

**Content-validated¹
Solutions[®] Algorithms**
*Bringing Evidence-Based Solutions[®]
Programs to Your Practice*

1. Betz J, van Rijswijk L. Using wound care algorithms: A content validation study. / WOCN 1999;26:238-249.

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Today's Goal

Solutions[®] Algorithms → **Positive Wound Outcomes**
Helps lead to

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From an organizational standpoint,
what are the issues impeding
wound healing, and how might
Solutions[®] Algorithms assist?

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Impediments to Wound Healing ¹	Solutions® Algorithms Help ...
"Inadequate assessment,	Assess wound characteristics
lack of consistency and standardization of care and	Ensure consistency with easy to follow, visual guidelines
inappropriate dressing use."	Match appropriate products to wound characteristics

1. Kokka L, Scheurich A. The Impact of Telemedicine on Outcomes of Chronic Wounds in the Home Care Setting. *Ostomy/Wound Management* 2000;46(10):52.

Solutions® Algorithms

Overview

- Used to train clinicians on how to consistently link evidence-based wound assessment to product selection

Components

- Wound Care Algorithm Booklet (blue)**
 - Eight wound Algorithms
 - Covers five chronic wound types (pressure ulcer, diabetic ulcer, venous ulcer, arterial ulcer, mixed etiology ulcer)
- Comprehensive Guide Booklet (white)**
 - A companion piece to the Wound Care Algorithm Booklet
 - In-depth explanations of terms and concepts from Wound Algorithms
 - Full evidenced-based wound assessment
 - One Wound prevention Algorithm

Comprehensive Guide Booklet Wound Prevention Section

Overview


- One evidence-based prevention algorithm that links skin breakdown risk factors to topical product solutions
- Emphasize prevention first: Chronic wounds are a significant and costly problem for the healthcare industry
- A long-term sales aid


Components

- Skin breakdown risk factors
- Prevention Algorithm
- ConvaTec Skin Care Products

Solutions® Algorithm Booklet

- Eight wound algorithms based on exudate and necrotic tissue level
- Each Algorithm drives through
 - Wound Assessment
 - Wound Goals
 - Wound Care Plan (including ConvaTec products)
 - Managing risk factors where able
 - Expected Outcomes
 - Delayed Healing



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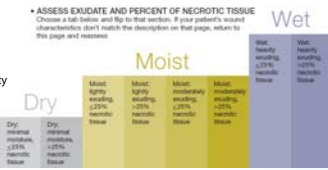
Solutions® Algorithm Booklet Pre-Algorithm Criteria


Overview

- One of eight Algorithms are chosen based on wound exudate and necrotic tissue level

Components

1. Medical Diagnosis
 - Type of ulcer
2. Nursing Diagnosis
 - Impairment of skin or tissue integrity
3. Goals of Patient Care
 - Reduce risk factors
 - Prevention
4. Wound Characteristics
 - Exudate and Necrotic tissue level



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Solutions® Algorithms Quick Tip!

⋮
→


Indicates that a **decision** has to be made about which step to take

|
→

Indicates the next step to take based on the assessment

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→

Indicates that more information to help make a **decision** is on page 49 of the Comprehensive Guide

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Solutions® Algorithm Booklet Wound Assessment Section

Overview

- Further segments based on the wound characteristics that drive product selection.

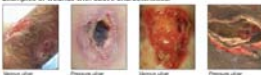
Components

- Infection
 - Provides brief checklist for infection and ConvaTec product suggestion.
 - EBP- culture and systemic antibiotics
- Depth
 - Based on partial-thickness (PTW) or full-thickness (FTW), not NPUAP staging

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Moist: lightly exuding, <25% necrotic tissue

Examples of wounds with above characteristics:



1 ASSESS FOR INFECTION*


2 ASSESS DEPTH*

Superficial or partial thickness

- Epithelial damage or scabbing
- Partial thickness damage to epidermis and/or dermis

Full thickness

- Extends through the dermis with damage to epidermis and subcutaneous tissue, muscle, or bone

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Solutions® Algorithm Booklet Wound Assessment Section

