Dental Chronicle
▪ June 30, 2012
Canada's National Newspaper of Dentistry

Your Practice

Healthy life-style brings benefits

■ Practice productivity can improve with adoption of healthy lifestyle approach

by **Louise Gagnon,**
Correspondent, **Dental Chronicle**

DENTISTS WILL LIKELY FIND THAT THE productivity in their practices will increase if both they and their staff adopt healthful lifestyles.

"People who exercise are able to have quicker reaction times, better memory, and improved executive functioning," says Dr. Uche Odiatu, a Toronto dentist who spoke at the annual meeting of the Ontario Dental Association about the benefits of exercise and good diet in dental practices. "Staff will likely perform better, be more efficient, and make fewer mistakes if they are in shape."

In the same way that dentists view the purchase of technology as a tool to increase productivity and billings in their practices, they should see physical activity and good eating habits as instrumental to achieving those goals, according to Dr. Odiatu.

LEADING BY EXAMPLE

It is key that dentists lead by example and adopt healthful habits, and others in leadership positions in a dental practice such as the leader of the hygiene team or the clinical coordinator, lead healthful lifestyles, says Dr. Odiatu.

"It is hard to ask others for excellence and to be healthy if the dentist is eating junk food, smoking or is inactive," he says. "If the dentist is having coffee and a pastry, for example, rather than having an apple and a cup of green tea, the dentist is setting an unhealthy tone for the practice.

"Whatever habits the team leader has, the staff members will likely adopt those habits, if they are good habits, or lower themselves, if they are bad habits," says Dr. Odiatu.

It's also a more convincing argument for patients if dentists are trying to educate them about oral hygiene and

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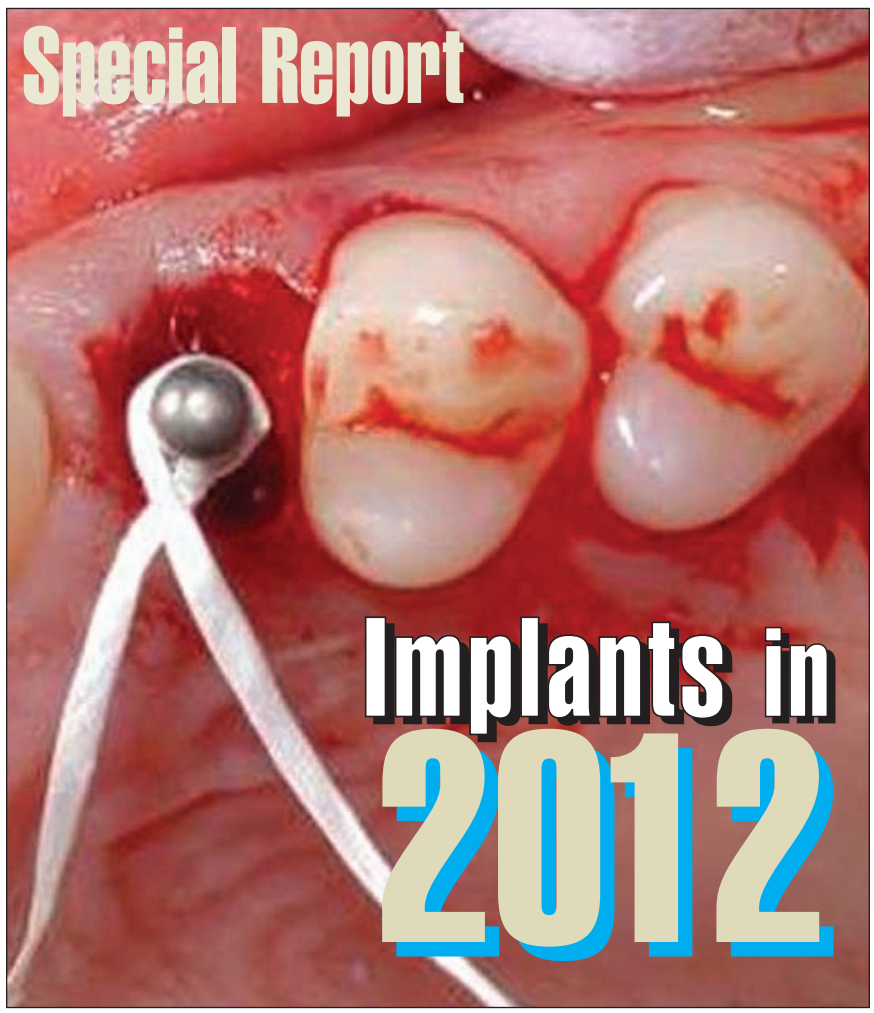

by **Louise Gagnon,**
Correspondent, **Dental Chronicle**

The growing variety of implant systems means dentists have a wide range of choices available to suit their patients. Currently, the placement of most implants will require some degree of bone grafting, and in complex situations even gum grafting, to ensure there is sufficient support in place.

"In a significant percentage of cases, you will need some kind of bone grafting," says Dr. Hassan Adam, a dentist based in Yellowknife, N.W.T. "You need to have bone around the implant [to support it]. You are required to build up the arch before placing an implant. If a tooth was pulled because of an infection or it has been a long time since the tooth was removed, there may be a lot of bone loss."

Alternatives to autogenous bone are available, such as freeze-dried bone for situations in the future where there is insufficient bone available for grafting.

A good implant will likely last a lifetime and implant failure is rare, but compliance is crucial to achieve that longevity, says Dr. Adam.

"The chance of implants taking well if the patient is smoking decreases," says Dr. Adam. "The attachment of the tissue to the implant is fragile, so anything that will adversely affect the blood flow has an impact. Smoking certainly impacts the blood flow."

It is advisable to place implants once individuals have achieved full growth, for implants are affected by growth patterns, notes Dr. William Turner, a dentist in Thunder Bay, Ont.

"The implants will not move with

—*please turn to* **page 4**

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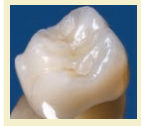

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See page 13

Postgraduate education

Update on detection and management of caries

THE ABILITY TO DETECT CARIES beneath sealants and around the margins of composite restorations is among the benefits of The Canary System, according to new research presented at the IADR. Turn to **page 7.**

DentalVitae

First Canadian to receive ADEA fellowship

With a career born from the concept that the ideal dentist is both healer and teacher, London, Ont.'s Dr. Harinder Sandhu heads to Washington to observe health policy in action. **See page 12.**

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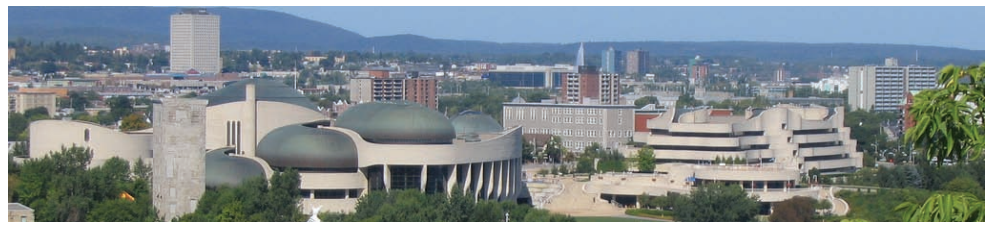

Dental Chronicle National Editorial Board

Each issue, Dental Chronicle is honored to introduce you to the distinguished members of our National Editorial Board. This month, we welcome Dr. William E. Turner of Thunder Bay, Ont.

Esthetic dentistry captured Dr. William Turner's interest around 1995, after he had been practicing for a few years, and it has developed into the most rewarding part of his career, he says.

"I think there was a point in my career where I was getting comfortable and I wanted to explore something else," says Dr. Turner, who has a full-time practice in Thunder Bay, Ont. "I discovered esthetics and I took a couple of courses at the University of Minnesota. Then I got involved with the program in Buffalo, and I did my proficiency certificate in esthetics in Buffalo."

He completed that certificate by 2002 on a part-time basis while continuing to practice, he says, travelling to the U.S. city for a week or two at a time. His interest in esthetics also led Dr. Turner to become chair of the Canadian Academy for Esthetic Dentistry's accreditation committee, but, for a while now, leadership and education opportunities have taken a back seat to his family.

That's not to say he wouldn't enjoy lecturing once his two children are off on their own. "I am not adverse to doing a little teaching, doing a little lecturing," says Dr. Turner. "I'm not sure what direction that's going to take and I'm not in any hurry to pursue that right now. I did my graduate thesis on direct fibre-reinforced composite bridges, and it is an area of dentistry that has tremendous potential but hasn't really been explored. Very few dentists do the technique. It works extremely well nowadays with the materials we have at our disposal. I actually did a chapter in [Dr.] George Freedman's book *Contemporary Esthetic Dentistry* on the technique. I suspect that's what I get approached most often to talk about or to write about."

