



**3M** Science.  
Applied to Life.™

## Discover the scientifically proven power of 3M™ Prevena™ Therapy.

Higher standards in healthcare call for a higher standard of therapy. Take postop care to new levels and provide your patients with protection from post-surgical complications with ciNPT.

# Managing complications has never been more important.

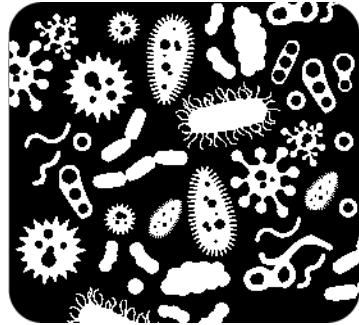
- Surgical complications challenge multiple clinicians with consequences that “ripple” across care settings
- Today’s uncertain care environment has made protecting against complications a high priority
- Surgeons and staff have a responsibility to manage incisions to minimize the need for in-person care

**“Ripple effect” of surgical complications often encourages clinicians to favour low-touch care, including solutions that promote:**

- Efficiency and cost-effectiveness
- Minimal complications
- Minimal hospital stays
- Low readmits
- Portability of care
- Home-based recovery
- Telehealth consultations

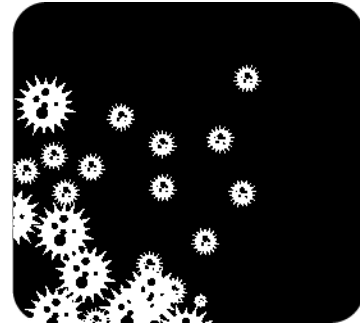
# Understanding the factors that impact SSI.

Reduce external sources of bacterial contamination with evidence-based antiseptic solutions.



Dose of bacteria

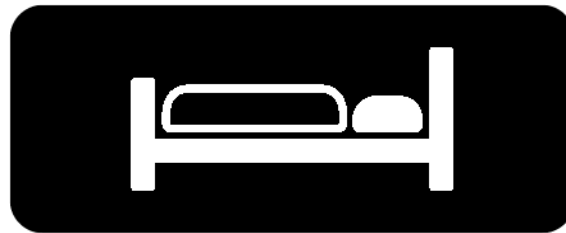
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Virulence of bacteria

**RISK OF SSI<sup>4</sup>** =

Enhance factors that promote patients' ability to protect against infection, such as maintenance of normothermia.



Resistance of the host (Patient)



## #1 risk factor

is contamination from patients' own skin.<sup>5,6</sup>

Joint-related deep infections are among the most costly events after both total hip and knee arthroplasty.<sup>7</sup>

Total hip arthroplasty (THA)	Total knee arthroplasty (TKA)
<b>\$44,180*</b>	<b>\$36,397*</b>

\*Original costing in USD. Exchange rate from USD to CAD correct of 18 May 2021





## Throughout the surgical journey 3M is here to help.

3M's science-based solutions help protect surgical patients and staff to help deliver optimal outcomes for every patient, every time.

# Bringing your best. Every patient, every time.



### Patient preparation

- Personal protective equipment
- Nasal decolonization
- Preoperative patient warming
- Hair removal



### Surgical intervention

- Surgical hand hygiene
- Sterilization assurance
- Vascular access
- Temperature monitoring
- Intraoperative patient warming
- Antimicrobial incise draping
- Surgical skin antisepsis



### Patient recovery

- Negative pressure wound therapy with and without instillation
- Postoperative incision management
- Closed incision negative pressure therapy

# Complications in orthopedic surgery can be costly.



**7.7-11.7 days**

Increased length of hospital stay due to SSIs.<sup>1</sup>



**18.8%**

of unplanned **30-day readmission** following THA and TKA due to SSI<sup>2</sup>



**\$29,341\***  
**and \$36,700\***

average hospital costs with periprosthetic joint infection complications after TKA and THA,<sup>3</sup> respectively.



**\$37,757\***

median readmission cost to treat infected orthopedic trauma injuries.<sup>4</sup>

By working to help protect incisions from postoperative complications, 3M™ Prevena™ Therapy works to help stop the ripple effect before it begins.

