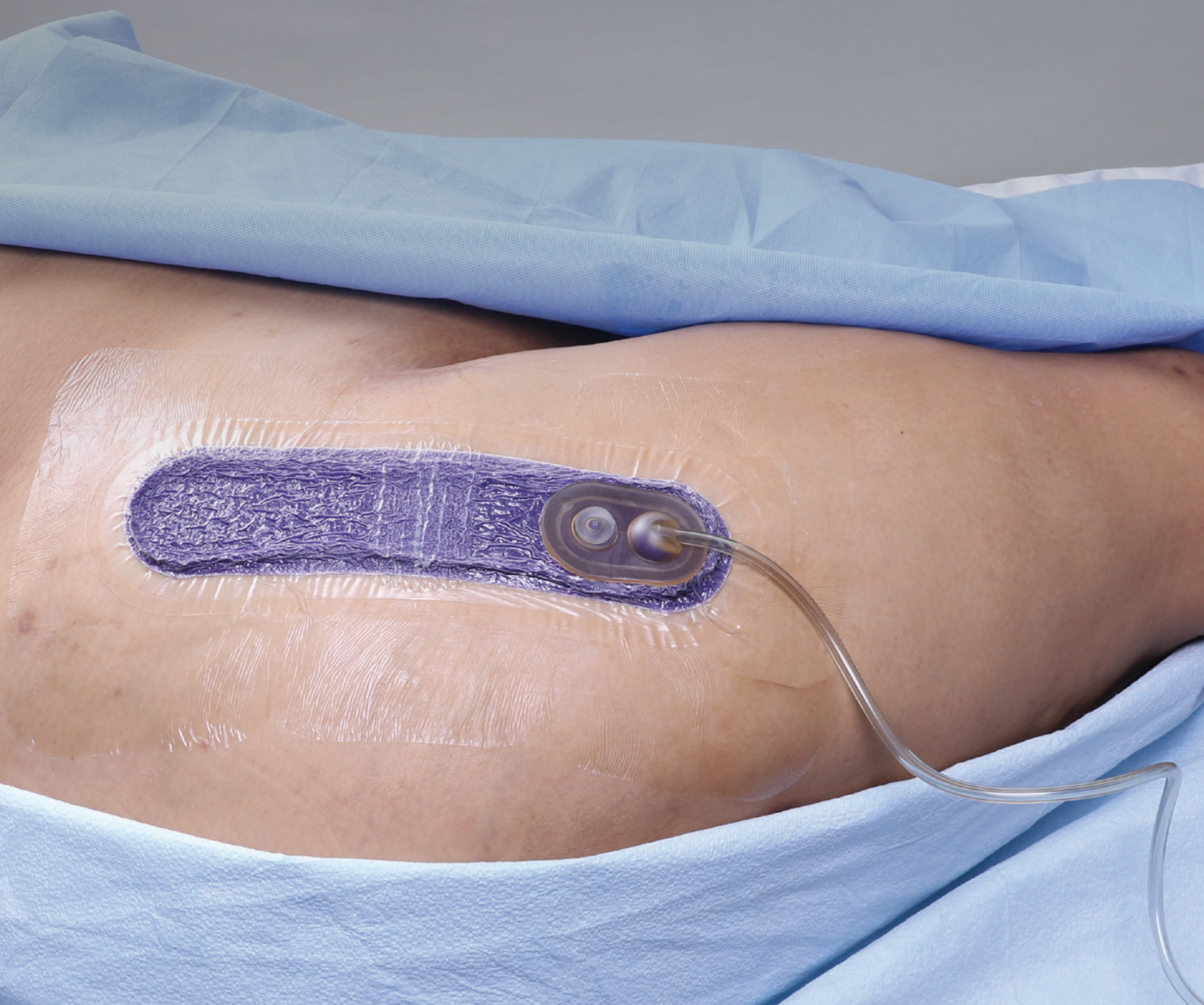
3M | Prevena™
Incision Therapy

The power to protect
in orthopaedic surgery.

Helping to protect surgical incisions beyond the operating room, for patients at risk of surgical site complications. Supporting the healing journey from hospital to home.



We understand things have changed recently.

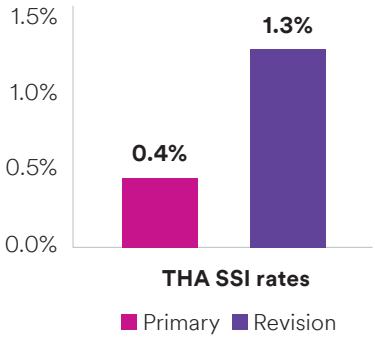
The COVID-19 pandemic has resulted in consequences which have rippled across the health care setting and beyond.

As we resume elective surgery, clinicians are redefining postoperative care and adopting their approaches to achieve.

- Early discharge
- Home-based recovery
- Virtual clinics
- Low-touch care
- Minimal complications
- Low readmissions

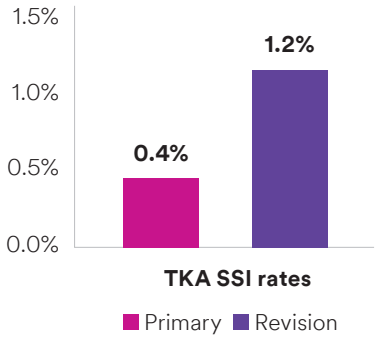
Surgical site complications are a major source of morbidity after hip and knee arthroplasty procedures.

THA and TKA* revision surgery is associated with



3x greater SSI rates

when compared with primary procedures.[1]



SSIs are associated with an increased median length of hospital stay following THA and TKA.[2]

↑ 17 days THA

↑ 7 days TKA

18.8%

Unplanned 30-day readmission following THA and TKA due to SSI.[3]

€9,560

Additional average costs due to SSI following orthopedic and trauma surgery.[4]

By working to protect incisions from postoperative complications, 3M™ Prevena™ Therapy works to help stop the ripple effect before it begins, protecting patients, surgeons, staff, practices, and hospitals from potential consequences through low touch care.

*Total knee arthroplasty = TKA; Total hip arthroplasty = THA

3M™ Prevena™ Therapy helps to manage and protect surgical incisions by:

Helping to hold incision edges together

Reducing oedema

Acting as a barrier to external contamination

Delivering continuous -125mmHg up to 7 or 14 days**

Decreasing lateral tension of sutured/ stapled incisions†[5]

Removing fluids and infectious materials*

"NICE advice"

Did you know?

