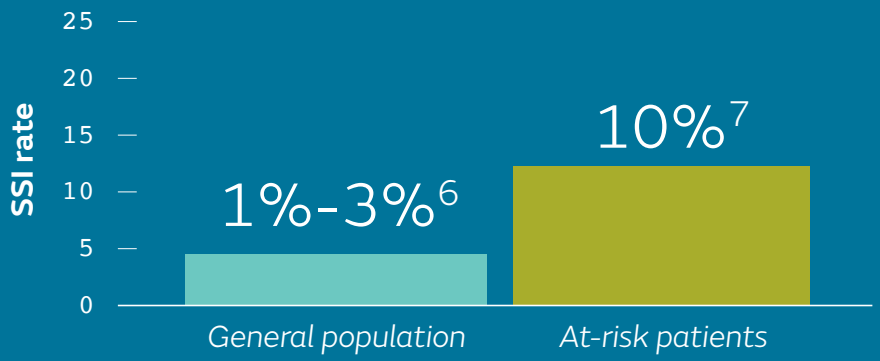
Control your risk + Control your outcomes

Reducing the risk of orthopedic surgical site complications (SSCs) with next-level technology.

Smith+Nephew

PICO◊
Single Use Negative Pressure Wound Therapy System

Higher risk demands higher standards



The rate of surgical incision complications for at-risk orthopedic patients is higher than it is for the general population.[6,7]

7x
increase[8]

The combination of obesity with diabetes revealed a nearly sevenfold increase in periprosthetic knee infections when compared with obese patients without diabetes.

How do you define high risk?

Certain comorbidities are believed to be the main culprits:[9]

Diabetes | Obesity | Immune deficiency | Hypertension | Smoking

More procedures – and more risk

An aging population means a projected increase in total joint arthroplasty (TJA) procedures – and complications from those procedures.[1,2]

The most common surgical site complications for total joint replacement procedures are:

Surgical site infection
The number one reason for readmissions after total joint surgery[3]

Prolonged drainage
Shown to increase the risk of infection by:

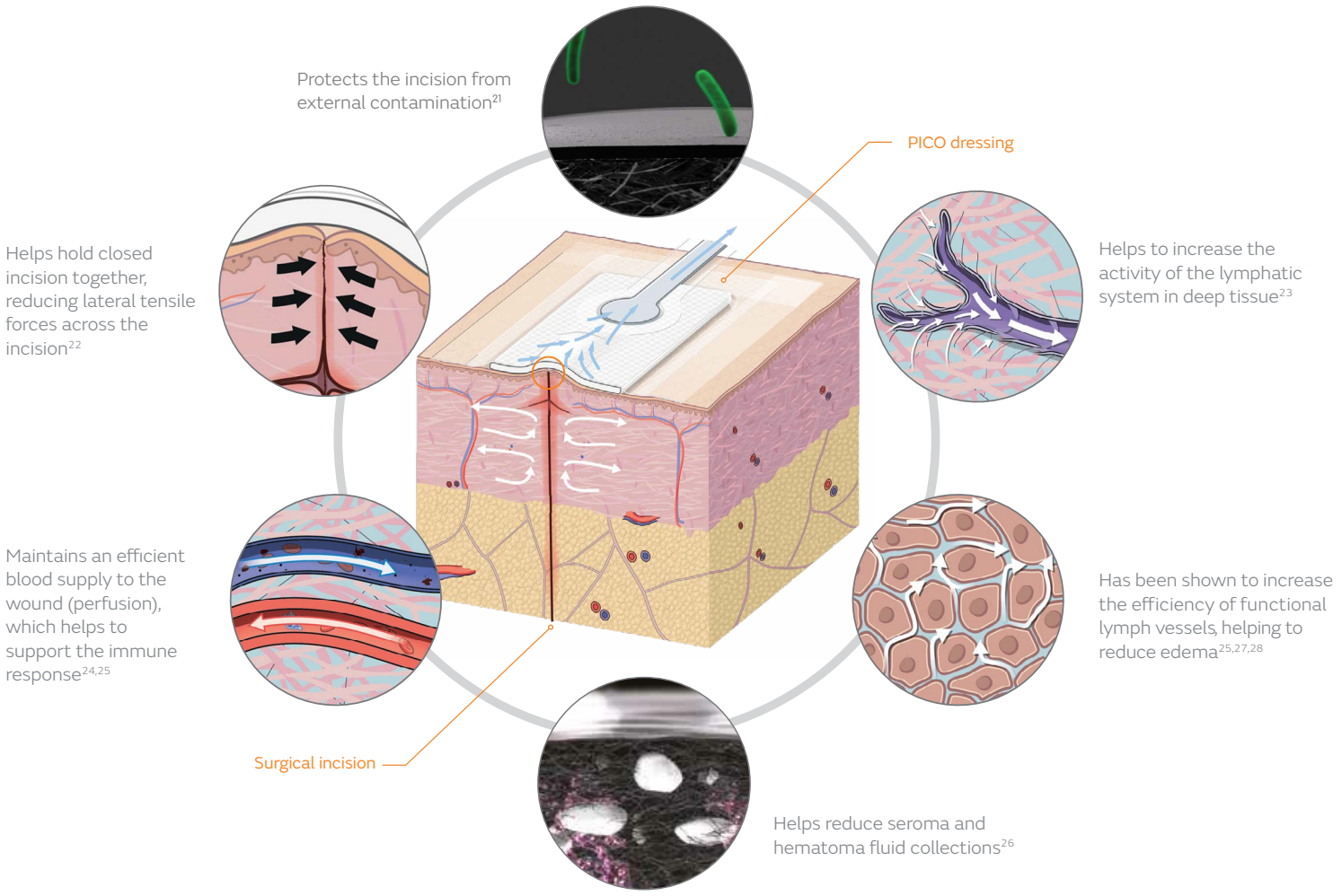
- 42% following a total hip arthroplasty (THA)[4]
- 29% following a total knee arthroplasty (TKA)[4]

