







## Wound Culture Sampling/Swabbing

A wound infection can be diagnosed form the clinical visual assessment undertaken reviewing the sign and symptoms. However the clinical visual assessment can be advanced with additional tests and investigations if required to identify:

- Specific pathogen strains in the wound
- Microbe sensitivity to the type of antibiotics commenced or to be prescribed
- Identify any possible complications such as Osteomyelitis or Seromas.

Microbiology wound swabs should not be undertaken routinely or without substantial cause.

If wound culture sampling/swabbing is required when a wound is showing signs on <u>Spreading or Systemic</u> <u>infection</u> to identify the specific pathogen strains in the wound or microbe sensitivity then the Levine technique must be used.

Despite wound swabbing being the most widely used technique for microbial monitoring it is often preformed differently by each clinician. Several studies suggest that the Levine technique is more effective that the Z-Swab technique. This can be undertake by a HCA at the desertion of the RN, RM or Nursing Associate.

Table 3: Levine technique		
Step	Action	Further information
1	Cleanse and debride wound prior to wound culture	<ul> <li>Inform and seek permission from patient to obtain specimen</li> <li>Cleanse wound using warm normal saline</li> <li>Debride non-viable tissue as required</li> <li>Cleanse wound again</li> </ul>
2	Moisten culture tip	<ul> <li>Moisten culture tip with sterile normal saline, especially with dry wounds</li> </ul>
3	Where to obtain specimen	<ul> <li>Obtain specimen from cleanest area in the wound</li> <li>Where possible, do not obtain from slough or necrotic tissue</li> </ul>
4	Technique	<ul> <li>Inform the patient that procedure may cause discomfort</li> <li>Place wound culture into wound</li> <li>Firmly press swab into wound and rotate</li> <li>Using a sterile technique, place swab into culture container</li> </ul>
5	Label appropriately	<ul> <li>Patient label on culture container and pathology slip</li> <li>Provide site, time and initials of who obtained specimen (e.g. left medial distal malleolus wound)</li> <li>Provide as much relevant history as appropriate:</li> <li>Current antibiotic or medication (steroid)</li> <li>Comorbidity (DM)</li> <li>Specific microbe suspected (<i>Pseudomonas aeruginosa</i>)</li> <li>Provisional diagnosis of wound</li> <li>Duration of wound</li> </ul>
6	Apply dressing as appropriate	<ul> <li>Medicated dressings may be appropriate</li> <li>Moisture management and wound bed preparation principles should be adhered to</li> </ul>





International Wound Infection Institute (IWII) (2016) Wound Infection in Clinical Practice. Wounds International. International Wound Infection Institute (IWII) (2022) Wound Infection in Clinical Practice. Wounds International. ansson C, Hoborn J, Moller A, Swanbeck G. The microbial flora in venous leg ulcers without clinical signs of infection. Acta Derm Venereol 1995; 75(1): 24-30. 2. Bowler PG, Duerden BI, Armstrong DG. Wound microbiology and associated approaches to wound management. Clin Microbiol Rev 2001; 14(2): 244-69. 3. Human RP, Jones GA. Evaluation of swab transport systems against a published standard. J Clin Pathol 2004; 57: 762-3.