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: The wound size has fluctuated over time, with an initial increase from 5.5cm x 4.5cm to 6.4cm x 4.0cm by 09-13-2024, followed by a gradual decrease to 1.1cm x 2.8cm by 12-03-2024. The most recent measurement on 02-10-2025 shows a slight increase to 1.5cm x 1.6cm, which could be due to the depth increase to 0.5cm, suggesting a possible re-excision or debridement procedure.  
- Exudate: Exudate volume and viscosity have varied, with periods of low and high volume, and changes in viscosity from low to medium. The exudate type has also transitioned from serous to serosanguineous and back to serous, indicating ongoing healing processes with occasional signs of inflammation or possible infection.  
- Tissue Characteristics: The tissue color has changed from pale to pink, red, and back to pink, indicating phases of healing, inflammation, and possibly ischemia. The coverage of the wound area by granulation tissue has been mostly complete, with a noted exception on 10-14-2024, where it covered only one quarter of the wound area, suggesting a potential setback in the healing process.**

#### 2. Concerning Patterns

**- Fluctuating Wound Size: The wound size increase in the early stages and the later slight increase could indicate delayed healing or complications such as infection.  
- Exudate Variability: Changes in exudate characteristics might signal underlying issues such as infection, especially with the presence of blood (serosanguineous type).  
- Tissue Coverage: The noted decrease in tissue coverage at one point could be a sign of a healing plateau or a complication requiring intervention.  
- Oxygenation Levels: The oxygenation levels have generally been within a range that could support healing ( выше 78%), but the variability and the drop to 73% in the last measurement could indicate issues with wound perfusion or the need for supplemental oxygen therapy.**

#### 3. Care Recommendations

**- Debridement: Consider regular debridement to remove dead tissue and promote a clean environment for healing, especially given the fluctuations in wound size and tissue characteristics.  
- Infection Control: Monitor closely for signs of infection and consider prophylactic or therapeutic antibiotic treatments if infection is suspected, given the variability in exudate and tissue color.  
- Topical Treatments: Continue with MediHoney or consider alternative topical treatments that promote moist wound healing and have antimicrobial properties. The use of Medihoney patches seems to be beneficial but may need adjustment based on wound status.  
- Off-loading: Given the wound's location on the plantar forefoot, implement strategies to off-load pressure from the wound area to facilitate healing, such as custom orthotics or footwear modifications.  
- Blood Glucose Control: Although the patient's diabetes status is mentioned, the HbA1c levels are not provided. Tighter control of blood glucose levels can significantly impact wound healing in diabetic patients.**

#### 4. Complication Risks

**- Infection: The presence of serosanguineous exudate and fluctuations in wound size and tissue color increase the risk of infection.  
- Delayed Healing: The patient's diabetic status and the wound's location on a weight-bearing area increase the risk of delayed healing.  
- Amputation: Although not directly indicated from the provided data, diabetic foot ulcers have a risk of progressing to severe complications, including amputation, if not managed properly.**

#### 5. Significance of Sensor Measurements

**- Oxygenation: The oxygen levels have generally been adequate for healing but show variability. Lower oxygenation levels could indicate poor perfusion or the need for supplemental oxygen.  
- Temperature: The wound temperature has been relatively stable, which is good. Significant deviations could indicate infection or inflammation.  
- Impedance: The provided impedance measurements are variable and, in some cases, not completed. Impedance can give insights into tissue health and fluid status, but the interpretation requires consistent and comparable data.**

In conclusion, while the wound shows signs of healing, there are concerning patterns that necessitate close monitoring and potentially more aggressive interventions to prevent complications and ensure timely healing. Regular assessment of the wound, adjustment of the treatment plan as needed, and tight control of the patient's diabetes are crucial for optimal outcomes.

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