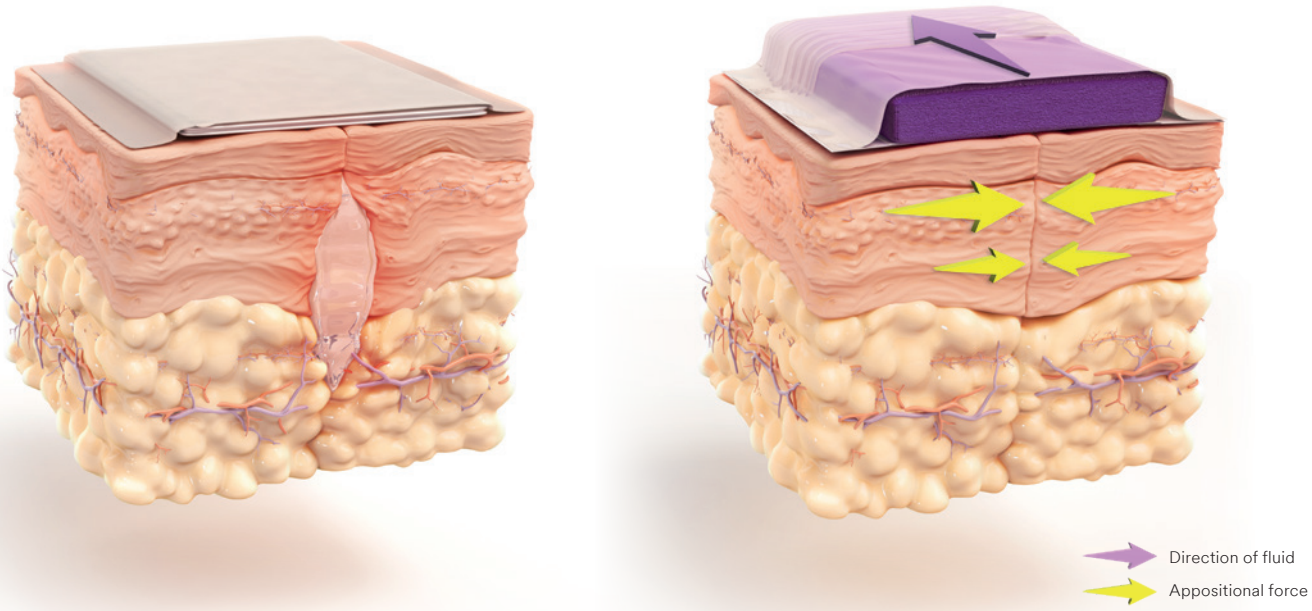
NICE have published a medical innovation briefing on the use of "Prevena Incision Management for Closed Surgical Incisions". Access the full document at **https://www.nice.org.uk/advice/mib173**

*In a canister
**Maximum length of therapy with 3M™ Prevena™ Therapy Platform is 7 days. Maximum length of therapy with 3M™ Prevena Restor™ Therapy Platform is 14 days.
† In computer and bench models

3M™ Prevena™ Therapy utilises reticulated open cell foam technology and -125mmHg negative pressure.

Passive therapy

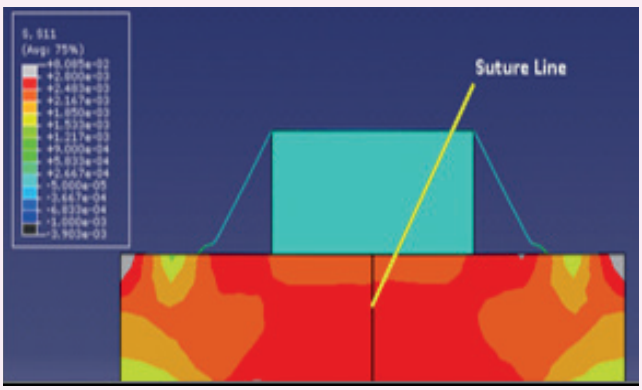
Prevena Therapy



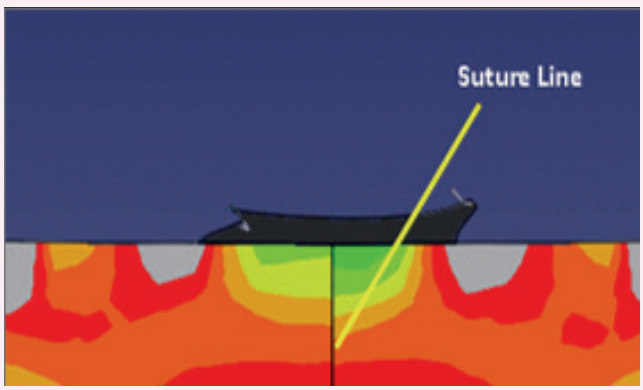
Under -125mmHg of negative pressure, the reticulated open cell foam dressing collapses to it's geometric center. This brings the incision edges together, reduces lateral tension, and also allows for improved fluid management.[5–7]

Delivering a 50% reduction in lateral tension.[5]

Reducing lateral strain is important to maintain the integrity of closed surgical incision. Using a finite computer model on a simulated incision, Prevena Therapy has been shown to reduce lateral strain by approximately 50% (0.9 to 1.2kPa) along the incision.



A Lateral strain on simulated incision without application of Prevena Therapy. Orange and red colours indicate high lateral strain.



B Lateral strain on simulated incision with application of Prevena Therapy. Yellow and green colours indicate low lateral strain.

The power of 3M™ Prevena™ Therapy.

Prevena Therapy is packed with features specifically designed to help reduce the risk of surgical site complications.

1. **Replaceable canister**
   Store exudate and infectious fluids away from the surgical incision.
2. **3M™ V.A.C.® connector**
   Connect to other V.A.C. Therapy Units within the hospital setting for greater flexibility.
3. **Audible and visual alarms**
   Rectify therapy issues at an early stage.
4. **Continuous -125mmHg**
   To hold incision edges together and remove fluids.
5. **Foam bolster**
   Channels uniform negative pressure to the incision area, reducing lateral tension.
6. **Skin friendly interface layer**
   Wicks fluid away from the surface, with 0.019% ionic silver to help reduce bacterial colonisation of the fabric.

Both the 3M™ Prevena™ 125 Therapy Unit and 3M™ Prevena™ Plus 125 Therapy Unit can support clinicians with early discharge into a home setting:

- Portable, singe use therapy
- No additional dressing changes for up to 7 days
- Shower friendly

Prevena 125 Therapy Unit (45ml canister)

Included with:

- 3M™ Prevena™ Peel and Place System Kit – 13cm and 20cm
- 3M™ Prevena™ Duo Incision Management System with Peel and Place Dressing – 13cm

Prevena Plus 125 Therapy Unit (150ml canister)

Included with:

- 3M™ Prevena™ Plus Peel and Place System Kit – 35cm
- 3M™ Prevena™ Plus Customisable Incision Management System

Multiple dressing sizes and configurations. With easy to use Peel and Place dressings for linear incisions up to 35cm and customizable dressings for non-linear and intersecting incisions up to 90cm in length.

New 3M™ Prevena Restor™ Therapy

The next generation in post-op healing. Prevena Restor Therapy simultaneously manages closed incisions alongside the surrounding soft tissue for up to 14 days, with no dressing changes required.

For more information visit: 3M.co.uk/PrevenaRestor

Meta-analysis of comparative trials evaluating a single-use closed-incision negative-pressure therapy system.[8]

Singh DP, Gabriel A, Parvizi J, Gardner MJ, D'Agostino R Jr. *Plast Reconstr Surg.* 2019 Jan;143 (1S Management of Surgical Incisions Utilizing Closed-Incision Negative Pressure Therapy):41S-46S.

