

Sharps Safety Matters

Where to find safety products?

by Ron Stoker

It has been estimated that one of every seven healthcare workers are injured by a contaminated sharp every year. The International Sharps Injury Prevention Society (ISIPS) believes that only one in three needlesticks are reported. This opinion is based upon numerous visits to clinicians, clinics and hospitals.

Many institutions have made the switch to safety products and are in compliance with the revised OSHA bloodborne pathogen standard. However, some are still using traditional non-safety products rather than safety products.

We all know that safety products can reduce the risk of needlestick and other sharps injuries to healthcare workers. One of the challenges that healthcare workers and managers have is “where do I find safety products.” To this end, ISIPS has created a comprehensive safety product list with more than one hundred safety product categories.

This list contains a product category and category description, followed by a list of safety products including company name and a Web site where more information can be obtained. In this first of a two part series, safety products in categories A through H are presented.

Air Bubble Removal Devices

Clinicians must expel air bubbles from blood samples safely without exposure to blood or blood-borne pathogens. Allows air out the filter end but does not allow blood. This device eliminates accidentally expelled blood droplets caused by aerosolizing air bubbles from a blood-filled syringe.

- ▶ Filter-Pro™ air bubble removal device; Smith’s Medical, www.smiths-medical.com.

Allergy Syringes

Allergen immunotherapy (allergy injection treatment) consists of repeated injections of one or more mixtures of extracts of allergens over a period of several years. A variety of allergy syringes are available with retractable needles, or shielded needles.

- ▶ Allergy Trays and Syringes; Terumo, www.terumotmp.com.



- ▶ BD SafetyGlide™ Syringe for Allergy; BD, www.bd.com.
- ▶ Hypodermic Needle-Pro Safety Allergy Tray and needles; Smiths Medical, www.smiths-medical.com.
- ▶ InvirosNAP! Safety Syringe Allergy Tray; Inviros Medical, www.invirosmedical.com.
- ▶ MONOJECT™ Allergy Trays; Covidien, www.kendallsharpsafety.com.
- ▶ VanishPoint Allergy Syringe Tray and syringes; Retractable Technologies Inc., www.vanishpoint.com.

Amniocentesis Trays

Amniocentesis is a procedure where fluid is aspirated out of the amniotic sac. Fetal urine, fetal cells, and various proteins move freely within this sac. During amniocentesis, a long needle is placed through the abdominal wall and into the amniotic sac. Once the needle is in the amniotic sac, a syringe is used to aspirate the amniotic fluid. The fluid is then sent for evaluation. New technologies provide safety sharps that can protect the user from needlesticks.

- ▶ Amniocentesis Tray; Smiths Medical, www.smiths-medical.com.
- ▶ Curity Amniocentesis Tray; Covidien, www.kendallhealthcare.com.
- ▶ Safe-T-Amnio™ Tray; Cardinal Health, www.cardinal.com.

Ampoule Breaker

Ampoules are small glass vessels in which liquids for injections are hermetically sealed. When the cap is snapped off, glass chips can fly off and a jagged or sharp edge can cut the hands of clinicians and others.

The scoring at the neck does not always break where it is intended. This is due to the glass re-melting to some degree at the score line. In one study more than 62 percent of nurses said that they have been cut by a broken glass ampoule. Safety ampoule breakers prevent this problem by covering the glass ampoule during the breaking process, thus protecting the clinician’s hands.

- ▶ Ampoule Breaker; Millipore Inc., www.millipore.com.
- ▶ Ampoule Opener; Health Care Logistics, www.healthcarelogistics.com.
- ▶ SafeBreak™; Medi-Dose Inc., www.medidose.com.
- ▶ Snapit™ Ampoule Opener; Qlicksmart, www.qlicksmart.com.

Apheresis Needles

Apheresis is a special blood donation procedure in which plasma or selected cellular elements, such as platelets or white cells, are separated from the other parts of the blood and retained. Blood is drawn and processed through a cell separator, and the other cells and plasma are returned to the body. Apheresis takes approximately two hours compared with a whole blood donation of about eight to 10 minutes. During apheresis, the patient or donor is connected to the apheresis machine. A needle is inserted into a vein in each arm. Blood is withdrawn from one arm, run through the machine to extract the stem cells, and all the remaining components of the blood are returned to the donor through the needle in the other arm. In the case of a patient donating their own stem cells, this process is performed using a central venous catheter, which has two lumens.

