

PRACTICE BRIEF

Dental caries management: A practical approach for your practice

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Keywords

risk stratification; quality improvement; dental caries management.

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Received: 6/15/2020; accepted 10/23/2020.

doi: 10.1111/jphd.12427

J Public Health Dent **80** (2020) S117–S121

Abstract

Chronic disease management models in primary care have demonstrated significant benefits to the patient experience and patient health outcomes. In trying to prepare for the future, with or without COVID-19 implications, dental providers and clinics are facing opportunities to add value, consider alternative payment models, and to incorporate risk stratification and population health management along with medical systems. However, as alternative payment models emerge in dentistry, stand-alone dental clinics may face unique challenges in trying to prepare for the future while still providing patient care in the fee for service environment. This article focuses on a 6-months pilot project of how implementing a comprehensive caries disease management care model, evaluating caries risk, and implementing risk stratification strategies can prepare dental offices for future payment models and inclusion in the greater health system. There are two overall goals for this pilot. First, applying a caries disease management protocol to every patient visit, regardless of reimbursement. Second, applying quality improvement (QI) principles to change how a dental office approaches care delivery. The Institute of Medicine defines quality in healthcare as a direct correlation between the level of improved health services and the desired health outcomes of individuals and populations

Introduction

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this pilot. First, applying a caries disease management protocol to every patient visit, regardless of reimbursement. Second, applying quality improvement (QI) principles to change how a dental office approaches care delivery. The Institute of Medicine defines quality in healthcare as a direct correlation between the level of improved health services and the desired health outcomes of individuals and populations.²

Clinic Name

Community Dental Care-Vickery Meadow Dental Center.

Program

A standalone dental clinic, that is supported by a dental administrative organization, was selected as the pilot site to work with a clinical integration trainer to implement

a caries disease management approach to providing traditional dental treatment in an existing fee-for-service payment structure. The American Academy of Family Physicians defines disease management as a set of activities aimed at improving the health and clinical outcomes of patients.³ The office was introduced to The Model for Improvement, developed by Associates in Process Improvement, to provide a framework for developing, testing, and implementing changes leading to improvement. The office used the Plan Do Study Act (PDSA) process.⁴

Objective

Dental caries is a largely preventable disease. Yet, caries is one of the most common chronic diseases of childhood in the United States.⁵ In fact, one in five children aged 5–11 years have at least one untreated decayed tooth; one of seven adolescents aged 12–19 years has at least one untreated decayed tooth.⁵ The goal of this pilot was to provide the rationale for disease prevention and management of caries by using the disease management protocol (DMP). This protocol is based upon the belief that patients have the most important role in the management of caries. By using the protocol, the office was introduced to a tested

risk-based disease prevention and management clinical protocol.

Methodology

The pilot office received an initial training utilizing existing caries disease management training resources made available by the DentaQuest Partnership for Oral Health Advancement (DPOHA) (formerly the DentaQuest Institute). The entire dental staff, including operational and clinical personnel, were trained on the comprehensive DMP that was developed and tested at Boston Children's Hospital.

The DMP is based on the premise that a patient's caries risk status is not static, but rather can change over time. The protocol addresses the social and environmental factors, as well as the biological causes of the dental caries disease process. The DMP is a series of components that when incorporated together in clinical practice, leads to disease management.

The DMP is comprised of seven components (Figure 1):

- Caries risk assessment
- Remineralization modalities
- Recare intervals based on caries risk
- Self-management goals
- Effective communication
- Treatment based on patient's clinical needs and caregiver's or patient's desires
- Caries lesion charting by tooth surface and activity

