
Ready... Aim... Improve! Tools

Improving Status of Surgical Wounds

Ready...Aim...Improve! Tools
for Improving Status of Surgical Wounds
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Introduction to the Ready...Aim...Improve! Tools for Improving Status of Surgical Wounds

What are the Ready...Aim...Improve! tools?

The Ready...Aim...Improve! tools included in this packet support home care agencies in their quality improvement efforts related to the home health outcome measure, Improvement in Status of Surgical Wounds. The tools fall into four categories:



Patient education/self-care management



Staff education/protocols



Clinical assessment, and



Intervention action tools

Where did they come from?

The Ready...Aim...Improve! tools are a sample of the tools found in or developed from the Improving Status of Surgical Wounds Resource Package. The Resource Package includes valuable evidence-based practices and was created as a resource to guide home care providers' quality improvement work. The Ready...Aim...Improve! tools include some that are taken directly from a list of tools in the Resource Package ("Ready As Is" tools), and tools that have been created or developed from evidence-based resources referenced in the Resource Package ("Develop Your Own" tools).

How do I use the tools?

The tools can be used at multiple points during the Outcome-Based Quality Improvement (OBQI) process. After reviewing a tool, you may want to include items from it in your "Should Be Done" list as you investigate care processes. Problem statements can be developed based on material found in the tools. You may find it advantageous to include the tool in your action plan as a best practice or an intervention action.




How can I find out more about the Ready... Aim... Improve! Tools and the Improving Status of Surgical Wounds Resource Package?




A tutorial is available that will guide you through the steps of integrating the Resource Package material in your OBQI process. It also demonstrates how the Ready...Aim...Improve! tools were developed and how they might be used to improve care. The tutorial is titled "Improving the Home Health Publicly Reported Outcome Measures – Using the Change Binder & Resource Packages for OBQI". The tutorial, the Resource Packages, and the Ready...Aim...Improve! tools will be posted at www.medqic.org as they become available.






Improving Status of Surgical Wounds

Tools Index

Tool	Type	Description	Pages	Source
My Wound Care – Steps in Changing the Dressing	Patient education self-care management 	“Develop Your Own” Tool – A single page grid that allows clinicians to customize for their patients that details the steps in changing a wound dressing.	1	The Clinical Resource Efficiency Support Team (CREST). Guidelines on the general principles of caring for patients with wounds. Available at: www.crestni.org.uk/publications/wounds.pdf . Page 23
Eating and Wound Healing – A Fact Sheet for Patients with Wounds	Patient education self-care management 	“Develop Your Own” Tool – Patient teaching tool detailing food choices that promotes wound healing.	1	Fact Sheets on Dietary Supplements National Institute of Health Office of Dietary Supplement. Vitamin and mineral supplement fact sheets. Available at: http://ods.od.nih.gov/Health_Information/Vitamin_and_Mineral_Supplement_Fact_Sheets.aspx Nutrient Recommendations for Wound Healing Scholl D, Langkamp-Henken B. Nutrient recommendations for wound healing. <i>JIntraven Nurs.</i> 2001; 24(2): 124-132. The Clinical Resource Efficiency Support Team (CREST). Guidelines on the general principles of caring for patients with wounds. Available at: www.crestni.org.uk/publications/wounds.pdf .
WOCN Guidance on OASIS Skin and Wound Status MO Items.	Clinical Assessment 	“Ready As Is” Tool – Definitions of OASIS wound stage and status MO item responses.	5	Wound Ostomy & Continence Nurses Society. WOCN guidance on OASIS skin and wound status MO items. Available at:

Tool	Type	Description	Pages	Source
				www.wocn.org/education/pdf/WOCNOASISGuidance.pdf.
Wound Care Guidelines	Staff education and protocols 	"Develop Your Own" Tool – A one page fact sheet detailing appropriate choices for dressing different wounds.	1	District Nurses Professional Practice and Development Group and Professional Nurse Development Team. Wound care guidelines Available at: www.berkshire.nhs.uk/wokingham/misc_pages/policies_and_procedures.asp Accessed May 20, 2005. (See Sections 4.4, 5.4-5.5 in particular)
Guideline for Prevention of Surgical Site Infection	Staff education and protocols 	"Develop Your Own" Tool – A teaching tool for clinicians based on research evidence and expert panel consensus	1	Guideline for Prevention of Surgical Site Infection The Centers for Disease Control and Prevention: online at www.cdc.gov/ncidod/dhqp/gl_surgicalsites.html District Nurses Professional Practice and Development Group and Professional Nurse Development Team. Wound care guidelines Available at: www.berkshire.nhs.uk/wokingham/misc_pages/policies_and_procedures.asp Accessed May 20, 2005. (See Sections 4.4, 5.4-5.5 in particular)
The Seven Principles for Selecting an Ideal Wound Dressing	Staff education and protocols 	"Ready As Is" Tool – Excellent resource for wound dressing selection	3	The Clinical Resource Efficiency Support Team (CREST). Guidelines on the general principles of caring for patients with wounds. Available at: www.crestni.org.uk/publications/wounds.pdf. Page 20

Tool	Type	Description	Pages	Source
Open Wound Documentation Tool	Intervention action tools 	"Ready As Is" Tool – A documentation tool clinicians can utilize to capture assessments of open wounds.	2	The Clinical Resource Efficiency Support Team (CREST). Guidelines on the general principles of caring for patients with wounds. Available at: www.crestni.org.uk/publications/wounds.pdf . Page 23
Improving Status of Surgical Wounds Chart Audit Tool	Intervention action tools 	"Develop Your Own" Tool – Chart audit tool that includes evidence-based best practices.	1	Guideline for Prevention of Surgical Site Infection The Centers for Disease Control and Prevention: online at www.cdc.gov/ncidod/dhqp/gl_surgicalsites.html The Clinical Resource Efficiency Support Team (CREST). Guidelines on the general principles of caring for patients with wounds. Available at: www.crestni.org.uk/publications/wounds.pdf .
Surgical Wound Care: Patient Self-Care Workbook	Patient education self-care management 	"Develop Your Own" Tool – Patient education tool related to surgical wound care and self-care. Colorful, easy to read.	8	Developed from resources found in the Improving Surgical Wound Status Resource Package. www.medqic.org/dcs/ContentServer?cid=1122297929384&pagename=Medqic%2FMQTools%2FToolTemplate&c=MQTools

