**Project Title:** EVALUATING A NUTRITION EDUCATION WEBSITE FOR YOUNG PEOPLE WITH TYPE 1 DIABETES

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**Project Outline:**

***1. Background/potential health benefits of the project (200 words max)***

Surveys of patients with Type 1 Diabetes (T1D) attending the Women’s and Children’s Hospital (WCH) diabetes clinic from 2013-2015 have shown that patients with T1D at WCH see the diabetes dietitian less often than recommended by international guidelines and that patients with longer diabetes duration are less likely to attend the dietitian. While patients feel they do not need to see the dietitian, most patients and families sought nutrition advice from the Internet or other technologies. The preferred methods for nutrition information delivery from WCH was a website/ smartphone app in conjunction with 1:1 dietitian review. To meet this need, a ‘Nutrition for Type 1 Diabetes’ website has been developed to supplement 1:1 dietitian appointments in diabetes clinic. It contains nutrition information, resources, educational videos, games/quizzes written or curated by WCH diabetes dietitians. The website aims to improve accessibility and immediacy of trustworthy nutrition information and aims to improve engagement of patients with longer diabetes duration with the nutrition service, thereby improving their nutritional management of T1D.

***2. Aims and/or objectives***

The primary aim of the study is to assess the effectiveness of the website across the following objectives:

Overall objectives of website:

* To improve engagement with nutrition information/WCH nutrition service (in person or online) for children with longer diabetes duration >12 months.
* To improve patient satisfaction with WCH diabetes nutrition service
* To improve confidence and ability to self-manage diabetes in both patients and carers.
* To improve knowledge of core aspects of nutritional management of Type 1 Diabetes over time of website use.
* To improve application of knowledge to assist diabetes management.
* To improve access to reliable and trustworthy nutrition information targeted for young people with T1D online and to improve the immediacy of this access.
* To improve nutritional management of T1D among users

The secondary aim of the study is to obtain consumer feedback from patient/carers about the website to inform improvements and modifications prior to this online resource being made publically available.

***3. Methods (include details of study design, type of data to be collected, sample size, outcomes).***

Recruitment, website access, baseline assessment and final assessment will take place prior to the honours project (PHASE 1). The honours project (PHASE 2) will commence at the end of the intervention and will involve collection of some participant data from casenotes, analysis of all study data, and generation of conclusions from data collected and recommendations.

**PHASE 1**

Recruitment will occur at diabetes clinic and via email in **January-April 2019** – this will be conducted by a WCH dietitian.

Inclusion criteria:

* Diagnosed with Type 1 Diabetes
* Seen by an Endocrinologist at WCH
* <19 years of age
* Diabetes duration ≥12 months
  + Rationale: the website is targeted at improving dietitian/nutrition information access for patients with longer diabetes duration
* English speaking
* Living in an area with internet and cellular phone coverage and has access to computer with internet, smart phone or tablet through which to access website

Exclusion criteria:

* Type 2 Diabetes, Cystic Fibrosis related Diabetes, Maturity Onset Diabetes of the Young

Baseline assessment:

Upon recruitment, participants will complete a series of baseline assessment questionnaires as follows:

Baseline questionnaires will include the following:

1. Nutrition knowledge questionnaire
2. Diabetes Treatment Satisfaction Questionnaire (DTSQs)
3. Dietary assessment questionnaire
4. Locally developed questions regarding the following themes:

* Satisfaction with WCH Nutrition and Diabetes service
* Confidence in self-management of nutrition management of T1D
* Patient/parent perceived accessibility, immediacy, specificity, reliability and trustworthiness of information available for nutrition care of T1D for children and young people

Intervention:

Upon return of the baseline assessment questionnaires, participants will be individually randomised into 2 groups as follows:

1. Standard care (control group)

Participants randomised to standard care will continue to receive usual standard care. They will be asked to complete the final assessment questionnaires 3 months from randomisation.

1. Website access (intervention group)

Participants randomised to website access will have access to the pilot website for a period of 3 months. Access will be staggered according to randomisation date. Participants will attend planned visits to Endocrinologist, DNE and/or Dietitian as usual during the study period.

Each time a participant from the intervention group accesses the website, they will be required to log in using their user-specific log-in details and disclose if the user is a parent alone, a child alone, or a parent-child dyad.

Throughout the pilot study, website metrics will be collected to investigate the way in which the website is accessed and used by participants and their families.

Final assessment:

After 3 months of website access/usual care, participants will complete the final assessment questionnaires.

All participants (both intervention and control groups) will be sent an email with a link to final assessment questionnaires to be completed online. These will include repeated baseline questionnaires (questionnaires 1-4 as outlined above).

The intervention group only will complete further questionnaires to provide feedback on the website (eg. content, appearance, usability). These questionnaires will be developed in conjunction with the website designers and will cover themes such as:

* How useful is the website to nutrition care for T1D
* How relevant is the content
* How easy is the information to understand
* Any additional or desired features, information/content?
* How easy is the website to use/ functionality?
* How appealing is the website?
* Feedback regarding the appearance, design and layout of website

**PHASE 2**

**HONOURS PROJECT COMMENCES – JULY 2019**

A student dietitian will collect clinical data from participant casenotes (weight, height, HbA1c) for all participants. This clinical data will be from a clinic visit within 3 months after the end of the participant’s pilot period (ie. between 3-6 months of the randomisation date). A dietitian/student dietitian will use case notes and/or Diabetes Patient Management System (DPMS) to investigate how often each participant accessed the WCH diabetes dietitian since randomisation.

The student dietitian will collate baseline and endpoint data, conduct data analysis and produce conclusions regarding the success of the website against website aims and generate recommendations regarding website modifications in line with participant feedback.

***Skills to be obtained by the student:***

Reading critiquing and synthesising scientific literature – literature review

Scientific/professional writing skills – literature review/manuscript/ writing recommendations

Data collection (from casenotes) and data management

Quantitative and qualitative data analysis (from questionnaires including free-text responses from participants)

Increased knowledge regarding the management of young people with T1D

An understanding of educational needs/desires of young people with T1D

***Student location:***

Women’s and Children’s Hospital, Nutrition Department

***Adequate space and resources to undertake the project: YES***