otherwise indicates adverse information or suggests the Practitioner or AHP is not capable of exercising Disaster Clinical Privileges or Practice Prerogatives. Disaster Clinical Privileges and Practice Prerogatives are time-limited and shall expire automatically at the time the CEO or designee declares the disaster to be over, or that the services of Volunteer practitioners or AHPs are no longer required.

~~E. **PROCEDURE:**~~

~~1. Disaster privileges may be granted to volunteers eligible to be Licensed Independent Practitioners and Allied Health Professionals upon presentation of a valid picture identification issued by the state, federal, or regulatory agency and at least one of the following:~~

~~a. A current picture hospital identification card clearly identifying professional designation.~~

~~b. A current license to practice.~~

~~c. Identification indicating that the individual is a member of a Disaster Medical Assistance Team (DMAT) or MRC, ESAR-VHP, or other recognized state or federal organizations or groups.~~

~~d. Identification indicating that the individual has been granted authority by a federal, state, or municipal entity to render patient care in disaster circumstances.~~

~~e. Identification by current hospital or medical staff member(s) with personal knowledge regarding the volunteer's ability to act as a licensed independent practitioner during a disaster.~~

~~2. Disaster Response:~~

~~a. All non-Medical Staff who are granted disaster privileges will respond to the Physician Labor Pool in Physicians Dining Room and appropriate name badge provided (appropriate name badge is defined by Medical Staff Policy #8710-521, *Name Tags for*~~

~~*Health Practitioners*).~~

~~3. Pending Verifications Process:~~

~~a. Current professional licensure of those providing care under disaster privileges is verified from the primary source as soon as the immediate emergency situation is under control or within 72 hours.~~

~~i. If primary source verification cannot be completed within 72 hours of the practitioner's arrival due to extraordinary circumstances, the hospital documents all of the following:~~

~~1) The reason(s) verification could not be performed within 72 hours of the practitioner's arrival.~~

~~2) Evidence of the licensed independent practitioner's demonstrated ability to continue to provide adequate care, treatment, and services.~~

~~3) Evidence of an attempt to perform primary source verification as soon as possible.~~

~~4. Oversight of Volunteer Practitioner:~~

~~a. The Medical Director or designee will provide oversight of the care, treatment and services provided by the volunteer practitioner, by either direct observation, mentoring or chart review and will determine whether the volunteer practitioner's disaster privileges will be continued for the duration of the disaster situation. Within 72 hours, the organization will make a decision on information that is obtained from the Medical Director or designee to continue the volunteer practitioner's practice.~~

~~i. When the disaster situation no longer exists, these disaster privileges terminate.~~

~~F.~~D. **REFERENCES**:

1. The Joint Commission Standards

~~1. Inside the Joint Commission, Vol. 13 No. 4, March 3, 2008.~~

~~2. The Joint Commission Standards EM.02.02.13 and EM.02.02.15~~

APPLICATION FOR DISASTER PRIVILEGES

To be completed by the Volunteer Licensed Independent Practitioner/Volunteer Practitioner

Full Name:_____
Cell Phone Number:_____
Social Security Number:_____
Date of Birth:_____
Office Address, City, State, Zip Code:_____
_____
Office Telephone:_____
Photo Identification Type (i.e., driver's license, government I.D.)
_____
Identifying Number:_____
Issuing State/Agency:_____
(If copy not obtained, list other information):_____
_____
License (certification or registration) Number:_____
Issuing State:_____
Expiration Date:_____
(If copy not obtained, list issuing agency name/address/phone/other information)
_____
Malpractice Insurance Carrier Name:_____
Telephone Number (if available):_____

Current Hospital Affiliation(s) – Facility(s) Name(s)
Address(s), City(s), State(s), Zip Code(s)
Telephone Number(s)
_____
_____
_____

LIP/Volunteer Practitioner's Signature:_____

VERIFICATIONS/APPROVAL

Review all documents and attach copies if possible. Conduct verification of information as possible

License/Certification/Registration:_____

Affiliation(s):_____

Insurance:_____ NPDB:_____OIG:_____Other:_____

On Site Medical Staff Member's Name:_____

Responsibilities (following interview with volunteer Health Care Practitioner):_____

_____

_____

Assigned Partner:_____

Approved by: (print name, signature, title):_____

CONSENT, ACKNOWLEDGEMENT & RELEASE OF INFORMATION FOR DISASTER PRIVILEGES

I, the undersigned, hereby apply for disaster privileges as requested on this application. I acknowledge and agree to abide by the Medical Staff Bylaws, Rules and Regulations and applicable hospital policies. By applying for disaster privileges, I accept the following conditions during the processing and consideration of my application and for the duration of my privileges, regardless of whether or not I am granted the privilege requested:

1. I agree the information provided in conjunction with this application is accurate and represents the current level of my training, experience, capability, health status and competence to practice the disaster privileges requested.

2. I fully understand and agree that any significant misrepresentation, misstatement or omission from this application, whether intentional or not, shall constitute cause for denial of requested disaster privileges. In the event that disaster privileges have been granted prior to the discovery of such misrepresentation, misstatement or omission, such discovery may result in summary termination of disaster privileges.

3. I hereby authorize my professional liability insurance carrier to notify the Chief of Staff or his agent, in the event that my insurance coverage is terminated, canceled, modified or otherwise acted upon.

4. I understand and agree that as an applicant for disaster privileges that I have the burden of producing adequate information for the proper evaluation of my professional competence, character, ethics, health status, and other qualifications and for resolving any doubts about such qualifications. I agree to make myself available for interviews with regard to my application and any peer review related matters during the time that I hold disaster privileges.

5. I agree to provide continuous care for my patients either personally or through an identified qualified member of the medical staff.

6. Immunity is extended to the fullest extent permitted by law and I release from liability all persons, organizations, committees and their agents from participating in good faith in requesting or supplying information relative, but not limited to: (a) applications for appointment and/or clinical privileges; (b) periodic reappraisals undertaken as part of the peer review process; (c) investigations, reprimands, corrective action, suspension or reduction of clinical privileges, or other disciplinary action; (d) hearings and appellate reviews: (e) reviews before the governing board; (f) case evaluations; (g) utilization reviews: (h) other hospital, medical staff or departmental, service or committees activities relating to the quality of patient care or my professional conduct; (i) inquiries concerning my professional qualifications, character, ethics, physical or mental health status, or behavior; and (j) any other matter that may affect patient care, or the orderly operation of this or any other hospital, and I hereby authorize and consent to the release of such information.

7. I understand and agree that after I submit this application it is my sole obligation to promptly report to the Chief of Staff or his designee of any: (1) change in the contents of this application; (2) change in my physical or mental health that could impair my ability to practice; (3) change in my staff membership or privileges at any other health care facility; (4) investigation or accusation with regard to my license or DEA; or (5) conviction of, or plea of guilty or no contest, or its equivalent, to a felony in any jurisdiction; (6) sanction and/or exclusion from participation in any Federal health care program; or (7) change in the status of my professional liability insurance coverage.

8. I present this application and arrange for the submission of other information with the understanding: (1) that such information is requested by the peer review committee(s) of this hospital as part of the credentialing process; (2) that the confidentiality and privacy of this information will be preserved; and (3) that this information and materials will only be released or disclosed as part of current or future credentialing, peer review or quality improvement processes as described above and in the medical staff bylaws, rules and regulations.

