SPRINZ & NZSCA Conference Presentation

USING GPS MONITORING TO OPTIMISE HIGH-INTENSITY TRAINING LOADS IN REGIONAL HOCKEY ATHLETES AHEAD OF FIH 2026



Presenters:
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HOCKEY NEW ZEALAND

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HOCKEY NEW ZEALAND

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TARGET METRICS USED TO DRIVE TRAINING INTENSITY

01.

HIGH SPEED METERS

Total meters covered in training or game above 19.8km/h.

- *Indicator of a player's ability to sustain repeated high-intensity efforts across a session or game*

02.

HIGH METABOLIC LOAD *(HMLD)*

The distance travelled by a player when their Metabolic Power (energy consumption per kilogram per second) exceeds 25.5 W/kg

- *Reflects the true physiological cost of match play beyond just speed*
- *Complete picture of high-intensity activity than HSR alone, as a player can accumulate significant HMLD without ever entering Zone 5 or 6*

03.

HIGH METABOLIC EFFORT *(HME)*

High Metabolic Effort occurs when an athlete's Metabolic Power exceeds 25.5 W/kg.

- *Presented as a total number of bouts.*
- *It captures efforts that HSR alone would miss*
- *Represents the point at which the body is working at a high anaerobic-to-aerobic crossover intensity*

03.

DISTANCE (Z2-6)

Total Distance covered within an international match between **Zone 2-6**.

- ***Zone 2*** *— Light jogging, easy locomotive patterns.*
- ***Zone 6*** *— Sprint velocity above 25.2 km/h (>7.0 m/s); representing the peak physical demand of match play.*

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The Performance Problem To Solve

Hockey New Zealand game style in both the Women's and Men's disciplines is heavily reliant on the being able to play in a man-on-man press (MOMP).

MOMP style of play is physically demanding as outfield players need to isolate their opponents, with the primary aim of winning possession quickly, disrupting the opposition's build-up play, and forcing errors under direct physical pressure

Physiological determinants:

- Repeated Sprint ability
- Aerobic Capacity
- Anaerobic Tolerance
- Acceleration & Deceleration Capabilities



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ROADMAP OF GPS IMPLEMENTATION

Phase #1

Look into previous tours, tournaments, and pinnacle events to identify the current Worst Case Scenario Metrics

Historical Match Research

Phase #2

GPS Units Allocated to main training hubs.

RTE Live Tracking

Phase #3

Opportunity for indivudal athletes to invest in their own unit

Athlete Individual Investment & Education

Phase #4

Athletes assessed on outputs compared to the group averages

Intervention Strategy 1

Phase #5

Athletes assessed and compared to their individual/positional group match outputs.

Intervention Strategy 2

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THE COMPARISON

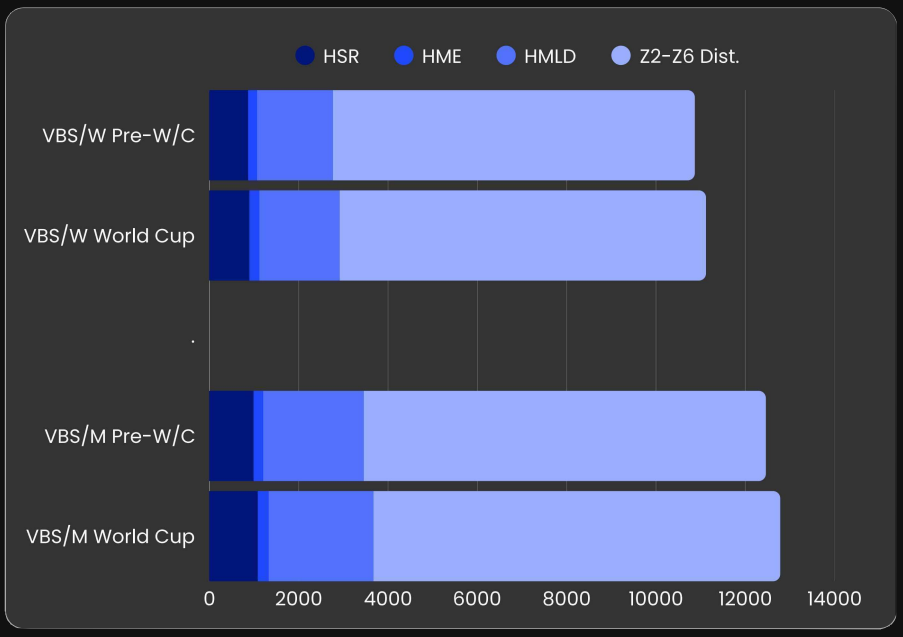
Pre-World Cup vs World Cup

Pre-World Cup

- Data set captured before 2026

World Cup

- Data set captured during the FIH World Cup hosted in Belgium & Netherlands.
- 15th August → 31st August



Using GPS monitoring to optimise high intensity training loads: Shaun Burrows

Notes