When asked about the current state of dentistry, Dr. Turner says that the types of challenges faced by today's dentists have not changed from their predecessors, but some have grown more pressing. "The remuneration for dentists for doing welfare and social service type dental plans is making it increasingly difficult for dentists to service those patients," he says.

"When I started practice 30 years ago, it was not uncommon to run a practice for 50 per cent overhead," says Dr. Turner. "Now it is more like 70 per cent."

Advances in dental technology are very exciting, he says. "When I graduated from dental school, implants were practically a dream. I didn't believe we'd ever reach a point where we could actually implant something in the jaw and put a tooth on it, and we are doing it routinely now."

As exciting as cosmetic dentistry is, Dr. Turner recommends that dentists considering it as a specialty should take care with their education choices.

"My advice would be to take lots of courses, and try to take courses in a university environment," Dr. Turner says. "There's lots of courses that are offered through universities, and I think they tend to be a little more mainstream . . . there are some course out there that have given cosmetic dentistry a bad reputation. And it needn't be that way. Cosmetic dentistry can be very conservative."

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R. Allan Ryan

Senior Associate Editor
Lynn Bradshaw

Assistant Editor
John Evans

Sales & Marketing
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A good implant will last a lifetime; failure is rare

continued from **page 1**—

growth," says Dr. Turner. "You may end up with a situation where the [implant supported] tooth is submerged. You take great care in placing an implant in the desired location, and if you aren't careful growth effectively changes that location and you can be left with a significant esthetic challenge."

BEST TO DELAY IMPLANTS UNTIL OLDER

Whether a young person is congenitally missing teeth or whether the young person has lost teeth due to trauma, it is preferable to place composite materials as a temporary measure until they are finished growing. Implants then can be put in place, explains Dr. Turner. This can mean delaying treatment until age 20 in females and as late as age 25 in males. It may also be wise to delay treatment until the patient has finished the activity which resulted in the trauma. Hockey players often wait until they are finished their playing career before having more permanent restorations placed. If they get hit in the mouth again, it is far preferable to replace a composite bridge that to have to replace an implant retained crown.

Visual technology is contributing to the predictability of implants, notes Dr. Carol Waldman, a dentist in Toronto and a fellow of the International Congress of Oral Implantology.

"The dentist or surgeon can place the implant as close to perfect as possible with advances in computer software," explains Dr. Waldman, noting that if bone grafting or site preservation is done soon after extraction, the whole procedure is almost seamless.

At the other end of the spectrum, if years have gone by and a missing tooth has not been replaced, there is typically significant bone loss. Both bone grafting and gum grafting may be necessary in such cases, according to Dr. Waldman.

Like her colleagues in the rest of Canada, Dr. Waldman asks her patients to butt out if possible or at least make concerted efforts to significantly decrease smoking if they are planning to undergo implant placement.

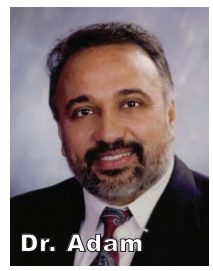
One study found smoking was a risk factor for implant failure with smooth implants and that implant survival was poorest for implants placed in the maxillary posterior areas of smoking patients. (*International Journal of Oral Maxillofacial Implants* 2008; 23(6):1117-1122.)

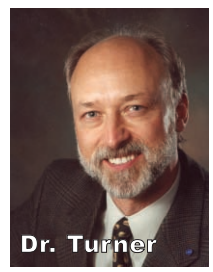
Additionally, Dr. Waldman screens for normal blood sugar levels in her patients who have diabetes and encourages patients to normalize their blood sugar levels, particularly before the placement of an implant and in the months following the placement of an implant.

COLLABORATE WITH OTHER CLINICIANS

A study published in *Diabetes Metabolism* in Feb. 2012 suggested that dentists and diabetes clinicians collaborate to ensure careful selection of suitable candidates for implant treatment to ensure stabilization of glycemic control, eradication of periodontitis, eradication of poor oral hygiene, as well as cigarette smoking (2012 Feb; 38(1):14-19.)

A complication such as peri-implantitis occurs in a minority of implant placement cases, about 5%, but a severe case of peri-implantitis can result in an the loss of bone around the implant and ultimately in the implant being removed, notes Dr. Waldman. Typically, however, disinfection and the administration of pharmacotherapy can sufficiently treat peri-implantitis. It is also important to remove excess cement in cases where the final crown is cement retained, as this is a common cause of peri-implantitis.


Dr. Adam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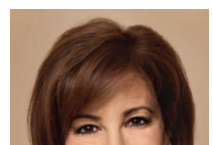

Dr. Waldman

Increasingly, it is recognized that there is an interface between the host and the implant and that there are functional and biologic challenges related to this interface. In addition, there is an increasing awareness of the role of biofilm in implant success, observes Dr. John Nasedkin, a Vancouver prosthodontist and instructor in Graduate Occlusion and Prosthodontics at the University of British Columbia, and past president of the American Equilibration Society.

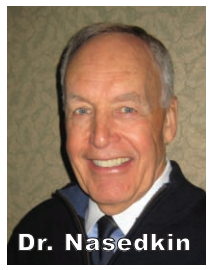
"There are some particularly aggressive pathogens in the oral flora that are active when peri-implantitis takes place," observes Dr. Nasedkin.

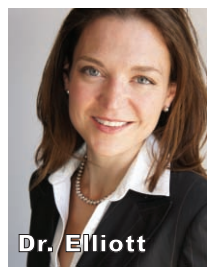
Despite possible factors that may contribute to the failure of implants such as the presence of smoking or biofilm, implants are a technology that will be a fixture in dentistry. "The research is clear that they [implants] are highly reliable and are here to stay," says Dr. Nasedkin.

Implant systems in the marketplace are aiming at minimizing the need for multiple providers in implant placement, observes Dr. Nasedkin.

"It appears we are seeing signs that the laboratory industry is undertaking to become a one-stop source for all of the needed components for the placement and restoration of a single implant-supported crown," says Dr. Nasedkin. The trend is realistic given patient considerations about costs, he notes.

"This allows the dentist to more properly quote a fee for the removal of a tooth and the placement of an implant-supported crown," says Dr. Nasedkin, adding the system more readily lends itself to the back of the mouth where high-end esthetics are not a strong consideration.


Dr. Nasedkin


Dr. Elliott

Critical esthetics issues such as managing the appearance of the upper six front teeth may still require increased costs, and dentists need to go to greater efforts to make those teeth appear natural, adds Dr. Nasedkin.

The transmucosal connection, or abutment, is now more routinely made with all-ceramic materials like zirconia for implants placed in the front of the mouth, to prevent the grey colour of a metal abutment from shining through the tissue and compromising the esthetics of the procedure.

GENTLE EXTRACTIONS BENEFIT THE PROSPECT OF FUTURE IMPLANTS

The availability of implants with smaller diameters allows for the placement of implants without as much bone grafting or bone support, notes Dr. Tarra Elliott, a Toronto dentist and past president of the York Regional Dental Society.

However, smaller diameter implants may not be strong enough to support every situation, says Dr. Elliott. The best option is to preserve as much bone as possible when a tooth is extracted using gentle, non-invasive techniques and preserving the socket site to ensure maximum bone quality and quantity is maintained.

In this way, she says, an implant of appropriate size can be placed.

Dr. Elliott also noted that performing the implant placement procedure within six months to one year post extraction often avoids the need for supplemental grafting, making the placement straightforward.

Healthy lifestyle can bring benefits to your staff, and your practice

continued from **page 1**—
inflammation, for example, if the dentists themselves practice good eating and exercise.

"Wellness-based dentistry is more than just changing amalgams to resins," says Dr. Odiatu. "It's easier for a dentist to talk to patients about poor oral hygiene if the dentist is healthy. A dentist who is out of shape and is telling patients to be healthy and meanwhile, that dentist has abdominal adiposity, which is a source of inflammatory cytokines and contributes to poor oral health, is not as credible as one who is in good health. It's about practicing what you preach."

In his own personal experience, Dr. Odiatu reports he has weighed as much as 227 pounds and, at that weight, he says he did not feel efficient. Now, after shedding excess weight, he says he feels more alert and alive and believes his philosophy is a healthy contagion in his practice.

In Dr. Odiatu's practice, his clinical coordinator has begun leading other staff members in exercising to a workout DVD after the work day is done, and some staff members enjoy power walks on their lunch breaks.

"It is whatever works for the staff in terms of activity," says Dr. Odiatu. "I think it is an example of birds of a feather flocking together."

Individuals may find they are more likely to stick to an activity if they have a buddy to exercise with, he said.

BE ENTHUSIASTIC, AND POSITIVE

Dentists should make efforts to support and promote activity in the practice and not criticize individuals for their choices. "Honour the individuals decisions, and not let people feel that they are judged," he says. "Be enthusiastic, but don't cajole or judge."

Exercise not only increases alertness, but it wards off physical pain and discomfort such as back pain, says Dr. Odiatu, noting that most lower back pain can be lessened with the use of strength and flexibility exercises.

