Appendix e-1: Quantitative and qualitative outcomes which will be used to monitor the effects of a 4-year, performance-focused swimming training program for people with cerebral palsy who have high support needs.

Table 1: Outcomes that will be used to monitor the physical responses of participants over the course of the training program. The protocol paper associated with this material describes the methods for evaluating Clinical and Swimming Performance outcomes.

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| **Outcome Domain** | **Construct** | **Measure** |
| Clinical | Health-Related Quality of Life | PedsQL CP Module for Teenagers, Child Reported |
| Health-Related Quality of Life | SF-36: General Health Subscale |
| Health-Related Quality of Life | SF-36: Mental Health Subscale |
| Physical Functioning | SF-36: Physical Functioning Subscale |
| Physical Functioning | Fatigue Severity Scale |
| Gross Motor Functioning | Gross Motor Function Measure-66-Item Set |
| Swimming Performance | Independent Swim Speed | Average velocity during maximal time trial |
| Tests of Fitness | Range of Movement | Humeral angle in streamline position (Dominant Arm) |
| Range of Movement | Femoral angle in streamline position (Left and Right) |
| Range of Movement | Tibial angle in streamline position (Left and Right) |
| Range of Movement | Fifth metatarsal angle in streamline position (Left and Right) |
| Isometric Strength | Peak maximal voluntary contraction, shoulder extension from 90 degrees of flexion (Left and Right) |
| Isometric Strength | Peak maximal voluntary contraction, shoulder flexion from neutral (Left and Right) |
| Motor fitness  | Unilateral rapid alternating tapping task (Left and Right) |
| Swimming Biomechanics  | Kinematics | Video analysis of freestyle swimming technique during time trial (quantitative and qualitative descriptors) |
| Kinematics | Quantitative analysis of elbow joint angle during time trial using Inertial Measurement Unit |
| Psychosocial | Narrative and Life history (qualitative) | Semi-structured interview to access the back-stage stories of participants’ experiences of sport prior to engagement in the program, conducted with each participant and their parent/guardian. |
| Training Experiences (qualitative) | Semistructured interviews at the commencement and conclusion of each training phase, conducted with each participant, their parent/guardian and their coach. Outcomes will:* privilege the voices of the participants, providing insight into how their experiences influence the construction of themselves as athletes and people;
* capture the barriers and facilitators to their ongoing participation in performance focused swimming training.
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