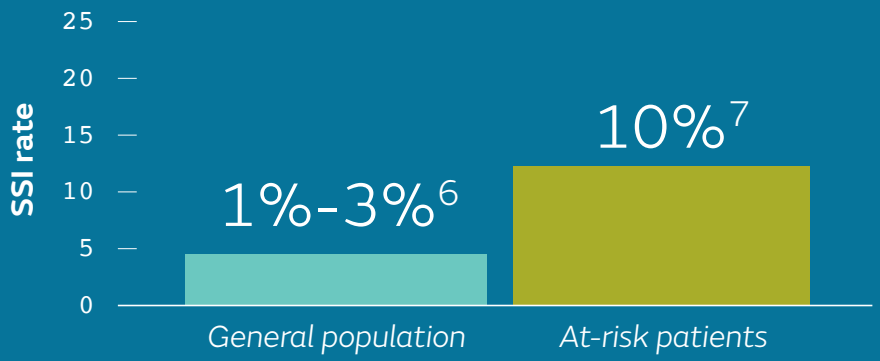
Control your risk + Control your outcomes

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:

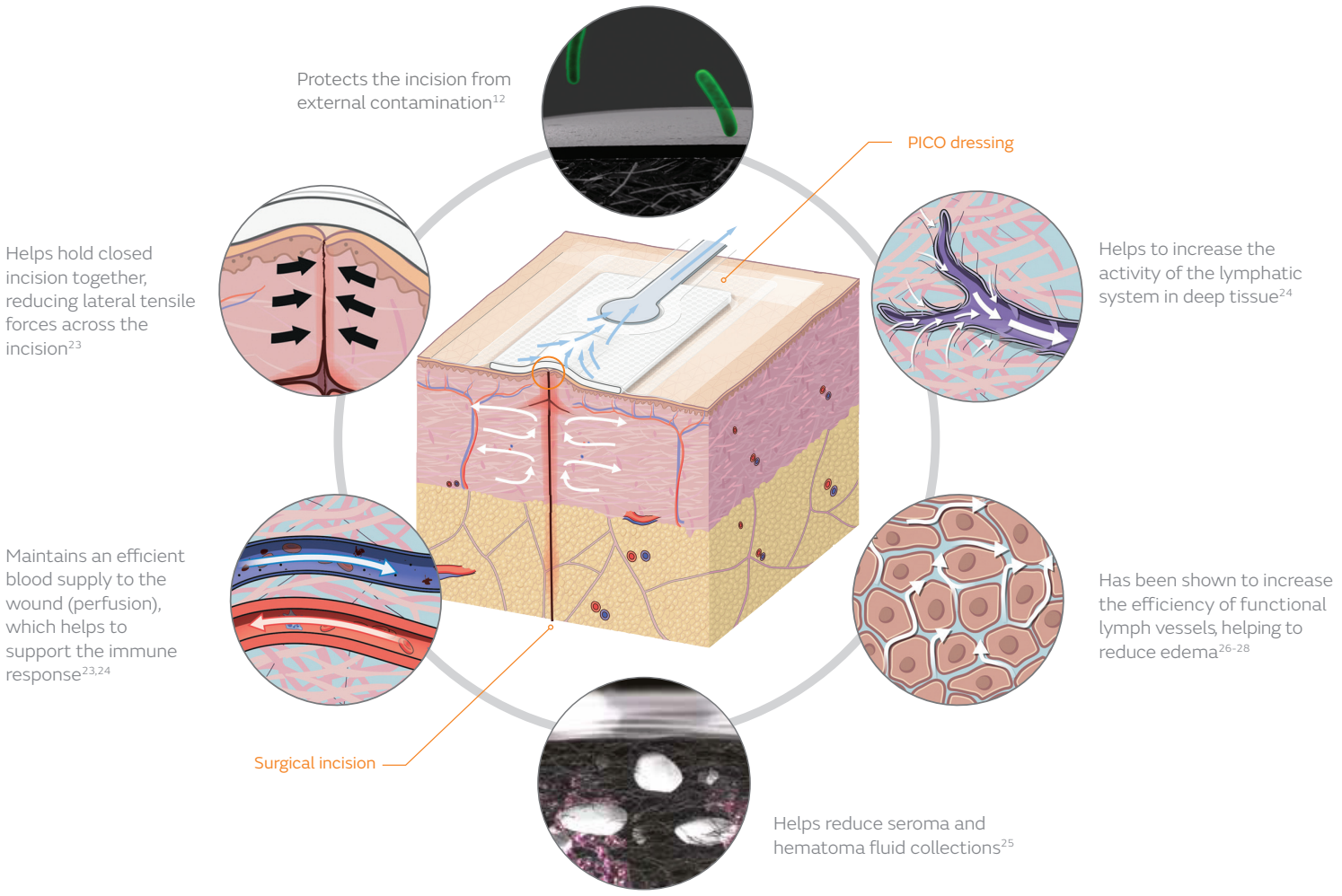
- 42% following a total hip arthroplasty (THA)[4]
- 29% following a total knee arthroplasty (TKA)[4]

