

STANDARDIZED PROCEDURE
MEDICATION INSTILLATION INTO EXTERNAL VENTRICULAR
DRAIN (Adult, Peds)

I. Definition

The purpose of this standardized procedure is to allow the Advanced Health Practitioner (AHP) to safely administer medication via an external ventricular drain (EVD) catheter port into the ventricles.

II. Background Information

A. Setting: The setting (inpatient vs outpatient) and population (adults vs pediatrics) for the Advanced Health Practitioner (AHP) is determined by the approval of the privileges requested on the AHP Privilege Request Form. If the procedure is being done on a Pediatric patient, make sure Child Life is involved and use age appropriate language and age appropriate developmental needs with care of children, as appropriate to the situation.

B. Supervision

The necessity of the procedure will be determined by the AHP in verbal collaboration with the attending physician or his/her designee. Direct supervision will not be necessary once competency is determined, as provided for in this procedure. At that time, general or indirect supervision is acceptable.

Designee is defined as another attending physician who works directly with the supervising physician and is authorized to supervise the AHP.

The Advanced Health Practitioner will notify the physician immediately upon being involved in any emergency or resuscitative events or under the following circumstances:

1. Patient decompensation or intolerance to the procedure
2. Bleeding that is not resolved
3. Outcome of the procedure other than expected

C. Indications

1. When a physician order is written designating the medication, amount, route and time of injection.
2. Medications used for instillation into an External Ventricular Drain will include the following:
 - a. Gentamicin
 - b. Amphotericin
 - c. Vancomycin
 - d. Other medications require approval from an attending MD and the Pharmacy

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D. Precautions/Contraindications

1. Patient with allergy to that medication
2. Patient with elevated intracranial pressure
3. The medications should be prepared by Pharmacy in a Laminar Air Flow hood.

E. Materials

1. Medication in a 3-5 ml syringe with a 25-gauge 5/8" needle.
2. Chlorhexadine
3. 2"x 2" gauze and tape
4. Sterile gloves, sterile gown, hat and mask

III. Medication Instillation into External Ventricular Drain

A. Pre-treatment evaluation

1. Ensure medication is appropriate for external ventricular drain instillation, order is accurate and medication has not expired.
2. In collaboration with the physician, note the ICP trends, drainage output and clinical condition of the patient.

B. Patient Preparation

1. Take a time-out to check two patient identifiers and review patient allergies.
2. Inform the patient/family of the treatment plan, which includes medication instillation.
3. Position the patient in a comfortable position that gives adequate access to the injection port.

C. Perform Procedure

1. Don hat, mask, sterile gown and sterile gloves.
2. Using sterile technique, scrub injection port at 3-way stopcock with Chlorhexadine for 1 minute.
 1. Wait at least 1 minute.
 2. Using sterile technique, wipe completely dry with 2"x2".
3. Turn 3-way stopcock off to drainage system.
4. Inject medication slowly, stopping if any resistance is met.
5. Leave port closed to drainage for 1 hour.

D. Post-procedure

1. Evaluate patient for neurological changes

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2. Check intracranial pressure

E. Follow-up treatment

1. Write orders to instruct bedside RN to leave port closed to drainage for one hour and reopen after the allotted time period.
2. Instruct bedside RN to notify NP or MD if increased ICP > 20 mm HG occurs during that time.

F. Termination of treatment

1. Allergic reaction to medication
2. If resistance is met when injecting medication
3. Intracranial pressure sustained at greater than 20cm. H₂O

IV. Documentation

A. Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings.
2. Record the time out, indication for the procedure, procedure, EBL, the outcome, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note, as well as any teaching and discharge instructions.

B. All abnormal findings are reviewed with supervising physician

V. Competency Assessment

A. Initial Competence

1. The Advanced Health Practitioner will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.
2. The Advanced Health Practitioner will demonstrate knowledge of the following:
 - a. Medical indication and contraindications of medication instillation into EVDs.
 - b. Medications appropriate for external ventricular drain instillation
 - c. Risks and benefits of the procedure
 - d. Related anatomy and physiology
 - e. Consent process (if applicable)
 - f. Steps in performing the procedure
 - g. Documentation of the procedure

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- h. Ability to interpret results and implications in management.
3. Advanced Health Practitioner will observe the supervising physician perform each procedure three times and perform the procedure **three** times under supervision.
4. Supervising physician will document Advanced Health Practitioner's competency prior to performing procedure without supervision.
5. The Advanced Health Practitioner will ensure the completion of competency sign off documents and provide a copy for filing in their personnel file and a copy to the medical staff office for their credentialing file.

B. Continued proficiency

1. The Advanced Health Practitioner will demonstrate competence by successful completion of the initial competency.
2. Each candidate will be initially proctored and signed off by an attending physician. Advanced Health Practitioner must perform this procedure at least **three** times per year. In cases where this minimum is not met, the attending must again sign off the procedure for the Advanced Health Practitioner. The Advanced Health Practitioner will be signed off after demonstrating 100% accuracy in completing the procedure.
3. Demonstration of continued proficiency shall be monitored through the annual evaluation.
4. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred, a copy of the procedure note will be submitted.

VII. RESPONSIBILITY

Questions about this procedure should be directed to the Chief Nursing and Patient Care Services Officer at 353-4380.

VIII. HISTORY OF POLICY

Revised June 2012 by Subcommittee of the Committee for Interdisciplinary Practice

Reviewed June 2012 by the Committee on Interdisciplinary Practice

Prior revision October 2008

Approved June 2012 by the Executive Medical Board and the Governance Advisory Council.

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