

CATEGORY RESOURCE GUIDE

Respiratory routine disposables

Included in this document

(Click to view each section)

Market landscape

Manufacturing insights

- [Product overview](#)
- [Selection factors](#)
- [OEM and manufacturing locations](#)
- [Raw materials](#)
- [Regulatory and approvals](#)
- [Non-awarded suppliers](#)

Logistics insights

- [Transportation/shipping](#)
- [Product storage](#)

Utilization insights

- [Clinical contract support resources](#)

Building supply assurance

- [Potential supply vulnerabilities](#)
- [Conservation strategies](#)
- [Supply chain programs](#)
- [Planning for disruptions](#)

Vizient award overview

Awarded suppliers

MS1082 – Flexicare
 MS1083 – Fisher & Paykel
 MS1084 – Medline Industries
 MS1085 – Sensimedical
 MS1086 – SunMed Group Holdings
 MS1087 – Sunset Healthcare Solutions
 MS1088 – Teleflex
 MS1089 – Vyair Medical
 MS1147 – Vyair Medical
 MS5454 – Hamilton Medical

Distribution

Both direct and distributed through the following distribution channels:

Medical - surgical



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

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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 respiratory routine disposables category contains a variety of products that are manufactured in various locations. Suppliers are now focusing more on supply assurance, increasing their manufacturing capabilities with some moving their manufacturing either near-shore or onshore. Raw material and manufacturing labor prices continue to rise, affecting supplier costs. Most products in this category require Food and Drug Administration (FDA) approval, which can lead to delayed manufacturing times if these approvals are not met within a certain time. It is recommended hospitals keep three months of critical stock on hand, provide accurate forecasting for suppliers, and consider alternative suppliers or distributors on and off contract to ensure supply availability.

Manufacturing insights

Product overview

- Nasal/oral pharyngeal airways, airway holders and airway accessories
- Incentive spirometers
- Humidifiers and accessories
- Filters
- Oxygen delivery devices (oxygen nasal cannulas, oxygen masks, oxygen tubing and accessories)
- Sodium chloride bullets
- Sterile water for inhalation
- Flowmeters and regulators
- Spirometers for measuring Forced Vital Capacity (FVC), Forced Expiratory Volume in 1 second (FEV1) and other respiratory values
- Ventilator circuits and accessories
- BiPap/CPAP circuits and accessories
- Large volume nebulizers and accessories

Selection factors

Respiratory products were previously divided into various categories where products did not necessarily align. Restructuring of the respiratory portfolio of products was done to realign related products into new categories and sub-categories:

Category/subcategory	Products
Routine respiratory disposables	Nasal/oral/pharyngeal airways, holders, accessories, incentive spirometers, humidifiers/accessories, Heat Moisture Exchangers (HME)/filters, oxygen delivery devices/accessories, sodium chloride bullets, sterile water for inhalation, ventilator circuits/accessories, BiPap/CPAP circuits/accessories and large volume nebulizers/accessories
Subcategory: flowmeters and regulators	Flowmeters, regulators and accessories
Subcategory: respiratory therapy diagnostics	Spirometers and spirometer accessories

OEM and manufacturing location

- Hamilton Medical (Innovative Technology for its humidifier) – U.S. and Romania
- FlexicareFisher & Paykel Healthcare – New Zealand, Mexico
- Sensimedical (Novaplus®) – El Salvador
- Sunset Healthcare Solutions – China, Taiwan, Turkey, UK, U.S.
- Teleflex -Malaysia, China, Mexico, Taiwan

Raw materials

- Plastic/resin
- Silicone
- Vinyl
- Mediprene
- Polyvinyl chloride (PVC)
- Some connectors that contain jumpers and resistors/wires
- Metals
- Water
- Di(2-ethylhexyl)phthalate (DEHP)
- Aluminum stampings with

The latest manufacturing insights are available [here](#).

Regulatory and approvals

Class 1 FDA approval is needed for High Flow Nasal Cannula (HFNC), oxygen masks, oxygen nasal cannulas, ventilator and BiPap/CPAP circuits. U.S. Pharmacopeia Sterile Water for Inhalation Monograph approval is needed for sterile water.

