

A photograph of three healthcare professionals in scrubs. Two women and one man are gathered around a tablet, looking at the screen. The woman on the left is wearing blue scrubs, the woman in the middle is wearing pink scrubs, and the man on the right is wearing blue scrubs. They are in a bright, modern setting, possibly a hospital or clinic, with large windows in the background.

3M Science.
Applied to Life.™

Post-acute case studies.

Learn how 3M Negative Pressure Wound Therapy (NPWT) and Advanced Wound Care (AWC) solutions can help provide comprehensive wound management from start to finish.

Introduction.

This booklet includes case studies across several wound types. 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 condition and circumstances.

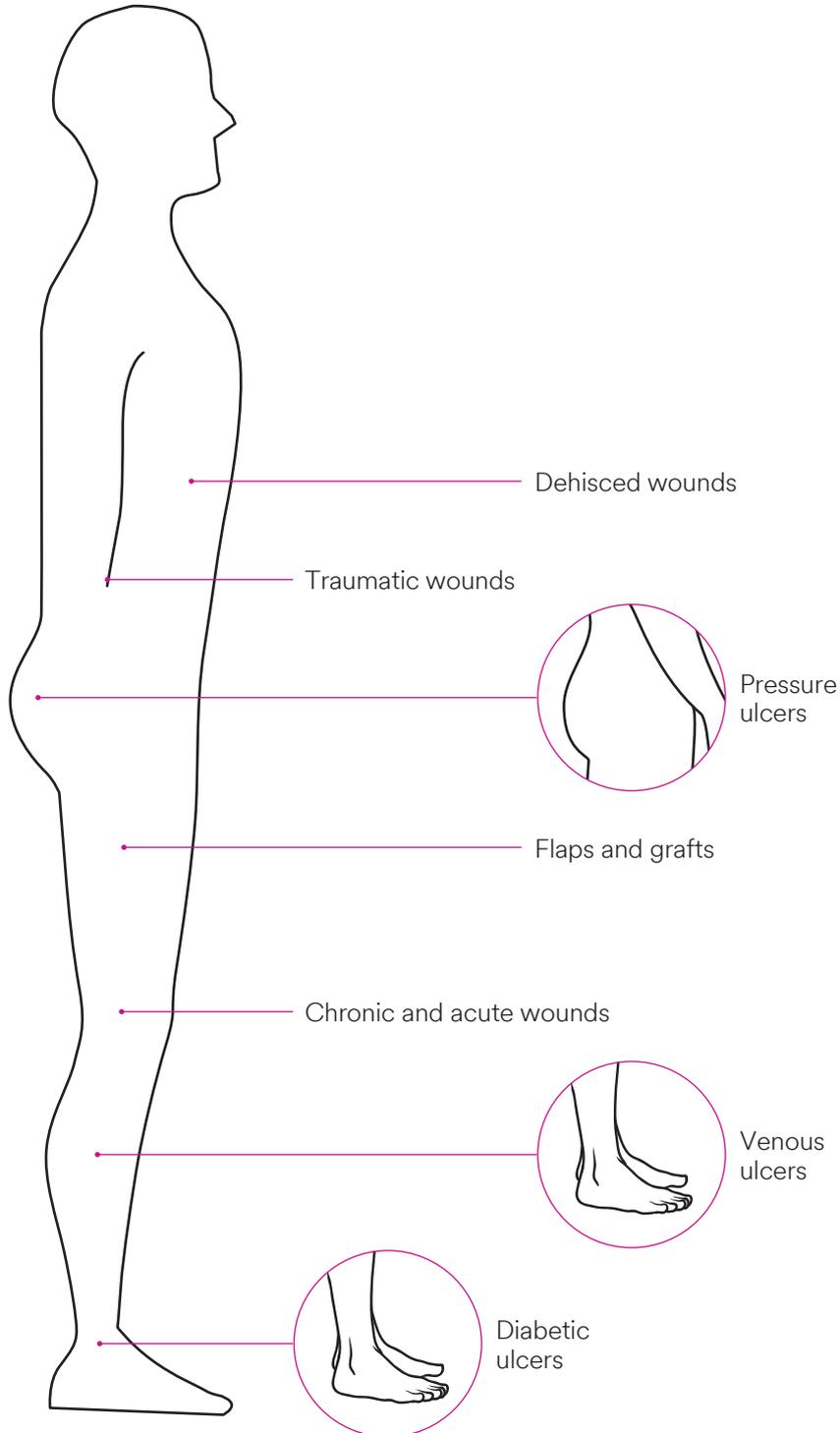
Note: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. This material is intended for healthcare professionals.

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3M™ V.A.C.® Therapy System and 3M™ Snap™ Therapy System indicated wound types.

These 3M Negative Pressure Wound Therapy (NPWT) products are indicated for the following wound types:



For appropriate wounds, initiate the use of 3M NPWT.

1 Start early with 3M NPWT.



2 Transition to 3M Advanced Wound Care Solutions according to facility wound care protocol.



Benefits of early initiation of 3M™ V.A.C.® Therapy on acute and chronic wounds.

have been demonstrated in acute care, long-term acute care, and home health care.*¹⁻³



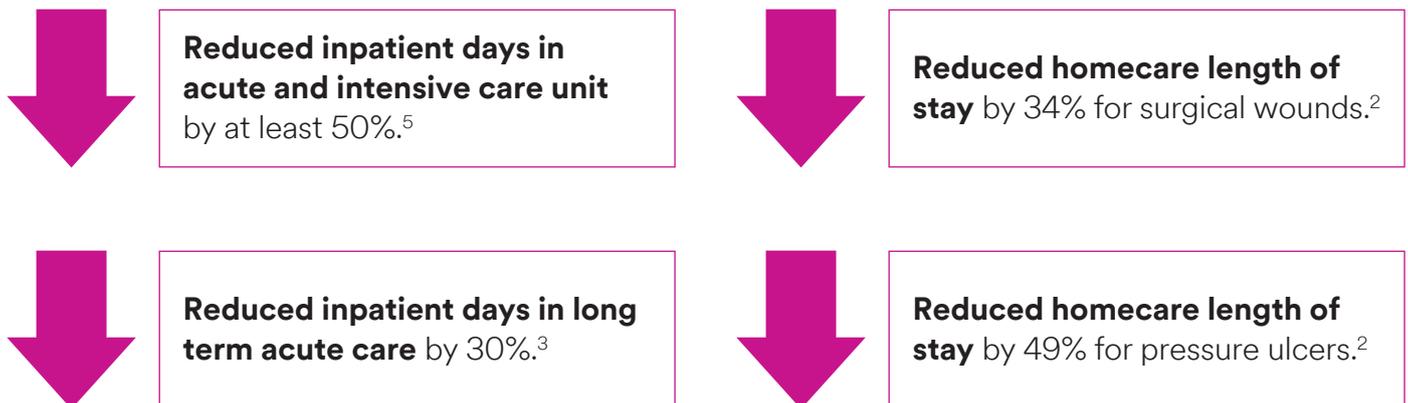
In a retrospective analysis of 4,739 acute and chronic wounds,** when V.A.C.® Therapy was initiated early in the wound care centre setting, treatment time period compared to late initiation, the median days to reach significant closure (75% wound surface area reduction) were:⁴

1/2 time 
for acute wounds

1/3 time 
for chronic wounds

Additionally, the early group was **twice as likely** to reach 75% wound surface area (WSA) reduction as the late group for both acute and chronic wounds.