- ▶ MasterGuard Anti-Stick Needle Protector; Medic Anti-Stick Needle/Connector; Medisystems Corp; www.medisystems.com.
- ▶ Nipro SafeTouch Fistula Needles; Rockwell Medical Technologies Inc., www.rockwellmed.com.
- ▶ Platypus, SysLoc Safety A.V. Fistula Needle Set, WingEaster A.V. Fistula Needle Guard; JMS North America Corp., www.jmsna.net.

Arterial Blood Gas Syringes

Arterial blood must be used for ABG measurement rather than venous blood because only arterial blood accurately reflects the amount of pO₂ transferred from the lungs. Specialized safety products are used for this.

- ▶ Micro ABG Arterial Blood Gas Sampling Kits; Vital Signs Inc., www2.vital-signs.com/VSIHome/html/english/default.aspx.
- ▶ Pulsator Plus Syringes with Dry Heparin, Pulsator Plus Syringes with Dry Heparin, Pro-Vent Plus; Smiths Medical, www.smiths-medical.com.
- ▶ Pulse ABG Syringe; Westmed Inc., www.westmedinc.com.
- ▶ safePICO self-filling arterial sampler; Radiometer America Inc., www.radiometeramerica.com.

Arterial Catheter Stabilization Products

Arterial catheter stabilization products are designed to hold arterial lines in place throughout therapy. Rather than using sutures, with the inherent suture wounds and the potential for accidental needlesticks—just stabilization.

- ▶ Stable-Line Arterial Catheter Stabilization Device; Iapyx Medical, iapyx.com.
- ▶ Statlock Arterial Stabilization Device; CR Bard, www.statlock.com.
- ▶ Zefon Arterial Anchor Bandage; Zefon International Inc., www.zefon.com.

Arterial Line Draw

- ▶ Portex Line Draw Plus and Umbilical Line Draw; Smiths Medical, www.smiths-medical.com.
- ▶ Deltran Plus closed needleless arterial blood collection system; Utah Medical Products, www.utahmed.com/deltranplus.htm.
- ▶ Venous Arterial blood Management Protection (VAMP) Plus, Vamp Adult, Vamp Jr.; Edwards Life Sciences, www.edwards.com.

Automated Filling of IV Syringe Doses

The standard method of filling syringes manually creates many opportunities of accidental needlesticks and other occupational exposure to medications. Automated systems are available that make the filling of syringes safer.

- ▶ Exacta-Mix™ 2400 Compounder (EM2400), Rapid-Fill™ Automated Syringe Filler (ASF); Baxa, www.baxa.com.

Bifurcated Needles

Bifurcated needles administer vaccines by the scarification method. There is currently only one safety bifurcated needle available for smallpox vaccinations if they become necessary again.

- ▶ BD Eclipse™ Bifurcated Needle; BD, www.bd.com.

Bleeding Time Devices

Bleeding time products make an incision and are then discarded into an approved sharps container. A timer is started and the edge of the incision is blotted at 30-second intervals with filter paper. The time that the bleeding stops is noted.

- ▶ Surgicutt bleeding time; International Technidyne Corp. (ITC), a subsidiary of Thoratec Corp., www.itcmed.com.
- ▶ Triplett Bleeding Time Device; Helena Laboratories, www.helena.com/triplett.htm.

Blood Collection

- ▶ Hypodermic Needle-Pro EDGE™ Safety Device, Saf-T Holders, Saf-T-Clik Blood Tube Holder, Venipuncture Needle-Pro Device (blood tube holder with needle shield attached); Smiths Medical, www.smiths-medical.com.
- ▶ Microvette Capillary Blood Collection System, Multifly, S-Monovette Blood Collection System; Sarstedt, www.sarstedt.com.
- ▶ ProGuard II™ Safety Needle Holder, Defender Safety Needle Holder, MONOJECT MAGELLAN™ Safety Blood Collection Device, MONOJECT™ ANGEL WING™ Blood Collection Sets with Needle Holder, MONOJECT™ ANGEL WING™ Blood Collection/Infusion Sets with Female Luer, MONOJECT™ ANGEL WING™ Blood Collection/Infusion Sets with Multi-Sample Luer Adapter, ANGEL WING™ Blood

Collection Assembly with MONOJECT BLUNTIP™ Safety I.V. Access Cannula, ANGEL WING™ Luer Lock Collection Set, MONOJECT™ ANGEL WING™ Multi-Sample Collection Sets-Male; Covidien, www.kendallhealthcare.com.