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[13,14] and increase satisfaction rates[15]
- Provides therapy for up to seven or 14 days
- Delivers compression-like therapy to the incision and its margins[16-18]
- May improve scar quality[19,20]



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[29]
- Save an estimated **$8,800** per high-risk patient following primary hip and knee arthroplasty, compared to standard care[30]

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 vs tNPWT.[15]

- May improve scar quality[19,20]
- Portable system allows patients the freedom to continue daily activities[13,14]
- Gentle silicone adhesive makes application and removal easy while minimizing pain upon removal[31-34]
- Splashproof dressing, allowing patients the ability to shower*[35]
- Quiet system better enables patients to sleep[36]
- 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. For full product and safety information, please see the Instructions for Use.

---

*The PICO dressing should not be exposed to a direct spray or submerged in water.

References: 1. Kurtz S, Ong K, Lau E, Mowat F, Halpern M. Projections of primary and revision hip and knee arthroplasty in the United States from 2005 to 2030. J Bone Joint Surg Am. 2007;89(4):780-785. **2.** Wolford HM, Hatfield KM, Paul P, Yi SH, Slayton RB. The projected burden of complex surgical site infections following hip and knee arthroplasties in adults in the United States, 2020 through 2030. Infect Control Hosp Epidemiol. 2018;39(10):1189-1195. **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):422-430. **4.** Patel VP, Walsh M, Sehgal B, Preston C, DeWal H, Di Cesare PE. Factors associated with prolonged wound drainage after primary total hip and knee arthroplasty. J Bone Joint Surg Am. 2007;89(1):33-38. **5.** Sershon RA, Tecle N, Della Valle CJ, Levine BR, Berger RA, Nam D. The impact of an acute, traumatic wound dehiscence on clinical outcomes following primary knee arthroplasty. J Arthroplasty. 2018;33(8):2613-2615. **6.** Hester T, Mahmood S, Moftah F. Is single use portable incisional negative pressure wound therapy system suitable for revision arthroplasty? Adv Orthop Surg. 2015;2015:1-4. **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):e101-1-9. **8.** Teo BJX, Yeo W, Chong H-C, Tan AHC. Surgical site infection after primary total knee arthroplasty is associated with a longer duration of surgery. J Orthop Surg (Hong Kong). 2018;26(2). **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. **10.** Malmsjö M, Huddleston E, Martin R. Biological effects of a disposable, canisterless negative pressure wound therapy system. Eplasty. 2014;14:e15. **11.** Smith & Nephew 2019.Summary Report of in vitro Wound Model and Negative Pressure Delivery (Nominal -80mmHg) testing for PICO v2 (PICO 7 and PICO 14) System. Internal Report. RD/18/134 V2. **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.** Hurd T, Trueman P, Rossington A. Use of a portable, single-use negative pressure wound therapy device in home care patients with low to moderately exuding wounds: a case series. Ostomy Wound Manage. 2014;60(3):30-36. **14.** Smith & Nephew December 2018.Summary of PICO v2 (PICO 7 and PICO 14) Human Factors Testing. Internal Report. RD/18/136. **15.** Kirsner R, Dove C, Reyzelman A, Vayser D, Jaimes H. A prospective, randomized, controlled clinical trial on the efficacy of a single-use negative pressure wound therapy system, compared to traditional negative pressure wound therapy in the treatment of chronic ulcers of the lower extremities. Wound Repair Regen. 