



World Congress on **Diabetes and Pediatric Endocrinology**

“Telemedicine” in children and adolescents with Type 1 Diabetes – a Systematic Review and Meta-analysis of Randomized Controlled Trials.

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Objective: To systematically review the published randomized controlled trials (RCT) that evaluate the effectiveness of telemedicine (TM) in terms of glycemic control primarily and other secondary clinical outcomes such as quality of life, patient satisfaction and severe hypoglycemic episodes in children and adolescents with type 1 diabetes. Design (Method): The randomized controlled trials are extracted from data sources including Medline/PubMed, EMBASE, Web of Science, PsycINFO, Cochrane Library and CINAHL using the PICO model

Results

- The search identified 1199 records and 16 trials were eligible
- The meta-analysis showed a marginal improvement in glycemic control at three months follow up which did not reach statistical significance and was not sustained at six months follow up.
- Only few studies evaluated the effect on patient satisfaction, DQoL (Diabetes-related quality of life) and occurrence of severe hypoglycemic episodes which also showed no significant difference between the intervention and control groups.

Conclusion:

- Limited evidence to support the use of TM in children and adolescents with type 1 Diabetes.
- No increase in significant adverse effects such as frequency of severe hypoglycemic episodes or DKA.
- Subgroup analysis indicated a small improvement in HbA1c at three months
- Improvement was not sustained at six months follow up.
- Improved by using sustained re-enforcement strategies

Limitations:

- This study is limited by high heterogeneity, limited evidence base on many of the outcomes and the use of various modes and intensities of telemedicine interventions making the evaluation of outcome efficacy and cost-effectiveness assessment difficult.
- High quality RCTs are needed to evaluate the role of TM in improving glycaemia control in this patient population

Biography

Moosakutty Chettiyarammel is working as an consultant Paediatrician of The University of Warwick, Ireland