In addition, absenteeism and sick days affect all businesses, and a fit employer or employee, on average, takes fewer sick days. One study published in the *Journal of Occupational and Environmental Medicine* (2001 Dec; 43(12):1019-1025) found a significant relationship between exercise frequency and illness-related absenteeism.

Active individuals are also at lower risk of developing atrophy of their brains, keeping away conditions like Alzheimer's Disease or Parkinson's Disease, explains Dr. Odiatu.

"If people have high energy, you want to be around them," says Dr. Odiatu, pointing out an office with active people is likely also one with good morale that will help attract patients to the practice.

In addition, in Dr. Odiatu's practice, staff members are typically brown bagging it for lunch, and the fridge is stocked with vegetables and fruits.

Wise food choices not only avoid weight gain, but foods such as berries, vegetables, healthy oils, and omega-3 fatty acids, are good for the brain, he says.

Water is the drink of choice over sugar-filled energy drinks and soft drinks in his own practice, Dr. Odiatu notes.

New therapeutic air polishing powder removes stains 50% faster while improving remineralization and decreasing sensitivity

■ Calcium phosphate-based bioactive glass makes less mess in operatories than other air polishing powders, developer says

Calcium phosphate-based air polishing prophy powders offer therapeutic benefits, as well as improved whitening and less patient discomfort when compared to sodium bicarbonate-based powders says Ian Thompson, Haliburton Chair in Physiology at King's College London, U.K, and Technical Director at Osspray, developers and manufacturers of Sylc calcium phosphate prophy powder. The system is marketed in Canada by Oral Science.

Air polishing can remove stains faster than with a hand tool and prophy cup, but typical air-polishing prophy powders have qualities that limit their utility and can make their use unpleasant for dentist and patient alike, he says.

"They tend to be shard-like in nature," Thompson says. "And so when you fire them onto the surface of the tooth they tend to dig the surface and expose more dentine tubules. That's increasing the source of sensitivity. Traditionally they are sodium bicarbonate powders, and being very salty, they taste very salty, and patients find that sort of unpleasant."

Sodium bicarbonate powders have also been shown to damage restorative materials and sealants (*Journal of the American Dental Association* 2012; 141(1):63-70).

It seemed like there was a niche for a better powder, Thompson said.

Calcium phosphate-based bioactive glass was originally developed for bone remineralization by Thompson's colleague Larry Hench, now Emeritus Professor of Cermaic Materials at Imperial College London, U.K. in the late 1960s, Thompson says. "Bioactive glass had been shown to be good at remineralizing bone surfaces, so in theory it should be good at remineralizing dental surfaces," said Thompson. "So we created some materials and we gave them to Tim Watson" (a dentist from London, England, who had approached Thompson and Hench with the idea to develop a new air abrasive for cutting tooth surfaces). The glass turned out to have no cutting effect but did a good job hardening and remineralizing teeth, he said.

PROVIDING VALUE TO PATIENTS

This remineralization gives calcium phosphate-based prophy powders therapeutic abilities not present in other air polishing powders. According to a study from King's College London's Dental Institute (*Journal of Dentistry* 2010; 38(6):475-479), after polishing with Sylc patients experienced a 45% reduction in sensitivity, compared to 6% after polishing with a sodium bicarbonate-based powder. More tellingly, two weeks after treatment the Sylc patients were still experiencing a 40% reduction, while in the sodium bicarbonate patients sensitivity had increased 17% due to the exposure of more tubules.

Lower treatment discomfort from air polishing with calcium phosphate powder was also reported by patients in the King's College study. On a 10-point visual analogue scale of overall experience from 1 = very poor to 10 = very good, the mean score for the calcium-phosphate group was 7.9±1.4, vs. 5.4±2.0 for sodium bicarbonate, a 46% increase in comfort.

The greater weight of the bio-active glass particles also means less mess in the clinic. "It is denser and heavier than sodium bicarbonate, so it is more difficult to aerosolize," says Thompson. "So you will get some dust around the patient's lips, on the chin and so on. But you won't get it travelling all across the operatory as you used to."

"Pretty much any situation where we would use sodium bicarbonate you can now use Sylc," says Thompson. "Sylc is able to produce a smoother surface than the sodium bicarbonate, and you should get a better surface finish. It should be shiny, it should be whiter, it should be cleaner and it should be stronger than with the sodium bicarbonate."

For all its benefits, air polishing is not always the best approach, Thompson says. "Patients with incredibly high sensitivity, or patients with chronic weakened enamel, and so on. You generally wouldn't use air polishing in that area, because the powder is driven by compressed air stream and you don't want to fire powders onto the surface of the tooth and then start damaging the tooth." In such cases he suggests that using the calcium phosphate powder with a rubber cup and rotary hand tool would still allow the patient to benefit from polishing and remineralization with less discomfort or risk of damage.

As part of the Sylc package, a hand-held air-polishing device called Prophy-Mate Neo from NSK is offered. The Neo is the only hand-held air polishing device strong enough to support Sylc.

Update on detection and management of caries

■ Ability to detect caries beneath sealants and around the margins of composite restorations among benefits of system reported during the annual scientific sessions of the International Association for Dental Research in Iguaçu Falls, Brazil

At the IADR (International Association for Dental Research) in June 2012, new research findings were presented on The Canary System's ability to detect caries beneath sealants and around the margins of composite restorations.

The sealant study involved examining 28 extracted human molars and premolars which contained 103 potential healthy and carious pits/fissures on their occlusal surfaces, as determined by ICDAS II (visual scoring criteria). After scanning marked pits/fissures with The Canary System and DIAGNODent, teeth were sealed with 3M™ ESPE™ Clinpro™ sealant. Following sealant placement, teeth were re-scanned at the same sites with The Canary System and DIAGNODent. Using polarized light microscopy (PLM), the sites were scored as 'carious' or 'non-carious'. With PLM as the gold standard, sensitivities/specificities before sealant placement were:

The Canary System (0.92/0.70);
DIAGNOdent (0.41/1.0); and
ICDAS II (0.77/0.90).

After sealant placement, the fissures were scanned and sensitivity/specificities were:

The Canary System (0.83/0.79); and
DIAGNODent (0.64/0.46).

The investigators concluded that The Canary System could "see through" sealants and detect caries at least 83% of the time, which was much better than visual examination or DIAGNODent. Canary readings greater than 20 indicated the presence of a carious lesion beneath the sealant.

The second study involved detecting caries around the margins of composite restorations. Five extracted molars with large carious lesions were selected. Caries was removed from the tooth leaving a small area of caries 1 mm below the surface of the tooth. A condensable composite restoration was bonded into place and 74 areas along margins of the five restored teeth were scanned. The Canary was able to detect the lesions in all of the areas scanned.

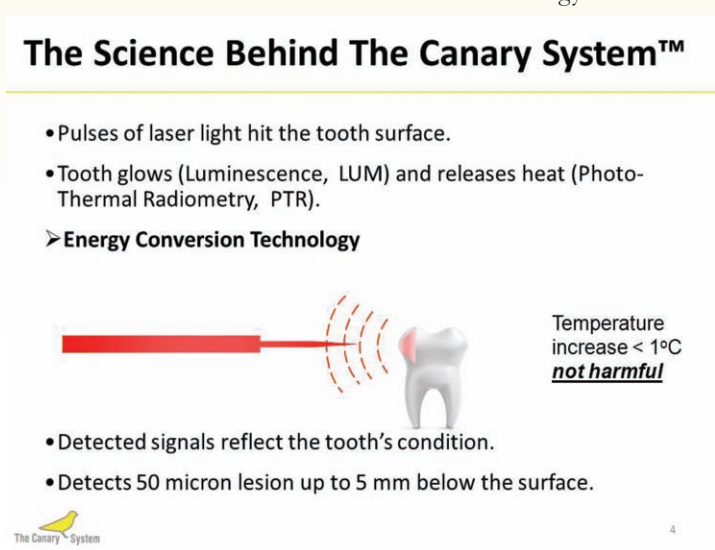
This study was able to validate the findings from our case studies that The Canary System was able to detect caries along the margins of composite and amalgam restorationsii. Restoring caries around restorations is one of the most common reasons for the replacement of fillings. Being able to find secondary caries early means one can repair rather than replace restorations. The Canary System is the only tool available now to dentists to detect caries around all visible margins of restorations.

The Canary System directly assesses the status of the tooth by using PTR-LUM technology. Pulses of laser light are shone on the tooth and the laser light is converted to heat (Photothermal Radiometry or PTR) and light (luminescence or LUM) which are emitted from the tooth surface when the laser is off.

The Canary System measures four signals:

1. The strength or amplitude of the converted heat or PTR signal;
2. The time delay or phase of the converted heat or PTR to reach the surface;
3. The strength or amplitude of the emitted luminescence (LUM); and
4. The time delay or phase of the emitted luminescence (LUM).

