

Transcript-Testing the path to better concussion diagnosis

Cyerra Hibbert, senior soccer player at Illinois State University who has suffered multiple concussions

Hibbert finished the FlightPath test but had some challenges.

"After a while it did bring a little confusion or if I wasn't aware of where the bird flew on or off the screen, that did trick a little bit of my memory and concentration skills, so I do think it's definitely approachable. It's definitely doable. I think just based on your outcome will determine where you are in your concussion level." (:23)

The FlightPath app takes pressure off athletes because it provides objective data about whether they have a concussion.

"Because as athletes, we're always eager to be on the field or play the game and to have that mindset to be better and get back on your feet as quickly as you can. I think this app will allow you to really settle and to really take your time with your symptoms." (:16)

Dr. Adam Cross, pediatric hospitalist and director of Children's Innovation Lab at Jump Simulation & Education Center

Dr. Cross' research team has done some internal testing but needs to test on concussed athletes.

"Regarding how well it detects differences in impairments with people – how well they can determine if someone is functioning, acting appropriately, or if there's if there's something else going on. The challenge has been really doing that with individuals that have true concussion," says Dr. Cross. (:23)

Athletes took baseline testing first and use FlightPath when concussion is suspected.

"The players themselves are trying out this app while concussed after having been consented earlier on in the year so that we can get data around how they perform with this app while concussed versus not concussed, and comparing that to be to the normal, typical present-day evaluation techniques that the trainers perform." (:24)

There are other concussion applications commercially available, but Dr. Cross suggests none are as robust as FlightPath.

"There aren't any, as far as I've seen, that use this mixed reality approach to gather the kinds of data that we're gathering. This is very rich data in a very short time in our app. One of the things that makes it so unique and sets it apart is that we get so much data about so many different manifestations of concussion in such a short time." (:23)

Dr. Karan Rai, sports medicine physician and team physician for Illinois State University Athletics

The data from FlightPath could help beyond diagnosis.

"It in turn can help us with making prognoses, coming up with recovery timelines, implementing certain vestibular therapy. Other than diagnostic purposes, we can extrapolate that data to help us come up with a better treatment plan as well." (:19)

Rai says nearly 15 athletes who have suffered a concussion have completed a FlightPath assessment and it's been performing well.

"Results are early so far but in our sample size we found some associations at least where FlightPath has shown some abnormalities similar to what other examinations have found as well, whether that's the SCAT test or the ImPACT test." (:18)