Early initiation of V.A.C.® Therapy has led to:



*Early NPWT was defined for acute wounds as treatment initiated within the first 7 days from the first wound treatment date and within 30 days for chronic wounds; late NPWT initiation occurred after this time. A secondary analysis was conducted on a sub-set of patients where Charlson Co-morbidity Index Scores ≤ 5 , to assess Early vs. Late cost differences by wound type, excluding the sickest patients with significant non-wound long-term care costs; this cohort represented 80% of the wounds.

**The US Wound Registry was used in this retrospective analysis that examined 4,739 acute and chronic wounds (56.7% and 43.3%, respectively) that received NPWT, from 3,604 patients treated in 56 outpatient WCCs from 11-Nov-2000 through 16-Jul-2010. For Acute Wounds, median days from first visit to 75% Wound Surface Area (WSA) reduction was 40.4 days for early group vs. 81.6 days for late group, or 1/2 the time for the early group ($p < 0.0001$). For Chronic Wounds, median days from first visit to 75% WSA reduction was 96.4 days for early group vs. 274.6 days for late group, or 1/3 the time for the early group ($p < 0.0001$).

3M™ ActiV.A.C.™ Therapy System at a glance.

A portable negative pressure wound therapy device designed for the ambulatory patient.

The ActiV.A.C.™ Therapy System was specifically developed for the mobile wound care patient, to help them resume their activities of daily living while still receiving the proven benefits of 3M™ V.A.C.® Therapy.



- € Lightweight – weighs only 1.08kg
- € Small size with a low profile that can be worn close to the body
- € Easy-to-use
- € Alarm notifications that are easy to recognise and correct
- € Continuous or Intermittent therapy
- € Pressure settings from -25mmHg to -200mmHg
- € Easy, quick release 300ml canister
- € 14-hour battery for activities of daily living (depending on the dressing and setting)
- € Only V.A.C.® Therapy Devices provide patented 3M™ SensaT.R.A.C.™ Technology, a real time pressure monitoring feedback system

There are numerous studies that have evaluated the cost-effectiveness of V.A.C.® Therapy in a variety of settings and indicated wound types.

These studies have shown that V.A.C.® Therapy has been associated with:

- € Fewer hospitalisations^{6,8}
- € Fewer complications^{7,8}
- € Fewer amputations^{9,10}
- € Fewer dressing changes^{11,12}
- € Faster time to wound healing¹³
- € Shorter hospitalisation^{9,10}
- € Reduced treatment times^{14,15}

By minimising the factors that contribute to direct and indirect wound care costs, V.A.C.® Therapy has emerged as a cost-effective option for wound management.

3M™ Snap™ Therapy System at a glance.

A unique and convenient disposable negative pressure wound therapy (dNPWT) solution, ideal for patients who might benefit from silent, hidden and portable wound care.

The Snap™ System combines the simplicity of advanced wound dressings with the proven benefits of negative pressure therapy in a discreet design.¹⁶

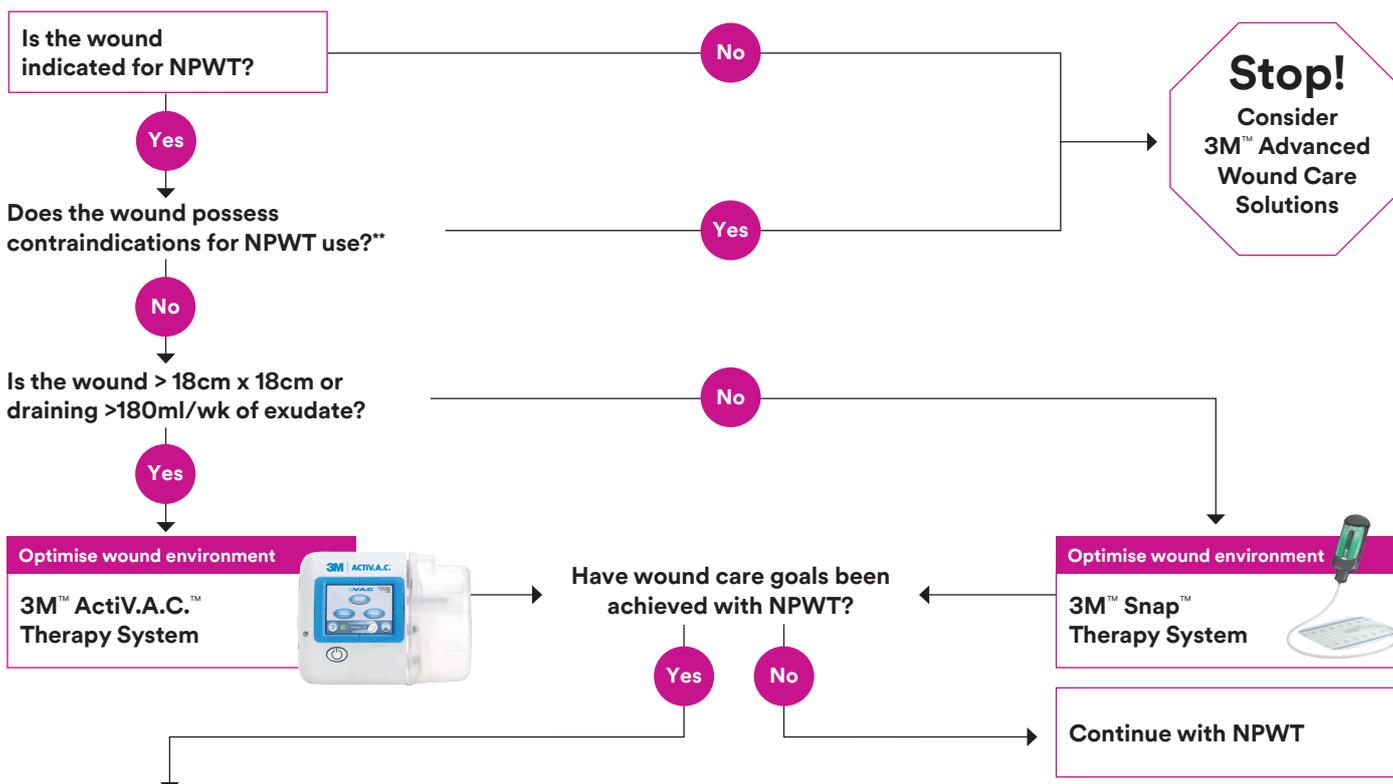
- € Mechanically powered and portable for patient mobility
- € No settings or adjustments for patient to learn
- € Preserves patient quality of life (QOL)¹⁶
- € Discreet and worn under clothing
- € Silent design ensures minimal sleep interruptions¹⁶
- € Continues -125mmHg (alternatively -75mmHg and -100mmHg) Therapy
- € -125mmHg cartridges available with 60ml and 150ml
- € Single-use, disposable NPWT
- € Off-the-shelf availability
- € Bridge dressing available



Select the appropriate product.

