

An Exploratory Study of a Contemporary Caries Management Protocol for High-Risk Immigrant Children

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Objectives: ‘Project Smile-Aid’ (PS-A) pilot-tested a diversified strategy to manage severe early childhood caries (S-ECC) in young low-income, immigrant children attending a public health clinic in Vancouver, Canada. The objectives were to test the feasibility and parental acceptance of PS-A and to explore its impact on child and parent oral health-related quality-of-life.

Methods: PS-A ‘interventions’ included caregiver counselling about diet and toothbrushing employing a motivational-interviewing approach; interim therapeutic restorations (ITRs); and topical remineralization agents (fluoride varnish and CPP – ACP) applied in clinic and at home. Children ≤ 6 years of age with S-ECC were recruited over an 8 month period. One calibrated clinician delivered the interventions and, at baseline and follow-up, completed the dental assessments and recorded other measurements. Parental satisfaction was rated using a 4-point Likert scale at a 48 hours post-‘intervention’ telephone call. Also, caries status, oral hygiene, child’s behaviour and Early Childhood Oral Health Impact Survey (ECOHIS) scores were compared to baseline at 3, 6 and 9 month intervals.

Results: Fifty-two children participated: 22 girls, 30 boys. Child’s age, mean (SD), was 33.1 (13.7) months. Behaviour often impeded placing ITRs, but 27/52 (53%) of children had ≥ 1 ITR, typically on maxillary incisors. Median plaque scores at follow-up did not demonstrate significant improvement from baseline. Overall, ICDAS scores remained the same, suggesting stabilization of caries. Parental satisfaction with the ‘interventions’ was uniformly positive at 48-hours post-‘intervention’. Further, decreased mean parental ECOHIS scores suggested significant improvement in parental quality-of-life over time. However, child-domain ECOHIS scores were challenging to interpret, likely because some items of the instrument did not apply to such young children.

Conclusions: Low-income, immigrant parents welcomed the PS-A strategy as an opportunity to “do something” to stabilize their child’s dental disease, and, as measured by ECOHIS, parental quality of life appeared to improve compared to baseline.

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