9. I understand that the completion of this application is my sole responsibility. I declare that the information on this application is true and without omission to the best of my knowledge. I hereby apply for disaster privileges.

SIGNATURE: _____ DATE: _____

Tri-City Medical Center
Oceanside, California

DELETE – use NeoFax instead

WOMEN'S and& NEWBORNCHILDREN'S SERVICES MANUAL –
NEONATAL INTENSIVE CARE UNIT (NICU)

SUBJECT: AMPHOTERICIN-B LIPOSOME (AMBISOME), ORDERING AND INFUSION OF

ISSUE DATE: 6/07
REVISION DATE: 06/09, 6/11, 8/12

Department Approval Date(s):	**11/15**
Perinatal Collaborative Practice Approval Date(s):	**08/16**
Division of Neonatology Approval Date(s):	**08/16**
Pharmacy and Therapeutics Approval Date(s):	**11/16**
Medical Executive Committee Approval Date(s):	**11/16**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	

A. **PURPOSE:**

1. To prevent the incidence of hypoglycemia and/or hyperglycemia in the VLBW infant, during infusion of the Amphotericin-B Liposomal (AmBisome), the following guidelines are recommended.

B. **POLICY:**

1. All orders for Amphotericin-B in the NICU will be for Amphotericin-B Liposomal (AmBisome).
2. When using a double lumen central line (PICC or UVC):
   a. The pharmacist will prepare the ordered dose of Amphotericin-B Liposomal in D_5W.
   b. The Amphotericin-B Liposomal will be infused through the secondary port. If there are IV fluids, including TPN, infusing in the secondary port, per physician orders, the hourly infusion volume will be changed on the primary port to be inclusive of both ports total hourly volume.
   c. Primary IVFs will continue to be infused through the primary port of the central line. There is no need to stop the IVFs including TPN during infusion of the Amphotericin-B Liposomal.
3. When using single lumen central line (PICC or UVC) or PIV:
   a. When Amphotericin-B Liposomal is ordered and a baby is receiving TPN/Lipid or IV therapy greater than 5% dextrose through a single lumen central line or PIV, the medication will be prepared as follows:
      i. The pharmacist will calculate the amount of dextrose (in grams) that the neonate receives in a two-hour period (timeframe for Amphotericin-B Liposomal infusion).
      ii. The pharmacist will calculate the amount of dextrose concentration necessary for the Amphotericin-B Liposomal to deliver the same or slightly greater amount of dextrose over two hours.
      iii. Amphotericin-B Liposomal will be prepared in a standard concentration of 0.5 – 2 mg/ml and added to the dextrose solution concentration calculated in (b) above.
      iv. The rate of administration of the Amphotericin-B Liposomal admixture will be such that the entire infusion will be completed in two hours.
      v. TPN/Lipids will be stopped during the infusion of Amphotericin-B Liposomal, which will be infused through the same IV access site.
4. For all Amphotericin-B Liposomal Infusions:
   a. Due to incompatibility of normal saline with Amphotericin-B Liposomal, D_5W will be used to clear the line both prior to, and after the infusion.
   b. During the infusion of Amphotericin-B, Liposomal blood glucose will be monitored one hour after the start of the infusion and again one hour after completion of the infusion.

c. Infants will remain on strict I&O for the duration of treatment course.

A. **EXTERNAL LINKS:**

C. **REFERENCES:**

1. Wilson, S. S. (2005). Nurses's Drug Guide. Prentice Hall.
2. Young, T.E. & Magnum, B. (2011). Neofax, 24th Ed., Raleigh, NC.
3. Zenk, K.E., Sills, J.H., & Koeppel, R.M. (2003). Neonatal Medications and Nutrition, 3rd Edition.

Gomella, Tricia Lacy, M. Douglas Cunningham, and Fabien G. Eyal, eds. *Neonatology: management, procedures, on-call problems, diseases, and drugs.* 7th. New York: McGraw Hill Education Lange, 2013.

McMillan, Julia A., and Carlton K.K. Lee, et.al. *The Harriet Lane Handbook of Pediatric Antimicrobial Therapy*. 2nd. Philadelphia: Elsevier Saunders. 2014.

Neofax, 24th Ed., Raleigh, NC: Thomson Reuters. 2011.

B. **APPROVAL PROCESS**

1. **Clinical Policies & Procedures Committee**
2. **Nurse Executive Council**
3. **Medical Executive Committee**
4. **Professional Affairs Committee**

Board of Directors

Tri-City Medical Center
Oceanside, California

Women and Newborn Services
Neonatal Intensive Care Unit (NICU)

SUBJECT: CONSULTATION TO PERNINATAL UNIT

ISSUE DATE: NEW
REVISION DATE(S):

Department Approval Date(s):	**11/16**
Perinatal Collaborative Practice Approval Date(s):	**11/16**
Division of Neonatology Approval Date(s):	**11/16**
Pharmacy and Therapeutics Approval Date(s):	**n/a**
Medical Executive Committee Approval Date(s):	**11/16**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	

A. **DEFINITION(S):**
1. Perinatal Unit: A perinatal unit means a maternity and newborn service of the hospital for the provision of care during pregnancy, labor, delivery, postpartum and neonatal periods with appropriate staff, space, equipment and supplies.

B. **POLICY:**
1. A neonatologist or Allied Health Professional (AHP) shall be available for perinatal unit consults as requested by an OBGYN or Certified Nurse Midwife.

Tri-City Medical Center	Women and Newborn Services
PROCEDURE:	**EPIDURAL /PATIENT CONTROLLED EPIDURAL ANESTHESIA (PCEA) AND SPINAL BLOCK MANAGEMENT**
Purpose:	To provide the nursing management **for** ~~of~~ the ~~adolescent adult~~ patient receiving epidural analgesia, continuous PCEA ~~(Patient controlled Epidural Analgesia)~~ **and** SAB (Spinal Anesthesia Block)~~. or CSE (Continuous Spinal Epidural).~~
~~Supportive Data:~~	
Equipment:	1. Electronic Fetal Monitor 2. Intravenous(IV) Administration Set 3. IV Fluids as ordered by provider 4. Epidural Infusion Pump and Key 5. Epidural Insertion Kit 6. Medications as ordered by Anesthesiologist 7. Blood Pressure Monitor 8. Pulse Oximeter 9. Oxygen delivery and suctioning equipment
~~Issue Date:~~	~~5/94~~

A. **POLICY:**

1. The Anesthesiologist and ~~the assigned~~ **Labor** &**Delivery (L&D) nurse** ~~RN~~ share the responsibility for the observation and monitoring of the patient and/or her unborn fetus receiving epidural /spinal anesthesia**.**
2. Patients receiving PCEA anesthesia must have a dedicated syringe pump infusion channel that is positioned on the opposite side of the mainline intravenous channels, which can be locked and has set guardrails.
3. **The Anesthesiologist shall** ~~will~~ **obtain informed consent** from the patient **and be responsible for:**
   - a. ~~place the e~~**Epidural catheter or spinal anesthesia** ~~algesia~~ **placement**
   - b. **Entering orders for epidural management** to ensure rates for administration are clear for infusion pump programming.
   - c. Using **the epidural/ PCEA specific tubing (containing a yellow stripe)** which indicates it **is an epidural line and NOT to be used for any other reason.**
   - ~~2.~~**d. Administering all bolus doses and changing rates on the infusion pump**
     - i. Any increase or decrease in the rate of continuous PCEA must be ~~done~~**ordered** by the Anesthesiologist **and may be performed by the nurse with a second nurse to witness the adjustment**.
     - ii. **After two ordered dose changes if the patient continues to have pain at the same or increased intensity the patient shall be evaluated by the anesthesiologist.**
   - e. **Connecting** the mediation syringe **tubing to the epidural catheter**
   - f. **Ensuring documentation requirements on anesthesia record are complete according to department standards**
4. **Prior to insertion, the nurse will** ensure anesthesia consent is signed.
5. The pharmacy department is responsible for the preparation of the epidural **continuous infusion medication syringe.** ~~/ spinal anesthesia.~~

