

PERFUSIONIST

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, an incumbent of this position is responsible for the preparation, set-up, sterilization, checking, adjustment, operation, and monitoring of perfusion and related equipment consisting of the extra-corporeal pump, and related equipment and controls used in open-heart surgery and other procedures to perfuse a patient's blood. These responsibilities extend from preliminary stages, during surgery and post-operative stages. May function as a leader of the team, responsible for repairs and electronic adjustments to the pump oxygenator; and maintaining adequate inventory of replaceable items. Provides training and leadership to new members of the Perfusion staff, house staff, nurses and technicians. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Prepares operating room by setting up equipment for extra-corporeal pump for open-heart surgery and other medical procedures, including bringing in solutions or blood, medical supplies, filters, tubes, etc.;

Sets up extra-corporeal pump for particular case depending on age, weight, type of heart problem;

Selects and assembles ancillary supplies and equipment including autotransfusion, ultrafiltration, potassium and calcium analyzer, anticoagulation assay equipment, in-line blood gases, and chemistry monitoring;

Operates the equipment during clinical open-heart surgery and related procedures, i.e. long-term circulatory and/or respiratory support, left and right heart support;

Checks the proper operation of the extra-corporeal pump, such as proper adjustment of pump heads to prevent destruction of blood cells, the proper functioning of component parts and connectors and the proper electrical functionings of pump accessories;

Obtains blood, checks as type, identification for patient, prepares blood, solutions and components for use in the extra-corporeal pump, including sterile tubing, priming of all lines and bubble-free lines;

Monitors operation of extra-corporeal pump during open-heart surgery for proper functioning, blood, proper drug dilution levels, patients temperature and control of hot and cold water to maintain temperature of blood per surgeons instructions;

Adds drugs in order to correct imbalance of chemistry of blood;

Calibrates pump flows and occlusion of pump head;

Makes the necessary corrections during the malfunction of the machine by manual methods, as circumstances dictate without directions;

Maintains continuous oral communication with the surgeon and anesthesiologist;

EXAMPLES OF WORK: (Illustrative Only)

Controls the temperature of the patient by controlling the mechanism for cooling or rewarming the blood;

Receives the blood for perfusion from the Blood Bank, or donor, checks, labels and infuses properly;

Adds drugs to the perfusate during the procedure;

Keeps records of patient during surgical procedure in relation to perfusion rate, oxygenation flow rate, temperature, blood chemistries and time of perfusion;

Disassembles and cleans equipment at conclusion of surgery;

Trains house staff, technicians and nursing personnel in the use of the pump oxygenator and relation to open heart surgery.

REQUIRED KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Thorough knowledge of the operation, monitoring and maintenance of an extra-corporeal pump and related perfusionary equipment; thorough knowledge of medical technology; good knowledge of the techniques, procedures and equipment used in a surgical research laboratory; ability to keep accurate records of vital statistical and replaceable items; ability to work as a member of a surgical team; ability to work under stressful and emergency conditions; ability to repair and adjust equipment quickly; reliability; accuracy; sound judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: High school or equivalency diploma and either: (a) Graduate of a CAAHEP accredited school of cardiovascular perfusion; or (b) certified by the American Board of Cardiovascular Perfusion; or (c) six years experience as a clinical perfusionist; or (d) an equivalent combination of the foregoing training and experience as defined by the limits of (a) through (c).