As a lesion grows, there is a corresponding change in the signal as the heat is confined to the region with crystalline disintegration (dental caries) and PTR increases and LUM decreases. As remineralization progresses and enamel prisms begin to reform their structure, the thermal and luminescence properties begin to revert back in the direction of healthy tooth structure. The system is so sensitive it detects very small changes in temperature (less than 1 to 2 degrees Celsius), much less than that generated by a conventional dental curing light and imperceptible to the patient.



REPEATABLE MEASUREMENT

The Canary Number is created from an algorithm combining these four signals and is directly linked to the status of the enamel or root surface crystal structure, not from measuring the level of fluorescence from bacteria or bacterial by-products.

The Canary Number ranges from 1 to 100 with lower numbers (under 20) indicating healthy tooth surface. Shifts in The Canary Number indicate changes within the crystal structure of the tooth. Using this simple numbering system allows the clinician to communicate with their patients and easily explain the evolution or changes in caries lesions (Fig. 4). It also allows patients and clinicians to track progress of remineralization of early lesions and the outcomes of various preventive measures.

Research has demonstrated that PTR-LUM technology used in The Canary System can detect:

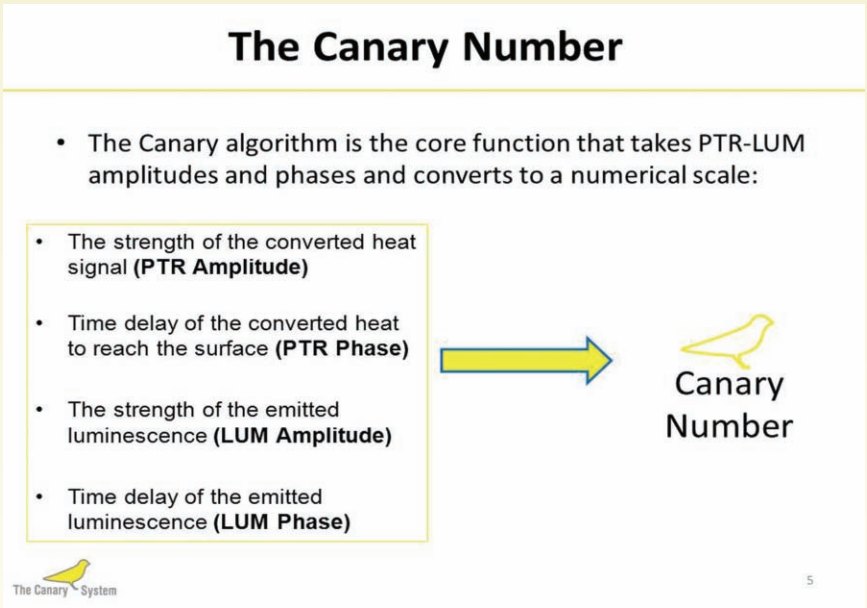
- Occlusal pit and fissure caries[iii,iv,v]
- Smooth surface caries[vi,vii]
- Acid erosion lesions[viii ix]
- Root caries[x, xi]
- Interproximal carious lesions[xii,xiii]
- Demineralization and remineralization of early carious lesions[xiv,xv,xvi xvii]

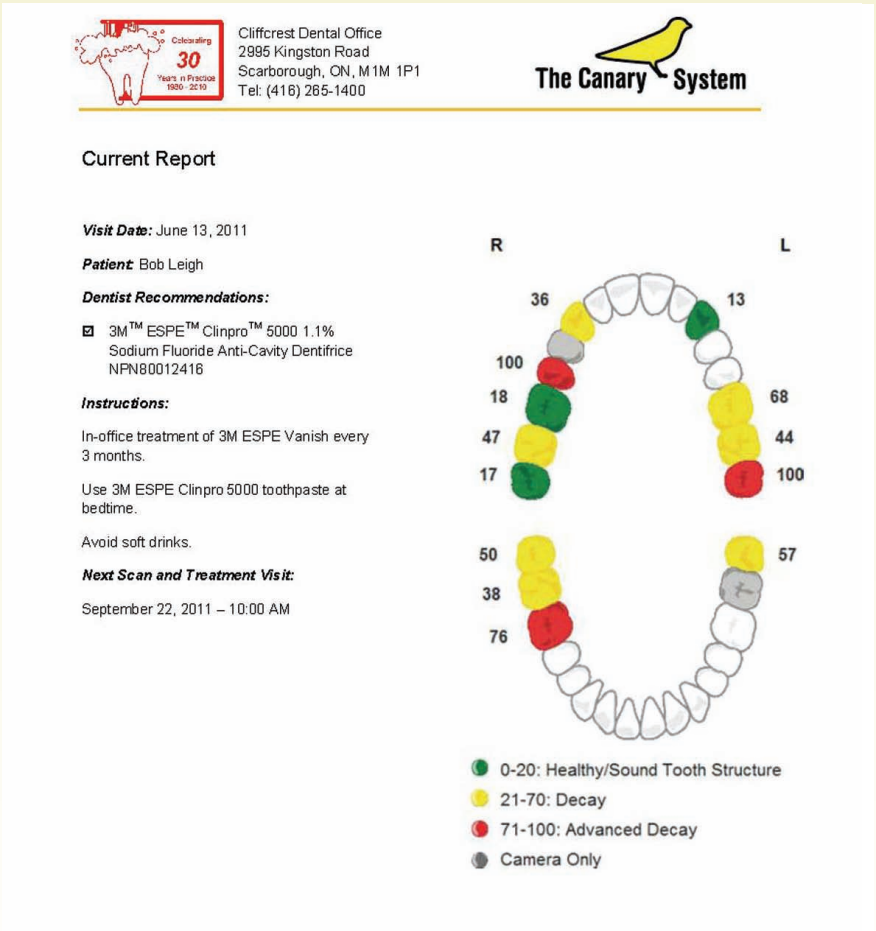
PTR-LUM technology enables clinicians to detect small early lesions in the order of 50 microns and in depth up to 5 mm below the tooth surface, even in the interproximal regions of teethxviii. It provides a repeatable measurement that is linked to the status of the enamel or root surface under examination.

The Canary System has been studied in two Health Canada approved investigational trials. The first trial[xix,xx] involved 50 patients and confirmed the safety of the system along with the ability to detect carious lesions and white or brown spots on both wet or dry tooth surfaces and the ability to detect lesions on tooth surfaces with moderate stain. Patients in this first clinical trial, which was completed in early 2010, have continued to be seen in clinical practice with no adverse events associated with this trial or the use of The Canary System.

The second clinical trial finished enrolment in May 2011. The trial involved 98 patients seen at four trial sites over a nine-month period. This trial again confirmed the safety of The

Dr. Stephen Abrams is a general dental practitioner with over 30 years of clinical experience. He is the founder of Four Cell Consulting, Toronto, which provides consulting services to dental companies in the area of new product development and promotions. He is one of the founding board members of ACCERTA Claim Corporations, a dental and pharmacy claims management company. He is the CEO and Co-Founder of Quantum Dental Technologies which has developed The Canary System mentioned in this article. He can be contacted at (416) 265-1400 or by e mail at: dr.abrams4cell@sympatico.ca





Canary System. Preliminary analysis showed excellent correlation with ICDAS (a visual ranking system). Efficacy in the context of this trial is considered the ability of the investigational device to detect dental caries. The secondary objectives of this study were to develop a treatment scale that correlates to lesion size, explore the ability of the investigational device to detect caries and erosion lesions, and monitor changes in lesion size in response to various therapies.[xxi xxii]

CARIES DETECTION IN CLINICAL PRACTICE

Dental caries is a disease that involves the breakdown of tooth structure by exposure to acids produced by bacteria. Caries detection and monitoring involves looking for changes in structure of the tooth surface—changes in the crystal structure of the enamel and root surface, which would indicate disease progression. The Canary System is linked to changes in crystal structure and can be used to assist in the diagnosis of caries in clinical practice. As with all detection systems, the final step in the process is how we, as trained professionals, interpret the results. Diagnosis of caries involves using the results obtained from these systems and integrating this with our knowledge of the dental history of our patients.