2019;27(5):519-529. **16.** Smith & Nephew 2019.PICO Biomechanical Study. Internal Report. DS/19/211/R. **17.** Selvaggi F, Pellino G, Sciaudone G, et al. New Advances in Negative Pressure Wound Therapy (NPWT) for Surgical Wounds of Patients Affected with Chron's Disease. Surgical Technology International. 2014;24:83-89. **18.** 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. **19.** Galiano RD, Hudson D, Shin J, et al. Incisional negative pressure wound therapy for prevention of wound healing complications following reduction mammaplasty. Plast Reconstr Surg Glob Open. 2018;6(1):e1560. **20.** Tanaydin V, Beugels J, Andriessen A, Sawor JH, van der Hulst RRWJ. Correction to: 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):1176-1176. **21.** 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. **22.** 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. **23.** Loveluck J, Copeland T, Hill J, Hunt A, Martin R. Biomechanical modeling of the forces applied to closed incisions during single-use negative pressure wound therapy. Eplasty. 2016;16:e20. **24.** Innocenti M, Santini M, Dreassi E, et al. Effects of Cutaneous Negative Pressure Application on Perforator Artery Flow in Healthy Volunteers: A Preliminary Study. J Reconstr Microsurg. 2019 Mar;35(3):189-193. **25.** Kilpadi DV, Cunningham MR. Evaluation of closed incision management with negative pressure wound therapy (CIM): hematoma/seroma and involvement of the lymphatic system: CIM: hematoma/seroma and lymphatics. Wound Repair Regen. 2011;19(5):588-596. **26.** Birke-Sorensen H, Malmsjo M, Rome P, et al. Evidence-based recommendations for negative pressure wound therapy: treatment variables (pressure levels, wound filler and contact layer)-steps towards an international consensus. J Plast Reconstr Aesthet Surg. 2011;64 Suppl:S1-16. **27.** Scalise A, Calamita R, Tartaglione C, et al. Improving wound healing and preventing surgical site complications of closed surgical incisions: a possible role of Incisional Negative Pressure Wound Therapy. A systematic review of the literature. Int Wound J. 2016;13(6):1260-1281. **28.** Shim HS, Choi JS, Kim SW. A Role for Postoperative Negative Pressure Wound Therapy in Multitissue Hand Injuries. Biomed Res Int. 2018 Mar 26;2018:3629643. **29.** Karlakki SL, Hamad AK, Whittall C, et al. Incisional negative pressure wound therapy dressings (iNPWTd) in routine primary hip and knee arthroplasties: A randomized controlled trial. Bone Joint Res. 2016;5(8):328-337. **30.** Nherera LM, Trueman P, Karlakki SL. 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 Regen. 2017;25(3):474-482. **31.** 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. 2014;14:e20. **32.** Hudson DA, Adams KG, Van Huyssteen A, Martin R, Huddleston EM. Simplified negative pressure wound therapy: clinical evaluation of an ultraportable, no-canister system. Int Wound J. 2015;12(2):195-201. **33.** Smith & Nephew May 2015.A prospective, open, non-comparative, multi-centre study to evaluate the functionality and dressing performance of a new negative pressure enhanced dressing (NPED) in acute wounds (CT09/02). Internal Report. ST865 CT09/02. **34.** Sharp E. Single-use NPWT for the treatment of complex orthopaedic surgical and trauma wounds. J Wound Care. 2013;22(Sup10):S5-S10. **35.** Smith & Nephew April 2018.PICO 7Y - Waterproofness of dressings. Internal Report. DS/18/134/R. **36.** Smith & Nephew December 2018.Acoustic Testing Report: PICO v2 (PICO 7 and PICO 14) Devices. Internal Report. RD/18/131.

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