2015 ANNUAL SEMINAR NEW ORLEANS, LA.

Special Care Advocates in Dentistry 2015 Lit. Review

(SAID’s Search of Dental Literature Published in Calendar Year 2014*)

Compiled by:
Dr. Mannie Levi
Dr. Douglas Veazey

Special Acknowledgement to Mr. Timothy O’mara who provided computer support and literature searches.
Recent journal articles related to oral health care for people with mental and physical disabilities.

Search Program = PubMed
Database = Medline
Journal Subset = Dental
Publication Timeframe = Calendar Year 2014*
Language = English
SAID Search-Term Results = 2,202
Initial Selection Result = 457 articles
Final Selection Result = 120 articles

SAID Search-Terms Employed:

1. Intellectual disability  
2. Mental retardation  
3. Mental deficiency  
4. Mental disorders  
5. Mental health  
6. Mental illness  
7. Dental care for disabled  
8. Dental care for chronically ill  
9. Self-mutilation  
10. Disabled  
11. Behavior management  
12. Behavior modification  
13. Behavior therapy  
14. Cognitive therapy  
15. Down syndrome  
16. Cerebral palsy  
17. Epilepsy  
18. Enteral nutrition  
19. Physical restraint  
20. Immobilization  
21. Protective devices  
22. Moderate sedation  
23. Conscious sedation  
24. Analgesia  
25. Anesthesia  
26. Dental anxiety  
27. Nitrous oxide  
28. Gingival hyperplasia  
29. Gingival hypertrophy  
30. Glossectomy  
31. Sialorrhea  
32. Bruxism  
33. Deglutition disorders  
34. Community dentistry  
35. State dentistry  
36. Gagging  
37. Substance abuse  
38. Syndromes  
39. Tooth brushing  
40. Pharmaceutical preparations

Program: EndNote X3 used to organize search and provide abstract. Copyright 2009 Thomson Reuters, Version X3 for Windows.

*NOTE: The American Dental Association is responsible for entering journal articles into the National Library of Medicine database; however, some articles are not entered in a timely manner. Some articles are entered years after they were published and some are never entered.
   Reviews current technology and biomaterials, including: Navigation Technology, Nanotechnology, Tissue engineering and Stem Cells
   This study identified BMI, severity of physical disability, high daily water consumption, mouth breathing, use of antidepressants and diuretics, and frequency of brushing as factors in dry mouth in the elderly
   The purpose of this study was to explore whether subjective perception of interaction with dental staff was associated with dental fear in a population of 18 year olds. Adolescents with high dental fear did perceive their interactions with dental staff negatively more often
   Using CAMBRA on 161 patients this study found these patients to be at higher risk of dental caries, with high rates of risk factors and low rates of preventive factors.
   This is a rare syndrome impaired psychomotor and social development, and seizures. Eight children were examined. They showed deep palate, tongue interposition between the arches and tongue disposition on the incisive papilla.
   Between 2007 and 2010 twelve thousand patients with a diagnosis of a mental health condition were hospitalized for dental reasons. These individuals were more likely to be older and sicker and to use more hospital resources.
   TAR syndrome is a rare congenital disorder with potential implications impacting provision of dental care. This case report reviews its features.
   A total of 105 patients were discussed at 10 MDT meetings. The mean time for each discussion was 2 minutes.
The purpose of this study was to determine the efficacy of a 10% chlorhexidine tooth coating in reducing the incidence of cavitated lesions in adults. The chlorhexidine proved to be effective in high risk patients with more than two lesions at the initial exam.

10. Czarnecki GA, et al. Nursing and Dental Students’ and Pediatric Dentistry Residents’ Responses to Experiences with Inter professional Education. Journal of Dental Education; 78:9: 1301-1312

Nursing students who participated in a clinical pediatric dentistry rotation with third year dental students and pediatric residents improved their oral health related behavior and knowledge. The dental students improved their attitudes related to the importance of nurses doing caries risk assessment and recognizing caries.


Discusses the effect of products with low pH, and medications that can cause oral dryness.


This study came to the conclusion that straight interdental brushes may remove interproximal plaque better than angled interdental brushes.


Oral disease is common in patients with CKD and may represent an important health burden. Eighty eight studies were evaluated.


This article discusses the differences between classification criteria for Sjogren’s syndrome, and calls for refinement of the criteria due to increased understanding of the disease.