Printing Instructions for the Improving Status of Surgical Wounds Tools



The Improving Status of Surgical Wounds Tools were created in Adobe Acrobat and are pdf files. You will need the Adobe Acrobat Reader installed on your computer in order to open and print these materials. Most computers have this software installed, but if yours does not, download a free version of Adobe Reader at this website:

<http://www.adobe.com/products/acrobat/readstep2.html>

If you have an older version of the Adobe Reader, you will need to install the most current version. (As of this printing, Adobe 7.0.5 is the most current version.)

You may review the tools in this file by scrolling, utilizing the arrows on the right hand side of your screen.

You can change the size of the document on the screen by adjusting the percentage of magnification in the tool bar at the top of the screen.

Locate individual tools by clicking on the tab titled “Bookmarks” which is located on the left hand side of the screen.

Review tools in the bookmark list.

Click on the tool you are interested in and you will be taken to the first page of the tool.

The screenshot shows the Adobe Acrobat Reader interface. The main content is a fact sheet titled "Eating and Wound Healing A Fact Sheet for Patients with Wounds". The fact sheet includes a table with columns for "Essential Nutrients", "What Should I Eat?", and "This week I will eat...". The table lists various nutrients and their corresponding food sources. Callouts from external boxes point to specific UI elements: "Printer Icon" points to the print button in the toolbar; "Change Size" points to the zoom percentage (75%); "Scroll Through Tools" points to the right-hand navigation arrows; "Bookmarks Tab" points to the "Bookmarks" tab on the left sidebar; and "Page Numbers" points to the "1 of 1" indicator at the bottom of the page.

Essential Nutrients	What Should I Eat?	This week I will eat...
Protein: Improves fibroblast proliferation and collagen synthesis which are very important to wound healing.	Lean meat, beans, soy, nuts, poultry, fish, cottage cheese, cheddar cheese, yogurt	
Glutamine: Essential for the immune system to function properly.	Dairy products, soy, raw spinach, raw parsley, raw cabbage	
Arginine: Enhances wound collagen deposits which leads to wound healing.	Dairy products, lean meat, poultry, fish, nuts	
Vitamin C: Enhances wound collagen deposits and increases the tensile strength of the scar tissue that is formed.	Orange juice, oranges, strawberries, cantaloupe, broccoli, bell pepper, papaya, mango, spinach	
Zinc: Speeds up wound healing by increasing new tissue growth in the wound bed.	Oysters, lean meat, beans, nuts, poultry, whole grains, fortified breakfast cereals, dairy products	
Vitamin A: Promotes granulation which is an essential part of wound healing.	Eggs, fortified breakfast cereals, cheddar cheese, carrots, spinach, cantaloupe, mango	
Iron: Strengthens the wound bed and improves oxygen delivery to the wound bed.	Red meats, fish, poultry, beans, fortified breakfast cereals	
Fluids: Adequate fluids are essential because dehydrated skin becomes more fragile.	Water	

Instructions for printing all tools in file:

1. Click on “Print” icon on the toolbar at the top of the screen.
2. The “Print” window will open.
3. Click “OK”.

Printing Instructions for the Improving Status of Surgical Wound Tools



Instructions for printing an individual tool:

1. Locate tool by clicking on the Bookmark tab.
2. Note the page numbers of the tool by scrolling through the document (page numbers are located at the bottom of the screen in the white box).
3. Locate and click the printer icon in the toolbar at the top of the page.
4. "Print" window will open and under "Print Range", click on "Pages from ___ to ___".
5. Enter the page range of the document you are interested in printing.
6. Click "OK".

Instructions for printing the Surgical Wound Care - Patient Self-Care Workbook:

A 16 page booklet, printed double-sided, final printed size 8 ½ inches high x 5 ½ inches wide (printed on 8 ½ x 11 inch paper and folded in half)

1. Locate the Patient Self-Care Workbook by using the "Bookmarks" tab.
2. Note the page numbers of the tool by scrolling through the document (page numbers are located at the bottom of the screen in the white box).
3. Click on "Print" icon in the toolbar at the top of the screen.
4. The "Print" window will open.
5. Under "Print Range" click on "Pages from ___to___" and enter the page range of the Workbook.
6. Click on "Properties", then
7. Click on the "Finishing" tab, under "Document Options", click "Print on Both Sides".
8. Click on the "Basics" tab, under "Orientation", click "Landscape".
9. Click "OK" and then "OK" again on the Print Screen.
10. Your printer will guide your next steps with two-sided printing instructions.
For example:
 - a. Remove the printed pages from the OUT tray.
 - b. Insert the stack into the IN paper tray so that side 2 will print.
 - c. Click Continue to Print.Your printer's instructions may vary slightly, follow the on-screen guidance as you print this double-sided document.
11. Remove papers from the printer.
12. Fold to form the Patient Self-Care Workbook.
13. Place staples in the fold to secure the workbook.