Dehiscence
In one study, 43% of the procedures in which patients developed dehiscence were considered failures[5]

Does standard incision care meet your standards?

PICO◊ sNPWT is a pioneering negative pressure wound therapy system with a unique mode of action that can help raise the level of care for orthopedic surgical incisions:

- Manages low to moderate levels of exudate[10-12]
- Canister-free and portable, which can help improve patient mobility[14,15] and increase satisfaction rates[16]
- Provides therapy for up to seven or 14 days
- Delivers compression-like therapy to the incision and its margins[13,15,16]
- May improve scar quality[17-20]



Where negative pressure meets positive outcomes

In a randomized controlled trial, the PICO◊ sNPWT System has been shown to:

- Reduce superficial SSCs by up to **76%** while also reducing exudate, length of stay and dressing changes[25]
- Save an estimated **$8,800** per high-risk patient following primary hip and knee arthroplasty, compared to standard care[27]

See more case studies at: possiblewithpico.com

Case studies

High-risk patient with total hip replacement

65-year-old female with hypertension, diabetes, BMI 35 kg/m2, osteoarthritis

Individual results will vary.

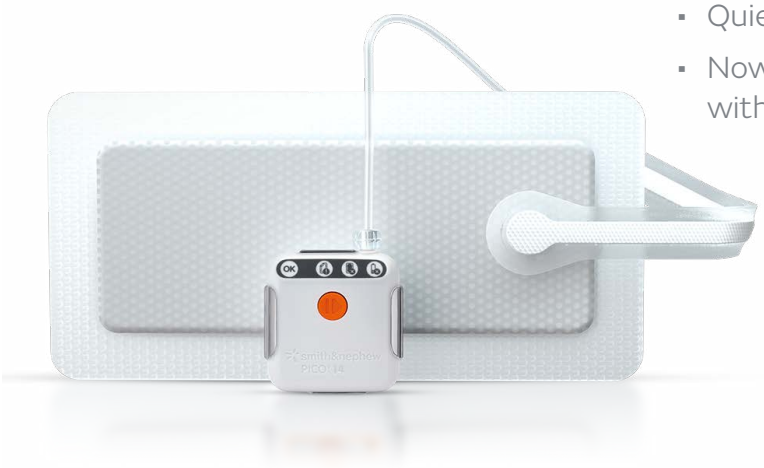
High-risk patient with knee implant

77-year-old male with hypertension and osteoarthritis

Patient satisfaction, powered by PICO◊ sNPWT

The PICO sNPWT System features a portable, canister-free design that has been shown to increase patient satisfaction rates across the clinical spectrum* vs tNPWT.[16]

