

## CCM Public Symposium Speaker – CSB 2018

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**Title of Talk:** *Goaltender Equipment: Friend and Foe?*

**Abstract:** Due to advancements in materials engineering, professional player feedback and new National Hockey League rules and regulations, the ongoing development of ice hockey goaltender equipment surpasses concurrent biomechanically-driven studies that evaluate the equipment. We address this discordance by investigating the effects of ice hockey goaltender equipment on player safety and performance. Our previous work evaluating goaltender lower body kinematics and kinetics suggests an inverse relationship exists between these two factors. Therefore, we believe that equipment research and development should focus on both player safety and sport performance, ensuring that advancing performance does not occur at the expense of safety. For example, our most recent research explores the effects of the National Hockey League's goaltender upper body equipment rule changes that will result in smaller equipment. Mobility performance was analyzed using range of motion and reach envelope outcome measures, while puck impact mitigation assessed the equipment modification's effect on goaltender safety.

**Bio:** Dr. Ryan Frayne completed a bachelor of science from the University of Guelph in Human Kinetics, then attended Western University where he completed a Masters and PhD under the supervision of Dr. Jim Dickey. During his tenure as a PhD student he established a thriving research partnership with CCM hockey that focused on developing and conducting new methods to understand the effects of ice hockey goaltender equipment on an athlete's safety and performance. He is currently a Mitacs postdoctoral fellow in the Biomechanics, Ergonomics and Neuroscience lab at Dalhousie University where he continues to work with CCM hockey testing their goaltending equipment. Dr. Frayne is also a member of CCM's Goalie Advisory Committee and a sessional instructor in the School of Health and Human Performance at Dalhousie University.