



the **dental** surgeon

JULY 2014



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April 4, 2014

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1. Pan PC, et al. 2010 J Dent;38:S1(2010):S16-20. (Compared with selected daily-use mouthrinses in a single 30-second treatment.) 2. Fine DH, et al. 2007 J Periodontol;78(10):1935-1942. 3. Pianotti R, Pitts G. 1978 J Dent Res;57(2):175-179. 4. Charles CH, et al. 2000 J Clin Dent;11(4):94-97. 5. Charles CH, et al. 2001 J Am Dent Assoc;132(5):670-675. 6. Charles CH, et al. 2004 J Clin Periodontol;31(10):878-884. 7. DePaola LG, et al. 1989 J Clin Periodontol;16(5):311-315. 8. Overholser CD, et al. 1990 J Clin Periodontol;17(8):575-579. 9. Lamster IB, et al. 1983 Clin Prev Dent;5(6):12-16. 10. Gordon JM, et al. 1985 J Clin Periodontol;12(8):697-704. 11. Sharma NC, et al. 2002 Am J Dent;15(6):351-355. 12. Sharma N, et al. 2004 J Am Dent Assoc;135(4):496-504. 13. Bauroth K, et al. 2003 J Am Dent Assoc;134(3):359-365. 14. Grossman E, et al. 1989 J Periodontol;60(8):435-440.

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Editor's note

Congratulations to the resounding success of IDEM 2014 with another breakthrough record of almost 8000 participants from 61 countries! I have been volunteering at IDEM since undergraduate days and it is indeed heartening to see how this baby has achieved such international success till date! Not forgetting our pioneers whom spearheaded the 1st IDEM edition of course.

As the Chinese saying "Double Happiness", my heartiest congratulations to our SDA President, Dr Kuan Chee Keong; SDA Vice-President, Dr Kelvin Chye Chuan Hee; and SDA member, Dr Oliver Hennedige on being elected as the President-Elect, Vice-President and Secretary General respectively at the APDC/APDF Elections held in Dubai June 2014. It was a landslide victory for Dr Kelvin Chye with 17 out of 19 votes for him.

I am thankful when respectable senior colleagues come to me and applaud how the *DentalSurgeon* has evolved to its current issue and their advice are words of wisdom which I deeply appreciate. Amongst them, include our President Drs Kuan Chee Keong, Choo Teck Chuan and Asha. One of the advice from Dr Choo TC: "Buy a new pair of shoes!" at a dinner struck me and had change the way on how I should approach certain things in life.

A chat with a close friend recently has also reminded me of what encompass private and public success, and that it's time that I should focus on building up the private success of my life. Indeed, we should all be strive to excel in the important aspects of our lives, whichever comes first in priority.

Thank you all from the bottom of my heart.

Lastly, I would like to welcome Dr Teo Yiwei who has recently joined our editorial team.

Dr Seow Yian San
Editor-in-Chief
Assistant Honorary Secretary
SDA Council 2014-2016



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**There's no president's message this issue*

DentalSURGEON
Printed by Wesin Trading Co Pte Ltd
MCI (P) 104/08/2013

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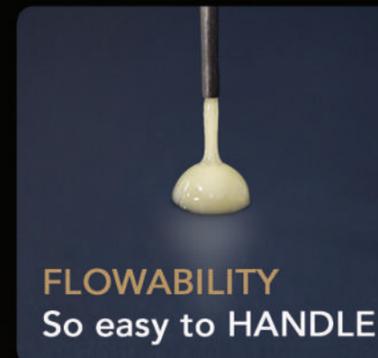
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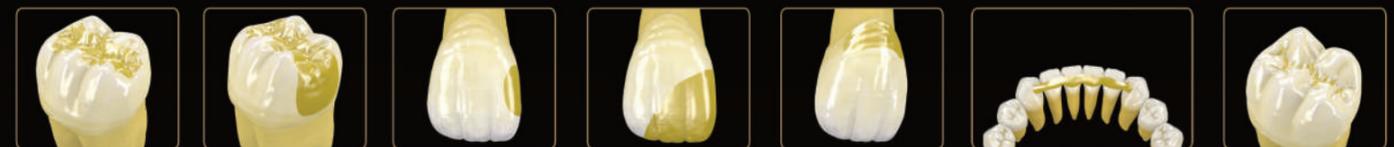
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The Eighth Edition of IDEM Singapore 2014 was a

RECORD - BREAKING SUCCESS

- report from Koelnmesse



COUNTRIES



PARTICIPANTS



This year's IDEM Singapore demonstrated why it is Asia's leading dental trade fair and scientific conference with record breaking numbers of exhibitors, conference tracks and attendees.