~~3.~~**6. The patient is the ONLY person who is authorized to use the dose request cord/button to administer medication on demand.**

a. **PCEA by PROXY is PROHIBITED and this must be reviewed with the patient and family by the Anesthesiologist and nurse.**

Department Review	Department of OB/GYN	Division of Neonatology	Department of Pediatrics	Department of Anesthesia	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
4/95, 10/96, 5/97, 11/97, 3/00, 11/02, 11/03, 12/08, 7/09, 6/13, 12/14	01/13	n/a	n/a	10/16	11/16	05/13, 11/16	06/13	7/09, 6/13

B. **PRE-PROCEDURE:**

1. The nurse will confirm Obstetrician's order for regional pain control management **and notify** the **Anesthesiologist of patient's desire to have epidural/PCEA** anesthesia.

~~1.~~**a.** The Nurse shall **give a brief history of the patient and her labor status to the Anesthesiologist using SBAR (Situation, Background, Assessment, Recommendation) format.**~~.~~

~~a.~~**b. Review** ~~Obtain~~ **the** results of **admission** ~~ordered~~ laboratory studies **and notify the Anesthesiologist of any abnormal findings.**~~.~~

2. Obtain vital signs prior to anesthesia placement **to establish baseline blood pressure (BP) and pulse.**

~~2. Notify the anesthesiologist for request of epidural.~~

3. Administer **a 500-1000 mL fluid bolus of Lactated Ringers prior to the placement of epidural/PCEA or spinal, per established Anesthesia orders.**~~Hydrate the patient prior to placement of epidural catheter with Lactated Ringers Solution; minimum 500-1000 mL/ or the amount ordered by the anesthesiologists.~~

a. The ~~L&D R~~**nurse** shall verify obstetrician's order for the amount of hydration needed for patients on strict intake and output (-preeclampsia and/or a patient on magnesium sulfate).

4. Ensure an **epidural/PCEA** syringe **pump** is available **for use** once the **epidural is placed.**

C. **PROCEDURE:**

1. ~~Nurse will e~~Ensure all necessary equipment is at the bedside.

a. **Obtain the** ordered medication **syringe from** the **Pharmacy**/ pyxis and have it available

2. **Prior to the procedure, the nurse and Anesthesiologist shall perform a procedural TIME OUT and document its completion in the** patient's **E**lectronic **M**edical **R**ecord (EMR).

~~3.~~

3. Position the patient in a way that opens the spinal vertebra to assist with epidural placement.

a. Make sure she is lying or sitting on level surface, shoulders squared, with back rounded outward.

b. Ensure she is supported, to prevent falling.

4. **Place a continuous pulse oximeter and blood pressure** (BP) **cuff on the patient.** Set the BP cuff to cycle **every 5 minutes during the** epidural/ spinal **placement process**

5. Monitor the Fetal Heart Rate according to the Fetal Heart Rate Surveillance Procedure.

6. Once the epidural/PCEA or spinal is placed, assess BP, Pulse, Respiratory Rate and oxygen saturation levels at these intervals:

a. Every 2 minutes x 5

b. Every 5 minutes x 3

c. Every 15 minutes for duration of epidural infusion.

~~5. Nurse shall program the epidural infusion pump and have setting confirmed by the anesthesiologist.~~

~~a. Bupivicaine concentration as ordered~~

~~b. Rate in mL/hr.~~

~~c. For PCEA only: bolus amount in mL, Lockout time in minutes (1 hour maximum) in mL.~~

~~6. The RN shall assist the anesthesiologists with patient position for placement of epidural.~~

7. ~~If the patient will be utilizing the PCEA feature, the anesthesiologist will reinforce use of the infusion device as needed.~~ Ready the PCEA syringe pump for use:

a. **Insert the** medication **syringe into the pump** and **verify that the selected guardrail medication dosing matches the Anesthesiologist's order** with the Anesthesiologist or a second nurse..

b. **Once the** port less, yellow-striped, primed, epidural **tubing is attached to the epidural catheter by the Anesthesiologist,** the nurse shall **start the infusion and engage the lockout feature on the pump.**

8. **Monitor** for complications that may be associated with epidural insertion.
   a. **Local Anesthetic toxicity:** Assess for drowsiness, light-headedness, tinnitus, circumoral paresthesia, metallic taste in mouth, slurred speech, blurred vision, unconsciousness, cardiac dysrhythmias and cardiac arrest. Notify anesthesia immediately if any of these symptoms are noted. Initiate cardiopulmonary resuscitation (CP~~R~~R) as needed.
   b. **High Spinal:** Assess for numbness or weakness of the upper extremieties, dyspnea, weak speech or inability to speak, apnea and loss of consciousness. Notify anesthesia immediately if any of these symptoms is noted. Initiate CPR as needed.
9. Position the patient in lateral or upright position with uterine displacement using one of the following to maintain blood pressure and avoid hypotension.
   a. Hip wedge
   b. Semi-fowlers with uterine displacement
10. If hypotension o~~O~~ccurs, **utilize anesthesia order set to guide interventions and notify anesthesiologist**:
    a. ~~Position~~ **Place** the patient in lateral position
    b. Administer fluid bolus**, as ordered,** ~~and notify anesthesiologist.~~
    c. **Consider a**~~A~~dministration of ephedrine **if hypotension is not resolved with initial interventions and per Anesthesia orders.** ~~per department of anesthesia- Labor Analgesia PPO~~
    d. Notify obstetrician as necessary for significant unresolved hypotensive episodes.
11. Nurse shall advise the patient to notify the nurse for any unexpected sensations or loss of motor function following demand dose.
12. The lot number and brand of the epidural kit shall be documented in the Electronic Medical Record **(EMR)** by the ~~Rn~~ **nurse** assisting with the procedure
13. Assess and document adequacy of pain relief 30 minutes after placement and every 2 hours as needed.
14. ~~Initiate~~ **Place** Foley catheter **per order**~~to gravity drainage~~ within the first hour of epidural anesthesia.
15. **Monitor for the following side effects at a minimum every four hours:**
    ~~16.~~**a. Change in patient's level of consciousness**
    ~~a.~~**b. Nausea and vomiting**
    ~~b.~~**c. Itching, pruritus**
~~c.~~**16. Assess patient's dermatome level and motor function after initial epidural placement and once a shift at a minimum to establish baseline and/or** identify **changes.**
~~d.~~**17. Verify epidural catheter site is** intact; **infusion tubing is connected, labeled, and infusing on a dedicated infusion pump each shift.**
~~17.~~**18. Instruct the patient and family to:**
    a. **Avoid touching or manipulating catheter or tubing**
    b. **Avoid excessive moving around or overstretching upper extremities**
    c. **Notify the nurse if the catheter is accidentally removed or any part of it becomes disconnected.**
~~18.~~**19. At shift change,** the nurse shall review **and document the patient's pump history and total delivered doses with the oncoming nurse before clearing the pump history.**
    a. **The pump infusion settings should be reviewed against the Anesthesia orders with the oncoming nurse and documented in the patient's EMR.**
~~19.~~**20. The nurse may change the syringe containing the same medication and concentration, turn off the infusion and remove the catheter as ordered by the Anesthesiologist.** ~~If initial epidural infusion syringe needs replacing the nurse can replace the infusion syringe with pre-prepared solution containing the same medication as ordered by the anesthesiologist.~~

D. **POST DELIVERY REMOVAL OF EPIDURAL OR INTRATHECAL CATHETER:**
1. The Nurse will verify there is a written order to remove the catheter.
   a. If the patient is scheduled for a postpartum tubal ligation, the catheter should not be removed.