- ▶ VACUETTE QuickShield Tube Holder, VACUETTE VISIO PLUS Blood Collection Needle, VACUETTE Safety Tube Holders, VACUETTE Safety Blood Collection Sets; Greiner Bio One, www.gbo.com/en.
- ▶ Vacutainer Eclipse Blood Collection Needle, Vacutainer Push Button Blood Collection Set, Vacutainer Safety-Lok™ Blood Collection Set, Eclipse Safety Shielding Blood Collection Needle, One Use Stackable Holder, Vacutainer Passive Shielding Blood Collection Needle with Integrated Blood Tube Holder, Vacutainer Eclipse™ Blood Collection Needle, Vacutainer Push Button Collection Set; BD, www.bd.com.
- ▶ VanishPoint Blood Collection Tube Holder (needle-retracting tube holder with back-end needle protection); Retractable Technologies, www.vanishpoint.com.

Blood Culture Bottles

A blood culture is a laboratory test in which blood is injected into bottles of culture media to determine whether microorganisms have invaded the patient's bloodstream. These blood cultures are ordered as a set consisting of two bottles, one that is an aerobic bottle and one that is an anaerobic bottle.

A blood culture is done when a person has symptoms of a blood infection or bacteremia. Blood is withdrawn from the person and is then tested in a laboratory to find and identify any microorganism present and growing in the blood. This allows the physician to prescribe antibiotics if a microorganism is found. Blood is drawn from a person suspected of blood infection and is put directly into a blood culture bottle containing a nutritional broth. Some culture bottles allow clinicians to use safety needled products in transferring the blood.

- ▶ BD BACTEC™/F Blood Culture Procedural Trays; BD, www.bd.com.
- ▶ WorkSafe™ Blood Culture Kit; bioMérieux Inc., www.biomerieux-usa.com.

Blood Culture Bottle Sample Introduction

These products are used to collect samples into vacuum blood culture bottles for bacterial detection and test tubes for laboratory tests.

- ▶ MONOJECT™ ANGEL WING™ BacT/ALERT™* Blood Collection Device-Male, MONOJECT™ ANGEL WING™ BacT/ALERT™* Transfer Device-Female; Covidien, www.kendallsharpsafety.com.
- ▶ Samplot Adapter Cap; ITL, www.itlcorporation.com.

Blood Donor Needles

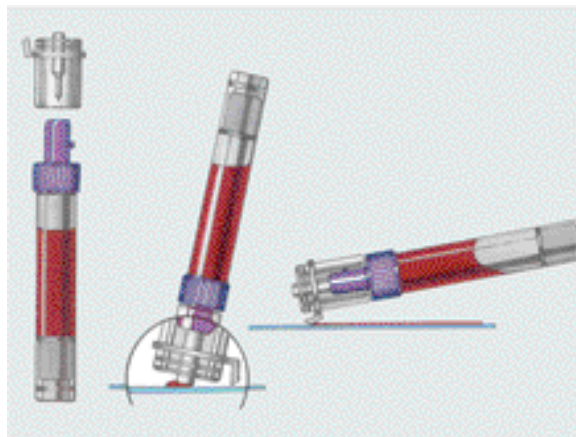
Blood donor needles transfer blood from a blood donor into donor bags. Following the blood donation the needle is retracted or shielded to prevent needlesticks.

- ▶ DonorCare Needle Guard, SampLok Tube Holder, SampLock Sampling Kit; ITL, www.itlcorporation.com.

Blood Slide Preparation Devices

These products eliminate the need to remove the stopper from the blood tube. The old and potentially dangerous method to prepare differential slides was to take two glass slides, open a blood tube by removing its cap, place a drop of blood onto one of the slides and then place one slide against the other one. New safety products can eliminate the potential of exposure to bloodborne pathogens and without the risk of broken glass or blood splatter.

- ▶ Diff-Safe Blood Dispenser; Alpha Scientific Corp., www.alpha-scientific.com.
- ▶ Haemo-Diff Blood Smear; Sarstedt, www.sarstedt.com.
- ▶ H-Pette Slide Preparation Device; Helena Laboratories, www.helena.com/miscPlastics.htm.



Haemo-Diff Blood Smear

Blood Splash Protection

- ▶ Safety Shield™; ITL Corp., www.itlcorporation.com.
- ▶ Splash Guard; Medegen Medical, www.medegen.com.