\*Original costing in USD. Exchange rate from USD to CAD correct of 18 May 2021.

**References:** **1.** de Lissovoy G, Fraeman K, Hutchins V, Murphy D, Song D, Vaughn BB. Surgical site infection: incidence and impact on hospital utilization and treatment costs. *Am J Infect Control.* 2009 Jun;37(5):387-97. **2.** Merkow R, et al. Underlying reasons associate with hospital readmission following surgery in the US. *JAMA.* 2015;313(5):483-95. **3.** Kurtz SM, Lau E, Watson H, Schmier JK, Parvizi J. Economic burden of periprosthetic joint infection in the United States. *J Arthroplasty.* 2012 Sep;27(8 Suppl):61-5.e1. doi: 10.1016/j.arth.2012.02.022. Epub 2012 May 2. **4.** Thakore RV, et al. Surgical site infection in orthopedic trauma: A case-control study evaluating risk factors and cost. *Journal of Clinical Orthopaedics and Trauma.* 2015;(6):220-226.

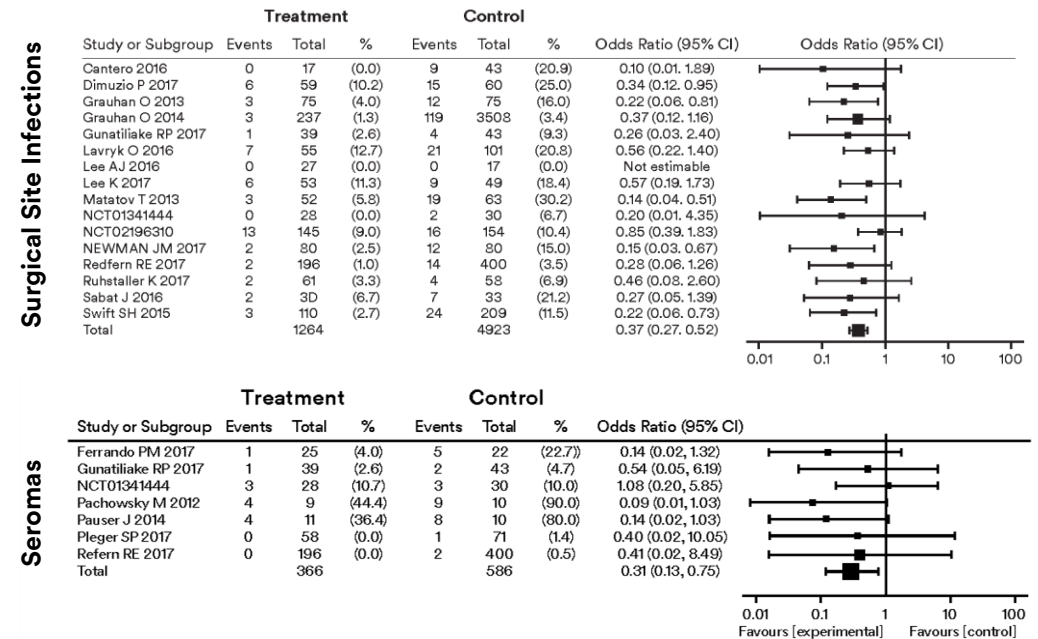
# How 3M™ Prevena™ Therapy can help.

**Indications for Use:** The PREVENA™ Incision Management System is intended to manage the environment of surgical incisions and surrounding intact skin in patients at risk for developing post-operative complications, such as infection, by maintaining a closed environment via the application of a negative pressure wound therapy system to the incision. The PREVENA™ Dressing skin interface layer with silver reduces microbial colonization in the fabric.

## Clinical Evidence Supporting the Indication

A systematic literature review and associated meta-analysis were used to support the safety and effectiveness of Prevena Therapy over closed incisions in reducing the incidence of surgical site infection (SSI) and seroma versus conventional wound dressings.

