

2015-11-03


A Systematic Review of Oral Health Interventions to Reduce Disparities in Adults with Intellectual Disability: Results of a Novel Approach

Christine J. Clifford
University of Massachusetts Medical School

Et al.

Let us know how access to this document benefits you.

Follow this and additional works at: https://escholarship.umassmed.edu/shriver_pp

 Part of the [Community Health and Preventive Medicine Commons](#), [Dental Public Health and Education Commons](#), [Health Services Administration Commons](#), [Health Services Research Commons](#), [Mental Disorders Commons](#), and the [Public Health Education and Promotion Commons](#)

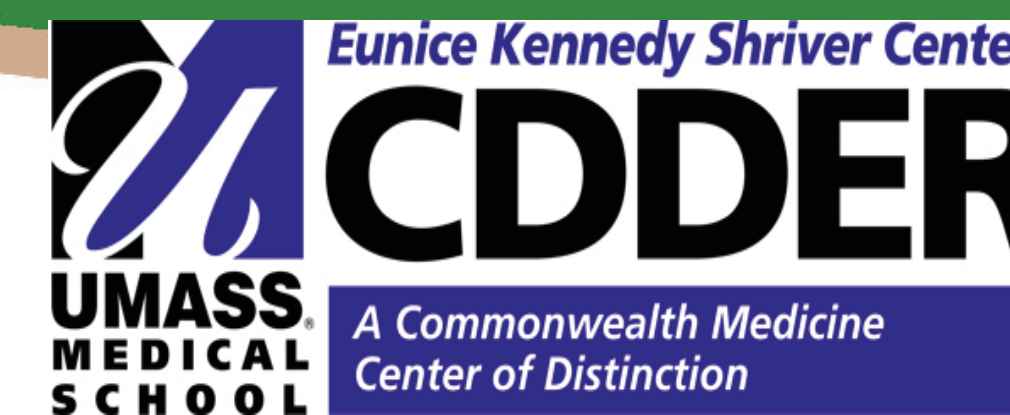
Repository Citation

Clifford CJ, Bonardi A, Holder M. (2015). A Systematic Review of Oral Health Interventions to Reduce Disparities in Adults with Intellectual Disability: Results of a Novel Approach. Eunice Kennedy Shriver Center Publications. Retrieved from https://escholarship.umassmed.edu/shriver_pp/59

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Eunice Kennedy Shriver Center Publications by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.

A Systematic Review of Oral Health Interventions to Reduce Disparities in Adults with Intellectual Disability¹: Results of a Novel Approach

Christine J. Clifford², MHP; Alexandra Bonardi², MHA, OTR/L; Matthew Holder³, MD, MBA



Background

Recognizing access to oral health care as a public health challenge, Healthy People 2020 introduced oral health goals to reduce untreated caries, to reduce dental decay, to reduce tooth extraction due to dental disease, and to increase the use of sealants. The Centers for Disease Control Oral Health Strategic Plan (2011-2014) included a goal to eliminate disparities in oral health and an associated strategic initiative broadening “the understanding of health disparities, determinants of health disparities, and evidence-based approaches to addressing disparities in oral health.”

