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Microsoft's cutting-edge mixed reality platform may be too early for the US healthcare stage

Article

Microsoft recently unveiled a new mixed reality platform, **Microsoft Mesh**, that uses its **HoloLens** headset to project a hologram of a person or objects that users can interact with as

if they're there in person.

"VR for healthcare" is still in its early days in healthcare—so, even though Microsoft Mesh has massive potential to disrupt health operations, it'll likely be a while before it takes off.

- **Startups are developing VR-based research and programs for medical education and treatment—but these sorts of projects are few and far between.** For example, VR firm **AppliedVR** works with over 240 hospitals and collaborated with **Stanford University School of Medicine** on a study that found AppliedVR's pain management program resulted in a 42% reduction in pain intensity for chronic pain patients. And **FundamentalVR** has been developing its VR-enabled surgical education platform that allows multiple users to access a single virtual classroom for an immersive learning experience that can simulate real-world training.
- **Digital health tools at large haven't totally permeated healthcare yet, and even some of the more mature technologies are facing resistance from patients and providers.** US telemedicine users doubled from 2019 to 2020, but around **64%** of healthcare providers say tech challenges faced by patients (like lack of access and limited digital literacy) are major barriers to sustained usage post-pandemic, according to The COVID-19 Healthcare Coalition's October 2020 analysis. Meanwhile, many health systems are still molding their healthcare infrastructure to fit the quickly shifting digital health landscape—and until the digital health transformation dust settles, high-tech innovations like Microsoft Mesh will be put on the backburner: Health execs say telehealth and AI solutions are at the top of their priorities, according to a 2021 Center of Connected Medicine-KLAS report.

Although it could be a while before mixed reality disrupts healthcare, we think it'll be in a limited capacity, especially for medical education and surgical collaboration.

- **Clinical training for any medical profession requires hands-on experience, which is often resource intensive**—but mixed reality tech can help deliver an enhanced education model that's economical, repeatable, and effective: For example, studying anatomy with VR could be just as engaging as studying it on a cadaver, but without risks, one-time use factor, supplies, and associated costs.
- **And tech like Microsoft Mesh could enhance surgical planning and collaboration by surgeons in a risk-free environment.** For example, last year, Chicago-based **Rush University** achieved 98.9% surgical accuracy after testing **Augmedics's** xvision Spine system that lets surgeons visualize the 3D spinal anatomy of a patient using a headset that mimics X-ray vision. Mixed reality techlike Microsoft Mesh could also make collaborating with surgical experts

from around the world easier, and improve the odds of successful surgeries in tight timeframes.