Wound Care Analysis Report

# Patient Information

**Patient Demographics:**Age: Unknown years  
Sex: Unknown  
BMI: Unknown

**Diabetes Status:**

# Analysis Results

**Comprehensive Analysis of Wound Healing Progression and Clinical Recommendations**

### 1. Wound Healing Trajectory

The wound healing trajectory for this patient can be analyzed by examining changes in wound size, exudate, and tissue characteristics over time.

**- Size: The wound initially measured 5.5cm x 4.5cm x 0.1cm (Area: 24.8cm²) on 08-30-2024. By 02-10-2025, it had decreased significantly to 1.5cm x 1.6cm x 0.5cm (Area: 2.4cm²), indicating a positive healing trend.  
- Exudate: The exudate volume and type have fluctuated throughout the healing process. Initially, it was low volume and serous. Over time, there were periods of medium to high volume with changes in viscosity and type (serous, serosanguineous, sanguineous). By the last visit, it was medium volume and serous, which could indicate a relatively stable wound environment.  
- Tissue Characteristics: The tissue color has varied from pale to pink to red, with coverage of the wound area being all or partially covered. The most recent observations show red tissue covering all of the wound area, which is consistent with the healing process.**

### 2. Concerning Patterns

Several concerning patterns and measurements have been observed:

**- Fluctuations in Wound Size: While the overall trend is a decrease in size, there have been instances where the wound size increased or remained stable for a period, suggesting potential stalls in the healing process.  
- Exudate Variability: The variability in exudate volume and type could indicate ongoing inflammatory responses or potential infection, which requires close monitoring.  
- Oxygenation Levels: Oxygen saturation levels in the wound have fluctuated, with the lowest reading being 73.0% on 02-10-2025. Lower oxygen levels can impede the healing process.  
- Temperature Measurements: While most temperature readings were within a relatively normal range, there were instances where edge and peri-wound temperatures were not recorded, which could be important for assessing wound health.**

### 3. Care Recommendations

Based on the wound type, characteristics, and healing progress:

**- Continued Use of Medihoney: Given the patient's response to Medihoney, its continued use is recommended. Medihoney has antimicrobial properties that can aid in preventing infection and promoting a moist environment conducive to healing.  
- Adaptive Dressings: The use of adaptive dressings like medihoney patches has been beneficial. These dressings should be continued or adjusted based on exudate levels and wound size.  
- Regular Monitoring: Regular monitoring of wound size, exudate, and tissue characteristics is crucial. This includes ensuring complete documentation of temperature readings and addressing any signs of infection promptly.  
- Management of Exudate: Given the variability in exudate, consideration should be given to using dressings that can manage a range of exudate volumes and types effectively.**

### 4. Complication Risks

Assessing based on the patient profile and wound characteristics:

**- Diabetes (T2DM): The patient's diabetes status poses a risk for impaired wound healing due to potential issues with circulation, neuropathy, and increased susceptibility to infection. Tight blood glucose control is essential.  
- BMI (40.6): The patient's high BMI increases the risk for pressure ulcers, especially on the plantar surface of the foot, and may complicate wound healing due to increased pressure and reduced mobility.  
- Infection Risk: Fluctuations in exudate and tissue color changes may indicate an increased risk of infection. Vigilant monitoring for signs of infection (e.g., increased redness, swelling, warmth, foul odor) is necessary.**

### 5. Significance of Sensor Measurements

**- Oxygenation (O₂) Trends: Lower oxygen saturation levels in the wound can hinder the healing process. Trends showing consistently low O₂ levels may necessitate interventions to enhance oxygen delivery to the wound site.  
- Temperature Trends: Consistent temperature measurements are crucial for assessing wound health. Significant deviations from normal skin temperatures could indicate infection or other complications.  
- Impedance Measurements: Impedance measurements (High Frequency, Center Frequency, Low Frequency) provide insights into the wound's electrical properties, which can change as the wound heals. These measurements can help in assessing the wound's fluid status, tissue composition, and potentially the presence of infection or other complications. However, the absence of resistance and capacitance values for some measurements limits the interpretability of these data.**

In conclusion, while the wound has shown an overall trend of improvement, close monitoring of its characteristics, prompt management of any signs of infection, and adjustments to the care plan as necessary are critical to Support the healing process and prevent complications. The patient's underlying health conditions, particularly diabetes, necessitate vigilant wound care to mitigate risks associated with impaired healing.

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