The purpose of this study was to assess the feasibility of using an assay of oral neutrophils to measure periodontal inflammation in uncooperative adults with special needs. The study found that the measure of gingival inflammation using the assay correlated positively with traditional periodontal parameters.


This study attempted to identify and evaluate factors affecting utilization of dental services through the use of a questionnaire given to 423 mothers. The major factors predicting the use of dental services were: perceived need, habit of regular dental visits and access to services.

This study assessed and compared the oral health of 15 neutropenia patients to 26 healthy controls. The study found no significant difference between the two groups.

This paper provides an overview of the techniques utilized in identifying saliva based markers /indicators of disease.

1100 articles from 26 different countries were reviewed. The evidence from these articles indicated that dental therapists provided safe, effective, quality care for children.

A review of the literature from 1990-2011 found that oral healthcare education may have a positive effect on home nurses’ oral healthcare knowledge and attitude.

A review of the literature from 1990-2011 found the following: the most common barriers to delivering health care to older people was lack of adequate equipment in a care home, lack of an adequate treatment area, lack of reimbursement and inadequate training.

This article provides a review of the medical aspects of aging and age related diseases, followed by a discussion of the impact on general and oral health.

The purpose of this study was to design and validate an instrument for establishing perceptions of oral health held by physicians treating people living with HIV/AIDS.

This study found that medicine cups were the device most frequently used. They were also had a higher occurrence of errors compared to other devices.

Using the test regimen of a dual phase gel with toothpaste, the authors found greater remineralization than with toothpaste alone.

27. Fratto G, Manzon L. Use of Psychotropic Drugs and Associated Dental Diseases. Int’l J Psychiatry in Medicine; 48(3) 185-197, 2014
This article reviews data on the psychototropic drugs used in the last 30 years with special attention to the side effects related to oral health.
This study compared the DMFT and CPITN of 70 children with Type 1 DM to 70 healthy children matched for age and gender. The study found the children with Type 1 DM were at more risk for caries and periodontal disease.

The main purpose of this study was to determine whether dental treatment under general anesthesia improved oral health related quality of life for preschoolers and their families. The study found a significant improvement after treatment, and found that treatment under general anesthesia was acceptable to most of the parents surveyed.

Gingival inflammation was assessed in 48 individuals with systemic sclerosis. Manual dexterity loss due to Systemic sclerosis appears to be the biggest factor in these individuals.

The purpose of this study was to compare caries, oral hygiene, and periodontal status of CKD patients in different stages and healthy controls. Oral hygiene, gingival, and periodontal status decreased as the stage CKD increased and was worse than the controls. Caries did not differ significantly with the stage of renal disease.


This study showed that the higher the level of dental anxiety, the lower number of restored teeth and the higher the calculus index.

The facilitators and barriers to tooth brushing by caregivers of CSHCN are similar to those noted among caregivers of typically developing children.

Analysis of 5 clinical trials showed a benefit to gingival health from use of an essential oil mouth rinse.

This article discusses the need for dentistry to increase integration with medicine and the larger health system.
This study suggests that dentists are not incorporating evidence of the oral-systemic connection. It postulates that future dental curricula should include more content on this.

This article outlines a dental school curriculum in special care developed by the International Association for Disability and Oral Health.

This study investigated self-rated orofacial esthetics in patients with dental anxiety and in relationship to psychological and oral health. The results showed less satisfaction with esthetics in patients with dental anxiety.

This article reviews potential age related risk factors for satisfactory oral function in the older dentate person.

Ninety one percent of those answering the survey used local anesthesia at least part of the time. The most common procedure for which local anesthesia was used was extraction of teeth.


This article examines the role of the general dentist in dementia awareness, using the dentist-patient relationship to spot the early signs of dementia and plan for future dental treatment.

Caries risk is related to just a few common factors, which results in common patterns of disease. This article examines the biofilm model of dental caries, identifies common disease patterns and discusses targeted therapeutic strategies to make CAMBRA more adaptable in the private practice setting.

This article reviews several anticoagulant medications and how they should be managed in the dental setting.

This study assessed the oral health of 200 elderly patients who were cognitively competent but medically compromised and functionally dependent, finding poor oral health.

A sample of 292 women being treated for bulimia nervosa was surveyed. The results showed that the participants had a high level of concern about their oral health and a high incidence of oral health problems. Less than one third of those responding to the survey felt that their health care provider was the most helpful source of oral health information.


