# SWCCAC Wound Management Program (WMP)
## Clinician Version

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1 South West CCAC Wound Management Program – Revised – April 2011
The South West CCAC Wound Management Program was developed by the SW CCAC Wound Care Steering Committee. The “Service Planning Guide Specific Wound Type” template and some content came from the OACCAC Wound Care Guiding Framework materials (Orridge, C., Purbho, D., McIsaac, C. et al. 2004) and has been updated and expanded upon. Created May 26, 2009  Rev. June 29, July 14, Sept. 23, Dec 10, 2009, Feb 8, Updated August, 2010, and March 2011 in this revised format.

This is the clinical version for nurses and other health care professionals. The service delivery version for Case Managers was developed in March 2011, and contains less clinical information.

### SWCCAC WMP: Authorizing Over Max Dressing Supplies

**Maximum Weekly Orders**
Please see SWCCAC Policy and Procedure 5.1.1 documents regarding Medical Supply Orders for specifics.
The following pathway was created to guide Case Managers and Nurses in decision-making when a client requires more supplies than the weekly maximum allows. This may be when clients have more than one wound, or have large amounts of exudates initially, but does need to be reviewed q 9 weeks as a quality step in ensuring that the client is not receiving excessive amounts unnecessarily.

The client requires ‘over maximum’ quantities of formulary items **[Special authorization process NOT applicable- SA process is specific to requesting supplies not currently in the MS catalogue]**

- **Nurse**
  - Completes dressing order form for the correct weekly amount of dressings and supplies the client requires. If this exceeds the maximum weekly order amount, nurse communicates this to the Case Manager by phone call. The nurse should speak with the in-office CM if the client’s Community CM is not available.
  - If client is more appropriate for monthly orders (stable client, little change to orders), this process is followed to authorized monthly orders.
  - Nurse is responsible to ensure that they have submitted an up to date wound care status report documenting clearly the wound care status, size, and drainage amounts every three weeks. Over maximum authorization is reviewed every 3 weeks; wound status reports are reviewed to assess that the dressing protocol is effective in promoting wound healing.
  - Once Authorization has been received, nurse documents on the supply order that CM has approved additional supply volumes at the bottom left hand corner of the dressing order form, and the nurse initials this.
  - The maximum weekly amounts are on a per wound basis; if there is more than one wound, the nurse should enter this in COMMENTS.

- **Case Manager**
  - Receives communication from nurse regarding need for over maximum weekly supplies OR monthly orders, and checks that a current wound care status report is in the client’s file which clearly supports the need for additional supplies.
  - Over maximum supplies cannot be authorized without a current wound care status report.
  - Enters note in CHRIS data base - Subject: Care Team Communication. First line of note “Medical Supply Authorization” then type a note indicating that supplies over maximum amounts have been authorized. P/C from Nurse _________. Additional supplies authorized ______ with rationale for over max required. Document type of dressing where over max supplies are required and rationale.
  - Monitors treatment center status reports and renews over maximum authorization as above if supplies still required. Consider ET referral or case conference if continued need for over max supplies when healing is poor.
  - Notifies CPS team and nurse if client no longer requires over maximum supplies.

- **CPS Team**
  - Receives Medical Supply Order form requesting over maximum amount of supplies.
  - Checks that nurse has ticked the box indicating that nurse has received authorization from CM.
  - Checks CHRIS notes to ensure that CM has entered a note indicating over maximum supplies have been authorized.
  - Fills order as completed.
  - OR if documentation not completed, fills order only for the standard maximum amounts, then forwards Medical Supply Order Form back to the agency nurse indicating over maximum amounts have not been provided because they were not authorized by CM, and directs nurse to call the CM. Enters a task in CHRIS for the client’s case load regarding “overmax supplies requested with no authorizing note in CHRIS” for CM followup.

- Maximum amounts are detailed right on the dressing supply order form in bold
  http://www.ccac-ont.ca/Upload/sw/General/MedicalSupplies/SWCCACMedicalSupplyOrderForm.pdf
ORDER FREQUENCY:
The “Medical Supply Orders” procedure states “In order to respond to changing care needs and to reduce wasted product, clients receive a weekly order of approximately one (1) week’s supply”. However “Where a client requires the long-term and consistent use of supplies, use the option of monthly orders” if the client is appropriate for authorizing monthly orders the above process must be completed


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**SWCCAC WMP: Wound Care Reporting Guidelines**

**Wound Care Status Report Form - Nursing Service Providers**

**Key for Use:** These are printed on NCR paper. The duplicate copy should be left in the in-home chart for reference. The original should be faxed to the CCAC office as per nursing agency procedures.

**Frequency of completion:** This is now indicated in the shaded sub-headings.
The nurse will complete this form in full during the admission visit or at the time of the wound occurrence (when the client is already on nursing services for other reasons.)

**Indicate the timing of the report:**  
- Initial
- Change of status
- Interim
- Discharge

**Indicate the location of the visit and status of discussion around plans to attend flex clinic:**
- In - home
- Flex Clinic
- Plans to go to Flex Clinic

---

**Table: Wound Care Status Report**

| WOUND CARE STATUS REPORT | CLIENT NAME: ____________________________  
|---------------------------|------------------------------------------  
| □ Initial □ Change of status □ Interim □ Discharge | (LAST, FIRST)  
| CLIENT ID #: ______________________________ |  
| Location of visits: □ In - home □ Flex Clinic □ Plans to go to Flex Clinic |  

**Assessment – on admission**

<table>
<thead>
<tr>
<th>Wound Type</th>
<th>Ulcer Type</th>
<th>Location of Wound</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Surgical</td>
<td>□ Venous Leg Ulcer</td>
<td></td>
</tr>
<tr>
<td>□ Open</td>
<td>□ Arterial Leg/Foot Ulcer</td>
<td></td>
</tr>
<tr>
<td>□ Trauma</td>
<td>□ Mixed Leg Ulcer</td>
<td></td>
</tr>
<tr>
<td>□ Burn</td>
<td>□ Diabetic foot Ulcer</td>
<td></td>
</tr>
<tr>
<td>□ Skin Tear /Abrasion</td>
<td>□ Pressure Ulcer</td>
<td></td>
</tr>
<tr>
<td>□ Malignant</td>
<td>□ Suspected Deep Tissue Injury</td>
<td></td>
</tr>
<tr>
<td>□ Inflammatory</td>
<td>□ Stage I</td>
<td></td>
</tr>
<tr>
<td>□ Unknown</td>
<td>□ Stage II</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>□ Stage III</td>
<td></td>
</tr>
<tr>
<td>□ Multiple Wounds</td>
<td>□ Stage IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Unstageable</td>
<td></td>
</tr>
</tbody>
</table>

**Wound or Ulcer Type:** Select the type that most reflects the information that you have at the time (from Medical Referral, Client History and Information, Physical presentation of the wound). If unsure, check □ Unknown, or if unlisted but known, write in behind “Other”.

**Location of Wound:** Indicate with a circle or drawing the area of the body where the wound(s) occur.

**Age of Wound/Ulcer:** Document the length of time that the wound has been present

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3 South West CCAC Wound Management Program – Revised – April 2011
Assessment Section:

Wound Assessment – on admission, q 3 weeks and discharge

<table>
<thead>
<tr>
<th>PUSH SCALE</th>
<th>( \text{Length} \times \text{Width} , \text{cm}^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longest head-to-toe (12 to 6 o’clock)</td>
<td></td>
</tr>
<tr>
<td>Widest side-to-side (3 to 9 o’clock)</td>
<td></td>
</tr>
<tr>
<td>□ 0  = 0</td>
<td>□ 6 = 3.1 – 4.0</td>
</tr>
<tr>
<td>□ 1 = &lt;0.3</td>
<td>□ 7 = 4.1 – 8.0</td>
</tr>
<tr>
<td>□ 2 = 0.3 – 0.6</td>
<td>□ 8 = 8.1 – 12.0</td>
</tr>
<tr>
<td>□ 3 = 0.7 – 1.0</td>
<td>□ 9 = 12.1 – 24.0</td>
</tr>
<tr>
<td>□ 4 = 1.1 – 2.0</td>
<td>□ 10 = &gt; 24.0</td>
</tr>
<tr>
<td>□ 5 = 2.1 – 3.0</td>
<td></td>
</tr>
</tbody>
</table>

Sub-score:

**Exudate Amount:**
- □ 0 = None
- □ 1 = Light
- □ 2 = Moderate
- □ 3 = Heavy

**Tissue Type:**
- □ 0 = Closed
- □ 1 = Epithelial Tissue
- □ 2 = Granulation Tissue
- □ 3 = Slough
- □ 4 = Necrotic Tissue

Sub-score:

PUSH Total Score:

Presence of Undermining/ Tunneling:
- □ None present
- □ Undermining < 2 cm in any area
- □ Undermining 2-4 cm involving < 50% wound margins
- □ Undermining 2-4 cm involving > 50% wound margins
- □ Undermining > 4 cm or Tunneling in any area

Wound Depth:

Wound Size: Each Nursing service provider is expected to provide their nursing staff with wound measurement tools as “tools of the trade”. Instructions in *italics* are from [www.npuap.org](http://www.npuap.org) - PUSH Tool Version 3.0: 9/15/98 11F ©National Pressure Ulcer Advisory Panel. Measure the greatest length (head to toe) and the greatest width (side to side) using a centimeter ruler. Multiply these two measurements (length x width) to obtain an estimate of surface area in square centimeters (cm²). Always use the same method each time the ulcer is measured.

For linear wounds such as incision lines, the PUSH method of measuring will not work if the wound is not situated head to toe or side to side. Make good notes as to how you measured it. Measure the wound end to end for length and then at the point at which it is the widest for width.

For depth choose the deepest portion of the wound using a sterile cotton-tipped applicator or measurement device. The measurement stops when applicator shaft emerges at skin level. Estimate 0.1 cm for very shallow wounds.

**Exudate Amount:** Estimate the amount of exudate (drainage) present after removal of the dressing and before applying any topical agent to the ulcer. Estimate the exudate (drainage) as none, light, moderate, or heavy.

**Tissue Type:** This refers to the types of tissue that are present in the wound (ulcer) bed.

- **Score as a “4”** if there is any necrotic tissue (Eschar) present: black, brown, or tan tissue that adheres firmly to the wound bed or ulcer edges and may be either firmer or softer than surrounding skin.
- **Score as a “3”** if there is any amount of slough present and necrotic tissue is absent: yellow or white tissue that adheres to the ulcer bed in strings or thick clumps, or is mucinous.
- **Score as a “2”** if the wound is clean and contains granulation tissue: pink or beefy red tissue with a shiny, moist, granular appearance.

A superficial wound that is re-epithelializing is **scored as a “1”**: for superficial ulcers, new pink or shiny tissue (skin) that grows in from the edges or as islands on the ulcer surface.

When the wound is closed or resurfaced, **score as a “0”**: the wound is completely covered with epithelium (new skin).
Presence of Undermining/ Tunneling: You have 5 categories to choose from to indicate any tunneling or undermining. These are indicators contained the Bates-Jensen Wound Assessment Tool (BWAT)\(^1\), and are a validated and reliable method of documenting this characteristic of the wound.

Infection Identified- Indicate when it was identified within the current three week period. It is recognized that wound infection will delay healing.

Wound impacts functional/social activities- Indicate □ Yes  □ No and whether a plan has been developed to address this. Questions that can help to determine this are: “Does the wound prevent you from doing the activities that you normally do such as household-related or self-care activities? Are you able to do the social activities that you normally do such as going out for dinner, to the movies etc.?” If yes, is an Occupational Therapist required for an adaptive assessment? Is a social work consultation necessary?

Have Teaching handouts been given? - As part of the SWCCAC Wound Management program, toolkits have been created for open surgical wounds, pressure ulcer, venous ulcer and diabetic foot ulcers. Once these have all been implemented by July 2, 2011, it is the expectation of the CCAC that ALL new clients with these etiologies will be given the teaching handouts and the associating care plan will be implemented.

Is Client/Caregiver able to learn wound management? - Is the client or caregiver able to learn to do wound treatment? Indicate □ Yes □ No □ In Progress - If No, please document a reason:__________________________

“Teach and Reduce” remains a key concept in community nursing as a method of empowering the client/caregiver and of being fiscally responsible in providing nursing visits only when necessary. This also contributes to improved capacity for nursing agencies in a time of nursing shortages. Self-care is a key concept of chronic disease management, which wounds are often a direct result of.

Braden Total Score- Score as per the Braden Scale for Pressure Sore Risk. Each service provider agency is responsible for providing their nursing staff with this tool to assess the risk. It is to be performed on ALL clients with wounds at this time. It is available at: [http://www.bradenscale.com/images/bradenscale.pdf](http://www.bradenscale.com/images/bradenscale.pdf)

Please indicate the Braden sub-category scores in the sequence that they occur on the form:
Sensory Perception___Moisture___ Activity___Mobility____Nutrition___ Friction & Shear____

Percentage Reduction in Wound Size-
The formula to calculate the % reduction in size over time\(^2\) is:
\[
\frac{SA\ (\text{Initial}) - SA\ (\text{Current})}{SA\ (\text{Initial})} \times 100 = \%\ reduction\ in\ size
\]
(SA = surface area calculated as Longest Length X perpendicular Widest Width)

Response of wound to treatment: q 3 weeks & Discharge

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F-</strong></td>
<td>Frequency of dressing changes 3 x week or less (by all care participants, including client): □ Yes  □ No</td>
</tr>
<tr>
<td>Actual Frequency:_____________ Reason higher than 3x per week:__________________________</td>
<td></td>
</tr>
<tr>
<td><strong>U-</strong></td>
<td>Etiology or best practices known □ Yes  □ No</td>
</tr>
<tr>
<td><strong>N-</strong></td>
<td>Size of wound has decreased by 20-30% by week three, and continues to decrease at progressive rate afterwards? □ Yes □ No</td>
</tr>
<tr>
<td><strong>If no to any of the above, plan (see criteria in Wound Care Reporting Guidelines):</strong></td>
<td></td>
</tr>
<tr>
<td>□ Change in wound treatment</td>
<td>□ Physician consult</td>
</tr>
<tr>
<td>□ ET/WCS nurse consult</td>
<td>□ Nutrition</td>
</tr>
<tr>
<td>□ Case Conference with Case Manager</td>
<td></td>
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<tr>
<td>□ Wound not healed at 3 months = PT Assessment for Adjunctive Therapy (after June 1, 2011)</td>
<td></td>
</tr>
</tbody>
</table>

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\(^1\) Available at: [http://www.geronet.med.ucla.edu/centers/borun/modules/Pressure_ulcer_prevention/pubBWAT.pdf](http://www.geronet.med.ucla.edu/centers/borun/modules/Pressure_ulcer_prevention/pubBWAT.pdf)

\(^2\) Sussman and Bates-Jensen 2007

5 South West CCAC Wound Management Program – Revised – April 2011
Response of Wound to Treatment:
The “FUN” acronym indicates situations in which wound healing is not progressing as expected, and originated in the Wound Care Guiding Framework Project in 2004. This has been updated slightly by the SWCCAC Wound Management Program to provide more guidance.

- **F (Frequency)** - If the frequency of dressing changes has not decreased to 3 x week by 3 weeks (this includes dressings that are being changed by the client/caregiver.)
- **U (Unknown)** - If the cause of the wound is unknown, or if the nurse is unsure of best practices.
- **N (Number)** - If the size of the wound has not decreased by 20-30% in 3 weeks of treatment, or if there is not an ongoing decrease or progression reduction in wound size at each q 3 week reporting time.

If the Wound not responding to treatment: There are several options that should be considered by the nurse and case manager:

### Change in wound treatment.
Under the 1991 Regulated Health Professions Act, initiation of wound care below the dermis is within the controlled acts authorized for nursing. **Nurses may independently decide that a specific procedure is required and initiate the procedure in the absence of a specific order or directive from a physician.** An RN or RN (EC) who meets certain conditions (applies knowledge, best evidence, skill and judgment and has the appropriate authority to make and act on decisions required and declines to perform procedures that are not competent to perform, determines the appropriateness of the procedure for the specific client, and demonstrates knowledge of the purpose, indications, contraindications, risk to the client, expected outcomes, actions to take if complications occur, and health teaching and decision support) may initiate and/or provide an order for an RN or RPN to perform: Care of wound below the dermis or mucous membrane: cleansing, soaking, irrigating, probing, debriding, packing, dressing. College of Nurses of Ontario.

This means that within the SWCCAC, if the CCAC REFERRAL/REQUEST FOR ASSESSMENT is received from the physician, NP or RNEC, indicating:

- **√ Wound Care:** Client’s receiving service within South West region will be provided wound care according to South West CCAC Wound Care Management Program unless otherwise indicated (see full section below)

the nurse may adjust the treatment plan as needed to promote an ideal wound healing environment. The College of Nurses of Ontario advises that the nurse must communicate what the treatment plan is with the physician in this situation.

However, if that box is **NOT** checked, and the physician has written specific instructions, the nurse must **NOT** change the treatment plan independent of communication and consent from the physician, as per the College of Nurses of Ontario³.

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### TREATMENT ORDERS: WOUND CARE

<table>
<thead>
<tr>
<th>Wound Dx</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Maintenance</td>
<td>☐ Healable</td>
</tr>
</tbody>
</table>

**Note:**
1) Treatments will be taught and services reduced when appropriate
2) Wound care orders outside of best practice may not be eligible for SW CCAC services
3) Wound care products may be substituted to a comparable product based on SW CCAC supply list

Compression Therapy requires ABPI measurements

<table>
<thead>
<tr>
<th>VLU ABPI</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>DD/MM/YY</td>
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(CCAC REFERRAL South West CCAC – version 10/10/09)

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³ Verbal discussion with CNO Nursing Practice Advisor Margo B. x 2 Feb. 2011

⁷ South West CCAC Wound Management Program – Revised – April 2011
The College **DOES** support the following activity: The nurse may communicate in writing to the physician: Describe wound briefly and any concerns. Then write: “This is the treatment that I am recommending for the wound. If I do not hear from you in 7 days, we will implement this plan of care.” If the nurse has NOT heard back from the physician to the contrary, the nurse may initiate the new treatment, as per the Ontario College of Nurses *Practice Standard: Decisions about Procedures and Authority*, 2009.

Whether the nurse initiates the order or makes suggestions to the primary physician, it is expected that this will be a collaborative practice model with clear written communications and mutual respect.

**Enterostomal (ETN) nurse or wound care specialist (WCS) nurse consult.** These nurses have advanced knowledge regarding evidence-based wound healing and clinical practice guidelines. It is expected that this will be a collaborative practice model with clear communications and mutual respect between the wound care specialist, general nursing and the multi-disciplinary team. There may be additional reasons for requiring an ET/ WCS consult including but not limited to: lower leg assessment including the ankle brachial pressure index (ABPI) to determine the safety of using compression therapy, sharp debridement, to create a pouching system to manage an enterocutaneous fistula or lymphocele drainage or for complex wound management. Other criteria for ETN/ WCS assessment are indicated within the wound etiologies sections: e.g. venous ulcer, diabetic foot ulcers, and for conservative sharp non-viable debridement of callus &/or necrotic tissue. And new ostomy or clients with pouching problems with established ostomies. **New April 2011- The ETN/WCS service delivery model has been changed to that of a more consultative model.** In general, the ETN/WCS will make one visit to assess and make recommendations, and then place the chart on hold pending a need for further visits. Exceptions to this would be if the wound needs repeated sharp non-viable debridement by the ETN/WCS or if the wound is complex and difficult to manage.

**Case Conference with Case Manager**

Case Conferences are to be conducted with all members of the care team in the following situations:
- No progression in wound healing for a client receiving wound care services for 2-3 months. (The client’s wound has been assessed as having the potential to heal.)
- Complex wound care situations
- Issues with client adherence to treatment (e.g. individual with diabetic foot ulcer who refuses to obtain pressure offloading device, which is critical to healing). This is a way to discuss risk and to determine if the wound truly can be healable based on the client’s inability to follow the plan of care.

The purpose of the case conference would be to determine:
- The healing potential of the wound
- Appropriate treatment plan
- Appropriateness of a maintenance service plan
- Plan to address barriers to goal achievement

**Physician consult**

The purpose of the consult would be to determine if co-morbid factors are impeding wound healing (e.g. blood work for malnutrition, anemia, poor glycemic control) or referrals to specialists (general, plastic, orthopedic and vascular surgeons, wound care specialists, infectious diseases, diabetologists, dermatologists etc.)

**Nutrition consult**

The purpose of the consult would be to determine if poor nutrition (Inadequate food intake) can be improved to enhance wound healing.

**OT consult**

The purpose of the consult would be to determine if risk factors such as friction and shear (e.g. sliding down chair, sliding in bed when positioned) can be eliminated or to determine what pressure redistribution devices are appropriate.
PT consult

The physiotherapist would determine if functional status can be improved. Examples are impaired mobility related to ability to change and control body position, intermittent pneumatic compression for VSU > 5 cm² &/or > 6 months duration, or Theraband exercises for fixed ankle joint.

☐ Wound not healed at 3 months; or DFU not healed ≥50% at 4 weeks; or Spinal Cord injury with pressure ulcer = PT Assessment for Adjunctive Therapy (after June 1, 2011)

<table>
<thead>
<tr>
<th>Wound Care Plan - on admission + q 3 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Care Plan Goal:</strong></td>
</tr>
<tr>
<td>☐ Healing Service Plan ☐ Maintenance Service Plan ☐ Palliative Service Plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What is the current treatment?</th>
</tr>
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<tbody>
<tr>
<td>Primary dressing:</td>
</tr>
<tr>
<td>Secondary Dressing:</td>
</tr>
<tr>
<td>Planned Dressing Frequency?</td>
</tr>
</tbody>
</table>

Comments re: Compression / Offloading / Pressure Redistribution:

Mutual Goal Setting Regarding Expected Outcomes of Wound Care:
- There must be agreement between the physician, the nursing team and the client regarding setting goals about the “healability” of the wound.
- A wound will either be expected to heal or not. If not “healable”, it will be “maintenance” (where the goal is to prevent deterioration) or “palliative” (where it is understood that the wound may deteriorate as the client’s condition deteriorates).
- Choose ☐ Healing Service Plan ☐ Maintenance Service Plan ☐ Palliative Service Plan.
- If you find on a subsequent visit that the goal has changed, you should indicate what the revised service plan is and that it is different.
- A “Maintenance” or “Palliative” plan of care is one that generally does not utilize the more costly advanced wound products which are designed to support or promote healing.

Please note that if the wound is determined to be maintenance or palliative, the Wound Care Status Report would only be reported with the usual PSPR report, and not q 3 weeks as for a healing wound.

Current Treatment:
- Briefly document the treatment that is being used at this time: e.g Flush wound with 118 mls NS. Apply Aquacel cut 1 cm larger than wound edges covered by Combiderm dressing planned for 2 x weekly.

Comments re: Compression / Offloading / Pressure Redistribution: Provide a brief description of this for clients with Venous Ulcers (compression) / Diabetic Foot Ulcers (offloading) / Pressure Ulcers (Pressure redistribution).

Discharge: At the time of discharge, the CCAC would like to know what the wound status was. Choose the appropriate box: ☐ Client / Caregiver independent with wound care ☐ Wound Healed ☐ Client assisted to access appropriate resources or ☐ Other:

---

SWCCAC WMP: Wound Care Status Report - Case Management Resource Allocation
Based on the information provided in the Wound Care Status Report, the Case Manager will reassess to ensure that:
- The service provider goals are appropriate
- There is progress towards client goals.
The following questions should be considered:
- Has the wound type been identified?
- Has the wound healing potential been determined (healing, maintenance or palliative)?
• Is there progression towards the goals?
  o Wound healing
  o Client/caregiver education
  o Other goals specific to the client situation?
• What are the barriers to progression of goals?
• What plans does the service provider have to address barriers?
• Is the time frame and frequency of service appropriate to achieve goals?
• Is the service authorization consistent with the service authorization guidelines for the common wound types (see etiology sections in this document).
• What other services/resources are required to assist the client to achieve his/her goals? (see etiology sections in this document).
• Are the resources used for wound care consistent with the service goals and the etiology sections in this document?

Expected Outcomes
Some of the expected client outcomes include:
  o Steady healing rate of wounds,
  o Adequate pain management and
  o Maximum involvement of clients and caregivers in wound management.
System outcomes of the Wound Management Program include:
  o Improved consistency of provision of best practices in wound care
  o Reduction in nursing utilization,
  o Reduction in supplies utilization and
  o Improved allocation of nursing and supplies resources.

A portion of this material was adapted from the Provincial Wound Care Guiding Framework Program Copyright © May 2004 by the Wound Care Review Project.

Flex Clinics for Wound and Ostomy Care
Flex clinics should be seen as the “normal” expectation rather than the unusual. The conversation and assessment around the client’s appropriateness for the clinic should happen at the time of admission, with both the case manager and the nurse initiating the conversation. Even if the client is obviously unable to attend a clinic currently, it may be possible within 2 or 3 weeks after the admission, and it is believed that having the expectation reviewed at the start makes the client more receptive to the clinic model once they are physically able to attend. To help with this, as part of the new wound initiatives for specific wound types, page 3 of each of the client teaching handouts contains the following information:

Can I have the nurse visit me at a specific time each day?
The South West CCAC has several Flex Clinics, where you can go for:
• Wound or Ostomy Care
• IV antibiotic therapy
• Injectable Medication Administration (e.g Fragmin)

The Flex Clinic schedules your visit for a specific appointment time.
My Flex Clinic location: ______________________________________________

Once you are feeling stronger, you would normally be expected to go to the flex clinic for your care.