Non-awarded suppliers

- Neotech Products – artificial airway holders, nasal cannulas, oxygen delivery connectors/adapters
- POM Medical – oxygen masks
- ICU Medical -- artificial airway accessories/holders, nasal cannulas, oxygen connectors/adapters, pharyngeal/nasal/oral airways, spirometers, humidifiers, ventilator circuits/accessories, HMEs/filters,
- Samova – pharyngeal airways; humidifiers, spirometers, sterile water for inhalation, sterile water for irrigation, ventilator circuits/accessories, HMEs/filters, sampling ports/lines
- Southmedic – artificial airway accessories, bite blocks, oxygen masks
- Cook Group – artificial airway holders, nasal cannulas, oxygen delivery connectors/adapters, sampling ports/lines

Logistics insights

Transportation/shipping

- Varies by supplier: air, freight and sea
- Sourcing: Mexico, China, and some domestically
- Ports of entry: Ports in California and Texas cities, as well as Boston
- Days to process through ports of entry: two to seven
- This varies by supplier – some major distribution centers are in Texas, California, Mississippi, Nevada (Reno), Massachusetts (Boston) and other parts of the U.S. In addition, many suppliers use local distribution centers.

Products are ordered both direct and distributed for most of the contracts in this category.

See additional freight update [here](#).

Product storage

This varies by product type: typically 16 months or greater at room temperature.

Utilization insights

Clinical contract support resources

This varies by supplier – most of them have a clinical support team that provides education and training on products, whether it is virtual or in person.

Building supply assurance

Potential supply vulnerabilities

China/Taiwan and U.S./Mexican border geopolitical issues and any natural disasters

Conservation strategies

Many of the suppliers have dual manufacturing capabilities with multiple sites of where the products are made. A lot of them have safety stock levels at their manufacturing plants as well as distribution centers.

Because predicting the next supply shortage is impossible, it is important that healthcare providers not only adopt and implement care practice 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. For example, some hospitals have reported decreasing their intravenous solution use by as much as 50% 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:

- Maintain at least three months of stock on hand.
- Provide accurate forecasts to suppliers and anticipate seasonal vs. annual demand.
- Commit to a supplier with supply assurance strategies in place – typically these suppliers will service their current customers before taking on new customers.
- Consider committing to Novaplus Enhanced Supply (NES) program suppliers.
- Keep an accurate cross-reference of critical products on hand for supply disruptions.

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 respiratory routine disposables or any other category, share your information [here](#). The information you share will be anonymous unless you grant Vizient permission to share.

Supply chain programs

Diversity

Sunset Healthcare Solutions is a Vizient diversity supplier. Vizient's Supplier Diversity Program supports the development of minority-, woman-, disability-, LGBT- and veteran-owned business enterprises that meet high-quality standards. We also strive to work with suppliers who proactively seek strategic partnerships with diverse companies. For more information, click [here](#).

Novaplus

Sensimedical is a Vizient Novaplus supplier. Through Novaplus, access to products goes deep with more than 15,000 individual line items – including numerous high-demand items. The brand encompasses a broad range of categories needed across the care continuum, such as: anesthesia, business products and services, diagnostic imaging, food, laboratory, medical, orthopedic, pediatric, pharmacy, respiratory and surgical. Today as the capabilities, expertise and purchasing power of Vizient grow, we offer expanded value so you unlock even more from your private-label purchasing. For more information, click [here](#).

Novaplus Enhanced Supply

Sensimedical is part of the Novaplus® Enhanced Supply (NES) Program. A part of Novaplus, the industry's longest-running private label program, NES delivers additional inventory of essential medications and products, including PPE, critical to your clinicians' ability to provide immediate and high-quality patient care.

In addition to incremental product in the marketplace, this innovative contracting model helps providers and suppliers increase supply assurance through clearer data insights, diversified relationships, and visibility into logistical and other considerations that affect production – enabling greater stability between supply and demand.

For information, click [here](#).

Impact Standardization

Flexicare, Fisher & Paykel, Medline, Sensimedical, SunMed, Sunset Healthcare and Vyaire participate in the Impact Airway Management Standardization Program, which improves procurement processes on commonly purchased products and financially reward standardization efforts while reducing product variation and improving procurement processes on commonly purchased products. Since 1996, members have earned more than \$1.5 billion in cash rebates through the programs. With 12 programs to choose from and built-in flexibility within each program, it's easy to gain additional value beyond price for your organization. For more information, click [here](#).

Planning for disruptions

Distributor recommendations

- Products in this category can be purchased direct or distributed from a Vizient Authorized Distributor.

Best practice strategies

- Provide suppliers with accurate annual and seasonal spike forecasting.
- Keep three months of products on hand.
- Utilize distributors or alternative suppliers when necessary.

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 (medical/surgical 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 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 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 Centers for Disease Control and Prevention (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. For example, 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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As the nation's largest member-driven health care performance improvement company, Vizient provides solutions and services that empower health care providers to deliver high-value care by aligning cost, quality and market performance. With analytics, advisory services and a robust sourcing portfolio, we help members improve patient outcomes and lower costs.