Four hundred and sixty-nine patients were examined. The prevalence and severity of chronic periodontitis was much higher than that of a geographically matched control population.


In this study, 82 patients were randomly allocated to receive either conventional restorations or ART. The authors found ART to be more cost effective after one year, especially when using an alternative workforce.


Zellweger syndrome is a rare autosomal recessive disorder. It is characterized by craniofacial dysmorphism and neurological anomalies.


Three hundred and seventy-six nurses completed a survey. The findings revealed that nurses’ oral health knowledge significantly influenced their perceived effectiveness.

53. Finkelman MD, et al. Relationship between duration of treatment and oral health in adults with intellectual and developmental disabilities. Spec Care Dent 34(4) 2014; 171-175

This was a retrospective study of 107 patients with IDD who were under regular treatment. The study found a decrease in caries and an increase in periodontal disease over time.


The use of a .12% chlorhexidine spray reduced the rates of dental and gingival plaque compared to the placebo group.


Motor neuron disease is a group of chronic degenerative disorders, which include ALS. This study of 33 patients found that oral health was not affected by MND. This was attributed to highly motivated patients, caregivers, and staff.


This study of 100 outpatients with COPD indicated that these patients had serious oral health issues.
   Twelve patients were given a an interview survey regarding their experience with laser treatment of caries. The results indicated that the patients found laser treatment safe, and less painful.

   One hundred and five patients were included in this study. The results indicated that oral health depended on the patient’s ability to maintain oral hygiene and worsened with the severity of the MR.

   This study followed 26 patients with DM type2 and chronic periodontitis compared to 26 patients with chronic periodontitis and no DM. The study found that prophylaxes every 3 months improved the periodontal condition in both groups.

   One hundred and eighty nursing home residents were given either manual or electric toothbrushes. After 2 months the electric toothbrush was evaluated as beneficial and less time consuming.

   Reviews the oral manifestations of DEB and presents a case.

   Children with Down syndrome in this study presented with lower total anti-oxidant capacity of saliva and higher salivary levels of sialic acid. The study concludes salivary antioxidant capacity can be a cost effective method for screening large populations.

   Sixty children were examined for tooth erosion. Their parents/caregivers then filled out a questionnaire. The study found that erosion was associated to frequent consumption of soft drinks, powdered juices, and reported gastroesophageal reflux. Erosion was found to have no effect on health related quality of life.

64. Al-Allaq T, et al. oral health status of individuals with cerebral palsy at a nationally recognized rehabilitation center. Spec Care Dent 35(1) 15-21
   This study reviewed the records of 478 patients with CP. The patients were divided into four different age groups. The study found differences in oral health between the age groups.

   Data were collected from 60 parents of children with CP. The results showed caries and bruxism to be the factors most associated with negative OHRQoL.
This review article attempts to clarify which cases should have GA vs sedation, and what kind of treatment can be rendered in the hospital.

The study found websites addressing dental care for cancer patients were limited in quality and written at difficult reading levels.

A survey answered by 331 dental hygienists in Michigan showed that less than 10% of them felt their knowledge was up to date.

Reviews treatment and management of cognitively impaired older adults.

This article reviews the relationship between oral bacteria, oral hygiene, and aspiration pneumonia.

Twenty nine patients with SHCNs were compared to 29 patients with no SHCNs. Clinical outcomes did not differ, but the group with SHCNs took longer to complete treatment.

This article reviews the relationship between several systemic diseases and oral health.

Reviewing the records of 140,114 high caries risk Veterans it was shown that fluoride use significantly reduced the risk of caries.

This article discusses the three main types of skin cancer, highlighting clinical features.

This study concludes that an oral health care director can decrease staff caused iatro-compliance in a long term care facility.

This article suggests that coordinating with other health services, reduced waiting time and improved waiting room layout can reduce anxiety in this patient population

77. Kim HS, et al. Association between harmful alcohol use and periodontal status according to gender and smoking. BMC Oral Health 2014; 14:73
Periodontal status was found to be related to alcohol use and smoking.

This study compared 90 people with CKD to 90 people without CKD. Oral lesions were more prevalent in patients with CKD.

There was no statistically significant association between a greater number of sealants and restorations and higher urinary BPA concentrations.

Four hundred seventy eight patients were surveyed. Increased gagging was related to greater levels of dental care related fear, fear of pain and negative beliefs about dentistry and dental treatment.