- Surrounding Skin
 - Healthy
 - Normal for skin tone, reddened
 - Unhealthy
 - Hyperpigmented (dark staining)
 - Macerated (white tissue)
 - Non-blanchable erythema
- Wound Edges
 - Healthy
 - Distinct edges, edges attached (e.g., Stage II pressure ulcer, hard eschar)
 - Unhealthy
 - Edges not attached to wound base, tunneling, undermining.
 - Hyperkeratotic (calloused)

3 ASSESS SURROUNDING SKIN*

4 ASSESS WOUND EDGES*

Healthy: Reddened

- Normal for skin tone

Fluctuant or blanchable


- Burns white when pressure applied, turns back to red

Healthy

- Distinct, outline clearly visible, attached, and firm with wound base*

Unhealthy

- One or all of the following present:
 - Edges well defined, not attached to wound base
 - Edges well defined, flaccid, scabbed, hyperkeratotic, or rolled under
 - Undermining or tunneling present

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Solutions® Algorithm Booklet Goals of Wound Care Section

Overview: Topical management goals determined based on the wound classification (PTW or FTW) or wound's needs

Components

- Obtain clean wound bed
 - Debride
- Provide moist environment
 - If dry- must provide
- Maintain moist environment
 - If moist- must maintain
- Absorb excess exudate
 - If wet – must absorb
- Prevent premature wound closure
 - Necessary for FTW with depth, undermining/tunneling
 - Necessary for some Partial-thickness
- Obtain healthy wound edges
 - Necessary for wounds with "unhealthy" edges
- Obtain healthy surrounding skin
 - Necessary for wounds with "unhealthy" surrounding skin

OBJECTIVE: Provide/maintain moist wound environment (EBP)

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Wound Care Plan Section - Cleanse

Overview

- Product selection driven from wound characteristics and goals
- ConvaTec options listed for each product category

Components

6. Cleanse

- To remove debris, bacteria, odor, prepare for dressing
- Cleansing of wound is needed at each dressing change


6 CHOOSE APPROPRIATE WOUND CARE PLAN

Cleanse

Cleanse wound

ConvaTec options

- SAP-Care® AP Dermal Wound Cleanser
- Shur-Care® Wound Cleanser



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Solutions® Algorithm Booklet

Wound Care Plan Section - Debride


2. Debride to remove necrotic tissue >25% (found in four Algorithms)

Warning statement: Do not debride dry necrotic wounds on the feet without appropriate consultation

- Autolytic**
 - Carried out with primary/secondary dressing selection
 - Uses enzymes present in wound to liquefy necrotic tissue
- Enzymatic**
- Surgical**
 - KALTOSTAT® dressings may be used after surgical debridement for wounds prone to minor bleeding

Debride wound*

Autolytic - Removal of necrotic tissue by the body's own enzymes in the presence of a moist wound healing environment. Separation of necrotic tissue. Enzymatic - Apply enzymatic debridement agent according to package insert INSTRUCTIONS, including exposure to HEAT (if). Surgical - Qualified provider remove devitalized tissue with surgical or other sharp instrument. Obtain minor bleeding before dressing wound. ConvaTec option for minor bleeding: KALTOSTAT® dressings.



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Solutions® Algorithm Booklet

Wound Care Plan Section - Cover Dressings

3. Dressing Selection

- Primary Dressings**
 - Direct contact with wound
 - Always needed
 - May be used to fill dead space (depth, tunneling, undermining) for secondary dressing
 - May be used alone on wounds with no depth
- Secondary Dressings**
 - Cover for primary dressing (i.e., "cover dressing")
 - Used only if Exudate management or Wound hydration is primary dressing
- Algorithm Dressing categories**
 - Wound Hydration
 - Exudate Management
 - Moisture-retentive Dressing

Cover with moisture-retentive dressing

ConvaTec options

- DuDERM Sign® Dressing
- ConvaDERM® Dressing
- Versa® ICP Gully Foam Dressing

Cover with moisture-retentive dressing and fill dead space

ConvaTec options


- SAP-Gulp Dressing
- DuDERM Gel
- Apoh & Inocell AQUACEL® or AQUACEL® dressings

Cover with moisture-retentive dressing

ConvaTec options

- DuDERM Sign® Dressing
- ConvaDERM® Dressing
- Versa® ICP Gully Foam Dressing

All ConvaTec products can be found under these icons in product section on page 74



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Evidence-based¹, Content-validated² Solutions[®] Algorithms in Action

1. Solutions[®] wound care algorithms. National Guidelines Clearinghouse. Accessed May 18, 2006.
2. Nelson, M, et al. Wound healing outcomes using standardized care in clinical practice. J WOCN 2004;13(2):61-71.