Wound/Clinical considerations (non-hospital)

Criteria	3M™ ActiV.A.C.™ Therapy System	3M™ Snap™ Therapy System
Wound size	> 18cm x 18cm	≤ 18cm x 18cm
Wound drainage	> 180ml/week	≤ 180ml/week (3) x 60ml cartridges/week



When the time is right to transition from NPWT, consider 3M™ Advanced Wound Care and Skin Integrity Solutions

3M™ Advanced Wound Care Solutions may be appropriate when NPWT is not available or appropriate and should be selected based on clinical goal.

Protect skin	Protect/Prepare wound bed		Optimise wound environment	Provide therapeutic compression
Routine skin protection	Manage biofilm/bioburden		Manage exudate	
3M™ Cavilon™ No Sting Barrier Film	3M™ Kerracel™ Ag Gelling Fiber Dressing	3M™ Silvercel™ Non-Adherent Antimicrobial Alginate Dressing	3M™ Kerracel™ Gelling Fiber Dressing	3M™ Coban™ 2 Two-Layer Compression Systems
At-risk or damaged skin protection	Provide collagen	Minimise adherence	3M™ Tegaderm™ Silicone Foam Dressings	3M™ Coban™ 2 Lite Two-Layer Compression Systems
3M™ Cavilon™ Advanced Skin Protectant	3M™ Promogran Prisma™ Wound Balancing Matrix	3M™ Adaptic™ Touch Non-Adhering Silicone Dressing	3M™ Tegaderm™ High Performance Foam Dressings	

****Note:** Specific indications, contraindications, warnings, precautions, and safety information exist for these products and therapies, some of which may be Rx only. Please consult a clinician and product instructions for use prior to application.

Case study 1

Sequential wound management employing a multimodal approach to wound dehiscence post metatarsalphalangeal joint arthrodesis.

Patient

A 74-year-old male was referred to the wound care clinic and presented with a surgically dehiscence wound to the right lower extremity. The patient's past medical history included: degenerative joint disease, hallux rigidus, peptic ulcer disease, and three prior surgeries to the first metatarsalphalangeal (MTP) joint.

Diagnosis

The patient presented with an infected, dehiscence surgical incision with eschar status post MTP joint arthrodesis (**Figure 1**). The patient opted for an effort to salvage the right hallux.

Course of treatment

The patient was referred to a vascular specialist and received an arteriogram of the lower extremities. Per the ankle-brachial index, the right toe pressures were suggestive of less than optimal potential for wound healing. He underwent a percutaneous transluminal (PT) angioplasty to treat an occlusion in the right posterior tibial artery. The presence of osteomyelitis prompted the removal of the surgically installed hardware and the patient declined amputation of the right hallux (**Figure 2**). The patient was referred to an Infectious Disease specialist and was administered antibiotics to manage the infection. He underwent a bone resection of the right hallux, and the patient was discharged home with a 3M™ ActiV.A.C.™ Therapy System (-125mmHg) with 3M™ V.A.C.® Granufoam™ Dressing (**Figure 3**). Dressing changes occurred every 2–3 days. On postoperative day (POD) 21, the wound was evaluated, an allograft was applied (**Figure 4**), and the ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing was used to bolster the protected graft. As the allograft demonstrated appreciable take, 3M™ V.A.C.® Therapy was discontinued.

Discharge and follow-up

Treatment transitioned to the use of 3M™ Promogran Prisma™ Matrix to facilitate tissue granulation and wound closure. Promogran Prisma Matrix was applied to the wound on POD 35 (**Figure 5**). On POD 49, the wound was reevaluated and treatment with Promogran Prisma Matrix continued (**Figure 6**). Seventy days (POD 70) following the bone resection, the wound was almost closed (**Figure 7**).

Treatment modalities

- € Administration of antibiotics managed by Infectious Disease
- € Hardware removal
- € Arterial duplex ensued by vascular referral with arteriogram with PT angioplasty
- € Intravenous antibiotics
- € Resection of infected bone followed by conventional negative pressure wound therapy using the ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing
- € Application of allograft with ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing to bolster the allograft
- € Application of Promogran Prisma Matrix

Case study 1: Figures 1–7



Figure 1. Right foot at presentation status post MTP joint arthrodesis demonstrating surgical incision dehiscence with eschar.



Figure 2. Right hallux following hardware removal and prior to infected bone resection.



Figure 3. Wound following infected bone resection and the application of 3M™ ActiV.A.C.™ Therapy System with 3M™ Granufoam™ Dressing.



Figure 4. Wound covered with allograft on POD 21 prior to being bolstered with ActiV.A.C.™ Therapy System.



Figure 5. Wound filled with 3M™ Promogran Prisma™ Matrix on POD 35.



Figure 6. Wound on POD 49 following treatment with Promogran Prisma Matrix.



Figure 7. At follow-up appointment (POD 70), the wound on the right hallux is almost closed.

Case study 2

Multimodal management of gas gangrene and a diabetic foot in a post-acute setting.

Patient

A 44-year-old female presented to the Emergency Department with gangrene of the fourth toe, blanching of the sulcus of the forefoot and erythema of the plantar medial arch that extended upward (**Figure 1**). Six days prior, the patient reportedly dropped canned food on the left foot. The patient had type 2 diabetes, which was poorly controlled. However, she had no other known comorbidities, prior foot infection or ulceration.

Diagnosis

The patient presented septic with gas seen on an x-ray of the left foot. The patient was diagnosed with gas gangrene and a diabetic left foot.

Course of treatment

The patient was taken to the operating room (OR) for emergent incision and drainage of the affected foot. The surgeon performed an open amputation of the second, third, fourth and fifth toes (**Figure 2**). Necrotic and grossly infected tissue was excised. The surgical defect of the open foot was packed and dressed using saline moistened gauze. The patient was admitted to the acute floor and administered intravenous antibiotics. On postoperative Day 3, the patient returned to the OR for debridement, washout and surgical revision of the open foot. Partial closure was achieved on the plantar arch. 3M™ V.A.C.® Therapy was initiated to the remaining open wound. Dressings changes occurred every 3 days.

