Mid-Career Project

Cara Stepp, assistant professor of speech, language & hearing sciences, and a former KL2 Scholar and Pilot awardee, has developed a tool that uses an acoustic measure of small changes in people's voices, called relative fundamental frequency (RFF) that will make estimating laryngeal tension easy, noninvasive, reliable, and affordable. That's critical in helping patients through voice therapy. The tool, which is being tested for use in clinical practice, will also help speech scientists better understand how vocal hyperfunction works.



She is working on the project with a team of clinicians, scientists, and engineers at Sargent,

the BU School of Medicine, and Massachusetts General Hospital. The tool, whose development received \$10,000 in funding from the American Speech-Language-Hearing Foundation and \$480,927 from the National Institutes of Health (NIH), consists of two parts. The first is a microphone, such as that on a high-quality, handheld digital recorder or a smartphone. The second is computer software that Stepp's team created.

They came up with algorithms that enable the software to compute an automatic reading of RFF based on the voice recording. Stepp's team plans to make the software program available for free on the website for the STEPP LAB for Sensorimotor Rehabilitation Engineeringat BU later this year.

Read more here.