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Solutions[®] Algorithms in Action: Home Care¹

A study in Home Care in Canada using protocols adapted from Solutions[®] Algorithms, included ConvaTec products in addition to other proven modalities

- Reduced healing times for acute and chronic wounds by over 90%
- Increased the percentage of clients healed

	1999	2000	2001	2002	2003
Pressure Ulcer	1,202	771	556	104	51
Venous Ulcer		734	297	103	40
Diabetic Foot Ulcer	1,219	867	482	126	61
Ischemic/Atra Ulcer			498	35	43
Surgical Wound			205	39	22
Bum Wound				30	16
Other Wound	1,137	600	319	57	19
Total clients healed:	6	3	33	435	250
Total 2-week wound prevalence:	548	600	2,281		
% of clients healed:	1%	6%	19%		

Adapted with permission from Ostomy Wound Manage. Mchsaac C. Managing wound care outcomes. Ostomy Wound Manage. 2005;51:54-68.

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Solutions[®] Algorithms in Action: Home Care¹

A study in Home Care in Canada using protocols adapted from Solutions[®] Algorithms, included ConvaTec products in addition to other proven modalities

- Lowered labor and material costs by up to \$11,359/patient/year (Canadian \$)

Lower TOTAL costs

Compared costs of conventional treatment vs standardized protocols

Category	Conventional treatment	Standardized protocols
Total	\$793,163	\$422,067
Materials	\$664,345	\$228,125
Labor	\$128,818	\$193,942

Lower Total Costs chart is the property of Ostomy Wound Management and is reprinted herein with permission.
1. Mchsaac C. Managing wound care outcomes. Ostomy Wound Manage. 2005;51:54-68.

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Solutions® Algorithms in Action: Multiple Care Settings¹

Clinical use of Solutions® Protocols of care (< 5% gauze-dressed) in a prospective, multi-center study in real-world clinical practice

- Most chronic ulcers healed in less than 12 weeks
- Outcomes exceeded published results for similar wounds using protocols of care based on gauze, even if impregnated with growth factors or other agents

Ulcer Type	Partial-thickness (% Healed in 12 Weeks)	Full-thickness (% Healed in 12 Weeks)
Venous Ulcers	77% (n=30)	44% (n=124)
Pressure Ulcers	61% (n=134)	36% (n=373)

1. Bolton L, McNeis P, van Rijswijk L, et al. Wound healing outcomes using standardized care in clinical practice. J WOCN 2004;31(3):65-71.

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Solutions® Algorithms in Action: Acute Care¹

In a study in 13 Japanese hospitals, Solutions® Algorithms and ConvaTec products (MC/A) improved outcomes

- Overall, MC/A produced significantly improved healing results (p=0.046)

Group	Time of Enrollment (Mean PSST Score)	End of Study (Mean PSST Score)
MC/A	~28	~18
TC/A	~30	~22
TC/Na	~32	~22

MC/A (n=29): modern dressings with a standardized wound management algorithm
 TC/A (n=34): traditional dressings with a standardized wound management algorithm
 TC/Na (n=20): traditional dressings without a standardized wound management algorithm

1. Ohura T, Sanada H, Mino Y. Clinical activity-based cost effectiveness of traditional versus modern wound management in patients with pressure ulcers. Wounds. 2004 May; 16(5): 157-163.

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Solutions® Algorithms in Action: Acute Care¹

In a study in 13 Japanese hospitals, Solutions® Algorithms and ConvaTec products (MC/A) improved outcomes

- MC/A cost* significantly less than traditional care without a standardized wound management algorithm (p=0.003)

Group	PSST Units / Yen Spent
MC/A	0.127
TC/A	0.052
TC/Na	0.045

MC/A (n=29): modern dressings with a standardized wound management algorithm
 TC/A (n=34): traditional dressings with a standardized wound management algorithm
 TC/Na (n=20): traditional dressings without a standardized wound management algorithm

*total cost = labor + materials

1. Ohura T, Sanada H, Mino Y. Clinical activity-based cost effectiveness of traditional versus modern wound management in patients with pressure ulcers. Wounds. 2004 May; 16(5): 157-163.

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