



Is it time to change our approach to CARIES MANAGEMENT?

Dr. Stephen Abrams is a man of many talents: a clinician with over 34 years of practice experience, chair of the Ontario Dental Association's Dental Benefits Committee for the past 16 years, and a prolific author who has published over 100 articles in international journals and publications.

But his contribution to dentistry does not end there. An innovator and entrepreneur, Dr. Abrams has also been redefining caries management. His company, Quantum Dental Technologies, developed the Canary System used for the early detection and monitoring of carious lesions. CDA met with Dr. Abrams to discuss developments in caries management.



Stephen Abrams

DDS



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What is the current state of the science with regard to the management of early carious lesions?

The science is evolving as we speak, and it's evolving on two different fronts: (1) how we detect and measure lesions; and (2) how we treat them.

In your practice, do you manage caries differently than you did 5 or 10 years ago?

Yes, I do. That said, changing our way of managing caries is very difficult because of time constraints and shifts in thinking. We have to consider risk factors, home care and different products, on top of thinking about how we measure lesion progression and when, if and how we replace restorations.

As practitioners, we need to stop and ask ourselves "If I find a lesion, do I immediately pick up my handpiece as I was trained to do as a clinician, or do I begin to look at preventive measures and products that may help stabilize the lesion?"

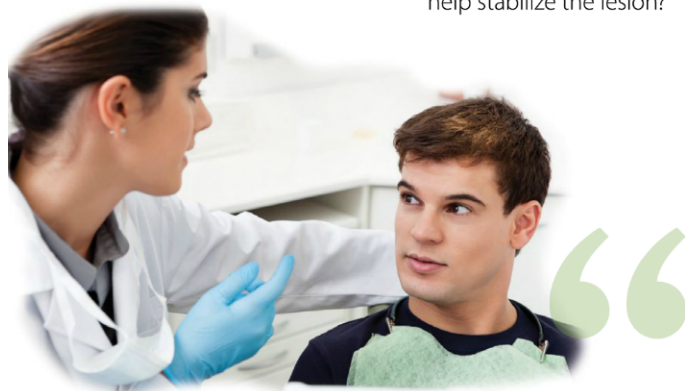
Are you also engaging with your patients in a different way?

Definitely! I want to educate my patients about what they need to do, so they stay engaged and involved in the treatment plan.

Our patients don't approach their oral health the way they used to. There's a lot more discussion now, and there's a sea of information patients read online—be it accurate or not—on various disease processes, including caries. Our job as clinicians must include patient education.

Do you believe that the North American approach is in tune with the evolution of the science underpinning caries management?

I don't believe so; there's a need for a bigger shift. We're still very much focused on what caries causes—holes, destruction of restoration margins, etc. We need to move our focus to questions such as "How did it get there and why?" and "Why are some of my patients able to resist this disease process?" We also need to go back to the basics and refer to caries as a disease.



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What do you think is the key factor in managing dental caries successfully?

Patient engagement. If your patients aren't engaged in managing any disease process, there's going to be no success. Patients need to understand what the disease is, and we as clinicians need to provide them with quantifiable information so they understand whether things are improving or worsening. For caries management, it's about lesion progression or regression. If it's growing, we need to engage the patient in behavioural changes.

Are there new tools to help us engage our patients better?

Yes, there are. What I would advise dentists to look for in a tool is one that's linked to the disease process—in caries it's measuring change in crystalline structure—that is backed by good science and solid evidence with results that are quantifiable, and that patients can understand.

For example, my patients don't understand what that little interproximal spot is when I show them radiographs. But when I give them a number with a scale, they begin to understand. So looking at devices that have repeatable, numerical results is key. Moreover, patients have to understand what the device is measuring.

Would you say "caries medicine" is the future of caries management?

It has to be. We need to look at the fees for the various services. Because when you think about it, what's considered prevention isn't actually disease prevention—it's disease treatment. We need enough support for practices to run a robust preventive program, as well as a program that covers the cause of the lesion. Prevention is in my opinion undervalued at times. Yet that's the one thing that's going to make the biggest difference down the road.

How can organized dentistry support the evolution of caries management?

Organizations can provide the profession with access to literature and speakers, and knowledge on how to critically evaluate the literature. They can also advocate for a fee or reimbursement system that provides support so we can treat disease early in its process.

Finally, organized dentistry can message the fact that it's important that dental diseases be treated in what I call a "dental home," an environment where the dentist becomes the person who supervises, and is actively involved in, the management of the caries disease process across its spectrum. ✦

*This interview has been condensed and edited.
The views expressed are those of the authors and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.*



The Canary System

The Canary System, developed by Dr. Abrams and his team at Quantum Dental Technologies, uses a laser to measure both release of heat and reflected light from the tooth surface. The device provides information on the presence and extent of carious lesions up to 5 mm beneath tooth surface, including in the interproximal areas, cracks, beneath sealants and around the intact margins of restorations. It uses a numbering system to help patients understand if lesions are improving or worsening.