Study overview

- A systematic literature search was performed focusing on publications utilising 3M™ Prevena™ Therapy between 1 January 2005 and 30 April 2018.
- After removal of duplicate publications and studies that did not meet inclusion criteria, a total of 11 RCTs, 7 prospective studies, and 12 retrospective studies were included in the meta-analysis.
- A total of up to 10,408 evaluable patients were included in this meta-analysis for SSI with 2,768 in the Prevena Therapy (treatment) group and 7,640 in the conventional wound dressing (control) group.
- Meta-analyses were also performed using anatomical location (colorectal/abdominal, obstetrics, lower extremity, groin/vascular, cardiac).

Findings

- For all meta-analyses performed using the fixed-effects approach, Prevena Therapy usage demonstrated a statistically significant reduction in incidence of SSI relative to traditional dressings.
- Prevena Therapy is significantly better at reducing the incidence of SSIs than traditional dressings in the RCT, observational, colorectal/abdominal, obstetrics, lower extremity, groin/vascular, and cardiac publications that were assessed.
- Sensitivity analyses using the random-effects approach remained significant in favour of ciNPT use in all meta-analyses except obstetrics.

Subgroup meta-analyses of closed-incision negative pressure versus traditional dressings in reduction of surgical site infection rates

Subgroup analysis	Studies (n)	Total (n)	Surgical site infection, pooled OR (95% CI)	*P*
Colorectal/abdominal	6	857	3.3 (2.0-5.5)	<0.00001
Obstetrics	5	1,931	1.7 (1.1-2.8)	0.02
Lower extremity	5	1,674	6.4 (2.8-14.5)	<0.0001
Groin/vascular	8	1,166	3.1 (2.2-4.4)	<0.00001
Cardiac	4	4,068	3.3 (1.5-7.6)	0.004

Subgroup meta-analyses of closed-incision negative pressure versus traditional dressings in reduction of surgical site infection rates using a random-effects model

Subgroup analysis	Studies (n)	Total (n)	Surgical site infection, pooled OR (95% CI)	*P*
RCT	11	1,579	2.7 (1.9-4.0)	<0.00001
Observational	19	8,829	2.8 (2.0-3.9)	<0.00001
Colorectal/abdominal	6	857	2.9 (1.6-5.4)	0.0004
Obstetrics	5	1,931	1.7 (0.9-3.5)	0.011
Lower extremity	5	1,674	6.1 (2.6-13.8)	<0.0001
Groin/vascular	8	1,166	3.0 (2.1-4.4)	<0.00001
Cardiac	4	4,068	3.4 (1.5-7.7)	0.003

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 randomised controlled trial.[9]

Higuera-Rueda CA, Emara AK, Nieves-Malloure Y, Klika AK, Cooper HJ, Cross MB, Guild GN, Nam D, Nett MP, Scuderi GR, Cushner FD, Piuzzi NS, Silverman RP. *J Arthroplasty.* 2021 Mar 6:S0883-5403(21)00236–9.

Study overview

- Prospective, multicentre randomised controlled trial to evaluate the efficacy of closed-incision negative pressure therapy (ciNPT) vs silver-impregnated antimicrobial dressings in revision total knee arthroplasty (rTKA) patients.
- Population: Patients (age ≥22 years), at risk of surgical site complications (having one or more comorbidities) that received rTKA with full exchange and reimplantation of new prosthetic components or open reduction and internal fixation of periprosthetic fractures.
- A total of 294 patients were randomised to receive either ciNPT (3M™ Prevena™ Therapy) or silver impregnated antimicrobial dressings (AQUACEL® Ag Surgical Dressings) (n =147 each). 224 patients completed the study; with 124 patients treated with Prevena Therapy and 118 patients treated with AQUACEL® Ag.
- Primary outcome was the 90-day incidence of surgical site complications (SSCs) with stratification in accordance with revision type (aseptic/septic).
- Secondary outcomes were 90-day health care ultilisation parameters (readmission, reoperation, dressing changes and visits) and patient-reported outcomes.

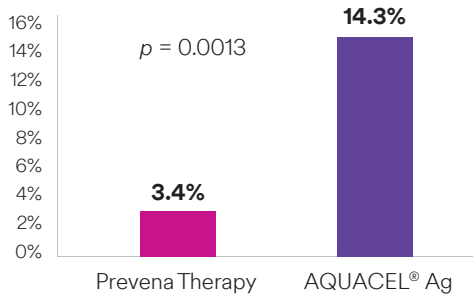
Findings

- Preset interim analysis of the primary outcome at 50% of the intended sample size outlined significantly lower rates of 90-day SSCs in the Prevena Therapy cohort, thereby prompting discontinuation of the trial for clear efficacy.
- Overall, the incidence of 90-day SSCs was lower for Prevena Therapy (5/147 patients) compared to AQUACEL® Ag (21/147 patients); 3.4% vs 14.3% respectively, OR: 0.22, 95% CI (0.08-0.59); p= 0.0013.
- Readmission rates were lower for Prevena Therapy (5/147 patients) compared to AQUACEL® Ag (15/147 patients); 3.4% vs 10.2% respectively, OR: 0.30, 95% CI (0.11-0.86); p= 0.0208.
- Fewer dressing changes were required with Prevena Therapy (1.1 ± 0.3) compared with AQUACEL® Ag (1.3 ± 1.0), p = 0.0003.
- The differences in reoperation rates, number of visits, and patient reported outcome improvement between both arms were not statistically significant (p > 0.05).

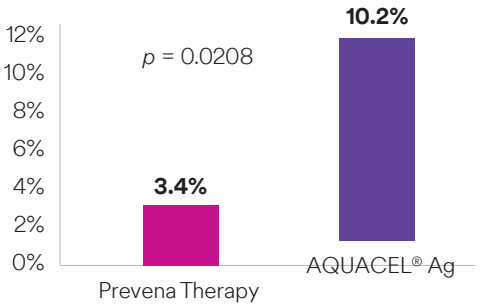
Conclusion

- ciNPT is effective in reducing the 90-day postoperative SSCs, readmission, and number of dressing changes after rTKA.

90-day complications



Readmission rates



Use of closed incisional negative pressure wound therapy after revision total hip and knee arthroplasty in patients at high risk for infection: a prospective, randomised clinical trial.[10]

Newman JM, Siqueira MBP, Klika AK, Molloy RM, Barsoum WK, Higuera CA. *Journal of Arthroplasty*. 2018.

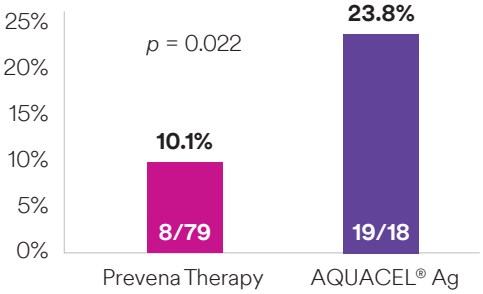
Study overview

- Prospective randomised study to compare the use of 3M™ Prevena™ Therapy to the standard of care, silver impregnated antimicrobial dressing (AQUACEL® Ag) in revision arthroplasty patients, at high risk of wound complications.
- 160 patients undergoing elective revision arthroplasty were prospectively randomised to receive either Prevena Therapy or AQUACEL® Ag in a single institution.
- Patients were included if they had at least 1 risk factor for developing wound complications.
- Study endpoints included wound complications (such as SSI, drainage, and cellulitis) readmission, and reoperation rates were collected at 2, 4, and 12 weeks postoperatively.

