

## EVIDENCE-BASED NEXUS TKO® ANTI-REFLUX NEEDLELESS CONNECTOR BIBLIOGRAPHY AND SUMMARY OF DATA

<b>Acute Care Setting Publications/ Posters</b>	<b>Clinical</b>	<b>PICC/CVC</b>	Ayers 2015 (tPA and CLABSI) Jasinsky 2008, 2009 (Occlusion and tPA reduction) Steere 2015, 2018, 2020 (tPA, CLABSI, Supply/Heparin reduction/Cost savings)
		<b>PIV</b>	Jasinsky 2008, 2009 (Improved dwell time, decreased phlebitis, savings) Steere 2018, 2019, 2020 (Improved dwell time, reduced occlusions, savings)
		<b>Midline</b>	Hitchcock 2016 (Reduced Occlusions and tPA usage) Valentino 2015 (Improved dwell time and blood sampling)
		<b>In Vivo</b>	Foor 2019 (PIVs and Hemodilution)
<b>Home Infusion Setting Publications /Posters</b>	<b>Patient</b>	<b>PIV, PICC</b>	Buzas 2021 (Reduced occlusions, ER visits, and unplanned patient encounters) Harris 2014 (Reduced occlusions) Harwood 2015 (Reduced tPA usage and cost savings) Shomo 2014 (Reduced tPA usage and cost savings)
<b>Scientific Publications</b>	<b>Laboratory</b>	<b>In Vitro</b>	Hull 2015, 2017 (Anti-Reflux) Gibson 2020 (Anti-Reflux, Bi-Directional Fluid Control)
	<b>Lit Review</b>	<b>PIV</b>	Moureau 2020 (Anti-Reflux, Theoretical Methodology-PIV, FlowRighteous)
<b>White Papers (Non-published)</b>	<b>Technical Data</b>	<b>TKO Performance</b>	Maurer 2016 (Reduced Occlusions and Improved Dwell Time with TKO-Midlines) Shomo 2008 (Reduced Occlusions with TKO-5) Mitch 2007 & 2008 (Reduced Occlusions with TKO-5; PICC/Midlines) Third Party Laboratory Testing

### Publications/Posters (Acute, Home Infusion or Laboratory Setting)

1	Ayers H. Successful CLABSI Reduction Strategies. UF Health Shands. Poster Presentation. Presented at the 2015 Association for Vascular Access Scientific Meeting. <a href="#">Link to Poster</a>
2	Buzas B. Keeping You Connected: Anti-Reflux Connectors Reduce Catheter Occlusions and Use of Alteplase. Allegheny Home Health Network. Presented at the 2021 National Home Infusion Association Conference. <a href="#">Link to Poster</a>
3	Foor J. Moureau, N. The Role of the Hemodilution Ratio in Correlation to Blood Flow Velocity and the Impact of Venous Valves in Retrograde Blood Reflux. Presented at the 2019 Association for Vascular Access Annual Scientific Meeting. <a href="#">Link to Poster</a>
4	Gibson M. Do Needleless Connector Manufacturer Claims on Bidirectional Flow and Reflux Equate to In Vitro Quantification of Fluid Movement? Presented at the 2020 Association for Vascular Access Scientific Meeting. Data on File, Nexus Medical. <a href="#">Link to iPoster</a>
5	Gibson M. Do Needleless Connector Manufacturer Claims on Bidirectional Flow and Reflux Equate to In Vitro Quantification of Fluid Movement? <i>Journal of the Association for Vascular Access</i> (2020) 25 (4): 28–36. <a href="#">Link to Study</a>
6	Harris L. Reduction in Central Line Occlusions and the Elimination of Heparin in Home Infusion Patients. Presented at the 2014 Infusion Nurses Society Conference. <a href="#">Link to Poster</a>
7	Harwood P. Reduction in Catheter Occlusion in home infusion by implementing an anti-reflux needleless connector. Presented at the 2015 National Home Infusion Association Conference. <a href="#">Link to Poster</a>
8	Hitchcock J. Preventing Occlusion in Peripherally Inserted Central Catheters. <i>British Journal of Nursing</i> 2016. Vol. 25. No.19. Pg. s12-s18. <a href="#">Link to PubMed Abstract</a>
9	Hull G. Quantitative Assessment of Reflux in Commercially Available Needleless IV Connectors. Presented at the 2015 National Home Infusion Association Conference. <a href="#">Link to Poster</a>
10	Hull G. Moureau N. Sengupta S. Quantitative Assessment of Catheter Reflux in Commercially Available Needleless IV Connectors. <i>J Vasc Access</i> . December 2017. <a href="#">Link to Study</a>
11	Hull G. Sengupta S. Quantitative Assessment of Catheter Reflux in Commercially Available Needleless Connectors. Presented at the 2015 Infusion Nurses Society Conference. <a href="#">Link to iPoster</a> / <a href="#">Link to Handout</a>
12	Jasinsky L. Wurster J. Occlusion Reduction and Heparin Elimination Trial Using an Anti-Reflux Device on Peripheral and Central Venous Catheters. Presented at the 2008 Infusion Nurses Society Conference. <a href="#">Link to Poster</a>
13	Jasinsky L. Wurster J. Occlusion Reduction and Heparin Elimination Trial Using an Anti-Reflux Device on Peripheral and Central Venous Catheters. <i>Journal of Infusion Nursing</i> . 2009. 32(1):33-39. <a href="#">Link to Study</a>
14	Shomo J. Reynolds C. Anti-reflux technology reduces catheter consumption and provides significant cost savings. Presented at the 2014 Infusion Nurses Society Conference. <a href="#">Link to Poster</a>
15	Steere L. Lean Six Sigma for Intravenous Therapy Optimization: A Hospital Use of Lean Thinking to Improve Occlusion Management. <i>JAVA</i> . March 2018. Vol 23 No 1. Pg. 42-50. <a href="#">Link to Study</a>