- Out of 426 studies in the initial search, ultimately, 16 prospective studies were included in this meta-analysis for SSI characterization
- A total of up to 6,187 evaluable patients were included in this meta-analysis for SSI with 1,264 in the Prevena Therapy (treatment) group and 4,923 in the conventional wound dressing (control) group
- Nine randomized controlled trials were included in a subgroup analysis for SSI in high-risk patients



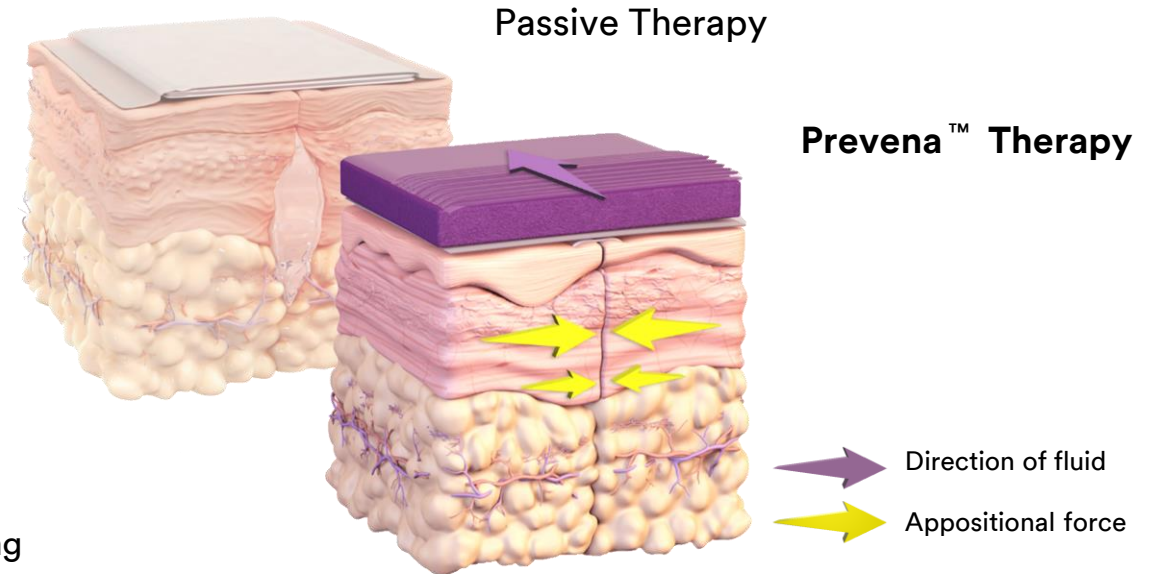
Prevena Therapy demonstrates the greatest benefit in reducing the incidence of SSIs in high-risk patients.

# 3M™ Prevena™ Therapy Science and Mechanism of Action

## Delivers continuous -125mmHg to the incision site

- ✓ Creates a barrier to external contaminants
- ✓ Helps hold incision edges together
- ✓ Decreases lateral tension of sutured/stapled incisions<sup>+5</sup>
- ✓ Removes fluid and infectious materials\*
- ✓ Reduces edema

Under -125mmHg of negative pressure, the Reticulated Open Cell Foam dressing collapses to its geometric center. This brings the incision edges together, reduces lateral tension, and also allows for improved fluid management.<sup>5-7</sup>



- Contours in 3M™ Prevena™ Dressings allow for even distribution of negative pressure
- Adhesive film creates a barrier to external contaminants
- Designed to conform to articulating joints to allow movement

- Skin interface layer contains 0.019% ionic silver, which reduces bacterial colonization in the fabric
- Multiple sizes and configurations
- 3M™ Prevena™ 125 Therapy Unit and Prevena Dressings are shower-friendly\*\*

<sup>+</sup>Computer and Bench Models, <sup>\*</sup>In a Canister, <sup>\*\*</sup>See Prevena Therapy Patient and Clinician Guides for additional details

**References:** 5. Wilkes RP, Kilpadi DV, Zhao Y, et al. Closed Incision Management With Negative Pressure Wound Therapy (CIM): Biomechanics. *Surgical Innovation*. 2012;19(1):67-75 6. 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 and Regen*. 2011;19:588-596. 7. Glaser DA, Farnsworth CL, Varley ES, et al. Negative pressure therapy for closed spine incisions: A pilot study. *Wounds*. 2012 Nov;24(11):308-316.