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Dental Association Monitor

A roundup of association activities for June 2012

Vancouver and District Dental Society	The VDDS annual Golf Tournament will be held in September this year. Date and other information has not yet been finalized—please check back to the VDDS web site for updates.	www.vdds.com
Victoria and District Dental Society	Continuing Education on Friday, Oct. 12, 2012: Designing and Creating Exquisite Esthetics; and Determining Causes of Esthetic Failures, presented by Dr. Lee Ann Brady, private pratitioner and author, leeannbrady.com	www.vicdds.ca
International College of Dentists—Canada Section	The 2012 Annual Council Meeting will be held on Sept. 13-14, 2012 in Saskatoon.	www.icd-canada.com
National Dental Examining Board of Canada	The next written examination and objective structured clinical examinations will be held on Nov. 17 and 18, 2012. Registration deadline is Oct. 1, 2012.	www.ndeb.ca
Manitoba Dental Assistants Association	Open Wide 2012, an annual event providing a day of free dental care to Manitoba's immigrant community, will be held on Saturday, Oct. 20 at the University of Manitoba Faculty of Dentistry. The Association invites dentists, dental hyienists and dental assistants to participate.	www.mdaa.ca
Canadian Dental Hygienists	Webinar: Interdental devices: a systematic review. Presented by Pauline Imai. Live presentation on Aug. 2, 2012, with an on-demand version available online through the CDHA website for three months following. Register online to participate in the live session. ■ The 2012 CDHA annual general meeting will be held on Saturday, Sept. 15, 2012 at TCU Place in Saskatoon.	www.cdha.ca
College of Dental Hygienists of British Columbia	The registration committee will be meeting on Friday, Sept. 21, 2012, and the quality assurance committee on Oct. 15. The Inquiry committee meets by teleconference on the first Monday of every month.	www.cdhbc.com
Calgary and District Dental Society	The CDDS Lecture Series begins on Sept. 14, 2012 with "Bread and Butter: Adhesive and Esthetic Dentistry" presented by Dr. Harald Heymann.	www.cdds.ca
Great Lakes Association of Orthodontists	The 2012 GLAO Annual Session will be held from Oct. 11 to14 at the Hyatt Indianapolis, Indianapolis, Ind. You can register and book your hotel room online through the GLAO website.	www.glao.org
Socié té Dentaire de Montré al	There will be an SDM evening conference in collaboration with BISCO Sept. 11, 2012 at Le Nouvel Hô tel in downtown Monté al, Que. Dr. Pierre Boudrias will be presenting an update on the restoration of pulpless teeth. On Sept. 25, Dr. Sylvain Gagnon will be speaking at the same hotel on using 3D modelling to optimize the outcome of orthodontic treatment.	www.sdmtl.ca
Canadian Association of Public Health Dentistry	The CAPHD 2012 Scientific Conference and Annual General Meeting will be held at the Delta Prince Edward Hotel in Charlottetown, P.E.I. Sept. 21 to 23, 2012. Hotel and travel information is available on the website.	www.caphd,ca
Canadian Academy of Pediatric Dentistry	The CAPD/ACDP 2012 Annual General Meeting will be held Sept. 7-9, 2012 in Niagara-on-the-Lake, Ont. Program information, registration and hotel booking available online at www.kidsdentist.ca/capd2012	www.capd-acdp.org
Ontario Dental Association	The ODA has installed Dr. Arthur T. Worth as its new president. Dr. Worth has worked to keep legislators abreast of oral health care issues. He has held several positions on the ODA's Board of Directors and in many committees. Dr. Worth says he hopes to engage other health care providers in knowledge sharing and co-operation with dentists.	www.oda.on.ca
Canadian Association of Orthodontists	The 64th Annual Scientific Session will be held Sept. 6 to 8, 2012 at the Fairmont Chateau Laurier Hotel in Ottawa. Registration, hotel information and a preliminary program are available on the website.	www.cao-aco.org
Northern Indian Medical and Dental Association of Canada	NIMDAC Golf Tournament & Dinner 2012: On Aug. 25, come enjoy the greens of Glen Abbey Golf Course, home of the RCGA and the Canadian Golf Hall of Fame.	www.nimdac.com
The Royal College of Dentists of Canada	Candidate registration for the 2012 National Dental Specialty Examination begins June 1, 2012. Applications close Oct. 1, 2012.	www.rcdc.ca
Canadian Academy of Endodontics	The CAE's 48th annual general meeting will be held at the Fairmont Hotel Macdonald in Edmonton from Oct. 17 to 20. Program details, hotel booking and registration are available online.	www.caendo.ca
Denturist Association of Ontario	The 2012 Perfecting Your Practice conference will be held from Sept. 20 to 23 at the Deerhurst Resort in Huntsville, Ont. Come a day early to golf at the Deerhurst PGA course.	www.dao.on.ca
Ontario Academy of General Dentistry	A three-day update in pediatric and special care dentistry hands on course will be presented by Dr. Fred Margolis Sept. 21 to 23 in Ottawa.	www.ontarioagd.org
Canadian Dental Association	The CDA's 2012 Annual Conference will be held from Sept.13-15, 2012 in Saskatoon, and the theme is Diversity in Dentistry. Program and hotel information, as well as registration, are available online. There will also be children's activities at the adjacent YMCA for attendees who would like to bring their families.	www.cdasask2012.com
Canadian Dental Assistants Association	The National Dental Assisting Conference 2012 will be hosted by the Manitoba Dental Assistants Association Oct. 25 to 27 at the Inn at the Forks in Winnipeg. Register through the CDAA website.	www.cdaa.ca
College of Alberta Dental Assistants	The CADA's annual general meeting and awards will be held at the Chateau Louis Hotel and Conference Centre in Edmonton, Alb., on Sept. 15. Check the CADA website for more details coming soon.	www.abrda.ca
International Association for Dental Research	The 2012 IADR Congress will be held Sept. 12 to 15 in Helsinki, Finland. Registration is now available online, as is program and accommodation information. Also available is information on post-Congress tours of the city and attractions.	www.iadr.com

World Dental Report

From the International News Resources of Dental Chronicle

UK

Dentists should anticipate equivalent success and survival rates, and similar radiographic changes, from dental implants installed in alveolar ridges that had previously been preserved with either Straumann Bone Ceramic (SBC) or deproteinized bovine bone mineral (DBBM), according to research published online in *Clinical Oral Implants Research* (June 3, 2012). Researchers randomly divided 27 alveolar ridge preservation patients into two groups. In the 14 members of the test group, the extraction socket was treated with SBM—a synthetic bone graft—and a collagen barrier. The 13 members of the control group received the DBBM and the same collagen barrier. Patients were allowed to heal for eight months, and then hydrophylic-surfaced titanium dental implants were installed in the preserved ridges. Dehiscence or fenestration defects were found during implant surgery in nine of the SBC group implants and eight in the DBBM group, necessitating extra bone augmentation. Loading of the implants was done after four months, and they were followed up one year after loading. At one year after loading, implant survival rate in both groups was 100%, and the success rate was 84.6% (11 of 13) in the SBC group and 83.3% (10 of 12) in the DBBM group. .....**http://ow.ly/bBrVN**

Italy

Titanium implants with oxidized, microtextured surfaces employed for the rehabilitation of partial edentulism can achieve excellent long-term clinical outcomes, researchers report in a study published online in *Clinical Implant Dentistry and Related Research* (June 1, 2012).

A total of 22 partially edentulous patients were included in the study, among which 54 implants were installed supporting 33 fixed rehabilitations. Prostheses were delivered three months after implant placement in the mandible, and six months after placement in the maxilla. Follow up visits were scheduled for six and 12 months, and then yearly after that. At each follow up, periapical radiographs were taken and assessments were done of plaque level and bleeding sores. The main outcomes measured were implant survival, prosthesis and implant success, and change in marginal bone level. Three patients did not attend the one-year follow up, so were excluded from the study. Nineteen of the subjects—accounting for 49 implants—were followed after prosthesis delivery for at least six years. Follow-up duration ranged from 75 to 96 months, with a mean of 81.8 months. One woman, a smoker, had a single-tooth mandibular implant fail after one year. At six years, cumulative implant survival was 98.0%, and success was 95.9%, while prosthesis success was 96.7%. Mean peri-implant bone loss was 0.76±0.47 mm at six years, and while more bone loss was seen in the maxilla than the mandible, the difference was not significant (0.78±0.14 mm, n=19 vs. 0.74±0.59 mm, n=30, p=0.75). In the maxilla, implants supporting partial prostheses saw significantly more bone loss than those single-tooth implants (p=0.03). Patients reported full satisfaction. **http://ow.ly/bAtfy**

Saudi Arabia

Chlorhexidine (CHX) was the most effective of three tested mouth rinses at controlling plaque, but resulted in the largest deposition of extrinsic stains and supragingival calculus, according to a study published online in the *International Journal of Dental Hygiene* (June 4, 2012). Researchers compared the effectiveness on plaque, calculus, gingivitis and stains of a CHX mouthrinse (0.2% CHX gluconate) to one containing triclosan (0.03%), sodium fluoride (NaF 0.025%) and ethyl alcohol (12%), and one combining CHX (0.2%), triclosan (0.3%), NaF (0.3%) and zinc chloride (ZnCl 0.09%). They also evaluated occurrence of adverse effects between the three rinses (group A, B, and C, respectively). In the double-blind, parallel trial, 48 healthy subjects were randomly assigned to use one of the three rinses, and assesseed for gingivitis, plaque, supragingival calculus and extrinsic stains at baseline and at the end of the 21-day experiment period. Group A had the best scores for gingivitis and plaque prevention, and group C the worst, with the differences between all three groups being significant (p=0.046). Supergingival calculus accumulation was also significantly different (p=0.03) between the groups, with group A's score nearly twice that of the most effective prevention, which was in group B. Group A and B had the highest and lowest rate of extrinsic stains, respectively. There was no significant difference in the occurrence of adverse events between the three groups.....**http://ow.ly/bBvL7**

Smartphone handy? Scan these codes for more information on these studies, or copy the links into your browser.