In order to continue to have a nurse visit you at home, you must:
• Be physically unable to travel to attend appointments
• Lack a dependable means of transportation
• Have an average appointment time of greater than 20-30 minutes.
The expectation of SWCCAC is that the H.e.a.l. products would be selected as the preferred product or first choice for all wounds. If no improvement is seen in 2 weeks, alternate products may be considered. If a physician, ET Nurse or Wound Care Specialist believes that an alternate product is more appropriate, the nurse may order products that are already on the SWCCAC formulary. If they wish to use a product that is not on the formulary, the nurse would need to fill out the Request for Exception Item authorization form (Version 2e March 9, 2010) for those products and indicate the rationale for the request.

*Exception Items Authorization may take up to 2 weeks, and approval is at the discretion of the SWCCAC, who will take into account the client’s clinical indications, treatment history, comparable products, cost of treatment and best practice considerations.

### H.e.a.l. Program Products and Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Min./Mean Wear Time</th>
<th>Max Wear Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterile DuoDERM® Hydroactive® Gel WOUND HYDRATION Primary Dressing</td>
<td>WCI</td>
<td>3 days for sloughy wounds or 7 days for clean wounds</td>
</tr>
<tr>
<td>Sterile AQUACEL® plain or Ag (silver) Hydrofibre® Wound Dressings - Primary Dressing *Please note that the ribbon packing has been discontinued from the SWCCAC catalogue. Apply one or more layers to the wound, overlapping the wound edges by 1 cm. AQUACEL Ag for partial-thickness burns may stay in situ for up to 14 days.</td>
<td>3-4 days or WCI*</td>
<td>7 d or 14 d for 2° Burns</td>
</tr>
<tr>
<td>Sterile Kaltostat® Calcium Alginate Wound Dressings - Primary Dressing Apply one or more layers to the wound, trimmed to the shape of the wound. For wounds with minimal exudate, may moisten with sterile NS. For tunneling wounds, leave a tail &gt;2.5 cm. Do not pack tightly.</td>
<td>WCI*</td>
<td>7d</td>
</tr>
<tr>
<td>Sterile CarboFlex® Absorptive Odor Control Dressings - Primary or Cover Dressing Choose a dressing size and shape that is 1 1/4” (3.2cm) larger than the wound area.</td>
<td>WCI*</td>
<td>3 days max</td>
</tr>
<tr>
<td>Sterile CombiDERM® Absorbent Cover Dressings - Occlusive Primary or Cover Dressing containing a hydrocolloid outer layer. Choose a dressing size and shape that is 1 1/4” (3.2cm) larger than the wound area. Do not cut.</td>
<td>WCI*</td>
<td>7d</td>
</tr>
<tr>
<td>Sterile Versiva® XC™ Gelling Foam Dressings – Semi-Occlusive Primary or Cover Dressing containing a waterproof polyurethane foam/film layer that protects the wound from external contaminants and manages moisture vapor transmission of exudate. Choose a dressing size and shape that is 1 1/4” (3.2cm) larger than the wound area. The dressing can be cut to conform to a heel or elbow, for example. See Section 2 for tips and tricks for successful utilization</td>
<td>WCI*</td>
<td>7d</td>
</tr>
<tr>
<td>Sterile DuoDERM SIGNAL® HYDROCOLLOID DRESSINGS - Occlusive Primary or Cover Dressing For light to moderate exudate Choose a dressing size and shape that is 1 1/4” (3.2cm) larger than the wound area.</td>
<td>WCI*</td>
<td>7d</td>
</tr>
<tr>
<td>Sterile DuoDERM® EXTRA THIN CGF® HYDROCOLLOID DRESSINGS - Occlusive Primary or Cover Dressing Allow a 3.2 cm border to adhere to intact skin</td>
<td>WCI*</td>
<td>7d</td>
</tr>
<tr>
<td>Unsterile SurePress® two layer high 30-40 mmHg compression bandaging system Requires a primary dressing NB** An Ankle Brachial Pressure Index (ABPI) must be done along with a lower leg assessment before this product is applied Note will be removed from catalogue in Oct. 2010 but the orthopedic padding component will still be available.</td>
<td>WCI*</td>
<td>7d If product stays in place</td>
</tr>
</tbody>
</table>
Convatec H.e.a.l. Program: Versiva XC “Tips and Tricks”

An application guide video is available at:  [http://www.convatec.ca](http://www.convatec.ca)  and five colour PDF application guides are available for shallow and deep wounds with or without Aquacel/ Aquacel Ag at:  [http://www.convatec.com](http://www.convatec.com)

**Versiva® XC® dressing** absorbs wound fluid and creates a moist environment in the wound which supports the body’s healing process and aids in the removal of non-viable tissue from the wound (autolytic debridement) without damaging new tissue. **Versiva® XC® dressing** combines Hydrofiber® Technology with a low Moisture Vapour Transmission Rate. This means it remains moist longer and can be used for wounds that may dry out when AQUACEL® dressings are used with a foam. Due to its gelling Hydrofiber® Technology, exudate is absorbed and locked in, trapping harmful bacteria and MMPs, creating an optimal moist wound environment that kick starts healing (Information from Convatec website)

**Versiva® XC® dressing :**

- Is available in SWCCAC:  **Versiva XC® Nonadhesive** (10 x 10 cm, 15 x 15 cm) for fragile skin or lower leg ulcers, and  **Versiva XC Adhesive** (7.5 x 7.5 cm, 14 x 14 cm, 19 x 19 cm, Heel 18.5 x 20.5 cm) for areas where adhesion is desired.
- Choose correct dressing size (The pad size of the dressing is large enough to cover the wound fully) and type e.g. Adhesive Heel dressing as this conforms well to the wound contours, reduces risk of slippage due to pressure and friction.
- Contains an inner pad for exudate absorption which should be lined up with the area of the wound.
- **Greater exudate amounts may be experienced during the first 7-10 days after initial management of a wound with Versiva XC dressing.** Dressings should be monitored closely and changed as often as necessary during this period. Dressings can be left on the wound for up to 7 days when the wound is closer to being healed.
- May use it in conjunction with AQUACEL® dressing to provide extra absorbency to manage the volume of exudate produced. Once you stop seeing the exudates “striking through” onto the Versiva® XC® dressing pad, you can stop using AQUACEL® dressing.
- Warm it to get better adhesion and conformability when applying.
- Can be cut to shape for convenience leaving one border edge to ensure the dressing stays intact.
- Allows the patient to shower with the dressing in place.
- Should be replaced at seven days or earlier if strikethrough is observed.
<table>
<thead>
<tr>
<th>Dressing Type</th>
<th>Classification &amp; Catalogue Code</th>
<th>Products available in SWCCAC Medical Supplies Catalogue – * indicates H.e.a.l. “preferred product”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antimicrobials</strong></td>
<td>Code Section 25</td>
<td>Iodosorb (10 g), Acticoat burn (10 x 10 cm), Biatain AG foam (10 x 10 cm, 15 x 15 cm), Seasorb AG alginate soft rope (3 x 44 cm), <strong>Aquacel AG flat</strong>(Silver hydrofiber) (10 x 10 cm, 15 x 15 cm), Kendall/Covidien AMD containing 0.5% Polyhexamethylene Biguanide (PHMB)— ribbon packing for tunneling wounds (0.6cm x 0.9 m, 1.3cm x 0.9 m, 2.5cm x 0.9 cm, ), a transfer foam (10 x 20 cm) and kerlix loose-woven(11.4 cm x 3.7 m), Inadine (10 x 10 cm) being added Oct. 2010.</td>
</tr>
<tr>
<td><strong>Barrier Creams or Ungs</strong></td>
<td>Code Section 83</td>
<td>Durable Skin Barrier Cream (zinc oxide ung) Skin prep wipes- for intact skin No Sting Wipes–alcohol free for broken skin</td>
</tr>
<tr>
<td><strong>Barrier Wipes</strong></td>
<td>Code Section 87 &amp; 88</td>
<td>Durable Skin Barrier Cream (zinc oxide ung) Skin prep wipes- for intact skin No Sting Wipes–alcohol free for broken skin</td>
</tr>
<tr>
<td><strong>Calcium alginate</strong></td>
<td>Code Section 21</td>
<td>Kaltostat* (8 x 12 cm, 2 g) Seasorb Soft rope (2.5 x 44 cm)</td>
</tr>
<tr>
<td><strong>Charcoal Dressings</strong></td>
<td>Code Section 24</td>
<td>Carboflex* - combination absorbent dressing with charcoal (8 x 15 cm)</td>
</tr>
<tr>
<td><strong>Clear Absorbent Acrylic Dressing</strong></td>
<td>Code Section 23</td>
<td>Tegaderm Clear Acrylic dressing - used for skin tears and superf. wounds- can stay insitu x 21 days) (11.1cm x 12.7cm, 7.6 x 9.5 cm)</td>
</tr>
<tr>
<td><strong>Compression Multi layer</strong></td>
<td>Code Section 43</td>
<td>Coban 2 (30-40 mmHg) – note include the 2 in the name to differentiate from plain Coban—they are not interchangeable, (Coban 2 Lite is currently being trialed and is an SA#), Profore (30-40 mmHg) Note - Coban 2 Lite is being evaluated June 2010.</td>
</tr>
<tr>
<td><strong>Compression Single layer</strong></td>
<td>Code Section 42</td>
<td>Coban 20 mmHg (only recommended for Duke’s Boots – see Page 28 this document), Comprilan (compression varies depending on how it is wrapped - 20-40 mmHg), Viscopaste code 2900 (for Unna's boot and dermatitis) (7.5 x 6 m).</td>
</tr>
<tr>
<td><strong>Compression Tubular</strong></td>
<td>Code Section 70</td>
<td>Tubigrip (Sizes B to G) Tubifast liner (red, blue green yellow sizes) NB - Measure to order the correct Tubigrip size. Provides between 5 and 30 mmHg depending on the size chosen and the leg measurements.</td>
</tr>
<tr>
<td><strong>Exudate Absorbers</strong></td>
<td>Code Section 26</td>
<td>Combiderm Non-adhesive (15 x 25 cm) Combiderm Adhesive (13 x 13 cm)* Versiva XC*Nonadhesive (10 x 10 cm, 15 x 15 cm) <strong>Versiva XC Adhesive</strong> (14 x 14 cm, 19 x 19 cm, Heel 18.5 x 20.5 cm) Mesorb (10 x 20 cm, 20 x 25.5 cm)</td>
</tr>
<tr>
<td><strong>Foams</strong></td>
<td>Code Section 16</td>
<td>Mepilex Border (7.5 x 7.5cm, 10 x 10 cm, 15x 15cm.), Biatain plain (10 x 10cm).</td>
</tr>
<tr>
<td><strong>Hydrocolloid</strong></td>
<td>Code Section 17</td>
<td>Duoderm Signal* (10x 10cm) Duoderm Xtra thin* (10x 10cm) Tegaderm Sacral (13.9cm x 12.3cm) Oval (10x 12cm) Thin (7 x 9 cm)</td>
</tr>
</tbody>
</table>
### SWCCAC WMP: Dressing Classification & Catalogue Code

<table>
<thead>
<tr>
<th>Classification</th>
<th>Products available in SWCCAC Medical Supplies Catalogue –</th>
<th>* indicates H.e.a.l. “preferred product”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogels- Code Section 18</td>
<td>Duoderm Hydroactive gel* (15 g tube) Nu-gel sheets (9.5 x 9.5 cm) Hypergel (hypertonic for debridement) (15 g tube)</td>
<td></td>
</tr>
<tr>
<td>Hydrofiber- Code Section 22</td>
<td>Aquacel flat* (10 x 10 cm, 15 x 15 cm). Please note that the ribbon format will be discontinued from the SWCCAC catalogue in October 2009.</td>
<td></td>
</tr>
<tr>
<td>Impregnated gauzes and dressings- Code Section 19</td>
<td>Mesalt (hypertonic Na+) (10 x 10 cm, 15 x 15 cm, 2 cm x m), Adaptic (petrolatum fine-weave) (7.6 x 20 cm, 7.6 x 7.6 cm)</td>
<td></td>
</tr>
<tr>
<td>Impreg. Antimicrob. tulle gauze- Code Sect 28</td>
<td>Bactigras (10 x 10 cm)</td>
<td></td>
</tr>
<tr>
<td>Medicated, not Self-adherent – Code Sect 29</td>
<td>Viscopaste (for Unna’s boot and dermatitis) (7.5 x 6 m) Biatain IBU foam for painful wounds (10 x 10 cm)</td>
<td></td>
</tr>
<tr>
<td>Negative Pressure Wound Therapy – Code Section 94</td>
<td>KCI VAC- 15 dressing choices available; ActiVAC device</td>
<td></td>
</tr>
<tr>
<td>Non-adherent dressing- Code Sections 19 &amp; 20, 67</td>
<td>Mepitel (7.5 x 10 cm, 10 x 18 cm.), Adaptic (petrolatum fine-weave) (7.6 x 20 cm, 7.6 x 7.6 cm), Tefla Sterile Non Adherent (7.5 x 20 cm, 7.5 x 10 cm) Codes 6707 and 6708</td>
<td></td>
</tr>
<tr>
<td>Protease Inhibitor- Code Section 32</td>
<td>Promogran (28 x 28 cm), Prisma (contains Promogran and silver) (28 x 28 cm)</td>
<td></td>
</tr>
<tr>
<td>Transparent film Code Section 23</td>
<td>Tegaderm frame style (10 x 12 cm, 6 x 7 cm), roll 10 cm x 10 m),</td>
<td></td>
</tr>
<tr>
<td>Wound cleansing devices-Code Section 5700 and 60</td>
<td>118 mls NS squeeze bottle- this provides 7-12 psi for wound flushing for wounds without undermining or tunnelling, Tip with 7cm tubing for irrigating wounds (Code 5700) to be used with 30 cc syringe and larger volumes of solution.</td>
<td></td>
</tr>
</tbody>
</table>

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### SWCCAC WMP: Signs and Symptoms of Wound Infection and Actions

(This material will also appear in the South West Regional Wound Care Framework Toolkit)

#### A. Introduction

Assessment of infection needs to be of the whole patient, and specifically the host’s ability to resist infection which include local and comorbid factors. Miller and Keane (1972) describe an “infective dose” as “that amount of pathogenic microorganisms which is sufficient to cause infection.” It is generally accepted that organisms in a quantity greater than $10^6$ will not only impair healing, but will produce sufficient toxins and proteolytic enzymes to harm living tissue (Woo and Sibbald 2009). Virulence is the “competence of a noxious agent to produce its effect.” Different bacteria have different virulent properties, so that a more virulent species may have more deleterious effects on the wound than the actual quantity of bacteria present. Host resistance is the “ability of an individual to withstand a noxious influence.” These include co-morbid

**Infection = dose x virulence**

**host resistance**
factors such as diabetes, immunosuppression, vascular disease, malnutrition, edema, alcoholism, prior surgery or radiation and inherited neutrophil defects, but also local factors which inhibit host resistance. These include: a large wound area, deep wounds, degree of chronicity, anatomic location distally or over bony prominences or perineal wounds, presence of foreign body, necrotic tissue, mechanism of injury such as trauma or perforated viscous, degree of post-wounding wound contamination, and reduced perfusion (Harris 1999).

B. Differentiating Between Local and Spreading Infection in Acute and Chronic Wounds

The information in these tables is derived from a variety of sources including validation of symptoms through bacterial assays, expert opinion via a Delphi technique and overview articles. They have been collated in order to provide one source for the multitude of signs and symptoms of localized and spreading infection in acute and chronic wounds (Cutting et al. 2005, Gottrup et al. 2005, Melling et al. 2005, Carville et al. 2008, Murray and Hospenthal 2008, Woo and Sibbald 2009).

### i) Acute Wounds

**e.g. traumatic wounds, surgical wounds healing by primary intention including stitches, sutures, drains, and toe nail resection/extraction (HNHB CCAC 2009)**

<table>
<thead>
<tr>
<th>Acute Localized Infection</th>
<th>Acute Spreading Infection</th>
</tr>
</thead>
</table>
| **Acute Wounds: All of the following (those in italics are also signs of infected partial thickness and full thickness burns):** | **Acute Wounds:**
| - Cellulitis | As for localized infection PLUS: |
| - Heat | - Further extension of erythema |
| - Pyrexia – in surgical wounds, typically five to seven days post-surgery | - Lymphangitis (see definition in chronic wounds) |
| - Delayed (or stalled) healing | - Crepitus in soft tissues |
| - Abscess (under eschar in burns) | Wound breakdown/dehiscence **Specific Signs of deep incision SSI,** affecting the fascia and muscle layers, or organ or space SSI, related to the procedure, which involves any part of the anatomy other than the incision that is opened or manipulated during the surgical procedure which may occur within 30 days or within one year if implant in place, and have at least one of the following criteria:* |
| - Malodour | - purulent drainage from the incision but not from the organ/space of the surgical site *
| - Wound breakdown | - a deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms - fever (>38°C), localized pain or tenderness - unless the culture is negative* |
| - Serous exudates with erythema | - an abscess or other evidence of infection involving the incision is found on direct examination or by histopathologic or radiological examination* |

**Specific signs of superficial SSI -** Involves only skin and subcutaneous tissue around the incision, occurring within 30 days of the procedure, and have at least one of the following criteria.*

- New or increasing pain*
- Erythema + induration (erythema purplish in colour in burns)*
- Local warmth*
- Localized swelling + increased exudates*
- Purulent (under eschar in burns)/hemopurulent discharge*
- Organisms isolated from an aseptically obtained culture of fluid or tissue from the incision*
- The incision is deliberately opened by a surgeon, unless the culture is negative*

The following are NOT considered superficial SSIs:

- Stitch abscesses (minimal inflammation and discharge confined to the points of suture penetration)
- Infection of an episiotomy or neonatal circumcision site

**Validation:** S&S of SSI have been validated for those items indicated with an asterisk*

**Action:** Contact surgeon; obtain a swab for c&s using the Levine method (see C) for aerobic and anaerobic cultures and sensitivity (obtain health practitioner orders) to determine species of bacteria and sensitivities to antibiotic therapy.

### ii) Acute Wounds: Partial thickness and Full Thickness Burns

**Burns** – As above in italics plus:

- Increased fragility of skin graft
- Skin graft/ skin substitute rejection with involvement of viable tissue
- Black/dark brown focal areas of discoloration in burn
- Friable granulation tissue that bleeds

**Burns: As for localized infection PLUS:**

- Ecthyma gangrenosum (infection of the skin typically caused by *Pseudomonas aeruginosa*. It presents as a round or oval lesion, 1 cm to 15 cm in diameter, with a
- Green discolouration of the subcutaneous fat
- Hemorrhagic lesions in subcutaneous tissue of burn wound or surrounding skin
- Increase in size or depth of wound
- Secondary loss of keratinized areas

**Validation in Burns:** Any signs and symptoms need to be assessed by a health care practitioner as quickly as possible to determine if systemic antibiotics are warranted.

**Notes:**
- Pain is not always a feature of infection in full thickness burns
- Deep wounds – induration, extension of the wound, unexplained increased white cell count or signs of sepsis may be signs of deep wound (i.e. subfascial) infection
- Immunocompromised patients – signs and symptoms may be modified and less obvious

**Chronic Wounds**
- e.g. diabetic foot ulcers, venous leg ulcers, arterial leg/foot ulcers or pressure ulcers, open surgical wounds including dehisced, infected, healing by secondary intention, wound closing by contraction and deposition of tissue. Both chronic localized and chronic spreading infections involve signs and symptoms beyond the classic signs and symptoms of erythema, pain, swelling and heat.

**Chronic Wound Infected with Biofilm**
- Delayed (or stalled) healing (wound not 20 to 30% smaller in 4 weeks according to patient history or existing documentation) occurring alone without other signs & symptoms is indicative of biofilm infection.

**Chronic Localized Infection**
- New, increased or altered pain*
- Delayed (or stalled) healing (wound not 20 to 30% smaller in 4 weeks according to patient history or existing documentation) (in spite of compression Rx with venous ulcers)
- Bleeding or friable (easily damaged) granulation tissue*
- Distinctive malodour or sweet, sickening odor*/change in odour
- Wound bed debris or discoloration (dark, dull red or grey/green, raw, red or salmon discoloration with gelatinous texture) or slough and necrotic/nonviable tissue*
- Increased or altered/purulent exudates*
- Induration
- Pocketing of granulation/bridging of epithelium (seen in chronic surgical wounds healing by secondary intent such as pilonidal sinus wounds Marks et al. 1987)
- Periwound oedema

**Additional signs specific to:**
- Arterial leg ulcers: Change in viscosity of exudates, necrosis new or spreading, erythema in periwound tissue that persists with elevation of limb
- Venous leg ulcers: Sudden appearance or increase in amount

**Chronic Spreading Infection**
- As for localised infection PLUS:
  - Wound breakdown/ increased size (length/ width or depth)*
  - Increase in temperature in surrounding skin (if thermoscan is available, increased periwound margin temperature of more than 3°F or 1.1°C*
  - Erythema/ edema extending from wound edge*
  - Increased exudate (serous/ Purulent / sangu-purulent)*
  - Wounds with exposed bone or probes to bone*
  - New areas of satellite breakdown beyond the original wound and/or recurrence of wounds shortly after healing*
  - Unpleasant or sweet, sickening odor*
  - Increased pain in an insensate diabetic foot
  - Cellulitis
  - Crepitus, warmth, induration or discoloration spreading into periwound area
  - Malaise or other non-specific deterioration in patient’s general condition

**Additional signs specific to:**
- Venous ulcers: newly formed ulcers within the inflamed margins of existing ulcer
- Diabetic Foot ulcers: Phlegmon (a spreading diffuse inflammatory process with formation of suppurative/purulent exudate or pus), fluctuation of tissues, blue-black discoloration and hemorrhage (halo), bone or tendon becomes exposed at base of ulcer, sinuses develop, spreading necrosis or gangrene

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of slough, sudden appearance of necrotic black spots

Pressure ulcers: Viable tissue becomes sloughy

Diabetic foot ulcers: Ulcer base changes from healthy pink to gray

Arterial leg and diabetic foot ulcers: Lymphangitis (inflammation) of the lymphatic channels that occurs as a result of infection at a site distal to the channel. Thin red lines observed running along the course of the lymphatic vessels in the affected area, accompanied by painful enlargement of the nearby lymph nodes– known as “blood poisoning in layman’s terms.”

Validation of signs and symptoms in chronic wounds: Infection has been validated in the presence of three or more of the other signs designated with an asterick*

Action: Assume that if three or more validated s&s are present, the wound is infected and obtain a swab for c&s using the Levine method (see C) for aerobic and anaerobic cultures and sensitivity (obtain physician orders) to determine species of bacteria and sensitivities to antibiotic therapy.

Notes
In patients who are immunocompromised and/or who have motor or sensory neuropathies, symptoms may be modified and less obvious. For example, in a diabetic patient with an infected foot ulcer and peripheral neuropathy, pain may not be a prominent feature.

• Arterial ulcers – previously dry ulcers may become wet when infected

• Clinicians should also be aware that in the diabetic foot, inflammation is not necessarily indicative of infection. For example, inflammation may be associated with Charcot’s arthropathy.

C. Levine Method for wound swab for culture & sensitivity
In order for other members of the team to have confidence in the value of swab for c&s results, it is important that each individual in the continuum of care is performing wound swabs using the same validated technique. Although tissue biopsies are considered the gold standard for quantifying bacterial bioburden in wounds, they are not practical in many settings due to high cost and limited accessibility (Landis et al 2007). Fortunately, Levine et al. (1976) demonstrated a linear relationship between quantitative tissue biopsy and a specific sampling technique (subsequently called the Levine technique) to obtain swab cultures in burn wounds, validating the technique. Levine’s method is commonly utilized for assessing any open wound (Stotts 1995, Dow et al. 1999, Landis et al. 2007 (level of evidence IIb).

NB* Swabs should be done only to determine the type of bacteria and the sensitivities, not to confirm the presence or absence of infection. Bacteriology reports may not reflect the presence or absence of biofilm.

Method:
• The Ontario Laboratories Act requires a health care practitioner’s order to process the culture.
• Use sterile cotton tipped swab and culture medium in a pre-packaged collection and transport system.
• For visiting nurses, do not allow transport medium to freeze or become overheated in your car before using it.
• If both anaerobic and aerobic cultures are desired, ensure that the swab kit has this capability and that you have requested both in the order.
• Thoroughly rinse wound with normal saline (non-bacteriostatic). If this is a cavity wound and you will be swabbing tissue at the bottom of the cavity, blot any excess NS with a sterile gauze to prevent dilution of the sample; if the wound is quite dry you should pre-moisten the swab in the culture medium before pressing on the tissue.
• Don’t swab pus, exudate, hard eschar or necrotic tissue. If there is no healthy granulation tissue present, there is no point in swabbing the wound as the results will only tell you what is on the surface, not what is actually in the live (viable) tissue.
• Rotate the swab tip in a 1cm square area of clean granulation tissue for a period of 5 seconds, using gentle pressure to release tissue exudate. This may cause discomfort so prepare the client/patient of the possibility.
• Remove protective cap from culture medium and insert cotton tipped applicator into the culture medium without contaminating the applicator shaft.
• Follow hospital or institutional practices for getting the swab to the lab. DO NOT REFRIGERATE! In the community sector, the patient or their family/care providers should transport the specimen to the laboratory at room temperature within 24 hours. Within one hour is ideal....the sooner the better.
D. Indications for and Use of Topical Antimicrobials and Antibiotics:

Di) The use of **topical antibiotics** in the management of infected wounds should generally be **avoided** to minimize the risk of allergy and the emergence of bacterial resistance (Carville et al. 2008). The use of **topical antimicrobial** solutions and dressings should be dependent on the level of patient risk and the microbial status seen. Generally, they should be implemented in response to the assessment, and discontinued when the signs and symptoms are resolved, reassessing at two-week intervals.*

*TWO WEEK CHALLENGE: If there are clinical indications for use of an antimicrobial dressing, carry out a two week challenge. If the wound is progressing, but there are still signs of localized or spreading infection, continue for another two weeks. When signs and symptoms are resolved, STOP the antimicrobial dressings. If patients are on antimicrobial dressings for longer than a four week period, review the dressing regimen and consider referral to appropriate clinical specialist e.g. ET, Nurse or Physician Wound Care Specialist, or Specialist Podiatrist for further discussion on management plan (NHS 2010).

