CATEGORY RESOURCE GUIDE

Vascular access products

Included in this document:

(Click to view each section)

Vizient award overview

Awarded suppliers

MS9610 – Bard (PICCs & midlines)
MS9620 – Bard (ports & port protectors)
MS9631 – AngioDynamics (dialysis & aspheris)
MS9632 – Bard (dialysis & aspheris)
MS9633 – Covidien (dialysis & aspheris)
MS9634 – Teleflex (dialysis & aspheris)

Distribution

Both direct and distributed through the following distribution channels:

Medical-surgical

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Update your preferences through our Subscription Manager by selecting Supply Assurance Weekly Digest.

Questions? Contact supplyassurance@vizientinc.com, pharmacyquestions@vizientinc.com, novaplus@vizientinc.com.

Making supply uncertainty a thing of the past, not the future

To help members maintain supply assurance for essential products, Vizient shares insights via **category resource guides** on vizientinc.com. These category-specific documents contain comprehensive manufacturing, logistics and utilization insights to help members source supplies with confidence. Category resource profiles are one way we're building supply assurance together.

Market landscape

The Vizient vascular access portfolio is separated in 3 subcategories Ports/ ports accessories. Piccs/Midlines, and Dialysis Catheters. See below for further details and category knowledge.

Manufacturing insights

Product overview

Ports

A chemotherapy port (also known as a "port-a-cath") is a small device that is implanted under your skin to allow easy access to your bloodstream. A port can be used to draw blood and infuse chemotherapy drugs. Some chemotherapy medications can only be given through a port, as they are too caustic to be delivered into a peripheral vein.

If you will be having several infusions of chemotherapy (some oncologists recommend a port if you will more than four treatments), a port is often easier than inserting an IV each time. It can also allow you to have some chemotherapy at home instead of at the hospital or in a clinic.

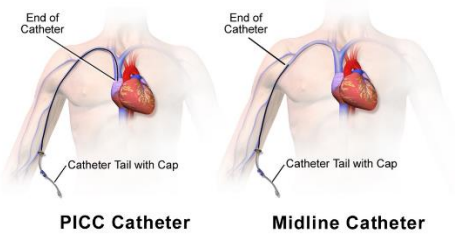
Catheter for Hemodialysis

A dialysis catheter is a catheter used for exchanging blood to and from the hemodialysis machine from the patient.

The dialysis catheter contains two lumens:

- Venous- pertaining to the blood in the pulmonary artery, right side of the heart, and most veins, that has become deoxygenated and charged with carbon dioxide during its passage through the body and that in humans is normally dark red.
- Arterial - This is a confusing terminology for layperson, because both lumens are in the vein. The arterial lumen (typically red) withdraws blood from the patient and carries it to the dialysis machine, while the venous lumen (typically blue) returns blood to the patient (from the dialysis machine). Flow rates of dialysis catheters range between 200 and 500 ml/min.

Piccs/Midlines



- PICC line- Peripherally inserted central catheters (PICC) are central lines and are used for longer lengths of intravenous therapy. It is a type of long catheter that is inserted through a peripheral vein, often in the arm, into a larger vein in the body, used when intravenous treatment is required over a long period.
- Midline catheters- are peripheral lines for medication or fluid delivery.

Selection factors

When choosing in vascular access, here are some characteristics to consider:

- Ports- MRI compatibility, catheter material, and catheter size
- Chronic/Acute Hemodialysis- Size, Length of cuff, number of Lumnes, tip type, Straight or curved, sideholes
- Piccs/Midlines- Size, number of lumnes, catheter material

OEM and manufacturing location

- BD Mfg Renosoa Mexico and Salt lake city
- Covidien/ Medtronic will not disclose
- Teleflex Mexico
- Merit Medical- Upstate new york and Costa Rica
- Medcomp- Mexicali, Mexico, Crown Point, Indiana, Harleysville, Pennsylvania

Raw materials

- Ports – Titanium, Plastic (polyoxymethylene), Silicone Overmolds
- Huber needles- Resins and stainless steel
- Dialysis Cathers- polyurethane, resin and silicone
- PICCs – Silicone and Polyurethane
- Midlines- Polyurethane
- Headerbags- Tyvek

The lastest manufacturing insights are available here.

Regulatory and approvals

- FDA- Guidance On Premarket Notification [510(K)] Submission For Short-Term And Long-Term Intravascular Catheters
- FDA- Implants and Prosthetics | FDA
- FDA 510 K - 510K approval process

Non-awarded suppliers

Merit medical Purchased Angio Dialysis catheters and we are working on an asset sale transfer

Logistics insights

Transportation/shipping

Products within this space are heavily purchased directly from the manufacturer.