Discharge and follow-up

One week later, the patient was discharged home with V.A.C.® Therapy and further instructed to be non-weight bearing on the left foot. A home health nurse changed 3M™ V.A.C.® Dressing every 2–3 days. The patient was seen in the clinic for follow-up twelve days status post debridement, washout, partial delayed primary closure and V.A.C.® Therapy (**Figure 3A**). Dressing changes occurred every 2–3 days. Maceration was noted along the sutured plantar incision and V.A.C.® Therapy over the open wound was suspended for 1 week (**Figure 3B**). To address the maceration, a povidone-iodine solution (Betadine®; Avrio Health LP, Stamford, Connecticut) was

enlisted to promote drying and to serve as a bactericidal agent. Additionally, calcium alginate was employed as the primary dressing during the week-long suspension of V.A.C.® Therapy. After one week, V.A.C.® Therapy resumed over the open wound, and wound progression was evaluated each week (**Figure 4**). After seven weeks, V.A.C.® Therapy was discontinued. The remaining wound was without depth, demonstrated reduced wound area and was occupied by 100% granulation tissue (**Figure 5**).

The 3M™ Snap™ Therapy System was then enlisted to provide negative pressure wound therapy as the patient awaited approval of a biologic medical product (**Figure 6**). Upon approval of the biologic, the Snap Therapy System was discontinued. To facilitate wound closure, a bilayered human skin equivalent composed of living cells (Apligraf®; Organogenesis Inc., Canton, MA) was applied and covered with a nonadherent dressing. The human skin equivalent was applied weekly for seven weeks (**Figure 7**). At eight weeks, wound closure was achieved. The patient returned to the clinic nineteen weeks after the resolution of the wound for a follow-up appointment (**Figure 8**). The previously affected site was still intact and remained completely healed.

Treatment modalities

- € Emergent surgical incision and drainage
- € Open amputation and excision of necrotic and grossly infected tissue
- € Surgical defect packed with saline moistened gauze
- € Intravenous antibiotics
- € Surgical revision with debridement and washout
- € V.A.C.® Therapy to promote granulation tissue formation and create an environment to promote wound healing dimensions
- € Povidone-iodine solution (Betadine®; Avrio Health LP, Stamford, Connecticut)
- € Calcium alginate dressing
- € Snap Therapy System as a transitional therapy between V.A.C.® Therapy discontinuation and application of skin substitute
- € Living cellular skin substitute (Apligraf®; Organogenesis Inc., Canton, MA)

Case study 2: Figures 1–8



Figure 1. Left diabetic foot with gas gangrene at presentation. A. Gangrene of the fourth toe with blanching of the sulcus of the forefoot. B. Gangrene of the fourth toe, blanching of the sulcus of the forefoot and erythema extending up the plantar medial arch.

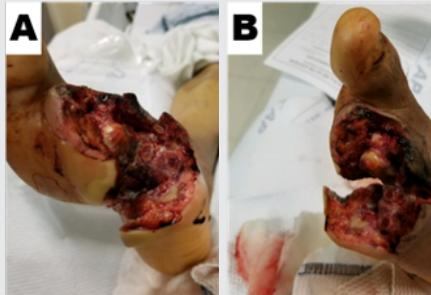


Figure 2. Left diabetic foot on postoperative Day 3 and prior to the second surgical procedure. A. Ventral aspect of open wound demonstrating the amputation of the 2nd through 5th toes. B. Dorsal aspect of open wound.

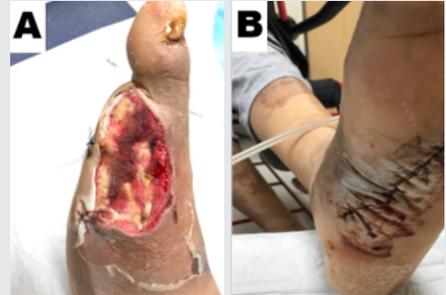


Figure 3. Left diabetic foot 12 days after second surgical procedure. A. Open foot wound after one week of 3M™ V.A.C.® Therapy. B. Macerated tissue distributed along the length of the primary closed plantar arch.



Figure 4. Left diabetic foot after four weeks of V.A.C.® Therapy. A. Open foot wound exhibiting bright beefy red tissue following four weeks of V.A.C.® Therapy. B. Ventral aspect of primary closed plantar arch.



Figure 5. After seven weeks of V.A.C.® Therapy, the open wound of the left diabetic foot was without depth as well as demonstrated reduced wound area and 100% tissue granulation. Having achieved therapeutic goals, V.A.C.® Therapy was discontinued.



Figure 6. The 3M™ Snap™ Therapy System was applied to the wound as the patient awaited approval for a biologic medical product.



Figure 7. Wound after weekly applications of a living cellular skin substitute. A. Wound at four weeks. B. Wound at seven weeks.



Figure 8. Left foot 19 weeks after wound resolution. A. Dorsal aspect of foot with resolved wound. B. Ventral aspect of foot with resolved plantar incision.

Case study 3

Management of an infected incision and drainage wound with undermining in a post-acute setting.

Patient

A 28-year-old female presented to the outpatient wound clinic following hospitalisation for an infected wound on the lower extremity (**Figure 1**). Three days prior, the patient underwent incision and drainage (I&D) for septic bursitis of the left knee. Aside from asthma, she had no other known medical history.

Diagnosis

The patient had been previously diagnosed with abscess of the left knee prepatellar bursa. The patient presented to the clinic with an incision and drainage wound measuring $4.0 \times 1.4 \times 0.9\text{cm}^3$ with 2.5cm with undermining at the 9 o'clock position. The patient initially received an intravenous antibiotic and was transitioned to an oral antibiotic based on wound culture result.

Course of treatment

Following an evaluation of the wound, negative pressure wound therapy using the 3M™ ActiV.A.C.™ Therapy System was recommended to manage the wound created from the I&D defect. 3M™ V.A.C.® Granufoam™ Dressing was applied to the defect, and 3M™ V.A.C.® Therapy was initiated at -125mmHg of continuous subatmospheric pressure. Dressing changes occurred every 2–3 days. After 3 weeks of V.A.C.® Therapy, the undermining had resolved, and the wound measured $2.2 \times 0.7 \times 0.2\text{cm}^3$ (**Figure 2**). The wound exhibited a reduction in volume and was occupied by granulation tissue. V.A.C.® Therapy was reapplied for 2 more weeks.

Discharge and follow-up

Five weeks after her initial presentation at the wound care clinic, the patient's wound measured $1.1 \times 0.3 \times 0.1\text{cm}^3$ (**Figure 3**). V.A.C.® Therapy was discontinued.

