A 3-Step Approach to Improving Quality Outcomes in Safety Net Dental Programs

The Future: Quality Outcome Measures Using CAMBRA

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The Future

• Increase Federal Funding to Expand FQHCs as a National Access Point
• More scrutiny and focus on clinical quality and patient outcomes
• Need for a uniform language for electronic health records and communications
Caries Management By Risk Assessment (CAMBRA)

- Potential to improve dental management of patients based on risk of disease occurrence
- Long term benefit of ongoing potential to reduce dental caries risks
- Potential for developing a common language of diagnoses that can be shared with medical community
- Can produce outcomes showing improvement for patients
CAMBRA

• Builds a patient registry within a dental practice for success rather than emergent care only
• Places greater emphasis on patient education and compliance to achieve results
• Can be introduced into a clinical practice in three primary stages
CAMBRA

• Stage one – Diagnosis and disease elimination
• Stage two – Introducing the risk assessment protocol
• Stage three – Ongoing disease management plan
Stage One

Starting the process of building the foundations for CAMBRA.

Disease Elimination
CAMBRA

• Stage One – Disease Diagnosis and Elimination
  • Elimination of dental disease and treatment completion within twelve months of diagnosis
  • Within 18 months, outcomes expectation include the elimination of dental disease for 35% of total new patients entering practice
  • Builds on successful identification of candidates prior to treatment planning
CAMBRA – Stage One

• Pre-treatment planning questionnaire required to determine level of patient motivation and willingness to comply with practice requirements
• Recommend a patient contract be implemented
• Only candidates that pass the pre-screening will be given comprehensive treatment plans – not to be given arbitrarily
• All other practice patients are walk-in, emergent care, or scheduled problem specific exam only
Sample Notice of Patient/Parental Responsibility for Dental Services

Dear Dental Patient/Caregiver,

[Name of Dental Program] is not a free clinic. In order to continue providing quality services and maintain the financial viability of our dental program, patients/caregiver are responsible for the following:

• Pay their remaining balances in full prior to receiving further non-emergent care. If your existing balance is not paid in full, we will not be able to continue elective care and you will be rescheduled.

• Payment is due in full at the time of your visit.

• For all major dental work (dentures, crowns), 50% of the fee will be required before the first appointment can be scheduled. The remaining 50% balance must be paid at the time the denture or crown is delivered. Patients will be alerted when payments are due so that they can bring the proper funds to the dental visit. No major work will be started until a 50% deposit toward services is made, and no delivery of the final product will be made until the balances are paid in full.
No one with a dental emergency will be denied services, regardless of their ability to pay; however, elective/follow-up work relevant to the emergency visit will not be started until all outstanding balances are paid in full.

In addition to meeting the financial requirements of this facility, our goal is to provide you (or your child) comprehensive care leading to a disease-free state. This requires cooperation from you in self-care management and meeting all conditions of the clinic including keeping all appointments as assigned.

We ________ [Name of Clinic] will assure you ________[Name of Patient/Caregiver] that all effort will be made to improve your oral condition toward a dental disease-free state within one-year provided you meet the following:
• Will keep all appointments assigned or notify our office of cancellation within 24 hours before the appointment or present evidence of an “true” unavoidable emergency if short notice given

• Will perform all instructions given for oral hygiene improvement and comply with routine preventive care appointments with our dental hygiene/counseling team

• Will purchase and utilize all medications prescribed to address your oral condition

• Will be prepared to demonstrate to our dental hygiene team ability to brush, floss, and comply with dietary goals during your visit in our effort to reduce your risk of decay

• Understand and comply with our policy that if you miss (____) appointments without prior notice within the guidelines of this practice, you will not be re-appointed. Only emergency care/ walk-in care when available will be provided to you. The agreement of assisting you toward a dental disease-free state will be voided.
CAMBRA – Primary Drivers

• One-hour block scheduling for all treatment planned appointments to allow quadrant restorative care and appropriate periodontal therapy when required

• Pre-treatment planning evaluation by assigned treatment counseling staffer (dental assistant, hygienist, social worker, etc.)

• All treatment planned patients given next appointment before dismissal after each successive appointment

• All treatment appointments should be scheduled no more than 2-3 weeks out
CAMBRA

• Preventive monitoring appointments between or before scheduled treatment appointments with an assigned preventive counselor or hygienist to include review of health history, dietary/nutrition counseling, demonstrated brushing and flossing technique, and review of home care plan

• All charges for planned services including applicable discounts are collected prior to the scheduled visit

• Periodic preventive coaching home calls by preventive counselor or provider
CAMBRA – Stage One Overall Outcomes

• Improving the patient’s ability to demonstrate good home hygiene
• Improving the patient’s ability to maintain the disease-free state once achieved
• Achieving the disease-free state after treatment completion
• Completing treatment needs within 12-months of initial examination
CAMBRA – Secondary Drivers

