best for them.” He is also seeking input about the types of data practitioners and payers would like to have access to.

“I think that’s critical,” he says. “We, as scientists, have our ideas about what sort of outcomes we should be paying attention to, but ultimately I think those making decisions in the field should decide.”

He continues, “The traditional experimental design studies a proposed intervention and tries to generalize the results across a population. I think we’re finding that doesn’t work so well in orthotics and prosthetics. Different patients respond differently, and we often don’t understand why. Even when you try to pick a homogenous patient population, there is still a big variation—not a great practice if you wish for your results to be clinically relevant. This is one of the reasons why we believe what we are doing is important: the process is individualized. It figures out for this specific patient what works best without any preconceived notions about what should be best for them. We just measure it.”

The current focus is on users of transtibial prostheses, regardless of the type of prosthetic foot; however, some devices are more challenging to emulate than others. “For instance, a microprocessor-controlled foot has intelligence programmed into it that cannot simply be measured on a mechanical testing setup. We need to gain insight, presumably from the manufacturer of the device, into how it is programmed to really do a good job of emulation,” Caputo explains.

Regardless of this challenge, he envisions not just including all available devices, but also using the emulator to implement ideas for prosthetic feet that do not exist yet, thus allowing manufacturers to research, develop, and test a device before it is even fabricated. “There are so many applications for this technology,” he says, and continued engagement with the clinical and research communities is going to be central to HuMoTech’s success. “We need feedback from all stakeholders in O&P to identify the key roadblocks holding back patients from achieving their full potential.”

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