2. Place patient in relaxed position.
3. Assess patient for back pain, back tenderness and baseline motor strength and sensation prior to removal of the catheter.
4. Assess site for hematoma, drainage and signs of infection.
5. Stop infusion and clamp tubing.
6. Perform hand hygiene.
7. Remove dressing while maintain**in**g pressure on the tubing just above the insertion site. Do not use alcohol. (Alcohol is neurotoxic to epidural space)
8. Gently and steadily remove the catheter with one slow motion, while holding 2x2 gauze over the site.
   a. If patient develops pain or paresthesia or resistance is met, STOP procedure, place a sterile dressing over the site to secure the epidural line and notify the **A**anesthesiologist.
9. Verify catheter tip is intact and rounded once catheter is removed.
10. If the tip is missing:
    a. Notify the physician
    b. Place the catheter with the missing tip in a specimen bag
    c. Label with the patient's name, date of removal
    d. Notify the shift supervisor.
11. Place sterile dressing over the areas and apply pressure for at least 2 minutes.
12. Evaluate patient's motor strength and sensation. Notify the **Anesthesiologist**~~physician~~ for decreased motor strength and/or se**ns**~~d~~ation that is not returning.
13. Document final syringe pump data history and w**aste unused medication per patient care services narcotic management program policy.**
14. ~~Document procedure and patient response.~~

E. REFERENCES:

1. **Association of Women's Health, Obstetric and Neonatal Nurses. (2012).The Role of the Registered Nurse (RN) in the Care of Pregnant Women Receiving Analgesia/ Anesthesia by Catheter Techniques (Epidural, Intrathecal, Spinal, PCEA Catheters) (Clinical Position Statement).Washington, DC:**
2. **Simpson, K. & Creehan, P. (2014). Perinatal Nursing,4th Edition. Philadelphia, PA.**
3. **Kennedy, B., Ruth, D., & Marin, E. (2009). Intrapartum Management Modules. A Perinatal Education Program, 4th Edition. Philadelphia, PA.**
4. **American Society of PeriAnesthesia Nurses. (2014) Position Statement 12, Care of the Perinatal Patient.**
5. **American Society of Anesthesiologists (2007). Practice guidelines for obstetric anesthesia: An updated report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia. Anesthesiology, 106, 843-863.**

~~1. Besuner, P. (2007) AWHONN Templates for Protocols and Procedures for Maternity Services. 2nd Edition. Washington D.C.~~
~~2. Cohen, S.P., Dragovich, A. (2007). Intrathecal Anesthesia. Anesthesiology Clinics, 25 (4). Retrieved December 2, 2008 from http://www.mdconsult.com.~~
~~3. Grant, P.J., Wesorick, D.H. (2008, March). Perioperative Medicine for the Hospitalized Patient. Medical Clinics of North America, 92(2). Retrieved December 2, 2008 from http://www.mdconsult.com~~
~~4. Gregoretti, C. et al (2007). Regional Anesthesia in Trauma Patients. Anesthesiology Clinics< 25(1). Retreived December 2, 2008 from http:// www.mdconsult.com~~
~~5. Perry, A.G>, Potter, P.A. (2006) Patient Controlled Analgesia. Clinical Nursing Skills and Techniques, 6th Edition. Retrieved December 2, 2008 from http://app32.webinservice.com/MosbySkills/SkillDetails~~

F. RELATED DOCUMENT(S):

1. **Women and Newborn Services Procedure: Fetal Heart Rate (FHR) Surveillance/Monitoring**
~~6.~~**2. Patient Care Services Procedure: Patient Controlled Analgesia (PCA)**

Tri-City Medical Center	Women and Newborn Services (WNS)
PROCEDURE:	**LAMINARIA**
Purpose:	To outline the nursing responsibilities in assisting the physician with the insertion and removal of Laminaria (Dilateria).
Supportive Data:	Laminaria is a sea grown plant, capable of absorbing fluids from uterine cervix. Gradual swelling of laminaria (up to 4 times its diameter) results in ~~aconcomitant~~ gradual symmetrical dilation of the cervical canal and soften~~sing~~ cervical tissue. Dilateria diameter swells the most within the first 4 to 6 hours after insertion.~~ and may continue to swell~~. **It should be removed within 24 hours to prevent infection.**~~ for a total of ± hours.~~
Equipment:	1. Laminaria (Dilateria) 2. Vaginal speculum 3. Long ring forceps 4. Atraumatic tenaculum or a milex dilateria forceps (if available) 5. Antiseptic solution per physician preference 6. Cervical lubricant and sterile swabs 7. Light source 8. Sterile gloves 9. Gauze sponges

A. INDICATIONS FOR USE:

1. **Cervical ripening for first and second trimester miscarriage/ abortion**
2. **Dilates cervix in preparation for Dilation and Curettage (D&C) procedure**

B. CONTRAINDICATIONS:

1. **Laminaria should not be used when vaginal, cervical and/or pelvic infection is suspected**
2. **Laminaria should not be used if there is concern that the patient will not follow-up appropriately, as the patient must return within 24 hours to have it removed.**

~~A.~~C. INSERTION:

1. After **the** physician/**Allied Health Professional (AHP)** has in**formed** ~~structed~~ patient of **reasons for use,** risks and side effects, **the nurse should** verify ~~informed~~ **the patient's** consent.

~~2. Explain procedure to the patient.~~

~~3.~~**2. The nurse/ Obstetrical Technician (OB Tech) will ensure the** ~~Have~~ necessary equipment **is** available **to place the laminaria aseptically..**~~for physician~~.

~~4.~~**a. A staff member will retrieve the laminaria from the supply pyxis for insertion**~~Obtain laminaria from pharmacy.~~

~~5.~~**3. The patient should be encouraged to void prior to the insertion**~~Have patient void to empty bladder.~~

~~a. Increases accuracy of pelvic examination.~~

4. **The nurse and/or OB Tech will be available to help the physician prepare the patient for laminaria insertion by:.**~~Open gloves for physician and open packages with vaginal speculum, ring forceps, and gauze sponges.~~
   a. **Positioning the patient in lithotomy position for vaginal examination**
   b. **Having appropriate cleansing product available to perform a surgical preparation before laminaria insertion.**

~~6.~~**c. Assisting physician during the procedure with equipment needs.**

5. **The nurse shall document the size and number of laminaria placed and how the patient tolerated the procedure in a clinical note.**
6. **The nurse will complete patient education which should include but is not limited to discussion about:**