- May improve scar quality[17-20]
- Portable system allows patients the freedom to continue daily activities[14]
- Gentle silicone adhesive makes application and removal easy[14] while minimizing pain upon removal [11,17-20]
- Waterproof dressing, allowing patients the ability to shower[14]
- Quiet system better enables patients to sleep[14]
- Now offering therapy for up to 14 days with PICO 14 System



Important Safety Information

The PICO 14 pumps contain a MAGNET. Keep the PICO 14 pumps at least 4 inches (10 cm) away from other medical devices at all times. As with all electrical medical equipment, failure to maintain appropriate distance may disrupt the operation of nearby medical devices.

References: 1. Kurtz, Steven & Ong, Kevin & Lau, Edmund & Mowat, Fionna & Halpern, Michael. (2007). Projections of Primary and Revision Hip and Knee Arthroplasty in the United States from 2005 to 2030. The Journal of bone and joint surgery. American volume. 89. 780-5. 10.2106/JBJS.F.00222. **2.** Hannah Wolford, MSPH, Kelly Hatfield, MSPH, Prabasaj Paul, PhD, MPH, Sarah Yi, PhD, John A Jernigan, MD, MS, Rachel B Slayton, PhD, MPH, Projected Burden of Complex Surgical Site Infections following Total Hip and Knee Arthroplasty among Adults in the United States, 2020 through 2030, Open Forum Infectious Diseases, Volume 4, Issue suppl_1, Fall 2017, Pages S654–S655, https://doi.org/10.1093/ofid/ofx163.1744 **3.** Agodi A, Auxilia F, Barchitta M, et al. Risk of surgical site infections following hip and knee arthroplasty: results of the ISChIA-GISIO study. Ann Ig. 2017;29(5):422–30. **4.** Patel, Vipul & Walsh, Michael & Sehgal, Bantoo & Preston, Charles & DeWal, Hargovind & Dicesare, Paul. (2007). Factors Associated with Prolonged Wound Drainage After Primary Total Hip and Knee Arthroplasty. The Journal of bone and joint surgery. American volume. 89. 33-8. 10.2106/JBJS.F.00163. **5.** Sershon, Robert & Tecle, Nahom & Valle, Craig & Levine, Brett & Berger, Richard & Nam, Denis. (2018). The Impact of an Acute, Traumatic Wound Dehiscence on Clinical Outcomes Following Primary Knee Arthroplasty. The Journal of Arthroplasty. 33. 10.1016/j.arth.2018.02.090. **6.** Hester, T., Mahmood, S., & Moftah, F. (2015). Is Single Use Portable Incisional Negative Pressure Wound Therapy System Suitable for Revision Arthroplasty? Advances in Orthopedic Surgery, 2015. **7.** Jämsen E, Nevalainen P, Eskelinen A, Huotari K, Kalliovalkama J, Moilanen T. Obesity, diabetes, and preoperative hyperglycemia as predictors of periprosthetic joint infection: a single-center analysis of 7181 primary hip and knee replacements for osteoarthritis. J Bone Joint Surg Am 2012; 94 (14): e101. **8.** Teo, B. J. X., Yeo, W., Chong, H.-C., & Tan, A. H. C. (2018). Surgical site infection after primary total knee arthroplasty is associated with a longer duration of surgery. Journal of Orthopaedic Surgery. https://doi.org/10.1177/2309499018785647 **9.** Eka A, Chen AF. Patient-related medical risk factors for periprosthetic joint infection of the hip and knee. Ann Transl Med. 2015;3(16):233. doi:10.3978/j.issn.2305-5839.2015.09.26 **10.** Malmsjö M. et al. Biological effects of a disposable, canisterless Negative Pressure Wound Therapy system. Eplasty 2014; 14:e15. **11.** Data on File DS/18/015/R. Summary Wound Model Report for Opal PICO 7. January 2018 **12.** Data on file reference 1102010 – Bacterial Barrier Testing (wet-wet) of PICO dressing with a 7 day test duration against S.marcescens; Helen Lumb, February 2011. **13.** Smith & Nephew January 2018. Outcomes following PICO compared to conventional dressings when used prophylactically on closed surgical incisions: systematic literature review and meta-analysis. Internal Report. EO/AWM/PICO/004/v1. **14.