



Sustainable Procurement Directory

The sustainable procurement directory provides Practice Greenhealth members with guidance on over 120 products and services health care organizations can target for sustainable procurement. The directory identifies key environmental considerations for each product or service, where to obtain more information, and the rationale for purchasing sustainably. This resource supports anyone who purchases or makes decisions about purchasing in health care. Be sure to download the latest version. Please let us know of any questions or comments by emailing procurement@practicegreenhealth.org.

Medical products

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As part of the sustainable procurement directory, this section provides guidance on over 50 medical products health care organizations can target for sustainable procurement.

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Dental

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Amalgam separators	Meet requirements of regulation (EPA Rule)	Use amalgam separators to remove mercury from all dental chairs	EPA's rule requires dental offices to comply with guidelines, which align with practices recommended by the American Dental Association, including the use of mercury amalgam separators.	Mercury from dental offices is the main source of mercury discharges to municipal water treatment plants. Once released into the aquatic environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the United States.	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan
Dental fillings	n/a	<ul style="list-style-type: none"> Mercury-free, and Specify labeling mercury containing devices 	Mercury elimination tools and resources	Mercury is a highly potent neurotoxin. Once released into the aquatic environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the United States. Exposure can cause a range of different health impacts especially to children and fetuses.	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan

Laboratory

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Distillation equipment or service	n/a	<ul style="list-style-type: none"> • Distill, or • Recycle, or • Reprocess laboratory solvents, alcohols, Xylene, Formalin waste, or • Contract for distillation service off-site; or • Purchase a neutralizing agent for formalin 	University of WA snapshot	Distilling lab xylene and formalin reduces hazardous waste and associated costs; it provides an end product for reuse to avoid purchasing new, saving money	n/a
Fixatives, stains	n/a	<ul style="list-style-type: none"> • Mercury-free (alternative to B5, Zenker fixative/stain), and • Specify that mercury containing devices should be properly labeled 	Mercury elimination tools and resources	Mercury is a highly potent neurotoxin. Once released into the aquatic environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.	Safer chemicals mercury elimination goal: Achieve mercury-free status or develop and implement mercury elimination plan
Lab reagents	n/a	<ul style="list-style-type: none"> • Mercury-free 	Environmental considerations for lab equipment	Mercury is a highly potent neurotoxin. Once released into the environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.	Safer chemicals mercury elimination goal: Achieve mercury-free status or develop and implement mercury elimination plan

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Microscope, fluorescence – Bulbs, Lamps	n/a	<ul style="list-style-type: none"> Mercury-free bulbs/lamps (no metal halide or mercury) 	My Green Lab	Energy efficient and mercury-free lights for fluorescence microscopes use less energy and are more stable over time. Cost savings possible (total cost of ownership).	Safer chemicals mercury elimination goal: Achieve mercury-free status or develop and implement mercury elimination plan

Medical Supplies

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Blood pressure devices (sphygmomanometers), cuffs	n/a	<ul style="list-style-type: none"> Mercury-free; and Reusable/recyclable cuffs, and Specify that mercury containing devices should be properly labeled as such 	Mercury elimination tools and resources	Mercury is a highly potent neurotoxin. Once released into the environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan
Breast pumps and accessories	n/a	<p>Meet the safer chemicals PVC and DEHP-free reduction goal:</p> <ul style="list-style-type: none"> Specify products meet the safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories 	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : Eliminate PVC and DEHP from at least two of the specified product categories

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Compression therapy	n/a	Meet the smarter purchasing challenge for single use device reprocessing <ul style="list-style-type: none"> Collect and purchase 20% reprocessed non-invasive devices compared to total 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing and then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	Smarter purchasing challenge single use device reprocessing : collect and purchase 20% reprocessed non-invasive devices compared to total
Electrophysiology (EP) catheters	n/a	<ul style="list-style-type: none"> Reusable, or Reprocessable, and Buy back reprocessed 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing and then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	n/a