Treatment modalities

- € Incision and drainage of bursa abscess
- € Intravenous Antibiotics
- € Oral antibiotic based on culture sensitivity assay
- € Negative pressure wound therapy using the ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing

Case study 3: Figures 1–3



Figure 1. Infected left knee wound (4.0 x 1.4 x 0.9cm³) with undermining (2.5cm) status post I&D three days prior.



Figure 2. Left knee wound (2.2 x 0.7 x 0.2cm³) after three weeks of 3M™ V.A.C.® Therapy.



Figure 3. Left knee five weeks after initial presentation and measuring 1.1 x 0.3 x 0.1cm³.

Case study 4

Sequential wound management employing a multimodal approach to manage an infected diabetic foot wound.

Patient

A 53-year-old female was admitted to the hospital with sepsis derived from an infected diabetic foot. The patient's past medical history included: type 2 diabetes, coronary artery disease, chronic kidney disease, hypertension, peripheral neuropathy, depression, anxiety disorder, panic disorder and fibromyalgia.

Diagnosis

The patient presented with sepsis via an infected diabetic left foot. The patient was administered intravenous antibiotics to manage the infection.

Course of treatment

On the day of admission, a vascular fellow and vascular surgery attending physician took the patient to the operating room (OR) for emergent incision and drainage of the affected foot (**Figure 1**). The presence of osteomyelitis prompted a hallux and first ray amputation (**Figure 2**). On postoperative day (POD) 1, 3M™ Veraflo™ Therapy was enlisted to cleanse the surgical defect; 14mL of normal saline was instilled with a 10-minute dwell time, followed by 3.5 hours of subatmospheric pressure (-125mmHg). Dressing changes occurred every 2–3 days, the patient received 5 days of Veraflo Therapy. The patient was discharged home with a 3M™ ActiV.A.C.™ Therapy System with 3M™ V.A.C.® Granufoam™ Dressing. On POD 7, the open wound was evaluated (**Figure 3**), and 3M™ ActiV.A.C.™ Therapy System with 3M™ V.A.C.® Granufoam™ Dressing was continued. On POD 35, it was felt that additional therapy was needed using ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing (**Figure 4**).

The patient was expected to be non-weight bearing on the left foot. Dressing changes occurred every 2–3 days. After 2 weeks (POD 49), V.A.C.® Therapy was discontinued as the wound cavity was filled and wound edges were brought together (**Figure 5**). To facilitate wound closure, 3M™ Promogran Prisma™ Matrix was applied to the wound. In **Figure 6** the wound after the treatment with Promogran Prisma Matrix.

Discharge and follow-up

Ten weeks (POD 70) from the initial surgery, and after the treatment with traditional wound care dressings, the wound achieved closure (**Figure 7**). The patient was seen in the clinic for her follow-up appointment, and the previously affected site was intact and remained closed. (**Figure 8**). The patient was ambulatory, utilising diabetic shoes and insoles.

Treatment modalities

- € Emergent surgical incision and drainage
- € First ray resection along with amputation of the hallux
- € Intravenous antibiotics
- € Veraflo Therapy to cleanse the wound
- € Conventional negative pressure wound therapy using the ActiV.A.C. Therapy System with V.A.C.® Granufoam™ Dressing
- € Promogran Prisma Matrix

Case study 4: Figures 1–8



Figure 1. Infected left diabetic foot following emergent incision and drainage.



Figure 2. Left diabetic foot following ray amputation of the hallux.



Figure 3. Open foot wound after five days (POD 7) of 3M[™] Veraflo[™] Therapy. Patient transitioned to conventional negative pressure wound therapy using the 3M[™] ActiV.A.C.[™] Therapy System.



Figure 4. Left diabetic foot on POD 35. Application of the ActiV.A.C. Therapy System was continued.



Figure 5. Left diabetic foot on POD 49. Having achieved therapeutic goals, V.A.C.[®] Therapy was discontinued.



Figure 6. Left diabetic foot on POD 63, after receiving 3M[™] Promogran Prisma[™] Matrix for two weeks.



Figure 7. Wound closed on POD 70, ten weeks from initial surgical procedure.



Figure 8. Left foot at follow-up appointment demonstrating wound remained closed.

Case study 5

Venous stasis ulcer of the lower extremity.

Patient

A 72-year-old male presented to the outpatient wound clinic with a venous leg ulcer (VLU) (**Figure 1**). The wound was extremely painful and unable to be adequately debrided in clinic. His previous medical history included peripheral vascular disease.

Diagnosis

The patient had a venous stasis ulcer of the left lower extremity. The patient received perioperative antibiotics and was continued on oral antibiotics for 10 days.

Course of treatment

Following an initial evaluation of the VLU, the patient was taken to the operating room (OR) for the excision of non-viable tissue (**Figure 2**). 3M™ Veraflo™ Therapy was initiated (**Figure 3**); 30mL of normal saline was instilled with a 20-minute dwell time, followed by continuous subatmospheric pressure (-125mmHg) for 2 hours. Dressing changes should occur every 2–3 days. The patient returned to the OR (Day 4) for STSG harvesting (**Figure 4**). The STSG was applied over the VLU and an allograft placental matrix (AmnioBand® Particulate; MTF Biologics, Edison, NJ) was distributed over the graft to optimise healing (**Figure 5**). Prior to applying 3M™ V.A.C.® Therapy dressing, 3M™ Adaptic™ Non-Adhering Dressing was placed over the graft to protect it. V.A.C.® Therapy was then applied and initiated to bolster the protected graft (**Figure 6**). 3M™ Promogran Prisma™ Matrix was applied to the STSG donor sites on the left thigh to facilitate healing (**Figure 7**). Ten days later (Day 14), the graft demonstrated full take (**Figure 8**). The donor site also demonstrated adequate healing (**Figure 9**).

Discharge and follow-up

Six weeks after his initial presentation at the wound care clinic, the patient's VLU had healed completely (**Figure 10**) and the donor sites on the left thigh had also fully reepithelialised (**Figure 11**).

Treatment modalities

- € Perioperative antibiotics
- € Excision of non-viable tissue within the OR
- € Initiation of Veraflo Therapy
- € Acquisition of STSG from thigh and application of STSG to VLU
- € Application of allograft placental matrix (AmnioBand® Particulate) over the STSG to optimise healing
- € Initiation of V.A.C.® Therapy using 3M™ Granufoam™ Dressing to bolster the STSG
- € Adaptic Non-Adhering Dressing to protect the STSG
- € Application of Promogran Prisma Matrix to donor site wounds to promote reepithelialisation

Case study 5: Figures 1–11



Figure 1. Venous stasis ulcer with non-viable tissue at presentation (Day 1).



Figure 2. VLU post excision of non-viable tissue (Day 1).



Figure 3. 3M™ Veraflo™ Therapy applied to the VLU (Day 1).



Figure 4. VLU after three days of Veraflo Therapy and prior to STSG placement (Day 4).