Germany

A novel sorption material with low surface tension γ(L) active agents or a low γ(L) polymerizable silicone polyether acrylate, used to modify the chemistry of commonly formulated experimental dental resin composites, reduced bacterial cell viability and adhesion, according to data from a study published online in *Archives of Oral Biology* (June 4, 2012). Researchers loaded the novel material with either hydroxyfunctional polydimethylsiloxane and polydimethylsiloxane or a polymerizable active agent—silicone polyether acrylate. The unmodified resin was used as a standard (ST). Viability of Actinomyces neslundii, Actinomyces viscosus, Streptococcus mitis, Streptococcus oralis, and Streptococcus sanguinis was measured on specimens that were water-stored, polished and pellicle-coated with human saliva using a fluorescence microscope after eight and 24 hours. Counts of total bacterial cell numbers, vital and non-vital cells were calculated by counting pixels of each colour in the images. Test materials modified with the silicone polyether acrylate had lower total bacterial counts, and all test materials had lower vital cell counts after after both eight and 24 hours, than ST. Bacterial adhesion was not influenced by contact angle, but a low total surface-free energy (SFE) and low polar term of SFE resulted in fewer bacteria. Total and vital cell counts were also affected by the material's chemistrypoints. .....**http:http://ow.ly/bBnzR**

India

The compressive strength of polymethylmethacrylate (PMMA) increases progressively as concentrations of silane-treated filler microparticles of either silver or aluminum increases, though tensile and flexural strength was reduced at 30% concentration, and metalizing dentures led to an appreciable increase in thermal perception reported by participants, according to the results published in the *Journal of Prosthodontics* (June 5, 2012). The first part of the two part study was conducted in vitro, investigating the effect of adding different concentrations of the filler particles (10, 20, and 30% by volume) on the tensile, compressive, and flexural strength of PMMA. Then in the second part, researchers investigated the thermal perception of 10 edentulous patients who were given two different sets of complete dentures—one made with PMMA containing 20% aluminum particles in the maxillary denture's palatal section, and one control set made with unmodified PMMA. Between all the samples in part one of the study, other than the first and second aluminum groups, mean tensile and flexural strength values varied significantly ($p<0.05$), and the differences in mean compressive strength between the control and test groups was also significant ($p<0.05$). All the subjects in the clinical part of the study reported greater perception of hot and cold when using the dentures with the metalized palatal region. .....**http://ow.ly/aRiau**

Norway

Pocket debridement with an erbium-doped (Er) YAG laser does not appear to provide better results than conventional mechanical debridement for treating smokers with recurring chronic inflammation, researchers report in a study published in the *Journal of Clinical Periodontology* (May 18, 2012). Investigators recruited 15 patients who were smokers, each with at least four teeth with a residual probing depth (PD) >/=5mm. Then in each patient, two pockets in two jaw quadrants were randomly selected to receive subgingival debridement with either the Er:YAG laser or the ultrasonic scaler/curette control at three-month intervals. At baseline, six and 12 months relative attachment level (RAL), PD, bleeding on probing and dental plaque were recorded. Both treatments showed a significant ($p<0.01$) decrease in PD from baseline to 12 months. The control group saw a decrease in mean PD to 4.0 mm from 5.4, and the test group saw a similar decrease. At no time point were any significant between-treatment differences seen. .....**http://ow.ly/bBBUp**

Dental Industry Chronicle

Developments from manufacturers, suppliers and providers

Susanne Currie is the new President of the board of directors at the Dental Industry Association of Canada (DIAC). She succeeded Jamie Matera during DIAC's annual meeting on May 10, 2012. Currie, Country Manager, Oral Health at Procter & Gamble, took a few minutes to share her thoughts on DIAC and the dental industry with Dental Chronicle assistant editor John Evans.

Susanne Currie, *new President of the Dental Industry Association of Canada (DIAC):*

"We need to continue education efforts, working with the CDA to make sure dentists have what they need"

Why did you seek out a leadership position in DIAC?

I've worked for P&G for about 15 years, and I have never had the opportunity to be involved in an industry outside of the building. At P&G you often end up in a role where you are very focussed internally. This is the first role I've had where I have been able to be very focussed externally. I've just never seen such a dynamic industry with relationships that are so strong, so fun, and I have a deep passion and a commitment to staying in the industry and making it better. I guess because I have the type of personality that gets caught up in that, I really appreciate it. It makes the job so much more interesting. So the more that I can help fuel that, the more that I can see it grow and continue—even in tougher economic times—the better, because I think it is important to everyone who works in this field.

What kind of challenges are facing the dental industry right now?

I think the biggest one is that when the economy starts to tighten up a little bit, people have a tendency to want to use price as a way to win. That's detrimental, as you have seen in other industries. It can put you in a race to zero, which is not what we want to do. I think that dentistry is shifting toward trust and value in terms of working with the patient base, and I think that we as the industry support that, we need to continue to promote trust and value within the dental profession, within our own relationships, and also in the way that we work with our offices and within our associations. When you move into tougher economic times, people have a tendency to do knee-jerk reactions, as opposed to really think through strategically—how do we raise the bar?

And the grey market?

The grey market absolutely becomes more prevalent in tougher economic times. Because everybody is trying to get that price advantage, it is easier to turn a blind eye or not make yourself as aware as you should. I think that we do need to continue to help people to understand that it is never in the best interests of an economy to have supply chain breaks. Because it is not always sustainable, it is not in the best interests of the consumer, and it doesn't provide reality in terms of a competitive place to do business. So I do think that non-compliant product is a big problem and one that everyone should take quite seriously.

Where do you see taking DIAC during your term as president?

There are five key areas where we can provide member value. I don't have any intention to change our strategies, I just have every intention of improving the execution on the deliverables we have for our members progress against non-compliant product.

We'll continue to share among the member companies best practices on how we can control our supply chains and do our best to eliminate the [grey market] issue. We also need to continue education efforts, working with the Canadian Dental Association to make sure dentists have what they need to control the situation. And we need to continue to work on our position with Health Canada, in terms of meeting with them and ensuring there are the right enforcements in place for people who are not compliant. So that's the first big area for our membership.

Conventions are something that we are all very focussed on, too. And I think that what is great is that we are seeing it is opening up in terms of all the right stakeholders at the table. That means the dentists, the hygienists, all the dental professionals, the associations that are running the conventions, and the industry, coming together to ensure that the conventions are as productive for everyone as they can be, going forward. I believe very strongly in us having full awareness and input into regulatory changes. So our regulatory subject matter committee—we have 10 companies that have given regulatory resourcing so that they can share and talk—not about our company positions, but about things that are happening that are relevant to the dental industry and making sure all member companies have awareness to that and know what our position as an industry association is.

I am also very encouraged by Technorama. That is another big effort for us. It is growing and very prosperous trade show. So we need to find more ways for that to be a beneficial trade show for more of our member companies.

And finally, it is the data. We need to find ways to increase the amount of data that is available to the member companies so that they can improve their business planning.

Will your experience at P&G help you as president?

I think so. I think it has already benefited my role with the regulatory DIAC director position that I held. I was not prepared to just go and talk to Health Canada. I took the sort of P&G approach which is to step back, assess the landscape, do an environmental scan, figure out who do we need to work with, who do we need to align ourselves with, and what is the advocacy plan that we would put into place that we could truly make progress against. Strategic planning is one of the things that P&G really focuses on. So that's something I think I've been able to help with the DIAC strategic plan, and really hone in on the work buckets we will put our resources in so that we can make real progress for the members. I think that is a skill set that I and a lot of the directors bring to the table.

What do you find encouraging about the industry?

I think the biggest thing that I am so encouraged by is that this is just a wonderful industry. People are passionate, they care, they have great relationships. And I'm really excited by the co-opetition words I've heard over the last couple of years. What is really nice is to see us all coming together so everything is a win-win for the dental professional, for the associations, for the educational institutions, for the industry itself so that we are all promoting that trust and that value, so the industry continues to grow and benefits Canadians.