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Endotracheal tubes	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories
Respiratory tubing (including from wall supply)	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Enteral nutrition products (including all tubing)	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories
Esophageal dilators (bougies)	n/a	<ul style="list-style-type: none"> Mercury-free, and Reusable, and Specify that mercury containing devices should be properly labeled as such 	Mercury elimination tools and resources	<p>Mercury is a highly potent neurotoxin. Once released into the environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.</p>	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Exam gloves	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories
Face and oxygen masks	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories

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Gastrointestinal tubes (Miller Abbott and Cantor)	n/a	<ul style="list-style-type: none"> Mercury-free, and Reusable Specify that mercury containing devices should be properly labeled as such 	Mercury elimination tools and resources	<p>Mercury is a highly potent neurotoxin. Once released into the environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.</p>	<p>Safer chemicals mercury elimination goal: Achieve mercury-free status or develop and implement mercury elimination plan</p>
Laryngeal mask airways	n/a	<ul style="list-style-type: none"> Reusable, and Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories 	<p>Moving (back) to reusables in the operating room</p> <p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.</p> <p>Two key problems associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Medical surgical supplies (distribution)	EPA SmartWay Partner	<p>Meet the transportation goal for supply chain practices:</p> <ul style="list-style-type: none"> Request vendors become an EPA SmartWay Shipper Partner 	<p>Meet the transportation supply chain goal</p> <p>EPA SmartWay partner list</p>	<p>Transportation is now the leading contributor of U.S. greenhouse gas emissions. Air pollution exposure from transportation can lead to: asthma and respiratory illness, heart disease and stroke, cancer, low birth weights, reproductive toxicant, premature death, and traffic safety issues.</p>	<p>Transportation supply chain practices goal: increase the percentage of EPA SmartWay partners amongst the top 10 distributors (by annual expenditure) to 80% or greater, and/or achieve an idle-free campus</p>
Nasal cannulas	n/a	<p>Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories</p>	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>

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Nasogastric tubes	n/a	<p>Meet the safer chemicals PVC and DEHP-free reduction goal:</p> <ul style="list-style-type: none"> Specify products meet the safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories 	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>
Non-rebreather face masks	n/a	<p>Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories</p>	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Tracheostomy tubes	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>
Parenteral infusion devices and sets	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	<p>Guidance for the safer chemicals PVC and DEHP reduction goal</p> <p>Safer chemicals PVC and DEHP reduction goal product lists</p>	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	<p>Safer chemicals PVC and DEHP reduction goal: eliminate PVC and DEHP from at least two of the specified product categories</p>

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Patient bedside products (basins, pitchers)	n/a	<ul style="list-style-type: none"> Reusable (stainless steel), or Reprocessible, or Recyclable plastic (collect and recycle) or Contains recycled content (postconsumer) 	Health care plastics: untapped feedstock, untapped business opportunity Medical plastic recycling in the OR: implementation module	Disposable products generate waste and waste costs when there are alternatives that conserve resources and result in savings.	n/a
Patient positioning devices	n/a	<ul style="list-style-type: none"> Reusable, and PVC/DEHP-free 	Moving (back) to reusables in the operating room	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a
Pulse oximetry	n/a	Meet the smarter purchasing challenge for single use device reprocessing <ul style="list-style-type: none"> Collect and purchase 20% reprocessed non-invasive devices compared to total, or Reusable 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing and then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	Smarter purchasing challenge single use device reprocessing: collect and purchase 20% reprocessed non-invasive devices compared to total

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Thermometers (such as lab, fever)	n/a	<ul style="list-style-type: none"> Mercury-free, and Reusable, and Specify that mercury-containing devices be properly labeled 	Mercury elimination tools and resources	Mercury is a highly potent neurotoxin. Once released into the environment, certain bacteria can change mercury into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish. Eating fish and shellfish is the main source of people's exposure to methylmercury in the U.S. Exposure can cause a range of different health impacts especially to children and fetuses.	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan
Tourniquets	n/a	<ul style="list-style-type: none"> Reusable, or Reprocessable, and Buy back reprocessed 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing and then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	n/a