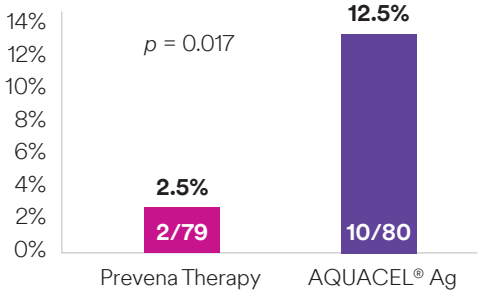
Findings

- Postoperative wound complication rate was lower for Prevena Therapy (8/79 patients) compared with AQUACEL® Ag (19/80 patients); 10.1% vs 23.8% respectively; p=0.022.
- Reoperation rate was lower for Prevena Therapy (2/79 patients) compared with AQUACEL® Ag (10/80 patients); 2.5% vs 12.5% respectively; p=0.017.
- There was no significant difference in readmissions with Prevena Therapy (16/79 patients) and AQUACEL® Ag (19/80 patients); 20.3% vs 23.8% respectively; p=0.595.
- After adjusting for the history of a prior periprosthetic joint infection and inflammatory arthritis, the Prevena Therapy cohort had a significantly decreased wound complication rate (OR, 0.28; 95% CI, 0.11-0.68).

Wound complications (wks. 2, 4, and 12)



Reoperation rate



†Although the authors reported use of Prevena Therapy for a mean of 3.6 days (ranging from 2 to 15 days), this mean time of application is outside the recommendations for Optimum Use as stated in the 3M™ Prevena™ Incision Management System Clinician Guide Instructions for use.

Cost model

A hypothetical cost model applied to the clinical results of the Newman study shows potential cost savings of €2,027 per patient with the use of Prevena Therapy.

Hypothetical economic model	Prevena Therapy (n = 79)	AQUACEL® Ag (n = 80)
Number of reoperations at 2, 4, and 12 weeks (a)	2	10
Average estimated cost of reoperation* (b)	€23,767	€23,767
Total reoperation cost (a*b)	€47,535	€237,674
Per patient cost of reoperation (a*b)/n)	€602	€2,971
Per patient cost of therapy◊	€380	€38
Total cost per patient	**€982**	**€3,009**

*Kallala RF, Ibrahim MS, Sarmah S, Haddad FS, Vanhegan IS. Financial analysis of revision knee surgery based on NHS tariffs and hospital costs. Does it pay to provide a revision service? Bone Joint J 2015;97B:197e201. Based on an average cost per reoperation due to infection of £20,356 (£30,011 – £9,655) . Exchange rate from GBP to EUR correct as of 25 Mar 2021.

◊Estimate based on price of Peel and Place Dressing System and AQUACEL® Ag; individual prices may vary.

The hypothetical economic model uses select study data to provide an illustration of estimates of costs for use of Prevena Therapy or AQUACEL® Ag. This model is an illustration and not a guarantee of actual individual costs, savings, outcomes or results. The hospital is advised to use this model as an illustration only to assist in an overall assessment of products and pricing.

A risk-stratification algorithm to reduce superficial surgical site complications in primary hip and knee arthroplasty.[11]

Anatone AJ, Shah RP, Jennings EL, Geller JA, Cooper *J. Arthroplasty Today*. 2018;4(4):493-498.

Study overview

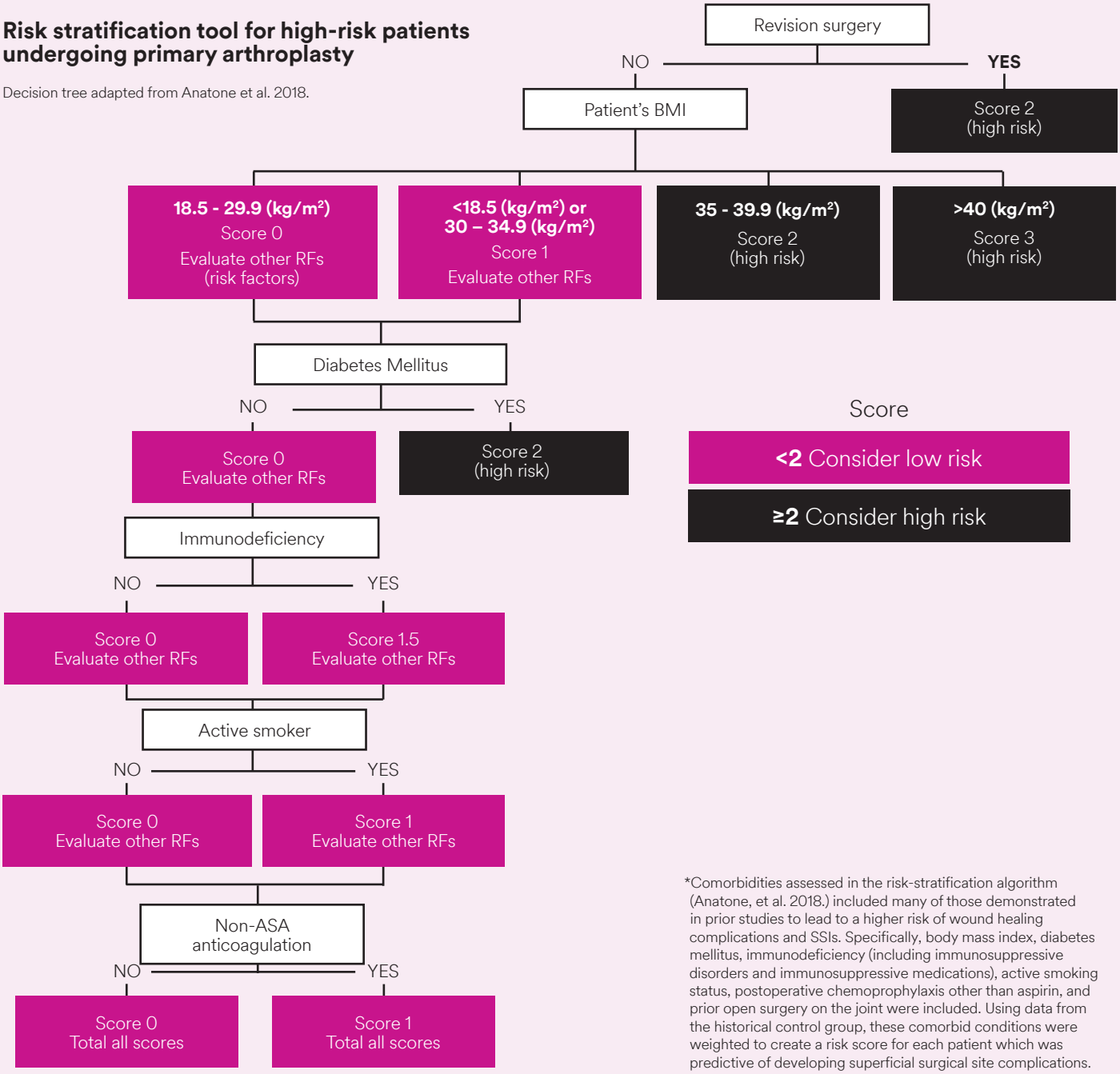
- Develop a risk stratification algorithm to guide the use of 3M™ Prevena™ Therapy and test its use in normalising the rate of superficial surgical site complications (SSCs) among high risk patients