3M ESPE has been named the dental industry's most innovative company by The Anaheim Group's Dental Industry Review for the 7th year in a row. The three criteria for innovation used are: new product clearances for market, dental industry patents registered with the U.S. Patent office, and dental patents from the European Patent Office and the World International Patent office.
http://ow.ly/bC12M

Henry Schein will now be distributing the full line of **Planmeca's** dental products in the U.S., including its full line of dental equipment, software, dental imaging and other products. This expands on an existing relationship between the two companies, as Henry Schein has been the exclusive distributor of Planmeca's products in Australia and New Zealand for nearly 20 years. http://ow.ly/bC1IL

LED Medical Diagnostics Inc. has signed an agreement with B.C.'s **Pacific Dental Services, Inc.** to purchase 400 of LED's VELscope Vx systems over the next three years.
http://ow.ly/bC2Vv

Align Technology, makers of Invisalign braces, has appointed **Tim Mack** as Senior Vice President, Marketing and Business Development. Mack has held the position of senior vice president, business development since Apr. 2011, with interim responsibility for professional marketing and new product development since Dec. 2011.
http://ow.ly/bC3rn

OraPharma, makers of **Arestin**, was acquired from the private equity firm Water Street Heathcare Partners by Canadian drug maker **Valeant Pharmaceuticals International**, with the deal expected to finalize by the end of June. Water Street OraPharma from Johnson & Johnson in Jan. 2011.
http://ow.ly/bEAK3

Profile

Lifelong learning

Leads to ADEA fellowship award

■ Dr. Harinder Sandhu's commitment to teaching brings opportunity to learn how to shape public health policy

A CAREER BORN FROM THE IDEA THAT the ideal dentist is both healer and teacher led Dr. Harinder Sandhu to the position of Director of the Schulich School of Dentistry at Western University in London, Ont., and has now made him the first Canadian awarded a Fellowship from the American Dental Education Association.

The ADEA/Sunstar Americas, Inc./Harry W. Bruce, Jr. Legislative Fellowship will take Dr. Sandhu to the U.S. capital in Washington, D.C. for three months, where he will work with and learn from those who collaborate with the government to develop policies and legislation.

The road to this fellowship started in India, Dr. Sandhu says, where as a child he had always had an interest in a career in health—dentistry or medicine or pharmacy. He was successful at becoming a dentist, but even then his ambitions were greater. "In India and many of the other countries, other than North America, clinicians who are also academicians have a very high profile," he says. "They are also considered the best clinicians and they contribute to society. So one of my aims from the very beginning was I wanted to do specialty training and I wanted to be an educator."


Dr. Sandhu

Seeking opportunities to expand his training abroad, Dr. Sandhu came to Canada and, after what he describes as a few years of troubling times, was admitted to a PhD program at the University of Ottawa.

COMING BACK TO CANADA

"From there on it has all been absolutely wonderful, a magic ride almost," says Dr. Sandhu. "I tremendously enjoyed my year doing my PhD, and then a post-doctoral fellowship at New York University, and then went on to do my specialty at Loma Linda University. That was the educational training. So when I finished that, because I had been on a prestigious Medical Research Council of Canada fellowship, I was offered a job at Loma Linda, and at the same time at the University of Western Ontario."

Citing loyalty to the Medical Research Council that had supported him, Dr. Sandhu travelled to Ontario to begin his career as an educator. Starting at Western in 1985 on a career scientist award, he was taken on as an assistant professor in 1987.

"The next step comes when I came to Western," says Dr. Sandhu. "The then Dean Dr. Ross Brook—who is a very visionary man and has been my mentor—said 'Yes, you have all the credentials and you are a good specialist and what not, but we want to make sure you are a great teacher as well.' So he asked me to go to a teaching institute at UBC, and then two years later to a leadership institute or management institute. And then through the ranks I progressed to associate professor with tenure and then full professor in 1998."

In 2004, he was presented with the opportunity to take on a leadership role within the university, and he says he "felt the calling" and accepted, leading to his current position as vice-dean and program director at the Schulich school.

"I have always felt that the leadership goal is about being the servant to be the leader," Dr. Sandhu says. "I consider myself a servant leader. I serve the people I work with, and take responsibility not only for my actions but their actions as wel, and where I can I support them and help them develop these skills."

To be a better servant, he needed to learn to be a better leader. "I always took opportunities to learn from people who were accomplished leaders."


Lincoln Memorial, Washington, D.C.

His personal investment in the dental community grew, as he became chair of the Dental Dean's Committee of Canada and then president of the Association of Canadian Faculty of Dentistry. Dr. Sandhu also became involved with the American Dental Educational Association in this period, and, in 2008, he became the first Canadian selected to attend a year-long leadership institute organized by the ADEA. Making contacts within ADEA, including executive director Dr. Richard Valachovic, encouraged Dr. Sandhu to reach out to the organization further, Dr. Sandhu says.

NEW PROJECTS BEING DEVELOPED

"Very recently I applied for a fellowship of the American Dental Education Association which is associated with their centre for public policy," Dr. Sandhu says. "I was not sure they would actually give this fellowship to a non-U.S. citizen, non-U.S. dental educated, as they had not done it before. But I did apply and they interviewed me, and to my great surprise I was informed that I am a recipient of this fellowship this year, and I am going to spend three months in Washington, D.C."

In Washington, Dr. Sandhu says, he will be working alongside advocates and lobbyists, learning to support dentistry in the political arena. "My aim is to bring about policies where we can help the needy and underserviced in professional dentistry. We still have half a million people in Ontario itself who have no availability of dental care. So my aim is to learn more and to be able to influence this policy within the profession and government of Ontario, and within Canada. So it is a learning process for me, and I'm hoping I will have more tools once I am done with the fellowship. And hopefully, will benefit the profession and people.

MEETING WASHINGTON DECISION-MAKERS

"I will of course be learning, I would say in a joking manner, tricks of the trade from experts," says Dr. Sandhu. "I'll be meeting senators who are committee chairs and congresspeople who are making these decisions on providing funding for oral health care programs and oral health research. I will also be looking at some of the data which ADEA collects from Canadian dental schools, so that we can tease it out of the whole. Their data is from all North American dental schools. We can see how our dental schools stand in relation to our education, our social responsibilities, and interprofessional education."

Paying forward to honour all the mentors and colleagues whose brains he picked for leadership tips is also on Dr. Sandhu's agenda, he says. "That is my major effort now, that what I have learned I must pass on the same way to the new generation. That is why I have started a leadership program for our first year students at Western University Schulich Dentistry. It was very well received by the students, and they are happy.

"I am also working now with the Ontario Dental Association to bring a management and leadership program forward in collaboration with Ivy Business school for the members of the Ontario Dental Association."

Do you know someone you would like to see profiled in this section? In each issue, DENTAL CHRONICLE highlights a Canadian dental practitioner with an intriguing interest or pastime. The editors invite your suggestions for future subjects of this feature. Please e-mail your suggestions to: dental@chronicle.ws

New Products

A selection of the month's most innovative new products

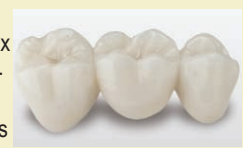
The **Toothbrush Shield**, designed to replace plastic snap-on caps, is a disposable, breathable and fast drying shield that acts like a surgical mask for toothbrushes. The shield is made of an antimicrobial non-woven material that wicks away moisture from toothbrushes, creating a cleaner, healthier environment. From IntelliDent, a division of E4 Technologies, Inc.

Circle #408 on feedback form

Vortex Blue Rotary Files utilize a new, proprietary method of processing NiTiwire that results in a Blue titanium oxide layer. Featuring a variable helical angle design, Vortex Blue offers a leap forward in resistance to cyclic fatigue, with a minimum of a 65% improvement over M-WireNiTi and a minimum of 99% improvement over standard NiTi. From DENTSPLY Tulsa Dental Specialties

Circle #409 on feedback form

The **IPS e.max CAD**-on technique fuses the strength (over 900 MPa) of an underlying IPS e.max ZirCAD framework with the esthetics of a matching IPS e.max CAD lithium disilicate glass ceramic overstructure. Restorations can be placed using conventional cementation techniques. From Aurum Ceramic/Classic Dental.



Circle #410 on feedback form

Bio-Pure Evacuation System Cleaner restores and maintains evacuation system flow and function by actively breaking down vacuum line build-up (enzyme activity) and digesting remaining organic waste. Simple to use, cleans between uses, non-foaming, non-corrosive neutral pH, removes odor and sludge, eliminates trap cleaning. From Sable Industries.

Circle #411 on feedback form

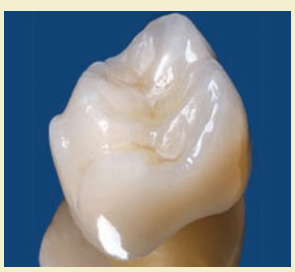
The new **DentalEZ's Product Catalog and Price List** displays the latest product offerings from all DentalEZ brands, including StarDental, Concentrix handpieces, ErgoSur stools, as well as industry classics. DentalEZ has created a convenient new product equipment tool that provides easy ordering and product selection. From DentalEZ Group

Circle #412 on feedback form

Therapeutic Spotlight

High flexural strength

Lava Ulitmate CAD/CAM Restoratives unique material properties provides high flexural strength and fracture toughness, resulting in long-term durabilty Nanotechology on the inside means a beautiful, long-lasting polish on the outside. Easy to mill. From 3M ESPE.



