Not Just Drilling and Filling: Adopting a Disease Management Approach to Manage Early Childhood Caries

**AIM**

The goal of the initiative (called the ECC Collaborative) was to engage dental practices to successfully adopt and spread DM protocols for ECC, including risk assessment, self-management goal setting, and risk based care along with restorative treatments to:

- Reduce percentage of patients with new cavitation by 50%
- Reduce percentage of patients with complaints of pain by 50%
- Reduce percentage of patients with referrals to operating rooms and for IV/oral sedation by 50%

**RESULTS**

In an earlier phase of the initiative, data showed that the DM approach resulted in improved care delivery and patient outcomes.

1. **Pre-Intervention**

   - Lower percentage of patients with new cavitation
   - Lower percentage of patients with complaints of pain
   - Lower percentage of patients with referrals to operating rooms

2. **Post-Intervention**

   - 50% reduction in new cavitation
   - 40% reduction in pain complaints
   - 25% reduction in referrals

**DISEASE MANAGEMENT (DM) PROTOCOL**

- The comprehensive ECC DM protocol is based on the premise that a patient’s caries risk status can change over time.
- The DM protocol is a blend of clinical and at home care with the goal of engaging caregivers through explaining the caries process and empowering them that they can make change.

**METHODS**

- The initiative utilized a phased approach.
- Phases II and III of the collaborative followed the Institute for Healthcare Improvement’s Breakthrough Series model.
- Participating sites were trained in both the fundamentals of DM as well as principles of improvement science to aid testing and implementation.
- Participating sites collected monthly data as well as qualitative data to track their progress, analyze gaps, and generate ideas to successfully implement the DM protocol into practice.
- Practices collaborated and exchanged ideas on adopting components of the DM protocol through regular meetings and project support designed to foster shared learning.

**USUALLY MANAGED PATIENTS**

- Electronic dental records are not designed to track health outcomes—requires the use of “dummy” codes to track disease
- Senior leadership support was crucial in championing efforts and removing barriers to implementing a new way to deliver care
- Certain components of the DM protocol were easier to adopt than others:
  - Risk assessments and self-management goals were easier to test and implement because care team had complete control over these processes.
  - Modifying recare intervals was not entirely in control of care team, dependent on parents bringing children back, lack of reimbursement for more frequent visits and culture of six-month recall presented challenges to many teams.
  - Caries lesion charting was a new concept to many, and was difficult to incorporate into workflow.

**TEAM MEMBERS**

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**THE GAP**

- THE GAP
  - Actual
  - Desired

**PROBLEM AND OPPORTUNITY**

- Early Childhood Caries (ECC) is the presence of one or more decayed, missing, or filled tooth surfaces in any primary tooth in children ages 0-6 and is one of the most prevalent chronic diseases in young children.
- Current treatment relies almost exclusively on costly restorative and surgical interventions, yet ECC is largely influenced by social/behavioral factors.
- Restoring caries lesions (cavities) alone is a short-term solution to a chronic problem.
- Without addressing the underlying disease process, caries lesions are likely to recur (50-75% of cases recur within 6-24 months), leading to increased health care costs.

**DISEASE MANAGEMENT (DM) Protocol**

- Disease Management Campaigns
  - Developing the DM MODEL (2008 – 2010)
  - Disseminating the DM MODEL (Wide Scale, 2011)

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- Efforts are now turning to a “campaign” approach to spread the DM protocol to providers nationwide.

**OUTCOMES MEASURED**

- Improvement in the following metrics:
  - New Cavitation
  - Referral to the Operating Room
  - Pain
  - Percent with self-management goals reviewed
  - Percent with risk assessed

**OUR REACH**

**CONCLUSIONS AND LESSONS LEARNED**

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**What we know**

- Applying evidence
- Changing processes
- Training workforce
- Educating parents
- Using information technology
- Aligning payment

**What we do**

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