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

**1. Wound Healing Trajectory:  
The wound healing trajectory shows a general trend towards reduction in size and improvement in tissue characteristics over time. Initially, the wound size was 5.5cm x 4.5cm x 0.1cm (Area: 24.8cm²) on 08-30-2024, and by 02-10-2025, it had reduced to 1.5cm x 1.6cm x 0.5cm (Area: 2.4cm²). The tissue characteristics evolved from pale to pink/red, indicating improved perfusion and oxygenation. Exudate volume and viscosity also showed variations, but overall, the wound has progressed towards a more favorable healing environment.**

**2. Concerning Patterns:  
Several concerning patterns were observed:  
- Increased exudate volume and viscosity: On 09-24-2024 and 10-08-2024, high or medium volume exudate with medium or low viscosity was noted, which may indicate infection or inflammation.  
- Impedance measurements: The absence of impedance measurements for certain dates (e.g., 10-14-2024, 10-22-2024) limits the understanding of wound healing. However, the available impedance data show fluctuations, which could indicate changes in wound fluid, tissue composition, or the presence of infection.  
- Oxygenation levels: Oxygen levels (O₂) fluctuated throughout the healing process, with the lowest reading of 73.0% on 02-10-2025, which may indicate inadequate tissue oxygenation and potential compromise in the healing process.  
- Temperature variations: While the center wound temperature remained relatively stable, the edge and peri-wound temperatures showed variations, which could be indicative of local inflammation or infection.**

**3. Care Recommendations:  
Based on the wound type, characteristics, and healing progress:  
- Continue with Medihoney or similar topical treatments: Given the wound's response to Medihoney, continue its use to promote a moist environment conducive to healing.  
- Monitor and manage exudate: Regularly assess exudate volume and viscosity, and consider using absorbent dressings or topical treatments to manage high exudate levels.  
- Assess for infection: Closely monitor the wound for signs of infection, such as increased redness, swelling, warmth, or foul odor, and adjust the treatment plan accordingly.  
- Optimize wound dressing: Ensure the wound dressing is properly secured and changed regularly to maintain a moist environment and prevent maceration.  
- Consider debridement: If the wound shows signs of necrotic tissue or slough, consider surgical or autolytic debridement to promote healing.**

**4. Complication Risks:  
Based on the patient profile and wound characteristics:  
- Infection risk: The patient's diabetes (T2DM) and obesity (BMI: 40.6) increase the risk of infection. Regular monitoring for signs of infection and prompt intervention are crucial.  
- Delayed healing: The patient's diabetes and obesity may also contribute to delayed wound healing. Close monitoring of wound progress and adjustment of the treatment plan as needed are essential.  
- Pressure ulcer risk: The wound's location on the plantar forefoot and the patient's obesity increase the risk of pressure ulcers. Regular repositioning, off-loading, and pressure-redistributing interventions should be considered.**

**5. Significance of Sensor Measurements:  
- Oxygenation (O₂) trends: Fluctuations in oxygen levels may indicate changes in tissue perfusion, oxygen delivery, or wound healing. Lower oxygen levels (e.g., 73.0% on 02-10-2025) may suggest inadequate tissue oxygenation, which can impede the healing process.  
- Temperature trends: Temperature variations may indicate local inflammation, infection, or changes in tissue metabolism.  
- Impedance trends: Impedance measurements can provide insights into wound fluid, tissue composition, and the presence of infection. Fluctuations in impedance may indicate changes in the wound environment, such as increased fluid accumulation or tissue edema.**

In conclusion, the wound has shown a general trend towards healing, but close monitoring and adjustment of the treatment plan are necessary to address concerning patterns and minimize complication risks. The patient's underlying medical conditions and wound characteristics require careful consideration in the management of the wound.

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