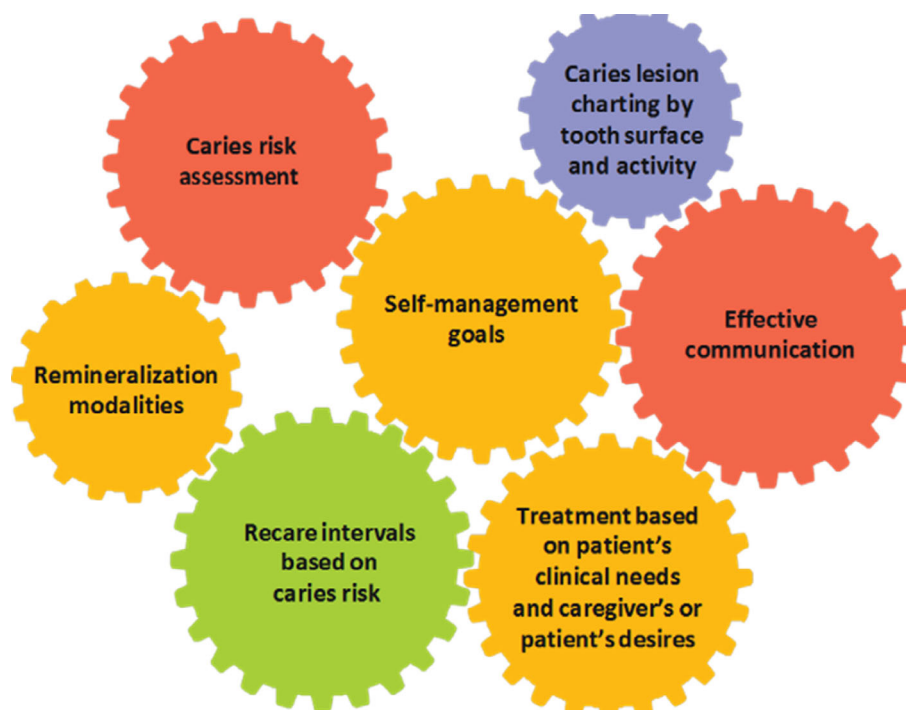


Figure 1 The seven components of the DMP, represented by a gear.

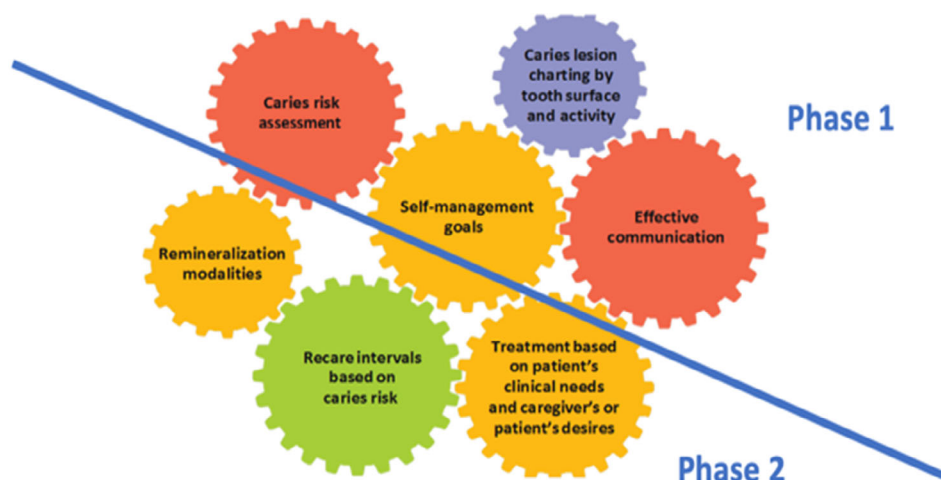


Figure 2 The seven components divided by training phases one and two.

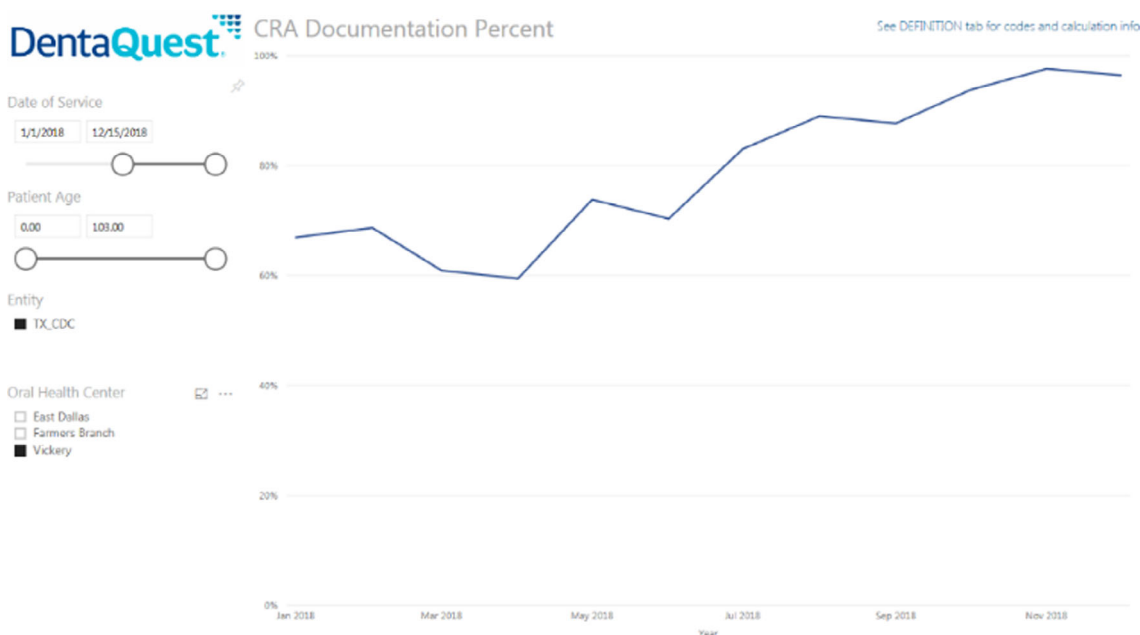


Figure 3 Caries risk assessment documentation run chart.

