

The primary benefit of this document is that it expands the professional endorsement for wound types beyond the diabetic foot ulcers analyzed in meta-analysis reviews.<sup>1</sup> The recommended wound types includes diabetic foot, chronic, recalcitrant, venous or ischemic wounds. The last one, ischemic, is very broad since it covers a wide variety of wound types, including but not limited to acute surgical wounds (sternum, abdominal, breast reduction, etc.) and pressure ulcers.

The guidance is based on the Delphi method, which is an accepted technique for establishing expert consensus on a given topic. The iterative process entails several rounds of anonymous questionnaires aimed at reaching agreement of greater than 70% among a group of experts.<sup>2</sup> The Delphi expert panel on topically applied oxygen was chosen from the attendees of the Leadership in Wound Healing conference held in person in New Orleans in May 2021. Eighteen (18) experts with experience in using topically applied oxygen participated in the final consensus and identified themselves as:

- Medical Doctors (16)
- Wound Specialists (15)
- Vascular Surgeons (6)
- Podiatric Surgeons (6)
- Plastic Surgeon (1)
- Critical Care Physician (1)
- Research Scientist in Wound Healing (PhD) (1)

When reading through the guidelines, keep in mind that the participants consider topically applied oxygen as an adjunct to other therapies, including moist wound therapy. The ‘work up and procedures’ bullets should not be considered as comprehensive, yet as items of interest when applying oxygen. The consensus recommendations are the following.

#### Topically Applied Oxygen Should be Considered for Wounds that:

- are delayed in healing
- have failed prior therapies
- are ischemic

#### Wound Types Likely to Benefit from Topically Applied Oxygen:

- diabetic foot ulcers
- venous leg ulcers
- ischemic ulcers

#### The authors conclude that:

- The growing body of clinical trial and real-world evidence demonstrating the effectiveness of topically applied oxygen in diabetic foot and other wounds supports its incorporation into clinical practice.
- Topically applied oxygen should be applied until the wound has healed or goals are met as long as the wound is showing improvement at 4 week intervals.

An earlier version of this publication is available via Research Gate:

[https://www.researchgate.net/publication/354796409\\_Guidelines\\_for\\_the\\_use\\_of\\_topical\\_oxygen\\_therapy\\_in\\_the\\_treatment\\_of\\_hard-to-heal\\_wounds\\_based\\_on\\_a\\_Delphi\\_consensus](https://www.researchgate.net/publication/354796409_Guidelines_for_the_use_of_topical_oxygen_therapy_in_the_treatment_of_hard-to-heal_wounds_based_on_a_Delphi_consensus)

#### References:

1. Serena T, Andersen C, Cole W, Garoufalos M, Frykberg R, Simman R. Guidelines for the use of topical oxygen therapy in the treatment of hard-to-heal wounds based on a Delphi consensus. *J Wound Care* 2022 31(3):S20-S24. DOI: [10.12968/jowc.2022.31.Sup3.S20](https://doi.org/10.12968/jowc.2022.31.Sup3.S20)
2. Eubank BH et al. Using the modified Delphi method to establish clinical consensus for the diagnosis and treatment of patients with rotator cuff pathology. *BMC Med Res Methodol* 2016 (16)56-56. DOI: [10.1186/s12874-016-0165-8](https://doi.org/10.1186/s12874-016-0165-8)