

# Cost-effectiveness of a disease-specific oral nutritional support for pressure ulcer healing

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## Introduction

The Oligo Element Sore Trial (OEST, Cereda et al 2015) demonstrated that supplementation with a disease-specific nutritional supplement enriched with arginine, zinc and antioxidants (Cubitan®) improves pressure ulcer (PU) healing in malnourished patients compared to a standard formula with the same protein and energy content. This objective of this economic evaluation was to determine if the improved PU healing is associated with cost savings in terms of overall cost of care.

## Method

A cost effectiveness analysis of incremental costs of local PU care against significant endpoints included in the OEST was conducted. These costs were; dressing materials, antibiotics, tests (PU swabs, culture and blood tests), debridement procedures, negative pressure wound therapy, expenses for health professional services (nursing and medical visits), and pressure redistribution mattresses. The economic analysis was conducted from the perspective of the local healthcare system in Italy where the OEST was performed.

## Results

Intervention with the experimental formula (Cubitan®) resulted in significant cost saving with respect to non-nutritional PU care activities ( $P=0.001$ ), particularly expenses for nursing time ( $P=0.001$ ) and dressing materials ( $P=0.024$ ). The difference in costs for pressure redistribution mattresses was also lower for the experimental group but did not reach statistical significance ( $P=0.083$ ). The local cost of the experimental formula was higher than for the control formula\* but despite this the overall cost of PU care was significantly lower in the experimental formula group ( $P=0.013$ ).

## Conclusion

This analysis demonstrated that the use of a disease-specific formula enriched with arginine, zinc and antioxidants, not only improves PU healing compared to a standard formula with the same protein and energy content, but that it is also a cost-effective intervention.

### Reference:

Cereda E, et al. A nutritional formula enriched with arginine, zinc, and antioxidants for the healing of pressure ulcers: a randomized trial. *Ann Intern Med* 2015; 162-74.

\*The local Italian cost of Cubitan included in this study was €2.30 per bottle compared to €1.80 per bottle of a standard formula with the same protein and energy content. In Ireland, the cost of a bottle of Cubitan is €1.60 (PCRS, 2017) which is the same as for all high protein supplements.