Patient Name:

Date:



My Wound Care - Steps in Changing the Dressing

I need to change the dressing:	<input type="checkbox"/> 2 times a week	<input type="checkbox"/> 1 time a week	<input type="checkbox"/> Everyday	<input type="checkbox"/> Other: _____
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Step 1 Gather all the necessary supplies.	<input type="checkbox"/> Gloves <input type="checkbox"/> Tape <input type="checkbox"/> Gauze <input type="checkbox"/> Sterile Saline <input type="checkbox"/> Trash can <input type="checkbox"/> Barrier Wipe <input type="checkbox"/> Wound Cleanser _____ <input type="checkbox"/> Wound Filler _____ <input type="checkbox"/> Wound Covering _____ 1. Open packages that you'll use for this dressing change and place within easy reach. 2. Set the trash can nearby.
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Step 2 Remove the old dressing.	1. Wash hands thoroughly with soap and water. 2. Put on non sterile gloves. 3. Remove the old dressing and discard in appropriate container. 4. Remove your gloves and wash hands again.
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Step 3 Clean the wound.	1. Put on non sterile gloves 2. Clean the wound with: <input type="checkbox"/> Sterile Normal Saline using a syringe. <input type="checkbox"/> Wound Cleanser in the spray container. <input type="checkbox"/> Other: _____ 3. Pat the wound and surrounding area dry with gauze. 4. Apply a barrier wipe to skin surrounding the wound.
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Step 4 Fill the wound.	1. Open the package and remove the wound filler 2. Fill the wound with: <input type="checkbox"/> Hydrogel _____ <input type="checkbox"/> Calcium Alginate _____ <input type="checkbox"/> Other: _____
----------------------------------	---

Step 5 Cover the wound.	<input type="checkbox"/> Cover with gauze and secure with tape. <input type="checkbox"/> Transparent dressing _____ <input type="checkbox"/> Foam dressing _____ <input type="checkbox"/> Hydrocolloid dressing _____ <input type="checkbox"/> Other: _____
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Step 6 Finishing up.	1. Remove gloves and wash hands thoroughly. 2. Put all dressing supplies away in a clean, dry, safe location. 3. Write down any minor concerns or call nurse if: ⇒ There is increased or different drainage ⇒ The drainage has a new odor ⇒ Your temperature is above _____ ⇒ The wound has new black or yellow tissue present
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Notes:

Eating and Wound Healing

A Fact Sheet for Patients with Wounds

Good nutrition is needed to help your wound heal and decrease your risk of getting a wound infection.



Essential Nutrients	What Should I Eat?	This week I will eat...
Protein: Improves fibroblast proliferation and collagen synthesis which are very important to wound healing.	 <p>Lean meat, beans, soy, nuts, poultry, fish, cottage cheese, cheddar cheese, yogurt</p>	
Glutamine: Essential for the immune system to function properly.	 <p>Dairy products, soy, raw spinach, raw parsley, raw cabbage</p>	
Arginine: Enhances wound collagen deposits which leads to wound healing.	 <p>Dairy products, lean meat, poultry, fish, nuts</p>	
Vitamin C: Enhances wound collagen deposits and increases the tensile strength of the scar tissue that is formed.	 <p>Orange juice, oranges, strawberries, cantaloupe, broccoli, bell pepper, papaya, mango, spinach</p>	
Zinc: Speeds up wound healing by increasing new tissue growth in the wound bed.	 <p>Oysters, lean meat, beans, nuts, poultry, whole grains, fortified breakfast cereals, dairy products</p>	
Vitamin A: Promotes granulation which is an essential part of wound healing.	 <p>Eggs, fortified breakfast cereals, cheddar cheese, carrots, spinach, cantaloupe, mango</p>	
Iron: Strengthens the wound bed and improves oxygen delivery to the wound bed.	 <p>Red meats, fish, poultry, beans, fortified breakfast cereals</p>	
Fluids: Adequate fluids are essential because dehydrated skin becomes more fragile.	 <p>Water</p>	

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

OVERVIEW AND BACKGROUND

As mandated by the Balanced Budget Act of 1997, Home Health Reimbursement shifted to a prospective payment system effective October 2000. Under this system, payment is based on the patient's clinical severity, functional status, and therapy requirements. The system for wound classification uses terms such as "nonhealing", "partially granulating", and "fully granulating"; these terms lack universal definition and clinicians have verbalized concerns that they may be interpreting these terms incorrectly. The WOCN Society has therefore developed the following guidelines for classification of wounds. These items were developed by consensus among the WOCN's panel of content experts.

M0445:	Does the patient have a Pressure Ulcer?
M0450:	Current number of Pressure Ulcers at Each Stage
M0460:	Stage of Most Problematic (Observable) Pressure Ulcer
	1 Stage I
	2 Stage II
	3 Stage III
	4 Stage IV
	NA No observable pressure ulcer

Definitions:

Pressure Ulcer: Any lesion caused by unrelieved pressure resulting in damage of underlying tissue. Shear and friction may be contributing factors. Pressure ulcers are usually located over bony prominences and are staged to classify the degree of tissue damage observed.

- Stage I: Non-blanchable erythema of intact skin, the heralding lesion of skin ulceration. In individuals with darker skin, discoloration of the skin, warmth, edema, induration, or hardness may also be indicators.
- State II: Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents as an abrasion, blister, or shallow crater.
- Stage III: Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.
- Stage IV: Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g. tendon, joint capsule). Undermining and sinus tracts (tunnels) may also be associated with Stage IV pressure ulcers.
- Non-observable: Wound is unable to be visualized due to an orthopedic device, dressing, etc. A pressure ulcer cannot be accurately staged until the deepest viable tissue layer is visible; this means that wounds covered with eschar and/or slough cannot be staged, and should be documented as non-observable.