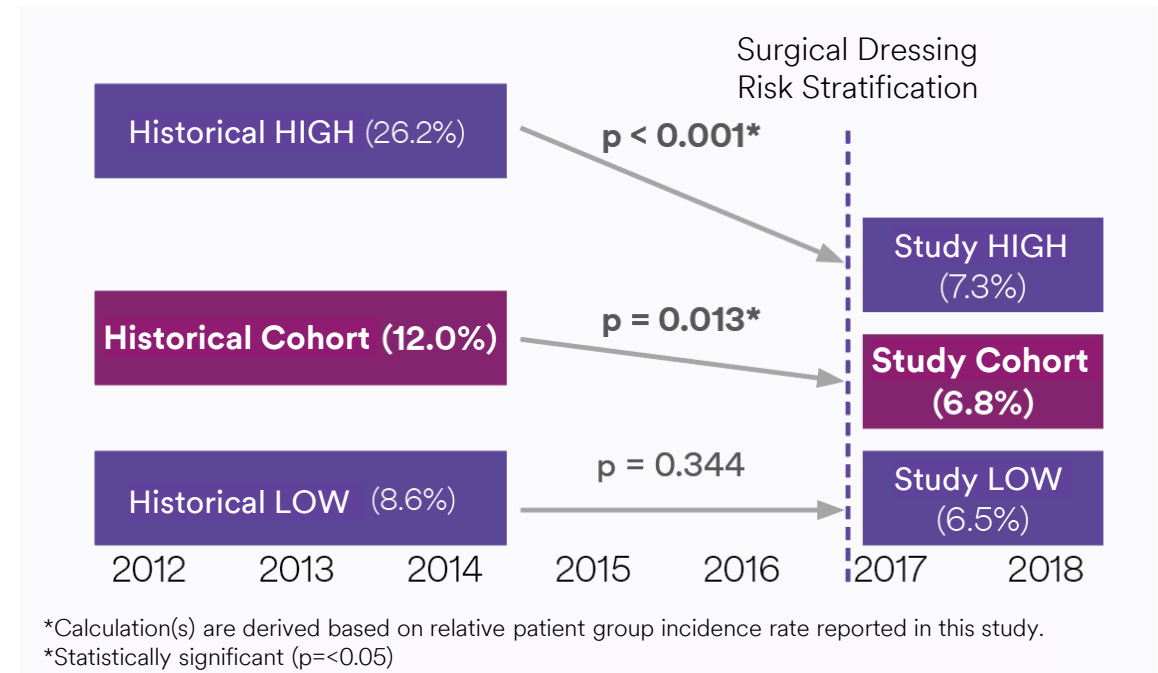
# Identifying Patients who may Benefit from 3M™ Prevena™ Therapy<sup>8</sup>

- A risk-stratification algorithm (Table 1) for the use of Prevena Therapy
- Working with patients undergoing primary total joint arthroplasties, the authors used the algorithm to categorize patients as high-risk ( $\geq 2$  score) and low-risk (score  $< 2$ )
- They compared outcomes of patients treated prophylactically with ciNPT dressings with historical control groups (Table 2)

Table 1

Risk factor	Weight
BMI	
<18.5kg/m <sup>2</sup>	1
18.5-29.9kg/m <sup>2</sup>	0
30-34.9kg/m <sup>2</sup>	1
35-39.9kg/m <sup>2</sup>	2
>40kg/m <sup>2</sup>	3
Diabetes mellitus	2
Immunodeficiency	1.3
Active smoking	1
Non-ASA anticoagulation	1
Prior surgery	2

Table 2



**High-risk patients**  
**72% reduction\*** in surgical site complications\*  
 7.3% (9/123) Prevena Therapy vs 26.2% (32/122) Control ( $p < .001$ )

**All patients**  
**43% reduction\*** in surgical site complications\*  
 6.8% (22/323) Prevena Therapy vs. 12.0% (77/643) Control ( $p < .013$ )

\*Percentages determined by calculating the difference between 26.2% to 7.3% and 12.0% to 6.8%, respectively.