Findings

- Compared with historical controls, a modest but significant improvement in superficial SSCs was observed after implementation of risk-stratification (12.0% vs 6.8%; p=0.013)
- Among high-risk patients, there was a marked improvement in SSCs when treated prophylactically with Prevena dressings as compared with historical controls receiving AQUACEL Ag® (26.2% vs 7.3%; p < 0.001)
- Low-risk patients, who continued to be treated with standard postoperative dressings, demonstrated no significant improvement (8.6% vs 6.5%; p = 0.344)

Risk stratification tool for high-risk patients undergoing primary arthroplasty

Decision tree adapted from Anatone et al. 2018.



*Comorbidities assessed in the risk-stratification algorithm (Anatone, et al. 2018.) included many of those demonstrated in prior studies to lead to a higher risk of wound healing complications and SSIs. Specifically, body mass index, diabetes mellitus, immunodeficiency (including immunosuppressive disorders and immunosuppressive medications), active smoking status, postoperative chemoprophylaxis other than aspirin, and prior open surgery on the joint were included. Using data from the historical control group, these comorbid conditions were weighted to create a risk score for each patient which was predictive of developing superficial surgical site complications.

Left tibial plafond fracture.

Animesh Agarwal, MD, Director of Orthopaedic Trauma and Professor of Orthopaedic Surgery at University of Texas Health Science Center, San Antonio, USA.

Patient information

Patient, a 40-year-old male who fell from a height of 20 feet, was transferred from an outside facility. He sustained an open tibial plafond fracture that was open on the medial side. Patient also had an open distal femur fracture, right closed ankle fracture, and right calcaneus fracture. Patient had a history of hypertension and a 1 pack-per day smoking habit.

Diagnosis

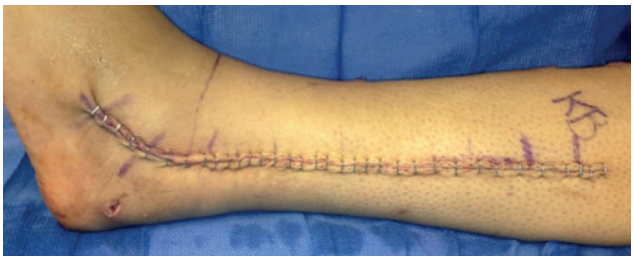
Patient was diagnosed with a left Grade 3 open tibial plafond fracture with an open wound on the medial side. He had extensive comminution and was originally treated with irrigation and debridement of the open fracture with placement of a bridging external fixation. There was signficant swelling at the time of the injury without evidence of compartment syndrome. Due to the soft tissue injury on the medial side and the amount of fracture comminution, it was felt that a lateral extensile approach would be best warranted.

Initial incision treatment/application of Prevena™ Therapy

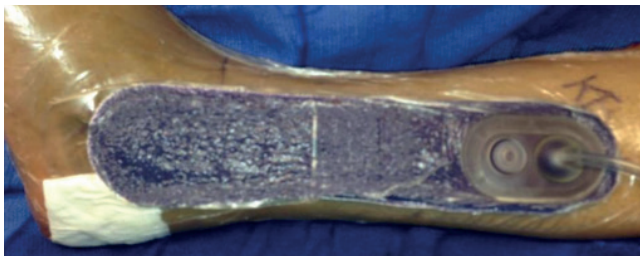
Following surgery (Figure A), the 3M™ Prevena™ Incision Management System with the Peel and Place Dressing was applied over the closed incision at -125 mmHg (Figure B).

Discharge and follow-up

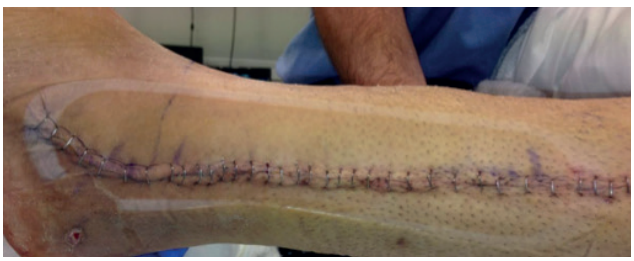
Prevena Therapy was discontinued after 7 days (Figure C). Enlargement of sections of the incision at this time showed excellent approximation of wound edges and what clinically appeared to be a much more mature incision at seven days than usually observed (Figure D.) Due to his multiple Injuries, the patient remained in the hospital and was discharged from the hospital on day 9, which was 2 days after Prevena Therapy was discontinued. The patient returned to his hometown and unfortunately was lost to further follow-up.



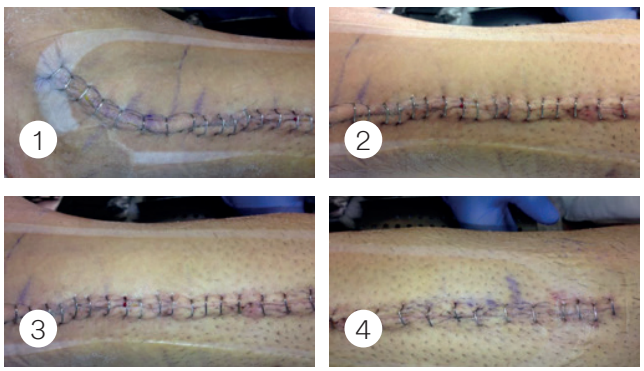
A. Clean, stapled incision post surgery for a left tibial plafond fracture.



B. Application of Prevena Therapy with the Peel and Place Dressing over closed incision.



C. Incision after 7 days of Prevena Therapy.



D. Enlargement of incision sections after 7 days of Prevena Therapy, from the ankle (1) up through the length of the incision (2–3) to the top (4).

Patient data and photos courtesy of Dr. Animesh Agarwal.

Revision Total Knee Arthroplasy (TKA).

H. John Cooper, M.D. Assistant Professor Columbia University, New York, New York.

Patient information

A 74-year-old woman with a past surgical history of bilateral knee replacement (Figure 1), complicated by a posterior dislocation of her right knee in 2013 that resulted in vascular compromise to her lower leg due to ruptured popliteal vessels. This was treated with reduction of the dislocation, right lower extremity vascular bypass, a needed a subsequent evacuation of a postoperative right leg haematoma. The patient's medical history was significant for morbid obesity (body mass index 40.5kg/m2), lymphedema, peripheral vascular disease, recurrent venous thromboembolic disease, hypertension, dyslipidemia, and hypothyroidism.

