The Intersection of Oral Health and Kidney Transplants

August 4, 2022



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Ensuring all Virginians have equitable access to comprehensive healthcare that includes oral health.



Public Health: Community, environmental, and social factors equitably contribute to improved oral and overall health Policy: Laws, policies, and regulations at all levels of government support positive health outcomes and health equity Public Awareness: Decision-making is guided by research, data, and information that recognizes the role oral health plays in overall health Clinical and Community Care: Care is equitable, high quality, coordinated, and integrated







2022 ANNUAL VIRGINIA HEALTH CATALYST SUMMIT

FRIDAY, OCTOBER 7TH THE WESTIN IN RICHMOND



Survey of Virginia-based transplant centers and dialysis centers providers -

Barriers to dental care access:

• are mostly due to insurance/finances (80%)

• finding a provider (20%)



POLICY UPDATES

Check out our new policy webpage: vahealthcatalyst.org/policy/

2021 - Adult Dental Benefit in Medicaid

2022 - A 30% increase in Medicaid dental reimbursement rates.

Dental Benefit in Medicare Part B

Virginia Medicaid Dental Benefit **Consistent** *Comprehensive* Dental Coverage for All Children Pregnant **Adults** People (under 21 yrs old) (over 21 yrs old) (over 21 yrs old) Smiles For Children Smiles For Children **Smiles For Children** a Dental Care for Children and Adults 2021: Over 2019 : Medicaid added in 2015! 800,000 Expansion Virginians!

Since July 1, 2021

New Adult Members Seen: 160,000

Teeth restored: 217,000

New providers: 168



A 30% increase in Medicaid dental reimbursement rates.

These rates have not increased in 17 years.

This change is an important aspect of strengthening Virginia's Medicaid provider network and supporting our safety net clinics.

The increase went into effect on July 1, 2022.



Dental Benefit in Medicare Part B

Medicare Part B currently pays for a very limited set of dental services that are "incident and integral" to medical services required to treat a beneficiary's primary medical condition – such as:

- reconstruction of the jaw following accidental injury
- tooth extractions done in preparation for radiation treatment for jaw cancer

CMS is proposing to use more of their existing authority and pay for more of these "medically necessary" dental services, such as dental examination and treatment preceding an organ transplant.

CMS is seeking comment on:

- other medical conditions where Medicare should pay for dental services, such as for cancer treatment or joint replacement surgeries
- a process to get public input when additional dental services may be integral to the clinical success of other medical services.







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WHAT PROBLEMS COULD POOR DENTAL HEALTH CAUSE?





- Dental Caries
 - Pain
 - Infection
- Tooth Loss
 - Loss of function
 - Isolation





- Gingivitis/Periodontitis
 - Diabetes
 - Cardiovascular Disease
 - Dementia/Alzheimer's Disease



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PERIODONTITIS INFLAMMATION OF THE GUMS





• Tooth Loss

- Loss of function
- Isolation







- Xerostomia (dry mouth)
 - Prescription medications
 - Chewing/Swallowing
 - Oral Candidiasis
 - Dental caries
 - Denture problems





functions of saliva





Oral Cancer

MOUTH CANCER AND THE THREE MAIN PREVENTABLE RISK FACTORS

MOUTH CANCERS AND THE AVERAGE NUMBER OF CASES PER YEAR UK, 2010-2012





Hindawi International Journal of Dentistry Volume 2018, Article ID 9610892, 8 pages https://doi.org/10.1155/2018/9610892

Review Article

Dental Care for Patients with End-Stage Renal Disease and Undergoing Hemodialysis

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6258100/

Oral Considerations in the Kidney Disease Patient

- Systemic Comorbidity
 - HTN and DM are the most common causes of ESRD
 - CVD is the main cause of death for renal transplant recipients
 - Cardiac arrest, infection, and malignancy are the most common causes of death for ESRD patients
 - Conditions of concern for management by dental providers
 - HTN, anemia, bleeding risk, infection risk, medication intolerance



- Mucosal abnormalities
 - Pallor
 - Bleeding tendencies
 - Xerostomia
 - Halitosis "uremic fetor"
 - Metallic/altered taste
 - Burning sensation of lips/tongue
 - Painful ulcerations of gums/under tongue
 - Angular cheilitis
 - Candidiasis



Sores on mucous membrane of inner cheek and gum

*ADAM.