\*\*SSC was defined as any dehiscence, suture granuloma, drainage occurring beyond postoperative day 5, significant hematoma formation, or SSI, as defined by the CDC, that required unplanned postoperative interventions.

Reference: 8. Anatone AJ, Shah RP, Jennings EL, Geller JA, Cooper HJ. A risk-stratification algorithm to reduce superficial surgical site complications in primary hip and knee arthroplasty. Arthroplasty Today. 2018 Oct 15;4(4):493



# Identifying patients who may benefit from 3M™ Prevena™ Therapy<sup>9</sup> (cont'd)

A multidisciplinary group of surgical and infectious disease experts have also developed an algorithm to guide when to consider using Prevena Therapy (ciNPT).

## Consensus recommendations based on:

- Literature review
- Their ciNPT experiences
- Known risk factors for surgical site occurrences (SSOs)

## In conclusion, they say, ciNPT should be considered for patients:

- At high risk for developing SSOs
- Undergoing high-risk procedures
- Undergoing procedures that would have highly morbid consequences if SSIs occurred

## In addition to risk factors listed in the preceding slide, they cite:

### Patient-Related Risk Factors

- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li>• Advanced age</li> <li>• Hypoalbuminemia</li> <li>• Corticosteroid usage</li> </ul> | <ul style="list-style-type: none"> <li>• Active alcoholism</li> <li>• Male sex</li> </ul> | <ul style="list-style-type: none"> <li>• Hematoma</li> <li>• Chronic renal insufficiency</li> </ul> | <ul style="list-style-type: none"> <li>• Chronic obstructive pulmonary disease</li> <li>• ASA score <math>\geq 3</math></li> </ul> |
|---|---|---|--|

### General Incision Related Risk Factors

- |  |   |  |  |
|--|---|--|--|
| <ul style="list-style-type: none"> <li>• High tension incision</li> <li>• Repeated incisions</li> <li>• Extensive undermining</li> </ul> | <ul style="list-style-type: none"> <li>• Traumatized soft tissue</li> <li>• Edema</li> <li>• Contamination</li> </ul> | <ul style="list-style-type: none"> <li>• Emergency procedure</li> <li>• Prolonged operation time</li> <li>• Post-surgical radiation</li> </ul> | <ul style="list-style-type: none"> <li>• Mechanically unfavourable site</li> </ul> |
|--|---|--|--|

### Procedure Related Risk Factors

General	Plastic	Orthopedic	Vascular	Cardiovascular
<ul style="list-style-type: none"> <li>• Open general</li> <li>• Open colorectal</li> <li>• Open urology</li> <li>• Open obgyn</li> <li>• Incisional hernia repair</li> </ul>	<ul style="list-style-type: none"> <li>• Post-bariatric abdominoplasty</li> <li>• Breast reconstruction</li> <li>• Big soft tissue defects</li> <li>• Soilage risk</li> </ul>	<ul style="list-style-type: none"> <li>• Open reduction and internal fixation of fractures</li> <li>• Fasciotomy</li> <li>• Above/below knee amputation</li> </ul>	<ul style="list-style-type: none"> <li>• Above/below knee amputation</li> <li>• Synthetic graft implantations</li> </ul>	<ul style="list-style-type: none"> <li>• Sternotomy</li> </ul>

Reference: 9. Willy C, Agarwal A, Andersen CA, Santis G, Gabriel A, Grauhan O, Guerra OM, Lipsky BA, Malas MB, Mathiesen LL, Singh DP, Reddy VS. Closed incision negative pressure therapy: international multidisciplinary consensus recommendations. Int Wound J. 2017 Apr;14(2):385-398. doi: 10.1111/iwj.12612. Epub 2016 May 12. PMID: 27170231.