Dii) Dressing Selection:
The dressing should be selected based on its ability regarding:

- Absorbency and ability to be used with highly exudating or low exudating wounds
- Conformability (the more that the dressing matches the contours and contacts with the wound surface, the better the antimicrobial effect)
- Odour and pain management
- Activity against the specific bacteria in the wound
- Sufficient levels of the agent to achieve bacterial kill as opposed to bacterial inhibition (and within what length of time?)
- Cytotoxicity (is the dressing likely to damage healthy cells?)
- Allergenicity (does the dressing contain any materials likely to cause sensitivity or allergy?)(Fletcher 2005)
- What the patient will tolerate (comfort)
- The cost of the dressing is countered by the ability to decreasing the nursing visits and maximum wear times.

Diii) Antimicrobial Treatment* Based on Level of Bacteria in Wound

*Please note: The antimicrobial dressings are listed in the order of the average price to the SWCCAC, from least cost (a) to highest cost (based on per unit pricing).

<table>
<thead>
<tr>
<th>Microbial Status of Wound</th>
<th>Systemic Antibiotics</th>
<th>Topical Treatment Options (Includes Products in SWCCAC Formulary and any Rx suggestions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute and Chronic (Keast 2010) (see Section B for S&amp;S)</td>
<td>No Exudate to Low Exudate</td>
<td>Moderate to High Exudate</td>
</tr>
</tbody>
</table>
| Need for Prophylaxis- | None required | 1. Optimize general health of individual (nutrition, medication, manage co-morbidities etc).
| wounds in at-risk individuals can quickly progress to colonized or infected. | | 2. Thorough cleansing, debridement if applicable, and infection control practices to prevent introduction of bacteria.
| | | 3. Utilize topical antimicrobial dressings: a) Inadine (SA# until Sept.-Catalogue version 22) (not for highly exudative wounds)
| | | b) AMD antimicrobial: packing strips, kerlix roll
| | | c) Aquacel Ag (may need to be pre-moistened) | 1. Optimize general health of individual (nutrition, medication, manage co-morbidities etc).
| | | 2. Thorough cleansing, debridement if applicable, and infection control practices to prevent introduction of bacteria.
| | | 3. Utilize topical antimicrobial dressings: a) AMD antimicrobial: packing strips, kerlix roll
| | | b) Seasorb Ag ribbon packing
<p>| | | c) Aquacel Ag |</p>
<table>
<thead>
<tr>
<th>Microbial Status of Wound</th>
<th>Systemic Antibiotics</th>
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<td>Moderate to High Exudate</td>
</tr>
</tbody>
</table>
| Contaminated Bacteria on surface only. No signs or symptoms. | None required | 1. Thorough cleansing, debridement if applicable.  
2. No antimicrobial action required.  
3. Choose absorbent, moisture retentive secondary dressing. |
| Colonised Bacteria attached to surface, starting to form colonies but no local tissue damage | None required | 1. Thorough cleansing, debridement if applicable.  
2. No antimicrobial action required.  
3. Choose absorbent, moisture retentive secondary dressing. |
| Localized Infection (Critical Colonisation) Bacteria more deeply invasive, local wound bed involved. Signs & Symptoms as per acute or chronic localized infection in Section A. Infection confined to level of dermis, erythema <2cms around wound margin. | None required | 1. Thorough cleansing, debridement if applicable.  
2. May use topical antimicrobials to cleanse (see section 10).  
3. Utilize topical antimicrobial dressings: Same as for prophylaxis above. Also-For Malodour: Flagyl Vaginal cream (requires Rx).  
4. Choose a moisture-retentive secondary dressing. |
| Spreading Infection Bacteria now involve surrounding tissue | Systemic Antibiotics Required | 1. Thorough cleansing, debridement if applicable.  
2. May use topical antimicrobials to cleanse (see section 10).  
3. Utilize topical antimicrobial dressings: Same selection as for prophylaxis above. Also-For Malodour: Flagyl Vaginal cream (requires Rx).  
4. Choose a moisture-retentive secondary dressing. |

CONSIDER topical antimicrobials in wounds with ischemia or multi-resistant organisms  
1. Thorough cleansing, debridement if applicable.  
2. May use topical antimicrobials to cleanse (see section 10).  
3. Utilize topical antimicrobial dressings: Same as for prophylaxis above. Also-For Malodour: Flagyl Vaginal cream (requires Rx).  
4. Choose a moisture-retentive secondary dressing.
Microbial Status of Wound
Acute and Chronic (Keast 2010) (see Section B for S&S)

Systemic Antibiotics

Topical Treatment Options (Includes Products in SWCCAC Formulary and any Rx suggestions)

<table>
<thead>
<tr>
<th>No Exudate to Low Exudate</th>
<th>Moderate to High Exudate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>secondary dressing.</td>
</tr>
</tbody>
</table>

**Systemic infection,**
Classic signs of sepsis:
Fever, rigors chills, hypotension
Multiple organ failure

**Systemic Antibiotics Required**

1. Thorough cleansing, debridement if applicable.
2. May use topical antimicrobials to cleanse (see section 10).
3. Utilize topical antimicrobial dressings:
   Same as for spreading infection above.
   Also - For Malodour: Flagyl Vaginal cream (requires Rx).
4. Choose a moisture-retentive secondary dressing.

1. Thorough cleansing, debridement if applicable.
2. May use topical antimicrobials to cleanse (see section 10).
3. Utilize topical antimicrobial dressings:
   Same as for spreading infection above.
   Also - For Malodour: Flagyl Vaginal cream (requires Rx).
4. Choose a moisture-retentive secondary dressing.

Table adapted from Leg Ulcer Guidelines, Smith and Nephew 2006.

**Div) Thoughts on Biofilm:**

**Incidence:** It is thought that about 60% of chronic wounds may be colonised with biofilm (James et al 2008, Hill et al 2010, Edwards-Jones et al. 2008) although there may be no physical symptoms other than delayed healing in spite of best practices for the type of wound. It is now also known that surgical site infections (SSI) also have a biofilm component (Wolcott et al. 2009).

**Definition:** In the past, this situation was called “Critical Colonization”, but we now know that biofilms, which cannot be detected with routine swabs for culture and sensitivity, are the probable cause (Wolcott et al. 2009).

**Signs:** Biofilms are generally not visible on the surface of the wound, although an increase in slough or a gel-like or shiny coating on the wound may be noted.

**Treatment:** Physical removal of Biofilm by thorough and frequent debridement and/or wound cleansing is a key treatment strategy, forcing the biofilm to reconstruct and make it more susceptible to effective antimicrobials, antibiotics or antiseptics to prevent re-formation (debride-and-cover with antimicrobial dressing strategy (NHS 2010).

### SWCCAC WMP- Antimicrobial Dressing Table

**Purpose:** This table provides a description of antimicrobial products and an average price in a range $5.00 increments (July 2010)

<table>
<thead>
<tr>
<th>Supply</th>
<th>Description / Maximum wear time</th>
<th>Size</th>
<th>MFG</th>
<th>Weekly Max/wound</th>
<th>Trade Name</th>
<th>Averag e cost /each</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimicrobial Ointment</td>
<td>Cadexomer Iodine, Kills microorganisms - change dressing when paste is clear - generally 3 x weekly</td>
<td>10g</td>
<td>Smith &amp; Nephe w</td>
<td>1</td>
<td>Iodosorb Ointment</td>
<td>&gt;$20.00 &lt; $25.00</td>
<td>2500</td>
</tr>
<tr>
<td>Antimicrobial Dressing</td>
<td>Antimicrobial Nancystalline Ag Dressing - antimicrobial effect lasts for up to 3 days.</td>
<td>10cm x 10cm</td>
<td>Smith &amp; Nephe w</td>
<td>2</td>
<td>Acticoat</td>
<td>&gt;$15.00 &lt; $20.00</td>
<td>2501</td>
</tr>
<tr>
<td>Antimicrobial Foam Dressing</td>
<td>Non-adhesive, antimicrobial dressing with Active Silver - sustained antimicrobial effect for up to 7 days.</td>
<td>10cm x 10cm</td>
<td>Colopl ast</td>
<td>3</td>
<td>Biatain™ Ag</td>
<td>&gt;$20.00 &lt; $25.00</td>
<td>2502</td>
</tr>
<tr>
<td>Supply</td>
<td>Description / Maximum wear time</td>
<td>Size</td>
<td>MFG</td>
<td>Weekly Max/wound</td>
<td>Trade Name</td>
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<td>------</td>
</tr>
<tr>
<td>Antimicrobial Foam Dressing</td>
<td>Non-adhesive, antimicrobial dressing with Active Silver - sustained antimicrobial effect for up to 7 days.</td>
<td>15cm x 15cm</td>
<td>Coloplast</td>
<td>3</td>
<td>Biatain™ Ag</td>
<td>$&gt;35.00 &lt;$40.00</td>
<td>2503</td>
</tr>
<tr>
<td>Antimicrobial Absorbent Hydrofiber Dressing</td>
<td>Hydrofiber technology combined with ionic silver - sustained antimicrobial effect for up to 7 days; for partial-thickness burns may stay in situ x 14 days.</td>
<td>10cm x 10cm</td>
<td>Conva Tec</td>
<td>3</td>
<td>Aquacel® Ag</td>
<td>$&gt;15.00 &lt;$20.00</td>
<td>2504</td>
</tr>
<tr>
<td>Antimicrobial Absorbent Hydrofiber Dressing</td>
<td>Hydrofiber technology combined with ionic silver - sustained antimicrobial effect for up to 7 days; for partial-thickness burns may stay in situ x 14 days.</td>
<td>15cm x 15cm</td>
<td>Conva Tec</td>
<td>3</td>
<td>Aquacel® Ag</td>
<td>$&gt;25.00 &lt;$30.00</td>
<td>2506</td>
</tr>
<tr>
<td>Antimicrobial Packing Strips</td>
<td>Antimicrobial Packing Strips (7832 AMD) may stay in situ x 3 days - change outer dressing as needed.</td>
<td>1.3cm x .9 M</td>
<td>Curity™</td>
<td>5 for 1st week then 3</td>
<td>AMD™</td>
<td>&lt;$5.00</td>
<td>2507</td>
</tr>
<tr>
<td>Antimicrobial Packing Strips</td>
<td>Antimicrobial Packing Strips (7833 AMD) - stays active up to 3 days - change outer dressing as needed.</td>
<td>2.5cm x .9 M</td>
<td>Curity™</td>
<td>5 for 1st week then 3</td>
<td>AMD™</td>
<td>&lt;$5.00</td>
<td>2508</td>
</tr>
<tr>
<td>Antimicrobial Ribbon</td>
<td>Absorbant and soft alginate with silver dressing for the management of moderate to heavily exuding wounds - remains active for up to 7 days but may need to be changed daily initially due to volume of exudate.</td>
<td>3cm x 44 cm</td>
<td>Coloplast</td>
<td>5 for 1st week then 3</td>
<td>Seasorb®® Ag</td>
<td>$&gt;10.00 &lt;$15.00</td>
<td>2509</td>
</tr>
<tr>
<td>Antimicrobial Foam Dressing</td>
<td>AMD Transfer Foam (55548 AMDX) - leave insitu up to 7 days - change outer dressing as needed. May require non-stick dressing as primary interface with wound surface.</td>
<td>10cm x 20 cm</td>
<td>Curity™</td>
<td>5 for 1st week then 3</td>
<td>AMD™</td>
<td>$&gt;25.00 &lt;$30.00</td>
<td>2510</td>
</tr>
<tr>
<td>Antimicrobial Roll</td>
<td>AMD Roll (3332) stays active up to 3 days - change outer dressing as needed.</td>
<td>11.4cm x 3.7M</td>
<td>Curity™</td>
<td>5 for 1st week then 3</td>
<td>AMD™</td>
<td>$&gt;5.00 &lt;$10.00</td>
<td>2511</td>
</tr>
<tr>
<td>Antimicrobial Packing Strips</td>
<td>AMD Packing Strips (7831 AMD) stays active up to 3 days - change outer dressing as needed.</td>
<td>.6cm x 9M</td>
<td>Curity™</td>
<td>5 for 1st week then 3</td>
<td>AMD™</td>
<td>&lt;$5.00</td>
<td>2512</td>
</tr>
<tr>
<td>10% Povidone Iodine dressing</td>
<td>Sterile, low adherent knitted viscose dressing impregnated with 10% povidone iodine in a water-soluble polyethylene glycol base which allows slow release. For low amounts of exudate only - will not facilitate autolytic debridement. Fading of the colour of the dressing indicates the loss of antiseptic efficacy and this is when the INADINE™ dressing should be changed.</td>
<td>9.5 x 9.5 cm</td>
<td>Systagenix</td>
<td>5 for 1st week then 3</td>
<td>Inadine™</td>
<td>&lt;$5.00</td>
<td>2513</td>
</tr>
</tbody>
</table>
A. Purpose:
Blunt (2001) has described routine wound cleansing as being ritualistic, rather than based on research evidence or the principles of wound healing. The clinician needs to determine what the wound characteristics are before deciding which method of cleansing and which solution is needed. The purpose of wound cleansing is to remove foreign bodies such as organic or inorganic debris, inflammatory contaminants and bacteria, devitalized tissue and excess exudate, all of which can become a cause of infection (Bale and Jones 1997, Blunt 2001). Effective cleansing removes these deleterious materials from the wound surface, without causing trauma to the healthy cells before application of wound dressing thus creating the optimum environment for the wound healing.

B. Cleansing Solutions:
- **Normal Saline** is generally preferred for cleansing because it is isotonic (physiologic), non-toxic and inexpensive (Bates-Jensen and Ovington 2007).
- **Sterile water** is needed to activate the silver in metallic/ nanocrystalline silver dressings, but not in ionic silver dressings.
- **Tap water** is a wound cleansing agent commonly used in the community and hospitals and has recently been reviewed as a Cochrane review (Fernandez et al. 2008). The decision to use tap water to cleanse wounds should take into account the quality of water (e.g. drinkable, municipality-treated or untreated well water), the severity of the wound and the patient’s general condition, including the presence of co-morbid conditions. In addition, the method of getting the tap water to the wound should be considered in making a decision, particularly in homes where hygiene concerns exist.
- **Commercial Wound Cleansers:** Although not provided by SWCCAC, wound cleansers are another method of cleansing wounds. They must be differentiated from skin/ perineal cleansers, which are meant for non-broken skin. Cleansers can be described as having a toxicity index; one part of the cleanser diluted with how many parts of water are needed to make the solution non-toxic to healthy cells. The least toxic are 1:10, the most toxic are 1:1000 for non-antimicrobial cleansers (Rodeheaver 2007).

C. Temperature of Solution:
Fluids used for cleansing wounds should be warmed to at least room temperature (#3.4c) http://www.rnao.org/Storage/29/2371_BPG_Pressure_Ulcers_I_to_IV.pdf but body temperature would be even more efficacious (Angeras et al. 2002). When a cold solution is used for wound care, and the temperature of the wound drops to below 37°, mitiotic activity is delayed by up to 4 hours (Torrance 1986), there is an inhibition of the ability of macrophages to work effectively and the leukocyte activity reduces to zero. There has been documented evidence that the incidence of sepsis is higher when the cleansing solution is not warmed (Angeras et al 2002).

D. Cleansing techniques:
  i) **Swabbing/ Scrubbing:** Swabbing a wound redistributes the bacteria (Thomlinson 1987), traumatizes new granulation tissue by causing microabrasions (Young 1995) and sheds fibres (Bale and Jones 1997).
  
  ii) **Compressing/ soaking:** Soaking of the foot to clean the wound should never be done with diabetic foot ulcers. Compressing or soaking of larger areas of necrotic tissue debris may help to soften or loosen the necrotic tissue (Bates-Jensen and Ovington 2007). However, soaking the wound or using non-
therapeutic low pressure increases the permeability of the tissue, increases bacterial counts, and does not effectively clean the wound bed (Michels 2001).

iii) Irrigation/ Flushing:
How: A 35ml syringe (30 in Canada) with a 19-gauge blunt needle approximately two cm above the wound delivers approximately 8 psi, when the plunger is depressed at maximum force (Rodeheaver 2007). The SWCCAC provides pre-filled irrigation bottles that are reported to provide this PSI (SWCCAC code 6001). If a wound is friable and bleeds easily, a lower force should be used. Pressures higher than 15 PSI will force surface bacteria and debris deeper into the wound with deleterious effects (Stevenson et al. 1976).

iv) Volume of solution:
There is no general agreement on the volume of solution that should be used. The RNAO Best Practice Guidelines for Pressure Ulcers advises that to achieve adequate cleansing of the wound bed, a sufficient volume of irrigation fluid is critical, and suggests between 100 – 150 ml of solution. However, the panel emphasizes that the amount used should be enough to adequately rinse the entire surface (Kozell et al. 2007), but this would be dependent on the size and condition of the wound. Miller and Gilchrist (1996) suggested an irrigation volume between 250ml and 500ml although Stevens et al.’s 1976 work specified a volume of 150 ccs. The old adages are “flush until returns are clear” and “the solution to pollution is dilution” (Bates-Jensen and Ovington 2007).

v) Universal Precautions:
Delivering the solution at a 45° angle will decrease the chance of splashback. Protective devices to protect the eye, face and clothes of the clinician should be utilized as per universal precautions.

vi) Sitz Bathing:
Commonly used in anorectal/ gynecological disorders, there is a lack of RCTs supporting sitz baths to promote faster healing or fewer complications. They may improve peri-anal hygiene and relieve discomfort (Tejirian and Abbas 2005). Conversely, they reported that immersing in a tub of water can cause systemic vasodilatation, decreasing the circulation to the perineal area, theoretically delaying healing. They are not recommended as a method of wound cleansing.

i) Whirlpool:
Where physically possible to provide, there is evidence to support whirlpool therapy for wound debridement and to increase perfusion to the area, but is not indicated for clean, proliferating wounds.

E. Cleansing by wound characteristics:
i) Shallow wound cleansing procedure: Regardless of the type of cleansing needed, you should cleanse from the centre of the wound in a circular motion, working towards the edges and the surrounding tissues. To decrease the chance of contamination of the wound centre, do not return to the centre after cleansing the edge of the wound or the surrounding tissues (Bates-Jensen and Ovington 2007).

ii) Wound containing debris or inflammation/externally contaminated/ granulating but not healing /Necrotic wounds healable and debrideable: High pressure irrigation with a force of 7 – 12 pounds per square inch (psi) will effectively remove inflammatory debris or loosen and soften loose necrotic tissue without damaging the viable tissue (Longmire et al. 1987).

iii) Healthy epithilializing wounds: Do not need aggressive cleansing as it may remove growth factors necessary for healing. Use low pressure (4-7 PSI) by pouring the solution over the wound with enough fluid to adequately rinse the entire surface (Bates-Jensen and Ovington 2007, Rodeheaver 2004, 2007). These wounds would benefit from leaving dressings intact for 7 -21 days with a clear dressing type ie: tegaderm acrylic or telfa clear.

iv) Healthy granulating wounds reducing 20-30% in size in 3-4 weeks: High pressure irrigation (8-15 PSI) is NOT recommended for healthy proliferating wounds because fragile blood vessels and new tissue can be damaged (Bates-Jensen and Ovington 2007, Rodeheaver 2007). Healing wounds without debris
or infection should be gently cleansed with non-cytotoxic solutions such as normal saline or non-ionic surfactant cleansers, warmed to room temperature, at low pressure of less than 8 psi, obtained by pouring the solution over the wound to protect granulating tissue, with enough fluid to adequately rinse the entire surface (Rodeheaver 2004). Do not use antimicrobial solutions for healthy granulating wounds.

v) Deep wound with tunneling or undermining: Use a small lumen catheter e.g. 5 Fr (Rodeheaver 2004) &/or a syringe to irrigate wounds with tunneling or undermining which cannot be managed using the 30 cc syringe/ 18 g angio system. Use a catch basin and towels to catch and absorb the returns. Fill a syringe with cleansing solution. While holding a basin below the wound (not touching the wound edges) empty syringe filled with cleansing solution into the wound, making sure that all areas are covered and any debris is loosened and removed. Repeat 2-3 x if needed. Do not touch the wound with the tip of the needle or angiocath. Be sure to irrigate any undermined areas or sinus tracts using a catheter with a syringe to cleanse the tissues that are not visible. Flush with large amounts of solution. Gently massage the tissue above the tunnel or undermining to express the solution, and repeat two or three times. **Never use force to instill the irrigation into a wound!** Because you cannot visualize the wound base, you may be forcing fluid along the fascial plane. Estimate that the amount of returns is similar to the volume of solution instilled; if the volume is noticeably less, report to the physician and do not irrigate again until client is assessed by physician.

vi) Necrotic wounds not healable and should not be debrided: The goal is to allow the tissues to dessicate without allowing autolytic debridement to occur. A topical application of poviodine-iodine solution (not detergent scrub) or Chlorhexidine is appropriate. Leave open to air if not exudating or cover with a loose non-woven gauze that will not be occlusive or adhere to the necrotic tissue.

F. Cleansing Considerations for Infected wounds:

i) Localized and spreading infection: High pressure irrigation (7-12 PSI) should be implemented using approx 150 cc.’s of normal saline to remove surface bacteria, debris and chronic wound exudates from infected wounds at each dressing change. It is also part of the recommended plan to eradicate suspected biofilms in wounds (debride-and-cover with antimicrobial dressing strategy (NHS 2010).

ii) Cleansing with topical antiseptics in infected wounds: The role of traditional antiseptics solutions (e.g. poviodine iodone, 0.25% acetic acid, 0.25% sodium hypochlorite) is being re-evaluated. There may be a role for using them to cleanse the wound in conjunction with the use of applying an antiseptic preparation/dressing until the next dressing change Carville et al (2008). Bates-Jensen and Ovington (2007) suggest rinsing with NS before applying the dressing to reduce any cytotoxic effects on the wound tissue. Carville et al (2008) do not mention the rinsing with NS step. Their use should be reserved for situations where the risk of the local bacterial burden is a greater concern than the stimulation of healing (Recommendation 7- Sibbald et al. 2006). **The 2-week challenge would apply** (NHS 2010) (see section 6di) and it is essential that the antiseptic is discontinued when the wound becomes clean and granulating. Remember that topical antiseptics do not have the ability to effectively penetrate tissue, so have no effect on any bacteria except those directly on the surface of the wound (Rodeheaver 2007).

The following instructions for the use of Acetic Acid for topical treatment of wounds with Pseudomonas are courtesy of Elise Nielsen, RN, BSN, CETN (C) – Acting Nurse Advisor for H&CC. Irrigate the wound with water or saline to remove any loose debris. Debris left in the wound can bind with antiseptics such as acetic acid and diminish their antimicrobial effects. Pour a small amount of acetic acid 2.5% solution into a clean container. Soak several 4X4 gauze dressings in the solution.
Remove enough gauze to cover the wound base and wring out with forceps until damp but not dripping. Apply to wound and leave for one minute. Remove gauze, discard and replace with fresh damp gauze: repeat 5-10 times. This creates an astringent effect that draws out the wound fluid. Do this with each dressing change. Flush the wound thoroughly with saline or tap water at the end of the treatment and before dressing the wound. If critical colonization has not resolved within 10-14 days with the use of acetic acid soaks and antimicrobial dressings then the client should consult a doctor for antibiotic therapy.

iii) Access to Antiseptic Solutions: SWCCAC only provides Povidine Iodine and Chlorhexidine (Codes 6300 to 6303) antiseptic solutions. The following are suggested proportions for two other common preparations that can be prepared at the client’s pharmacy for a low cost.

- **1% Acetic Acid:** add 100 cc of 5% Acetic acid (white table vinegar) to 400 cc water, or 1 Tbsp white table vinegar to ½ cup water / 3 month expiry at room temperature (Solution quantities obtained from Health Care Centre Pharmacy, Kitchener and Preston Medical Pharmacy, Cambridge May 2003).

- **Hygeol 1:20 Sodium Hypochlorite solution:** Javex bleach (5.25%) 4.8 mls and qs distilled water to 500 mls but if using Chlorox (6%) bleach it is 4.2 mls and qs to 500 mls. Dark bottle / 3 month expiry at room temperature (Solution quantities obtained from Health Care Centre Pharmacy, Kitchener 2010)

G. Peri-wound skin cleansing:

It is important to keep the skin surrounding the wound clean and free from excessive moisture to prevent maceration, contact dermatitis and other damage (Flanagan 1997). There may be a need to remove dressing adhesive.