- Periodontal disease
 - Neglect in oral hygiene
 - Lapse in routine dental care
 - Systemic inflammation
 - Renal osteodystrophy
 - Comorbidity with DM





- Bone disorders
 - Renal osteodystrophy
 - Disorders in Ca, P, Vit D metabolism, parathyroid activity changes
 - Tooth mobility
 - Malocclusion
 - Weaker bone
 - Bone tumors (giant cell lesions)
 - Jaw fracture risk
 - Abnormal bone healing





- Dental Caries/Erosion
 - Lower caries rates
 - Antimicrobial effect of salivary urea
 - Increase in pH (urea hydrolyzation by saliva)
 - Dental erosion due to regurgitation/nausea (side effect of hemodialysis)
 - Pulp narrowing/calcification
 - Challenges with root canal therapy





Dental Treatment in the Kidney Disease Patient

- Conservative medical treatment of RD or PD (peritoneal dialysis)
 - No significant special measures required
 - Avoid nephrotoxic drugs
 - Monitor blood pressure
- Hemodialysis
 - Consultation with nephrologist
 - Drug intolerance (lab values for kidney function and dosage adjustments)
 - Special measures required





Dental Treatment in the Kidney Disease Patient

• Bleeding risk

- Invasive treatments on non-dialysis days
- Local hemostatic measures or heparin antagonist
- Hematologic lab study
- Medications
 - Local anesthetics are generally safe
 - Acetaminophen and codeine are generally safe
 - NSAIDs can cause hypertension and increase bleeding risk





Dental Treatment in the Kidney Disease Patient

- Antibiotic prophylaxis/therapy
 - No strong evidence for IE prophylaxis
 - AHA guidelines recommend prophylaxis for renal patients with CV/IE risks
 - Full course of abx indicated for dental infections (CC test, adjust frequency)
 - Penicillins, clindamycin, cephalosporins are safe
- Psychological management
 - Assessment of quality of life (oral health-related QoL)
 - Oral health literacy, attitudes, and values
 - Education and motivational interviewing are important





FIRST ASSESSMENT

1.Explain extensively the aims of the dental treatment and discuss with the patient the importance of adequate oral health; obtain a written informed consent.

2. Collect a complete medical history and, if necessary, contact the nephrologist to assess the grade of ESRD, ESRD-related illnesses, timing, and type of dialysis.

3. Perform a noninvasive examination of dental, periodontal, and mucosal tissues. Complete the examination with radiographs both in dentate and edentulous patients.

4. Recognize all possible foci (periodontal and endodontic lesions, residual roots, partially erupted and malposed third molars, and peri-implantitis) and oral pathologies (caries and mucosal lesions).



DENTAL TREATMENT (General considerations)

1. Before any procedure that could lead to bleeding, a 15 ml rinse of chlorhexidine 0.12% for 60 seconds is recommended.

2. Antibiotic prophylaxis should be considered before surgery.

3. Dosage of pharmacologic therapies must be adapted to the creatinine clearance. In general, avoid administration of aspirin and consider safe local anesthetic.

4. Organize the patient appointments on the day after hemodialysis.

| Take into account the assessment of the patient's oral hygiene. In cases of periodontitis, perform a complete periodontal chart. Proceed with the mechanical removal of supra-and subgingival calculus with ultrasounds devices and curettes. Program surgical periodontal therapy when indicated and only if a good prognosis is expected. Otherwise, proceed with extraction. Motivate and instruct home oral hygiene. | endodontic therapy 1. Recognize carious lesions and proceed with decayed tooth restoration. 2. Test pulp vitality on teeth with extensive caries. In presence of pulp necrosis and/or apical lesions (diagnosed by radiographs), proceed with the endodontic treatment. 3. Extraction is recommended when the endodontic treatment does not guarantee the complete resolution of the pathology. | Oral surgery 1. Use an atraumatic technique to avoid the risk of bone fractures. 2. Extract residual roots, teeth with high mobility, and elements with periodontal or endodontic lesion that are not maintainable. 3. Extract partially erupted and malpositioned third molars to avoid pericoronal infection especially in the early posttransplant period. 4. Treat peri-implantitis or perform the surgical removal of unmaintainable implants. 5. Proceed with the biopsy of suspected mucosal lesions. | Prosthetic and orthodontic devices 1. Assess the adaptation of removable prostheses to determine the necessity of adjustment or substitution. 2. Check orthodontic appliances and maintain them if they do not interfere with oral hygiene (the removal of orthodontic brackets is suggested just before transplantation). 3. Instruct the patient regarding the correct cleaning and maintenance of the devices. |
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FIGURE 1: Flowchart for dental treatment of ESRD and hemodialyzed patients.

3. Treat the patients for new pathologies.

Best Practices and Opportunities

- Interprofessional collaboration
 - Consultation protocols
 - Resources for sharing
- Referral networks
 - Academic centers
 - Specialty clinics
 - FQHC's
- Advocacy
 - Medicare inclusion of dental coverage
 - State workforce





Thank you!

- Discussion
- Questions

