Study finds safety of Whistler sliding track comparable to other tracks

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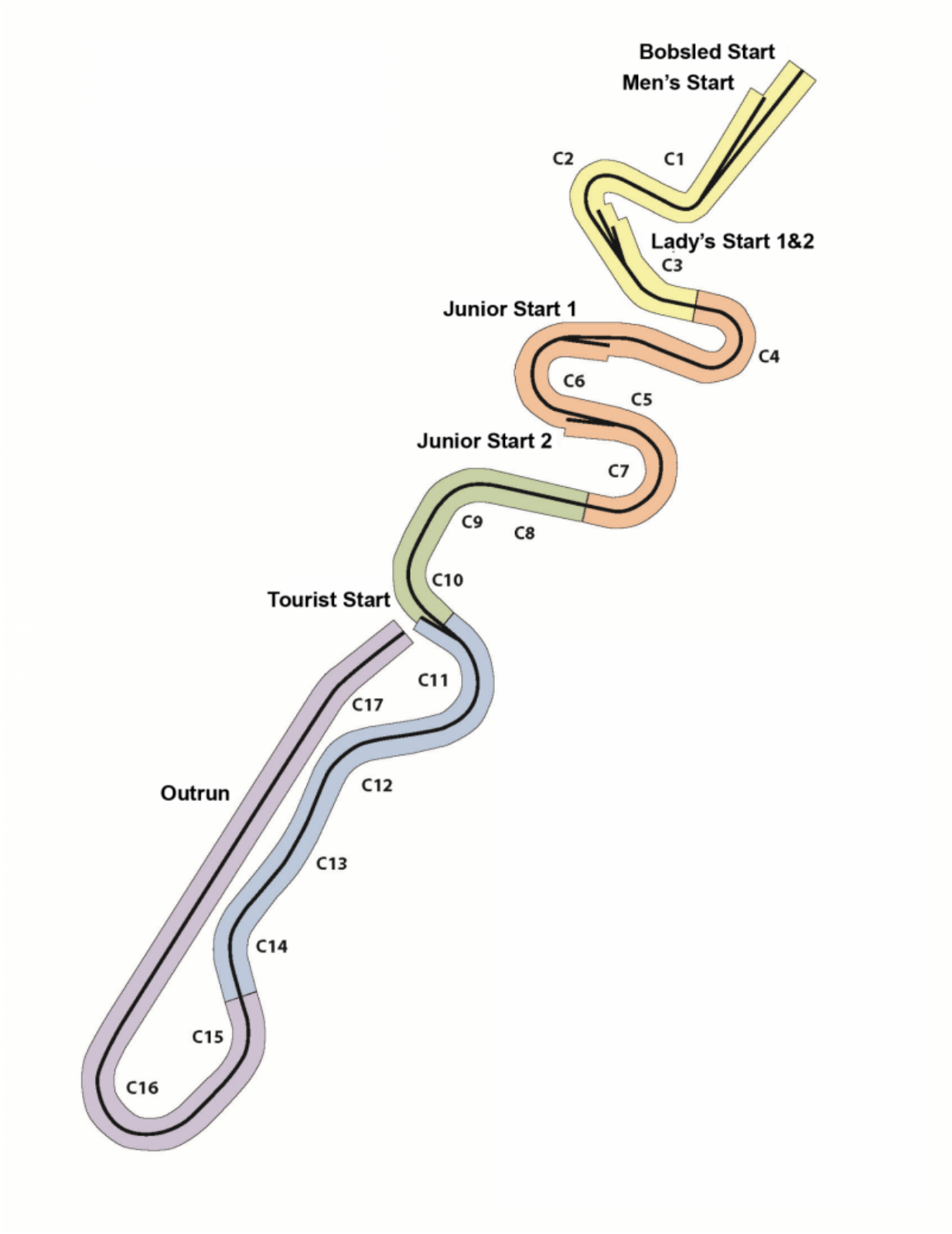

A University of British Columbia study has found that the safety of the Whistler

sliding track is comparable to other tracks. Credit: UBC

High speed and athlete inexperience are top contributing factors to injuries and accidents on the Whistler sliding track, according to a UBC study conducted following the death of an athlete during a training run before the opening ceremonies of the 2010 Vancouver Winter Olympics.

Results showed that the track, used for bobsleigh, luge and skeleton events, was not significantly more dangerous than other Olympic sliding tracks.

"With an overall injury rate of 0.5 percent, the track is pretty comparable to 16 other sliding tracks across the planet," said lead investigator Peter Cripton, a professor of mechanical engineering at UBC whose research focuses on biomechanics. "It was the athletes' experience level and start location that had significant impacts on the frequency and severity of injuries."

Researchers analyzed records of 43,200 runs involving more than 2,600 sliders at the Whistler Sliding Centre from 2007 to 2011. They also reviewed medical reports and incident logs from the same period, linking them to the start location, the athlete's experience level, and the location of the incident.

"The lower the start position, the lower the speed and the safer the athletes tended to be. They had significantly higher risk for injury if they started higher up," Cripton added.

Also consistent with the effect of higher speeds, three out of every four incidents occurred near the end of the track at corners 13 and lower, said Cripton.

Researchers also found that the more experienced the sliders, the lower the risk of injury. Sliders who had logged more than 150 runs had reduced injury risks, while those with just 30 to 59 runs under their belt had the highest risk of being hurt.

The report also recommends that sliding track operators make every effort to continuously monitor and log track incidents as they occur, using cameras and staff.

"Track operators should close the track and analyze near-misses, particularly for cases where an athlete was nearly ejected from the track," noted Cripton. "Immediate corrective measures can be taken, such as increasing the height of the barriers on the sides."

The study results can also be used to better understand the nature and causes of injuries to these athletes. This provides a basis for the design of improved protective gear, Cripton added.

More information: C A Stuart et al. Injuries at the Whistler Sliding Center: a 4-year retrospective study, *British Journal of Sports Medicine* (2015). DOI: 10.1136/bjsports-2015-095006

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