# PROMISES study data suggests 3M™ Prevena™ Therapy can help advance the standard of care.<sup>10</sup>

Promising new data from a randomized controlled trial further affirms that Prevena Therapy significantly reduces the risk of 90-day surgical site complications (SSCs) and readmissions, compared with silver-impregnated dressings, the current standard of care (SOC).

4x

### Reduction in SSCs\*

3.4% (5/147) Prevena Therapy vs.  
14.3% (21/47) SOC

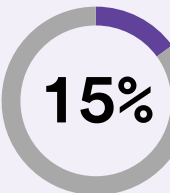
(p=0.0013)\*

3x

### Reduction in readmission rates\*

3.4% (5/147) Prevena Therapy vs.  
10.2% (15/47) SOC

(p=0.0208)\*



### Fewer mean dressing changes\*

1.1±0.3 Prevena Therapy vs.  
1.3±1.0

(p=0.0003)\*

## Study design

The PROMISES (Post-market, Randomized, Open-Label, Multicenter Study to evaluate Effectiveness) study was a multicenter randomized controlled trial involving 294 patients undergoing elective revision knee arthroplasty. Patients were prospectively randomized to receive either Prevena Therapy or an antimicrobial silver-impregnated dressing.

- Patients had at least one risk factor for developing wound complications.
- Study endpoints included wound complications (such as SSI or drainage), health care utilization parameters (readmission, reoperation, dressing changes, and visits), and patient recorded outcomes.

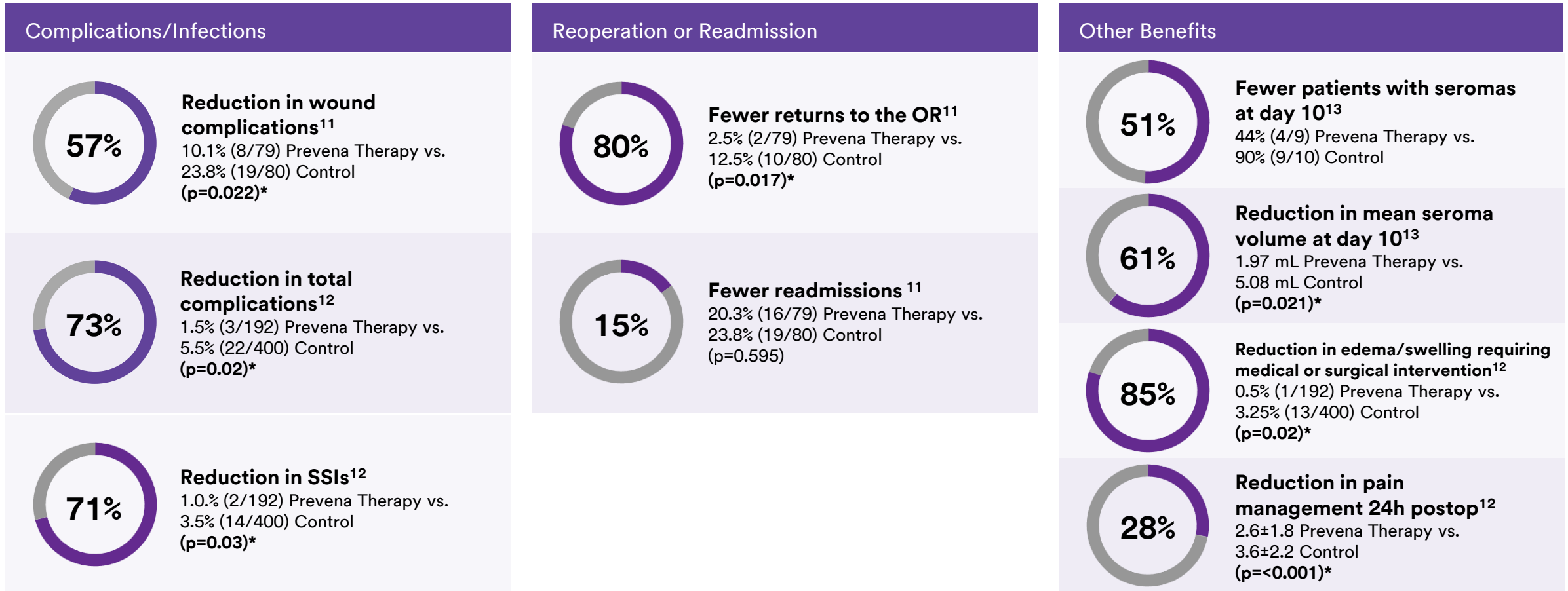
**Science strong enough to challenge the standard of care.**

