

Devices Used for Safe Handling of Hazardous Drugs

September 2024 In-service
Clinical Supervisors

The Problem

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The short-and-long-term effects from exposure to hazardous drugs are serious concerns for the healthcare provider or anyone who must live and work near these substances. NIOSH, OSHA, ONS, ASHP and USP 797 have all identified the problem and offer guidelines for the safe handling of these substances.

Possible Short-Term Effects of Exposure:

GI - Nausea, Vomiting, Diarrhea

Mucosa and Skin - Enteral Irritation, Respiratory Irritation and Cough, Dermatitis, Hair Loss

Neurological - headache, lightheadedness, vertigo, syncope

Reproductive - irregular menses

Possible Long-Term Effects of Exposure:

Cancer - Leukemia

Reproductive - Infertility, Miscarriages, Birth Defects

Closed Technology

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These devices:

- Create a closed system to protect the integrity of the I.V. fluid container, whether it is on a syringe for transfer or on the end of an I.V. set.
- Create a needle free closed system for transfer and mixing. Upon disconnect, the devices automatically self-seal and close the system.
 - They prevent spills from IV sets in the event of disconnect; accidental or intentional.
- Create closed system for disposal to protect against environmental contamination.



When are these used?

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- These are used for drugs like Gancyclovir, Blincyto and 5fu
- The current devices we are seeing are:
 - Spiros Cap
 - BD Phaseal
 - Equashield

SPIROS CAP

- Spiros IV Connector is a high-quality medical device designed for secure and reliable intravenous connections.
- It automatically creates a needle-free closed system that prevents leaks and drug vapor escape and facilitates safe mixing, transfer, administration and disposal of hazardous drugs.



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Integrated Locking Spin Collar

- The Spinning Spiros will remain permanently attached to ANY male luer device once it is activated and spinning.
- Eliminates any risk of the tubing or syringe accidentally disconnecting from the Spiros.
- Eliminates coiling of the secondary set.



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Spiros for Preparation and Transfer

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- Place the Spiros on any syringe to draw and transfer hazardous drugs without the risk of drips or spills. The Spiros only opens when it is attached to a female connector, including needlefree connectors.
- Safely transport prepared syringes with hazardous medications throughout a facility.



How to Use

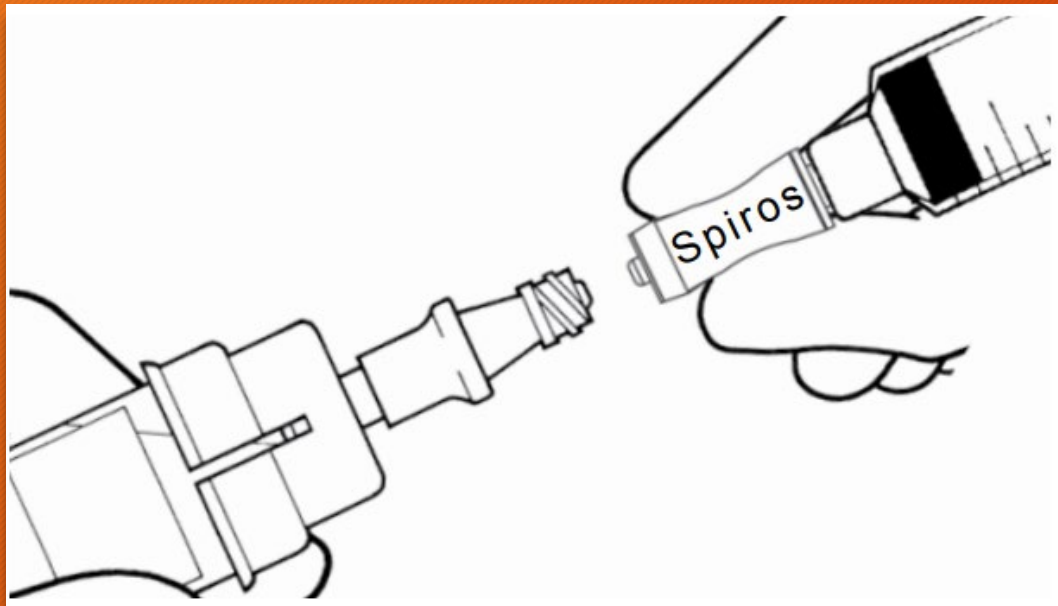
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Spiros for Use as a Syringe Adapter

1. Open package and remove Spiros. Remove protective cover from female luer and discard.
2. Attach female luer of Spiros to syringe.



To Aspirate Fluid from and To Infuse Fluid Through



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3. Aspirate:

- Grasp Spiros and attach to needlefree vial access device. Twist Spiros onto device until secure. Once attached, the Spiros fluid path is open, and drug may be aspirated.
- To remove, grasp Spiros and twist away from connector until loose. Upon disconnection, the Spiros fluid path is automatically closed.