Blood Transfer Devices

Blood can sometime need to be transferred from a syringe draw to an evacuated tube. Safety products can be used to eliminate sharps and bloodborne pathogen exposure during this process.

- ▶ BD Vacutainer Blood Transfer Device; BD, www.bd.com.
- ▶ MONOJECT ANGEL WING Blood Transfer Device; Covidien, www.kendallhealthcare.com.
- ▶ Saf-T Holder; Smiths Medical, www.smiths-medical.com.

Blunt Suture Needles

- ▶ Auto Suture™ ENDO STITCH™ 10 mm Suturing Device, PROTECT•POINT™ Blunt Point Needles; U.S. Surgical, www.syneture.com.
- ▶ Ethiguard Blunt Point; Ethicon Inc., www.ethicon.com.

Bone Marrow Biopsy Needle Kits

- ▶ Kendall GOLDENBERG SNARECOIL™* Bone Marrow Biopsy and Aspiration Trays with Safety Components, Kendall MONOJECT™ Bone Marrow Biopsy Trays with Safety Components; Covidien, www.kendallhealthcare.com.



GOLDENBERG SNARECOIL™* Bone Marrow Biopsy Tray

Bone Marrow Collection Systems

- ▶ Bone Marrow Collection System with Sealed Collection Bag; BioAccess, www.bioaccess.com.

Capillary Blood Collection

- ▶ Capi-Draw Capillary Blood Collection System; Innovative Medical Technologies Inc., www.innovativemedtech.com.
- ▶ Microvette Capillary Blood Collection System, Multivette Capillary Blood Collection System; Sarstedt Inc., www.sarstedt.com.
- ▶ MiniCollect Capillary Collection System; Greiner Bio-One, www.vacurette.com.

Carpject Safety Needle Systems

Carpject syringe systems consist of prefilled cartridges that can be loaded into a specialized syringe holder. The holder is a reusable, plastic device. The other component is a disposable cartridge unit containing medication.

- ▶ Carpject Needle-Pro device; Smiths Medical, www.smiths-medical.com.

Cataract Safety Scalpel

Specially designed, integrated retractable shield that protects the blade in procedure and handling. Allows the cataract surgeon to create the desired incision architecture, whether the incision is scleral or corneal.

- ▶ BD Beaver Safety Cataract Knives, BD Atomic Edge™ Safety Knives; BD, www.bd.com/ophthalmology/products/cataract/atomicedge/.
- ▶ Diamatrix Sharps Safety Stainless Steel Knife, Diamatrix Surgical Steel E-Series Trapezoid blade; Diamatrix Ltd., www.diamatrix.com.
- ▶ Sharpoint Sharpguard Guarded knives; Surgical Specialties, www.surgicalspecialties.com.

Catheter Securement Devices

According to the CDC, sutureless securement devices can be advantageous over suture securement in preventing catheter-related BSIs. The Infusion Nurses Society (INS) has indicated that using a manufactured stabilization device is preferred to suturing or taping.

- ▶ Cathsling™; For Patient's Inc., www.forpatientsinc.com.
- ▶ Centurion WingGuard™ PICC Catheter Securement Device; Tri-State Hospital Supply Corp, www.tristate.com.
- ▶ GRIP-LOK™ Universal Securement; Zefon International Inc., www.zefoon.com.
- ▶ I.V. PRO™ IV SITE PROTECTOR; Medi-Dose Inc., www.medidose.com.
- ▶ LockIt Plus™ Catheter Securement Device; Smiths Medical, www.smiths-medical.com.
- ▶ Merit Revolution™; Merit Medical, www.merit.com.
- ▶ StatLock Securement System; Bard Medical Systems, www.statlock.com.
- ▶ Stable-Line Arterial Catheter Stabilization Device; Iapyx Medical, iapyx.com.
- ▶ The Bone Catheter Securement Device; Medtec Medical, www.medtecmedical.com.

Chemo Waste Sharps Containers

Specialized containers to place needles and other sharps into as mandated by law. In addition, these containers are used for chemotherapy waste products.

- ▶ B-D Multi-Use One-Piece Sharps Containers; BD, www.bd.com.
- ▶ Chemo Waste Sharps Container; Health Care Logistics Inc., www.healthcarelogistics.com.
- ▶ Chemotherapy container; Bemis, www.bemis.com.
- ▶ SharpSafety™ Chemotherapy Sharps Containers, CHEMO-O-GATOR™ Sharps Containers; Covidien, www.kendallhealthcare.com.