In wounds where fecal or environmental contamination of the dressing is occurring (e.g. perianal and pilonidal wounds, plantar surface diabetic foot ulcers) cleansing the periwound skin with chlorhexidine x 1 minute (x 5 minutes if Pseudomonas is present) Payne et al. (1999), and rinsing with saline may be included in the plan of care. Chlorhexidine has a good effect against gram negative and gram positive bacteria, a fair effect against fungi and viruses, is intermediate in its speed of action in killing bacteria, and is minimally effected by mucous and proteins (Michels 2001). The periwound skin can be protected from exudate with the use of skin barrier wipes, or barrier creams if necessary. The choice of dressing also needs to include the ability to wick the moisture away from the periwound skin.
### Assessment for Wound Cleansing (1 of 2)

<table>
<thead>
<tr>
<th>1. Clean Epithelializing Wound &amp; Closed Surgical Wound (CSW)</th>
<th>2. Clean Granulating Wound decreasing in size 20-30% in 3-4 weeks*</th>
<th>3. Clean Granulating Wound NOT decreasing in size 20-30% in 3-4 weeks*</th>
<th>4. Necrotic healable wound where debridement is appropriate</th>
<th>5. Necrotic non-healable wound where debridement is NOT appropriate</th>
</tr>
</thead>
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<tr>
<td><strong>DO NOT flush with pressure higher than 7 PSI – use 118 ml. bottle, remove the irrigation tip and gently pour room or body temperature solution over the wound; cleanse the periwound skin. Do not use antimicrobial solutions.</strong></td>
<td><strong>DO NOT flush with pressure higher than 7 PSI – use 118 ml. bottle, remove the irrigation tip and gently pour room or body temperature solution over the wound bed; cleanse the periwound skin. Do not use antimicrobial solutions.</strong></td>
<td>*<em>Flush with 7-15 PSI using at least 150 ccs of solution at room or body temperature, cleanse and protect the periwound skin. Choose a primary antimicrobial dressing, cover with moisture retentive secondary (Debride and cover strategy) <em>Granulating wounds not decreasing in size may have a localized infection.</em></em></td>
<td><strong>Flush with 7-15 PSI using at least 150 ccs of solution at room or body temperature, cleanse and protect the periwound skin. Choose a primary dressing for autolytic or chemical debridement properties; wet necrotic wounds may also need antimicrobial dressings. Choose a secondary dressing with moisture-retentive properties to enhance autolytic debridement. Foul odour indicates anaerobes (see # 6)</strong></td>
<td><strong>If there is exudate, cleanse the periwound skin. Pat dry. The intent is to allow the necrotic tissue to dessicate and remain stable; a topical application of povidone-iodine solution (not detergent scrub) or Chlorhexidine is appropriate. Leave open to air or cover with a loose non-woven gauze that will not be occlusive or adhere to the necrotic tissue.</strong></td>
</tr>
</tbody>
</table>

**Epithelializing** - choose a dressing that can be left insitu x 7 days or longer

**CSW** - choose non-adherent dressing
**Assessment for Wound Cleansing (2 of 2)**

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<tr>
<td>Foul odour indicates presence of anaerobes - use antimicrobial solution, &amp;/or topical Metronidazole vaginal cream or gel. Friable tumor tissue may not tolerate flushing with 7-15 PSI or hand-held shower. Warm solution to body temperature to decrease discomfort.</td>
<td>Flush with 7-15 PSI using at least 150 ccs of solution at room or body temperature, cleanse and protect the periwound skin. Choose a primary antimicrobial dressing if desired for prophylaxis, cover with moisture retentive secondary – unless using hydrofiber Ag protocol. May cleanse small burns with lukewarm tap water and mild soap.</td>
<td>Irrigate using a 5Fr catheter or “soft-cath” with a 30-35 cc. syringe and 150 to 500 cc. solution at room or body temperature. Flush until returns are clear. Gently palpate over undermined or tunneled areas to express any irrigation solution that is retained. Do not force irrigation when resistance is detected. Physician consult to consider sharp debridement.</td>
<td>Two week challenge: May use a 10 – 14 day cleansing regime with an antimicrobial solution, flush with 7-15 PSI using at least 150 ccs of solution at room or body temperature, cleanse and protect the periwound skin. Choose a dressing with antimicrobial properties. Spreading infection will need systemic antibiotics in addition to wound toilette. May need to increase dressing frequency until S&amp;S of infection decrease.</td>
<td>Cleansing will be dependent on characteristics of wound bed. If goal is to prevent wound from deteriorating, treat as per # 5.</td>
</tr>
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</table>
**SWCCAC WMP: Daily Visit Frequency as Exceptional Situation for Healable* Wounds**

*It is understood that there must be a mutual agreement between the physician, the nursing team and the client regarding setting goals about the “healability” of the wound. Please see definitions on next page.

**Box 1. Orders received for OD or BID dressings for a Healable Wound:**
This dressing frequency will be considered to be an “exceptional” order to be approved/ utilized for the following criteria:

1. The exudate amount exceeds what can be managed by less frequent dressing changes (the periwound skin will be compromised). Appropriate exudate - absorptive dressings and peri-wound skin protection should be utilized in an attempt to manage the exudate and reduce the dressing frequency. Treat the cause wherever possible.

2. There is a need for mechanical debridement using normal saline/ betadine/ hygeol solutions with gauze or the AMD-impregnated gauze. This should be discontinued once the debridement has been achieved, and a moisture-retentive advanced wound dressing initiated, due to the non-selective nature of mechanical debridement using gauze. Porous gauze adheres to the wound and painfully disrupts healthy tissue on removal (Armstrong and Price 2004).

3. The wound/ surrounding tissue is infected and antimicrobial dressings such as silver, cadexomer iodine or AMD -impregnated gauze will be used in conjunction with systemic antibiotics where indicated. The dressing frequency will be decreased as soon as the exudate levels start to decrease.

4. The wound is located near the anus and fecal contamination of the wound/dressing cannot be avoided (pilonidal/perianal etc.)

**Box 2. Provided that the characteristics described in Box 1 above have been resolved, or are not present, the nurse/ case manager will contact the primary physician to discuss alternative dressings and frequency, based on the wound characteristics.**

There are several reasons why daily or BID visits for wound care, particularly with gauze and wet-to-dry gauze dressings, are not desirable:

1. This frequency utilizes a high volume of nursing visits, compared to 2-3 x weekly frequencies. This means that nursing agencies are often unable to take new referrals, having no capacity for more visits.

2. Each time that the dressing is removed and the wound cleansed, there is a delay in healing. Myers (1982) reported a three-hour delay of mitotic activity and inhibition of leukocytes with a 40 minute drop in wound temperature following wound cleansing ($n=420$).

3. Advanced wound dressings (Thomas 1997) provide moist, isotonic, interactive and non-toxic environments for healing, but only function optimally when they match the characteristics of the wound (Schultz et al. 2003). Marks et al. (1987) described the ideal characteristics of a wound dressing, including: impermeability to water and bacteria, freedom from particulate matter, thermal insulation, absorption and retention of exudate, prevention of trauma on removal, removal of toxic substances from the wound surface, prevention of dehydration, allow for gaseous exchange, and provide pain relief and comfort (Sharpe and McLaw 2001). Of these characteristics, gauze allows for gaseous exchange only. Owens (1943) reported that bacteria readily infiltrated 64 layers of dry gauze, while Alexander et al. (1992) demonstrated that Staphylococcus Epidermis migrated through 5 layers of moist gauze in less than 30 seconds when placed on uncoated paper wrappers on a contaminated agar plate ($p=0.0495$). Hutchinson and McGuckin (1990) reviewed infection rates in wounds healing by secondary intention, citing a 7.1% rate with gauze versus 1.3% with occlusive dressings.

4. The visit frequency may be able to be reduced, utilizing advanced wound products and in conjunction with other modalities to correct underlying etiological factors (e.g. assessing whether compression therapy is indicated) in collaboration with the physician. This represents a more cost-effective method for the SWCCAC to promote healing. The SWCCAC Wound Management Program can be used as a resource for wounds of specific etiology.

**Box 3. If the physician declines to change the treatment plan and frequency, the SWCCAC Case Managers will authorize an Enterostomal Therapy/Wound Care Specialist Nurse consultation based on the following criteria:** The “FUN” acronym indicates situations in which wound healing is not progressing as expected (criteria not met).

- **F (Frequency)** - If the frequency of dressing changes has not decreased to 3 x Week by 3 weeks
- **U (Unknown)** - If the cause of the wound is unknown
- **N (Number)** - If the size of the wound has not decreased by 20-30% in 3 weeks of treatment.

The physician will be notified of the ETN/WCS recommendations. If the physician declines to change the treatment plan and frequency in collaboration with the ETN/ WCS, the SWCCAC care team next steps will be decided on a case-by-case basis.
Box 2. Provided that the characteristics described in Box 1 above have been resolved, or are not present, the nurse/ case manager will contact the primary physician to discuss alternative dressings and frequency, based on the wound characteristics and “healability” of the wound:

1. Daily or BID visits for wound care utilizes a high volume of nursing visits, compared to 2-3 x weekly frequencies. This means that nursing agencies are often unable to take new referrals, having no capacity for more visits.
2. In general, advanced wound products will not be utilized when the wound is considered NON-healable or Maintenance, but this will be balanced with the need for exudate management and reduced visit frequency. This is not a predictable time: the wound must be assessed on each visit. Wherever possible, teach and reduce visit frequency.
3. The SWCCAC Wound Management Program can be used as a resource for wounds of specific etiology.

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If the physician declines to change the treatment plan and frequency in collaboration with the ETN/ WCS, the SWCCAC care team next steps will be determined on a case-by-case basis.

**Definitions re: “Healability”**

- **Healable**: Have sufficient vascular supply, underlying cause can be corrected, & health can be optimized.
- **Maintenance**: Have healing potential, but various patient factors are compromising wound healing at this time (Despatis et al 2008)
- **Non-healable/Palliative wound**: has no ability to heal due to untreatable causes such as terminal disease or end-of-life (Despatis et al 2008)
CCAC Referral Received with Diagnosis of Venous Stasis Ulcer

Do we have current ABI measurement plus specific orders?

- yes
  - Initiate referral for ET/WCS immediately so that ABI can be done in a timely manner
  - Initiate referral for visiting nursing service
- no
  - VN conducts history and physical assessment
    - Initiate alternative treatment plan (e.g., tubigrip, unna boot)

ET/WCS conducts lower leg assessment and develops treatment plan, including appropriate compression therapy
Complete Wound Care status Report and PSPR
Complete physician update

Does physical assessment support diagnosis and orders?

- yes
  - VN follows treatment plan as per recommendation of ET/WCS
  - Consult with physician (phone / physician update) Instantiate alternative treatment plan (e.g., tubigrip, unna boot) Request ET/WCS Referral Complete Wound Care Status Report and PSPR
  - Develop care plan to meet needs of client
    - Initiate compression therapy
    - Complete Wound Care Status Report and PSPR

- no
  - VN conducts history and physical assessment
    - ET/WCS conducts lower leg assessment and develops treatment plan, including appropriate compression therapy
    - Complete Wound Care status Report and PSPR

Complete Wound Care Status Report and PSPR

Wound requires mechanical debridement

- yes
  - VN follows Wound Care Status Report and PSPR
  - Yes

- no
  - Wound is infected and not yet responding to treatment
  - Exudate amount exceeds what can be managed by less frequent changes
    - yes
      - VN conducts Wound Care Status Report and PSPR
      - Yes
    - no
      - no

Wound meets daily visit criteria

- yes
  - VN follows Wound Care Status Report and PSPR
  - Yes

- no
  - VN follows Wound Care Status Report and PSPR
  - No

Wound is infected and not yet responding to treatment

- yes
  - VN conducts Wound Care Status Report and PSPR
  - No

- no
  - ET/WCS conducts lower leg assessment and develops treatment plan, including appropriate compression therapy
  - Complete Wound Care status Report and PSPR
  - Yes

Exudate amount exceeds what can be managed by less frequent changes

- yes
  - VN conducts Wound Care Status Report and PSPR
  - Yes

- no
  - VN conducts Wound Care Status Report and PSPR
  - No

Wound is infected and not yet responding to treatment

- yes
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- no
  - ET/WCS conducts lower leg assessment and develops treatment plan, including appropriate compression therapy
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  - Complete Wound Care status Report and PSPR
  - Yes

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- yes
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  - No

- no
  - VN conducts Wound Care Status Report and PSPR
  - Yes

Wound requires mechanical debridement

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  - VN follows Wound Care Status Report and PSPR
  - No

- no
  - ET/WCS conducts lower leg assessment and develops treatment plan, including appropriate compression therapy
  - Complete Wound Care status Report and PSPR
  - Yes
### SWCCAC WMP: Venous Ulcerations
#### Clinician Service Planning Guide

#### Definition of Wound Type
Chronic Venous Insufficiency (CVI) is a term coined to describe the summation of clinical changes to the skin and subcutaneous tissue occurring in a chronic venous disease (van der Molen 1957). CVI worse in individuals whose legs are in the dependent position for long periods of time, and in those with persistent immobility (Harding et al. 2008). It is estimated that 1–2 % of patients with CVI will develop a venous leg ulcer during their lifetime.

Venous leg ulcers occur as a result of damaged veins which are usually caused by venous hypertension (high pressure). Once healed, venous leg ulcers can reoccur.

- 70-90 % of lower extremity ulcers used to be venous in origin, now 30% are VSU (C. Moffat 2008)
- 21% of patients with venous disease also have arterial disease; 40% have 3 co-morbidities
- Recurrence rate:
  - 75% in 3 months without compression
  - 15-20% per year with compression
- Lower limb pulses:
  - Patients with normal arterial circulation can have absent pulses due to edema or a fixed ankle joint
  - Palpable pulses in patients with calcified vessels can be misleading (any diabetic is suspect for this condition)

**NB** Compression therapy must be prescribed by a physician and should only be initiated after a lower leg assessment has been performed.

The RNAO Clinical Best Practice Guidelines the Assessment and Management of Venous leg Ulcers is available for free download at: [http://www.rnao.org/Storage/46/4017_RNAO_Venous_Leg_FINAL.pdf](http://www.rnao.org/Storage/46/4017_RNAO_Venous_Leg_FINAL.pdf)


#### Nursing Service Goals

**Determine client’s goals**

**New Venous Wound Initiative to be launched March 21 - May 21, 2011**

- “My Venous Ulcer” - teaching booklet to review with clients
- “My Wound Care-Venous & Compression” - self-care guide
- SWCCAC Venous Wound Care Plan with time-specific goals

**Healing Service Plan**

- Utilize highest compression possible
- Wound healing
- Exudate management
- Pain management
- Decrease dressing changes
- “Compression for life”

**Maintenance or Palliative Service Plan**

*(wound not expected to heal, or due to client resistance to lifestyle adaptations or treatment)*

- Maintain wound environment
- Teach client/caregiver wound management
- Goals may be pain, exudate, odour and infection control
- Clients who do not adhere to the treatment plan

#### Clinical Interventions

**Wound Assessment:**

- Use a validated and reliable wound assessment tool
Other:

- Optimize nutritional intake and general health status.
- **Lower leg assess & ABPI**: if client has long-standing diabetes, hypertension or advanced age, the vessels may not be compressible and a segmental compression study will need to be ordered through diagnostic imaging in order to accurately determine the arterial status.
- Appropriate compression therapy based on lower leg assessment.
- **Note**: if ABPI not done prior to admission or if lower leg assessment does not support the use of the ordered compression in spite of the APBI value (i.e. the nurse has concerns that the client may have mixed venous arterial disease), in the absence of signs of arterial ischemia, the nurse will implement a simple Unna’s paste boot (see instructions Section 10) or use Tubigrip low compression until the ET/WCS can assess and formulate care plan. A communication to the physician will be sent at this time.
- **Compression choices** include single layer and multi-layer choices (See SW CCAC Catalogue Sections 42, 43 and 70), with various applications to provide a range of 20 to 40 mm Hg compression, based on the client’s vascular status and tolerance.
- “Compression bandaging is an added skill for clinicians and there must be an educational component and mentoring to ensure safety and efficacy in application.
- Prevent pressure damage in clients with impaired peripheral perfusion, thin or altered limb shape, foot deformities or dependent edema, R/A, reduced sensation, long-term steroid use and loss of calf muscle pump by choosing an inelastic (rigid) bandaging system, applying extra padding over bony prominence (Harding et al. 2008) also the achilles and tibialis anterior tendon areas.

**Wound Bed Prep:** debridement, bacterial balance, exudate control, protect periwound skin

**Common Dressing Supplies:**

- “NB-The RNAO BPG’s Assessment and Management of VSU’s Recommendation #20 states to “choose a type of dressing depending on the amount of exudate and phase of healing.”
- Appropriate examples are: alginates, hydrofibers, foams and exudate absorbers. If the dressing adheres to the wound surface, use a non-adherent layer compatible with the secondary dressing (e.g. do not use petrolatum products in combination with silvers.)

**AVOID use of adhesive products due to increased sensitivity of people with venous disease**

**Medical Treatment:**

- If woody fibrosis and induration are present in the periwound area or in the leg at the initial assessment, speak to physician re: use of Rx Pentoxyfilline 400mg TID (Bull et al. 2009- Cochrane review)

<table>
<thead>
<tr>
<th>CM Initial Nursing Service Authorization Guideline</th>
<th>Block of 30 visits over 12 weeks&lt;br&gt; If ABPI provided and specific compression bandaging ordered, if ulcer &lt; 5cm² or &lt;6 months duration, initiate referral for visiting nursing services to teach and reduce&lt;br&gt; ETN/WCS- Block of 3 visits over 3 months.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing Visit Frequency Plan</strong></td>
<td>Nursing services to teach and reduce—but recognize that self-care for compression bandaging is very difficult, and may only be appropriate in a limited number of client situations.  &lt;br&gt;☐ Healing Service Plan&lt;br&gt;Initial authorization  &lt;br&gt;• May need OD for first several days until exudate decreases in response to compression Rx, then decrease to q 2 days, then q 3—then q 7 days if possible. &lt;br&gt;NOTE that the faster the appropriate compression Rx is implemented, the faster the wound should heal.</td>
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### SWCCAC WMP: Venous Ulcerations
#### Clinician Service Planning Guide

**If OD visits requested:**
- See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds

**☐ Maintenance or Palliative Service Plan**
- Weekly
- Potential discharge when client/ family is able to care for wound
- Consider alternate funding such as ODSP for bandages/ dressings

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<tr>
<th>Expected Time Frame for Progress toward Healing</th>
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<tr>
<td>If &gt;28.79% reduction in wound size at 4 weeks will heal by 24 weeks (Phillips et al 2000)</td>
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<td>Should heal in 9 to 12 weeks for healing if the level of compression therapy is appropriate (WCGF)</td>
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<tr>
<th>Criteria for ETN/WCS or Multi-disciplinary Consult</th>
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<tr>
<td>ETN/WCS Consult If VENOUS ULCER is identified as diagnosis on Medical Referral but ABPI not done &amp; compression bandaging not specified– CSM needs to initiate referral to ET/WCS in addition to visiting nursing service, or if</td>
</tr>
<tr>
<td>- If ulcer is &gt; 5 cm² &amp;/or &gt; 6 months duration, refer to ET/WCS, plus:</td>
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<tr>
<td>F.U.N. Criteria (see page 6)</td>
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<tr>
<td>- Infection of the wound (Infected wounds will take longer to heal).</td>
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<tr>
<td>Vascular Consult</td>
</tr>
<tr>
<td>If nurse identifies fixed ankle joint, or impaired calf muscle pump refer to Physio Therapy</td>
</tr>
<tr>
<td>If ulcer &gt;5 cm² &amp;/or &gt; 6 months duration, Physio Therapy consult for Adjunctive Therapy assessment</td>
</tr>
<tr>
<td>If client cannot “doff and don” compression stockings independently, and no family members are able to do so, consider referral to OT for adaptive devices, or for PSW to assist with as ADL.</td>
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<tr>
<td>Any wound not healed at 3 months- Physio Therapy consult for Adjunctive Therapy assessment</td>
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<tr>
<th>Issues for CM</th>
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<tr>
<td>Assess appropriateness for Flex Clinic</td>
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<tr>
<td>Compression therapy is needed ongoing for life to decrease risk of recurrences.</td>
</tr>
<tr>
<td>Clients may require assistance in securing funding for compression hosiery. Case Manager to assist to access funding resources (SW).</td>
</tr>
<tr>
<td>Clients who do not adhere to the compression regime are at risk at risk of not healing &amp; for reoccurrence of venous leg ulcers. Case Managers should consider a case conference to review.</td>
</tr>
<tr>
<td>Definition of Wound Type</td>
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<tr>
<td><strong>Symptoms:</strong></td>
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<tr>
<td><strong>Signs:</strong></td>
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</tbody>
</table>
| **Investigations:**      | • High WBC, increased ESR and C-reactive protein.  
• Blood culture usually negative; swabs C&S usually negative unless necrotic tissue is swabbed (which is inappropriate) |

| Nursing Service Goals    | Determine client’s goals  
**Healing Service Plan**  
• Support local signs and symptoms while systemic antibiotic therapy treats condition  
• Healing of pre-existing or new wounds  
**Maintenance or Palliative Service Plan**  
*(wound not expected to heal, or due to client resistance to lifestyle adaptations or treatment)*  
• Support local signs and symptoms while systemic antibiotic therapy treats condition  
• Prevent deterioration if possible |

| Clinical Interventions   | **Wound Assessment:**  
• Use a validated and reliable wound assessment tool  
**Other:**  
• Systemic antibiotic therapy is needed for cellulitis.  
• Mark line of demarcation on leg distally and proximally with soft-tip indelible marker (not pen)  
• The client may find high compression, especially elastic systems, too painful to tolerate until the infection starts to respond to the antibiotic therapy. Do not stop compression entirely, because the edema will increase as a result of the cellulitis. Leg elevation is important.  
• Treat any co-existing conditions such as venous ulcer, venous dermatitis (see next section) or tinea pedis in addition to the systemic antibiotics.  
• Discomfort can be soothed using a compress of Burosol solution or Burrow’s solution x 15-20 minutes.  
• Using SWCCAC product 2511 antimicrobial kerlix loose-woven (11.4 cm x 3.7 m) wrap affected leg from base of toe to below knee, overlapping each turn by 50%. If exudate amount is large, cover with absorptive secondary dressing such as SWCCAC code 2602 or 2603 and kling wrap, covered by appropriate lower mmHg compression such as two layers of tubular support bandage Code 2009-2014. Once cellulitis is responding to systemic antibiotics, resume previous level of higher compression.  
• Other Use of topical Dressing Supplies* for infection/bacterial burden management – See Page 17 |

| CM Initial Nursing Service Authorization Guideline | **Block of 30 visits over 12 weeks**  
If ABPI provided and specific compression bandaging ordered, if ulcer < 5cm² or <6 months duration, initiate referral for visiting nursing services to teach and reduce  
**ETN/WCS- Block of 3 visits over 3 months.** |

| Nursing Visit           | Nursing services to teach and reduce—but recognize that self-care for compression |
### SWCCAC WMP: Venous Disease with Cellulitis
**Clinician Service Planning Guide**

<table>
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<tr>
<th>Frequency Plan</th>
<th>bandaging is very difficult, and may only be appropriate in a limited number of client situations.</th>
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<tr>
<td></td>
<td>Healing &amp; Maintenance Service Plan</td>
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<tr>
<td></td>
<td>• May need OD for first several days until exudate decreases in response to antibiotic Rx, then decrease to q 2 days, then q 3—then q 7 days if possible.</td>
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<tr>
<td></td>
<td><strong>If OD visits requested:</strong></td>
</tr>
<tr>
<td></td>
<td>• See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds – cellulitis accompanied by large amounts of exudate is an exceptional situation where the dressings need to be changed frequently to protect the intact skin, and the spread or decrease of erythema needs to be visually examined.</td>
</tr>
<tr>
<td></td>
<td>• SWCCAC Benchmark is that only 15% of visits for wound care should be daily.</td>
</tr>
</tbody>
</table>

| Expected Time Frame for Progress toward Healing | 1-2 weeks to treat cellulitis, then revert to plan for Venous Stasis Ulcer |
| Criteria for ETN/WCS or Multidisciplinary Consult | As per Venous Stasis Ulcer |
| Issues for CM | As per Venous Stasis Ulcer |
**SWCCAC WMP: Venous Stasis Dermatitis**

**Clinician Service Planning Guide**

### Definition of Wound Type

**Stasis dermatitis** causes a red, itchy rash on the lower legs. The rash can be dry and scaly or can weep and form crusts. The skin may turn to a brown or purple color, and the lower legs become increasingly edematous. It may be associated with acute contact dermatitis, which appears as itching, burning red areas on the leg corresponding to an area where a topical product has been used.

### Nursing Service Goals

**Determine client’s goals**

- **Healing Service Plan**
  - Resolution of stasis dermatitis a within 2-4 weeks;
  - Identify strategies to prevent recurrence

- **Maintenance Service Plan**
  - Prevent deterioration
  - Comfort measures

### Clinical Interventions

**Wound Assessment:**
- Use a validated and reliable wound assessment tool

**Other:**
- Systemic antibiotic therapy is not needed for acute contact dermatitis.
- **Avoid the use of known sensitizers in individuals with venous disease:** products that contain perfume, latex, dyes, lanolin or wool alcohols, balsam of peru, cetylsterol alcohol, parabens, colophony propylene glycol, neomycin, rubber, some adhesives, framycetin or gentamycin (Sibbald et al. 2007).
- Use moisturizers such as Glaxal Base (ask pharmacist if not on shelf), Cliniderm or Moisturel lotions (not cream) or plain Vaseline petrolatum ointment to keep the skin healthy and free of dry scales.
- Products containing urea such as Uremol or Attractain should be used sparingly for severely dry, scaly skin (Xerosis), and stopped if any signs of dermatitis occur.
- Only use topical corticosteroid preparations for two weeks at a time (if being applied more frequently than 2 x/ week) because they thin the skin when used for long time periods, making it more likely to break down or develop a rebound dermatitis.

![Eczema Diagram](https://via.placeholder.com/150)

- **Severe Eczema**
  - Very potent corticosteroid for 3-4 weeks + emollient

- **Infected Eczema**
  - Highly potent corticosteroid; antiseptic + astringent agent and oral antibiotics

- **Mild Eczema**
  - Moderately potent corticosteroid for 3-4 weeks

- **Weeping Eczema**
  - As for infected but without oral antibiotics

- **No Eczema**
  - Daily emollient (*unless wrapped*)

Grey et al. 2006

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36 South West CCAC Wound Management Program for Clinicians –Updated April 2011
### Client Education
- Compression is needed for life
- Rubbing or scratching an involved area (even through the bandage) will make the rash last for 3 more days than it would have (Sibbald et al. 2007)

### Dressing Choices for Venous Stasis Dermatitis
- Clean the patient's skin thoroughly by washing with tap water (not saline or sterile water) using a mild soap (Dove for sensitive skin) and rinse well. (Harris and Landolt 2008)
- Itching and burning can be soothed using a compress of Burosol solution or Burrow's solution x 15-20 minutes. Apply prescribed steroidal cream or ung. to all affected areas- Menthol added in $\frac{1}{4}$% to $\frac{1}{2}$% will aid in soothing and anti-itch effect, and cream can be kept in refrigerator (Sibbald et al 2007).
- Apply Unna's boot using a medicated zinc paste bandage* SWCCAC Code 2900 wrapped in a spiral wrap using fan-fold pleats to prevent constriction.
- Cover with kling and level of compression appropriate for client, based on complete lower leg assessment including APBI.
- *Note that contact dermatitis can also occur with this product, so be aware for signs of increased irritation.