Department Review	Department of OB/GYN	~~Department of Pediatrics~~	Pharmacy and Therapeutics	Medical Executive Committee	Professional Affairs Committee	Board of Directors
07/03, 08/09	02/13, **08/16**	~~02/13~~	01/13, **11/16**	05/13, **11/16**	06/13	06/13

a. **Avoid bathing, douching, and intercourse while the laminaria is in place**
b. **The laminiaria needs to be removed within 24 hours. Patient must return to have it removed if is being sent home after the procedure**
   i. **IF the laminaria falls out, notify her doctor**
c. **Discomfort similar to menstrual cramping after placement may be felt**
~~7.~~**d. Call her doctor immediately if develops a fever over 100 F, chills, pain or vaginal bleeding while laminaria is still in place.** ~~Open package of cervical lubricant and swabs for physician~~.
~~8. Open package(s) of Laminaria as requested by physician.~~
~~9. Assist physician with additional instruments as needed.~~

D. CAUTIONS:

1. **Cervical manipulation may cause a vaso-vagal reaction in the patient. She should be watched for unusual pallor, nausea vertigo or weakness after placement and it is best to have her remain recumbent for three to 10 minutes after placement.**
2. **If laminaria remains in place for greater than 24 hours, the physician should consider antibiotic prophylaxis.**
3. **The laminaria should not be forced into place during insertion. If the cervix is obstructed the physician may have to pre-dilate the cervix for placement.**

~~B.~~**E. REMOVAL:**

1. **The nurse and/OB Tech shall h**~~H~~ave patient empty **her** bladder.
2. **The nurse and/or OB Tech will help p**~~P~~osition patient in bed for **r**the **r**emoval of laminaria.
3. **The nurse and/or OB Tech will get the required equipment**~~,~~ **and supplies to assist provider with removal.**~~Open sterile gloves, forceps, and tenaculum for physician~~ **to include**~~.~~ hav**inge a** clean drape available on which to place **removed** laminaria.

~~3.~~**4. The nurse shall help get patient ready for surgery as needed.**

~~C.~~**F. DOCUMENTATION:**

1. At insertion **the nurse shall**~~,~~ note number and size of laminaria placed **by the physician.**~~and document in patient care record.~~
2. At removal, **the nurse shall** note number of laminaria removed **by the physician.** ~~and document in the patient record~~.

~~D. PATIENT TEACHING:~~

~~1. Avoid bathing, douching, and intercourse while laminaria is in place.~~
~~2. Must return within 24 hours for removal.~~
~~3. May feel discomfort similar to a menstrual cramp while laminaria is in place.~~
~~4. Report to physician if laminaria falls out. Have patient bring it when she returns.~~
~~5. Call physician immediately should patient develop fever over 100°F, chills, pain, or vaginal bleeding while laminaria is in place.~~
~~6. Use cervical medication if prescribed by physician.~~

~~7. Discharge patient per physician's orders.~~

~~E. CONTRAINDICATIONS:~~

~~1. Laminaria should not be used in the presence of a vaginal, cervical, and/or pelvic infection.~~
~~2. Laminaria should not be used if there is concern that the patient will not follow up appropriately.~~
~~a. The patient *must* return with 24 hours for removal of laminaria.~~

~~F. CAUTIONS:~~

~~1. Laminaria should only be used in absence of infections or in "clean cases." Acute cervicitis or gonococcal infection should be treated before laminaria insertion is attempted.~~

2. ~~Any cervical manipulation may cause a vaso-vagal reaction. Patient should be watched for evidence of unusual pallor, nausea, vertigo, or weakness. By remaining recumbent for 3 to 10 minutes, these symptoms usually disappear.~~
3. ~~Do not reuse laminaria.~~
4. ~~Do not use any one laminaria for more than 24 hours and follow sterility and medication routines at each insertion. If laminaria is left in place more than 24 hours, proper prophylactic measures should be taken.~~
5. ~~Laminaria should not be forced into a seemingly obstructed cervix. If cervix is obstructed, the physician may have to pre-dilate cervix.~~

G. **REFERENCES:**

1. **Sagiv, R, Mizrachi, Y.,Glickman, H., Kerner, R., Keidar, R., Bar, J. and Golan, A. (2015). Laminaria vs. vaginal misoprostol for cervical preparation before second trimester surgical abortion: a randomized trial. Contraception. May:91 (5) 406-411.** ~~Package insert for Dilateria (Laminaria Japonica), Milex Products, Inc~~.

Tri-City Medical Center
Oceanside, California

WOMEN AND NEWBORN SERVICES POLICY MANUAL

ISSUE DATE: 10/94 **SUBJECT:** SCHEDULING PROCESS FOR PROCEDURES

REVISION DATE: 1/00, 6/03, 8/09

Department Approval:	**06/16**
~~**Clinical Policies & Procedures Committee Approval:**~~	~~**02/13**~~
~~**Nurse Executive Committee Approval:**~~	~~**02/13**~~
~~**Medical** **Department of OB/GYN Approval:**~~	~~**08/09**~~**08/16**
Pharmacy & Therapeutics Committee Approval:	**n/a**
Medical Executive Committee Approval:	~~**05/13**~~**01/16**
Professional Affairs Committee Approval:	**06/13**
Board of Directors Approval:	**06/13**

A. **CESAREAN SECTIONS:**

1. Scheduling:
   a. Obstetricians' **(OB)** offices will call T**ri-City Medical Center (TCMC)** main surgery scheduling at 760-940-7382 to schedule surgical procedures in Labor and Delivery **(L&D)** O**perating** R**oom (OR).**
      i. Only **three**~~3~~ cases are to be scheduled each day
      ~~i.~~**ii. No elective surgeries are scheduled on the weekends, if avoidable.**
   b. Add-on cases for **m**~~M~~aternal or **f**~~F~~etal medical indications~~,~~ or elective bilateral tubal-ligations (for sterilization), may be scheduled through the **Assistant Nurse Manager (ANM) or designee.** ~~shift supervisor/charge nurse.~~
   c. Required information at the time of scheduling **shall include**:
      i. Primary Surgeon and Assist
         1) Name of the ~~elective or~~ indicated procedure
         ~~1) Pediatrician or use of Neonatologist if applicable~~
         2) Patient name, Age, **Estimated** Gestational Age **(EGA)** in weeks
            ~~2)~~**a) IF under 39 weeks EGA at the time of the scheduled procedure, there must be a valid medical indication. See Elective Delivery under 39 weeks unit specific policy** ~~(if applicable)~~
         ~~2)~~**3)** Patient's Gravida ~~(number of pregnancies)~~ and Para ~~(number of living children)~~
         ~~3)~~**4)** Reason for **procedure** ~~Cesarean Section~~
         ~~4)~~**5)** Significant medical problems/history, e.g. Hypertension, Low A**mniotic F**luid **I**ndex (oligo), Diabetes, known fetal problems or anomalies
   d. The **ANM/ designee** ~~shift supervisor/charge nurse~~ shall review ~~daily~~ the OR schedule in Cerner to ensure accuracy and ~~to~~ check the delivery log for those patients who have already delivered **to update schedule as indicated.**
2. Elective Cases:
   a. ~~Selected patients be k~~**K**nown candidates for cesarean section**s** ~~and~~ will have their surgeries scheduled in advance. **The most common examples include, but are not limited to:**
      i. Progression of pregnancy related hypertension/preeclampsia with changes in baseline labs
      ii. Uncontrolled diabetes
      iii. Known placenta previa
      iv. Previous classic uterine incision

v. **Known fetal anomalies where cesarean section may improve later motor or mechanical function**
vi. **Maternal/fetal indication with associated oligohydramnious not conducive to the labor process**
vii. **Maternal or fetal condition requiring intervention per perinatal or neonatal consultation**

~~a.~~**b.** The **OB ~~provider~~physician/Allied Health Professional (AHP)** ~~physician~~ and/or a representative from the ~~**provider**~~**physician/AHP's** ~~hysician's~~ office will contact the surgery scheduling office at **TCMC.**~~ri-City Medical Center~~.
i. If another procedure will occur with the cesarean section, (e.g. tubal ligation), this needs to be indicated in the **scheduling calendar.**~~calendar~~.
ii. The patient will also be scheduled for pre-op teaching.