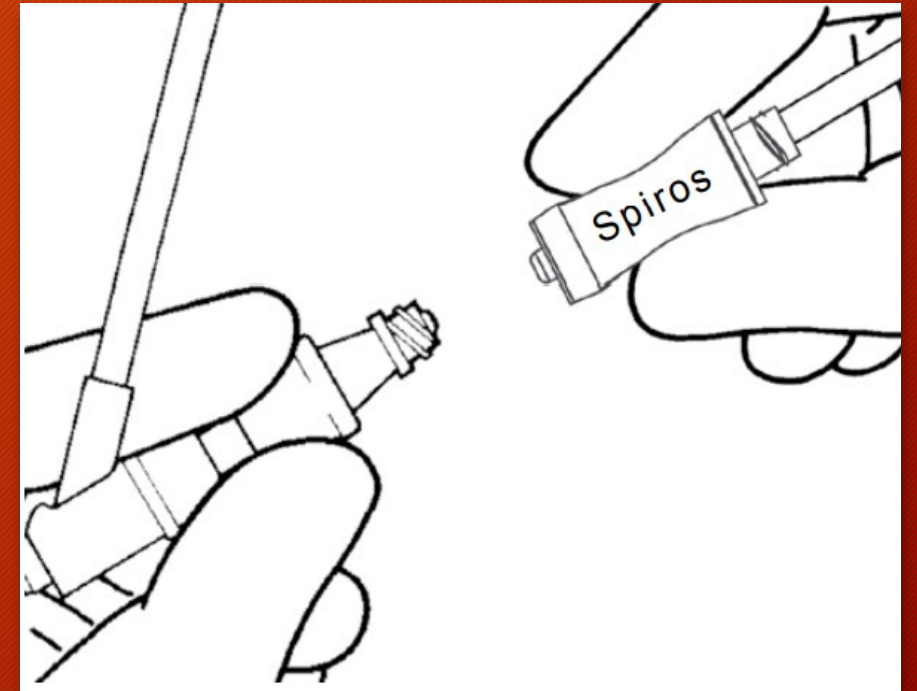
4. Infuse:

- Grasp Spiros and attach to needlefree connector or female luer. Twist Spiros onto connector until secure. Once attached, the Spiros fluid path is open and fluid may be infused from the syringe.
- Disconnect Spiros from connector by grasping and twisting away from connector until loose. Once disconnected, the Spiros fluid path is automatically closed.

Spiros on Tubing Sets

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1. Open package and remove set. Spiros is supplied with a priming cap which opens the system and allows for standard priming procedures. Prime set per protocol.
2. Grasp the Spiros at end of tubing set and attach to a needlefree connector or standard female luer. Twist Spiros onto device until secure. Once attached, the fluid path becomes open.
3. Proceed with fluid administration.
4. Disconnect Spiros from connector by grasping and twisting away from connector until loose. Once disconnected, the Spiros fluid path is automatically closed. Discard Spiros tubing set in accordance with facility protocol.





**BD PhaSeal Infusion
Connector**



BD PhaSeal Infusion Clamp



How to Engage - Disengage

Engage

NOTE: Follow aseptic technique and local guidelines for safe handling of hazardous drugs and facility protocol for drug administration, including disinfection of all IV access ports and BD PhaSeal™ System components, use of personal protective equipment (PPE), and visual inspection. Ensure all luer lock connections are securely tightened.



Push

Turn

Push

1. **PUSH-TURN-PUSH.** Hold white finger grips on injector and mating component. Line up wings of injector to indents of mating component. Push injector (N35) into connection interface.

Note: Avoid touching blue portion of injector.



Hold white finger grip and turn clockwise.
Push down to engage.

Disengage



Pull

Turn

Pull

1. **PULL-TURN-PULL.** Pull injector away from connection interface until blue portion of injector is exposed. Turn counterclockwise. Pull injector to remove from mating component.

IV bag spiked and primed in preparation area:

OR

IV bag needs to be primed in administration area:

- A Luer lock injector to end of IV administration set if not attached in preparation area.



- A Preprime IV administration set with saline or designated IV fluid per facility protocol. Ensure line is clamped. Spike preprimed IV administration set **below eye level** into distal end of infusion adapter.



- B Luer lock injector to end of primary IV administration set.

1. Luer lock connector onto patient's IV line or access port per facility protocol, or access connector on Y-site.



2. Engage injector to connector and administer infusion per facility protocol.



Note: BD PhaSeal™ Connectors should remain connected to IV line. Connector may be used for additional IV administration or IV push procedures. Connectors should be disinfected following aseptic technique and facility protocol and should be disposed of without disconnecting from tubing.

3. Once infusion is completed, stop pump, clamp IV lines and disengage injector.



Dispose of hazardous drug IV infusion bag and primary IV administration set without disassembling and in accordance with facility protocol.

