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

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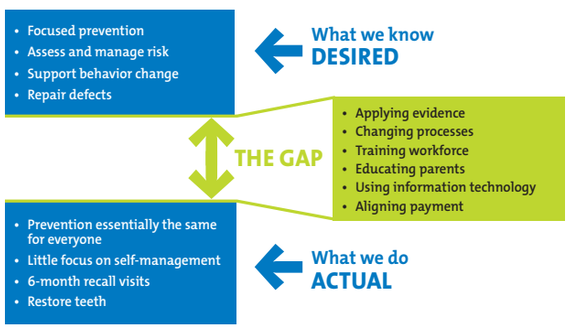
PROBLEM AND OPPORTUNITY

- 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 (23-57% of cases recur within 6-24 months), leading to increased health care costs.
- Studies have shown that a disease management (DM) approach is effective in preventing and managing ECC; however, this approach is not widely adopted.
- In order to bridge the gap between knowledge and practice, the DentaQuest Institute launched an initiative to create a national network of dental practices around using data to spread adoption of a comprehensive DM protocol to prevent, manage, and treat ECC.



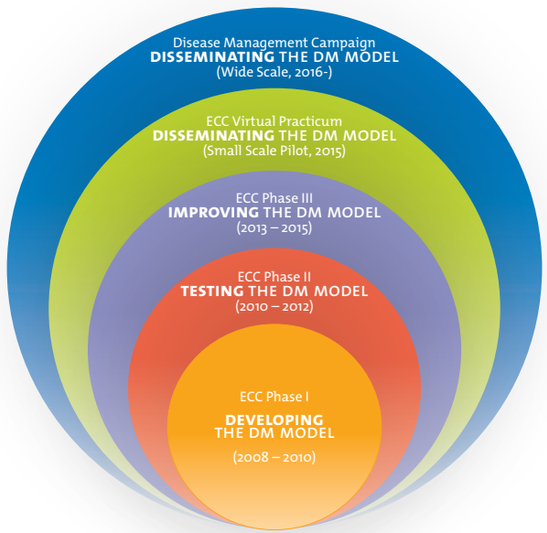
DISEASE MANAGEMENT (DM) PROTOCOL

- 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.

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 recare along with restorative treatments to:

- Reduce percentage of patients with new cavitation by 50%
- Reduce percentage of patients with complaints of pain by 30%
- Reduce percentage of patients with referrals to operating rooms and for IV/oral sedation by 50%



DISEASE MANAGEMENT SPREAD APPROACH

METHODS

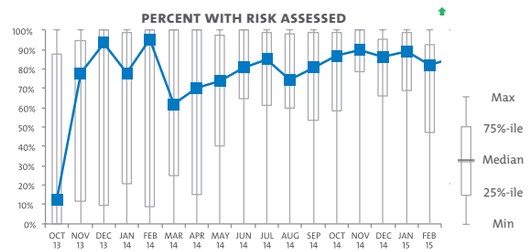
- The initiative utilized a phased approach.
- Phases II and III of the collaborative followed the Institute for Healthcare Improvement's Breakthrough Series model.
- Participating sites were trained in both the fundamentals of DM as well as principles of improvement science to aid testing and implementation.
- 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 and advice on adopting components of the DM protocol through regular meetings and project support designed to foster shared learning.
- Efforts are now turning to a "campaign" approach to spread the DM protocol to providers nationwide.

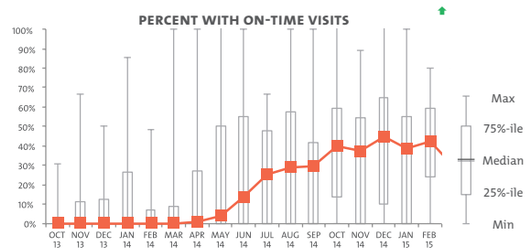
RESULTS

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

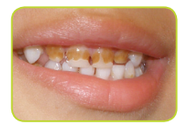
OUTCOME MEASURE	BASELINE	RESULTS ACHIEVED	PERCENTAGE IMPROVEMENT	IMPROVEMENT RANGE
New Cavitation	46%	33%	↓28%	↑14% – ↓71%
Referral to the Operating Room	22%	14%	↓36%	0% – ↓81%
Pain	11%	8%	↓27%	↑80% – ↓100%

- Phase III data showed that teams were successful in implementing care processes that focused on prevention and management of disease, specifically regular risk assessments, review of self-management goals and behaviors that promote good oral health, and on-time recare appointments based on risk.





SUCCESSFULLY MANAGED PATIENTS



PRE-INTERVENTION

POST-INTERVENTION

OUR REACH

CONCLUSIONS AND LESSONS LEARNED

- 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.

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