~~b.~~**c.** Scheduled cases are usually limited to three per day at 0730, 0900, and 1200.

~~a.~~**d.** Cases are scheduled on a first-come, first-served basis.

~~c.~~**e.** If a patient scheduled for a cesarean section delivers prior to her scheduled surgery date, it is the responsibility of the Clinic/ ~~**Provider**~~**Physician/AHP's** ~~Physician's~~ office to **notify the** OR **Surgery scheduling center** to have her name ~~removed~~**removed, when possible.** ~~from the scheduled procedures scheduling calendar~~. This will allow the schedule to be **updated and the scheduled slot opened**~~accessible~~ for other requests**.** ~~by the medical staff~~.

~~3. Medical Indications:~~
~~a. For any cases where there are maternal or fetal concerns not requiring same day or urgent intervention, yet have the potential for compromise should be added to the schedule of the L&D OR by the physician through the shift supervisor/charge nurse.~~
~~i. The shift supervisor/charge nurse shall determine availability of OR suite in L&D or the main OR~~
~~b. Most common examples include, but are not limited to:~~
~~ii. Progression of pregnancy related hypertension/preeclampsia with changes in baseline labs~~
~~iii. Uncontrolled diabetes~~
~~iv. Know placenta previa~~
~~v. Previous classic uterine incision~~
~~vi. Known fetal anomalies where cesarean section may improve later motor or mechanical function~~
~~vii. Maternal/fetal indication with associated oligohydramnious not conducive to the labor process~~
~~viii. Maternal or fetal condition requiring intervention per perinatal or neonatal consultation~~

3. Pre-op Visit:
a. **Shall be scheduled according to unit policy to** ~~Scheduled the day before the case through the main OR, preferably by 1500 to~~ allow for processing of pre-op labs/diagnostic tests
b. Pre-op teaching will be ~~initiated on the day before the case is scheduled and~~ completed by the ~~admitting~~ L&D **nursing staff.**~~RN on the day of surgery.~~

B. **INDUCTIONS:**
1. Elective Inductions:
a. Selected patients may be scheduled by their **OB ~~provider~~physician/AHP**~~physician~~ for an induction of labor **when greater than 39 weeks of gestational age**
b. The **OB physician/AHP**~~physician~~ and/or representative from the physician's office will contact the **L&D ANM or designee**~~labor and delivery shift supervisor/charge nurse~~ **to add the patient to the department's schedule**.
~~ix.~~**i.** The **patient** information **should include the patient's:**
~~x.~~**1) Name**
~~xi.~~**2) Patient birthdate**
~~xii.~~**3) Estimated Due Date/ EGA**
~~xiii.~~**4) Reason for induction**
~~1)~~**5) ~~Provider~~Physician/AHP**

~~2)~~**6) Patient's phone number** ~~will be entered into the scheduled procedures scheduling calendar~~.

ii. **The Office will fax the patient's prenatal record to L&D.**

c. Generally, patients should be instructed to call **L&D**~~labor and delivery~~ one-two hours before their scheduled induction to ensure room and staff availability to safely proceed with the induction. This will also decrease the number of patients sitting in the waiting area for prolonged periods of time and improve patient satisfaction.

d. If a scheduled induction patient fails to keep appointment**, it should be determined if the patient has already delivered and attempts made to contact the patient.**

~~b. C., if the labor and delivery log and/or scheduled procedures scheduling calendar should be checked to see if she has already delivered.~~

i. If there is no indication that the patient has ~~been~~ delivered **and the patient cannot be contacted,** ~~,~~ the **OB** ~~**provider**~~**physician/AHP** ~~physician or physician's representative~~ **shall be** ~~is~~ notified.~~ that the patient did not keep her appointment.~~

2. Medically Indicated Inductions:

a. Unscheduled inductions may occur due to **newly acquired** medical indications.

~~ii.~~**i. These patient admissions are coordinated** ~~Scheduled~~ **directly with the L&D ANM/ designee** on an as needed basis by the **OB** ~~**provider**~~**physician/AHP.** ~~physician with the L&D shift supervisor/charge nurse~~.

~~iii.~~**ii.** Medical indications are not elective procedures, but are considered necessary for maternal or fetal concerns requiring intervention by the **OB** ~~**provider**~~**physician/AHP**~~obstetrician~~ or as a result of a perinatal/neonatal consult.

~~iv.~~**iii.** Staffing availability will need to be **allocated to support these admissions and some elective inductions may need to be delayed depending on unit census and nursing ratio requirements.**~~considered for the timing of medically indicated exceptions based upon:~~

~~1) L&D RN~~

~~2) LDRP room available~~

C. **POSTPARTUM TUBAL LIGATIONS:**

1. Elective tubal ligation after a vaginal delivery will be scheduled by the **OB** ~~**provider**~~**physician/AHP.**~~attending physician~~.

~~a. Both the TCMC surgery scheduling office and the L&D shift supervisor/charge nurse will be notified.~~

~~b.~~**a.** Elective tubal ligations will be **added to** ~~scheduled in~~ the **department procedure** calendar **at a proposed time around the scheduled procedures, to ensure L&D staffing is available to support the case in the L&D OR.** ~~based on the number and scheduled times of cesarean sections~~.

~~c.~~**b.** Elective tubal ligations **that cannot be scheduled during the patient's stay may be scheduled as an outpatient procedure during her postpartum visit.** ~~may be added by the shift supervisor/charge nurse to the main OR schedule if the L&D Operating suites are unavailable for elective procedures. The add-on elective procedure will follow the main OR's priority list for non-scheduled emergent surgeries.~~

~~c. All elective tubal ligations will be placed in the calendar with the following information:~~

~~i. Patient's name~~

~~ii. Physician~~

~~iii. Time~~

D. **OUTPATIENT PROCEDURES:**

1. Certain patients **may be**~~will be~~ scheduled to come to **L&D** ~~labor and delivery~~ for a variety of outpatient procedures. These procedures include but are limited to:

a. Antenatal testing

b. Amniocentesis

c. External cephalic version

~~c.~~**d. Laminaria insertion**

2. The **OB** ~~**provider**~~**physician/AHP**~~physician~~ and/or a representative from the ~~physician's~~ **clinic**~~office~~ will contact the **L&D ANM/designee.** ~~labor and delivery shift supervisor/charge nurse.~~
   a. The information will be entered into the scheduled procedures ~~scheduling~~ calendar.
   b. In addition to the patient's name, the procedure, the date and time, **and** a phone number for the patient will also be entered in the calendar.
   c. Patient will be instructed to call **the L&D unit** one-two hours prior to procedure time to ensure ~~anticipated time is feasible and~~ a room and nurse are available**.**

E. **OUTPATIENT REGISTRATION:**

1. Patients coming to T**CMC**~~ri-City Medical Center~~ for procedures on the **L&D** ~~labor and delivery~~ unit will be instructed to check in with the admitting clerk or unit secretary at the front reception desk in W**N**~~C~~S.
   ~~iv.~~**a.** The admitting clerk will register the patient in the hospital information system

