Interdisciplinary Curriculum for Auricular Vagus Nerve Stimulation:
Expanding Neuromodulation Across the Continuum of Care

The goal: development of a consensus- and evidence-based continuing medical education curriculum for auricular vagus nerve stimulation (aVNS), with learning outcomes to enable practical application by any healthcare provider who seeks to safely identify, regulate, and maintain vagal states necessary for health and healing.

Presenting author:
Duvan Hoffmann, MBA
Co-authors:
Kajsa Landgren, PhD, RN
Mitchell L. Elkiss, DO, FACN, FAAMA, CSPOMM
Claire-Marie Rangon, MD, PhD
Megan Filoramo, MSN, APRN-BC, PGMT-BC, AP-PMN, IHWNC-BC
Dave Maybee, RMT
Eana Meng, MD-PhD candidate in History of Science
Peter Staats, MD, MBA, DABA, ABIPP, FIPP

Means for Non-invasive aVNS

Approaches for vagus nerve stimulation include: invasive, cervical, and aVNS (aka tVNS/taVNS). aVNS is non- (or minimally-) invasive, and is applied via biomedical devices, as well as direct care by providers using needles, electrical current, laser, ear seeds, or acoustic therapies to address vagal insufficiency (dysregulation) and restore sympathetic-parasympathetic balance.

The central role of vagal insufficiency (dysregulation) within the *Sleep-Pain-Anxiety cycle* (Fig 2), highlights the potential for broad utilization of aVNS.

Fig. 1: Patient receiving aVNS (stimulation applied via biomedical devices, electrical stimulation, low-level laser, needles, ear seeds/magnets, or manual manipulation).

Fig. 2: The "Sleep-Pain-Anxiety" cycle can be alleviated with aVNS.

Fig. 3: Examples of healthcare settings in which aVNS is used: nursing, primary care, internal medicine, mental health, pediatrics, geriatrics, hospitals, military, surgery, physical rehabilitation, addiction recovery, community health

Health settings icons courtesy of healthicons.org

Addressing Goals in Medical Education

This curriculum aligns with medical education goals of advancing neuromodulation and multimodal pain management by expanding access to, and delivery of, neuromodulation. A differential review of methods are taught on the six core competencies of AGCME: patient care, knowledge, communication, learning-based practice, professionalism, and systems.

Effectiveness, ease of application, safety, and low cost, are benefits of aVNS to improve person-centered care across many healthcare settings.

Potential in Continuum of Care

Advanced practice providers and allied health professionals are essential in providing continuum of care. aVNS supports this care with effective efficiency for pain, rehabilitation, anxiety, depression, PTSD, addiction, insomnia, and inflammatory conditions. Integration of aVNS approaches can address many practice management needs:

- Securing provider-patient trust
- Improved insights in team meetings
- Options for conservative treatment
- Cost reductions
- Means for treatment optimization
- Advancement of holistic and integrative approaches from intake through rehabilitation

Info & Educational Resources
IntegrateAuricular.com/avns

NANS2025 ANNUAL MEETING