The Intersection of Oral Health and Kidney Transplants

August 4, 2022
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.
SAVE the DATE

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%)
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 (under 21 yrs old)

Pregnant People (over 21 yrs old)

Adults (over 21 yrs old)

- added in 2015!
- 2019: Medicaid Expansion
- 2021: Over 800,000 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.
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.
Questions? Contact:

Wey-Wey Kwok, JD
Senior Attorney
Center for Medicare Advocacy
Lyubov Slashcheva, DDS, MS, FABSCD, DABDPH, FICD
Clinical Consultant, Virginia Health Catalyst
Research Director, Apple Tree Dental
Research Collaborator, Mayo Clinic
Dentist, Healthy Community Health Centers
Chairperson, APHA Oral Health Section
Oral and Systemic Health

What problems could poor dental health cause?

- Heart Disease
- Mouth Cancer
- Diabetes
- Gum Disease
- Tooth Loss
- Bad Breath
- Dental Decay
- Lung Conditions
- Strokes
Oral and Systemic Health

- Dental Caries
  - Pain
  - Infection
- Tooth Loss
  - Loss of function
  - Isolation
Oral and Systemic Health

• Gingivitis/Periodontitis
  • Diabetes
  • Cardiovascular Disease
  • Dementia/Alzheimer's Disease
Oral and Systemic Health

• Tooth Loss
  • Loss of function
  • Isolation
Oral and Systemic Health

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

August 4, 2022
Oral and Systemic Health

• Oral Cancer
Review Article

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

Fulvia Costantinides, Gaetano Castronovo, Erica Vettori, Costanza Frattini, Mary Louise Artero, Lorenzo Bevilacqua, Federico Berton, Vanessa Nicolin, and Roberto Di Lenarda

1Unit of Periodontology and Dental Hygiene, School of Dental Sciences, Department of Medical, Surgical and Health Sciences, University of Trieste, Italy
2Division of Nephrology and Dialysis, “Maggiore” University Hospital, Trieste, Italy

Correspondence should be addressed to Fulvia Costantinides; f.costantinides@fmc.units.it

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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
Oral Signs in the Kidney Disease Patient

- 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
Oral Signs in the Kidney Disease Patient

- Periodontal disease
  - Neglect in oral hygiene
  - Lapse in routine dental care
  - Systemic inflammation
  - Renal osteodystrophy
  - Comorbidity with DM
Oral Signs in the Kidney Disease Patient

- 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
Oral Signs in the Kidney Disease Patient

- **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 macusal 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 anesthetics.
4. Organize the patient appointments on the day after hemodialysis.

Periodontal therapy
1. Take into account the assessment of the patient’s oral hygiene.
2. In cases of periodontitis, perform a complete periodontal chart.
3. Proceed with the mechanical removal of supra- and subgingival calculus with ultrasound devices and curettes.
4. Program surgical periodontal therapy when indicated and only if a good prognosis is expected. Otherwise, proceed with extraction.
5. Motivate and instruct home oral hygiene.

Conservative-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 periocclusal infection especially in the early posttransplant period.
4. Treat peri-implantitis or perform the surgical removal of unattainable implants.
5. Proceed with the biopsy of suspected macusal 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.

RECALL PROGRAM
1. Insert all patients in a strict recall program (frequency range of 3-6 months).
2. Repeat a complete noninvasive examination of the oral cavity and radiographs if the presence of new foci is suspected.
3. Check prostheses and orthodontic appliances.
4. Treat the patients for new pathologies.

Figure 1: Flowchart for dental treatment of ESRD and hemodialyzed patients.
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