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<thead>
<tr>
<th>CM Initial Nursing Service Authorization Guideline</th>
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<tr>
<td><strong>Block of 30 visits over 12 weeks</strong></td>
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<tr>
<td>If ABPI provided and specific compression bandaging ordered, if ulcer &lt; 5cm² or &lt;6 months duration, initiate referral for visiting nursing services to teach and reduce</td>
</tr>
<tr>
<td><strong>ETN/WCS- Block of 3 visits over 3 months.</strong></td>
</tr>
</tbody>
</table>

### Nursing Visit Frequency Plan
**Nursing services to teach and reduce—but recognize that self-care for compression bandaging is very difficult, and may only be appropriate in a limited number of client situations.**

#### Healing Service Plan
**Initial authorization**
- May require daily x 2-3 until dermatitis diminishes, then decrease to q 2 – 3 days — then q 7 days if possible.
- Note that the faster the appropriate Rx is implemented, the faster the wound should heal.

**If OD visits requested ongoing:**
- See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds
- SWCCAC Benchmark is that only 15% of visits for wound care should be daily.

#### Maintenance Service Plan
- Weekly or less
- Potential discharge when family is able to care for wound

### Expected Time Frame for Progress toward Healing
Resolution of stasis dermatitis alone within 2-4 weeks; if venous ulcer also present will take longer.

### Criteria for ETN/WCS or Multidisciplinary Consult
- As per Venous Stasis Ulcer PLUS may need Dermatology or Wound Clinic consult if traditional Rx for dermatitis is not beneficial.
- Any wound not healed at 3 months- Physio Therapy consult for Adjunctive Therapy assessment

### Issues for CM
As per Venous Stasis Ulcer
Tubigrip is an interwoven stockinette with covered latex rubber yarns providing elasticity available in a tubular format (by the roll). Tubigrip's compression and support are indicated in a wide range of surface, joint and venous conditions. In mixed venous/arterial disease, it may be selected by the wound care specialist when only very minimal compression can be utilized. Compression can be adjusted by matching the size of the limb to the size of the tubigrip. **Precautions:** Do not apply Tubigrip over an existing compression bandaging system unless you specifically want to increase the amount of compression being provided.

### Tubigrip-tubular (double layer application) measuring guide for correct sizing to obtain desired compression*

<table>
<thead>
<tr>
<th>Widest width of limb in area to be compressed</th>
<th>LOW - 5-10 mm Hg compression for general edema</th>
<th>MEDIUM – 10-20 mm Hg compression for varicose veins / post burn scarring</th>
<th>HIGH - 20-30 mm Hg for soft tissue injuries / joint effusions</th>
<th>Size &amp; SWCCAC Code</th>
<th>Usage**</th>
<th>Limb size**</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 cm - 13.9 cm</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>B-7009</td>
<td>Small hands and arms</td>
<td>13-16 cm</td>
</tr>
<tr>
<td>14 cm - 14.9 cm</td>
<td>C</td>
<td>B</td>
<td>none</td>
<td>C-7010</td>
<td>Medium arms, small ankles</td>
<td>16-20 cm</td>
</tr>
<tr>
<td>15 cm - 24 cm</td>
<td>D</td>
<td>C</td>
<td>B</td>
<td>D-7011</td>
<td>Large arms, medium knees, small knees</td>
<td>20-24 cm</td>
</tr>
<tr>
<td>25 cm - 35 cm</td>
<td>E</td>
<td>D</td>
<td>C</td>
<td>E-7012</td>
<td>Large Knees, medium knees, small thighs</td>
<td>24-28 cm</td>
</tr>
<tr>
<td>36 cm - 44.9 cm</td>
<td>F</td>
<td>E</td>
<td>D</td>
<td>F - 7013</td>
<td>Large Knees, medium thighs</td>
<td>28-36 cm</td>
</tr>
<tr>
<td>45 cm - 50 cm</td>
<td>G</td>
<td>F</td>
<td>E</td>
<td>G - 7014</td>
<td>Large thighs</td>
<td>36-46 cm</td>
</tr>
<tr>
<td>51 cm - 60 cm</td>
<td>G</td>
<td>F</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61 cm - 70 cm</td>
<td>G</td>
<td>F</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Information provided by Convatec 2005.

**Information provided by Molnlycke 2010

**Washing of Tubigrip**—durability studies demonstrated no decrease in sub-bandage compression over 8 days when applied to a model leg and volunteer leg. However, sub-bandage pressure decreased by more than 29% when the bandage was subjected to four wash-dry cycles (Melhuish et al 2000), and should therefore be discarded and replaced after three washes to achieve maximum compression benefit.

**To achieve graduated 30 mm Hg. compression using Tubigrip tubular (using sizing for low compression):**

1. Cut first layer to go from above toes to below the knee providing 8 mm Hg.
2. Cut second layer to go from the toes to below the knee proving an additional 8 mm Hg.
3. Cut the third layer to fit from the toes to above the ankle in the gaiter area, providing a total of 24 mm Hg at the ankle (Melhuish et al 2000).

**Tubifast dressing retention bandage** does not provide any compression, but may act as a liner interface between the skin and the tubigrip to ease the application or hold dressings in place on difficult areas such as elbows or knees. Stretch the tubifast over the affected area- cover area below and above dressing by several cm. for adequate retention.

<table>
<thead>
<tr>
<th>Line colour &amp; SWCCAC Code</th>
<th>Product Usage**</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red - 7015</td>
<td>Small limbs</td>
<td>3.5 cm</td>
</tr>
<tr>
<td>Green- 7016</td>
<td>Small and medium limbs</td>
<td>5 cm</td>
</tr>
<tr>
<td>Blue -7017</td>
<td>Large limbs</td>
<td>7.5 cm</td>
</tr>
<tr>
<td>Yellow -7018</td>
<td>Extra-large limbs, heads, children’s trunks</td>
<td>10.75 cm</td>
</tr>
</tbody>
</table>
Section 10: Application of Simple Unna’s Paste Boot – Connie Harris (2008) Editorial assistance Sandra J. Landolt MD FRCPC (Internal Medicine) FRCPC (Dermatology) Consultant in Medical Dermatology and Internal Medicine as pertains to the skin. (CarePartners ET NOW P&P- used with permission)

General Information & Terminology:

Simple Unna’s Paste Boot: Named after German dermatologist Paul Gerson Unna, it consists of a paste bandage containing zine oxide ointment, 3 to 4 inches wide and 10 yards long (SWCCAC Code 2900)and wrapped in a spiral with fan-folds to prevent constriction and ischemia, and covered by a spiral wrapped kling gauze bandage. It is used for the treatment of venous stasis ulcers and other venous insufficiencies of the leg (Instructions follow)

Duke’s Boot: Created at Duke’s University in the late 1980’s, consists of a hydrocolloid dressing over the ulcer, covered by zinc paste bandage in fanfold spiral wrap, orthopedic padding and retentive cohesive compression bandage (SWCCAC Code 4200). As of Sept. 2010, this is the ONLY application for compression with this product that 3M Canada recommends as being safe.

Modified Duke’s Boot: Consists of alternate primary dressing over the wound, the zinc paste bandage in fanfold spiral wrap, a layer of orthopedic padding, and a layer of compression bandage specified by wound care specialist (e.g retentive cohesive compression bandage (SWCCAC Code 4200) or short-stretch compression (SWCCAC 4201.02,03,05)

Mechanism of Action for Simple Unna’s Paste Boot:  - A rigid or inelastic system. The paste bandage hardens over 24 hours to the consistency of cardboard, and provides hemodynamic support, protecting the skin and potentiating the calf muscle pump action when the individual ambulates. This improves the blood flow particularly on the deep veins and reduces edema. As the edema reduces, the wraps must be replaced to fit the smaller leg size.

Indications:

Provides a support system that can be utilized upon admission in the absence of signs of severe ischemia, when ABIs cannot be obtained due to edema or calcified vessels (see Contraindications).

- Refer to vascular surgeon particularly if there is continuing rest pain. Mixed arterial and venous ulcer with arterial insufficiency: low compression (Burrows et al. 2006) for ABI: 0.5-0.8 (Marston and Vowden 2003) (moderate ischemia), Ankle Sprain with venous insufficiency or atrophy
- Localized atopic dermatitis or venous dermatitis
- Can be used for mobile or immobile patients, works best if patient is able to ambulate some of the time.

Precautions

- Acute skin infections
- History of congestive heart failure
- Atrophy of muscles
- History of dermatitis- many patients are sensitive to some of the constituents of paste bandages, such as parabens preservatives, so it is advisable to patch test the patient with a small strip of bandage over at least 48 hours.
- Even if no sensitivity is noted with a patch test, an individual may go on to develop sensitivities on the involved limb, and any increase in dermatitis should result in the paste wrap being discontinued.

Contra-indications:

If any of the following signs and symptoms are present, do not implement Unna’s Boot without a doctor’s order and a vascular assessment such as ABI’s or segmental compression studies

- Pain in legs and feet when laying in bed with legs elevated and relieved by putting leg over the side of the bed or getting up and walking around
- Cold legs or feet
- Symptoms of intermittent claudication (characterized by muscle pain or cramping in the legs triggered by a certain amount of activity, such as walking, but disappears after a few minutes of rest. The location of the pain depends on the location of the clogged or narrowed artery. Calf pain is most common.)
- Diabetic microangiopathy (Damage to small blood vessels and capillary circulation causing retinopathy, nephropathy, neuropathy, diabetic foot disease)
- Dependent rubour/ pallor with elevation
- Loss of feeling or protective sensation so that the individual could not detect discomfort if the wrap were too tight.
Advantages
- Comfortable and soothes skin
- Protects skin from scratching

Disadvantages
- Sticky sensation in warm weather
- Contact Dermatitis may occur in some patients
- Less effective for non-ambulatory patients
- Pressure decreases with reduced edema (reapply)
- Cannot absorb large amounts of drainage and exudate may “strike-through” requiring changing.
- It does not provide compression during periods of inactivity.

Technique
Clean the patient’s skin thoroughly by washing with tap water (not saline or sterile water) using a mild soap (Dove for sensitive skin) and rinse well. Pat to dry with a clean towel (not 4x4”s).

Cleanse the wound as per Sections 10a & b Wound Cleaning Techniques.
Add moisturizer to normal skin or topical corticosteroid if ordered for dermatitis. Have patient flex the knee and dorsiflex (toes to nose) the foot to prevent pressure over the tibialis anterior tendon.

Apply Unna’s boot using a spiral layered application without any tension, smoothing the wrap with your hands using the following method:
Start at the base of the toes (metatarsophalangeal joints). Wrap upward in a spiral manner, overlapping about 50% of the previous layer, without pressure, **stopping at the lateral side of the leg with each turn, and fold back on itself (see ----- in diagram)**, avoiding any circumferential wrap that would cause constriction and potential pressure necrosis.
This also allows for expansion if edema should increase.
You must also allow for spread of the metatarsal bones and heel pad during gait. Continue the spiral, over the heel and upward to the tibial tubercle, being sure not to compress the peroneal nerve, which is just below the head of the fibula. Each turn must be done at an angle to avoid compromising the circulation.

Fanfolds - - - - along lateral leg prevent constriction if edema increases

The Unna’s Boot should be changed every 3-4 days initially, and then q 7days

If desired, 6-8 layers of paste wrap can be fanfolded back and forth just over the ulcer to create a semi-occlusive dressing.
If bony prominences along anterior foot and leg are evident, use folded gauze to cushion these areas. Finish below tibial tubercle of knee, about 1 inch below the knee. If constriction develops as the dressing hardens, make a 2-inch slit in it below the knee.
Place gauze on the outer side of the paste wrap over the ulcer area to absorb exudate and prevent strike-through (Strike-through is defined as the point at which absorbed fluid reaches the outer surface or edge of a dressing) (Thomas and Fram 2001)
Wrap the Unna’s boot with gauze kling-style bandage applied in a figure-8 pattern (this will be less likely to slip and fall down than a spiral wrap).
Patient Teaching

- Keep the Unna boot dry.
- If the bandage falls down or causes discomfort, call the nurse to have it changed.
- If the drainage becomes visible on the outside of the bandage before the next scheduled visit, call the nurse.
- If you experience increased pain when you go to bed at night and elevate your legs, have someone remove the bandage or call the on-call nurse to come and do this.
- Increased pain with the bandage is not expected and should not be ignored.
- Do not take a tub bath or shower when wearing an Unna boot unless the boot is covered with a large plastic bag and the patient is not at risk of slipping.
- In some cases, sponge bathing may be the only option.
- You should be able to wear a sock or stocking over an Unna boot as well as their regular shoes. If your foot is swollen, a wider shoe or slipper may be needed for the first few days, but then once the edema starts to decrease, your shoes or slippers should fit better.
- Your toes should not turn blue. If they do, remove the wrap immediately and call the nurse. The colour should return to normal within a short time (less than one hour).
### Definition of Wound Type

Mixed symptoms compatible with both venous and arterial disease
- ABI between 0.5 and 0.8 should be healable depending on other co-morbidities
- Symptoms of venous disease but pain is different:
  - Intermittent claudication (early)
  - Night time rest pain (late disease)
  - Pain with elevation
  - Pain may be masked in diabetics (neuropathy)
- Possible cool skin
- Thickened toenails
- Possible edema
- Possible Pallor (on elevation)/Dependant rubor
- Ulcers may have elements of both kinds of disease:
  - Venous shape and location /or ulcer may be circumferential
  - Yellow/black fibrous base
  - Wound bed may be dry

### Nursing Service Goals

**Determine client’s goals**

- Find compression system that can be tolerated
- Manage Pain
- Heal wound

**Healing Service Plan**

- Prevent deterioration
- Manage Pain

**Maintenance Service Plan**

- Effective Pain control is absolutely imperative in order to allow client to tolerate any compression at all.
- Avoid constrictive agents (nicotine, caffeine, cold environment)
- Consider Pentoxyfilline, antiplatelet drugs
- Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5 (Woundpedia)
- Elevate HEAD of bed on 6” blocks if only way to get individual recumbent at night
- Do NOT elevate feet above heart
- Warm, loose socks
- Avoid heating pads

### Clinical Interventions

**Wound Assessment:**

- Use a validated and reliable wound assessment tool

**Other:**

Must treat both disease components:
- Use maximum safest compression to decrease edema and improve venous return--
  maximum safest compression (Tubigrip low, Coban 2 Lite, (Currently SA #) Comprilan Parkwood Wrap at direction of wound care specialist/physician)
- Compression bandaging is an added skill for clinicians and there must be an educational component and mentoring to ensure safety and efficacy in application.
- Prevent pressure damage in clients with impaired peripheral perfusion, thin or altered limb shape, foot deformities or dependent edema, R/A, reduced sensation, long-term steroid use and loss of calf muscle pump by choosing an inelastic (rigid) bandaging system, applying extra padding over bony prominence (Comotera et al. 2008) also the achilles and tibialis anterior tendon areas.

**Compressio**
<table>
<thead>
<tr>
<th>SWCCAC WMP: Mixed venous/ Arterial Ulcerations</th>
<th>Clinician Service Planning Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Moist wound treatment if healing is expected <em>NB-The RNAO BPG's Assessment and Management of VSU's Recommendation #20 states to “choose a type of dressing depending on the amount of exudate and phase of healing.”</em>*</td>
<td></td>
</tr>
<tr>
<td>Common Dressing Supplies:</td>
<td></td>
</tr>
<tr>
<td>• Alginates, hydrofibers, foams and exudate absorbers.</td>
<td></td>
</tr>
<tr>
<td>• If the dressing adheres to the wound surface, use a non-adherent layer compatible with the secondary dressing (e.g. do not use petrolatum products in combination with silvers.)</td>
<td></td>
</tr>
<tr>
<td>AVOID use of adhesive and sensitizing products</td>
<td></td>
</tr>
<tr>
<td>Common Dressing Supplies* for infection/bacterial burden management</td>
<td></td>
</tr>
<tr>
<td>• See pages 19-21</td>
<td></td>
</tr>
<tr>
<td>Local Pain Management:</td>
<td></td>
</tr>
<tr>
<td>• May need to warm cleansing solution to body temperature to decrease pain; have dressings prepared before taking old dressing off to decrease length of time wound is exposed to air.</td>
<td></td>
</tr>
<tr>
<td><strong>CM Initial Nursing Service Authorization Guideline</strong></td>
<td>Block of 30 visits over 12 weeks</td>
</tr>
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<td>ETN/WCS- Block of 3 visits over 3 months.</td>
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<td><strong>Nursing Visit Frequency goals</strong></td>
<td>☐ Healing Service Plan</td>
</tr>
<tr>
<td>Initial authorization</td>
<td></td>
</tr>
<tr>
<td>• May need OD for first several days until exudate decreases in response to compression Rx, then decrease to q 2 days, then q 3—then q 7 days if possible. NOTE that the faster the appropriate compression Rx is implemented, the faster the wound should heal.</td>
<td></td>
</tr>
<tr>
<td>If OD visits requested:</td>
<td></td>
</tr>
<tr>
<td>• See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds</td>
<td></td>
</tr>
<tr>
<td>☐ Maintenance or Palliative Service Plan</td>
<td></td>
</tr>
<tr>
<td>• Weekly</td>
<td></td>
</tr>
<tr>
<td>• Potential discharge when client/ family is able to care for wound</td>
<td></td>
</tr>
<tr>
<td>• Consider alternate funding such as ODSP for bandages/ dressings</td>
<td></td>
</tr>
<tr>
<td><strong>Expected Time Frame for Progress toward Healing</strong></td>
<td>45% of individuals with low ABPIs experience healing with light compression (Woundpedia)</td>
</tr>
<tr>
<td><strong>Criteria for ETN/WCS or Multidisciplinary Consult</strong></td>
<td></td>
</tr>
<tr>
<td>• ETN/ Wound Care Specialist to do ABPI, determine appropriate compression or as per F.U.N. Criteria</td>
<td></td>
</tr>
<tr>
<td>• Physio Therapy consult for Adjunctive Therapy assessment if wound not healed at 3 months</td>
<td></td>
</tr>
<tr>
<td><strong>Issues for CM</strong></td>
<td>As per venous leg ulcer above</td>
</tr>
</tbody>
</table>
**Definition of Wound Type**

Lymphedema is the result of accumulation of fluid and other elements (e.g. protein) in the interstitial tissue spaces due to an imbalance between interstitial fluid production and transport (usually low output failure) (Moffat et al 2006). It is caused by congenital malformation of the lymphatic system, or damage to lymphatic vessels and/or lymph nodes. It is markedly noticeable in the legs and arms, but can involve the genitalia, and trunk also. Stemmer's sign is a thickened skin fold at the base of the second toe or second finger that is a diagnostic sign for lymphedema. A positive result occurs when this tissue cannot be lifted but can only be grasped as a lump of tissue. In a negative result, it is possible to lift the tissue normally.

Secondary lymphedema results from removal or damage to lymph nodes e.g. during surgery, fibrosis of the nodes secondary to radiation Rx, injury or infection. There is excess fibrosis, lymphatic abnormality, +ve Stemmer's sign, and recurrent infections. The feet and toes, hands and fingers are also involved.

End-stage Lymphedema secondary to tumour blockage of the lymphatic system is managed differently from chronic Lymphedema.

Veno-lymphedema is associated with long standing venous disease with Woody fibrosis, +ve Stemmers sign.

Lipidema is a different etiology characterized by excess fat, fat pad around ankles, soft tissue with no involvement of feet and –ve Stemmer’s sign. It does not respond to compression therapy.

Lipolymphedema occurs when longstanding Lipidema develops Lymphedema.


### Nursing Service Goals

**Determine client’s goals**

- **Healing Service Plan**
  - Reduction of edema using elevation, exercise, manual lymphatic drainage massage and/or compression bandaging
  - Compression garments to be fitted and obtained for life-long compression

- **Maintenance Service Plan**
  - Bandage to protect skin, absorb drainage, promote comfort and mobility

- **Palliation Service Plan**
  - Reduction of edema using subcutaneous drainage procedure to improve comfort and mobility

### Clinical Interventions

**Wound Assessment:**

- Use a validated and reliable wound assessment tool

**Other:**

- **Healing Service Plan** – requires a multidisciplinary model of care including medical assessment for definitive diagnosis, wound clinician knowledgeable in best practices for Lymphedema, Physiotherapy, manual lymph massage, nurses competent in wrapping Lymphedema wraps.
  - The London Regional Cancer Centre is now treating women with early signs of Lymphedema secondary to axillary resection for breast cancer with compression bandaging systems.
  - Successful treatment of chronic lymphedema can be achieved through multiple modalities. These include: skin care, prevention and treatment of cellulitis/erysipelas, elevation, exercise, manual lymph drainage, intermittent pneumatic compression,
multi-layer inelastic lymphedema bandaging, compression garments, exercise/movement and elevation, psychosocial support, palliative care and surgery.

- The compression wraps usually include a prescribed method of wrapping the fingers or toes, padding tendons and bony prominences with foam, rolls of foam applied first and then a short stretch bandage such as Comprilan applied in several layers. More recently, applications of the 3M Coban 2 layer wrap are also being used.

**Compression bandaging is an added skill for clinicians and there must be an educational component and mentoring to ensure safety and efficacy in application.**

**Palliative Service Plan**

- For palliation of end-stage edema secondary to tumor blockage or other complications of cancer, a subcutaneous drainage procedure has been developed.

**Support Groups:**
Lymphovenous Canada [www.lymphovenous-canada.ca](http://www.lymphovenous-canada.ca)
Lymphovenous Association of Ontario [http://www.lymphontario.ca/](http://www.lymphontario.ca/)

There is no support group located in SW at this time. The Waterloo Region Lymphedema Support Group meets monthly in the Victoria Room, Victoria Place, 290 Queen Street South, Kitchener on the last Tuesday of each month at 7pm. What is it? Am I at risk for it? How did I get it? How do I manage it? Does everyone feel this way about it? What can I do about it? Call Melody Southgate, RMT, CDT at 519-653-2101

| Certified Lymphedema Therapists in SW (March 2011) | Esther Epp-Kaethler, RN, CDT Thornbury (519) 599-6597 estherkaethler@hotmail.com  
Helen Murray, RN, CDT London Lymphcare Centre (519) 913-0181 hlnmr407@gmail.com |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------|
| **Hospitals in SW with Lymphedema programs (March 2011)** | **London Health Science Centre Victoria Hospital**  
800 Commissioners Road East  
London N6A 5W9  
Linda Evans, PT  
519-685-8117  
519-685-8051 (fax)  
Primary and Secondary LE patients, referred by physician  
Assessment, ADP authorizer, compression bandaging, education, pump, refer out for MLD  
**London Regional Cancer Program**  
790 Commissioners Road East  
London N6A 4L6  
Mia Pearson  
Intake Clerk (New Patient Referral)  
Lyn Kligman,  
Acute Care Nurse Practitioner  
519-685-8602  
519-685-8664 (fax)  
Secondary LE related to all cancers  
Weekly clinic every Monday: assessment, education for self management, referral to community resources for garment fitting, physiotherapy, MLD, CCAC for compression bandaging, ADP authorizer, insurance prescriptions  |
| **CM Initial Nursing Service Authorization Guideline** | **Block of 30 visits over 12 weeks**  
If ABPI provided and specific compression bandaging ordered, if ulcer < 5cm² or <6 months duration, initiate referral for visiting nursing services to teach and reduce ETN/WCS- Block of 3 visits over 3 months.  
**Nursing Visit Frequency Guideline**  
Nursing services to teach and reduce—but recognize that self-care for compression bandaging is very difficult, and may only be appropriate in a limited number of client situations.  
- ETN/WCS needed re: Lymphedema assessment and management  
- May require daily if edema is expected to reduce quickly, so that compression bandages would be falling down becoming ineffective or causing risk of tourniquet |
### SWCCAC WMP: Lymphedema Clinician Service Planning Guide

| **Expected Time Frame for Progress toward Healing** | • When limb measurements have been unchanged on three consecutive visits, it is time to look at fitting for compression garments funded through ADP. |
| **Criteria for ETN/WCS or Multidisciplinary Consult** | • Massage therapist for Manual Lymph Drainage (client must pay but family members can be taught to perform.)  
• **ETN/WCS** to assess ABPI if lower legs involved, make recommendations for type of lymphedema compression bandages and assist with recommendations for ADP program.  
The ADP program includes the following benefits for people with Lymphedema:  
• Specialized lymphedema assessment and treatment recommendations by the lymphedema team with yearly follow-up  
• Assistive Devices Program (ADP) coverage of lymphedema compression garments for any client with lymphedema (75% of the cost of up to six prescriptions per year. Each prescription is for one garment to wash and one garment to wear)  
• Assistive Devices Program (ADP) coverage of lymphedema garments for any client with primary lymphedema (75% of the total cost of pump and accessories required as a one time purchase plus compression garments three times a year)  
• Working with the referring physician, should facilitate referrals to physician who is willing to perform an assessment of the patient regarding their Lymphedema status, and complete the Assistive Devices (ADP) application papers for the fitting and coverage of the compression garment. Local physicians who will do this are Dr. Ken Harris, Vascular Surgeon at London Health Sciences. 519-685-8500-76780# Fax 519-667-6853 or Dr. Tom Forbes, Vascular Surgeon, London Health Sciences 519-667-6794 Fax 519-667-6853.  
• If the lymphedema is cancer-related, an oncology physician may sign the ADP application.  
• It may be necessary to request the following diagnostic tests prior to assessment at a Lymphedema clinic: 1. Abdominal Ultrasound  2. Bilateral Venous Duplex Studies  
• **Physio Therapy consult** for intermittent pneumatic compression pump assessment where bandaging is not producing reduction in Lymphedema. IPC should be prescribed and performed by practitioners who have received appropriate training at specialist level (Moffat et al. 2006)  
• **Physio Therapy consult** for Adjunctive Therapy assessment for any wounds not healed at 3 months  
• **Social work consult** for quality of life issues—may need psychology referral. |

**Issues for CM**  
Assess appropriateness for Flex Clinic.
**SWCCAC WMP: Arterial Ulcer**

**Clinician Service Planning Guide**

**Definition of Wound Type**

Occurs due to insufficient arterial blood supply (APBI<0.6)

**Contributing Factors:**
- Smoking, diabetes, hyperlipidemia, hypertension, CAD

**Results in:**
- A lack of oxygenated blood reaching the tissue especially in the lower limbs
- Tissue ischemia and necrosis
- Need increased blood supply for healing to occur
- Diagnostic studies needed to identify the cause

**Physical findings:**
- Pain with elevation of lower limbs
- Pulselessness (weak or absent)
- Pallor (on elevation)/ Dependant rubor
- Shiny skin / wasted muscles
- Hammer toes
- Distal gangrene of toes with palpable pulse and/or adequate circulation may indicate microemboli from proximal atheromatous plaques.