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

M0464:	Status of Most Problematic (Observable) Pressure Ulcer
	1 Fully granulating
	2 Early/partial granulation
	3 Not healing
	NA No observable pressure ulcer

Definitions:

- Fully granulating:
 - wound bed filled with granulation tissue to the level of the surrounding skin or new epithelium
 - no dead space
 - no avascular tissue (eschar and/or slough)
 - no signs or symptoms of infection
 - wound edges are open
- Early/partial granulation:
 - $\geq 25\%$ of the wound bed is covered with granulation tissue
 - there is minimal avascular tissue (eschar and/or slough) (i.e., $< 25\%$ of the wound bed is covered with avascular tissue)
 - may have dead space
 - no signs or symptoms of infection
 - wound edges open
- Not healing:
 - wound with $\geq 25\%$ avascular tissue (eschar and/or slough) OR
 - signs/symptoms of infection OR
 - clean but non-granulating wound bed OR
 - closed/hyperkeratotic wound edges OR
 - persistent failure to improve despite appropriate comprehensive wound management

Note: A new Stage 1 pressure ulcer is reported on OASIS as Not healing.

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

- M0468:** Does the patient have a stasis ulcer?
M0470: Current number of Observable Stasis (Ulcer(s))
M0474: Does this patient have at least one Stasis Ulcer that cannot be observed?
M0476: Status of the Most Problematic (Observable) Stasis Ulcer
- | | |
|----|----------------------------|
| 1 | Fully granulating |
| 2 | Early/partial granulation |
| 3 | Not healing |
| NA | No observable stasis ulcer |

Definitions:

- Fully granulating:
 - wound bed filled with granulation tissue to the level of the surrounding skin or new epithelium
 - no dead space
 - no avascular tissue (eschar and/or slough)
 - no signs or symptoms of infection
 - wound edges are open.
- Early/partial granulation:
 - $\geq 25\%$ of the wound bed is covered with granulation tissue
 - there is minimal avascular tissue (eschar and/or slough) (i.e. $< 25\%$ of the wound bed is covered with avascular tissue)
 - may have dead space
 - no signs or symptoms of infection
 - wound edges open.
- Not healing:
 - wound with $\geq 25\%$ avascular tissue (eschar and/or slough) OR
 - signs/symptoms of infection OR
 - clean but non-granulating wound bed OR
 - closed/hyperkeratotic wound edges OR
 - persistent failure to improve despite appropriate comprehensive wound management

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

M0482:	Does the patient have a Surgical Wound?
M0484:	Current number of (Observable) Surgical Wounds
M0486:	Does the patient have at least one Surgical Wound that cannot be observed due to the presence of a non-removable dressing?
M0488:	Status of the most problematic (Observable) Surgical Wound
	1 Fully granulating
	2 Early/partial granulation
	3 Not healing
	NA No observable surgical wound

Definitions:

- Description/classification of wounds healing by primary intention (i.e. approximated incisions)
 - Fully granulating/healing:
 - incision well-approximated with complete epithelialization of incision
 - no signs or symptoms of infection
 - Early/partial granulation:
 - incision well-approximated but not completely epithelialized
 - no signs or symptoms of infection
 - Not healing:
 - incisional separation OR
 - incisional necrosis OR
 - signs or symptoms of infection
- Description/classification of wounds healing by secondary intention (i.e., healing of dehisced wound by granulation, contraction and epithelialization)
 - Fully granulating:
 - wound bed filled with granulation tissue to the level of the surrounding skin or new epithelium
 - no dead space
 - no avascular tissue (eschar and/or slough)
 - no signs or symptoms of infection
 - wound edges are open.
 - Early/partial granulation:
 - $\geq 25\%$ of the wound bed is covered with granulation tissue
 - there is minimal avascular tissue (eschar and/or slough) (i.e., $<25\%$ of the wound bed is covered with avascular tissue)
 - may have dead space
 - no signs or symptoms of infection
 - wound edges are open
 - Not healing:
 - wound with $\geq 25\%$ avascular tissue (eschar and/or slough) OR
 - signs/symptoms of infection OR
 - clean but non-granulating wound bed OR
 - closed/hyperkeratotic wound edges OR
 - persistent failure to improve despite comprehensive appropriate wound management

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

GLOSSARY

Avascular:	Lacking in blood supply; synonyms are dead, devitalized, necrotic, and nonviable. Specific types include slough and eschar.
Clean Wound:	Wound free of devitalized tissue, purulent drainage, foreign material or debris
Closed Wound Edges:	Edges of top layers of epidermis have rolled down to cover lower edge of epidermis, including basement membrane, so that epithelial cells cannot migrate from wound edges; also described as epibole. Presents clinically as sealed edge of mature epithelium; may be hard/thickened; may be discolored (e.g., yellowish, gray, or white).
Dead Space:	A defect or cavity
Dehiscence/Dehiscence:	Separation of surgical incision; loss of approximation of wound edges
Epidermis:	Outermost layer of skin
Epithelialization:	Regeneration of epidermis across a wound surface
Eschar:	Black or brown necrotic, devitalized tissue; tissue can be loose or firmly adherent, hard, soft or soggy.
Full Thickness:	Tissue damage involving total loss of epidermis and dermis and extending into the subcutaneous tissue and possibly into the muscle or bone.
Granulation Tissue:	The pink/red, moist tissue comprised of new blood vessels, connective tissue, fibroblasts, and inflammatory cells, which fills an open wound when it starts to heal; typically appears deep pink or red with an irregular, “berry-like” surface
Healing:	A dynamic process involving synthesis of new tissue for repair of skin and soft tissue defects.
Hyperkeratosis:	Hard, white/gray tissue surrounding the wound
Infection:	The presence of bacteria or other microorganisms in sufficient quantity to damage tissue or impair healing. Wounds can be classified as infected when the wound tissue contains 10^5 (100,000) or greater microorganisms per gram of tissue. Typical signs and symptoms of infection include purulent exudate, odor, erythema, warmth, tenderness, edema, pain, fever, and elevated white cell count. However, clinical signs of infection may not be present, especially in the immunocompromised patient or the patient with poor perfusion.