Figure 5. STSG and allograft placental matrix applied to the VLU (Day 4).



Figure 6. Application of 3M™ V.A.C.® Therapy using 3M™ V.A.C.® Granufoam™ Dressing to bolster. The STSG protected with 3M™ Adaptic™ Non-Adhering Dressing (Day 4).



Figure 7. Placement of 3M™ Promogran Prisma™ Matrix over the donor site wounds (Day 4).



Figure 8. VLU on Day 14.



Figure 9. STSG donor site (left thigh) wounds on Day 14.



Figure 10. Completely healed VLU at follow-up appointment (six weeks).



Figure 11. Reepithelialized STSG donor site (left thigh) wounds at follow-up appointment (six weeks).

Patient data and photos courtesy of Michael N. Desvigne, MD, FACS, CWS, FACCWS; Valley Wound Care Specialists, Glendale, Arizona.

Case study 6

Wound management of venous leg ulcers in the right lower extremity using super-absorbent dressing and a two-layer compression wrap.

Patient

A 68-year-old male presented for care with lymphedema and multiple, copiously draining ulcerations on the right lower extremity (**Figure 1**). Symptoms were present for years and failed to respond to compression, foam dressings, or abdominal pads. Previous medical history included hypertension requiring use of anti-hypertensive medication.

Diagnosis

The patient presented with lymphedema and multiple ulcerations on the right lower extremity with copious amounts of drainage. A positive Stemmer sign was noted and palpable pedal pulses with mild symptoms of venous insufficiency were noted. He was diagnosed with lymphedema and venous leg ulcers.

Course of treatment

The patient underwent sharp debridement followed by 3M™ Kerramax Care™ Super-Absorbent Dressing and 3M™ Coban™ 2 Two-Layer Compression System. The dressing was changed 3 days later and revealed that the copious drainage had dramatically decreased (**Figure 2**). Therapy was continued with weekly dressing changes. After three weeks, treatment was changed to 3M™ Kerracel™ Ag Gelling Fiber Dressing and Coban 2 Compression System.

Discharge and follow-up

After 1 month, the ulcer had healed and the edema almost completely resolved (**Figure 3**). A support garment was prescribed, and pneumatic compression was ordered for daily use. A lymphedema therapist was recommended. The patient has continued to do well with only mild exacerbation of symptoms.

Treatment modalities

- € Sharp debridement
- € Kerramax Care Super-Absorbent Dressing
- € Kerracel Ag Gelling Fiber Dressing
- € Coban 2 Compression System
- € Support garment
- € Daily use of pneumatic compression after ulcer healed

Case study 6: Figures 1–3



Figure 1. Right leg venous leg ulcer at presentation.

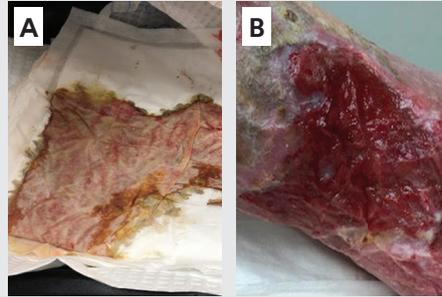


Figure 2. One week after application of 3M™ Kerramax Care™ Super-Absorbent Dressing along with 3M™ Coban™ 2 Two-Layer Compression System. A. Drainage was incorporated in the dressing; B. The wound surface was dry to the touch.



Figure 3. Lower extremity 1 month after Kerramax Care Super-Absorbent Dressing along with Coban 2 Compression System use.

Case study 7

Multimodal wound management of an infected venous leg ulcer.

Patient

A 60-year-old female presented for care with a venous leg ulcer of the right leg (**Figure 1**). Previous medical history included hypertension and dyslipidemia.

Diagnosis

The patient presented with venous leg ulcer of the right leg. Purulent drainage was observed in the wound dressings. The patient was diagnosed with a venous leg ulcer and infection.

Course of treatment

The patient underwent sharp debridement with wound culture followed by application of 3M™ Silvercel™ Non-Adherent Antimicrobial Alginate Dressing with 3M™ Easylift™ Precision Film Technology. Oral antibiotics were initiated as bacterial culture results indicated heavy growth of *Staphylococcus aureus*. After 10 days, the wound was improved (**Figure 2**). Oral antibiotics were continued for an additional 10 days along with Silvercel Non-Adherent Dressing and 3M™ Coban™ 2 Two-Layer Compression System (**Figure 3**).

Discharge and follow-up

Treatment was changed to 3M™ Promogran Prisma™ Matrix and Coban 2 Compression System (**Figure 4**). After two weeks, treatment was changed to 3M™ Promogran™ Matrix Wound Dressing and Coban 2 Compression System, which was continued until the wound was fully healed (**Figure 5**). After the wound was fully healed, 20mmHg support hose were prescribed.

Treatment modalities

- € Sharp debridement
- € Oral antibiotics
- € Silvercel Non-Adherent Dressing with Easylift Technology
- € Coban 2 Compression System
- € Promogran Prisma Matrix
- € Promogran Matrix

Case study 7: Figures 1–5



Figure 1. Venous leg ulcer at presentation.



Figure 2. Venous leg ulcer after 10 days of 3M™ Silvercel™ Non-Adherent Dressing and 3M™ Coban™ 2 Two-Layer Compression System.



Figure 3. Venous leg ulcer after an additional 10 days of Silvercel Non-Adherent Dressing and Coban 2 Compression System.



Figure 4. Venous leg ulcer after 14 days of 3M™ Promogran Prisma™ Matrix and Coban 2 Compression System use.



Figure 5. Venous leg ulcer treatment switched to 3M™ Promogran™ Matrix and Coban 2 Compression System.



