

## COVID-19 in Youth Soccer

Andrew M. Watson, MD, MS,<sup>1</sup> Kristin Haraldsdottir, PhD,<sup>1</sup> Kevin Biese, MS,<sup>2</sup> Leslie Goodavish, PA,<sup>1</sup>

Bethany Stevens,<sup>2</sup> Timothy McGuine, PhD, LAT<sup>1</sup>

From the Department of Orthopedics and Rehabilitation,<sup>1</sup>

University of Wisconsin School of Medicine and Public Health, Madison, WI, and

The Department of Kinesiology,<sup>2</sup> University of Wisconsin – Madison

Address for Correspondence:

Andrew Watson

Department of Orthopedics and Rehabilitation, Division of Sports Medicine

1685 Highland Avenue

Madison, WI 53705

Phone: (608) 263-6477

Fax: (608) 263-0503

Email: [Watson@ortho.wisc.edu](mailto:Watson@ortho.wisc.edu)

## ABSTRACT

**Purpose:** The purpose of this study was to determine the case and incidence rates of COVID-19 among youth soccer players and evaluate the relationship with background COVID-19 risk and phase of return to play.

**Methods:** Surveys were distributed to soccer clubs throughout the country regarding their phase of return to soccer (individual only, group non-contact, group contact) and date of reinitiation, number of players, cases of COVID-19, and risk reduction procedures that were being implemented. Overall case and incidence rates were compared to national pediatric data and county data from the prior 10 weeks where available. Finally, a negative binomial regression model was developed to predict club COVID-19 cases with local incidence rate and phase of return as covariates and the log of club player-days as an offset.

**Results:** 129 clubs responded, of whom 124 had reinitiated soccer, representing 91,007 players with a median duration of 73 days (IQR: 53-83 days) since restarting. Of the 119 that had progressed to group activities, 218 cases of COVID-19 were reported among 85,861 players. Youth soccer players had a lower case rate and incidence rate than the national rate for children in the US (254 v. 477 cases per 100,000; IRR = 0.511, 95% CI = [0.40-0.57], p<0.001) and the general population from the counties in which soccer clubs were based where data was available (268 v. 864 cases per 100,000; IRR = 0.202 [0.19-0.21], p<0.001). After adjusting for local COVID-19 incidence, there was no relationship between club COVID-19 incidence and phase of return (non-contact:  $\beta=0.35\pm0.67$ , p=0.61; contact:  $\beta=0.18\pm0.67$ , p=0.79). No cases were reported to have resulted in hospitalization or death. 100% of clubs reported having a plan in place to reduce the risk of COVID-19 and utilizing multiple different risk reduction procedures (median 8, IQR 6-10).

**Conclusions:** The incidence of COVID-19 among youth soccer athletes is relatively low when compared to the background incidence among children in the United States and the local general population. No relationship was identified between club COVID-19 incidence and phase of return to soccer. Youth soccer clubs universally report implementing a number of risk reduction procedures.