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Urological, general (irrigation/urology sets and solutions, urinary catheters)	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories
Vascular catheters (including umbilical vessel catheters, extracorporeal membrane oxygenation, cardiopulmonary bypass tubing)	n/a	Meet the safer chemicals PVC and DEHP-free reduction goal: Specify products meet the safer chemicals PVC and DEHP reduction goal to eliminate PVC and DEHP from at least two of the specified product categories	Guidance for the safer chemicals PVC and DEHP reduction goal Safer chemicals PVC and DEHP reduction goal product lists	<p>Two key problems are associated with PVC: dioxin, a known human carcinogen, can be formed during the manufacture of PVC, and during the incineration or burning of PVC products.</p> <p>DEHP, a phthalate used to soften PVC plastic that can leach from PVC medical devices, is linked to reproductive birth defects and other illnesses. The greatest human health concern is among young male infants with prolonged exposures, therefore, an emphasis on removing DEHP containing devices from NICUs.</p>	Safer chemicals PVC and DEHP reduction goal : eliminate PVC and DEHP from at least two of the specified product categories

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Warming devices	n/a	<ul style="list-style-type: none"> • Reusable, and • PVC/DEHP-free 	Moving (back) to reusables in the operating room	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a

Pharmaceuticals

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Pharmaceuticals (such as Ephedrine, Phenylephrine, Succinylcholine, Propofol)	n/a	<ul style="list-style-type: none"> Pre-filled syringe (or prepare in-house); Smallest vial possible for all pharmaceuticals 	Prefilled syringes article	Pre-filled syringes minimize pharmaceutical waste by using one multi-dose medication vial to draw up multiple syringes for individual patient use rather than using one medication vial for a single patient, and disposing the unused amount of medication.	n/a
Vaccines	n/a	<ul style="list-style-type: none"> Mercury-free (likely achieved if free of preservative thimerosal) 	Thimerosal in vaccines CDC: Thimerosal in flu vaccines	Mercury is used in the preservative thimerosal (59% by weight) which is used in vaccines and other pharmaceutical formulations.	Safer chemicals mercury elimination goal : Achieve mercury-free status or develop and implement mercury elimination plan

Sterile processing, sterilization, and high-level disinfection

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Disinfectants, high level (primarily for medical devices)	n/a	<ul style="list-style-type: none"> EtO-free - Alternatives include steam sterilization, ozone plasma, low temperature hydrogen peroxide gas plasma, peracetic acid; and Glutaraldehyde-free - Alternatives include OPA (orthophthalaldehyde), hydrogen peroxide. 	Sterilization and high-level disinfection options: sample of pros and cons Webinar: EPA warns EtO cancer risk, offers alternatives	Ethylene oxide (EtO) poses several health hazards requiring special handling and disposal of the chemicals and training in its use. It is a known human carcinogen with other acute and chronic health effects. Glutaraldehyde has health effects among health care workers exposed to it.	n/a

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Medical instrument cleaners (enzymatics)	EPA Safer Choice registered	(refer to standard/ecolabel)	To find EPA Safer Choice products, search product list	Products have to pass criteria to achieve the Safer Choice label. While this standard could be stronger, this is the only standard available for this product category.	n/a
Washers/disinfecting equipment	n/a	Select automatic cleaning (not manual)	Article: Automated vs manual Article: Advantages and limitations of Automatic automatic flexible endoscope reprocessors	Reduce staff exposure to disinfecting chemicals	n/a

Surgical/Operating Room

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Anesthesia circuits	n/a	Reusable	Moving (back) to reusables in the operating room	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a
Anesthetic gases	n/a	Minimize or eliminate the purchase of desflurane vaporizers	Article: Reducing inhaled anesthetic waste and pollution American Society of Anesthesiologists anesthesia toolkit	The three most common anesthetic gases used are sevoflurane, isoflurane and desflurane. Desflurane has the largest impact on the environment and also happens to be the most expensive of anesthetic gases.	n/a

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Burs, bits and blades	n/a	<ul style="list-style-type: none"> • Reusable, or • Reprocessable, and • Buy back reprocessed, or • Recyclable 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing, then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	n/a
Covers: back table, mayo stand	n/a	Reusable	Moving (back) to reusables in the operating room	One study found that when these disposables were replaced with reusable products, there was an average of 64.5% reduction in surgical waste generated.	n/a
Endomechanicals: graspers, clip appliers, scissors	n/a	<ul style="list-style-type: none"> • Reusable, or • Reprocessable, and • Buy back reprocessed, or • Recyclable 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing, then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	n/a
Endomechanicals: trocars	n/a	<ul style="list-style-type: none"> • Reusable, or • Reusable, and • Buy back reprocessed 	Moving (back) to reusables in the operating room	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a