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16	Steere L. The Five-Year Impact of a VAST Using Lean IV Care to Reduce CVAD Occlusions. Presented at the 2020 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
17	Steere L. Ficara C. Transforming Intravenous Practices: Cost Savings, Better Patient Outcomes Presented at the 2020 American Organization for Nursing Leadership. <a href="#">Link to Poster</a>
18	Steere L. The Power of a VAST in Improving Patient Satisfaction & Reimbursements. Presented at the 2020 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
19	Steere L. Ficara C. The Right Approach for the Right Result: Applying Lean Leadership to Achieve Standard Work in IV Therapy. <i>PSQH</i> [Internet]. 2020 Oct 8 [cited 2020 Oct 8]; Available from: <a href="#">Link to Article</a>
20	Steere L. Ficara C. The Right Approach for the Right Result: Applying Lean Leadership to Achieve Standard Work in IV Therapy. <i>Nurse Leader</i> [Internet]. 2020 Oct 9 [cited 2020 Oct 9]; Available from: <a href="#">Link to Article</a>
21	Steere L. Ficara C. Reaching One Peripheral IV Per Patient Visit with Lean Multi-Modal Strategy: The PIV5Rights Bundle. <i>JAVA</i> . 2019;24(3):31-43. <a href="#">Link to Study</a>
22	Steere L. Ficara C. Reaching One Peripheral IV Per Patient Visit with Lean Multi-Modal Strategy: The PIV5Rights Bundle. Presented at the 2019 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
23	Steere L. Reduction in Central Venous Catheter Infections and Occlusions: Examining the Clinical Impact of a Pressure Activated Anti-Reflux Connector. Presented at the 2015 Association for Vascular Access Scientific Meeting. <a href="#">Link to Poster</a>
24	Steere L. A Quinfecta: Five Rights for 1 PIVC Per Patient. Presented at the 2018 Institute for Healthcare Improvement Meeting. <a href="#">Link to Poster</a>
25	Steere L. Sullivan D. Reduce PIVC Complications and Costs Using the Five Rights Approach A Randomized, Controlled Trial. Presented at the 2018 Association for Vascular Access Scientific Meeting. <a href="#">Link to Poster</a>
26	Valentino, R. Farkas, V. Maximizing the Midline. Poster Presentation. Presented at the 2015 Association for Vascular Access Scientific Meeting. <a href="#">Link to Poster</a>
<b>Research Reviews/White Papers/Technical Data</b>	
27	Maurer A. Reducing the occlusion rates of peripheral Midlines: Our 5-year experience using Bionector TKO needle free connectors. Presented at the 2016 National Health System CDDFT Meeting (UK). Data on File, Nexus Medical. <a href="#">Link to Presentation</a>
28	Mitch S. Brandmeyer B. PIC and Midline Catheter Occlusion Rates: A prospective study comparing the Interlink Split Septum Device versus Nexus TKO split septum pressure activated anti-reflux valve. White Paper 2007. <a href="#">Link to White Paper</a>
29	Mitch S. Revolutionary Change in IV Therapy Utilizing LifeShield® TKO-5® Anti-Reflux Device. White Paper. 2008. Data on File, Nexus Medical. <a href="#">Link to White Paper</a>
30	Moureau N. Steere L. Theoretic Methodology and Systematic Evidence Review of the PIV5Rights Insertion Care Bundle. Presented at the 2020 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
31	Moureau N. Jasinsky L. Achieving Peak Catheter Performance Through Reflux Valve Protection: Reducing Catheter Occlusions and Failure. Presented at the 2020 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
32	Moureau N. How to Become Flow Righteous: The 1-2-3 Elements of Success. Presented at the 2020 Association for Vascular Access Scientific Meeting. <a href="#">Link to iPoster</a> / <a href="#">Handout</a>
33	Shomo J. Paquet F. Reducing the Risk of Catheter-Related Complications: Evaluation of the LifeShield™ TKO-5® Anti-Reflux Device in Two Hospitals. White Paper. 2008. Data on File, Nexus Medical. <a href="#">Link to White Paper</a>
34	GLP-Lab Study. Nexus TKO®-6P: 96-Activation Microbial Barrier Performance Study. Data on File, Nexus Medical. <a href="#">Link to Data</a>
35	GLP-Lab Study. Nexus TKO®-6P: Mechanical Hemolysis Study. Data on File, Nexus Medical. <a href="#">Link to Data</a>
36	GLP-Lab Study. Nexus TKO®-6P: Blood Clearance Study. Data on File, Nexus Medical. <a href="#">Link to Data</a>
37	ISO 594 – Primary Standard for Luer Fittings. Septum Insertion Force Study of Nexus TKO®-6P Septum and other Market Leading Needleless Connectors. Data on File, Nexus Medical. <a href="#">Link to Data</a>
38	ISO 594 – Primary Standard for Luer Fittings. Luer and Locking Thread Comparisons: Dimensional Study of Nexus TKO®-6P and other Market Leading Vascular Access Devices. Data on File, Nexus Medical. <a href="#">Link to Data</a>
39	Nexus TKO®-6P: 510K Premarket Notification. Nexus Medical 510(k): K130416. Data on File, Nexus Medical. <a href="#">Link to FDA Premarket Notice</a>
40	Nexus TKO®-6P: Biocompatibility & Chemical Compatibility Technical Specification. Nexus Medical 510(k): K130416. Data on File, Nexus Medical. <a href="#">Link to Data</a>