Preserving sites and protecting veins

The BD Nexiva™ closed peripheral IV catheter system, shown to preserve sites for longer and designed to protect patients by reducing the risk of complications and restarts1-7*

*Compared to an open system.
Complications of peripheral intravenous catheters are not only common in the hospital setting— they’re costly.\textsuperscript{8,9}

Did you know that intravenous (IV) catheter placement is the most common invasive hospital procedure performed worldwide?\textsuperscript{8}

Up to 90\% of hospitalized patients in the United States require an IV catheter during their hospital stay, and 98\% of those procedures are peripheral intravenous catheter (PIVC) placements.\textsuperscript{8}

HOWEVER

Up to 50\% of PIVCs experience a PIVC-related complication during dwell time.\textsuperscript{8}
PIVC-related complications lead to catheter removal and have an economic impact on a hospital system\textsuperscript{8,9}

Potential complications consist of \textbf{phlebitis, extravasation, occlusion, dislodgement}, and \textbf{infection}. Any of these complications, either alone or in combination, lead to catheter removal before the end of the intended dwell time.\textsuperscript{8}

### Cost of an IV start\textsuperscript{10,11}

Estimated at \(-$50^*\)
Assuming insertion success on first attempt

### Extravasation\textsuperscript{9,11}

\$16,342\textsuperscript{†}
Average potential liability of a moderate extravasation

\$108,874\textsuperscript{†}
Liability of a severe extravasation

### Bloodstream infections\textsuperscript{12}

\$33,000 to \$75,000 for a patient in ICU
A 2011 study showed bloodstream infections are costly to healthcare facilities

### Blood exposure

\textbf{39%} blood leakage incidence
Without the use of a blood control device\textsuperscript{13}

\$0.30 per insertion
Average cost per cleanup for blood exposure based on a 2011 study\textsuperscript{14}

\textbf{Selecting the right PIVC the first time can help minimize costs associated with resticks and restarts and preserve sites}\textsuperscript{1-7,16,17}

\textsuperscript{*}In 2016 dollars, adjusted for inflation from original 2010 amount of \$45. Includes the cost of a start kit, catheter, saline flush syringe, extension set with clave (needle-free connector), and 20 minutes of nursing time.

\textsuperscript{†}In 2016 dollars, adjusted for inflation from original 2007 amounts of \$14,118 and \$94,056, respectively.
Compliance with best practices around PIVC use may help reduce costs, limit resource utilization, and increase patient satisfaction.\(^2,4,17,18\)

**Centers for Disease Control and Prevention (CDC)**

- Catheter stabilization is recognized as an intervention to decrease the risk for phlebitis, catheter migration and dislodgement, and may be advantageous in preventing catheter-related bloodstream infections (CRBSIs)\(^4\)
- Recognizes that there is no need to replace peripheral catheters more frequently than every 72 to 96 hours to reduce risk of infection and phlebitis in adults\(^4\)

**International Nosocomial Infection Control Consortium**

- Recommends the use of vascular access devices that minimize manipulations and reduce components (PIVCs with integrated extension and needle-free access ports) to achieve longer dwelling time and reduce the need for replacement of PIVCs more frequently, with minimum complications\(^19\)
• Recommend **limiting the use of add-on devices** to reduce the potential for contamination, additional manipulation, and disconnection\(^2\)

  – Limiting add-on devices reduces the incidence of contamination and accidental disconnection, minimizes the manipulation of the sterile fluid pathway, maintains a closed system, and reduces the costs associated with their use\(^3\)

• Add-on devices should only be used when clinically indicated for a specific purpose. When indicated, preferentially use systems that minimize manipulation and reduce multiple components, such as integrated extension sets\(^2\)

• Recommend removal of PIVCs in patients only when clinically indicated\(^2\)

• Studies support Infusion Therapy Standards of Practice recommendation on PIVC removal

  – Routine replacement of PIVCs did not reduce the rate of catheter-related complications compared with clinically indicated replacement (e.g., because of catheter failure)\(^17\)

    • Clinically indicated replacement strategy has been shown to **reduce total IV equipment costs by 11%**\(^17\)

  – Clinically indicated replacement of PIVC results in:

    • Significant reduction in healthcare resource use such as equipment and staff time\(^17\)

    • **Minimized number of restarts and costs**\(^18\)

    • **Increased patient satisfaction**\(^18\)
The BD Nexiva closed peripheral IV catheter system

The only all-in-one PIVC shown to preserve sites for longer

**BD Nexiva IV catheter reduces complications**

- **Reduces manipulations**
  
  Integrated extension tubing and stabilization platform† reduce manipulations and movement at the site that may lead to dislodgement‡ and phlebitis\(^1,2\,0\)

- **Reduces accidental dislodgement**
  
  Clinically demonstrated to reduce accidental dislodgement\(^2,0\,†\) and complies with the Infusion Therapy Standards of Practice and CDC guidelines for catheter stabilization\(^2,4\)

- **Lessens blood exposure**
  
  98% reduced blood exposure during insertion due to the BD Nexiva IV catheter preassembled systems\(^2,0\,⁎\)

- **Lowers chance of mechanical phlebitis**
  
  Proprietary BD Vialon™ biomaterial softens up to 70% in the vein, enabling longer dwell times and reducing the chance of mechanical phlebitis by up to 50%\(^6\)

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Closed system=Fully-integrated system that consists of a pre-attached extension tube, stabilization platform, and needle-free connectors.

*Compared to an open system.

†When used with an IV site securement dressing.