Closed Arterial Sampling

- ▶ BD Safedraw™ Closed Loop Blood Sampling System; BD, www.bd.com.
- ▶ Deltran Plus Kit; Utah Medical Products, www.utahmed.com.
- ▶ Saf-T Closed Blood Collection System™ Devices; Smiths Medical, www.smiths-medical.com.

Closed Venous Sampling

- ▶ BD Safedraw™ Closed Loop Blood Sampling System, BD Safe Draw Closed Loop Blood Sampling System; BD, www.bd.com.
- ▶ Saf-T Closed Blood Collection System™; Smiths Medical, www.smiths-medical.com.

Closed System Antineoplastic Systems

An important part of treatment for cancer patients is the use of antineoplastic agents. Unfortunately, these agents have been associated with potential adverse health effects for the individuals who prepare, administer and dispose of these medications. This is a major concern because there are more cancer patients than in the past, greater combinations of chemotherapeutic drugs are being used, more potent drugs are being used, and new procedures and settings have now been implemented. Often the drugs used for chemotherapy have a similar structure or activity known to hazardous drugs. Many of these drugs are carcinogenic, teratogenic, and can create reproductive and organ toxicity. Closed system protective devices can virtually eliminate any exposure of toxic drugs to health-care workers, custodial staff or waste management employees.

- ▶ ONGUARD™ Contained Medication System with TEADAPTOR™ Components; B Braun, www.bbraun.com.

Cord Clamping Products

Two plastic clamps are placed on the cord and then are severed with scissors. Both disposable and reusable scissors are a potential source of sharps injuries to healthcare workers and others. Newer technologies exist that can take the risk of a sharps injury out of this procedure.

- ▶ ClampCut SCC-23; Price Invena, www.priceinvena.dk/index.htm.
- ▶ ClampCut SCC-23; BioMedical International Corp., www.biomedicalintl.com.

Cord Blood Collection Products

- ▶ CordGuard; Utah Medical, www.utahmed.com.
- ▶ Cord Stick™ Multiple Draw System; Cord Stick Corporation, www.cordstick.com.
- ▶ UmbiliCup; DeRoyal, www.deroyal.com.

Dental Anesthesia—Automatic

- ▶ SafetyWand; Milestone Scientific, www.milesci.com.

Dental Anesthesia Syringe

- ▶ Safe-Mate; Medpro Safety Products, www.safe-mate.com.
- ▶ Ultra Safety Plus XL Safety Syringe; Septodont Inc., www.septodontinc.com.

Epidural Needle

- ▶ Perifix Safety Epidural Needle; B. Braun Medical Inc., www.bbraun.com.

Epidural Continuous Infusion Trays

- ▶ Continuous Epidural Tray with Needle Safety; Smiths Medical, www.smiths-medical.com.
- ▶ Perifix Safety Continuous Epidural Trays; B. Braun Medical Inc., www.bbraun.com.

Fascia Closing Device

Accidental suture needlesticks are the leading cause of sharps injury in the operating room. Suture needlesticks have been reported at rates as high as one in every 18 surgical cases, placing surgeons and OR personnel at serious risk of life-threatening infections.

- ▶ The SutureTek Fascia Closure Device; Suturetek Inc., www.suturetek.com.

Finger Protection

This category features devices used to provide needlestick protection during gynecological and urological surgical procedures. These products facilitate suture placement and tissue dissection and can be used in surgical procedures of other specialties. They are radiopaque for identification during radiological studies.

- ▶ Digicap; Marina Medical, www.marinamedical.com.

Finger-stick Sampling

- ▶ Microvette Capillary Blood Collection System, Multivette Capillary Blood Collection System; Sarstedt Inc., www.sarstedt.com.
- ▶ MiniCollect Capillary Collection System; Greiner Bio-One, www.vacurette.com.
- ▶ SAFE-T-FILL Capillary Blood Collection; RAM Scientific, www.ramsci.com.