WOUND OSTOMY AND CONTINENCE NURSES SOCIETY GUIDANCE ON OASIS SKIN AND WOUND STATUS M0 ITEMS

Necrotic Tissue:	See avascular.
Non-granulating:	Absence of granulation tissue; wound surface appears smooth as opposed to granular. For example, in a wound that is clean but non-granulating, the wound surface appears smooth and red as opposed to berry-like.
Partial Thickness:	Confined to the skin layers; damage does not penetrate below the dermis and may be limited to the epidermal layers only
Sinus Tract:	Course or path of tissue destruction occurring in any direction from the surface or edge of the wound; results in dead space with potential for abscess formation. Also sometimes called “tunneling”. (Can be distinguished from undermining by fact that sinus tract involves a small portion of the wound edge whereas undermining involves a significant portion of the wound edge.)
Slough:	Soft moist avascular (devitalized) tissue; may be white, yellow, tan, or green; may be loose or firmly adherent
Tunneling:	See sinus tract
Undermining:	Area of tissue destruction extending under intact skin along the periphery of a wound; commonly seen in shear injuries. Can be distinguished from sinus tract by fact that undermining involves a significant portion of the wound edge, whereas sinus tract involves only a small portion of the wound edge.

Wound Care Guidelines

Choosing the Right Dressing

Objective: To ensure the optimum conditions for wound healing and to prevent further damage to the surrounding areas.



Wound Type	Objective	Treatment(s)
Black/brown necrotic eschar: Covered with hard, dry layer of dead tissue	Debridement and rehydration in order to loosen dry necrotic tissue <i>Necrotic tissue on the foot requires dry dressing and urgent referral</i>	⇨Hydrocolloid ⇨Hydrogel ⇨Enzymatic debriding agent ⇨Sharp debridement by competent, certified clinician
Slough: Filled with soft, yellow, glutinous covering	Debride wound, allow wound granulation, remove excess exudate, protect from infection, reduce colonization	⇨Alginate ⇨Hydrocolloid ⇨Hydrogel ⇨Silver dressing ⇨Film dressing incorporating silver ⇨Larva therapy
Granulating: Open superficial or deep cavity wounds which have granular, pebble like appearance	Optimize conditions for moist wound healing, remove and manage exudate, protect from infection, reduce factors which retard healing	⇨Alginates to absorb moderate to heavy exudate ⇨Hydrocolloid to absorb moderate exudate ⇨Hydrogel to provide moisture for small to no exudate ⇨Silver dressing ⇨Hydrophilic foams ⇨Semi permeable films ⇨Vacuum assisted closure
Epithelializing: Superficial pink/white tissue migrating from the wound edge or hair follicle with minimal exudate	Create moist environment, protect from infection, protect from trauma, reduce factors which retard healing.	⇨Semi permeable films ⇨Foams ⇨Thin hydrocolloids ⇨Hydropolymer
Newly healed: Epithelium or scar formation covering wound site	Protect site, prevent reoccurrence	⇨Film dressing initially ⇨Low to non-adherent dressing

Developed by Patti Johnston, RN, CWOCN, COS-C, OASIS Answers, Inc.

Reference: District Nurses Professional Practice and Development Group and Professional Nurse Development Team Wound Care Guidelines

www.berkshire.nhs.uk/wokingham/misc_pages/policies_and_procedures.asp

Prevention of Surgical Site Infection

An Evidence-Based Staff Education Tool

Criteria for defining a Surgical Site Infection:	<p>Infection occurs within 30 days after the operation and at least one of the following:</p> <ul style="list-style-type: none"> ⊕ Purulent drainage ⊕ Culture of fluid or tissue identifies organism ⊕ At least one of the following S/S of infection present: <ul style="list-style-type: none"> ○ Pain or tenderness, Localized swelling, Redness, Heat ⊕ Deep incision dehisces or is deliberately opened by a surgeon when the patient has at least one of the following: <ul style="list-style-type: none"> ○ Fever, localized pain or tenderness ⊕ Abscess 									
The top 5 pathogens isolated from Surgical Site Infections:	<p>Staphylococcus aureus Coagulas-negative staphylococci Enterococcus spp. Escherichia coli Pseudomonas aeruginosa</p>									
Patient characteristics associated with increased risk of surgical site infection:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">↻ Diabetes</td> <td style="width: 33%;">↻ Nicotine use</td> <td style="width: 33%;">↻ Steroid use</td> </tr> <tr> <td>↻ Malnutrition</td> <td>↻ Prolonged preoperative hospital stay</td> <td>↻ Perioperative transfusion</td> </tr> <tr> <td>↻ Infection unrelated to surgical site</td> <td></td> <td></td> </tr> </table>	↻ Diabetes	↻ Nicotine use	↻ Steroid use	↻ Malnutrition	↻ Prolonged preoperative hospital stay	↻ Perioperative transfusion	↻ Infection unrelated to surgical site		
↻ Diabetes	↻ Nicotine use	↻ Steroid use								
↻ Malnutrition	↻ Prolonged preoperative hospital stay	↻ Perioperative transfusion								
↻ Infection unrelated to surgical site										
Recommendations for Prevention of Surgical Site Infection Postoperative Incision Care										
<ul style="list-style-type: none"> ☑ Protect primary incisions with a sterile dressing 24 to 48 hours postoperatively. ☑ Wash hands before and after dressing changes and any contact with surgical site. ☑ When an incision dressing must be changed use sterile technique (first 24 – 48 hours postoperatively). ☑ Debridement of necrotic tissue from wounds healing by secondary intention. ☑ Educate the patient and the family regarding proper incision care, symptoms of surgical site infection, and the need to report symptoms 										

10. SEVEN PRINCIPLES FOR SELECTING AN IDEAL WOUND DRESSING.

The ideal dressing will:



- provide a moist environment;
- manage excess exudate;
- allow gaseous exchange;
- provide a constant wound interface temperature;
- protect the wound from pathogenic organisms;
- protect the wound from contamination with particulate matter;
- protect the wound from trauma.