Diagnosis

The patient suffered a second posterior dislocation of the right knee (Figure 2). The second posterior dislocation was reduced in the emergency department (Figure 3), and limb was placed in an immobiliser. The patient was referred for revision surgery. The patient underwent a right TKA revision in which the knee joint was revised to a hinge (Figure 4). The procedure was performed without pneumatic tourniquet placement, and the patient was prescribed the anticoagulant, rivaroxaban (Xarelto®; Janssen Pharmaceutica NV, Beerse, Belgium) immediately postoperatively.[1]

Initial incision treatment/application of Prevena Therapy

Following the revision TKA procedure, the 3M™ Prevena Plus™ Incision Management System with Peel and Place Dressing – 35cm was applied over the closed incision at -125mmHg of subatmospheric pressure to reconstitute the integumentary integrity (Figure 5). The Peel and Place Dressing – 35cm remained over the closed incision until removal on postoperative day 7.

Discharge and follow-up

On postoperative day 7, the patient returned to the physician's office for dressing removal (Figure 6). After 7 days of Prevena Therapy, the incision was intact, and no postoperative complications, infection or dehiscence were noted.

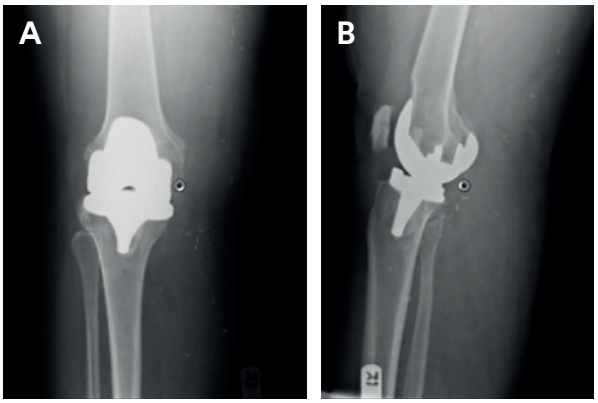


Figure 1. TKA of the right knee.
A. Radiographic image depicting frontal view of right knee following TKA.
B. Radiographic image depicting sagittal view of right knee following TKA.

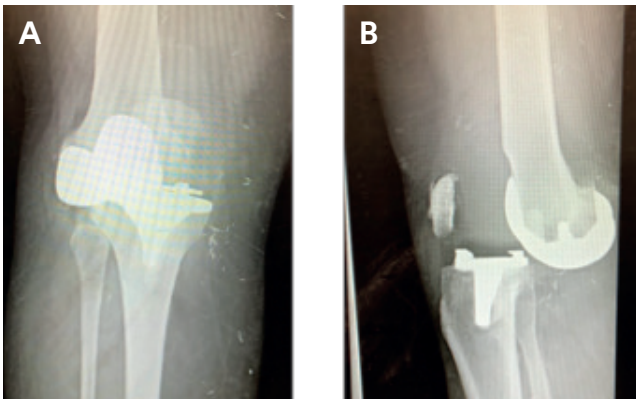


Figure 2. Right TKA after second posterior dislocation.
A. Frontal view of radiographic image depicting dislocated TKA.
B. Sagittal view of radiographic image depicting dislocated TKA.

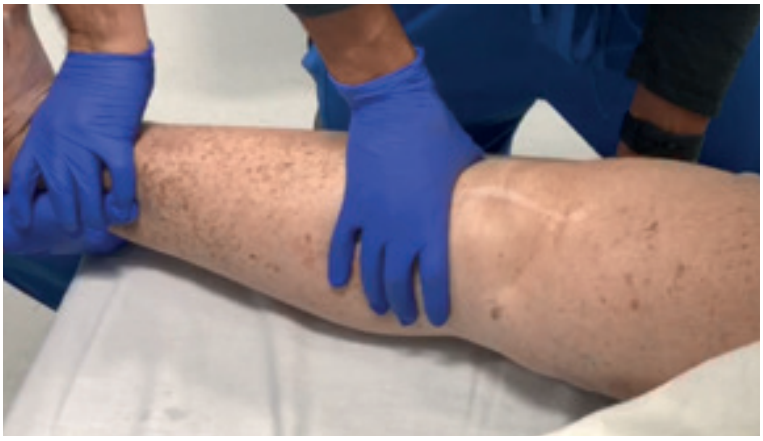


Figure 3. Right knee underwent closed reduction and was referred for revision surgery.

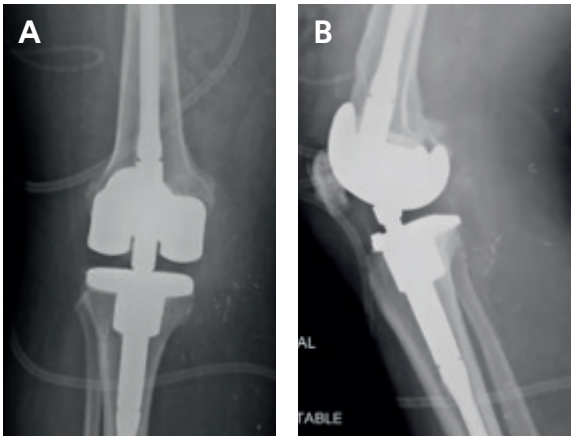


Figure 4. Right knee after TKA revision procedure.
A. Radiographic image depicting frontal view of knee following TKA revision with a hinge joint.
B. Radiographic image depicting sagittal view of knee following TKA revision with a hinge joint.

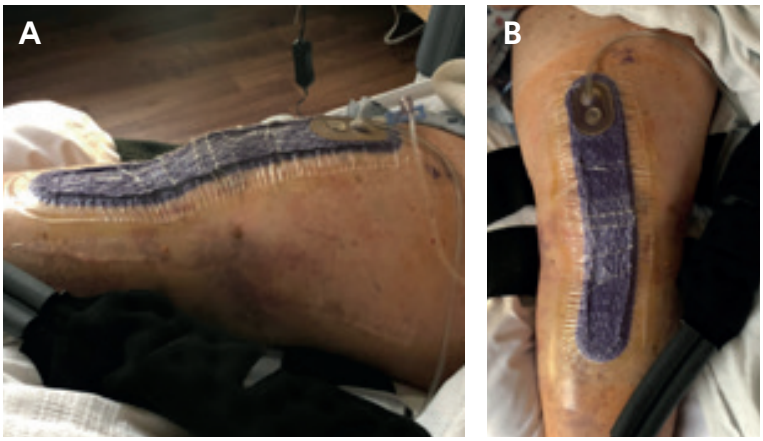


Figure 5. Prevena Plus Incision Management System with Peel and Place Dressing – 35cm was applied postoperatively to the incision.
A. Lateral view of Prevena Dressing – 35cm.
B. Anterior view of Prevena Dressing – 35cm.