Tri-City Medical Center
Oceanside, California

WOMEN AND NEWBORN SERVICES POLICY MANUAL

ISSUE DATE: 10/94 **SUBJECT:** Shift Change Responsibilities

REVISION DATE: 01/00, 06/03, 07/06

Department Approval Date(s):	03/16
Department of OB/GYN Approval Date(s):	n/a
Division of Neonatology Approval Date(s):	n/a
Department of Pediatrics Approval Date(s):	n/a
Pharmacy and Therapeutics Approval Date(s):	n/a
Medical Executive Committee Approval Date(s):	n/a
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	06/13

A. **ASSIGNMENT SHEET:**

1. Patient care assignments are made by the charge nurse for the oncoming shift.
   a. The names of ~~licensed~~ nursing personnel working in labor and delivery (L&D), ~~newborn nursery,~~ and mother-baby **unit** ~~couplet~~ are listed on the assignment sheet for women's and **newborn** ~~children's~~services **(WNS)**.
   b. Support staff and management personnel assigned to each of the areas is also documented.
2. The assignment sheets are maintained by the charge nurse.
   a. Nurses may obtain their assignments from the unit census boards.
3. **Updates**~~Changes~~ to the assignment sheet, indicating admissions and/or discharges are made by the charge nurse on an ongoing basis during the shift.

B. **SHIFT REPORT:**

1. **N**~~Licensed~~ nursing staff, unlicensed staff, and management personnel **receive**~~take~~ report from the off-going shift.
   a. This report is given verbally **and if possible at the patient's bedside**.
   b. Report is to be given in a manner that protects patient confidentiality.
2. Management report is given in an in-person verbal format at 0700 and 1900 between the oncoming and off-going charge nurses.
3. During report, specific patient condition information and anticipated needs are discussed.
   a. All concurrent and prospective interventions are based on the plan of care for each patient.

C. **PLAN OF CARE:**

1. The plan of care is formulated by the ~~registered~~ nurse using information gathered from the **patient history and current clinical assessment.**~~WCS database.~~
   a. The plan of care is ~~formulated~~ and interventions are **reviewed and discussed with the patient and should reflect items to help the patient meet established outcomes.** ~~identified for problems that are common to our population.~~
   b. **The plan of care should be curtailed to meet the needs of the patient and may change during the patient's stay.** ~~Unique problems of specific individuals are also noted and interventions are formulated.~~

~~1. Non-registered nurse staff, (e.g. licensed vocational nurses) may have various components of problem interventions assigned by a registered nurse.~~

2. Interventions for problems identified are evaluated **and/or updated**~~after the time frame specified in the plan of care or~~ at least every 24 hours.

3. All care planning is **coordinated** ~~done~~ by the registered nurse. ~~alone or in conjunction with an LVN.~~
   a. **Acute Care Technicians (ACT's) or Certified Nursing Assistants (CAN's)**~~LVN's~~ assist the ~~registered nurse in care planning~~ by providing data gathering **tasks**~~assistance~~ and ~~performing tasks~~/duties assigned to him/her by the registered nurse.

~~2. Registered nurse staff function as charge nurse and primary care planners for a specific group of patients.~~

~~a. **Acute Care Technicians (ACT's) or Certified Nursing Assistants (CNA's)**LVNs assist the registered nurse in care planning by providing data gathering **tasks**assistance and performing tasks/duties assigned to him/her by the registered **nurse.**d nurse.~~

D. **ROLES OF SUPPORT PERSONNEL:**

1. OB Technicians **(Techs):**
   a. ~~OB technicians (techs)~~ f**F**unction as support personnel to the **medical and** ~~licensed~~ nursing staff and perform tasks that are assigned to them **which can include but is not limited to:**
      i. Surgical scrub technician role
      ii. Assist with delivery room set up, management, and any equipment preparations.
      iii. Instrument cleaning preparations
      iv. Sterile processing department duties
      v. Patient transfer/transport
      ~~b.~~**vi. Supply and room stocking role**
2. Unit Secretaries**:**
   a. ~~Unit secretaries p~~**P**rovide clerical support to nursing staff **and medical staff**~~as well as physicians~~ in the areas that comprise **WNS**~~women's and children's services~~.
3. **Peri-Operative Aides:**
   a. Function as housekeeping support personnel to the L&D unit and perform tasks that are assigned to them which can include but is not limited to:
      i. All housekeeping duties to include operating room terminal cleaning
      ii. Patient transfer/ transport
      ~~c.~~**iii. Specimen transport**

Tri-City Medical Center	Distribution: Women and Newborn Services
PROCEDURE: **VACUUM EXTRACTION**	
Purpose: Provide procedural guidelines for the RN assisti	
Supportive Data: A vacuum extractor consists of a soft or rigid cup suction device attached. This device is used as the fetal head. The cup is placed on fetal head, seal is formed. Gentle traction is then applied to deliver the fetal head.	
Equipment: 1. Fetal monitor 2. Vacuum extractor and tubing 3. Vacuum hand pump with gauge	

DELETE – use Mosby's, it is inclusive of the correct practice elements

A. **POLICY:**
1. Application and management of vacuum cup by Physician only.
2. Assistance with pump by an RN or Physician.

B. **INDICATIONS FOR USE:**
- a. Fetal:
  - i. Non-reassuring fetal tracing.
  - ii. Failure to deliver spontaneously following an appropriately managed second stage.
- b. Maternal:
  - i. Need to avoid voluntary expulsive efforts.
  - ii. Inadequate expulsive efforts.

C. **CONDITIONS/CONSIDERATIONS FOR USE:**
- a. Complete dilation and effacement of the cervix.
- b. Engaged fetal head is at station 0 or more
- c. Ruptured amniotic membranes.
- d. Empty bladder and rectum.
- e. Greater than 34 weeks gestation.

D. **CONTRAINDICATIONS FOR USE:**
- a. Manual rotation of the fetal head.
- b. Incomplete dilation of cervix.
- b. Face, brow, breech presentation or transverse lie.
- b. Unengaged vertex.
- c. Suspected macrosomia.
- d. Prematurity ≤ 34 weeks gestation.
- e. Cephalopelvic disproportion.
- f. Previous scalp sampling (relative contraindication).
- g. Suspected fetal bleeding abnormalities.
- h. Failed vacuum extraction if any of the following exist:
  - i. Cumulative traction time exceeds 10 minutes, or 15-30 minutes total procedure time.
  - ii. Extractor cup becomes disengaged ("pop-off") three times with good application to fetal scalp, as defined by the physician.
  - iii. Vertex has not advanced substantially with each traction attempt.
  - iv. Evidence of fetal scalp trauma.

