

Remote Collaboration and Learning for Speech-Language Pathologists

University of South Alabama Mobile, AL



Dr. Kendrea Garand, PhD (USA SDI Lab) at work in an imaging suite with her TIMS MVP and TIMS Connect medical imaging solutions, alongside a companion



Members of the Research Team, Swallowing Disorders Initiative Lab (University of South Alabama, Mobile, AL)
Far left: Kendrea Garand, PhD - Founder and Director, SDI Lab

Problem: Enhance how SLPs Access Medical Images & Collaborate With Clinicians Across Campus
To support this broad span of research studies, deliver accurate diagnoses of patients' swallowing disorders, and to further the education of next-gen SLPs, the university required the latest imaging technology for swallow studies.

To that end, USA's radiologists use a **General Electric Mobile C-Arm** (Model GE OEC One) to acquire detailed imaging during procedures. For maximum functionality and efficiency, Dr. Garand needed a parallel solution to complement the GE C-Arm enabling technicians to easily maneuver in the confined space of a small imaging suite and capture **Modified Barium Swallow** studies in high resolution video (with synched audio), archive them to their **PACS** database, and facilitate the sharing of imaging/studies with clinicians, faculty, and students throughout the university's networks and disbursed facilities.

Solution: TIMS MVP and TIMS Connect®

To meet varied and growing medical imaging needs of the Lab, Dr. Garand deployed the **TIMS Medical Video Platform™ (TIMS MVP)** - an integrated hardware and software system from **TIMS Medical** (Chelmsford, MA). TIMS MVP provides for the recording, editing, labeling, review, analysis, and archiving of high resolution (1024 x 1024 pixels) medical video throughout the lab and nearby imaging suites.

This includes support for the Lab's GE C-Arm ultrasound and digital radiography system, and any other medical video modalities. Modified Barium Swallow (MBS) Studies can be archived to PACS/VNA in DICOM format and exported as DICOM or MP4 video for sharing, distribution, and integration into reports and presentations.

University of South Alabama Swallowing Disorders Initiative Lab



The University of South Alabama (Mobile, AL)

Comprehensive, research-activity university & healthcare provider - where learning meets healing

Founded in 1963, The University of South Alabama ("South" or "USA" for short) is home to more than 4,000 students and 100+ academic programs. South's 1,200-acre campus is not solely a location for teaching and athletic facilities, but also a dynamic community for high-level research and the **USA Health system** (whose two hospitals, the **Mitchell Cancer Institute**, and three medical colleges) provide care to hundreds of thousands of residents of the Gulf Coast region, and is a training ground for future Speech-Language Pathologists (SLPs), as well as physicians, nurses, and other healthcare professionals.

TIMS Medical Video Platform® | Record • Edit • Archive • Collaborate

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Mobile, AL

USA's Swallowing Disorders Initiative Lab

A jewel in the university's crown is its **Swallowing Disorders Initiative Research Laboratory**, an award-winning research center focused on how aging impacts swallowing function and how swallowing impairment (**dysphagia**) occurs in patients with progressive neurodegenerative disease, particularly those with motor neuron disease (**MND**), such as amyotrophic lateral sclerosis (**ALS**), and sleep related disorders, such as obstructive sleep apnea.

Founded and led since 2017 by Dr. Kendrea L. (Focht) Garand, the SDI Lab and its researchers investigate:

- * Swallowing physiology and coordination of breathing and swallowing
- * Respiratory swallow training on improving respiratory-swallow coordination
- * Impact of pulmonary function on speech and swallowing function
- * Strengthening paradigms on improving swallowing function



"Swallowing. We can take it for granted. We eat and drink all day long without giving it a thought. That is, until there's a problem. Each year, one in 25 adults will experience dysphagia — difficulty in swallowing.

Accurate diagnosis of dysphagia requires high resolution video imaging during MBS studies. The TIMS Medical Video Platform equipment makes it easy for us to observe swallow studies in real-time and precisely (and quickly!) analyze offline.

TIMS is valuable to us as a teaching facility, as it enables SLP students and other clinicians to remotely watch and participate in clinical exams without having to be physically present in the procedure suite – a capability that has proven beneficial given recent restrictions on in-person learning associated with COVID-19 social distancing protocols.

Finally: TIMS Medical has been crucial in helping us secure grants, conduct complex research projects, and publish multiple papers in peer-reviewed journals."

Kendrea L. (Focht) Garand, PhD, CScD, CCC-SLP, BCS-S, CBIS, CCRE: Founder and Director, Swallowing Disorder Initiative Research Laboratory; Assistant Professor of Speech-Language Pathology; PhD Program Coordinator (University of South Alabama)

TIMS Connect (a software enhancement to the TIMS MVP system) allows clinicians SLP students beyond the procedure room to remotely observe in-process studies from any networked hospital computer.

For more on **TIMS MVP**: <https://tims.com/timsmvpproduct/>

For more on the **USA Swallowing Disorder Initiative Lab**: <https://sites.google.com/southalabama.edu/sdilab>

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