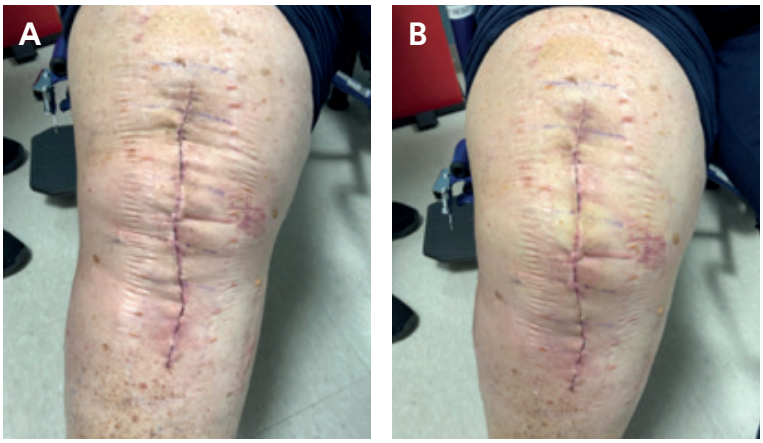


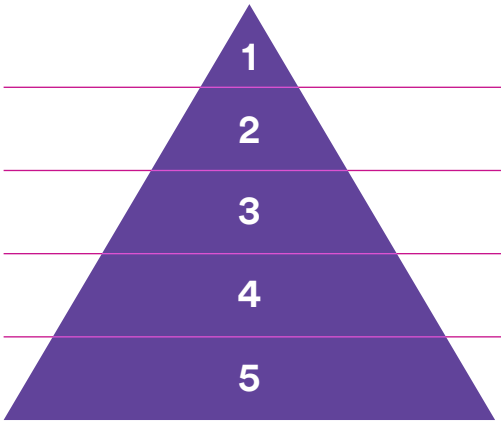
Figure 6. Patient follow-up on postoperative day 7 demonstrating intact incision.
A. Knee in an extended position after removal of Prevena Therapy.
B. Knee in a flexed position after removal of Prevena Therapy.

Patient data and photos courtesy of H. John Cooper, M.D. Assistant Professor Columbia University, New York, New York.

Note: As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary, depending on the patient's circumstances and condition.

There are 70+ ciNPT journal publications using our products. The following publications are specific to plastic surgery.

Level of clinical evidence rating.



Level 1: Evidence obtained from at least one properly designed randomised controlled trial.
Level 1b: Systematic reviews (with homogeneity) of randomised controlled trials.

Level 2: Evidence obtained from well-designed controlled trials without randomisation.
Level 2b: Individual cohort study or low quality randomised controlled trials (e.g., <80% follow-up).

Level 3: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

Level 4: Case series (and poor quality cohort and case-control studies).

Level 5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or 'first principles.'

Citation	Wound/surgery type	Level of clinical evidence*
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. *Journal of Arthroplasty*. 2018 Nov 17. [Epub Ahead of Print]†	Total hip and knee arthroplasty	1b
Crist BD, Oladeji LO, Khazzam M, Della Rocca GJ, Murtha YM, Stannard JP. Role of acute negative pressure wound therapy over primarily closed surgical incisions in acetabular fracture ORIF: A prospective randomized trial. *Injury*. 2017 Apr 27.pii: S0020-1383(17)30283-8.	Acetabular fractures	1b
Pauser J, Nordmeyer M, Biber R, Jantsch J, Kopschina C, Bail HJ, Brem MH. Incisional negative pressure wound therapy after hemiarthroplasty for femoral neck fractures - reduction of wound complications. *International Wound Journal*. 2014;13(5):663-667.	Hemiarthroplasty for femoral neck fractures	1b
Manoharan V, Grant A, Harris A, Hazratwala K, Wilkinson M, McEwen P. Closed Incision Negative Pressure Wound Therapy vs Conventional Dry Dressings After Primary Knee Arthroplasty: A Randomized Controlled Study. *J Arthroplasty*. 2016 Apr 28. pii: S0883-5403(16)30083-3.	Knee arthroplasty	1b
Howell RD, Hadley S, Strauss E, Pelham FR. Blister formation with negative pressure dressings after total knee replacement. *Current Orthopaedic Practice*. 2011 Mar;22(2):176-179.	Knee arthroplasty	1b
Stannard JP, Robinson JT, Anderson ER, McGwin G Jr, Volgas DA, Alonso JE. Negative pressure wound therapy to treat hematomas and surgical incisions following high-energy trauma. *Journal of Trauma*. 2006 Jun;60(6):1301-6.	Lower extremity fractures	1b
Stannard JP, Volgas DA, McGwin G, Stewart RL, Obremskey W, Moore T, Anglen JO. Incisional negative pressure wound therapy after high-risk lower extremity factures. *Journal of Orthopedic Trauma*. 2012 Jan;26(1):37-42.	Lower extremity fractures	1b
Stannard JP, Volgas DA, Stewart R, McGwin G Jr, Alonso JE. Negative pressure wound therapy after severe open fractures: a prospective randomized study. *Journal of Orthopedic Trauma*. 2009 Sep;23(8):552-7.	Lower extremity fractures	1b
Pachowsky M, Gusinde J, Klein A, Lehrl S, Schulz-Drost S, Schlechtweg P, Pauser J, Gelse K, Brem MH. Negative pressure wound therapy to prevent seromas and treat surgical incisions after total hip arthroplasty. *International Orthopaedics*. 2012 Apr;36(4):719-22.	Total hip arthroplasty	1b
Redfern RE, Cameron-Ruetz C, O'Drobinak S, Chen J, Beer KJ. Closed incision negative pressure therapy effectson postoperative infection and surgical site complication after total hip and knee arthroplasty. *J Arthroplasty*2017 Nov;32(11):3333-3339.†	Hip and knee arthroplasty	2
Reddix RN Jr, Leng XI, Woodall J, Jackson B, Dedmond B, Webb LX. The effect of incisional negative pressure therapy on wound complications after acetabular fracture surgery. *Journal of Surgical Orthopaedic Advances*. 2010 Jun;19(2):91–7.	Hip arthroplasty	3
Cooper HJ, Roc GC, Bas MA, Berliner ZP, Hepinstall MS, Rodriguez JA, Weiner LS. Closed incision negative pressure therapy decreases complications after periprosthetic fracture surgery around the hip and knee. Injury. 2018 Feb;49(2):386-391. doi: 10.1016/j.injury.2017.11.010. Epub 2017 Nov 14.	Periprosthetic fracture surgery	3
Cooper HJ, Bas MA. Closed-Incision Negative-Pressure Therapy Versus Antimicrobial Dressings After Revision Hip and Knee Surgery: A Comparative Study. *J Arthroplasty*. 2016 May;31(5):1047-52.	Revision knee and hip	3
Anatone AJ, Shah RP, Jennings EL, Geller JA, Cooper J. A risk-stratification algorithm to reduce superficial surgical site complications in primary hip and knee arthroplasty. *Arthroplasty Today*. 2018;4(4):493-498. doi:10.1016j.artd.2018.09.004.	Hip and knee arthroplasty	3
Curley AJ, Terhune EB, Velott AT, Argintar EH. Outcomes of Prophylactic Negative Pressure Wound Therapy in Knee Arthroplasty. *Orthopedics*. 2018;41(6):e837-e840. doi:10.3928/01477447-20181010-02.	Knee arthroplasty	3

