

5. Strausbaugh LJ. Emerging health care-associated infections in the geriatric population. *Emerging Infectious Dis* 2001;7:268-71.
6. Davey P. Management of suspected bacterial urinary tract infection in adults, A national clinical guidelines, Scottish Intercollegiate Guidelines Network, July 2006
7. Treatment Guidelines from *The Medical Letter* 2007; 5 (57).
8. McGeer A, Campbell B, et al. Definitions of infection for surveillance in long-term care facilities. *Am J Infect Control* 1991;19:1-7.
9. Centers for Medicare & Medicaid Services. State Operations Manual. Appendix PP, Section 483.25(d); 2005. Publication #100-07. http://cms.hhs.gov/manuals/Downloads/som107ap_pp_guidelines_ltcf.pdf.
10. Loeb M, Bentley DW, et al. Development of minimum criteria for the initiation of antibiotics in residents of long-term care facilities. *Infect Control Hosp Epidemiol* 2001;22:120-4.
11. Juthani-Mehta M. Asymptomatic bacteriuria and urinary tract infection in older adults. *Clinics Geriatric Med* 2007; 23:585-94.
12. Juthani-Mehta M. Nursing home practitioner survey of diagnostic criteria for urinary tract infections. *J Amer Geriatrics Soc* 2005; 53:1989-90.
13. Warren JW. Guidelines for antimicrobial treatment of uncomplicated acute bacterial cystitis and acute pyelonephritis in women. *Clin Infectious Dis* 1999; 29:745-58.
14. Hummers-Pradier E. Management of urinary tract infections in female general practice patients. *Fam Practice* 2005; 22:71-7.
15. Nicolle LE. Resistant pathogens in urinary tract infections. *J Amer Geriatrics Soc* .2002;50S230-5.
16. Fihn SD. Acute uncomplicated urinary tract infection. *NEJM*2003;349:259-66.

Porpon Rotjanapan, MD, is an Infectious Disease Fellow at the University of Iowa Hospitals and Clinics.

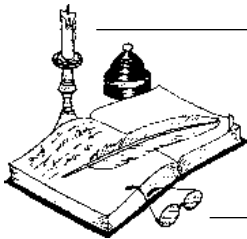
David Dosa, MD, is Assistant Professor of Medicine and Community Health, The Warren Alpert School of Medicine.

Disclosure of Financial Interests

The authors have no financial interests to disclose.

9SOW-RI-GERIATRICS-112009

THE ANALYSES UPON WHICH THIS PUBLICATION IS BASED were performed under Contract Number 500-02-RI02, funded by the Centers for Medicare & Medicaid Services, an agency of the U.S. Department of Health and Human Services. The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. The author assumes full responsibility for the accuracy and completeness of the ideas presented.



Physician's Lexicon

The Wanderings of the Vagus Nerve

The vagus nerve, sometimes called the pneumogastric nerve, is the tenth of twelve paired nerves emanating from the primate brain stem and are collectively called the cranial nerves. It is the longest and most complex of the cranial nerves. It emerges from the medulla oblongata, between the olivary nucleus and the inferior cerebellar peduncle; it then exits the infratentorial space through the jugular foramen, courses caudally through the carotid sheath and finally distributes its roots to structures in the neck, thorax and, via the diaphragm, the abdomen. About 80% of its fibers are sensory but it does innervate numerous muscles including those of the larynx and also carries parasympathetic fibers.

The phrase, vagus nerve, is derived from the Latin, *nervus vagus*, meaning wandering nerve. A number of other English words are also descended from the Latin, *vagus*, all reflecting the sense of wandering or impermanence. Thus, one encounters the word, vagabond, (a

person leading a wandering, nomadic life and sometimes thought to be shiftless, irresponsible and without a permanent home); the word, vagrant, (a person with neither home nor visible means of support, a wanderer); the word, vague, (something not clearly perceived or understood, something imprecise); and extravagant (spending too much; wandering beyond the bounds of fiscal reason and prudence). And the words reverie and rave are distantly related.

Still further English words trace back to the Latin, *vagus*. A vade mecum (literally, in Latin, "go with me") defines working or instructional manuals in various occupations and avocations (in more modern vernacular, "how-to" books). Even the slang, vamoose (directly from the Spanish, *vamos*, meaning let us go; previously from the Latin, *vadere*, meaning to go, and ultimately from the Latin, *vagus*.)

The word, wander, however, is purely Germanic (through various north Teutonic permutations including Old

English) with not a trace of Latin or Greek. The word, vandal, derives from it; and through a reverse linguistic migration then turns up in Latin as *Vandalus*, the name that the Romans bestowed upon the pagan Germanic tribes that ravaged Spain and Gaul particularly during the Fifth Century.

The vagus nerve has been a sturdy mainstay within textbooks on neuroanatomy for centuries. No medical student could possibly consider promotion to the clinical years without knowing the distribution and sensory/motor responsibilities of this important cranial nerve. And now, with the increasing employment of the **vagus nerve stimulator (VNS)** as a therapeutic adjunct, the nerve has assumed even greater practical importance.

— STANLEY M. ARONSON, MD