** Hurd, T., Trueman, P., & Rossington, A. Use of portable, single use negative pressure wound therapy device in home care patients with low to moderately exuding wounds: a case series. Ostomy Wound Management. Volume 60. Issue 3. March 2014. **15.** WMP.11446.UEF/R3 Project Fairbanks Human Factors Summary Report Issue 5. G Walker, May 2017. **16.** Kirsner R, et al. Randomized controlled trial on the efficacy and acceptance of a single-use negative pressure wound therapy system versus traditional negative pressure wound therapy in the treatment of lower limb chronic ulcers (VLU and DFU). Poster presented at Wild on Wounds National Wound Conference. September 12–15, 2018. Poster 18. Galiano RD, Hudson D, Shin J, van der Hulst R, Tanayadin V, Djohan R, et al. Incisional Negative Pressure Wound Therapy for Prevention of Wound Healing Complications Following Reduction Mammaplasty Plastic & Reconstructive Surgery Global Open 2018; 6(1):e1560: 1-8. **17.** Tanaydin V, Beugels J, Andriessen A, Sawor JH, Van Der Hulst R. Randomized Controlled Study Comparing Disposable Negative-Pressure Wound Therapy with Standard Care in Bilateral Breast Reduction Mammoplasty Evaluating Surgical Site Complications and Scar Quality. Aesthetic Plast Surg. 2018;42(4):927-935. **18.** Sharp, E; Single use NPWT for the treatment of complex orthopaedic surgical and trauma wounds; Journal of Woundcare Cases supplement 2013, Vol 22, No 10, S5-9. **19.** Hudson, D; Adams, K; Van Huyssteen, A; Martin, R; Huddleston, E; Simplified negative pressure wound therapy: clinical evaluation of an ultraportable, no canister system; International Wound Journal 2015, 12: 195-201. **20.** Smith & Nephew 2019.Pre-Clinical Assessment of Single-Use Negative Pressure Wound Therapy during in vivo Porcine Wound Healing. Internal Report. DS/19/313/R. **21.** Smith & Nephew January 2018. Outcomes following PICO compared to conventional dressings when used prophylactically on closed surgical incisions: systematic literature review and meta-analysis. Internal Report. EO/AWM/PICO/004/v1. **22.** Smith & Nephew February 2011.Bacterial Barrier Testing (wet-wet) of PICO dressing with a 7 day test duration against S. marcescens. Internal Report. 1102010. **23.** Loveluck J, Copeland, T., Hill, J., Hunt, A., and Martin, R., . Biomechanical Modeling of the Forces Applied to Closed Incisions During Single-Use Negative Pressure Wound Therapy. ePlasty. 2016. **24.** Karlakki, S. et al. Incisional Negative Pressure Wound Therapy dressings (iNPWTd) in routine primary hip and knee arthroplasties. Bone Joint Res 2016;5:328–337. **25.** Nherera L.M. et al. Cost-effectiveness analysis of single-use negative pressure wound therapy dressings (sNPWT) to reduce surgical site complications (SSC) in routine primary hip and knee replacements. Wound Repair & Regeneration 2017; 25(3):474-482. **26.** Canonico S et al., (2012) Therapeutic possibilities of portable NPWT. Initial multidisciplinary observation with the negative pressure device. Acta Vulnov. 10. Pp.57-66. **27.** Kilpadi DV, Cunningham MR. Evaluation of closed incision management with negative pressure wound therapy (CIM): hematoma/seroma and involvement of the lymphatic system. Wound Repair Regen. 2011;19(5):588-596. **28.** Payne C, Edwards D: Application of the single-use negative pressure wound therapy device (PICO) on a heterogeneous group of surgical and traumatic wounds: Eplasty Apr 2014, 14: e20.

Advanced Wound Management
Smith & Nephew, Inc.
Fort Worth, TX 76109
USA
www.smith-nephew.com
www.possiblewithpico.com

Customer Care Center
T 800 876-1261
F 727 392-6914

PCPE5-28163-1120