Flu Syringe

- ▶ BD SafetyGlide™ Syringe, BD Integra™ Flu Syringe with Retracting BD PrecisionGlide™ Needle; BD, www.bd.com.
- ▶ Flu Trays and Syringes; Terumo, www.terumotmp.com.
- ▶ Hypodermic Needle-Pro Safety Flu Tray and needles; Smiths Medical, www.smiths-medical.com.
- ▶ MONOJECT™ Allergy Trays; Covidien, www.kendall-sharpsafety.com.
- ▶ InviroSNAP! Safety Syringe Flu Trays Inviro Medical; www.inviromedical.com.
- ▶ VanishPoint Flu Syringe Tray and syringes; Retractable Technologies Inc., www.vanishpoint.com.

Glove Puncture Indicator Gloves

The double gloving system that visibly indicates when a puncture occurs in the presence of fluid. Surgical gloves not only prevent infection of the patient during surgery, but also from the primary barrier to viral transmission from the patient to the wearer. However, any puncture in the glove can present a potential hazard. This unique product category provides the wearer with an immediate, easily recognizable visual indication of glove puncture in the presence of fluid, providing a proven precaution against the risks to the surgical team from bloodborne pathogens during medical procedures. If the outer glove is punctured, ingress of fluid through the puncture hole is clearly visible as a dark green patch around the site of the puncture.

- ▶ Biogel Reveal™ double gloving system; Mölnlycke Health Care, www.molnlycke.com.

HeelStick Lancets

- ▶ BD Quikheel™ Lancet; BD, www.bd.com.
- ▶ HemoHeel and HemoHeel Preemie; Helena Laboratories, www.helena.com.
- ▶ Tenderfoot Heel Incision Device; International Technidyne Corp. (ITC), www.itcmed.com.



Quikheel™ Lancet

Hemodialysis Catheter Needles

Damaged kidneys require use of hemodialysis where blood flows into a special filter that removes wastes and fluids. “Clean” blood flows back into the body. Most of us are fortunate enough to have two healthy kidneys that keep our blood clean by removing wastes, and excess fluid and minerals. The kidneys also produce hormones that keep our bones strong and our blood healthy. If our kidneys were to fail, harmful wastes build up in our bodies, our blood pressure may rise, and we retain excess fluid. We also do not make enough red blood cells. When these conditions occur it is necessary to get treatments that will replace the functioning of failing kidneys.

- ▶ ButtonHole Needle Sets, MasterGuard Anti-Stick Needle Protector, Medic Anti-Stick Needle/Connector; Medisystems Corp., www.medisystems.com.
- ▶ Shelly Protected Fistula Needle; Discount Medical Supply Inc., www.diasol.com.
- ▶ SysLoc Safety A.V. Fistula Needle Set, WingEaster A.V. Fistula Needle Guard; JMS North America Corp., www.jmsna.com.



Surecan™ Safety Huber Needle

Huber Needles

Huber needles administer chemotherapy, antibiotics, and TPN through implanted ports. The needle may be left in the port for days and it can sometimes be difficult to extract the needle safely. The difficulty of pulling the needle out creates a recoil action with the clinician often getting stuck by the needle into the stabilizing hand. Safety Huber needles, therefore, are essential to use.

- ▶ GRIPPER PLUS Safety Huber Needle; Smiths Medical, www.smiths-medical.com.
- ▶ Huber Plus Safety Huber Needle; Bard Access Systems Inc., www.bardaccess.com.
- ▶ K-Shield Huber Needle Safety Device; Kawasumi Laboratories America Inc., www.kawasumiamerica.com.
- ▶ LifeGuard Safety Huber Needle; AngioDynamics, www.angiodynamics.com.
- ▶ LiftLoc Safety Infusion Sets, MiniLoc Safety Infusion Sets, Safe Step Huber Needle Set; Specialized Health Products Intl. Inc, www.shpi.com.
- ▶ Smart Safety™ Huber Needle Set; MPS Acacia, www.mpsacacia.com.
- ▶ Surecan™ Safety Huber Needle Infusion Set; B. Braun Medical Inc., www.bbraun.com.

Safety products in categories G through Z will be presented in next month’s issue of *Managing Infection Control*. †

Ron Stoker is the founder and executive director of ISIPS, the International Sharps Injury Prevention Society, and is a frequent contributor to Managing Infection Control magazine. He speaks frequently at national and international meetings on sharps safety, hand hygiene and infection control issues. He is coauthor of the “Compendium of Infection Control Technologies.” For more information on the Compendium, go to www.medicalsafetybook.com. Mr. Stoker is providing a number of webinars focusing on a variety of sharps injury prevention safety products. For more information on the webinars, go to www.isips.org/seminars.html.

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