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NOTHING ABOUT US WITHOUT US: A SCOPING REVIEW AND PRIORITY-SETTING PARTNERSHIP IN TYPE 1 DIABETES AND EXERCISE

Nika Klapat, University of Manitoba, Children's Hospital Research Institute of Manitoba; **Nicole Askin**, University of Manitoba; **Andrea MacIntosh**, University of Manitoba, Children's Hospital Research Institute of Manitoba; **Nicole Brunton**, University of Manitoba, Children's Hospital Research Institute of Manitoba; **Jacqueline Hay**, University of Manitoba, St. Boniface Hospital Albrechtsen Research Centre; **Jane Yardley**, University of Alberta - Augustana Campus; **Seth Marks**, University of Manitoba, Diabetes Education Resource for Children and Adolescents; **Kathryn Sibley**, University of Manitoba, George and Fay Yee Centre for Healthcare Innovation; **Todd Duhamel**, University of Manitoba, St. Boniface Hospital Albrechtsen Research Centre; **Jonathan McGavock**, University of Manitoba, Children's Hospital Research Institute of Manitoba, Diabetes Action Canada SPOR Network

Background:

Background: Type 1 diabetes (T1D) is the most common endocrine disorder in children and youth. Engaging patients (PE) with T1D, including youth, in research has largely focused on blood glucose self-management without an exercise focus.

Objective:

Objective: Characterize PE practices in previously conducted T1D exercise trials and determine stakeholder priorities for exercise research.

Methods:

Methods: A scoping review of published (Medline, Embase, CINAHL, and Central databases) and grey literature (www.clinicaltrials.gov) was conducted to identify randomized exercise interventions lasting minimum four weeks and available in English. Information on PE and patient-reported outcomes (PROMs) was extracted. Subsequently, to determine exercise research priorities, an anonymous online survey collected questions from patients, caregivers and healthcare providers. Submitted questions were qualitatively analyzed and compiled into a long-list, used by a twelve-person stakeholder steering committee to establish ten priority research questions in exercise and T1D.

Results:

Results: Of 9,962 identified sources, 19 published trials and 4 trial registrations fulfilled inclusion criteria. No evidence of PE existed in any included study. Most commonly measured PROMs were frequency of hypoglycemia (n=7) and quality of life (n=4). The priority-setting survey yielded 194 submitted research questions. Steering committee rankings identified 10 priorities focused on maintaining short-term glycemic control. The top three questions were: 1)What explains the variation in responses that the same person can experience doing the same exercise between different days?; 2)Which is the best for maintaining glycemic stability and glucose tolerance: aerobic training, strength training, or a combination of both? If a combination, does the order matter?; 3)What modes of exercise (ie activity types, such as walking, cycling,

weightlifting, rock climbing etc) produce the best health benefits while maintaining tight glycemic control?

Conclusion:

Conclusion: Recent exercise-based randomized controlled trials in T1D have not included PE or PROMs. Patient priorities for exercise research have yet to be addressed with adequately designed clinical trials.