Wound Care Analysis Report

# Patient Information

**Patient Demographics:**Age: 42.0 years  
Sex: Male  
BMI: 40.6

**Diabetes Status:**Type: T2DM  
HbA1c: nan%

# Analysis Results

### Comprehensive Analysis of Wound Healing Progression

#### 1. Wound Healing Trajectory

**- Size and Area: The wound size and area have generally decreased over time, from an initial size of 5.5cm x 4.5cm x 0.1cm (24.8cm²) to a final size of 1.5cm x 1.6cm x 0.5cm (2.4cm²), indicating overall progress in wound healing.  
- Exudate: There has been variability in the volume and type of exudate, ranging from low volume serous to high volume sanguineous. However, towards the end of the observation period, the exudate volume has stabilized, mostly remaining low to medium with a serous or serosanguineous type, which can be considered a positive sign in the healing process.  
- Tissue Characteristics: The tissue color has fluctuated between pale, pink, and red, with coverage of the wound area being consistent at "all of the wound area" for most visits, indicating a good healing response.**

#### 2. Concerning Patterns

**- Increased Exudate Volume and Viscosity: On 09-24-2024, there was a notable increase in exudate volume and viscosity, which could indicate infection or a setback in the healing process. Similarly, later increases in exudate volume, such as on 10-08-2024 and 02-10-2025, warrant close monitoring.  
- Fluctuations in Oxygenation: Oxygen levels have varied, with a notable decrease to 73.0% on 02-10-2025. Lower oxygen levels can impede wound healing and should be closely monitored.  
- Impedance Readings: The availability and variability of impedance readings (e.g., High Frequency Impedance) could indicate changes in wound moisture and tissue health, but consistent patterns or trends are difficult to discern due to missing data points.**

#### 3. Care Recommendations

**- Continue Use of Medihoney: Given the overall progress in wound healing, the current use of Medihoney patches appears effective and should be continued, especially considering its antimicrobial properties and ability to promote a moist healing environment.  
- Regular Monitoring of Exudate and Tissue: Given the variability in exudate and tissue characteristics, regular and close monitoring is essential to quickly identify any potential infections or healing setbacks and adjust care accordingly.  
- Debridement: If there's evidence of slough or necrotic tissue, debridement may be necessary to remove dead tissue and promote healing.  
- Consider Compression Therapy: For a patient with a high BMI and a wound on the plantar surface, managing swelling and promoting blood flow through compression therapy could be beneficial, but this should be balanced with the need to avoid pressure on the wound.**

#### 4. Complication Risks

**- Infection Risk: Given the patient's diabetes status and the presence of a burn wound, there's an increased risk of infection. Regular monitoring for signs of infection (e.g., increased redness, swelling, purulent discharge) is crucial.  
- Delayed Healing: Diabetes and obesity can impede wound healing. Close monitoring and management of blood glucose levels, along with maintaining a healthy diet and lifestyle, are essential to support the healing process.  
- Pressure Ulcers: The plantar location of the wound, combined with the patient's high BMI, increases the risk of pressure ulcers. Proper off-loading and pressure redistribution strategies should be employed.**

#### 5. Significance of Sensor Measurements

**- Oxygenation (O₂): Oxygen levels are crucial for wound healing, as they indicate the wound's access to oxygen necessary for the healing process. Lower oxygen levels, such as those observed on 02-10-2025, may indicate a need to optimize wound care strategies to improve oxygen delivery to the wound.  
- Temperature: Wound temperature can indicate infection (if elevated) or poor perfusion (if decreased). The consistent temperature readings around 97°F to 98°F suggest stable wound conditions, but any significant deviations should be investigated.  
- Impedance: Impedance measurements can provide insights into wound moisture and tissue health, helping to guide the use of topical therapies and dressings. However, the interpretation of these measurements requires consistency and consideration of the wound's specific conditions.**

This analysis emphasizes the importance of continued monitoring, adapting care strategies as needed based on wound progression, and addressing potential complications early to support optimal wound healing.

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