**ULCER characteristics:**
- Wound bed pale & dry/minimal exudates
- Yellow/black fibrous base
- Varying locations: usually distal lower extremities below the ankle (Tip of toes, heels, sides of foot)
- Often precipitated by trauma
- Deep, punched out appearance
- Even wound edges

**Nursing Service Goals**

**Determine client’s goals**

☐ **Healing Service Plan**

May require revascularization in order to heal:
- Wound healing
- Pain management
- Control and prevent infection
- Decrease dressing changes

☐ **Maintenance Service Plan**

- Prevent deterioration
- Pain, exudate and odour control

**Clinical Interventions**

**Wound Assessment:**
- Use a validated and reliable wound assessment tool

**Other:**

**Interventions to improve health:**
- Optimize nutritional intake and general health status (medical review)
- Vascular assessment
- Correction of underlying disease process if possible
- Improve nutrition and health status
- Explain benefit of increased exercise to decrease claudication
- Use of bed cradle to elevate bedding
- Avoid constrictive activities (nicotine, caffeine, tight shoes or stockings)
- Elevate HOB on 4-6” blocks, keep heart above feet for ischemic pain
- Do not elevate legs
- Avoid heating pads, ice bags
- DO NOT USE COMPRESSION, avoid tight socks

---

47 South West CCAC Wound Management Program for Clinicians –Updated April 2011
### SWCCAC WMP: Arterial Ulcer Clinician Service Planning Guide

#### Dressing Selection:
- **“NB - Note that the RNAO BPGs for Assessment and Management of Foot Ulcers for People with Diabetes state that “Application of moisture retentive dressings in the context of ischemia and or dry gangrene can result in a serious life- or limb-threatening infection”.”**
- Debridement (if circulation is adequate to support healing), bacterial balance, exudate control, protect periwound skin.

**For dry healing wounds**
- Hydrogel (to rehydrate if healable) covered by foam dressing or semi-occlusive dressing. **Warning:** Use hydrocolloid cautiously if risk of infection (contra-indicated if infection present).

**For exudating healing wounds:**
- Hydrofiber or alginate covered by exudate absorber.

**For maintenance wounds:**
- Betadine or Chlorhexidine painted on wound.
- Comfort measures ie WHO pain ladder analgesia (this will be posted in the South West Regional Wound Care Toolkit on thehealthline.ca later this spring)

In general, advanced wound products will not be utilized when the wound is considered NON-healable or Maintenance, but this will be balanced with the need for exudate management and reduced visit frequency.

| CM Initial Nursing Service Authorization Guideline | Block of 30 visits over 12 weeks  
ETN/WCS- Block of 3 visits over 3 months. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing Visit Frequency Guideline</strong></td>
<td><strong>Nursing services to teach and reduce</strong></td>
</tr>
</tbody>
</table>
|                                                   | □ Healing Service Plan  
  - In general 1 to 3 times per week over 4 weeks. Revascularization needs to occur before healing is possible.  
□ Maintenance Service Plan  
  - 1 to 2 times per week  
**If OD visits requested:** See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds  
  - Potential discharge when family is able to care for wound  
  - SWCCAC Benchmark is that only 15% of visits for wound care should be daily. |

| Expected Time Frame for Progress toward Healing | Will make slow progress  
If there is no possibility of improving circulation to the affected leg, the goal of treatment will be palliative. |

| Criteria for ETN/WCS or Multidisciplinary Consult | **ETN/WCS:**  
  - F.U.N. Criteria (see page 6)  
  - Infection of the wound can be catastrophic  
  - Debridement if healable  
**Other Disciplines:**  
  - Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5 (Woundpedia)  
  - Any wound not healed at 3 months- Physio Therapy consult for Adjunctive Therapy assessment |

| Issues for CM | Determine appropriateness for Flex Clinic. |
Diabetic Foot Ulcer Algorithm

CCAC receives a referral - diagnosis of Diabetic Foot Ulcer

CM conducts assessment – RAI-CA
SRC = 93

Indicators for ET consult:
- Age of the wound >2 months
- Presence of necrotic tissue
- Presence of peri-wound callus
- Infection? Probes to bone

Set up nursing visits Block of 20 visits (over a 2 month period)
Wound healing goal

Diabetic Management Nutrition
Visits – indicators from RAI-CA or RAI-HC, blood sugar history

OT Visits
Assess for equipment, home safety

PSW Visits (if indicated)

Nursing Assessment

Is debriding required

yes

Initial PSPR will indicate frequency of visits for debriding

no

Consult visit basis

Exudate amount exceeds what can be managed by less frequent changes

no

Wound requires mechanical debridement

yes

Wound is infected and not yet responding to treatment

no

Wound is located near anus with fecal contamination

no

no

no

Wound is appropriate for advanced wound dressing and reduced dressing change/visit frequency (q3-4 days)

Contact physician for new order

Complete initial PSPR and Wound Care Status Report – request ET consult

Wound care status report q3 weeks while wound is healable

Non Adherent Client
Goal setting
Case conferencing

PT (if indicated)

Set up nursing visits Block of 20 visits (over a 2 month period)
Wound healing goal

Diabetic Management

ETWCS Consult
Block of 4 visits over 3 month period

Nutrition Visits – indicators from RAI-CA or RAI-HC, blood sugar history
### Definition of Wound Type

Neuropathy of the feet in people with diabetes leads to changes in muscle and bone alignment. Pressure over bony prominences leads to callus formation and the absence of sensation predisposes the area to skin breakdown and ulcer formation. This pressure must be offloaded (relieved) to prevent further damage and to promote healing. The risk of lower extremity amputation is 15 to 46 times higher in diabetics than in persons who do not have diabetes mellitus (Armstrong and Lavery 1998). Greater than 85% of lower leg amputations are precipitated by diabetic foot ulcers (Jones 2006), while 15% of DFUs end in amputation (Snyder et al. 2010)

- 50% have opposite leg amputated in 5 years.
- 5-year mortality rates were 46% for those with DFU and PVD compared to 48% for those patients who did have an amputation (Robbins et al. 2008)
- Early detection and appropriate treatment of these ulcers may prevent a significant percentage of amputations.
- Most DFU’s occur at areas of increased pressure - 90% of diabetic plantar ulcers are attributed to pressure (Orsted, Searles, Trowell et al. 2006).

The RNAO Clinical Best Practice Guidelines Assessment and Management of Foot Ulcers in Persons with Diabetes is available for free download at: [http://www.rnao.org/Storage/11/536_BPG_Assessment_Foot_Ulcer.pdf](http://www.rnao.org/Storage/11/536_BPG_Assessment_Foot_Ulcer.pdf)


### Nursing Service Goals

**Determine client’s goals**

**New Diabetic Foot Ulcer Initiative to be launched May 1 - July 1, 2011**

- “My Diabetic Foot Ulcer” - teaching booklet to review with clients
- “My Wound Care- Diabetic Foot Ulcer”- self-care guide
- SWCCAC Diabetic Foot Ulcer Care Plan with time-specific goals

#### Healing Service Plan

- Blood sugar control (HgA1C)
- Wound Healing
- Teach Client/Caregiver wound management and prevention education
- Decrease dressing changes

#### Maintenance Service Plan

- Prevent or delay amputation
- Prevent or delay deterioration of the wound
- Client/Caregiver education about wound care

### Clinical Interventions

**Wound Assessment:** Ideally, a multi-disciplinary team should be involved including but not limited to:

- Certified podorthist/ chiropodist/ podiatrist to be fitted for pressure offloading orthotic devices –this is absolutely essential. Off-loading device must be worn every time their foot touches the floor.
- **Dietitian:** Optimize nutritional intake
- Vascular assessment to determine if wound is healable.
- **Orthopedic surgeon** for recurrent forefoot ulcerations should be referred to assessment re: surgical interventions (e.g. may have shortened Achilles tendon 2° to neuropathy)
- **Surgical assessment** needed for Neuropathic wound, Acute Charcot joint, or Infected diabetic foot if non-surgical interventions not achieving healing (Lavery et al. 1996)
• **Endocrinologist/ Diabetologist:** Correlation between poor diabetic control and increased risk of complications, optimize general health status

• **Infectious diseases:** Infected wounds may require Infectious diseases consult. NB* Pain in an insensate foot can signify deep infection/osteomyelitis.

• **Vascular Consult** if Peripheral Arterial Disease present (ABPI less than 0.5)

• **Wound care specialist, pharmacist** as indicated

• **Physiotherapy** if adjunctive therapy indicated

**General**

- Limit foot soaks to 5 minutes 3 x weekly

**Wound Bed Prep:**

- Debridement, bacterial balance, exudates control, protect periwound skin.
- NB* Pain in an insensate foot can signify deep infection/osteomyelitis.
- Infected wounds may require Infectious diseases consult
- Vascular Consult if Peripheral Arterial Disease present (ABPI less than 0.5)
- VAC assessment for acute surgical wounds in diabetic foot

**NB - Note that the RNAO BPGs for Assessment and Management of Foot Ulcers for People with Diabetes recommend the following:**

- Assess the wound bed for bacterial balance, exudate level and the need for debridement.
- Select a dressing or combination of dressings that can manage and or control the above wound environment.
- Use a dressing that will keep the wound bed continuously moist and the peri-wound skin dry.
- Choose a dressing that controls exudate but does not dry the ulcer bed.
- Eliminate wound dead space by loosely filling all cavities with dressing material.
- **Warning:** Occlusive dressings such as hydrocolloids are not recommended for ulcers on the plantar foot - Mulder et al 2003, Keast 2009).

**For healing dry DFU wounds**

- Hydrogel (to rehydrate) covered with non-occlusive exudate absorber or foam dressing.

**For healing exuding wounds**

- Hydrofiber or alginate covered with exudate absorber or foam  Note - Foam dressings DO NOT reduce the interface pressure. Off-loading devices and orthotics are required.

**NB - Note that the RNAO BPGs for Assessment and Management of Foot Ulcers for People with Diabetes state that “Application of moisture retentive dressings in the context of ischemia and or dry gangrene can result in a serious life- or limb-threatening infection”.**

**For maintenance wounds**

- Paint with betadine, prevent exudate from soaking through the outer dressing.
- Comfort measures i.e. analgesia

**For infection/bacterial burden management—**

- Diabetic ulcers require close evaluation. Signs of an infection in a diabetic foot ulcer can be masked due to the immuno-compromised status of the individual.
- Topical antimicrobials can be used to reduce bacterial burden in the presence of superficial wound infection, but never take the place of systemic antibiotics when those are needed for deeper infections. See Page 17.
- If you are not sure of the nature of the infection, choose a non-occlusive dressing as the cover dressing. Dressing frequency for infected DFU should be increased until symptoms of infection are resolved.

**If client is unwilling to make lifestyle changes** that will allow the wound to heal (control
<table>
<thead>
<tr>
<th><strong>SWCCAC WMP: Diabetic Foot Ulcer Clinician Service Planning Guide</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CM Initial Nursing Service Authorization Guideline</strong></td>
</tr>
<tr>
<td>Block of 30 visits over 12 weeks</td>
</tr>
<tr>
<td>ETN/WCS- Block of 4 visits over 3 months.</td>
</tr>
<tr>
<td><strong>Nursing Visit Frequency Guideline</strong></td>
</tr>
<tr>
<td>Visiting Nursing teach and reduce</td>
</tr>
<tr>
<td>□ Healing Service Plan</td>
</tr>
<tr>
<td>• In general, visit frequency should be 1 to 3 times per week. Dressing change frequency is determined by the size of the wound, the amount of exudate and the ability of the dressing to contain it.</td>
</tr>
<tr>
<td>□ Maintenance Service Plan</td>
</tr>
<tr>
<td>• 1 to 2 times per week</td>
</tr>
<tr>
<td>• Potential discharge when family is able to care for wound</td>
</tr>
<tr>
<td><strong>If daily visits requested:</strong></td>
</tr>
<tr>
<td>• See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds.</td>
</tr>
<tr>
<td>• SWCCAC Benchmark is that only 15% of visits for wound care should be daily.</td>
</tr>
<tr>
<td><strong>Expected Time Frame for Progress toward Healing</strong></td>
</tr>
<tr>
<td>If &gt; 50% healing at 4 weeks, should be healed by 16-24 weeks (calculates to &gt;37.5% healing at 3 weeks)</td>
</tr>
<tr>
<td>If &lt;50% healing at 4 weeks (&lt;37.5% at 3 weeks) outcomes may be catastrophic (Bolton 2010)</td>
</tr>
<tr>
<td><strong>Criteria for ETN/WCS or Multidisciplinary Consult</strong></td>
</tr>
<tr>
<td>ETN/WCS:</td>
</tr>
<tr>
<td>• F.U.N. (see page 6)criteria</td>
</tr>
<tr>
<td>• ABPI to determine healing potential</td>
</tr>
<tr>
<td>• Debridement of necrotic tissue and callus</td>
</tr>
<tr>
<td>• Wound is &gt; 4 weeks in age at admission</td>
</tr>
<tr>
<td>• Wound probes to bone</td>
</tr>
<tr>
<td>• Wound not healed &gt; 50% at four weeks (calculates to &gt;37.5% healing at 3 weeks)</td>
</tr>
<tr>
<td><strong>Other disciplines:</strong></td>
</tr>
<tr>
<td>• Physio Therapy consult for Adjunctive Therapy assessment DFU not healed &gt; 50% at four weeks (calculates to ≥37.5% healing at 3 weeks)</td>
</tr>
<tr>
<td>• Physio Therapy consult for Adjunctive Therapy assessment if wound not healed at 3 months</td>
</tr>
<tr>
<td>• Ideally, a multi-disciplinary team should be involved including but not limited to: chiropody, wound care specialist, endocrinoloist/ diabetologist, dietitian, pharmacist and infectious diseases, orthopedic surgeon as indicated, Glucose assessment and intervention for improving blood glucose control</td>
</tr>
<tr>
<td>• Infected wounds may require Infectious diseases consult</td>
</tr>
<tr>
<td>• Vascular Consult if PAD present</td>
</tr>
<tr>
<td>• Recurrent forefoot ulcerations should be referred to orthopedic surgeon for assessment re: surgical interventions (e.g. may have shortened Achilles tendon 2° to neuropathy)</td>
</tr>
<tr>
<td>• Surgical assessment needed for Neuropathic wound, Acute Charcot joint, or Infected wounds</td>
</tr>
</tbody>
</table>

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### SWCCAC WMP: Diabetic Foot Ulcer
Clinician Service Planning Guide

| Issues for CM |  
|---------------|---|
| • Determine appropriateness for Flex Clinic. |  
| • If client is unwilling to make lifestyle changes that will allow the wound to heal (control blood glucose level, obtain and wear pressure offloading devices, keep dressing clean and dry etc.) a Case Management Conference should be held with CM, primary nurse, ETN/WCS, client and physician if possible to outline risk of lower leg amputation due to catastrophic consequences. Nursing agencies are encouraged to use risk identification forms to alert CM to risk. |  
| • If client does not obtain a pressure-off-loading device and wear it at all times on the affected foot, the goal of treatment may be maintenance. Case Manager to assist client to access funding resources (SW). |  
| • If there is no possibility of improving circulation to the affected leg, the goal of treatment will be maintenance. |
Referral / update received for client with pressure ulcer identified (assign to SRC 93)

Initiate nursing service and OT service (unless OT assessment has been done recently)
Initiate nutrition service if nutrition risks identified in contact assessment / mini functional

VN conducts nursing assessment, including Braden

Develop care plan based on assessment results, addressing risk factors identified in Braden

Complete PSPR and Initial Wound Care Status Report identifying other referrals required (e.g., nurse continence)

CM forwards all care plans to all providers, including PSH, to keep all members of care team informed

OT conducts initial assessment

Develop care plan to address pressure relief, positioning, mobility, client/family education

Dietitian conducts initial assessment

Develop care plan to address nutritional deficiencies / risks

Pressure Ulcer

Exudate amount exceeds what can be managed by less frequent changes

Wound requires mechanical debridement

Wound is infected and not yet responding to treatment

Wound is located near anus with fecal contamination

Wound meets daily visit criteria

Wound appropriate for advanced wound dressing and reduced dressing change / visit frequency (q3-4 days)

Wound meets daily visit criteria

Complete PSPR

Complete PSPR

Complete PSPR
Definition of Wound Type

- A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction.
- A number of contributing or confounding factors are also associated with pressure ulcers:
  - poor nutritional status, impaired mobility, low level of activity, impaired sensory perception, advanced age, low arteriole pressure, poor oxygenation, unresolved moisture on skin, friction and shear, number and severity of co-morbidities.
- You can never “back-stage” an ulcer – e.g. once a stage IV, always a stage IV.

The Wound Ostomy Continence Nurses Society in the USA has developed the following definitions about avoidable and unavoidable pressure ulcers:

**AVOIDABLE PRESSURE ULCERS** - Occur when the resident develops a pressure ulcer and the facility did NOT do one or more of the following:
- evaluate the resident’s clinical condition and pressure ulcer risk factors;
- define and implement interventions that are consistent with resident needs, resident goals, and recognized standards of practice; or
- monitor and evaluate the impact of the interventions; or revise the interventions as appropriate.

**UNAVOIDABLE PRESSURE ULCERS** - The resident developed a pressure ulcer even though the facility had:
- evaluated the resident’s clinical condition and pressure ulcer risk factors;
- defined and implemented interventions that are consistent with resident needs, goals, and recognized standards of practice;
- monitored and evaluated the impact of the interventions; and
- revised the approaches as appropriate.

**Skin Changes At Life’s End (SCALE)**

- Kennedy Terminal Ulcer (KTU) is a type of pressure ulcer that some individuals develop as they are dying. It can be shaped like a pear, butterfly, or horseshoe, usually on the coccyx or sacrum but can occur in other areas. The ulcers can appear as red, yellow or black, occur suddenly, and usually indicate that death is imminent (Sibbald, Krasner et al 2008).

<table>
<thead>
<tr>
<th>NPUAP Staging System for Pressure Ulcers (Updated 2007)</th>
<th>Suspected Deep</th>
<th>Stage I</th>
<th>Stage II</th>
<th>Stage III</th>
<th>Stage IV</th>
<th>Unstageable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue Injury</td>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

The RNAO Clinical Best Practice Guidelines for the Risk Assessment and Prevention of Pressure Ulcers and the Assessment and Management of Stage I-IV Pressure Ulcers are available for free download at:

- [http://www.rnao.org/Storage/12/638_BPG_Pressure_Ulcers_v2.pdf](http://www.rnao.org/Storage/12/638_BPG_Pressure_Ulcers_v2.pdf)

The Canadian Association of Wound Care’s Best Practice Recommendations for the Prevention and Treatment of Pressure Ulcers is available for free download at:


**Nursing Service Goals**

- Determine client’s goals
- New Pressure Ulcer Wound Initiative to be launched March 21- May 21, 2011
  - “My Pressure Ulcer” - teaching booklet to review with clients
  - “My Wound Care-Pressure Ulcer” - self-care guide
  - SWCCAC Pressure Ulcer Wound Care Plan with time-specific goals
**Wound Management Program for Clinicians – Updated April 2011**

<table>
<thead>
<tr>
<th>Clinical Interventions</th>
</tr>
</thead>
</table>
| **Healing Service Plan** | • Use a validated and reliable wound assessment tool and Stage Pressure ulcers (see above)  
| | **Other:**  
| | • Optimize nutritional intake and general health status.  
| | • Braden Scale for Pressure Sore Risk and interventions based on identified risk e.g.  
| | • contiience issues= Nurse Continence Advisor referral  
| | • Pressure redistribution surfaces are critical to prevention and healing.  
| **Client Education:** | New Pressure Ulcer Management Wound Initiative to be launched March 21- May 21, 2011.  
| | • “My Pressure Ulcer” - teaching booklet to review with clients  
| | • “My Wound Care-Pressure Ulcer” - self-care guide  
| | **SWCCAC Pressure Ulcer Care Plan**  
| **Maintenance Service Plan** | • Maintain wound environment.  
| | • Teach client/caregiver wound management.  
| | • Goals may now be pain, exudate and odour control.  

<table>
<thead>
<tr>
<th>Wound Assessment:</th>
</tr>
</thead>
</table>
| • Use a validated and reliable wound assessment tool and Stage Pressure ulcers (see above)  
|  
| Other: |  
| • Optimize nutritional intake and general health status.  
| • Braden Scale for Pressure Sore Risk and interventions based on identified risk e.g.  
| • contiience issues= Nurse Continence Advisor referral  
| • Pressure redistribution surfaces are critical to prevention and healing.  

**Client Education:** | New Pressure Ulcer Management Wound Initiative to be launched March 21- May 21, 2011.  
| | • “My Pressure Ulcer” - teaching booklet to review with clients  
| | • “My Wound Care-Pressure Ulcer” - self-care guide  
| | **SWCCAC Pressure Ulcer Care Plan**  

<table>
<thead>
<tr>
<th>Healing Service Plan</th>
</tr>
</thead>
</table>
| • Principles of wound bed preparation: debridement, bacterial balance, exudate control,  
| protect periwound skin. *NB- Note that the RNAO BPGs for Assessment and Management  
| of Stage I to IV Pressure Ulcers recommends that dressings should be selected based on  
| the principles of moist wound healing  
|  
| **For dry healing wounds:** | Hydrogel (to rehydrate) covered with Hydrocolloid, or occlusive/ semi-occlusive exudate  
| absorptive dressings  
|  
| **For exudating healing wounds:** | Hydrofiber or alginate covered by exudate absorptive dressings  
| • Topical Negative Pressure therapy (VAC) may be appropriate following surgical  
| intervention for Stage III or IV healable pressure ulcers (not eligible in SWCCAC for  
| chronic wounds)  

<table>
<thead>
<tr>
<th>Maintenance wounds</th>
</tr>
</thead>
</table>
| • Betadine-soaked gauze and absorbent cover dressing  
|  
| **Common Dressing Supplies* for infection/bacterial burden management** |  
| • See Page 17  
| • Cover with exudate absorptive dressings. If unsure of the type of infection, choose a  
| non-occlusive  

<table>
<thead>
<tr>
<th>Maintenance/ Palliative Service Plan</th>
</tr>
</thead>
</table>
| • Avoid higher cost advanced wound treatment and focus on exudate and odour  
| management.  

<table>
<thead>
<tr>
<th>CM Initial Nursing Service Authorization Guideline</th>
</tr>
</thead>
</table>
| **Block of 30 visits over 12 weeks**  
| **If ETN/WCS needed:** Block of 2 visits in Consultative model  

<table>
<thead>
<tr>
<th>Nursing Visit Frequency Guideline</th>
</tr>
</thead>
</table>
| **Nursing Service Provider - Teach and Reduce**  
| **Client at Risk of Pressure ulcer or Stage I ulcer:** Weekly for 1-2 weeks  
| • **Stage II:** 1 to 2 times per week for 3 to 4 weeks  

56 South West CCAC Wound Management Program for Clinicians – Updated April 2011
### SWCCAC WMP: Pressure Ulcer Clinician Service Planning Guide

<table>
<thead>
<tr>
<th>Expected Time Frame for Progress toward Healing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeframe difficult to determine dependent on ability to correct underlying causes. Kennedy’s Terminal Pressure Ulcers occur near end-of-life and will not heal.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria for ETN/WCS or Multidisciplinary Consult</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ETN/WCS Consult for:</strong></td>
</tr>
<tr>
<td>• Infection of the wound</td>
</tr>
<tr>
<td>• Debridement of the healable wound</td>
</tr>
<tr>
<td>• Plus F.U.N. Criteria (see page 6)</td>
</tr>
<tr>
<td><strong>Physio Therapy consult</strong></td>
</tr>
<tr>
<td>for Adjunctive Therapy assessment if client has Spinal Cord Injury (SCI) (after June 1, 2011)</td>
</tr>
<tr>
<td><strong>Physio Therapy consult</strong></td>
</tr>
<tr>
<td>for Adjunctive Therapy assessment if wound has not healed at 3 months (after June 1, 2011)</td>
</tr>
<tr>
<td><strong>OT referral</strong></td>
</tr>
<tr>
<td>for pressure redistribution assessment at time of admission—for seating and surface devices.</td>
</tr>
<tr>
<td><strong>PT referral</strong></td>
</tr>
<tr>
<td>for mobilization/mobility issues</td>
</tr>
<tr>
<td><strong>Dietitian referral</strong></td>
</tr>
<tr>
<td>if poor nutrition noted on initial screening</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues for CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine appropriateness for Flex Clinic</td>
</tr>
<tr>
<td>Authorize pressure redistribution surfaces/devices rental as per SWCCAC policy</td>
</tr>
</tbody>
</table>
## Definition of Wound Type

Closed surgical wounds are well-approximated with a palpable healing ridge (area of raised tissue) along the incision line, healing by primary intention. The incision is clean, dry, and not reddened.  