Freight and Rail

See additional freight update here.

Product storage

- Shelf life for ports and Dialysis Catheters are three years

Utilization insights

Clinical contract support resources

- AJKD- Clinical Practice Guidelines for Vascular Access
- ONS- Evidence-Based Standards Guide the Use and Maintenance of Venous Implanted Ports
- NIH- Percutaneous Central Catheter (Picc)
- NIH Ports - Results for the peripherally inserted central catheters versus PORTs comparison
- CDC- Tips for preventing dialysis infections.
- CDC- offers guidelines for Intravascular Catheter-Related Infections
- NIH Dialysis- Hemodialysis
- FDA- Implanted Blood Access Devices for Hemodialysis

Building supply assurance

Potential supply vulnerabilities

None at this time

Conservation strategies

Because predicting the next supply shortage is impossible, it is important that healthcare providers not only adopt and implement care practices strategies to conserve critical products and supplies, but it is equally as important to sustain leading practices that will help ensure the availability of essential products post recovery and in the future. Some hospitals have reported decreasing their intravenous solution use by as much as 50 percent in some care areas by continuing to adhere to the conservation strategies implemented during the recent shortages
Healthcare providers and other leading organizations have identified and recommend the following actions:

- Work with Supplier Local rep

Additionally, with other products and services:

- Assess and identify all hospital services
- Identify and list critical products, supplies, and resources required to sustain operation of those areas identified and ranked in the first step
- Maintain the internal planning team document with accurate information. Review and update the document on a routine basis with current employee contact information. If a team member no longer works in the organization, identify the replacement and communicate the information to all stakeholders
- Communicate practice changes and procedures frequently to staff and stakeholders
- Hold regularly scheduled planning meetings in the absence of a supply chain shortage or event. This will help to ensure that identified processes and protocols remain relevant and any issues requiring revisions and/or updates are addressed in advance of a shortage or disaster

If your organization has implemented conservation strategies for Vasular Access, or any other category, please share your information here. The information you share will be anonymous? unless you grant Vizient permission to share.

Supply chain programs

MedComp participates in the Vizient Pedatric Program for dialysis and aspheris. Bard participates in the Vizient Pediatric Program for PICCS and Midlines, The Vizient Pediatric Program is a supply chain program focused on delivering savings, quality, and choice from an industry-leading pediatric product portfolio. Additional information is available here.

Planning for disruptions

Best practice strategies

Vizient offers the following best practices to help members manage disruptions. These suggestions are available to help you gain insight on how the industry is managing supply challenges.

If your inventory is low

Vizient is committed to bringing hospitals, manufacturers, distributors and the industry together to talk about this issue and any long-term implications. We feel continued dialogue around the issue by experts; hospitals, manufacturers, distributors and industry will be crucial to ultimately arriving at a solution to vexing issue. During critical supply periods, members should continue to order their normal levels of products in order to ensure continued availability for all institutions.

- If you begin to experience a shortage:
- Evaluate your current supply
- Contact your local supplier representative and report exactly how many days' supply you have left.
- If you are not getting a response from suppliers, contact Vizient so we can facilitate communication between member and supplier; provide whether you are ordering direct or through distribution (med/surg or pharmacy), and indicate supplier and distributor (if applicable) when you contact Vizient.
- We encourage you to continue the conversation within your organization, with your peers and with the manufacturers and distributors to identify ways to manage your ongoing I.V. solutions needs.
- Submit inquiries to disasterresponse@vizientinc.com.

Expedite supply resolution

To expedite resolution for supply issues, contact your local supplier and provide the following information:

- The description and item number of the product that is experiencing a shortage
- Whether you are purchasing directly or through an Authorized Distributor
- Days' supply remaining in your inventory

If expanding your facility

We suggest members notify suppliers when expanding their facilities to assist in planning and anticipate increases in allocations. You should consider notifying your suppliers of at least three months ahead of the completion of your facility to ensure sufficient capacity.

Building supply assurance together

Collaboration among suppliers, distributors, members and Vizient strengthens the assurance of supply for all stakeholders. Our wealth of experience, actionable data and predictive planning helps to strengthen supply assurance. Further, our work with stakeholders focuses on improving supply chain risk mitigation as we collaborate to enhance data, increase supply visibility and expand inventory access.

Four themes keep us centered and are the pillars of our supply chain assurance efforts: insights, access, enablement and advocacy. Learn more about our supply assurance strategy.

In the event of a supply disruption, Vizient will publish a product disruption brief to the Supply Assurance webpage. Curated by Vizient experts, these documents provide a summary of current conditions and strategies to manage product-level disruptions.

