Developing HypoPAST (Hypoglycaemia Prevention, Awareness of Symptoms, and Treatment), a fully-online, self-guided, psycho-educational program for adults with type 1 diabetes: An intervention mapping approach

Aim: To use intervention mapping to plan development, implementation, and evaluation of a fully-online, psycho-educational program to support adults with type 1 diabetes (T1D) experiencing hypoglycaemia-related problems (fear of, severe and frequent hypoglycaemia).

Method: We utilised the 6-steps of intervention mapping: logic model of the problem, program outcomes and objectives, program design, program production, program implementation plan, and evaluation plan. This involved:

* engaging a team of academic, clinical (e.g. diabetes education, psychology, endocrinology/diabetology, health economists, statisticians) and lived experience (T1D) experts
* conducting literature reviews (e.g. modifiable risk factors for hypoglycaemia-related problems, content and outcomes of similar international hypoglycaemia programs)
* developing logic models, program content, and research protocol (implementation and evaluation plan)
* inviting review of draft intervention materials (including text, imagers, and activities) by adults with T1D; conducting cognitive debriefing interviews to capture reviewers’ feedback and inform its implementation; and feeding-back findings and adaptations in group discussions with the reviewers.

Results: HypoPAST (Hypoglycaemia Prevention, Awareness of Symptoms, and Treatment) is a fully-online, self-guided, psycho-educational program for reducing fear of hypoglycaemia among adults with T1D. The program has 7 modules (25-55 minutes each):

* My hypo symptoms
* Preventing severe hypos
* Too many hypos
* Doing what I want to do, safely
* Sleeping, safely
* Other people’s reactions
* Worrying less about hypos.

The modules include lived experience videos and quotes; informational videos delivered by a psychologist, a diabetes educator, and a person with T1D; reflection and problem-solving activities; and printable information leaflets and activity sheets.

Conclusion: Intervention mapping facilitated systematic planning, development, and evaluation of HypoPAST. The resulting program is informed by published literature, psychological and behavioural theory, and academic, clinical and lived experience. Outcome, health economic and process evaluation will provide insight into the effectiveness, cost-effectiveness, feasibility and acceptability of HypoPAST.