‡Compared with B. Braun Introcan Safety® catheter with Bard Statlock® IV Ultra stabilization device.

*Compared with an FEP catheter.
BD Nexiva IV catheter dwells longer

Median dwell time for BD Nexiva IV catheters versus the open-system catheters studied in a randomized trial of PIVCs in place for more than 24 hours\(^1\)

BD Nexiva IV catheter preserves sites

By preserving sites for longer, the BD Nexiva IV catheter helps patients get the medication they need as scheduled, potentially decreasing their length of stay\(^1,7,20\)
Using the BD Nexiva IV catheter may reduce costs and delays in treatment.\(^1,7,20\)

**Cost reduction of**

\[\sim \$1,000,000\]  
per year per 1,000 beds

In a 2014 clinical study, the longer dwell time (6 days\(^*\)) of the BD Nexiva IV catheter led to cost reductions compared with an open system.\(^1\)

BD Nexiva IV catheter technologies may help lower overall costs

- **BD Vialon biomaterial**
  Longer time to thrombus formation in a porcine study\(^7\) for BD Vialon biomaterial catheters led to **fewer restarts** and enabled longer dwell times, which may reduce overall costs.

- **BD Instaflash\(^\text{TM}\) needle technology**
  Incorporates a notched needle that may **improve first-stick success and reduce painful hit-and-miss insertions**.

- **Stabilization platform\(^*\)**
  Helps minimize movement that can lead to peripheral IV catheter complications, restarts, and associated costs.\(^20\)

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\(^*\)Compared with 96 hours in an open system.  
\(^*\)Compared with PU and FEP catheters tested in reference study.  
\(^\dagger\)Compared with B. Braun Introcan Safety\(^\text{®}\) catheter with Bard Statlock\(^\text{®}\) IV Ultra stabilization device.
Count on technology that makes treating patients safer while remaining compliant with industry guidelines.¹,³,⁵,²¹

**Increased clinician safety**

98% reduced blood exposure during insertion due to the BD Nexiva IV catheter preassembled system.*

**Increased catheter stabilization**

Clinically demonstrated to reduce accidental dislodgement,²⁶ meeting Infusion Nursing Society standards and CDC guidelines for catheter stabilization.²⁶

**Reduced rate of complications**

In a clinical study, results demonstrated a significant reduction in the rate of phlebitis (grade 2 or higher), PIVC-related complications, and infiltration in the closed-system group compared with the open system group.¹

**Preserves sites**

In compliance with industry best practices, BD Nexiva IV catheter is the only all-in-one PIVC system shown to dwell longer and preserve sites vs open system PIVCs.¹,⁷

*Compared with a non-blood control catheter.

By choosing the BD Nexiva IV catheter you can reduce the risk of complications and make treating patients safer.³,⁵
The BD Nexiva closed IV catheter system has features that help provide significantly better care.

1. **BD Vialon biomaterial**
   - Proprietary BD Vialon biomaterial softens up to 70% in the vein, enabling longer dwell times and reducing the chance of mechanical phlebitis by up to 50%.*
   - Catheters made with BD Vialon biomaterial remained free of thrombus longer than any of the other catheters tested in a porcine study.†

2. **BD Instaflash™ needle technology**
   - Incorporates a notched needle (20- to 24-gauge), which may improve first-stick success.
   - Notched needle may reduce painful hit-and-miss insertions.
   - Provides quick blood visualization that may help improve insertion success and therefore reduce insertion attempts.

3. **Longer lengths**
   - Accommodate a variety of clinical needs from premature newborns to ultrasound guidance.
   - 18 gauge available in 1.25" and 1.75"
   - 20 gauge available in 1", 1.25", and 1.75"
   - 22 gauge available in 1" and 1.75"
   - 24 gauge available in 0.56" and 0.75"

4. **Built-in stabilization platform‡**
   - Reduces dislodgement by 84%§ and complies with the Infusion Therapy Standards of Practice and CDC guidelines for catheter stabilization.²

5. **Pre-attached extension set**
   - Shown to significantly reduce blood exposure during insertion compared to an open system and aligns with INS guidelines.²
   - Recommend limiting the use of add-on devices to reduce the potential of contamination, additional manipulation, and disconnection.²

6. **Passive safety mechanism**
   - Needle is automatically shielded after insertion.

7. **BD ChloraShield™ IV dressing**
   - BeneHold Adhesive Technology formulated with CHG provides sustained antimicrobial activity against skin flora for up to 7 days.
   - Provides a barrier to external contaminants including fluids, bacteria, viruses, and yeast.
   - Dressing wicks away moisture and other fluids and acts as a water-resistant barrier.**

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*Compared with an FEP catheter.
†Compared with PU and FEP catheters tested in a reference study.
‡When used with an IV site securement dressing.
§Compared with B. Braun Introcan Safety® catheter with Bard Statlock® IV Ultra stabilization device.
||Product provides a viral barrier from viruses 27 nm in diameter or larger while the dressing remains intact.
**The dressing is not designed for absorption of large quantities of blood or exudate.
The BD Nexiva closed IV catheter system

The only all-in-one PIVC system shown to preserve sites for longer $^{1,7}$

- **6 days versus 4 days** median dwell time versus an open system studied in a randomized trial of PIVCs in place for more than 24 hours$^1$
- **May reduce delays in treatment and costs**$^{1,7,20}$
- **Makes treating patients safer**, compliant with standards and guidelines$^{1,2,4,20}$
- **The BD portfolio of IV technologies** has solutions that help provide significantly better care$^1$

References


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