Principle 1: Provide a Moist Wound Environment

Arising from the seminal work of George Winter in 1962, the phrase 'moist wound healing' has been coined to describe an optimum environment for wound healing. It was observed that wounds covered with an occlusive dressing healed twice as fast as those left to dry out.

Under dry conditions the bed of an open wound rapidly dries out and forms a scab made up of dead and dying cells. New epidermal cells have to burrow beneath the scab to find a moist layer to allow movement across the wound. In a moist environment epidermal cells are able to slide across the surface of the wound because the dressing maintains humidity on the wound surface.

Wounds which are healed in a moist environment heal faster, are less inflamed and less painful. There is more collagen production and better contraction which results in less scarring.

Principle 2: Manage Excess Exudate

Although the effective management of exudate is probably the most common problem encountered by practitioners involved in wound care, the composition and function of wound fluid is generally not well understood.

From the physiology of wound healing, the presence of serous fluid in an open wound plays a vital part in the healing process:

- it provides essential nutrients as an energy source for actively metabolising cells;
- it contains growth factors which actively promote healing;
- it serves as a transport medium for white cells;
- it helps to ensure that the wound surface does not become excessively dry.

Although the wound surface should remain moist, excessive moisture causes maceration and excoriation of the surrounding skin which may in turn lead to infection. The precise balance that needs to be maintained by the dressing between moisture and absorbency is still not certain.

Principle 3: Allow Gaseous Exchange

Successful wound healing is dependent upon good oxygen resources.

In the early stages of wound healing tissue oxygen is extremely low (<10mm Hg) indicating the absence of a working microcirculation. A low oxygen tension is thought to stimulate fibroblast replication and angiogenesis, and hence the production of granulation tissue thus helping to improve the circulation and raise the tissue oxygen.

Once tissue oxygen improves (>10mm Hg collagen can be synthesised) the wound healing process can continue.

The presence of exudate or debris on the wound surface may inhibit gaseous exchange through the dressing. It would be fair to say that the wound does not rely on atmospheric oxygen for its oxygen.

Principle 4: Provide A Constant Wound Interface Temperature

A constant temperature of 37 C promotes both macrophage and mitotic activity during granulation and epithelialisation.

Cells and enzymes function at normal body temperature. Reduced interface temperatures inhibit the activity of phagocytic cells and significantly affect cell mitosis.

Principle 5: Protect the Wound from Pathogenic Organisms.

One of the major functions of intact healthy skin is to protect underlying structures from invasion by micro-organisms. A wound disrupts the integrity of the skin and provides a potential pathway for pathogenic organisms to enter the body. Wound infection can cause delayed healing and if infection is not controlled it may lead to cellulitis, bacteraemia and septicaemia.

Many modern dressings are bacteria-proof. This not only prevents airborne bacteria entering a wound but also prevents contaminated exudate being released into the environment and causing cross-infection. Moistened or leaking dressings can provide a pathway for bacteria to travel in both directions. It has been shown in vitro that motile bacteria such as Pseudomonas can pass through a moist dressing in a few hours. This has been termed “strike-through” and requires immediate dressing change.

Principle 6: Protect the Wound from Contamination with Particulate Matter

It is well documented that the presence of debris in the wound may delay wound healing and act as a focus for infection. Foreign matter introduced into the skin causes an inflammatory response and can lead to the formation of fibrous tissue, scarring and hypertrophy. It is undoubtedly true that fibres from certain dressings used in wound care can become incorporated into wounds, however some feel there is a need for more research into the detrimental effects of this particularly to ensure that any residual chemicals left after complex manufacturing processes do not inversely affect wound healing.

Principle 7: Protect the Wound from Trauma.

One of the priorities of wound management is to protect the wound from any further trauma. It has been reported that removal of adherent dressings can cause trauma to wounds. It is well documented that traditional dressings such as gauze have a tendency to adhere to the surface of wounds causing damage to newly formed epithelium. Adherence occurs either because (a) the wound exudate becomes incorporated into the dressing and dries or (b) granulation tissue grows between the structure of the dressing.

Manufacturers of wound dressings have tried to overcome this problem by applying facing layers to dressings which attempt to prevent adherence to the wound.

Open Wound Observation Chart

Name:	Referrals (where appropriate):
Unit No: Ward.....	Dietitian: Date:/...../..... Other: Date:/...../..... Other: Date:/...../.....
Consultant/ GP:	Allergies:
Type of wound:	Wound site:

Date	.....	.....	.....
Maximum size (in centimetres or millimetres)	Length	Length	Length
	Depth	Depth	Depth
	Width	Width	Width
	Wound traced Yes/ No Photograph Yes/ No	Wound traced Yes/ No Photograph Yes/ No	Wound traced Yes/ No Photograph Yes/ No
Wound Bed (state approx %) NB. Other may include tendon, muscle, bone.	(Black) Necrosis (Yellow) Slough (Red) Granulation (Pink) Epithelialising Other	Necrosis Slough Granulation Epithelialising Other	Necrosis Slough Granulation Epithelialising Other
Surrounding skin Healthy/ Blistered/ Dry/ Scaly/ Wet or Dry Eczema/ Macerated/ Red & Hot			
Exudate (colour) Serous/ Sanguinous/ Serosanguinous/ Purulent			
Exudate (amount) Dry/ Low/ Moderate/ High			
Odour None/ Only present when dressing is removed/ Fills the room			
Wound Pain (frequency) None/ Only at dressing change/ Intermittent/ Continuous			
Wound Pain (Patient's Perception) Use Pain Scale			
Signature			

Date			
Infection (only complete this section if appropriate)			
Suspected/ Present	.....	.....	.....
Swab taken (date)/...../...../...../...../...../.....
Result/ Organism(s) isolated	..........	..........	..........
Action taken	..........	..........	..........
Signature	.....	.....	.....

Date	Recommended Dressings/ Bandages	Rationale	Maximum Wear time	Sign

Additional Notes

Sign.

Please evaluate progress in the Nursing Care Plan.