The Full NICE Guideline Prevention of Surgical Site Infection is available for free download at [http://guidance.nice.org.uk/CG74/Guidance/pdf/English](http://guidance.nice.org.uk/CG74/Guidance/pdf/English)

## Nursing Service Goals

- **Determine client’s goals**
  - Wound healing
  - Client/Caregiver will be independent with treatment
  - Decrease dressing changes

## Clinical Interventions

- Optimize nutritional intake and general health status.
- Assess for and report signs and symptoms of infection

**The NICE (2008) Guidelines for prevention and treatment of SSI includes the following recommendations:**

- Advise patients that they may shower safely 48 hours after surgery (but this is dependent on agreement of responsible surgeon). There is no evidence to support the use topical antimicrobial agents for surgical wounds that are healing by primary intention to reduce the risk of surgical site infection.

**Common dressing supplies for closed surgical incisions healing by primary intention (NICE 2008)**

- Cover the wound with an appropriate interactive dressing for a period of 48 hours unless otherwise clinically (or ordered by the surgeon) indicated, for example, if there is excess wound leakage or haemorrhage.
- There is no robust evidence to support the use of one dressing over another. However, in the majority of clinical situations a semi-permeable film membrane with or without an absorbent
- An island is preferable (one that has a non-stick absorbant strip of dressing in the centre, surrounded by an adhesive of some sort—e.g. cloth-like tape, transparent film, thin hydrocolloid).
- Avoid the use of gauze as a primary dressing because of its association with pain and disruption of healing tissues at the time of dressing change.
- The Mölndal Technique (developed with surgical orthopedic incisions) involves the use of hydrofiber or hydrofiber Ag folded into 4 thicknesses covered with a film dressing. Selection of a Hydrofiber® dressing versus Hydrofiber®Ag is dependent on the individual patient’s risk of wound infection
- The Jubilee (Clarke et al.2009) technique (developed with surgical orthopedic incisions) involves three layers of hydrofiber folded over the incision and secured with thin hydrocolloid- applied with no tension and changed a mean of 3.7 days.

**Client Education:**

**The NICE (2008) Guidelines for prevention and treatment of SSI includes the following recommendations:**

- Offer patients and carers clear, consistent information and advice throughout all stages of their care. This should include the s&s and risks of surgical site infections, what is being done to reduce them and how they are managed.

**CM Initial Nursing Service Authorization Guideline**

- Block of 4 visits over 2 weeks only in conjunction with JP Drain care. If there is exudate or gaping, it is NOT a closed surgical incision. ETN/WCS not anticipated.

**Nursing Visit**

Nursing Service Provider if drain care or other intervention is required, to teach and...
**SW CCAC WMP: Closed Surgical Incision Clinician Service Planning Guide**

<table>
<thead>
<tr>
<th>Frequency Guideline</th>
<th>reduce.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Healing Service Plan</strong></td>
<td></td>
</tr>
<tr>
<td>- Authorize visits for 2 weeks</td>
<td></td>
</tr>
<tr>
<td>- In general, 2 to 3 times per week for the first week then decrease.</td>
<td></td>
</tr>
<tr>
<td>- Frequency of visits dependent on need for other treatment.</td>
<td></td>
</tr>
<tr>
<td><strong>Daily visits for closed surgical wounds should NOT be authorized in the absence of extenuating circumstances.</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected Time Frame for Progress toward Healing</th>
<th>Fast healing; sutures/staples removed up to 3 weeks post-operatively.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criteria for ETN/WCS or Multidisciplinary Consult</strong></td>
<td>ETN/ WCS</td>
</tr>
<tr>
<td>- F.U.N. criteria (see page 6)</td>
<td></td>
</tr>
<tr>
<td>- Clinical Infection -- Always report back to primary surgeon</td>
<td></td>
</tr>
</tbody>
</table>

| Issues for CM | Assess appropriateness for Flex Clinic |
### Definition of Wound Type

**Open surgical wounds include:** Non-healing incisions with separation OR incisional necrosis OR signs and symptoms of surgical site infection (SSI) OR no palpable healing ridge OR those healing by secondary intent OR tertiary intent

The Full NICE Guideline Prevention of Surgical Site Infection is available for free download at [http://guidance.nice.org.uk/CG74/Guidance/pdf/English](http://guidance.nice.org.uk/CG74/Guidance/pdf/English)

### Nursing Service Goals

**Determine client’s goals**

**New Surgical Wound Initiative to be launched February 1 – April 1 2011**
- “My Open Surgical Wound” - teaching booklet to review with clients
- “My Wound Care” - self-care guide
- “My JP Drain” - self-care guide
- SWCCAC Healable, Open Surgical Wound Care Plan

**☐ Healing Service Plan**
- Wound healing
- Client/Caregiver will be independent with treatment
- Decrease dressing changes

**☐ Maintenance Service Plan (Unusual for this wound type)**
- Prevent deterioration

### Clinical Interventions

**Wound Assessment:**
- Use a validated and reliable wound assessment tool

**Other:**
- Optimize nutritional intake and general health status.
- Assess for and report signs and symptoms of infection.

**☐ Healing Service Plan**

**Wound Bed Prep:**
- Debridement, bacterial balance, exudate control, protect peri-wound skin.
- Health teaching to prevent infection and deterioration of wound, improve nutrition and general health status.
- **The NICE (2008) Guidelines for prevention and treatment of SSI includes the following recommendations on dressings for surgical wounds healing by secondary intention**
  - Do not use Eusol (Hygeol) and gauze, or moist cotton gauze or mercuric antiseptic solutions. Use an appropriate interactive dressing.

**For open surgical wounds healing by secondary intention:**
- Hydrofiber or alginate (layered to 80% of the depth) covered by a secondary absorbant dressing.

**For tunneling or undermined surgical wounds where the wound base cannot be seen, a dressing that can be removed in one piece is desired.**
- Gauze ribbon packing may be appropriate to deliver Cadexomer Iodine or other antimicrobial products.
- An alternative to this is PHMB (polyhexamethylene biguanide) antimicrobial ribbon packing, which can be left insitu for up to 3 days. **Tight wound packing is not considered best practice.**

**For infection/bacterial burden management –**
- See Page 17
- If you are not sure of the nature of the infection, choose a non-occlusive dressing as the cover dressing.

**Client Education: New Surgical Wound Initiative launched Feb. 1- Apr. 1, 2011**
- “My Open Surgical Wound” - teaching booklet to review with clients
- “My Wound Care” - self-care guide
- “My JP Drain” - self-care guide
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWCCAC Healable, Open Surgical Wound Care Plan</td>
<td>Maintenance Service Plan (Unusual for this wound type) Choose dressings that are lower-cost and focus on exudate management and odor control.</td>
</tr>
<tr>
<td>CM Initial Nursing Service Authorization Guideline</td>
<td>Block of 24 visits over 8 weeks. Please note that if incision is only gaping slightly &amp;/or with minimal exudate, the block visits and length of time would be less. If ETN/WCS needed: Block of 2 visits in Consultative model</td>
</tr>
</tbody>
</table>
| Nursing Visit Frequency Guideline                                            | **Nursing Service Provider - Teach and Reduce**  
- Authorize visits for 2 weeks.  
- In general, may require daily x 3 to assess ability to manage exudate, then 2 to 3 times per week then decrease to weekly when specific objectives met  
- Frequency of visits dependent on treatment.  
**If OD visits requested:**  
- See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds  
- SWCCAC Benchmark is that only 15% of visits for wound care should be daily—surgical wounds have been the highest category for daily visits for past 3 years. |
| Expected Time Frame for Progress toward Healing                             | Fast Progress dependent on nutritional status and co-morbid status  
- New statistics for healing rates of surgical wounds are difficult to find. A 1969 study found that wounds that healed by 50% in 13 days would heal at 21 days (Ramirez et al 1969). |
| Criteria for ETN/WCS or Multidisciplinary Consult                           | **ETN/WCS**  
- Immediately if enterocutaneous fistula involved.  
- F.U.N. criteria (see page 6)  
- Clinical Infection  
- Unmanageable exudate  
- Debridement of necrotic tissue –may require trip back to OR by primary surgeon if large amounts need to be debrided quickly |
| Issues for CM                                                               | Determine appropriateness for Flex Clinic |

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62 South West CCAC Wound Management Program for Clinicians –Updated April 2011
**SWCCAC WMP: Incision and Drainage (I&D) Open Surgical Wound Clinician Service Planning Guide**

| Definition of Wound Type | I&D is historically the treatment of choice for cutaneous abscesses (Korwnyk and Allan 2007). These are either sutured primarily or left open and packed loosely, and treated with or without an oral antibiotic (Hankin and Everett 2007). Community-associated (CA) MRSA is considered to be endemic in North America, and is a frequent cause of abscesses, making it important to:  
- Confirm the diagnosis of MRSA infection (Stevens et al. 2005) by Levine method swab culture  
- Treatment with systemic antimicrobial therapy to which the bacterial isolate is susceptible is controversial (Korwnyk and Allan 2007).  
- For cases of mild illness: (patient afebrile, abscess <5 cm, no other medical comorbidities - I&D with or without topical antibiotics may be a sufficient and definitive therapy (Lee et al. 2004). |
| --- | --- |
| Nursing Service Goals | Determine client’s goals  
- These wounds should be healable.  
**New Surgical Wound Initiative to be launched February 1 – April 1, 2011**  
- “My Open Surgical Wound” - teaching booklet to review with clients  
- “My Wound Care” - self-care guide  
- SWCCAC Healable, Open Surgical Wound Care Plan  
□ Healing Service Plan  
- Teach self-care if anatomically possible  
□ Maintenance Service Plan  
- This would be unlikely with this type of wound, unless in the presence of a chronic abscess-causing disease such as hidradenitis suppurativa, in a client with other co-morbidities. |
| Clinical Interventions | Wound Assessment:  
- Use a validated and reliable wound assessment tool  
Other:  
- Optimize nutritional intake and general health status.  
□ Healing Service Plan  
Wound Bed Preparation includes decreasing bacterial balance, treating infection, local wound care.  
- Flush wound without increasing pressure within the cavity, debridement, bacterial balance, exudate control, protect periwound skin.  
- Health teaching to prevent infection and deterioration of wound.  
- CA-MRSA is contagious and may affect not only the client but also their household contacts. Transmission on the hands or gloves of healthcare workers is a common method of spread.  
- Daily dressings with gauze packing alone do not reflect advanced wound care principles, yet generally, the small size of the opening in these wounds precludes the use of thicker dressings.  
Common dressing supplies:  
- Gauze ribbon packing may be appropriate to deliver Cadexomer Iodine.  
- An alternative to this is PHMB (polyhexamethylene biguanide) antimicrobial ribbon packing *(CCAC codes 2507, 2508, 2512)*, which can be left in situ for up to 3 days.  
- To date, there is no concern between the use of these antimicrobial dressings and the development of antibiotic resistant organisms.  
- Tight wound packing is not considered “best practice”. A looser packing allows the wound to contract and heal from the base, while the packing serves as a conduit to allow the exudate to drain.  
- Avoid packing tightly at the opening, as this can plug the exit and cause increased
<table>
<thead>
<tr>
<th>SWCCAC WMP: Incision and Drainage (I&amp;D) Open Surgical Wound Clinician Service Planning Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Petition within the cavity as the exudates volume increases causing painful extension of the cavity</strong> <em>(Birchall &amp; Taylor 2003)</em></td>
</tr>
<tr>
<td>• Cover with absorbent secondary dressing</td>
</tr>
<tr>
<td><strong>Maintenance Service Plan</strong></td>
</tr>
<tr>
<td>• Use lower cost dressings if healing is not expected and focus on exudate management and odour control</td>
</tr>
<tr>
<td><strong>CM Initial Nursing Service Authorization Guideline</strong></td>
</tr>
</tbody>
</table>
| **Block of 18 visits over 6 weeks**  
If ETN/WCS needed: **Block of 2 visits in Consultative model** |
| **Nursing Visit Frequency Guideline**  |
| **Nursing Service Provider - Teach and Reduce**  |
| **Healing Service Plan**  |
| • May require daily x 2-3 to assess ability to manage exudate, and assess for s&s of spreading infection, then 2 to 3 times per week & decrease.  
• Frequency of visits dependent on Rx chosen  |
| **If OD visits requested:**  |
| • See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds  
• SWCCAC Benchmark is that only 15% of visits for wound care should be daily—surgical wounds have been the highest category for daily visits for past 3 years. |
| **Expected Time Frame for Progress toward Healing**  |
| 4 weeks depending on size of wound and co-morbid factors |
| **Criteria for ETN/WCS or Multidisciplinary Consult**  |
| **ETN/WCS Consult:**  |
| • FUN criteria (see page 6)  
• Repeated infection  
**Physio Therapy consult** for Adjunctive Therapy assessment for wounds not healed at 3 months (after June 1, 2011) |
| **Issues for CM**  |
| Determine appropriateness for Flex Clinic. |
| Definition of Wound Type | Other types of wounds seen in community include but are not limited to:  
| | • Inflammatory wounds:  
| | • Pyoderma Gangrenosum  
| | • Bullous Pemphigus  
| | • Cutaneous vasculitis  
| | • Hidradenitis suppurativa  
| | • Traumatic injuries:  
| | • Pre-tibial lacerations,  
| | • Hematomas  
| | • Calciphylaxis  
| | • Necrotising Fasciitis  
| | • Necrobiosis Lipoidica Diabeticorum |
| Nursing Service Goals | **Determine client’s goals**  
| | **Healing Service Plan**  
| | • Wound healing  
| | • Client/Caregiver will be independent with treatment  
| | • Pain management  
| | **Maintenance Service Plan**  
| | • Maintain wound environment  
| | • Teach client/caregiver wound management  
| | • Goals may now be pain, exudate and odour control |
| Clinical Interventions | **Wound Assessment:**  
| | • Use a validated and reliable wound assessment tool  
| | **Other:**  
| | • Optimize nutritional intake and general health status.  
| | • Referral to appropriate physician for Rx of underlying disease (e.g. dermatologist, wound specialist, rheumatologist, gastroenterologist) is imperative.  
| | • Assess for and report signs and symptoms of infection.  
| | **Wound Bed Prep:**  
| | • debridement (in the absence of malignancy or inflammatory ulcers), bacterial balance, exudate control, protect periwound skin  
| | • Hydrofiber or Alginate (layered to 80% of the depth) covered by secondary dressing.  
| | **For infection/bacterial burden management—**  
| | • See Page 17. May require antimicrobials for prophylaxis in immune-compromised individuals.  
| | • If you are not sure of the nature of the infection, choose a non-occlusive dressing as the cover dressing.  
| | **Client Education**  
| | • Health teaching to prevent infection and deterioration of wound, improve nutrition and general health status |
| CM Initial Nursing Service Authorization Guideline | **Block of 30 visits over 12 weeks**  
| | **If ETN/WCS needed:** Block of 2 visits in Consultative model |
| Nursing Visit Frequency Guideline | **Nursing Service Provider - Teach and Reduce**  
| | **Healing Service Plan**  
| | • 2 to 3 times per week for the first week then decrease. |
### SWCCAC WMP: Other Types of Wounds (e.g. Inflammatory Ulcers etc.)
#### Clinician Service Planning Guide
- Frequency of visits dependent on etiology of wound and the recommended treatment.

**If OD visits requested:**
- Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds
- SWCCAC Benchmark is that only 15% of visits for wound care should be daily

#### Maintenance Service Plan
- as above

<table>
<thead>
<tr>
<th>Expected Time Frame for Progress toward Healing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many of these wounds require high-doses of immunosuppressant drugs. Healing will be affected by the speed with which diagnosis and systemic treatment is initiated and the individual client response, other co-morbid factors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria for ETN/WCS or Multidisciplinary Consult</th>
</tr>
</thead>
</table>
| **ETN/WCS**—
- **Special emphasis on “U”** in FUN criteria-(see page 6)-- unknown etiology or unsure of needs based on etiology
- Need for debridement (note- sharp viable debridement contra-indicated in Pyoderma Gangrenosum)

**Physio Therapy consult** for Adjunctive Therapy assessment if not healed at 3months (after June 1, 2011)

**Referral to appropriate physician** for Dx and Rx of underlying disease (e.g. dermatologist, wound specialist, rheumatologist, gastroenterologist) |

<table>
<thead>
<tr>
<th>Issues for CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine appropriateness for Flex Clinic. If client becomes independent with dressing changes, and healing will be over an extended time or is considered maintenance, look for alternate sources of funding such as ODSP, third party insurance etc.</td>
</tr>
</tbody>
</table>
### Definition of Wound Type

**The New Zealand Guidelines group recommends**: Avoid use of the terms first-degree/primary, second-degree/secondary and third-degree burns. Superficial burns can be 2 types:
- a superficial burn or scald that solely involves the epidermis (red, painful but intact skin).
- and a superficial partial-thickness burn that extends down into the more superficial, papillary layer of the dermis (blisters at site of burn).

Even superficial burns can be life-threatening depending on the extent of body surface involved.

These are the only types of burns that can be managed safely in a community out-patient setting, but may require hospitalization.

**Infection:**
See Signs and Symptoms of Wound Infection in burns.

**Burns in children:** The thickness of a child’s skin is less than an adult’s, so that children have deeper injuries from the same thermal exposure. As well, the combined surface area of the head and neck compared with the rest of the body in a child is larger than in an adult. Therefore, a small burn on a child could be much more severe than the same size burn on an adult (Baron 2010). Acute referral to secondary care is required for individuals with burns with signs of serious or systemic infection.


### Nursing Service Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Determine client’s goals</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Healing Service Plan</strong></td>
<td>Healing of superficial or partial thickness within 21 days. Any burns that are unlikely to heal within 21 days without grafting should be referred to a burn unit for scar management by day 10 to 14.</td>
</tr>
<tr>
<td><strong>Maintenance Service Plan</strong></td>
<td>This would be extremely rare for this etiology in the community sector.</td>
</tr>
</tbody>
</table>

### Clinical Interventions

**Wound Assessment:**
- Use a validated and reliable wound assessment tool

**Other:**

**The New Zealand Guidelines group recommends**: The depth of a burn injury should be reassessed two to three days after the initial assessment, then subsequently every three days.
- Adequate pain management is crucial.

**Management of Blisters:**
- There is great debate over whether to aspirate, drain or debride the blister covering for Superficial Partial-thickness Burns. Flanagan et al. (2001) advise leaving blisters intact where possible (i.e. where it is not causing ischemia due to increase pressure, or infection due to retention of devitalized tissue) to allow gradual absorption of blister burn fluid in an attempt to maximize healing and reduce patient discomfort.
- However, if the blister flap is non-viable or will break in an uncontrolled manner, &/or will interfere with the application of antimicrobial products, it should be de-roofed.

**The New Zealand Guidelines group recommends**: “Preferably leave small blisters intact unless likely to burst or interfere with joint movement. If necessary, drain fluid by snipping a hole in the blister.”

**Client Education:**
- type of dressing and treatment plan,
potential for skin discoloration
keep healed areas protected from overexposure to the sun by using sunscreen with an SPF of 15 or more, especially during the next season of sun exposure.
If exposed to ultraviolet radiation too soon, newly healed skin can become permanently hyperpigmented (Johnson and Michael 2002).
regulate hot water temperature at source
appropriate first aid
burn management.

Wound Bed Preparation:
debridement (in the absence of malignancy or inflammatory ulcers), bacterial balance, exudate control, protect periwound skin

Common dressing supplies:
Products with antimicrobial action (such as silver sulphadiazine cream or moisture-retentive antimicrobial dressings) should be used on all burns for the first 72 hours (three days) after burn injury to prevent infection then follow with a dressing that promotes moist wound healing and re-epithelialization (New Zealand Guidelines).
Biosynthetic dressings allow a decrease in time to healing and reduction in pain during dressing changes. (Cochrane Review Wasiak et al. 2008)
As acute phase ends with decreased exudates + in absence of s&s of infection, use a non-adherent, a transparent acrylic dressing, transparent film or a thin hydrocolloid to decrease dressing changes

Not recommended:
Silver sulphadiazine (SSD) for the full duration of treatment is associated with delays in time to wound healing and increased number of dressing applications (Cochrane Review Wasiak et al. 2008)
Tulle gauze (e.g. Unitulle, Jelonet, Sofratulle, Bactigras) which allows tissue to grow in the interstices of dressing

Hydrofiber Ag Method:
For Superficial and Partial thickness burns caused by Flame, Fluid, Contact and Scald injuries that appear to not require surgical intervention (SWCCAC Codes 2504, 2506)
The patients’ wounds may be contiguous or scattered but may not exceed 40% TBSA.
This may be used on topical injuries if deemed appropriate based on a case by case basis NB*** If this protocol is utilized, it is important that the client is given written instructions about the dressing & frequency of dressings that can also be communicated to the ordering or ER physician***
Apply in the immediate post-burn period if the blister has been deroofed, being aware that the wound cannot be visualized once the dressing adheres – or apply at 48 to 72 hours using other antimicrobial moist wound (Not petrolatum-based) dressings if visual assessment of the burn depth is desired for the first 3 days.
(Application day). The hydrofiber Ag should be overlapped by 6 cm if more than one piece is required, and pre-moistened if there is minimal exudate, or if it is being applied over a joint, or if the burn is 2-3 days old already. Cover with dry gauze and abdominal pads.
Day 1: Remove secondary dressing and inspect Aquacel Ag to ensure that no migration of dressing has occurred, causing exposed wound. Add more pieces with 6 cm overlap. Reapply secondary dressing.
Day 3: If the dressing is non-adherent at 72 hours, the dressing should be removed so that the burn can be re-evaluated by a physician to determine if it has
### SWCCAC WMP: Superficial or Superficial Partial- thickness Burns

#### Clinician Service Planning Guide

progressed to full-thickness or is infected- if so, an alternate treatment such as Silver sulfadiazine will be required. If the dressing is saturated with exudate, the hydrofiber Ag dressing should be removed, the wound cleansed and debrided as needed and hydrofiber Ag replaced with only one thickness (except for the overlap). Otherwise, only the secondary dressing should be changed. As the burn re-epithelializes, the dressing will spontaneously detach and can be trimmed away with scissors.

- **Days 6, 10, 14:** The secondary dressing should be removed every 2-3 days (Saba et al. 2009). Trim detached Aquacel Ag dressing with scissors. Apply new secondary dressing.

- **Once all of the Hydrofiber has loosened,** any remaining open areas can be dressed with pre-moistened Hydrofiber Ag and cover dressing as before.


#### CM Initial Nursing Service Authorization Guideline

| Block 12 visits over 4 weeks | If ETN/WCS needed: Block of 2 visits in Consultative model |

### Nursing Visit Frequency Guideline

**Nursing Service Provider - Teach and Reduce**

- *Visits no less than OD x 3 days in order to allow reassessment of the depth of the burn injury.*
- Depending on Rx, should be able to decrease frequency to q 3-4 days
- If burns are infected or considered to be at risk of infection, then daily visits are justified initially as per “Daily Visit Frequency as an Exceptional Situation for Heable* Wounds.

#### Expected Time Frame for Progress toward Healing

Expected healing time without complications: minimum 2 weeks but should be short stay

#### Criteria for ETN/WCS or Multidisciplinary Consult

**ETN/WCS Consult:**

- F.U.N. criteria (see page 6)
- Clinical Infection
- Pain with dressing changes
- Unmanageable exudates
- Need for conservative non-viable sharp debridement

**Referral to plastic surgeon** if wound not progressing as expected.

### Issues for CM

Determine appropriateness for Flex Clinic.
**South West CCAC: Patient/Client Teaching: Aquacel AG® Method for Superficial and Partial-Thickness Burns (SWCCAC Codes 2504, 2506)**

Your doctor or the wound care specialist has ordered a dressing for your burn that is different than dressings that are changed every day. The purpose of the dressing is to prevent infection, to reduce your discomfort, and to reduce the need to disrupt the burn with frequent dressing changes. **Please take these instructions with you if you see your family doctor or need to go to emergency for any reason.**

<table>
<thead>
<tr>
<th>Day Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application day</strong> (Day of Burn up to Day 3)</td>
</tr>
<tr>
<td><strong>Day 1 (after Aquacel Ag dressing is applied)</strong></td>
</tr>
<tr>
<td><strong>Day 3 (only when dressing is applied at time of burn)</strong></td>
</tr>
<tr>
<td><strong>Days 6, 10, 14:</strong></td>
</tr>
<tr>
<td><strong>Once all of the Aquacel Ag has loosened:</strong></td>
</tr>
<tr>
<td><strong>Important things to know:</strong></td>
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</tbody>
</table>

References: Aquacel Ag® for Burns information, Convatec, Montreal, PQ. and Saba et al. 2009 J Burn Care Res 30(3):380–385

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**Definition of Wound Type**

Primary cutaneous cancers include:
- **Basal Cell** (in areas of chronic sun exposure)
- **Squamous cell** (from sun-induced pre-cancerous lesions)
- **Marjolin’s** (Squamous cell proliferating or transforming from a chronic wound)
- **Melanoma** (in areas of chronic sun exposure)
- **Kaposi’s Sarcoma**

Secondary malignant wounds that occur from metastatic disease (local or distant primary tumors) or from direct invasion of a primary tumour into the skin and will be either:
- **crater-like or cavity ulcerations** with fragile tissue prone to bleeding, infection, pain and malodorous exudate or
- **proliferating/fungating** nodular & grotesque lesions prone to bleeding, infection, pain and malodorous exudates.

