Health Research Caucus
Diabetes Research and Innovation in Canada

PRESENTER SUMMARY

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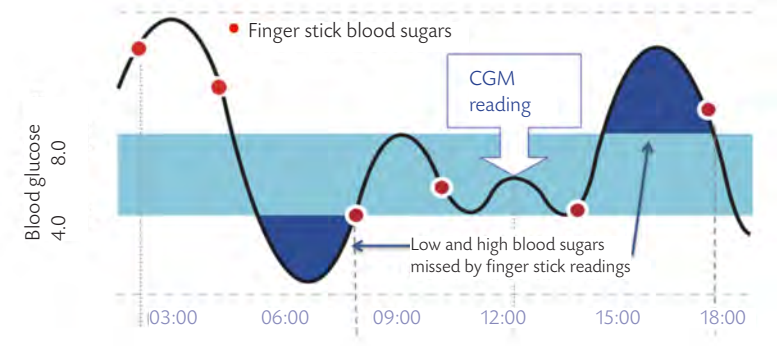
Use of technology in children and adolescents with type 1 diabetes

Dr. Lawson's research focuses on use of technologies such as insulin pump therapy and continuous glucose monitoring (CGM) in the management of Type 1 diabetes in children and youth. Insulin pump therapy, an alternate to daily insulin injections, uses a pager-size device to deliver insulin through a small catheter placed under the skin. CGM uses a separate catheter to measure blood sugar levels in the interstitial fluid, up to 288 readings per day, updated and displayed on the insulin pump every 5 minutes.

Insulin pump therapy offers more physiologic insulin delivery and the possibility of matching insulin doses to the individual's precise needs, enabling better blood sugar control and prevention of long-term complications. However, most pediatric pump users fail to achieve and maintain adequate diabetes control with pump therapy alone. Studies show that the combination of pump therapy and CGM improves blood sugar control in adults, but with varying levels of success in children and youth.

Dr. Lawson hypothesizes that success with CGM is related to timing of CGM initiation. She is the Principal Investigator of the JDRF CCTN funded multicentre CGM TIME Trial: **T**iming of **I**nitiation of Continuous Glucose **M**onitoring in **E**stablished Pediatric Diabetes. This randomized controlled trial is comparing simultaneous initiation of CGM and insulin pump therapy to standard pump therapy with delayed addition of CGM. Its conclusions will help determine how and when to start CGM to optimize its effectiveness in the pediatric population.

Continuous Glucose Monitoring vs Finger Stick Blood Sugars



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