In addition to our disruption briefs, Vizient also compiles all known disruptions into the monthly Supply Update Executive Summary which tracks all supply chain disruptors, including current market challenges, category-specific product updates and recovering markets.

Whether a supply disruption is the result of a natural or human-made disaster, it is imperative that members are informed. The Vizient Disaster Preparedness webpage was developed to help providers meet supply chain needs before, during and after an event. The Supply Update section of the guide is updated on a frequent and routine basis with communication from all awarded suppliers that have manufacturing facilities in areas impacted by a disaster. Additionally, a status update list of those

manufacturers whose operations have been affected, as well as a list of impacted product(s), will be maintained and updated as that information is received from supplier.

The importance of an internal planning team

Identifying an internal planning team is imperative to managing supply, mitigating risks and sustaining operations during a supply shortage. According to the Supply Chain Disaster Preparedness Manual developed by the CDC, internal teams should consist of representatives from supply chain, purchasing, emergency management, each clinical/care delivery area, inventory staff, receiving and distribution staff. Relative to medication and solutions, Vizient member feedback indicated the pharmacy department as an integral member to the internal team, as clinical/pharmacy practice changes may occur. Additional members may include the facilities safety manager, security, risk management, legal, marketing and communications, and public relations.

A simple internal team planning document will help to identify, contact and quickly convene relevant team members. See the sample below:

Name	Title	Department/role	Phone	Email

Once an internal team is identified, additional considerations before beginning the development and implementation of a recovery plan include the following:

- The team's goals
- The responsibilities of each planning team member
- Other department/team members who may need to be involved
- Frequency of team meetings
- How the goal/mission be accomplished
- How information will be documented and communicated to the broader audience
- A current framework for success either within your facility or from a leading organization

Stakeholder communication

During supply chain product disruptions, it is vital that accurate and timely information is disseminated to internal and external stakeholders. The following actions should be considered in an effort to facilitate and ensure informed decisions:

- Designate the point person or persons who will be responsible for developing, disseminating and monitoring all communications coming from the internal planning team.
- The internal planning team should collaborate key messages/information to stakeholders, such as changes in policies and/or practice changes.
- Clearly communicate the roles and responsibilities of all staff based on the agreed upon recovery plan. If there are changes to the plan at any time, timely communication of those changes will help to increase risk mitigation and minimize interruption of patient care.
- Establish communication mechanisms for information exchange. Examples include but are not limited to regularly scheduled briefings and meetings, in-services, staff trainings, live/recorded webinars, memos and emails.

- Determine the frequency of reminders and updates regarding supply disruption status and anticipated resolution.
- Frequent updates and reminders after a supply disruption has been mitigated or eliminated help to ensure ongoing success and sustainability of best practices.

Supply management and logistics

A leading practice identified in managing recent shortages is a centralized management approach of impacted product codes. A key responsibility of the internal planning group is to identify all affected product codes and to determine the amount of supply on hand, expected and any allocation protocols implemented by the supply source. Once the current product status is determined, the following actions are recommended:

- Update and maintain an accurate inventory list. Each care area that utilizes any product code on the inventory list should identify a point person to collect on hand and usage levels on an agreed upon frequency. That information should be reported back to the internal planning team. Inventory can either be managed by care delivery areas or in a centralized manner.
- Identify space in the facility to store, manage and distribute product. Designate authorized personnel responsible for maintaining the inventory (expiration dates temperature, ventilation, utilization, equipment maintenance and repair, etc.).
- Develop and seek approval for the inventory management protocol and communicate this information to all stakeholders.
- Update and maintain accurate purchase order and allocation protocols from the contracted supplier and your group purchasing organization (GPO).
- Update and maintain accurate emergency contact information for all suppliers as well as internal stakeholders. This process should be done at least every six months.
- Review the inventory management status on an agreed upon frequency with the internal planning group. Assess for barriers to its effectiveness, implement any changes necessary and communicate those changes to all stakeholders.

Planning for all levels of care and ancillary products

Feedback from lessons learned indicated the need to include all levels of care and ancillary products, if applicable, in the conservation plan. If your provider system has children's hospitals, ambulatory surgery centers, outpatient clinics and/or long-term care facilities, utilization and logistics of products and supplies must be incorporated into the plan. Additionally, it is vital that ancillary products are considered when contemplating allocations and purchase orders. During the recent drugs and solutions shortages, as large volume solution bags went on back order, smaller volume bags, compounding products, and syringes also went on back order because of practice changes. Therefore, conservation planning should include actual and the additional ancillary products that may be required to sustain a clinical and/or operational practice change.

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