\*Calculation(s) are derived based on relative patient group incidence rate reported in this study. \*Statistically significant (p<0.05)

**Reference: 10.** Higuera-Rueda C, Emara AK, Nieves-Malloure Y, Klika AK, Cooper HJ, Cross MB, Guild GN, Nam D, Nett M, Scuderi GR, Cushner FD, Piuze NS, Silverman RP. The Effectiveness of Closed Incision Negative Pressure Therapy versus Silver-Impregnated Dressings in Mitigating Surgical Site Complications in High-Risk Patients after Revision Knee Arthroplasty: The PROMISES Randomized Controlled Trial. J Arthroplasty (2021), doi: <https://doi.org/10.1016/j.arth.2021.02.076>



# In addition to the PROMISES study, the clinical efficacy of 3M™ Prevena™ Therapy has been demonstrated in other Level I and II studies.



\*Calculation(s) are derived based on relative patient group incidence rate reported in this study. \*Statistically significant (p<0.05)

**Reference: 11.** Newman JM, Siqueira MBP, Klika AK, Molloy RM, Barsoum WK, Higuera CA. Use of closed incisional negative pressure wound therapy after revision total hip and knee arthroplasty in patients at high risk for infection: A Prospective, Randomized Clinical Trial. J Arthroplasty. 2019 Mar;34(3):554-559. **12.** Redfern, R. E., Cameron-Ruetz, C., O'Drobinak, S. K., Chen, J. T., & Beer, K. J. (2017). Closed Incision Negative Pressure Therapy Effects on Postoperative Infection and Surgical Site Complication After Total Hip and Knee Arthroplasty. The Journal of arthroplasty, 32(11), 3333-3339. <https://doi.org/10.1016/j.arth.2017.06.019>. **13.** Pachowsky, M., Gusinde, J., Klein, A., Lehl, S., Schulz-Drost, S., Schlechtweg, P., Pauser, J., Gelse, K., & Brem, M. H. (2012). Negative pressure wound therapy to prevent seromas and treat surgical incisions after total hip arthroplasty. International Orthopaedics, 36(4), 719-722. <https://doi.org/10.1007/s00264-011-1321-8>.



# 3M™ Prevena™ Therapy designed for your needs.



**3M™ Prevena Plus™ Customizable Dressing**

**3M™ Prevena Plus™ 35 cm Dressing**

**3M™ Prevena™ 20 cm Dressing**

**3M™ Prevena™ 13cm Dressing**

Available in Canada from your authorized 3M-KCI distributors.  
 KCI USA, Inc., a 3M Company  
 KCI owned and operated by 3M Company

**KCI Medical Canada Inc.**  
 75 Courtneypark Dr W, Unit 4  
 Mississauga, ON  
 L5W 0E3

**KCI USA, INC.**  
 12930 IH 10 West  
 San Antonio, TX  
 78249

## Prevena Therapy System Kits

Item#	Description	UOM
PRE1001	3M™ Prevena™ Peel and Place System Kit – 20 cm	Each
PRE1101	3M™ Prevena™ Peel and Place System Kit – 13 cm	Each
PRE3201	3M™ Prevena™ Plus Peel and Place System Kit – 35 cm	Each
PRE4001	3M™ Prevena™ Plus Customizable System Kit	Each
PRE1121	3M™ Prevena™ Duo System Kit - 13 cm Peel and Place Dressings (2)	Each