SURGICAL WOUND REVIEW TOOL

Target Outcome: Improvement in Status of Surgical Wound

Patient Name: _____

Medical Record #: _____

Important Care Behaviors	Yes	No	N/A	Comments
1. During the SOC/ROC assessment, the clinician accurately responded to M0488, Status of Most Problematic Surgical Wound as evidenced by documented healing ridge palpation (for wound healing by primary intention) or by documented wound bed status (% of granulation and/or % of necrotic tissue (for wounds healing by secondary intention.)				SOC/ROC Clinician: _____
2. During the Discharge assessment, the clinician accurately responded to M0488 Status of Most Problematic Surgical Wound as evidenced by documented healing ridge palpation (for wound healing by primary intention) or by documented wound bed status (% of granulation and/or % of necrotic tissue (for wounds healing by secondary intention.)				Discharge Clinician: _____
3. The wound was measured weekly and documented according to agency guidelines.				
4. Each wound assessment included wound bed status (granulation, necrotic tissue).				
5. Each wound assessment included wound exudate type, amount, and odor.				
6. Presence of healing ridge assessed by skilled clinician q visit on wounds healing by primary intention.				
7. By the 2 nd visit, the caregiver/patient was provided with wound care teaching tools.				
8. Proper handwashing, dressing removal and dressing application return demonstration properly performed by the caregiver/patient.				
9. Wound cleansing performed per orders at each dressing change utilizing sterile normal saline.				
10. For surgical wounds healing by secondary intention, dressing utilized provided moist wound therapy, absorbed exudate if needed, and/or provided debridement of necrotic tissue if present.				
11. Nutritional assessment performed by skilled clinician during SOC assessment.				
12. Dietetic intervention initiated by 3 rd visit if SOC assessment indicated need.				
13. If known surgical wound infection, the patient received systemic antibiotics within 48 hours				
14. The assessing clinician notified the physician of any signs/symptoms of wound infection ie. purulent exudate, pain or tenderness, localized swelling, heat, redness, fever on the same day identified.				
15. If suspected wound infection, the physician ordered a wound culture and sensitivity within 24 hours.				
16. If the patient was a diabetic, fasting blood sugar monitored and documented.				
17. If the patient was a smoker, smoking cessation intervention occurred within the first two weeks of care.				
Other Important Factors	Yes	No	U/K	Comments
1. Did the patient have a prolonged preoperative hospital stay?				
2. Did the patient receive a perioperative blood transfusion?				
3. Did the patient receive steroid therapy prior to or after surgery?				
4. Was the surgical incision originally left open to heal by secondary intention?				
5. Did the patient have an infection unrelated to the surgical site?				



This material was developed by OASIS Answers, Inc (www.oasisanswers.com) and distributed by Quality Insights of Pennsylvania (www.qipa.org), the Medicare Quality Improvement Organization Support Contractor, under contract with the Centers for Medicare & Medicaid Services (CMS). The views presented do not necessarily reflect those of CMS.

Surgical Wound Care: Patient Self-Care Workbook



Learn how to manage your condition:

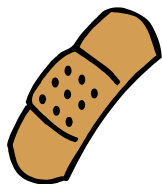
- ❖ What about the healing process and risks?
- ❖ How can medicine, diet, and exercise help?
- ❖ What can YOU do to improve your health?

What is a Surgical Wound ?

- an opening or interruption of the skin as a the result of a surgical incision
- may be stapled, sutured, graft site, or pin sites

How Do Surgical Wounds Heal ?

- Primary intention:
 - wound edges are brought together and held with staples or sutures
- Secondary intention:
 - wound is left open or is opened up and healing occurs by new tissue developing from the inside of the wound to the outer edges



Surgical Wound Healing Sequence

Inflammatory Stage (4-6 days):

- brings all the necessary cells to the area

Proliferation Stage (4-24 days):

- builds new tissue

Remodeling Stage(21 days-2 years):

- remodels new tissue into mature tissue

My Personal Plan: (continued)

Things that would help me meet my goal:

My confidence in being able to meet my GOAL:

0 1 2 3 4 5 6 7 8 9 10
Not Confident Very Confident

For More Information:

Wound Ostomy and Continence Nurses Society
www.wocn.org 888-224-9626

American Academy of Wound Management
www.aawm.org 202-521-0368



Local Resources: _____

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My Personal Plan:

I would like to work on the following areas to manage my Surgical Wound:

- Prevent Infection
- Take my Medicine
- Eat Healthy
- Exercise Regularly
- Stop Smoking

My Personal Plan:

My GOAL for the next month is:

Possible problems in meeting my goal:

Take this booklet with you to your doctor appointment.

You can help take care of your surgical wound.

This booklet was put together to help you understand your role ("self-care") in helping your surgical wound(s) heal.

Self-care includes:

1. Recognizing signs and symptoms of infection
2. Keeping wound clean and dry
3. Changing dressings as instructed
4. Regular handwashing
5. Eating healthy
6. Avoiding trauma, pressure, or friction to the surgical wound
7. Smoking cessation

It is Important to Recognize the Signs and Symptoms of Infection:

- Increased pain
- Swelling in the area of the wound
- Increased redness of the skin surrounding the wound
- Increased warmth of the skin surrounding the wound
- Drainage from the wound that is yellow, green, or brown
- Increased wound drainage between days 5 and 9

If I notice any of these signs, I should:

Medicines:

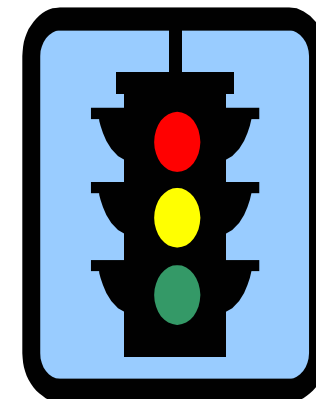
- Unless the wound is infected, specific medications for surgical wounds are usually not prescribed.
- If the wound is infected your physician may prescribe antibiotics.
- If the wound has a lot of unhealthy tissue, your physician may prescribe an enzymatic debriding agent to help remove this unhealthy tissue.
- Unless instructed to do so, do not put anything on your wound. Topical antiseptics (i.e., povidone iodine) should not be used.
- Talk with your physician before taking oral supplements of vitamins A and C and zinc because they could have adverse effects



Your Action Plan:

Use this guide to help you report changes in your symptoms to your doctor or home care provider.