Data was collected from 254 graduates of the University Of Michigan School Of Dentistry. Those that had a structured community based experience had a more positive attitude toward treating underserved patients.

This study concluded that under oral health supervision there is no difference in dental caries prevalence between children with or without auditory or visual impairment.

83. Listl,S. Oral health conditions and cognitive functioning in middle and later adulthood. BMC Oral Health 2014 14: 70
This study supports the idea that there is an association between oral health and cognitive functioning.

This review of the literature suggests that oral implants can be a useful option in the disabled population, depending on proper case selection.

This study examined 153 patients in a geriatric and psychiatric hospital in Israel. The results showed that oral health among this population was poor.
   This review of the literature found that the evidence suggests a causal relationship between tooth erosion and eating disorders.

   Ninety two psychiatric patients were given dental exams. The authors reached the following conclusions: Chronic exposure to neuroleptic drugs can cause bruxism, and these patients have poor oral hygiene and extensive unmet dental needs.

   This article reviews behavior management techniques. The authors conclude that getting as much information as possible ahead of time from the parent/guardian can help choosing what technique to use.

   A sample of 35 children found poor oral hygiene and high intake of sugar.

   This study examined 65 hospitalized psychiatric patients. The authors concluded that these patients suffer from oral/dental pathologies at a higher rate than healthy people.

   In this study 177 patients that had dentistry under GA were followed for 2 years. The authors found that after 2 years only 36% of follow up appointments were kept. Over 20% of composites failed. SSCs were the most successful restoration.

   Seventy patients with self-induced vomiting were examined. The results showed a high rate of erosion.

93. Raman RPC et al. Effect of nonsurgical periodontal therapy verses oral hygiene instructions on Type 2 diabetes subjects with chronic periodontitis: a randomized clinical trial. BMC Oral Health 2014, 14:79
   This study of 40 patients found that nonsurgical therapy reduced the plaque index more than oral hygiene instruction did.

   In this study of 280 children, results for these two different sealants did not differ significantly after 24 months.

66 patients (298 teeth) were restored. The study found that after one year ART was an effective treatment

   Twenty four patients were surveyed after having impressions taken. They preferred the digital impression technique.

   This study of 11 fluoride varnishes found great variation in their in vitro efficacy.

   This study showed most children seen for GA continued to be uncooperative and fearful.

   This study of 151 patients showed significant differences in medication and comorbid medical conditions. A thorough medical and pharmacological history is extremely important.

    The report from the ADA council on scientific affairs.

    A survey was given to 808 caregivers. Most felt confident assisting with oral care. Family caregivers felt less confident than salaried caregivers.

    219 patients were studied over five years. The authors concluded that serum IgA levels to common periodontal microbiota are associated with risk for developing incident Alzheimer disease.

    Based on this study of 53 patients with ED, the authors concluded that there is an association with chronic periodontitis.


    This study found that the better the level of functioning, the better the child’s oral health, and the more comfortable the parents were with teaching their children brush.
In this study of 473 participants the authors conclude that baseline disease severity was associated with the magnitude of response to non-surgical therapy.
This systemic review found that evidence is of very low quality in regard to periodontal treatment preventing or managing CVD in patients with chronic periodontitis.
This systemic review found insufficient evidence to support use of slow release fluoride devices.
This study showed that patients with Crohn’s disease who had undergone resctive surgery had a higher DMF score and higher salivary counts of Lactobacilli and Strep Mutans.
Summarizes current information on Autism.
Reviews various dental considerations for the patient with CP.
A study of 80 students at a school for special needs children revealed poor oral health status.
In a study of 31 institutionalized patients being seen by a hygienist weekly, there was no correlation between disability and oral opportunistic pathogens.
This article reviews the clinical aspects of TMD in people with schizophrenia on antipsychotic drug therapy.
This systemic review assesses the effect of interventions for the management of patients with taste disturbances.
Ninety three older patients were examined. Those with dementia appeared to have poorer oral health

118. Chi Donald L., Ettinger Ronald L. Prevention and Nonsurgical Management of Dental Caries Over the Life Course for Individuals With Special Health Care Needs. CDA Journal 42(7): 455-463
This paper discusses oral health related issues for patients with special needs throughout life and outlines various clinical strategies.

A total of 73 patients with mental illness were divided into three groups and followed over 12 weeks. The group that received a short video and brochure every 4 weeks showed a reduced plaque index

This article reviews new oral anticoagulants