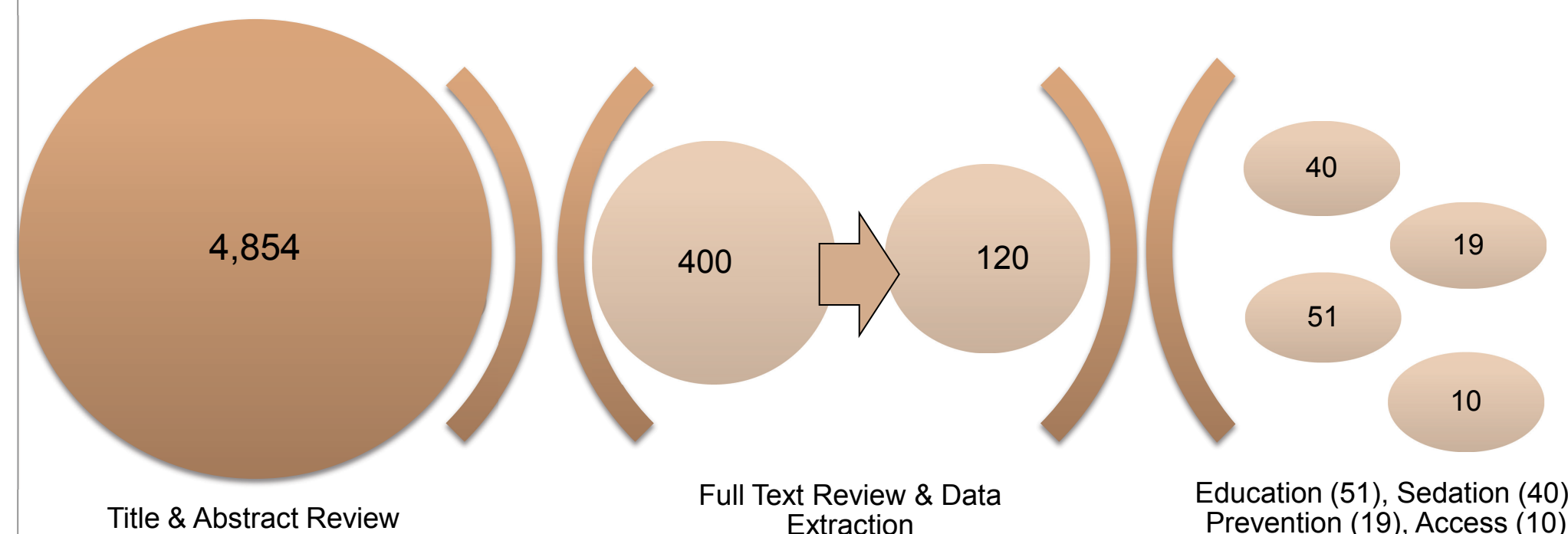
Research consistently shows that the population with Intellectual and Developmental Disability (I/DD) experience poorer oral hygiene, higher prevalence and severity of periodontal disease, and higher incidence of untreated caries than the general population. In this systematic review researchers rigorously evaluated the evidence for a wide range of oral health interventions with the potential to reduce disparities in individuals with I/DD.

Systematic Review Key Questions

KQ 1: What effective interventions/strategies exist to improve access to oral health care for the I/DD population?

KQ2: What effect do interventions that support good oral health behaviors have on improved oral health care for the I/DD population?

Prisma Chart (modified)