• Evidence of improving home preventive efforts and dietary modification as needed including correct frequency of brushing and flossing after meals
• Demonstrated ability to brush and floss correctly (recommend use of disclosing solution after onsite brushing as indicator of success)
• Access to and use of fluoridated water, toothpaste, and/or fluoride supplement if indicated
• Attendance on time for all assigned appointments with appropriate payment
CAMBRA – Stage One

- This stage of activities should be initiated and monitored for up to one year before moving into Stage Two
- Prepares the Health Center to better integrate CAMBRA into practice with minimal re-tooling
- Patients completing Stage One become ideal candidates to implement Stage Two strategies as part of the recall process
Stage Two

CAMRA tools introduction:
Treatment modifications based on Risk Assessment findings
A tool for ongoing monitoring
CAMBRA – Stage Two

- Risk Assessment Protocol added to treatment plan
- All other Stage One services remain intact
- Allows diagnosis based on relative risk of dental disease, not just the presence of actual disease – CARIES ONLY
- Patients assigned to a diagnostic group after examination with treatment protocols
- Outcomes monitoring consistent with diagnostic grouping unless changed in future recall exams
CAMBRA – Risk Assessment

- Risk Factors vs. Protective Factors
  - Dietary habits
  - Food groups – sugars, low ph/high acid levels
  - Calcium intake
  - Presence of enamel defects, pits, fissures, or erosion
  - Fluoridated water source
  - Plaque control
  - Brushing and flossing frequency
  - Genetics
  - History of decay
  - Bacterial load in oral flora
  - Salivary function (buffering capacity)
  - Medications (dry mouth producing)
  - Presence of decay or dental restorations
  - Physical/mental disabilities and limitations
CAMBRA

• Four primary risk groupings
  – Low Risk
  – Moderate Risk
  – High Risk
  – Highest “Extreme” risk based on medical modifier
    • Xerostomia – chronic dry mouth
    • Chronic Disease – Diabetes, Organ Transplant
    • Immuno-compromised
    • Medication i.e. Bisphosphonates, Psychotropic Drugs, etc....
CARIES RISK ASSESSMENT FORM FOR AGE 0 TO 5 YEARS

Patient Name: __________________________ I.D. # ________ Age ____ Date ______________

Initial/baseline exam date __________________________ Recall/POE date __________________________

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>1. Caries Risk Indicators - Parent Interview</strong></td>
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<tr>
<td>a) Mother or primary caregiver has had active dental decay in the past 12 months</td>
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<td>b) Child has recent dental restorations (see 3b below)</td>
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<td>c) Continual bottle use - contains fluids other than water</td>
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<td>d) Child sleeps with a bottle, or nurses on demand</td>
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<td>e) Frequent (greater than three times daily) between-meal snacks of sugars/cooked starch/sugared beverages</td>
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<td>f) Saliva-reducing factors are present, including: 1. medications (e.g., some for asthma or hyperactivity) 2. medical (cancer treatment) or genetic factors</td>
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<td>g) Child has developmental problems, Past Med Hx</td>
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<td>h) Parent and/or caregiver has low SES (Socio-economic status) and/or low health literacy</td>
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<tr>
<td>i) No dental home/episodic dental care</td>
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</table>
CARIES RISK ASSESSMENT FORM FOR AGE 0 TO 5 YEARS

Patient Name: ________________________________ I.D. # ________ Age ____ Date ______________
Initial/baseline exam date_________________________ Recall/POE date_______________________

2. Protective Factors/Indicators – Parent Interview

| (a) Child lives in a fluoridated community or takes fluoride supplements by slowly dissolving or as chewable tablets |
| (b) Teeth cleaned with fluoridated toothpaste (pea size) daily |
| (c) Mother/caregiver has caries activity |
| (d) Mother/caregiver chews/sucks xylitol chewing gum/lozenges 2-4 X daily or dissolving xylitol tablets |
| (e) Child has a dental home and regular dental care |

3. Caries Risk Indicators - Clinical Examination of Child**

| (a) Obvious white spots, decalcifications, or obvious decay present on the child’s teeth |
| (b) Restorations placed in the last 2 years |
| (c) Plaque is obvious on the teeth and/or gums bleed easily |
| (d) Dental or orthodontic appliances present, fixed or removable: e.g., braces, space maintainers, obturators |
| (e) Visually inadequate saliva flow - dry mouth |

**If yes to any one of 1(a), 1(b), 3(a) or 3(b) or any two of 1(c)-1(i), or 3(c)-3(e), consider performing bacterial culture on mother or caregiver and child. Use this as a baseline to follow results of antibacterial intervention. | Parent/Caregiver Date: | Child Date: |

| (a) Mutans streptococci (Indicate bacterial level: High, Medium, Low) |
| (b) Lactobacillus species (Indicate bacterial level: High, Medium, Low) |
CAMBRA – Low Risk