Circle #413 on feedback form

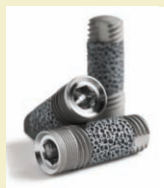
The **Double-Wedge**, the first 'pull' wedge is an essential part of the Triodent Tri-Clip. On its own, it can be used with most matrix band systems. Remarkably versatile, the wedge is stretched then 'flossed' into the embrasure before cavity preparation and matrix palcement. From Clnical Research Dental.

Circle #414 on feedback form

With **HELIODENT^{PLUS} X-ray Images** clinicians can distinguish details with high contrast, enabling diagnosis with a wide variety of indications. The support arm is available in three different lengths, as well as numerous mounting options and the possibility of fast and easy changeover from film to digital radiography. From Sirona.

Circle #415 on feedback form

The **Trabecular Metal Dental Implant** features an osteoconductive mid-section that is structurally similar to cancellous bone. Portions of the implant also utilize MTX microtextured surface, which has been documented to achieve high levels of bone-to-implant contact. From Zimmer Dental.



Circle #416 on feedback form

Therapeutic Spotlight

Saves time

Placing a composite on top of **Biodentine** in the same visit is a proven, safe and effective procedure. A case study showing a one-year clinical follow-up demonstrates that the functional integrity of the full restoration is maintained when the composite is bonded onto Biodentine 10 to 12 minutes after the start of mix. After one year, the restoration showed zero defects and the radiograph showed no secondary decay. Studies available from Septodont.

Circle #417 on feedback form

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Oral Science	Sylc Prophy Therapy	**406**
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Ten minutes with... Dr. Tina Meisami

Oral reconstructive surgery is often needed by the victims of physically abusive relationships, but due to their circumstances it is sometimes difficult for them to afford the care they need. In Toronto, the Dr. Borna Meisami Commemorative Foundation was created by local dentist Dr. Tina Meisami and four female colleagues to provide free dental and orthodontic treatment to abused women.

Why did you create this foundation?

This foundation came from a very painful place. I decided to set up a foundation to honour my brother who unfortunately passed away tragically in 2007 at age 40. We were very close. He was an orthopedic surgeon. I wanted to do something to honour his life and what he stood for. He was a very compassionate and humane doctor. Even at age 40, he had been practicing for about 15 years and he had always had deep concerns about women's social issues, in particular, violence against women. I wanted to do something within my capability, within my professional knowledge and within my own skills to help other women get out of the vicious cycle of abuse, neglect, poverty and their ramifications such as poor oral and overall health.

Was getting the foundation started difficult?

Getting the team together was really easy. We started with the five of us. The next step was to set up as a non-profit organization, and then the real challenge was to establish a reputation, to develop relationships with women's shelters and various women's community services to have access to potential patients and to women in need. I don't know if you've ever tried to look up a women's shelter or try to contact them. They're very protected and it's because of the safety that these women require from abusive partners. So if you're an unknown entity it takes a while to establish the proper relationships.

Other than the difficulty of forming relationships with the women's organizations, have you had any specific setbacks?

The only difficulty that actually persists is the women that we treat usually have—by the virtue of their social circumstances—very transient living status. They live in women's shelters but they're usually not there for very long. It's often difficult for us to complete their comprehensive dental treatment while they're still in the shelters. Some of them need several months of treatments. In at least 50 per cent of the cases, we lose the patients to follow-up because once they leave the shelter we can't reach them. The social workers can no longer reach them and often they have unlisted numbers and addresses in order to be safe from their predators. Getting the women to our various clinics—we treat them in our personal clinics—is often difficult. Fortunately we're all located on subway lines, but for these women sometimes to be able to afford a subway token is an issue. Sometimes we pay for taxi rides if we know it's an issue.

You mentioned that you're getting a lot of support from many different groups. What form is that support taking?

Well, the dental professionals, the physicians, the dentists, dental hygienists, the nurses, all give their professional expertise. But we also have various dental supply companies, or dental laboratories that give in kind donations. For example, we work very closely with Native Hunter who is a regional manager for the Nobel Biocare implant company. She gets us free implants, as many as we need in a year, to provide patients with implant rehabilitation. We work very closely with Gordana Dental Art Studio, who does all of our crown and bridge and prosthetic work, dentures, and all her staff volunteer their time. Many of the larger dental supply companies like Henry Schein, Hu-Friedy, Oral B, Sinclair, 3M, donate materials. Whatever they can give us, we take.

What are your plans for the future of the foundation?

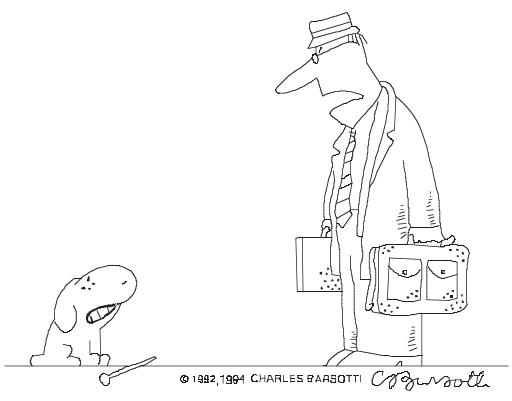
We want to promote our cause and we want to reach out to more women in Ontario and Canada. I think our dream is to become national and even go to the U.S. I think really our plan is to have a central dental clinic we can call our home in order to make things easier, to provide a multidisciplinary approach to dental treatment.

In this instalment of Dental Chronicle's ongoing series of interviews with notable clinicians and researchers, Dr. Meisami spoke with assistant editor John Evans. The editors invite your suggestions for future subjects of this feature. Please e-mail your suggestions to: dental@chronicle.ws

What the lay press is saying

CBC News New Brunswick's government has announced a dental and eye-care program for children of low-income families (June 12, 2012). Social Development Minister Sue Stultz said about 22,000 children qualify for the program, which was a promise from the government's poverty reduction strategy that was supposed to be in effect in Apr. 2011. The program will cover basic care including regular exams, X-rays and extractions, and some preventive treatments, up to $1,000 per year. The vision program will cover similar basic needs—yearly exams, lenses and frames up to $220 every two years. Stultz said that children 18 and younger from low-income families will qualify for the program, which takes effect Sept. 1, 2012. Overall the program is expected to cost $4.3 million per year.

BBC News Research from King's College London Dental Institute, published in the *British Dental Journal,* says dentists are not being vigilant when performing dental surgery and warning patients about the risks of nerve damage (June 8, 2012). Researchers looked at 30 patients with nerve injuries, finding problems with pain, speech, eating and kissing. (Each year, 1% of dental implants result in nerve injuries, the news outlet reported.) The King's College team found more than half the patients examined had constant pain or discomfort after surgery, and 40% complained of numbness. Psychological problems were mentioned by 30% of participants, which included four diagnosed with depression. Lead author of the study Professor Tara Renton told the news outlet that pre-operative consent and planning, and post-operative follow up were inadequate, with only 11 patients aware they had signed consent forms, and eight reporting they felt they had not been warned about the potential for nerve injury.



"Hey, it was a lousy, rushed, two-day business trip. You're lucky I remembered to bring you a swizzle stick."

Fox News A study published online in the *BMJ* Open online journal shows that high levels of dental plaque are associated with increased risk of death from cancer (June 12, 2012). The prospective, observational study tracked nearly 1,400 people in Stockholm from 1985 to 2009. The 35 participants who died of cancer during the study period had higher levels of dental plaque (a dental plaque index between 0.84 and 0.91) than the survivors (indexes between 0.66 and 0.67). The average age of death for women and men were 61 and 60 years, respectively. These ages were 13 and 8.5 years less than the expected average age of death for each gender.

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† $p<0.001$

‡ Randomized, 6-month, controlled, observer-blind, parallel-group clinical trial conducted according to American Dental Association guidelines; n=237 healthy subjects with mild-to-moderate gingivitis evaluable at both 3 and 6 months. Subjects rinsed twice daily for 30 seconds with 20 mL at least 4 hours apart. Whole-mouth mean plaque index (PI) scores at 6 months were 1.13 for the group who brushed, flossed and rinsed with COOL MINT LISTERINE® (baseline 2.75) and 2.37 for the brush + floss + control rinse group (baseline 2.78). Whole-mouth mean modified gingival index (MGI) scores at 6 months were 1.44 for patients who brushed, flossed and rinsed with COOL MINT LISTERINE® (baseline 2.11) and 1.81 for patients who brushed, flossed and rinsed with control rinse (baseline 2.1). Based on home use.

1. Sharma N, Charles CH, Lynch MC *et al.* Adjunctive benefit of an essential oil-containing mouthrinse in reducing plaque and gingivitis in patients who brush and floss regularly: a six month study. *J Am Dent Assoc* 2004;135(4):496-504.
2. **LISTERINE® TOTAL CARE®** Product Licence. Johnson & Johnson Inc. October 27, 2011.

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