Citation	Wound/surgery type	Level of clinical evidence*
Reddix RN, Tyler HK, Kulp B, Webb LX. Incisional vacuum-assisted wound closure in morbidly obese patients undergoing acetabular fracture surgery. *The American Journal of Orthopedics*. 2009 Sep;38(9):32-5.	Acetebular fractures	4
Hansen E, Durinka JB, Costanzo JA, Austin MS, Deirmengian GK. Negative pressure wound therapy is associated with resolution of incisional drainage in most wounds after hip arthroplasty. *Clinical Orthopaedics and Related Research*. 2013 Oct;471(10):3230-6.	Hip arthroplasty	4
Stannard JP, Atkins BZ, O-Malley D, Singh H, Bernstein B, Fahey M, Masden D, Attinger CE. Use of negative pressure therapy on closed surgical incisions: A case series. *Ostomy Wound Management*. 2009 Aug;55(8):58-66.	Lower extremity fractures	4
Gomoll AH, Lin A, Harris MB. Incisional vacuum-assisted closure therapy. *Journal of Orthopaedic Trauma*. 2006 Nov-Dec;20(10):705-9..	Orthopaedic trauma	4
Stannard JP, Gabriel A, Lehner B. Use of Negative Pressure Wound Therapy Over Clean, Closed Surgical Incisions. *International Wound Journal*. 2012;9:32-39.	Orthopaedic trauma	4
Berkowitz MJ. Use of a Negative Pressure Incisional Dressing After Surgical Treatment of Calcaneal Fractures. *Techniques in Foot and Ankle Surgery*. 2013 Dec;12(4):172-174.	Calcaneal fractures	5
Brem MH, Bail HJ, Biber R. Value of Incisional Negative Pressure Wound Therapy in Orthopedic Surgery. *International Wound Journal*. 2014 Jun;11(Suppl 1):3-5.	Mixed	5
Suleiman LI, Mesko DR, Nam D. Intraoperative Considerations for Treatment/Prevention of Prosthetic Joint Infection. Current Reviews in *Musculoskeletal Medicine*. 2018:1-8.	Hip and knee arthroplasty	5
Chotanaphuti T, Courtney PM, Fram B, Kleef N.J., Kim TK, Kuo FC, Lustig S, Moojen DJ, Nijhof M, Oliashirazi A, Poolman R, Purtill JJ, Rapisarda A, Rivero-Boschert S, Veltman ES. Hip and Knee Section, Treatment, Algorithm: Proceedings of International Consensus on Orthopedic Infections. *The Journal of Arthroplasty*. 34(2S):S393-S397. doi: 10.1016/j. arth.2018.09.024.	Hip and knee arthroplasty	5
DeCarbo WT, Hyer CF. Negative-Pressure Wound Therapy Applied to High-Risk Surgical Incisions. *Journal of Foot and Ankle Surgery*. 2010 May;49(3):299-300.	Orthopaedic trauma	5
Nam D, Sershon RA, Levine BR, Della Valle CJ. The Use of Closed Incision Negative-Pressure Wound Therapy in Orthopaedic Surgery. *J Am Acad Orthop Surg*. 2018:1-8. doi: 10.5435/JAAOS-D-17-00054.	Orthopaedic surgery	5
Al-Houraibi RK, Aalirezaie A, Adib F, Anoushiravani A, Bhashyam A, Binlaksar R, Blevins K, Bonanzinga T, Chih-Kuo F, Cordova M, Deirmengian GK, Fillingham Y, Frenkel T, Gomez J, Gundtoft P, Harris MA, Harris M, Heller S, Jennings JA, Jimenez-Garrido C, Karam JA, Khlopas A, Klement MR, Komnos G, Krebs V, Lachiewacz P, Miller AO, Mont MA, Montanez E, Romero CA, Schwarzkopf R, Shaffer A, Sharkey PF, Smith BM, Sodhi N, Thienpont E, Villanueva AO, Yazdi H. General Assembly, Prevention, Wound Management: Proceedings of International Consensus on Orthopedic Infections. *The Journal of Arthroplasty*. 2019;34(2):S157-S168. doi:10.1016/j. arth.2018.09.066.	Orthopaedic infections	5
Agarwal A. Management of Closed Incisions Using Negative-Pressure Wound Therapy in Orthopedic Surgery. *Plastic and reconstructive surgery*. 2019;143(1 Management of Surgical Incisions Utilizing Closed Incision Negative Pressure Therapy):21S-26S.	Orthopedic trauma surgery	5

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3M™ Prevena™ Therapy System Kits

Size	Code	Contents
13cm	PRE1101	1 × 3M™ Prevena™ 125 Therapy Unit, 1 × 3M™ Prevena Peel and Place Dressing - 13cm, 1 × 3M™ Prevena™ 45ml Canister, 3M™ Prevena™ Patch Strips, 1 × 3M™ V.A.C.® Connector, 1 x Carrying Case with Strap
20cm	PRE1001	1 × 3M™ Prevena™ 125 Therapy Unit, 1 × 3M™ Prevena Peel and Place Dressing - 20cm, 1 × 3M™ Prevena™ 45ml Canister, 3M™ Prevena™ Patch Strips, 1 × 3M™ V.A.C.® Connector, 1 x Carrying Case with Strap
35cm	PRE3201	1 × 3M™ Prevena Plus™ 125 Therapy Unit, 1 × 3M™ Prevena Peel and Place Dressing - 35cm, 1 × 3M™ Prevena™ 150ml Canister, 3M™ Prevena™ Patch Strips, 1 × 3M™ V.A.C.® Connector, 1 x Carrying Case with Strap, 1 x AC Power Cord and Adapter
90cm	PRE4001	1 × 3M™ Prevena Plus™ 125 Therapy Unit, 1 × 3M™ Prevena™ Customizable Dressing, 1 × 3M™ Prevena™ 150ml Canister, 3M™ Prevena™ Patch Strips, 1 × 3M™ V.A.C.® Connector, 1 x Carrying Case with Strap, 1 x AC Power Cord and Adapter
Prevena Duo Therapy - 13cm	PRE1121	1 × 3M™ Prevena™ 125 Therapy Unit, 2 × 3M™ Prevena Peel and Place Dressing - 13cm, 1 × 3M™ Prevena™ 45ml Canister, 3M™ Prevena™ Patch Strips, 1 × 3M™ V.A.C.® Y-Connector, 1 x Carrying Case with Strap

3M™ Prevena™ Therapy Dressing Kits

Size	Code	Contents
13cm	PRE1155	5 × 3M™ Prevena™ Peel and Place Dressings – 13cm
20cm	PRE1055	5 × 3M™ Prevena™ Peel and Place Dressings – 20cm
35cm	PRE3255	5 × 3M™ Prevena™ Peel and Place Dressings – 35cm
90cm	PRE4055	5 × 3M™ Prevena™ Customizable Dressings – 90cm

3M™ Prevena™ Therapy Accessories

Size	Code	Contents
14 Day Therapy Unit	PRE4010	1 × 3M™ Prevena Plus™ 125 Therapy Unit - 14 Days
45ml Canister	PRE1095	5 × 3M™ Prevena™ 45ml Canister
150ml Canister	PRE4095	5 × 3M™ Prevena Plus™ 150ml Canister
V.A.C.® Connector	PRE9090	10 × 3M™ Prevena™ Therapy V.A.C.® Connector

For more information about the Prevena Therapy System, contact your local representative.

Note: Specific indications, 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.