Procedure:

Note: Follow aseptic technique and local guidelines for safe handling of hazardous drugs and facility protocol for drug administration, including disinfection of all IV access ports and BD PhaSeal™ System components, use of personal protective equipment (PPE), and visual inspection. Ensure all luer lock connections are securely tightened.

1. Position infusion clamp around injector/connector assembly with correct orientation as shown in diagram on inside of clamp. Snap clamp closed, locking BD PhaSeal™ Injector/Connector Assembly in place.



Note: Infusion clamp is for single patient use **only** and can be used to secure injector/connector throughout patient's hospital/clinic visit. Clamp should be discarded in accordance with facility protocol after single patient use.

BD Phaseal Infusion Clamp

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- Do not throw out
- This is used again
- On arrival to patient's home if this has fallen off and dropped on the floor, please reach out to agency so we can reach out to pharmacy



EQUASHIELD® is an innovative closed system transfer device (CSTD) that is airtight and leakproof used for the compounding and administering of hazardous drugs.



EquaShield

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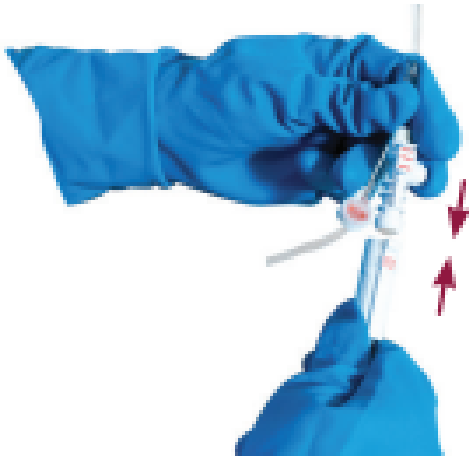


How to Engage - Disengage

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Engage:

All Equashield components are engaged by aligning the red marks on each component and sliding components together (Push On)



DO NOT TWIST OR ROTATE SYSTEM COMPONENTS DURING OR AFTER ENGAGEMENT

DO NOT TWIST OR ROTATE SYSTEM COMPONENTS DURING OR AFTER ENGAGEMENT

Disengage:

All Equashield nursing components are disengaged by depressing the lever on the Luer Lock Adaptor (LL-1) and pulling apart (Pull Off)



Flushing or Administering an IV Push

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Procedure:

Follow aseptic technique and facility guidelines for safe handling and drug administration, confirming all connections are tightened securely. Follow facility protocol for disinfection of all access ports and Equashield components.

1

Disinfect desired access site per facility protocol



2

Luer LL-1 to the access site



3

Remove cap from Syringe Unit



4

Disinfect LL-1 membrane per facility protocol



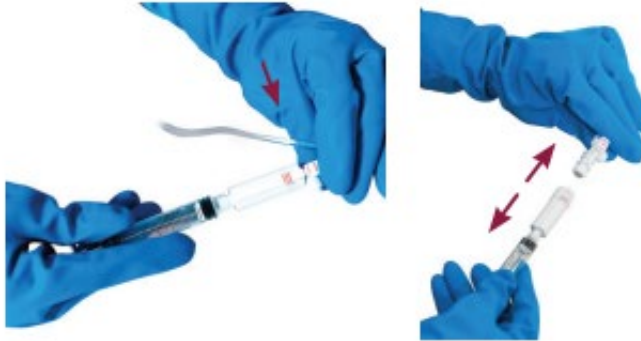
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Align red to red
and engage
Syringe Unit to
LL-1 (Push On)



6

After IVP is complete,
depress lever on
LL-1 and disengage
Syringe Unit (Pull Off)



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Dispose of per
facility protocol



[What is a Spiros Cap](#)

[How to Use Spiros.pdf](#)

[Gancyclovir Video with Phaseal](#)

[BD Phaseal Manual](#)

[BD Phaseal In-Service Video](#)

[Equashield_Procedures_Manual.pdf \(hhvna.com\)](#)

[Equashield Video](#)

[Equashield Intro](#)

Videos/PDF

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Nurse must report to Helms Home Care in real time any change in patient condition, leak/spill or loss of medication, errors, missing supplies, equipment malfunction to the Agency via Teams/Ticket or Phone.

RN must document who they spoke with at the Agency.

Agency will complete incident report (if needed) and report to pharmacy and prescribing MD.

Reporting

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Deviations

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- When patients are scheduled for therapy. please note there is an Infusion Frequency Deviation for most drugs.
- When scheduling please try to schedule as close to due date if possible.
- If scheduling early, please check with the CC and/or Supervisor if it is okay to see patient early.
- There are certain drugs that are very specific about the dates, and we need to adhere to the orders.
- We are planning to do an In-service on deviations in more detail soon
- Vyvgart is a good example of one of the drugs we need to be careful when scheduling.