Product	Environmental ecolabel, standard, regulation	Key environmental criteria	More information	Rationale for purchasing	Practice Greenhealth goals/metrics
Endomechanicals: ultrasonic, bipolar and monopolar scalpels	n/a	<ul style="list-style-type: none"> • Reusable, or • Reprocessable, and • Buy back reprocessed 	Business case for greening the OR (medical device reprocessing) Medical device reprocessing implementation module Medical device reprocessing case study	Programs to collect certain FDA eligible medical devices in the OR for reprocessing, then purchase back the reprocessed devices are generating huge cost-savings and significant waste reductions for a variety of organizations.	n/a
Fluid management products and systems	n/a	<ul style="list-style-type: none"> • System empties directly into sewer system, and • Reusable containers 	Use fluid management systems in the operating room	Eliminates exposure risk and reduces occupational safety issues from suction canisters; reduces regulated medical waste and eliminates waste costs (associated with filled canisters and purchase of solidifiers)	n/a
Grounding pads	n/a	Reusable	Moving (back) to reusables in the operating room	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a
Lighting, surgical	n/a	Specify LED surgical lighting	Environmental considerations for surgical lighting Department of Energy technical guidance: LED surgical task lighting	LEDs are energy efficient, requiring less wattage to produce equivalent light levels. LEDs promise significantly greater life and a non-catastrophic failure mechanism. LEDs are instant-on, dissipate less heat, and cost less to operate over time than traditional lighting.	n/a

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OR custom kits, procedure packs	n/a	Meet the smarter purchasing surgical kit goal: Review and reformulate custom surgical kits. Remove unneeded items.	OR kit reformulation: implementation module Smarter purchasing surgical kit review goal	Review any procedural packs or kits to identify extraneous materials not needed and replace single use with reusables for cost savings and waste reduction	Smarter purchasing surgical kit review goal : Review and reformulate (where appropriate) at least 80% of total OR kit types
Sterilization wrap	n/a	<ul style="list-style-type: none"> • Reusable hard cases, or • Peel pouches 	Implementation module: rigid sterilization containers	While polypropylene blue wrap is ubiquitous in hospitals, staff often have problems with breakthrough, where sharp instruments or tray corners push through the blue wrap, forcing the materials inside to be re-sterilized. A transition to rigid sterilization containers can make long-term financial sense for a health care organization.	n/a
Surgical basins and pitchers	n/a	Reusable	Moving (back) to reusables in the operating room The University of Maryland Medical Center: Reusable textiles in the OR	Much of the waste in health care is due to the myriad of disposable products and packaging used. Alternatives exist that cost less over the life of the product.	n/a
Surgical drapes and gowns	n/a	Reusable	Moving (back) to reusables in the operating room The University of Maryland Medical Center: Reusable textiles in the OR	One study found that when these disposables were replaced with reusable products, there was an average of 64.5% reduction in surgical waste generated. When surgeons were asked in a 2010 study to rate gown comfort, ease of use and protective properties of reusables versus disposables, they found surgeons clearly preferred the reusables.	n/a

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Surgical towels	n/a	Reusable	Moving (back) to reusables in the operating room The University of Maryland Medical Center: Reusable textiles in the OR	One study found that when these disposables were replaced with reusable products, there was an average of 64.5% reduction in surgical waste generated.	n/a
Waste anesthetic gas capture system	n/a	Use supplemental system to enhance energy reduction and prevent gases venting to outside	Effectively managing waste anesthetic gas GOR energy webinar series: Effectively managing waste anesthesia gas	The administration of anesthesia gas comprises more than one third of the surgical procedure carbon footprint, and at least 5% of total hospital emissions. Their direct impact on the environment, patients, and community health is quickly becoming a major area of focus for the anesthesia provider and health care community due to their global warming potential.	n/a