

VASCLUAR ACCESS DEVICES

Background

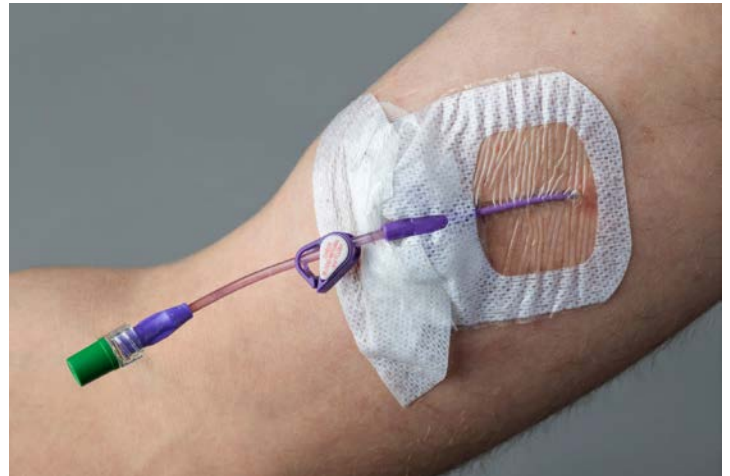
Vascular access devices allow for repeated, long-term venous access required to draw blood or administer intravenous medication or infusion therapy. There are many different types and brands of access devices, but the two main categories are peripherally inserted central catheters (PICC) and implantable venous access device (Port). The individual's need for access, length of use, risk or infection, activity level, and lifestyle may influence the decision for type of device.

A PICC is a thin, flexible tube inserted into an upper extremity vein and passed through to the larger veins near the heart. PICCs can vary in size, brand, number or lumens or valves. Catheters without valves will require a clamp to prevent retrograde blood flow or air in the line. Securing the PICC is essential to prevent migration of the tubing or dislodgment. Maintenance protocols may include use of a routine saline flush and weekly sterile dressing change. Other products like antimicrobial patches or end caps may also be used to prevent bacterial growth or infection. Blood pressure readings should be avoided in the extremity with the PICC.

A Port consists of a catheter threaded into a large vein near the heart and the port attached to it. Both parts remain under the skin. When the line needs to be accessed, a special needle is inserted through the skin into the rubber top of the port. Accessing a port is a sterile procedure.

Potential complications of vascular access devices include infection at the site or in the line, occlusion, broken or damaged tubing, or air embolism. Signs and symptoms of air embolism include:

- Lightheadedness
- Decreased blood pressure
- Increased heart rate
- Chest pain
- Anxiety
- Shortness of breath



Top Takeaways for School Considerations

Vascular access may be necessary for infusion therapy or treatment of a medical condition. Damage or removal of the line can be a life-threatening medical emergency.

A dislodged or leaking tubing, or any student complaint of sudden weakness, chest pain, or change in alertness should be assessed immediately by the school nurse.

Any break in the catheter should be clamped immediately at a point closer to the chest than the leak. Quick access to pressure clamps and a pressure dressing is important.

The area around the catheter insertion should always be covered by a clear dressing. Reinforcement may be necessary but routine dressing replacement is a sterile procedure that is not recommended to be performed at school.

A port will look like a bump under the skin and is round, about the size of a quarter.

Monitor for signs and symptoms of infection. Fever, redness, swelling, drainage, or pain require follow-up.

Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnosis of risk for infection and risk for injury
- Current diagnosed health condition including date of diagnosis, progress of disease process and other chronic health conditions
- Current medication and treatment orders (consider schedule, equipment needs and side effects)
- Assessment of implanted medical device (consider location, date of surgical placement, and device specific information)
- Use of specialized equipment, adaptive equipment, orthotics
- Activity and positioning precautions and/or restrictions
- Equipment troubleshooting (consider equipment/device user manual, battery, charger)
- Consider emergency care plan(s) (ECP) and emergency evacuation plan(s) (EEP) as related to medical needs in the school setting, and staff education/training, as appropriate

Discussion Starters for Educational Team

1. Has the school staff been trained to implement the student-specific emergency plan?
2. Would the student benefit from evaluations or assessments in any of the following areas: physical therapy, occupational therapy, speech and language therapy, assistive technology, adapted physical education, functional behavior, psychology, hearing and vision?
3. Would the student benefit from additional academic support and/or modified education (e.g., copies of notes, extra time, reduced workload, simplified instructions, alternative formats for presentation of material, 504/IEP)?
4. Does the student require activity precautions to prevent injury?
5. Does the classroom environment support the student's needs and/or equipment (e.g., desk/seating options, flash pass for bathroom or nurse)?

Resources

Cystic Fibrosis Foundation: Vascular Access Devices- PICCS and Ports
cff.org/managing-cf/vascular-access-devices-piccs-and-ports

USA Oncology Centers: Venous Access
usaoncologycenters.com/venous-access/



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