Reporting symptoms early may keep you out of the hospital.



You are doing WELL when:

- You can feel a healing ridge (or area of raised tissue) along the incision line
- Your surgical wound is clean, dry, and not reddened

Call your home care nurse when:

- You notice an increase in redness, swelling, pain, heat, or drainage
- Your wound is draining yellow, green, or brown liquid
- Your surgical wound appears wider, as if it is opening up

Call 911 RIGHT AWAY when:

- You experience changes in your ability to think or concentrate
- Your wound begins bleeding and you cannot get it stopped

You Are At Increased Risk of Surgical Site Infection If You:

- Are very old or very young
- Have poor nutritional habits
- Have diabetes
- Smoke
- Are obese
- Have an infection somewhere else in your body
- Take high doses of steroids (>30 mg/d)

Other Tips For Managing Your Surgical Wound

- You may be instructed to wear an incisional binder for additional support if your wound is on your underarm, neck, or abdomen
- Sutures or staples should be removed by your health care worker within 7-10 days after surgery. After they are removed, Steristrips™ are applied to provide support to the incision as it continues to heal.



Medicines:

Antibiotics

These drugs work by killing bacteria that cause infection. They are usually taken once or twice a day.

I am using: _____

Enzymatic Debriding Agents

These drugs work by consuming dead tissue within the wound bed making it clean so it can heal. They are gels or creams that are placed directly on the wound beneath a dressing and are changed whenever the dressings are changed.

I am using: _____

Vitamin Supplements

These oral supplements provide an additional source of vitamins A, C, and E. They are recommended only for persons with vitamin deficiencies. When taken, they are taken once a day.

I am using: _____

Nutrition:

It is important to eat a healthy diet when you have a surgical wound.

When you don't eat well, wounds heal more slowly.

Certain nutrients are especially important for surgical wound healing.

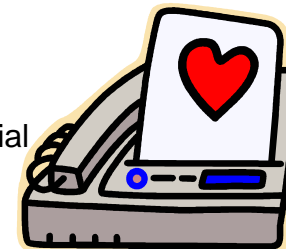
They are found in many of the foods we eat.

- Protein: meat, poultry, fish, eggs
- Vitamin A: whole eggs, fortified milk, beef, chicken
- Vitamin C: fruits and vegetables, especially guavas, red bell peppers, citrus fruits, broccoli
- Vitamin E: wheat germ oil, nuts, leafy green vegetables
- Arginine: meat, poultry, fish, dairy products, nuts
- Zinc: oysters, red meat, poultry, fortified cereal, whole grains



2. Telemonitoring

A monitoring system is placed in your home. This may include special devices to measure oxygen levels or your temperature. The monitor may also include questions on a computer that you answer each day.



Some systems may include taking a photograph or video, or otherwise allow your surgical wound to be seen by your health care provider(s) from their office. Your home care provider will teach you how to use the telemonitoring system.

Your information (oxygen levels, temperature, etc.) is sent to the home care agency computer, usually over the telephone lines. A clinician at the agency checks your information every day. If there are changes, your nurse or therapist will call you or visit you at home.

3. You call the home care agency

Your wound may get worse, or you may just want to ask a question.

"I see blood draining through the bandage. What should I do?"



The home care provider may give you advice over the telephone, may want to see you at your home to check your condition, or may tell you to call your physician.

Telehealth Strategies...

In addition to seeing you in your home, your home care provider may also suggest or use “*telehealth*” to monitor your surgical wound.

What is telehealth ?

1. **Your home care nurse or therapist calls you on the phone – simple telephone monitoring.**

You will be asked questions about your surgical wound, and other symptoms and activities. Your nurse will review information you need to know to better manage the healing of your wound.

“Is there any redness around the incision?”



Nutrition

Sometimes food just doesn't taste good. Things you can do to improve the taste of food include:

- Rinse mouth with water before eating
- Eat citrus fruits
- Have others prepare your food
- Eat with family and friends

If you have diabetes, maintain tight glucose control. High glucose level complicate wound healing.



Fluids

Your body needs plenty of water to maintain a healthy environment for your surgical wound to heal. If you do not drink enough liquids, you could become dehydrated.

Check off things you think you can do to prevent dehydration:

- Drink 8-12 cups of liquid per day
- Drink liquids after or between meals
- Keep a water bottle with you at all times
- Limit caffeinated drinks

Staying Active and Safe:

- Exercise provides many benefits for you when you have a surgical wound
- Activities such as walking or bike riding may be good exercise options
- If your doctor has outlined specific activity precautions you should follow (like not getting your incision wet, or limiting weight bearing or lifting), your home care therapist can help you stay active, while following your doctor's instructions.

Exercise will:

- Improve your oxygen intake (Oxygen is important for wound healing)
- Strengthen your heart so blood and nutrients can be carried to the surgical site
- Help you control your blood glucose
- Increase your energy level
- Make you feel better

It is important to start slowly when you are not used to exercising. A home physical therapist can help you begin your exercise program.

You will be instructed in ways to safely exercise such as:

- Drink water before and after you exercise
- Warm up and cool down for 5-10 minutes before and after exercising. For example, walk slowly before you start and after you finish your exercise.
- Monitor your heart rate while exercising
- Stop exercising immediately if you feel any discomfort
- Increase your exercise program only under the advisement of your physical therapist