E. **PROCEDURE:**
1. Monitor FHR during procedure.

Review/Revision Date	Clinical Policies & Procedures	Patient Care Quality Committee	Department of OB/GYN	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors Approval
5/09, 05/16			6/09, 08/16	n/a	10/16		7/09

2. Gather equipment:
   a. Pump assembly with gauge.
   b. Sterile tubing and sterile extractor cup with traction handle or preassembled suction cup and tubing.
3. Place sterile equipment on delivery table.
4. Connect the tubing to the pump "nipple"/assembly after MD hands off end of sterile tubing.
5. The physician confirms the vacuum pressure by placing a sterile-gloved hand over the suction cup and squeezing the trigger to apply 100 mmHg of pressure (green zone).
6. When the physician indicates that the cup has been placed over or near the posterior fontanel, raise the vacuum pressure to the yellow zone to initiate adhesion.
7. As contraction begins, the physician or RN assist will raise the vacuum pressure to the **green zone** (500 mmHg). A consistent level of pressure should be kept, using traction on the vacuum extractor to assist with the delivery of the head.
8. When the physician determines the contraction is no longer effective, reduce the vacuum pressure to the **yellow zone** and await the next contraction. Pressure should remain steady.
9. Document each increase and decrease in OB TraceVue. Notify the physician of the amount of time that has been accrued at maximum level. The vacuum should not remain at maximum levels for more than 10 **cumulative** minutes, or 15-30 minutes total procedure time.
10. Document in OB TraceVue: station, number of attempts, time lapsed during procedure, FHR, and type of suction used. Physician to document the number of pop-offs in the patient's medical chart.
11. Notify the RN caring for the newborn that a vacuum assist was used.
12. Notify the Pediatrician that a vacuum assist was used when routine notification of the birth is done.
13. Document the vacuum assist in the Maternal Delivery summary and Newborn Admission records.

F. **REFERENCES:**

1. AAP & ACOG. (2007). Guidelines for Perinatal Care, 6th Edition
2. American College of Obstetricians and Gynecologists. (2006b). Operative vaginal delivery. Clinical Management Guidelines. Washington, DC: Author
3. Caughey, A. B., et al. (2005). Forceps compared with vacuum: Rates of neonatal and maternal morbidity. Obstetrics and Gynecology, 106 (5, Part 1), 908-912.
4. MityVac Manufactures Guidelines for 10007LP M-Style® Mushroom® Cup (2006, November)
5. Royal College of Obstetricians and Gynaecologists. (2005, October). Operative vaginal delivery. Retrieved February 2, 2009 from http://www.guideline.gov
6. Olds, S. B., London, M. L., Wieland-Ladewig, P. A., & Davidson, M. R. (2004). Maternal-Newborn Nursing & Women's Health Care (7th ed.). Upper Saddle River, NJ: Pearson Education, Inc.
7. Simpson, K. R., & Creehan, P. A. (2008). AWHONN Perinatal Nursing (3rd ed.). Philadelphia, PA: Lippincott Raven Publishers.
   i. Vacca, A. (2002). Vacuum assisted delivery. Best Practice & Research: *Clinical Obstetrics and Gynaecology*, 16(1), 17-30;
   ii. Castro, M. A. et al., (2003). Controversies in the use of the vacuum extractor. *Seminars in Perinatology*, 27(1), 46-53

Formulary Line Item Additions/Deletions

Deletions:

- Albuterol tablets
- Erythromycin/sulfixoxazole 200mg/600mg suspension
- Formoterol 12 mcg (Foradil Aerolizer)

Albuterol tablets

Oral route is not guideline recommended. Stocked albuterol tablets and syrup formulations routinely expire. Oral syrup formulation removed from formulary per P&T decision in September. Preferred treatment route is via inhalation (nebulized or through inhaler).

Erythromycin/sulfisoxazole 200mg/600mg suspension

Erythromycin/sulfisoxazole was a macrolide combination used for the treatment of otitis media in pediatric patients. This product was withdrawn from the US market over a year ago and is no longer available from wholesalers.

First line treatment for otitis media in pediatric patients includes amoxicillin or amoxicillin/clavulanate. Alternative agents include cefdinir, cefpodoxime, cefuroxime, ceftriaxone, and azithromycin.

Formoterol 12 mcg (Foradil Aerolizer)

Formoterol 12 mcg capsule (for use with Aerolizer inhaler) is no longer manufactured. Formoterol nebulized solution (Perforomist®) is available on the TCMC formulary.

TRI-CITY MEDICAL CENTER
PHARMACY AND THERAPEUTICS COMMITTEE

Request for Formulary Status Evaluation:

Admission { x } **Deletion { }**

Date: 11/16/2016 **Requestor:** Dr. Oska Lawrence

Trade Name: Zarxio **Generic Name:** Filgrastim-sndz

Dosage form(s): 300 mcg/0.5 mL and 480 mcg/0.8mL single-use prefilled syringe injection
Indications:

1. Neutropenia, in patients with nonmyeloid malignancies receiving myelosuppressive anticancer drugs, undergoing myeloablative chemotherapy followed by bone marrow transplantation (BMT), or due to congenital or idiopathic causes
2. Neutrophil recovery, following induction or consolidation chemotherapy treatment of patients with acute myeloid leukemia (AML)
3. Leukapheresis; mobilization of autologous hematopoietic progenitor cells into the peripheral blood

Efficacy:
The comparison of the analytical properties of filgrastim-sndz and filgrastim (Neupogen®) concluded the agents were highly biosimilar, notwithstanding minor differences in clinically inactive components. The results of the PK and PD similarity studies for doses studied (1, 2.5, 5 and 10 mcg/kg) support no clinically meaningful differences in the efficacy for all of the indications for which filgrastim (Neupogen®) is approved. The efficacy results of Cycle 1 of the filgrastim-sndz EP06-302 study, carried out in patients with breast cancer receiving chemotherapy, demonstrated **non-inferiority**. The safety analysis from this same randomized clinical study did not show any associations for new safety signals. Originator filgrastim (Neupogen®) and biosimilar filgrastim (Zarxio™) have the same indications, dosing recommendations, and dosage formulations.
Safety:

Propensity for medication error: Low

Abuse potential: None

Sentinel event potential:

1) Immunogenicity – antibody development a theoretical risk however incidence for filgrastim has never been determined

Cost comparison with similar Formulary products:

	300mcg	***480mcg***	
Neupogen®	$267.70/vial	$426.30/vial	
Zarxio®	$165.40/PFS	$263.40/PFS	
# of Neupogen® doses dispensed May 2015-May 2016	231 ($61,838.70)	234 ($99,747.18)	
Annual potential cost savings with Zarxio®	**$23,631.30**	**$38,111.58**	**Total = $61,742.88**

Recommendation:

Pharmacy Service recommends addition of Zarxio (filgrastim-sndz) to the TCMC formulary to replace Neupogen (filgrastim) Recommend removal of Neupogen® from TCMC formulary

Recommend modification of the Pharmacy Automatic Therapy Interchange Procedure to provide pharmacists the ability to automatically convert patients to Zarxio (filgrastim-sndz) if Neupogen (filgrastim) is ordered

- Interim P&T approval to make conversion following formulary approval of Zarxio®

Recommend education to nursing staff regarding Zarxio's relationship to Neupogen, changes in product appearance, and administration procedures

Process/Plan to monitor Patient Response:

1. Monitor white blood cell count
2. Monitor for immunogenicity

References:

1. Food and Drug Administration Approves First Biosimilar Product Zarxio. March 6th, 2015.
2. Zarxio® [package insert], Princeton, NJ: Sandoz Inc. 2015.
3. Neupogen ® [package insert], Thousand Oaks, CA: Amgen Inc. 1991.
4. Aapro M, Cornes P, Abraham I. Comparative cost-efficiency across the European G5 countries of various regimens of filgrastim, biosimilar filgrastim, and pegfilgrastim to reduce the incidence of chemotherapy-induced febrile neutropenia. J Oncol Pharm Pract. 2012 Jun;18(2):171-9.