## Prevena Therapy Dressings

Item#	Description	UOM
PRE1155	3M™ Prevena™ Peel and Place Dressing – 13cm	Case of 5
PRE1055	3M™ Prevena™ Peel and Place Dressing – 20cm	Case of 5
PRE3255	3M™ Prevena™ Plus Peel and Place Dressing – 35cm	Case of 5
PRE4055	3M™ Prevena™ Plus Customizable Dressing	Case of 5

## Prevena Therapy Devices and Canisters

Item#	Description	UOM
PRE1095	3M™ Prevena™ 45ml Canister	Case of 5
PRE4095	3M™ Prevena™ Plus 150ml Canister	Case of 5





# Today, the SARS-CoV-2 pandemic has made protecting against risk and lower touch care an even greater priority

## Moving forward, this means that:

- Elective surgical procedures, products, and protocols that help protect against risk should be utilized when appropriate
- Protecting patients, physicians, staff, and hospitals from unnecessary risk should be a priority when making decisions in care
- The ripple effect of postoperative complications can increase the need for different types of “high-touch care”
  - Exposing stakeholders to a greater number of person-to-person interactions
  - Challenging hospitals with an increased need to free up capacity in hospital and intensive care unit beds

3M™ Prevena™ Therapy helps support a rapidly changing health care landscape

### New postop needs:

### How Prevena Therapy can help:

Rapid discharge

Studies have shown Prevena Therapy can decrease length of stay<sup>14-18</sup>

Low-touch Care

Fewer required dressing changes and follow-up appointments

Infection control

Creates a barrier to external contaminants and continuously removes infectious materials\*

\*In a canister

**References:** 14. Nickl S, Steindl J, Langthaler D, et al. First Experiences with Incisional Negative Pressure Wound Therapy in a High-Risk Poststernotomy Patient Population treated with Pectoralis Major Muscle Flap for Deep Sternal Wound Infection. *J Reconstr Microsurg* 2017. 15. Schurtz E, Differding J, Jacobson E, Maki C, Ahmeti M. Evaluation of negative pressure wound therapy to closed laparotomy incisions in acute care surgery. *Am J Surg* 2017. 16. Conde-Green A, Chung TL, Holton LH, III, et al. Incisional Negative-Pressure Wound Therapy versus conventional dressings following abdominal wall reconstruction. A comparative study. *Ann Plast Surg* 2013;71:394-397. 17. Gassman A, Mehta A, Bucholdz E, et al. Positive outcomes with negative pressure therapy over primarily closed large abdominal wall reconstruction reduces surgical site infection rates. *Hernia* 2015;19:273-278. 18. Lee K, Murphy PB, Ingves MV, et al. Randomized clinical trial of negative pressure wound therapy for high-risk groin wounds in lower extremity revascularization. *J Vasc Surg* 2017;66:1814-1819.

# 3M™ Prevena™ Therapy is easy to order, integrate into your practice, and use with your surgical patients

## Prevena Therapy Resources

- Live Clinical Training & Product Support (25,000 Professionals Trained Annually)
- Clinical Services & Reimbursement Hotlines
- 24/7 Centralized, On Demand Clinical & Technical Support
- Free Product Evaluation Program

**For more information about Prevena Therapy, contact your local 3M representative.**

The PREVENA™ Incision Management System is intended to manage the environment of closed surgical incisions and surround intact skin in patients at risk for developing post-operative complications, such as infection, by maintaining a closed environment via the application of a negative pressure wound therapy system to the incision. The PREVENA™ Incision Dressing skin interface layer with silver reduced microbial colonization in the fabric.

The PREVENA™ Incision Management System is intended to manage the environment for surgical incisions that continue to drain following sutured or stapled closure by maintaining a closed environment and removing exudate via the application of negative pressure wound therapy.

For maximum benefit, the PREVENA™ Incision Management System should be applied immediately post surgery to clean surgically closed wounds. It is to be continuously applied for a minimum of 2 days up to a maximum of 7 days. It can transition home with the patient; however, all PREVENA™ Dressing changes should be performed under direct medical supervision.

**NOTE:** Specific indications, limitations, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. This material is intended for healthcare professionals.