• No previous caries history or lesions
• No restorations or previous history of fillings
• Good oral hygiene with good dietary habits, fluoride intake, and salivary functions
• Protective factors outweigh risk factors
CAMBRA – Moderate Risk

• No signs of visible active decay
• May have restorations as evidence of previous caries history
• Lacking in one or more protective factors such as good oral hygiene, dietary habits, fluoride intake, etc…
• Higher potential for developing caries at some future point if unaddressed
CAMBRA – High Risk

- Currently has dental caries and/or evidence of cavitated lesions
- Previous history of restorations
- Lacking in two or more protective factors such as good oral hygiene, access to fluoridated water and toothpaste, dietary habits place patients at risk
- Large enamel pits and defects
CAMBRA – Extreme Risk

- Has special needs that pre-disposes toward caries development
- Hypo salivary function
- Dry mouth – lack of acid buffering capability
- Active caries and/or multiple restorations present
- Chronic disease condition that lowers immunity or worsens oral condition
CAMBRA – Extreme Risk

• With an Extreme Caries Risk Diagnosis it is recommended that a medical consultation be sought
• Many of these cases will be joint managed with a primary care provider
• Diagnostic coding can be used to monitor caries risk status
• Good introduction for dentists to learn diagnostic coding and applications
CAMBRA – Modified Treatment Based on Risks

- Moderate, High, Extreme Risk
- Prescription Therapies Recommended:
  - Chlorhexidine
  - Clinpro 5000
  - Baking soda rinses or calcium phosphate paste
  - Xylitol 6-10 grams daily (chewing gum, lozenge)
  - Fluoride Varnish 1-3 initial applications
  - Risk – related recall scheduled from 3 to 6 months
CAMBRA

• DIAGNOdent – can be used to classify lesions using ICDAS coding (International Caries Detection and Assessment System)
• Very important as a documented reference for those practicing minimally invasive restorative techniques
• DIAGNOdent, pre-op, mid-op, and post-op photographs can be used in defense of overtreatment for financial gain
CAMBRA

- While most FQHCs paid via PPS or CBR do not traditionally over-treat, those with FFS may be tempted to do so.
- Health Centers under PPS and CBR face the opposite risk of under-treatment or “churning”.
- Using a RVU-based productivity monitoring is a good means to control for under-treatment.
ICDAS Coding: International Caries Detection and Assessment System

- 0 – sound smooth surface after 5 sec air drying
- 1 - first visual sign (color change) in enamel after 5 sec air drying
- 2 - distinct visual change seen in enamel when wet
- 3 - localized enamel breakdown with no visible dentin or underlying shadow
- 4 - underlying dark shadow from dentin with or without enamel breakage
ICDAS Coding

- 5-distinct cavity with visible dentin, frank cavitation involving less than half of tooth surface
- 6-extensive distinct cavity within dentin; is deep and wide with more than half the tooth surface involved
CAMBRA – DIAGNOdent and ICDAS for Occlusal Surfaces

- Readings under 20 with ICDAS codes 0-1 no restoration or invasive care needed
- Readings 20-30 with ICDAS coding of 2-3 may require a minimally invasive caries biopsy for sealant placement or restoration determination
- Codes 4-6 require at least a minimally invasive restoration or more extensive restoration
CAMBRA - References


Stage Three

Prevention plan
Long term sustaining the disease-free state
Emphasis on patient self-management and compliance to earlier stages of care
CAMBRA – Stage Three

- Ongoing Risk Assessment and Caries Management Assurance
- Risk Assessment performed during recall
- Ongoing caries management based on risks
- Maintenance of low risk status allows the provider to assure the patient will remain caries free
- Provides ongoing evidence of clinical impact and outcomes
CAMBRA

• Stage Three includes all previous stages with the inclusion of routine risk assessments and coaching during each recall appointment.

• Recall appointment frequency is based on diagnosed relative risk and range from 3, 4, 6 months to one-year.

• Risk Assessment coding can change as patient improves in self-management.
CAMBRA – Problem Areas

• Will initially slow down total encounter numbers per provider building the CAMBRA practice protocols
• Will require a dedicated oral hygiene coach with some visits and calls that are not chargeable under current reimbursement methods
• Will reduce the number of patients receiving comprehensive treatment plans
• Electronic record system required
• Will require creativity in seeking alternative reimbursement methods and grants
CAMBRA – Other Benefits

• May reduce overall recall appointment frequency as improvements obtained
• Will increase treatment completes for all treatment planned patients
• Will produce evidence of documented outcomes that show quality of care
• Potential for establishing practice protocols based on risks rather than provider preferences
• Long term community goals of improved health will be actualized