V.A.C.®
Therapy

Product	Description	Ordering options*
	3M™ V.A.C.® Granufoam™ Small Dressing Kit <ul style="list-style-type: none"> ▶ 1 V.A.C.® Granufoam™ Dressing (10 × 7.5 × 3.2cm) ▶ 1 sheet of V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275051/5) Case of 10 (M8275051/10)
	3M™ V.A.C.® Granufoam™ Medium Dressing Kit <ul style="list-style-type: none"> ▶ 1 V.A.C.® Granufoam™ Dressing (18 × 12.5 × 3.2cm) ▶ 2 sheets of V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275052/5) Case of 10 (M8275052/10)
	3M™ Granufoam™ Large Dressing Kit <ul style="list-style-type: none"> ▶ 1 V.A.C.® Granufoam™ Dressing (26 × 15 × 3.2cm) ▶ 2 sheets of V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275053/5) Case of 10 (M8275053/10)
	3M™ V.A.C.® Granufoam Silver™ Small Dressing Kit <ul style="list-style-type: none"> ▶ 1 Granufoam Silver™ Dressing (10 × 7.5 × 3.2cm) ▶ 1 V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275098/5) Case of 10 (M8275098/10)
	3M™ V.A.C.® Granufoam Silver™ Medium Dressing Kit <ul style="list-style-type: none"> ▶ 1 Granufoam Silver™ Dressing (18 × 12.5 × 3.2cm) ▶ 2 sheets of V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275096/5) Case of 10 (M8275096/10)
	3M™ V.A.C.® Granufoam Silver™ Large Dressing Kit <ul style="list-style-type: none"> ▶ 1 Granufoam Silver™ Dressing (26 × 15 × 3.2cm) ▶ 2 sheets of V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275099/5) Case of 10 (M8275099/10)
	3M™ V.A.C. Whitefoam™ Small Dressing Kit <ul style="list-style-type: none"> ▶ 1 polyvinyl alcohol dressing (10 × 7.5 × 1cm) ▶ 1 V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275068/5) Case of 10 (M8275068/10)
	3M™ V.A.C. Whitefoam™ Large Dressing Kit <ul style="list-style-type: none"> ▶ 1 polyvinyl alcohol dressing (10 × 15 × 1cm) ▶ 1 V.A.C.® Drape 	<ul style="list-style-type: none"> ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275067/5) Case of 10 (M8275067/10)
	3M™ V.A.C. Whitefoam™ Small Dressing (foam only) <ul style="list-style-type: none"> ▶ 1 polyvinyl alcohol dressing (10 × 7.5 × 1cm) 	Case of 10 (M6275033/10)
	3M™ V.A.C. Whitefoam™ Large Dressing (foam only) <ul style="list-style-type: none"> ▶ 1 polyvinyl alcohol dressing (10 × 15 × 1cm) 	Case of 10 (M6275034/10)
	3M™ V.A.C.® Granufoam™ Bridge Dressing Kit <ul style="list-style-type: none"> ▶ 1 V.A.C.® Granufoam™ Dressing (3 pre-cut Circular pieces and 2 pre-cut rectangular pieces, 6 × 17 × 1.9cm) ▶ 1 Granufoam™ Bridge Dressing (67cm) with integrated SensaT.R.A.C.™ Pad 	<ul style="list-style-type: none"> ▶ 1 sheet of perforated V.A.C.® Drape with pre-cut hole and 5 removal V.A.C.® Drape Strips ▶ 1 disposable ruler Case of 5 (M8275042/5) Case of 10 (M8275042/10)
	3M™ V.A.C.® Granufoam™ Bridge Dressing <ul style="list-style-type: none"> ▶ 2 spiral V.A.C.® Granufoam™ Dressings (14.7 × 17.4 × 1.75cm, fully unwound: 81.3cm) ▶ 1 Granufoam™ Bridge Dressing (67cm) with integrated SensaT.R.A.C.™ Pad 	<ul style="list-style-type: none"> ▶ 1 sheet of V.A.C.® Drape ▶ 1 sheet of perforated V.A.C.® Drape with pre-cut hole ▶ 1 disposable ruler Case of 5 (M8275044/5)
	3M™ V.A.C.® Simplace™ Medium Dressing Kit with 3M™ Tegaderm™ Drape <ul style="list-style-type: none"> ▶ 2 spiral V.A.C.® Granufoam™ Dressings (14.7 × 17.4 × 1.75cm, fully unwound: 81.3cm) 	<ul style="list-style-type: none"> ▶ 3 sheets of 3M™ Tegaderm™ Drape ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275040/5) Case of 10 (M8275040/10)
	3M™ V.A.C.® Granufoam™ Bridge Dressing <ul style="list-style-type: none"> ▶ 2 spiral V.A.C.® Granufoam™ Dressings (14.7 × 17.4 × 1.75cm fully unwound: 81.3cm) 	<ul style="list-style-type: none"> ▶ 1 sheet of V.A.C.® Drape and 2 drape strips ▶ 1 SensaT.R.A.C.™ Pad with connector ▶ 1 disposable ruler Case of 5 (M8275045/5)
	3M™ V.A.C.® Drape <ul style="list-style-type: none"> ▶ 1 sheet of adhesive drape (30.5 × 26cm) 	Case of 10 (M6275009/10)
	3M™ V.A.C.® Y-Connector <ul style="list-style-type: none"> ▶ Allows two V.A.C.® Dressings to be connected to one 1 V.A.C.® Therapy Unit** 	Case of 5 (M6275066/5) Case of 10 (M6275066/10)

*Default quantities will be shipped unless otherwise specified. Payor restrictions may apply.

**Contact your representative, or review the 3M™ V.A.C.® Therapy Clinical Guidelines or Product IFU for additional information on treating multiple wounds with one 3M™ V.A.C.® Therapy Unit.

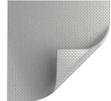
3M™ Snap™ Therapy System.

Product	Description	Case quantity	SKU	
 3M™ Snap™ Therapy Cartridge	Pressure: -125mmHg Capacity: 60mL	Each	SNPA125	
	Pressure: -100mmHg Capacity: 60mL	Each	SNPA100	
	Pressure: -75mmHg Capacity: 60mL	Each	SNPA75	
 3M™ Snap™ Therapy Strap	Size: 46cm, Small	Each	STPAS	
	Size: 53cm, Medium	Each	STPAM	
	Size: 61cm, Large	Each	STPAL	
 3M™ Snap™ Plus 125mmHg Therapy Cartridge	Pressure: -125mmHg Capacity: 150mL	Each	SNPA125P	
 3M™ Snap™ Plus Therapy Strap, Small	Size: 46cm	Each	STPASP	
	3M™ Snap™ Plus Therapy Strap, Medium	Size: 53cm	Each	STPAMP
	3M™ Snap™ Plus Therapy Strap, Large	Size: 61cm	Each	STPALP
 3M™ Snap™ Bridge Dressing Kit	Hydrocolloid: 14cm x 11cm Foam: 8cm x 8cm Interface: Reticulated Open Cell Foam (blue)	Each	BKTF14X11	
	3M™ Snap™ Bridge Dressing Kit with SecurRing™ Hydrocolloid Skin Barrier	Hydrocolloid: 14cm x 11cm Foam: 8cm x 8cm Interface: Reticulated Open Cell Foam (blue) Includes 3M™ Snap™ SecurRing™ Hydrocolloid Skin Barrier	Each	BKTF14X11S
 3M™ Snap™ Advanced Dressing Kit	Hydrocolloid: 10cm x 10cm Foam: 8cm x 8cm Interface: Reticulated Open Cell Foam (blue)	Each	SKTF10X10	
	Hydrocolloid: 15cm x 15cm Foam: 13cm x 13cm Interface: Reticulated Open Cell Foam (blue)	Each	SKTF15X15	
	Hydrocolloid: 20cm x 20cm Foam: 18cm x 18cm Interface: Reticulated Open Cell Foam (blue)	Each	SKTF20X20	
 3M™ Snap™ SecurRing™ Hydrocolloid Skin Barrier	Size: 5cm diameter	10	SRNG10	

3M™ Advanced Wound Care and Skin Integrity Solutions.