When malignant wounds occur near blood vessels, there is the risk of a **catastrophic bleed** with imminent death.
- **Pruritis** can occur to such a degree that it deserves the same attention as uncontrolled pain.
- Fatigue, anorexia, nausea, dyspnea, lymphedema, impaired mobility and activity levels

**Nursing Service Goals**

- **Determine client’s goals**
  - If surgical removal and radiation treatment are not an option, then wound is considered palliative.

- **Healing Service Plan**
  - Maintain wound environment
  - Teach client/caregiver wound management
  - Goals may now be pain, exudate and odour control

- **Maintenance Service Plan**

**Clinical Interventions**

- **Wound Assessment:**
  - The Malignant Wound Assessment Tool (MWAT) (Schultz et al 2009) differs from other wound assessment tools in that it asks for the client’s perception of a number of clinical domain items, and includes other symptoms, physical functional and social interactions as part of the assessment. **Available at:**
  - [http://www.cancerpainnet.ca/research_tools](http://www.cancerpainnet.ca/research_tools) (permission required to use)

- **Key Interventions:**
  - Pain-free dressing changes
  - Pain management between dressing (may need topical analgesia as part of dressing routine)
  - Management of pruritis changes
  - Psychological and psychosocial support.
  - Management of exudates
  - Plan for catastrophic bleeding (if appropriate)
  - Assess and control malodour (remember that odour is always what the patient says that it is, just like pain)

- **Healing Service Plan**

- **Wound Bed Prep:**
  - Debridement is not always appropriate for patients who have extensive exuding wounds or multiple dry necrotic lesions, but bacterial balance, exudate control, and protection of periwound skin remain important.
  - Flushing these wounds to cleanse may not be tolerated due to pain.
  - If pain is increased when the dressing is removed or the wound cleansed, warm the cleansing solution and prepare the entire dressing to allow for a quick, painless
dressing change.

- Choose a non-adherent dressing or absorptive product with non-stick surface as primary dressing, with exudate-absorptive secondary dressing that is semi-occlusive or occlusive. Clean the wound as directed by the dressing manufacturer; some dressings can be left in-situ for several days with only the secondary dressing being changed.

- Choose Antimicrobial dressings with non-stick surface for superficial infection

**Malodor associated with anerobic bacteria proliferation:**

**Metronidazole** may be administered:

- **Orally** (capsules or tablets). ***Do not open the capsules to apply the powdered contents to wounds*** (Hazardous Inhalation Precautions).
- **Topically** - clear gel Metrogel is available, but vaginal cream (which is licensed for the treatment of malodorous fungating tumours in the UK but not in Canada, is commonly used with effect- has a stronger concentration of the drug. (Hampson 1996).

**Friable Tissue:**

- Plan for small bleeds- have calcium alginate in the home to apply to small areas of bleeding but note that some alginate dressings appear to cause increased bleeding in malignant wounds; d/c if this is seen.
- If alginates cannot be used for small amounts of bleeding, it may be necessary to obtain a prescription for Gel-foam or similar dressings from the physician to have on hand in home.

**Client Education re:**

- self care (if appropriate)
- progress of tumour
- prevention of infection and deterioration of wound, improvement of nutrition and general health status
- Risk of catastrophic bleeding (if appropriate) & actions

☐ **Maintenance/ Palliative Service Plan**

If surgical removal and treatment are not an option, then wound is considered palliative.

**Malodor categories:**

- **Strong:** odour is evident on entering the room when the dressing is intact.
- **Moderate:** Odour is evident on entering the room when the dressing is removed.
- **Slight:** Odour is evident at close proximity to the patient when the dressing is removed.
- **No odour:** No odour is evident at the patients’ bedside even when the dressing is removed (Haughton and Young in Alexander 2009).

<table>
<thead>
<tr>
<th><strong>CM Initial Nursing Service Authorization Guideline</strong></th>
<th>Block of 24 visits over 8 weeks—may have other pain and symptom management issues requiring other visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>If ETN/WCS needed:</td>
<td>Block of 2 visits in Consultative model</td>
</tr>
</tbody>
</table>

| **Nursing Visit Frequency Guideline**                | Nursing Service Provider teach and reduce  
|                                                   | Daily then decrease if able to 2 to 3 times per week. Frequency of visits is dependent on status of wound and the ability to manage exudates, bleeding and malodor. These clients may have other pain and symptom management needs that will influence the visit frequency.  
<p>|                                                   | <em><em>See Daily Visit Frequency as an Exceptional Situation for Healable</em> Wounds or Non Healable/Maintenance</em> Wounds |</p>
<table>
<thead>
<tr>
<th>Expected Time Frame for Progress toward Healing</th>
<th>May be palliative and not expected to heal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria for ETN/WCS or MD Consult</td>
<td><strong>ETN/WCS Consult:</strong></td>
</tr>
<tr>
<td></td>
<td>• F.U.N. criteria (see page 6)</td>
</tr>
<tr>
<td></td>
<td>• Clinical Infection</td>
</tr>
<tr>
<td></td>
<td>• Unmanageable exudate or malodor</td>
</tr>
<tr>
<td></td>
<td>Generally <strong>NO Physio Therapy consult</strong> for Adjunctive Therapy assessment</td>
</tr>
<tr>
<td>Issues for CM Consideration</td>
<td>Determine appropriateness for Flex Clinic.</td>
</tr>
<tr>
<td></td>
<td><strong>Psychosocial issues</strong> include:</td>
</tr>
<tr>
<td></td>
<td>• social isolation</td>
</tr>
<tr>
<td></td>
<td>• altered bdy image</td>
</tr>
<tr>
<td></td>
<td>• altered relationships and loss of personhood</td>
</tr>
<tr>
<td></td>
<td>• existential issues due to approaching death (Alexander 2009, Snyder 2009).</td>
</tr>
</tbody>
</table>
### SWCCAC WMP: Skin Tears

**Clinician Service Planning Guide**

#### Definition of Wound Type

Skin tears are caused by shearing, friction or blunt trauma that causes separation of skin layers, resulting in partial - or full-thickness wounds. **Damage is categorized using the Payne-Martin Classification for Skin Tears:**

- **Category 1** – Skin tears without tissue loss: Linear (full thickness or flap partial thickness).
- **Category 2** – Skin tears with partial tissue loss (scant tissue loss type or moderate to large loss).
- **Category 3** – Skin tears with complete tissue loss (absent epidermal flap).


#### Nursing Service Goals

**Determine client’s goals**

- Stabilize skin flap if still present
- Choose dressing that will not cause further skin damage
- Teach prevention methods to decrease risk of recurrence

**Healing Service Plan**

- Prevent deterioration
- Teach prevention methods to decrease risk of recurrence

**Maintenance Service Plan**

- Prevent deterioration
- Teach prevention methods to decrease risk of recurrence

#### Clinical Interventions

**Wound Assessment:**

- Use a validated and reliable wound assessment tool and categorize the severity of the skin tear (see above)

**Other:**

- Human tetanus immunoglobulin (TIG) should be given to all individuals with skin tears who have not received a tetanus toxoid (Td) inoculation in the past 10 years. The TIG should be given before wound debridement because exotoxin may be released (LeBlanc et al 2008)

**Wound Bed Prep:**

- Debridement of non-viable skin only after TIG (above), skin flaps should be preserved and approximated to allow autograft if possible.

**CAWC Best Practice Recommendations Choice of Dressings:**

- Absorbent, clear acrylic semi-permeable dressings are recommended for Category I to III skin tears with low to moderate exudate. These are meant to be left in place for 14 or as much as 21 days. Please note that the adhesive bond actually decreases over time so that the longer it is adhered to the skin, the easier it is to remove it with a decreased risk of skin damage.
- For Category I and II skin tears with less than 25 per cent epidermal flap loss approximation of the edges of the skin tear/flap tissue with 2-octylcyanoacrylate topical bandage (skin glue).
- Other dressing choices include silicone-based mesh or foam products, calcium alginate dressings if bleeding is present or other foam dressing with a contact layer.
- Zinc-impregnated gauze (normally used for Unna’s boot) can be fan-folded to 6-8 thicknesses and placed over the area- cover with secondary dressing and change q 3-5 days (commonly used with good effect but no literature found to support this).
- The use of hydrocolloids or transparent film dressings is not recommended as they may cause skin stripping or lifting of the skin flap if not removed properly, and paraffin gauze (tulle gauze) based products are no longer recommended - they can cause disruption of the skin flap, are not moisture-retentive and require frequent dressing changes.
- There is a new protocol for a product currently in the SWCCAC Medical supply catalogue a combination hydrofiber/ semi-occlusive dressing (Codes 1604 and 1606):
Choose & apply appropriate shape and size of non-adhesive product to be anchored with Kling wrap. If there is a skin flap under the dressing, use a waterproof marker to draw an arrow on the dressing, pointing away from the attached end of the skin flap. This indicates in which direction the dressing should be removed. A removal date can also be written. Dressing to remain in place for 5 days, depending on client’s condition. Assess wound & re-apply 2nd Codes 1604 and 1606 dressing. Leave undisturbed for an additional 5 days depending on client’s condition. Re-epithelialization should be complete within 14-21 days (Convatec Canada Protocol for Versiva XC).

**Client Education**

- Hydration of the skin with hypoallergenic moisturizers.
- Having those at risk wear long sleeves, long pants or knee-high socks.
- Providing shin guards for those who experience repeat skin tears to shins.
- Determining and removing potential causes for trauma.
- Ensuring a safe environment with adequate lighting.
- Minimizing objects that can be a source of blunt trauma.
- Padding edges of furniture and equipment, providing an uncluttered pathway, and avoiding scatter rugs.
- Minimize baths and use short showers.

<table>
<thead>
<tr>
<th>CM Initial Nursing Service Authorization Guideline</th>
<th>Block of 8 visits over 4 weeks If ETN/WCS needed: Block of 2 visits in Consultative model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Visit Frequency Guideline</td>
<td>Nursing Service Provider teach and reduce</td>
</tr>
<tr>
<td>Expected Time Frame for Progress toward Healing</td>
<td>1-2 times for the first week then decrease to weekly or q 2-3 weeks.</td>
</tr>
<tr>
<td></td>
<td>Frequency of visits is dependent on the type of treatment.</td>
</tr>
<tr>
<td></td>
<td>See Daily Visit Frequency as an Exceptional Situation for Healable* Wounds or Non Healable/Maintenance* Wounds</td>
</tr>
<tr>
<td>Criteria for ETN/WCS or Multidisciplinary Consult</td>
<td>ETN/WCS Consult:</td>
</tr>
<tr>
<td></td>
<td>F.U.N. criteria (see page 6)</td>
</tr>
<tr>
<td></td>
<td>Clinical Infection</td>
</tr>
<tr>
<td></td>
<td>Large size of skin flap</td>
</tr>
<tr>
<td></td>
<td>Unmanageable exudates</td>
</tr>
<tr>
<td>Issues for CM Consideration</td>
<td>May need OT/PT assessment to reduce risk factors</td>
</tr>
<tr>
<td></td>
<td><strong>Physio Therapy consult</strong> for Adjunctive Therapy assessment if not healed at 3 months(after June 1, 2011)</td>
</tr>
<tr>
<td></td>
<td>Determine appropriateness for Flex Clinic.</td>
</tr>
</tbody>
</table>

75 South West CCAC Wound Management Program for Clinicians –Updated April 2011
Ostomy Algorithm

1. Client with new ostomy
   - What teaching has been done? Achieving success? Level of independence? Has ADP been initiated?
   - CM authorizes supplies as per DRP (3 months)
   - CM authorizes nursing service
   - CM authorizes ET services (5 visits) based on status of the ostomy or if ADP Application needs to be pursued (for permanent ostomy)

2. Nursing goes out for first visit and completes nursing assessment

3. Has ostomy stabilized and product been established?
   - Authorization of 1 box of established product - client then purchases product on their own from this point

4. Pouching issues experienced in hospital – wear time is unpredictable – are there perianal skin issues?
   - Review ET Discharge Summary from hospital
   - ADP Application has been initiated?

Indications to ask for ET service:
- Comorbidities that are affecting client’s ability to self-care
- Pouching issues
- Personal skin issues
- Product choice needs review
- Psychosocial issues affecting self-care
<table>
<thead>
<tr>
<th><strong>SWCCAC WMP: New Ostomy Clinician Service Planning Guide</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
</tr>
<tr>
<td>Individuals who undergo surgery to create an artificial opening from the small bowel (ileostomy) large bowel (colostomy) or from a conduit created from the ileum to bypass the bladder (ileal conduit) will require assistance with learning self-care and in adapting to the altered body image. Successful pouching of the stoma can be challenging, depending on the amount of protrusion from the body, the type and consistency of stool, effluent or urine, the skin’s texture and moisture balance, the sitting of the stoma in terms of being within the individuals range of vision and the manual dexterity of the individual. The RNAO now has a clinical practice guideline “Ostomy Care &amp; Management” (2009) available for free download as a resource for health care providers. <a href="http://www.rnao.org/Storage/59/5393_Ostomy_Care_Management.pdf">http://www.rnao.org/Storage/59/5393_Ostomy_Care_Management.pdf</a></td>
</tr>
<tr>
<td><strong>Nursing Service Goals</strong></td>
</tr>
<tr>
<td>Determine client’s goals</td>
</tr>
<tr>
<td>- Expectations around self-care</td>
</tr>
<tr>
<td>- Explore pouching options to provide maximum confidence with altered body image and self-care challenges</td>
</tr>
<tr>
<td>- Independence with self care of Ostomy within 5-8 weeks.</td>
</tr>
<tr>
<td><strong>Clinical Interventions</strong></td>
</tr>
<tr>
<td>Assessment of Ostomy stoma and peristomal skin:</td>
</tr>
<tr>
<td>- Use a validated tool and assess stoma and skin for abnormal conditions on admission</td>
</tr>
<tr>
<td>New Ostomy Initiative to be launched Oct. 1- Dec. 1, 2011</td>
</tr>
<tr>
<td>- “My Urostomy”/ “My Ileostomy” / “My Colostomy” - teaching booklet</td>
</tr>
<tr>
<td>- “My Ostomy Care”- self-care guide</td>
</tr>
<tr>
<td>- SWCCAC New Ostomy Care Plan with time-specific goals</td>
</tr>
<tr>
<td>- Coloplast Peristomal Skin Assessment Tool</td>
</tr>
<tr>
<td>□ Healing Service Plan</td>
</tr>
<tr>
<td>- Teach client to be independent with Ostomy self-care within 5-8 weeks</td>
</tr>
<tr>
<td>- ETN/ Ostomy specialist nurse to enroll client in one of the three Industry programs for post-operative support as soon as possible after surgery if not done by Hospital ET.</td>
</tr>
<tr>
<td>Describe client acceptance:</td>
</tr>
<tr>
<td>- Actively participating in stoma care</td>
</tr>
<tr>
<td>- Unable to participate in self care due to emotional status</td>
</tr>
<tr>
<td>- Unable to look at stoma due to emotional status</td>
</tr>
<tr>
<td>- Unable to participate in self care due to physical limitations</td>
</tr>
<tr>
<td>At each visit assess:</td>
</tr>
<tr>
<td>- Fluid intake and Output per stoma (quantity and characteristics)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Output:</strong> Emptying _____x/ 24 hrs</td>
</tr>
<tr>
<td>- Adds Na/K to diet (for ileostomies)</td>
</tr>
<tr>
<td>- Avoiding sports and sweetened drinks (for ileostomies)</td>
</tr>
<tr>
<td>- Leakage under flange (document location)</td>
</tr>
<tr>
<td>- Peristomal skin appearance (use Coloplast Peristomal Skin Assessment Tool after implementation Nov 2011) &amp; Rx</td>
</tr>
<tr>
<td>- Stoma appearance and size</td>
</tr>
<tr>
<td>- Nutritional status and compliance with sodium and potassium intake as directed</td>
</tr>
<tr>
<td>- Current Pouching system and effectiveness</td>
</tr>
<tr>
<td>- Pain level</td>
</tr>
<tr>
<td>- Activity tolerance and level of fatigue and weakness</td>
</tr>
<tr>
<td>- Client teaching done and level of acceptance as per plan of care</td>
</tr>
<tr>
<td>SWCCAC WMP: New Ostomy Clinician Service Planning Guide</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td><strong>CM Initial Nursing Service Authorization Guideline</strong></td>
</tr>
</tbody>
</table>
| Block of 8 visits over 4 weeks  
ETN/WCS: Block of 3 visits over 4 weeks |
| **Nursing Visit Frequency Guideline** |
| Visiting Nursing teach and reduce  
First visit should be within 24 hours of hospital discharge; then 2 x /week.  
Exceptional situations will occur where pouching system no longer effective and increased visit frequency necessary until resolved, with reassessment by ETN/Ostomy Specialist required. |
| **Expected Time Frame for Progress toward Independence** |
| 5-8 weeks while stoma shrinks |
| **Criteria for ETN/WCS or Multidisciplinary Consult** |
| ETN/ Ostomy Specialist visit:  
• Within 1-3 days for all clients with new Ostomy not set up with Industry program in hospital or having urgent needs.  
• Within 7 days for all other clients with new Ostomy  
• Follow-up visit for new pouching problems or adaptation issues that occur after the initial consult (client is on hold by the ETN/ostomy specialist). |
| **Issues for CM** |
| • Determine appropriateness for Flex Clinic.  
• Fresh post-op clients may not have the physical stamina to attend clinics initially, while clients with pouching problems with established stomas should be very appropriate.  
• The SW CCAC Case Manager (CM) will approve ostomy supplies for eligible clients per 1.1.22 POLICY Ostomy Supply Order and 5.1.1 POLICY Medical Supply Orders for clients with new permanent AND temporary ostomies until the client is in a successful pouching system or up to a maximum period of two months. See the policy and procedure for specific details. |
<table>
<thead>
<tr>
<th>Venous Ulceration</th>
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<tr>
<td>Arterial Ulceration</td>
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<td>Diabetic Foot Ulceration</td>
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<tr>
<td>Pressure Ulceration</td>
</tr>
<tr>
<td>Closed Surgical Incision</td>
</tr>
</tbody>
</table>

**Venous Ulceration** – See pages 30-35 for Best Practice information

- Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5
- Warning: “Application of moisture retentive dressings in the context of ischemia and or dry gangrene can result in a serious life- or limb-threatening infection”.
- Wound Cleansing Enabler Section 7b:
  - Choose a type of dressing depending on the wound characteristics and exudate*:
    - Duoderm gel (to rehydrate) + Kaltostat, Aquacel, Mepilex or Biatain foam, Combiderm or Versiva XC exudate absorbers

**Arterial Ulceration** – See pages 40-41 for Best Practice information

- Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5
- Warning: “Application of moisture retentive dressings in the context of ischemia and or dry gangrene can result in a serious life- or limb-threatening infection”.
- Wound Cleansing Enabler Section 7b:
  - Choose a type of dressing depending on the wound characteristics and exudates*:
    - Duoderm gel (to rehydrate) + Kaltostat, Aquacel, Mepilex or Biatain foam, Combiderm or Versiva XC exudate absorbers

**Diabetic Foot Ulceration** – See pages 42-45 for Best Practice information

- Multidisciplinary approach*:
  - Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5
  - Pressure Offloading with Orthotics / Regular sharp debridement is imperative
  - Warning: “Application of moisture retentive dressings in the context of ischemia and or dry gangrene can result in a serious life- or limb-threatening infection”.
  - See Section 7b: Wound Cleansing Enabler
    - Choose a type of dressing depending on the wound characteristics and exudates*:
      - For dry wounds - Duoderm gel (to rehydrate) covered with Duoderm or Tegaderm hydrocolloid or Versiva XC exudate absorbers
      - For exudating healing wounds - Kaltostat, Aquacel, covered by Mepilex or Biatain foam, or Combiderm or Versiva XC exudate absorbers
      - For maintenance wounds - Betadine-soaked gauze and absorbent cover dressing.
      - Use Antimicrobials as per Section 5

**Pressure Ulceration** – See pages 46-49 for Best Practice information

- Multidisciplinary approach*:
  - Pressure Redistribution devices imperative
  - See Section 7b: Wound Cleansing Enabler
    - Choose a type of dressing depending on the wound characteristics and exudates*:
      - For dry wounds - Duoderm gel (to rehydrate) covered with Duoderm or Tegaderm hydrocolloid or Versiva XC exudate absorbers
      - For maintenance wounds - Betadine-soaked gauze and absorbent cover dressing.
      - Use Antimicrobials as per Section 5

**Closed Surgical Incision** – See pages 49-50 for Best Practice information

- Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5
- Max. Safe Compression: single layer and multi-layer choices (See SW CCAC Catalogue Sections 42, 43 and 70)
- Wound Cleansing Enabler Section 7b:
  - Choose a type of dressing depending on the wound characteristics and exudates*:
    - Duoderm gel (to rehydrate) + Kaltostat, Aquacel, Mepilex or Biatain foam, Combiderm or Versiva XC exudate absorbers
  - Kerlix AMD roll for cellulitis
  - Avoid use of adhesive products
  - Viscopaste wrap for dermatitis (Unna’s Boot Section 10)
  - Use Antimicrobials as per Section 5

*Multidisciplinary approach*:
- Pressure Redistribution devices imperative
- See Section 7b: Wound Cleansing Enabler
  - Choose a type of dressing depending on the wound characteristics and exudates*:
    - Duoderm gel (to rehydrate) + Kaltostat, Aquacel, Mepilex or Biatain foam, or Combiderm or Versiva XC exudate absorbers
  - For maintenance wounds - Betadine-soaked gauze and absorbent cover dressing.
  - Use Antimicrobials as per Section 5

**Venous Ulceration – Lower Leg** Assessment with APBI MUST be done
- Refer for revascularization if ABI<0.6, and refer urgently if ABI<0.5

**Max. Safe Compression**: single layer and multi-layer choices (See SW CCAC Catalogue Sections 42, 43 and 70)

**Wound Cleansing Enabler Section 7b**:
- Choose a type of dressing depending on the wound characteristics and exudates*:
  - Duoderm gel (to rehydrate) + Kaltostat, Aquacel, Mepilex or Biatain foam, Combiderm or Versiva XC exudate absorbers
  - Kerlix AMD roll for cellulitis
  - Avoid use of adhesive products
  - Viscopaste wrap for dermatitis (Unna’s Boot Section 10)
  - Use Antimicrobials as per Section 5
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<th>Inflammatory Ulcers – See pages 55-56 for Best Practice information</th>
<th>Superficial and Partial Thickness Burns – See pages 56-60 for Best Practice information</th>
<th>Malignant Wounds – See pages 61-63 for Best Practice information</th>
<th>Skin Tears – See pages 63-64 for Best Practice information</th>
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<tbody>
<tr>
<td><strong>See Section 7b: Wound Cleansing Enabler</strong></td>
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</tr>
<tr>
<td>Choose a type of dressing depending on the wound characteristics and exudate: Fill dead space with Kaltostat, Aquacel, (layered to 80% of the depth) covered by Combiderm or Versiva XC exudate absorbers. For tunneling, undermined or I&amp;D surgical wounds where the wound base cannot be seen: Gauze ribbon “buttered” with Iodosorb or use AMD antimicrobial ribbon (PHMB polyhexamethylene biguanide) - packing, - either can be left insitu for up to 3 days- cover with Combiderm or Versiva XC exudate absorbers. Tight wound packing is not considered best practice. <strong>Use Antimicrobials as per Section 5</strong></td>
<td>Choose a type of dressing depending on the wound characteristics and exudate: Fill dead space with Kaltostat, Aquacel, (layered to 80% of the depth) covered by Combiderm or Versiva XC exudate absorbers. <strong>Use Antimicrobials as per Section 5</strong></td>
<td>Choose a type of dressing depending on the wound characteristics and exudate: The Aquacel AG method is described in detail with a teaching handout for patient – dressing remains in place for up to 14 days, allowing re-epithelialization under dressing. <strong>OR</strong> Choose non-adherent dressing (Burn gauze/ Telfa Clear (SA#) if using with topical antimicrobial such as Flamazine (must apply 0.5 mm thick q 12 h) (should be used x 72 hrs only then switch to alternate dressing. As exudates decreases, + in absence of s&amp;s of infection , use a non-adherent foam (Mepilex) , or 3M Transparent Acrylic Dressing, or Tegaderm transparent film or thin Duoderm. <strong>DO NOT</strong> use Adaptic or tulle gauze <strong>Use Antimicrobials as per Section 5</strong></td>
<td>Choose a type of dressing depending on the wound characteristics and exudate: Mepilix foam dressing alone or Adaptic/ Mepitel/ Telfa Clear (SA#) with Combiderm or Versiva XC exudate absorbers <strong>For Malodour</strong>- clear gel Metrojel or Flagyl vaginal cream covered by Combiderm or Versiva XC exudate absorbers or Mesorb and Tegaderm Transparent film roll <strong>Use Antimicrobials as per Section 5</strong></td>
<td><strong>See Section 7b: Wound Cleansing Enabler</strong> - Category I to III skin tears 3M Absorbent Clear Acrylic dressings (low to moderate exudate -wear up to 21 days). <strong>OR</strong> -Category I and II skin tears &lt; 25 per cent epidermal flap loss approximate the edges of the skin tear/flap tissue with (skin glue) (physician) <strong>Other choices:</strong> Mepilix foam, Telfa clear (SA#). If bleeding - Kaltostat dressing cut to size of bleeding area only (If in Emerg- use Gelfoam as it will dissolve—the Kaltostat won’t). <strong>Viscopaste</strong> (Unna’s boot) can be fan-folded to 6-8 layers-cover with secondary dressing (q 3-5 days). <strong>DO NOT</strong> use Duoderm or Tegaderm hydrocolloids, Tegaderm transparent film or Adaptic or tulle gauze <strong>Use Antimicrobials as per Section 5</strong></td>
</tr>
</tbody>
</table>


Wounds International.Available at:
Available at:
http://journals.lww.com/aswjournal/Citation/2002/09000/Managing_Superficial_Burn_Wounds.13.a
94. Thomlinson D (1987) To clean or not to clean? Nursing Times 83: (9)71-75.