

## **Concussion Game-Transcript for Video-Audio Clips with Dr. Adam Cross, pediatric hospitalist and informaticist, OSF HealthCare-Innovation**

FlightPath app doesn't rely on user reporting symptoms

**“Because they want to keep playing - we term that ‘sandbagging.’ And the current tests that we have really don't protect against sandbagging. They're so reliant on people being honest with their symptoms that if somebody doesn't want to tell you, there's not a whole lot you can do. But this application that we're using is meant to test all of the different ways in which a concussion can manifest, and there are many.” (:24)**

The game asks the user to capture a virtual hummingbird within the user's actual environment – which is how the “mixed reality” is created.

**“We have a set of complex algorithms that determine how the bird should fly in that space to better test your abilities. If it detects you're having trouble in a certain way, it actually will go back and test that kind of movement to get a good sense of what's going on with that particular impairment.” (:17)**

The mixed reality system also requires the individual to move around physically to follow the hummingbird which tests the user's coordination and balance.

**“That actually requires you to not only move your hands and arms up and down but also move throughout the room (or location). You have to walk, you have to turn, you have to look up and down and all that requires vision; it requires reaction time to move with the hummingbird. It requires balance and it also requires a little bit of memory as you watch the bird leave the screen and figure out where it was going if it goes very quickly. It adapts itself to your performance in order to best test that threshold where you start having trouble.” (:28)**