Dysphagia, or difficulty with swallowing, is a sorely neglected medical disorder that impacts as many as 15 million Americans, with approximately one million people annually receiving a new diagnosis of the condition. Dysphagia is derived from the Greek word phagein, meaning “to eat.”

- Although little known, dysphagia often has devastating consequences: Each year, according to the Agency for Health Care Policy and Research (AHCPR), over 60,000 Americans die from complications associated with swallowing dysfunctions, most commonly aspiration pneumonia – caused by food or saliva going down the windpipe and into the lungs. A large proportion of these cases are due to dysphagia arising from a variety of causes, primarily stroke, degenerative neurological diseases, and head and neck cancer.
Based on CDC mortality data, this is more than the total number of people dying from all forms of Liver Disease, Kidney Disease, and HIV-AIDS, combined – and nearly as many as died from Diabetes, the #6 killer of Americans.

One in 17 people will develop some form of dysphagia in their lifetime, including 50 to 75 percent of stroke patients and 60 to 70 percent of patients who undergo radiation therapy for head and neck cancer. Estimates of dysphagia’s prevalence in such neurological diseases as Parkinson’s Disease and ALS run as high as 90 percent.

Dysphagia is especially prevalent among the elderly; for instance, studies suggest that up to 75 percent of nursing home residents experience some degree of dysphagia, and that as many as half of all Americans over 60 will experience dysphagia at some point after that age.

According to data cited in a VA report, aspiration pneumonia is one of the leading causes of death among the elderly, and has been reported as a growing cause of hospital admissions in that population segment. Pneumonia – a large percentage of which arises from dysphagia – is the fifth leading cause of death of Americans over the age of 65, and the third leading cause of death in those over 85.

In addition to aspiration pneumonia, dysphagia also predisposes patients to complications such as choking, bronchospasm, increased infection rate, chronic malnutrition, severe life-threatening dehydration, significant weight loss, muscle wasting, physical debilitation, and death from asphyxia. In head and neck cancer patients, dysphagia can also lead to poor wound healing and reduced tolerance to medical treatments.

Dysphagia profoundly affects quality of life: dysphagic patients experience personal discomfort and a drastic reduction in the quality of their lifestyles due to the inconvenience and pain of feeding tubes, which for many has been the primary treatment option for this condition. The loss of swallowing can also lead to severe depression due to the interruption of patients’ normal ways of life.

Complications due to dysphagia also increase healthcare costs by resultant hospital readmissions, emergency room visits, extended hospital stays, the necessity for long-term institutional care, and the need for expensive respiratory and nutritional support. For the most severe cases, a tracheostomy for breathing and percutaneous endoscopic gastrostomy (PEG) tube for nutritional supplements are typical.
• The cost of managing a patient with a feeding tube (PEG) is reported to average over $31,000 per patient per year. The total annual cost to Medicare just for enteral feeding supplies for outpatients was more than $670 million, in 2003. This figure is almost 6% of the total Medicare budget for that year. Including the monies spent in hospitals, the total cost of dysphagia to the healthcare system is well over $1 billion dollars, and rising rapidly. The prevalence of feeding tube usage, according to a recent study, is also rising steadily.

• Dysphagia can arise from a wide variety of causes, primarily stroke and other cerebral vascular accidents, traumatic head or spinal cord injuries, meningitis, head, neck, throat, and esophageal cancers and their treatment (e.g., radiation), degenerative neurological conditions (e.g., Parkinson's Disease, Multiple Sclerosis, Amyotrophic Lateral Sclerosis (Lou Gehrig’s Disease, or ALS), Cerebral Palsy, myasthenia gravis), respiratory conditions (e.g., Chronic Obstructive Pulmonary Disease), burns, and tracheotomies.

• Dysphagia occurs when there is a problem with any part of the swallowing process – for instance, weak tongue or cheek muscles may make it hard to move food around in the mouth for chewing. Food pieces that are too large for swallowing may enter the throat and block the passage of air.

• The problem can arise anywhere from the mouth to the stomach: it may be due to impaired function of the tongue, palate, pharynx, larynx, vocal folds, upper esophageal sphincter or esophagus, since all are involved in the swallowing mechanism.

• Other problems include not being able to start the swallowing reflex (a stimulus that allows food and liquids to move safely through the pharynx) because of a stroke or other nervous system disorder. People with these kinds of problems are unable to begin the muscle movements that allow food to move from the mouth to the stomach. Another difficulty occurs when weak throat muscles cannot move all of the food toward the stomach – bits of food can fall or be pulled into the trachea, which may result in aspiration pneumonia.

“... as many as half of all Americans over 60 will experience dysphagia at some point after that age.”
Dysphagia is also a familiar pediatric condition – for example, people born with abnormalities of the swallowing mechanism may not be able to swallow normally; infants who are born with a cleft palate are unable to suck properly, which complicates breast-feeding and drinking from a regular baby bottle.

As to diagnosis of dysphagia, physicians and speech-language pathologists who test for and treat swallowing disorders use a variety of tests that allow them to look at the parts of the swallowing mechanism, including fiber optic laryngoscopy, ultrasound, and the Modified Barium Swallow Study (MBSS or videofluoroscopy).

Each of these tests provides objective information about swallowing function and safety. Videofluoroscopic assessment of swallowing is the most widely used procedure; it is performed by a radiologist and a speech pathologist. The modified barium swallow (MBS) is thought to be the “gold standard” for assessment of swallowing. Manofluorography and ultrasound are also used as methods of assessment; however, they are generally used as an adjunct to modified barium swallow or a fiberoptic endoscopic evaluation of swallowing (FEES), rather than as alternatives.

The dysphagia diagnostic and treatment strategy team may include speech and language therapists, gastroenterologists, otolaryngologists, neurologists, surgeons, dietitians, nurses, and radiologists.

Traditional methods to treat dysphagia include conventional speech therapy and oral exercises, patient education, swallowing maneuvers (e.g., tucking the chin), and physiologic exercises. Thermal stimulation (application of cold to the throat area) has been commonly used. Diet alterations and food presentation strategies also are used therapeutically to improve efficiency and safety of swallowing. In most moderate to severe cases a percutaneous endoscopic gastrostomy tube, or feeding tube, was necessary to provide nourishment to the patients.

New treatments are evolving, some of which with great apparent potential to positively impact dysphagia and speed up recovery. The use of NMES (neuromuscular electrical stimulation) is yielding good outcomes in both inpatient and outpatient settings. The use of surface EMG (electromyography) is another promising modality in which feedback about the muscle’s activity level encourages the patient to swallow.