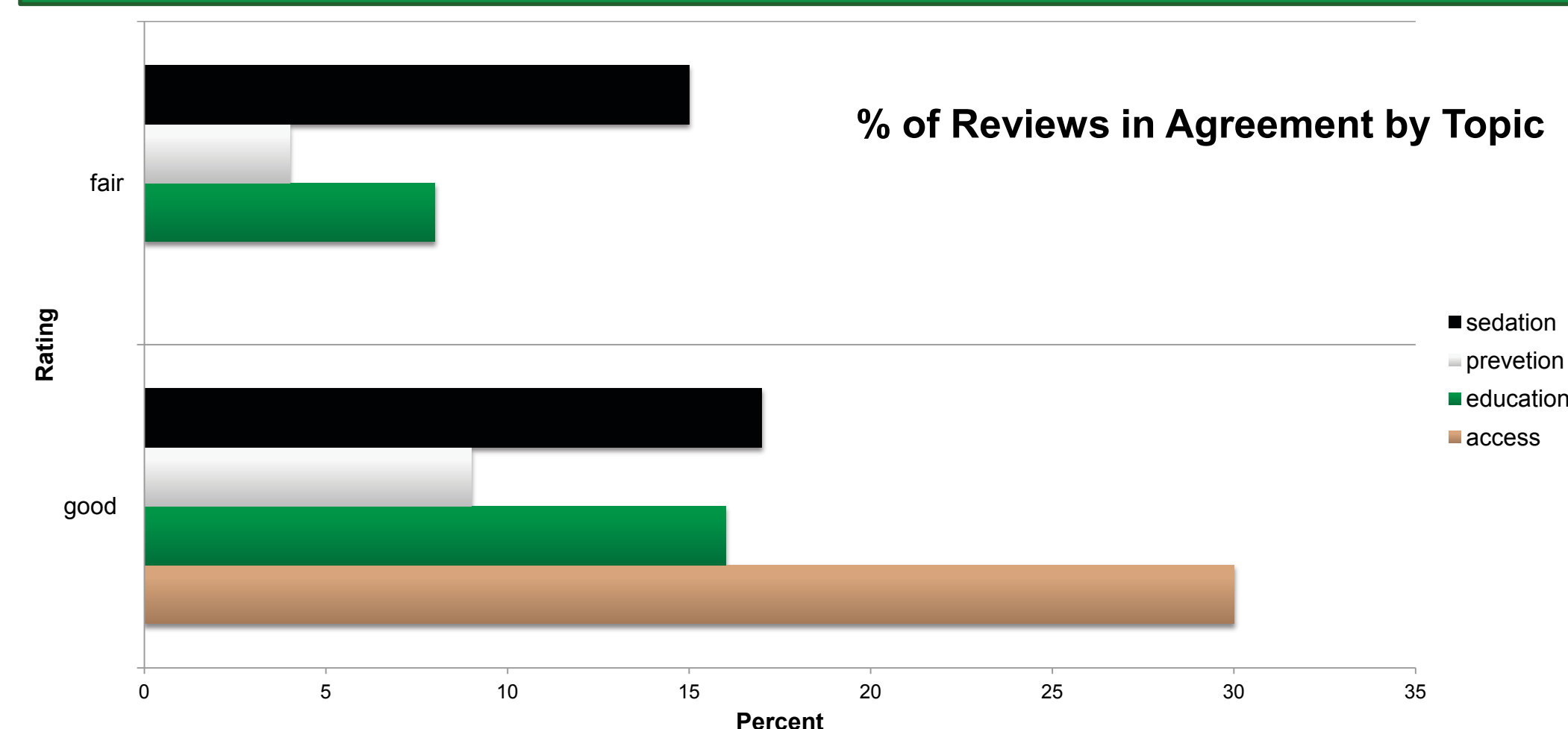
Methods

A robust search of on-line data bases such as PubMed, along with gray literature sites, was conducted. Inclusion criteria for systematic review: English language studies published between 1990 and 2013; intervention and outcomes described; population with intellectual disability could be identified in the reported results. Data extraction was conducted using the Systematic Review Data Repository (SRDR).

Studies fell into 4 topic areas: **prevention strategies, sedation use, education & behavioral strategies, access & potential models of care.** Literature and reports that did not meet the standard for inclusion were reviewed for inclusion in a promising practices document.

Final steps include dissemination of both the systemic review findings and a promising practices document.

Review of Study Quality



Study quality was assessed by examining external and internal validity. Quality was assessed for each article by clinical experts (i.e., dentists and dental hygienists), as well as a biostatistician. Experts answered the same questions, but from their respective perspectives. Reviewers rated the study population, intervention description, sampling strategy, measurement of the intervention and outcomes, data analysis and interpretation of results. In 41% of the 125 reviews the clinician and biostatistician assessments were in agreement.

Results

19% of the articles were RCTs, and 5% were randomized with no control; 18% of the articles were prospective cohorts and 12% retrospective; 10% of the articles were non-randomized trials. The study team tailored the extraction tool to address Key Questions for each specific topic. Of reviews in agreement, 26% were rated “good.” The results of these studies are shown in the table below as the best-available evidence. The small number of articles with similar interventions and outcomes limits the ability to aggregate findings and establish robust evidence of effective interventions.

Topic	Indication of Evidence: Does intervention improve oral health outcomes?
Education/Behavior	Behavior management techniques may improve cooperation of individuals with I/DD in oral health care and treatment. Individual and caregiver education programs indicate improvement in oral health measures. Provider exposure to individuals with I/DD indicates increased likelihood to care for individuals with I/DD.
Sedation	Sedation (in various forms) considered safe & effective with minimal side effects, and is a reasonable option for delivering/receiving oral health care in certain circumstances.
Prevention	Use of Chlorhexidine (various forms) results in improved gingival index scores.
Access	A specialized program , with referral to a specialty dentist; school based program , that brought the dentist to the school; and an analysis of managed care data indicated that enrollment in managed care may increase positive outcomes for individuals with I/DD.

Summary

Only 19% of extracted articles in the systemic review were RCTs, however employing a transdisciplinary model that incorporates environmental and organizational factors allowed for the inclusion of other literature and for the development of a promising practices document. The expanded model allowed for the inclusion of 125 articles across 4 topic areas to examine results, review and assess quality. The variety of interventions examined in this study points to several promising areas to reduce oral health disparities. Research methods must be applied to existing clinical interventions to build the evidence base for the most effective interventions to reduce oral health disparity.

¹Project funded by Centers for Disease Control & Prevention/National Center on Birth Defects & Developmental Disabilities/ Division of Human Development & Disability Cooperative Agreement # 1U01DD000914-01; ²Center for Developmental Disabilities Evaluation and Research, University of Massachusetts Medical School, Alexandra.Bonardi@umassmed.edu; ³American Academy of Developmental Medicine & Dentistry