Product	3M code	Size	Items/Box	Boxes/Case
 3M™ Cavilon™ No Sting Barrier Film	3343E	1ml wand	25	4
	3344E	1ml wipe	30	4
	3345E	3ml wand	25	4
	3346E	28ml spray bottle	12	—
 3M™ Cavilon™ Advanced Skin Protectant	5050G	2.7ml applicator	20	—
	5051G	0.7ml applicator	20	—
	5050G4P	2.7ml applicator	4	—

3M™ Advanced Wound Care and Skin Integrity Solutions (cont.)

Product	3M code	Size	Items/Box	Boxes/Case	
 3M™ Adaptic™ Non-Adhering Dressing	2012	7.6 × 7.6cm	50	12	
	2014	7.6 × 40.6cm	36	6	
	2015	7.6 × 20.3cm	24	6	
	2018	7.6 × 152.4cm roll	10	—	
	2019	12.7 × 22.9cm sheet	12	6	
 3M™ Adaptic™ Touch Non-Adhering Silicone Dressing	TCH501	7.6 × 5cm	10	5	
	TCH502	7.6 × 11cm	10	5	
	TCH503	12.7 × 15cm	10	5	
	TCH504	20 × 32cm	5	—	
 3M™ Adaptic™ Digit Non-Adhering Dressing	Digit dressing	MAD003	Small 2cm	10	17
		MAD013	Medium 2.4cm	10	17
		MAD023	Large 2.8cm	10	17
		MAD042	Extra Large 3cm	10	17
	Digit toe	MAD062	Large 2.8cm	10	17
 3M™ Kerracel™ Gelling Fiber Dressing	CWL1035	2.5 × 45cm ribbon	5	10	
	CWL1032	5 × 5cm	10	10	
	CWL1166	10 × 10cm	10	10	
	CWL1034	15 × 15cm	5	10	
 3M™ Kerracel™ Ag Gelling Fiber Dressing	CWL1183.S	2 × 45cm	5	10	
	CWL1179.S	5 × 5cm	10	10	
	CWL1180.S	10 × 12.5cm	10	10	
	CWL1181.S	15 × 15cm	5	10	
	CWL1182.S	20 × 30cm	5	10	
 3M™ Silvercel™ Non-Adherent Antimicrobial Alginate Dressing	CAD7230	2.5 × 30.5cm rope	5	5	
	CAD7050	5 × 5cm	10	5	
	CAD7011	11 × 11cm	10	5	
	CAD7020	10 × 20cm	5	5	
 3M™ Promogran™ Protease Modulating Matrix	M772028	28cm ²	10	4	
	M772123	123cm ²	10	4	
 3M™ Promogran Prisma™ Wound Balancing Matrix	PS2028	28cm ²	10	4	
	PS2123	123cm ²	10	4	
 3M™ Kerramax Care™ Super-Absorbent Dressing	PRD500-025	5 × 5cm	10	110	
	PRD500-050	10 × 10cm	10	110	
	PRD500-100	13.5 × 13.5cm	10	65	
	PRD500-120	10 × 22cm	10	70	
	PRD500-240	20 × 22cm	10	38	
	PRD500-380-B10	20 × 30cm	10	24	
	PRD500-600-B10	20 × 50cm	10	15	
PRD500-300	21 × 23cm	5	38		

3M™ Advanced Wound Care and Skin Integrity Solutions (cont.)

Product	3M code	Size	Items/Box	Boxes/Case
 3M™ Kerramax Care™ Gentle Border Dressing	CWL1000	16 × 16cm	5	19
	CLQ1001	16 × 26cm	5	13
	CWL1002	26 × 26cm	5	20
 3M™ Tegaderm™ High Performance Foam Non-Adhesive Dressing	90600	5 × 5cm	10	4
	90601	10 × 10cm	10	4
	90602	10 × 20cm	5	6
	90603	20 × 20cm	5	6
	90604	8.8 × 8.8cm	10	4

Product	3M code	Foam pad size	Overall dressing size	Items/Box	Boxes/Case
 3M™ Tegaderm™ High Performance Foam Adhesive Dressing	90610 square	5 × 5cm	8.8 × 8.8cm	10	4
	90611 oval	6 × 7.6cm	10 × 11cm	10	4
	90612 square	10 × 10cm	14.3 × 14.3cm	10	4
	90613 oval	10 × 11cm	14.3 × 15.6cm	5	6
	90614 mini oval	3.1 × 3.8cm	6.9 × 7.6cm	10	4
	90615* mini wrap	2.5 × 2.5cm	6.9 × 6.9cm	10	4
	90616 oval	14 × 17.1cm	19 × 22.2cm	5	3
	90619 heel/elbow	7.6 × 7.6cm	13.9 × 13.9cm	5	4

*The mini wrap dressing is constructed of a conformable, absorbent, polyurethane foam pad with a highly breathable, non-waterproof, film backing reinforced with soft cloth tape.

Product	3M code	Dressing type	Overall dressing size	Items/Box	Boxes/Case
 3M™ Tegaderm™ Silicone Foam Dressing	90631	Non-bordered dressing	10 × 10.8cm	10	4
	90632	Non-bordered dressing	15 × 15cm	10	4
	90640	Bordered dressing	7.5 × 7.5cm	10	6
	90641	Bordered dressing	10 × 10cm	10	6
	90642	Bordered dressing	15 × 15cm	10	4
	90643	Bordered dressing	5 × 5cm	10	6
	90646	Heel and contour	16.5 × 16.5cm	5	4
	90647	Small sacral	15 × 17cm	10	4
	90648	Large sacral	18.5 × 22cm	5	4

Product	3M code	Application/Use	Comfort layer size		Boxes/Case
			Compression layer size		
 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite Two-Layer Compression Systems	2094	Below the knee (ABPI ≥0.8)	Layer 1: 10cm x 2.7m	Layer 2: 10cm x 3.5m	8
	2794E	Below the knee (ABPI > 0.5)	Layer 1: 10cm x 2.7m	Layer 2: 10cm x 3.2m	8
	2094XL	Below the knee (lg. circumference) (ABPI ≥0.8)	Layer 1: 10cm x 3.5m	Layer 2: 10cm x 4.5m	8
	20096	Above the knee	Layer 1: 15cm x 3.5m	Layer 2: 15cm x 4.5m	8
	2092	Toe boot	Layer 1: 5cm x 1.2m	Layer 2: 5cm x 2.7m	8

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Note: All amounts listed do not reflect adjustments for quality reporting, e-prescribing, sequestration or any other reduction. All numbers represent US averages only.

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.

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.