- Treatment based on a patient’s clinical needs and caregiver’s or patient’s desires
- Caries lesion charting by tooth surface and activity

Strategies for implementation

Implementation of this disease management model was in two phases, represented by Figure 2.

Phase one was standardizing and streamlining caries risk assessments at every visit, setting self-management

goals, and learning motivational interviewing skills to improve communication with patients.

Phase two was utilizing evidence-based remineralization modalities, planning treatment based on patient’s clinical needs and caregiver’s or patient’s desires and determining recare intervals based on caries risk. Evidence-based guidelines on caries prevention were reviewed. Clinicians were encouraged to prioritize the use of these interventions based on effectiveness, safety, and feasibility.

For the purpose of this pilot, every patient visit provided an opportunity for disease management care. Disease



Figure 4 Self-management goals documentation run chart.

management care, such as self-management goal review, was not limited to only exam and hygiene visits, allowing for risk-stratified care, regardless of what the patient had an appointment for.

The DentaQuest Partnership for Oral Health Advancement provides examples of caries disease management metrics. The metrics used during this pilot were caries risk assessment documentation, low caries risk maintained, and self-management goals set. These metrics focus on risk-stratified care and relationships with patients and families. By combining motivational interviewing and self-management goals, the office was learning a new way of partnering with not only patients but their families.

Caries risk assessment Current Dental Technology (CDT) codes, D0601-D0603, were implemented prior to the pilot. The model for Improvement PDSA framework was used to streamline and standardize the way caries risk assessments were done in the office, focusing on improved identification of patient behavior. Educational aids were used to engage with patients, parents, and guardians differently.

To capture the self-management goal data, CDT codes D1310, D1330, D9993, or D9994 were used. CDT codes D1310 and D1330 were already in practice.

Pilot findings

Figures 3 and 4 represent phase one data collected from June to December 2018. In total, it represents 2,231 distinct patients and 5,607 total patient visits.

Figure 3 represents the percentage of patients who received a caries risk assessment documentation code at their visit. You can see the upward trend beginning in June 2018. It is our conclusion that this coincides with phase one implementation of caries risk assessments at each patient visit.

Figure 4 represents the percentage of patients who set a self-management goal during at their visit. The highest percentage of patients setting self-management goals took place during the first 3 months of implementation.

Lessons learned

The experience gleaned from this project suggests involvement of the whole team to implement and to scale the project into achievable steps are key takeaways. By looking at the way care is provided, teams can self-identify areas for improvement. Streamlining efforts around care improvement allows your early successes to build off one another. It also allows for quick identification of failures, while providing the framework to discuss what went wrong. The key lessons learned during the implementation phase are as follows:

- Create a patient-centered mission. Identify the driving force behind adopting a disease management model. Determine how to measure your goal and define success.
- Identify operational and clinical champions of the work to engage all members of the team. Dental

teams can learn the protocol and utilize QI principles to adapt the protocol to their specific needs and team members. Early engagement is successful when choosing a model that has successful outcomes.

- Choose simple metrics. Clinicians may already be utilizing caries risk assessment codes, but you may not be gathering data to review how often it is happening. Once you accomplish tracking one metric, track another simple metric.
- Be consistent. Brief, weekly meetings show your commitment to this change. Scheduled meetings allow a space to provide feedback, celebrate successes, and plan for implementation of the protocol. The PDSA format standardizes work needed to meet goals. Include details for every role on the dental team, including their specific work needed to reach each goal.

Conclusion

Identifying caries risk status and honing effective communication skills were the cornerstones of implementing and sustaining a disease management approach. Expanding on those skills allows for further work into risk-stratified care and the creation of individualized patient care pathways. Partnering with patients and families by setting self-management goals builds trust that can be applicable to the overall health environment.

Reasons for implementing a caries disease management care model may vary – preparing for a different payment structure, or risk-stratifying patients because of COVID-

19. The lessons learned during this pilot may help your practice see early success and prepare for what may lie ahead in dentistry.

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How to cite this article: Bruner T. Dental caries management: A practical approach for your practice. *J Public Health Dent*. 2020;80:S117–S121. <https://doi.org/10.1111/jphd.12427>