

Type 1 Diabetes Voluntary Tax Contribution Fund

Abstract for Active Award

Quality of Life in Children and Adolescents with Type 1 Diabetes

Host Campus: Los Angeles

Lead Investigator: Anna Barbara Moscicki

Collaborating Sites: Davis, San Diego

Start Date: 9/1/2018 *End Date:* 8/31/2019 *Amount:* \$250,000

SPECIFIC AIMS:

The overall goals of our initial application to MRPI was to examine the feasibility of harmonizing clinical data collection across the University of California (UC) campuses to inform quality assurance of care and foster research. In particular, little attention has been given to clinical data collection in pediatric health care. Currently, electronic medical records (EMR) document most clinical data in free text, with little to no capability to crosstalk within and across the UC campuses. Our project successfully brought together clinicians from all 5 campuses who agreed upon clinical information to be collectively gathered as part of clinical care. Three working groups were established: 1) Type I diabetes mellitus (T1DM), which focused on several health parameters such as glycemic control, microalbuminuria and modes of insulin administration; 2) Chronic Disease, which developed a consensus set of quality of life measures and 3) Disordered Eating, which adapted key food insecurity questions. The next logistical step is to build upon the working group's efforts and integrate these clinical templates. T1DM represents an ideal target since in California there are over 18,000 new cases of T1DM per year in children. The previous support from UC MRPI has uniquely prepared this group to identify factors associated with poor diabetes health outcomes and to identify specific parameters of diabetes health that are associated with the quality of life in children and adolescents with T1DM in California. Specifically, we are interested in tobacco and marijuana use— both of which have known negative effects on T1DM. In addition, marijuana use among adolescents has drastically increased paralleling the recent changes in California law making access easier. Understanding these interactions in children and adolescents with T1DM will lead to potential interventions for improved health outcomes.

Our specific aims and hypotheses are in children and adolescents with T1DM to:

1. **Examine the association between tobacco and marijuana use and glycemic control.** We hypothesize that both tobacco and marijuana use will be inversely correlated with glycemic control.
2. **Examine diabetes and non-diabetes specific factors that are associated with quality of life.** We hypothesize that type of insulin administration (e.g. pump vs subcutaneous dosing) does not affect quality of life, rather other factors including frequent hypoglycemia, frequent emergency department visits and development of T1DM complications (e.g. microalbuminuria), and non-diabetes specific factors including tobacco and marijuana use, depression and food insecurity will negatively affect quality of life.