IDEM Singapore 2014 saw more than 500 exhibitors from 38 countries showcasing the latest innovations in clinical dentistry, dental technology and patient care across every segment of the dental market, covering Restorative and Preventive treatments, surgical procedures and equipment, Orthodontics, Endodontics, periodontics and laboratory tools. The IDEM Singapore trade fair was the largest staged at the Suntec Singapore Convention and Exhibition Centre since it was refurbished, and the first ever to fill both floors of exhibition space covering 16,000 sqm. The trade fair and conference welcomed 7,842 participants from 61 countries over three and a half days.

Where East Meets West & East Meets East

The increase in the number of exhibitors, growth of attendee numbers by more than 8% and the increased representation from countries in the Asia-Pacific region such as Australia, Cambodia, Taiwan, Hong Kong, Korea, Japan, New Zealand, Myanmar and Sri Lanka, also highlighted another trend;

IDEM Singapore, long considered the event where East meets West, is now also increasingly seen as the gathering point for different parts of the East to meet each other.

Illuminating the Future of Dentistry

IDEM Singapore 2014 proved itself to be not only a "must-attend" event for dental practitioners and professionals in the Asia-Pacific looking for the latest cutting edge technology and innovations in dental solutions and services at its trade fair but also a "must attend" scientific conference.



The conference theme this year was "Dentistry - The Future Is Now" with the programme focusing on the future of dentistry, addressing the challenges and the procedural and technical advances in the various fields of dentistry. The extensive scientific conference ran for three and a half days, and featured 45 different sessions and 36 international speakers.



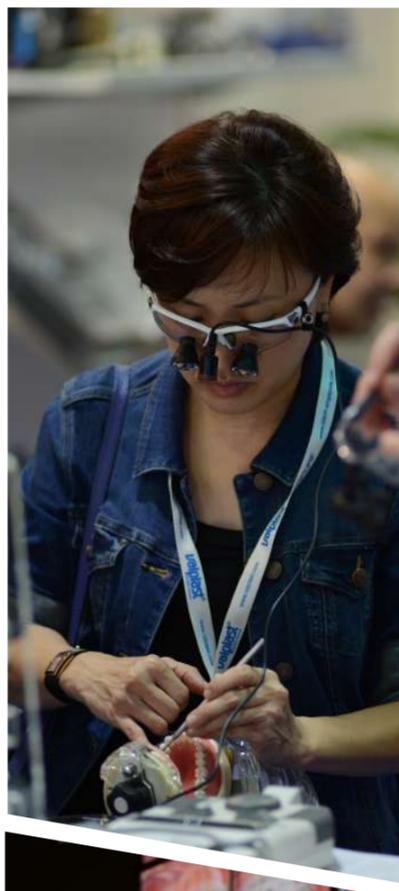
Dr John Burgess, the Assistant Dean for Clinical Research at the University of Alabama at Birmingham, United States, knows all about the 'The Future is Now'. He gave two well-attended and fascinating lectures on Vital Pulp Therapy, and Effective Efficient Tooth- Coloured Restorations. There is still a long way to go in the field of vital pulp therapy but Dr Burgess believes it might one day revolutionize the way we do dentistry.

"It is fascinating to think that one day in the not too distant future we might be able to repair a tooth with stem cells or even grow a living tooth for implant."

Dr Burgess thinks this is a time of wonderful opportunity for Asian dentists, especially those in South East Asia countries with rapidly expanding middle classes and a new generation of dentists to cater to them.

"In the past, restorations were expensive, when we worked with metal-based materials that required lengthy, almost handmade processing. That put restorations beyond the reach of many people but today with ceramics and composite resins, and CAD/CAM imaging and milling technologies; they are both more affordable and affordable to more people."

Another IDEM Singapore speaker, Prof Ken Hargreaves, the Professor of Pharmacology and Physiology at the University of Texas Health Science Center in the United States



SPEAKERS



SESSIONS



EXHIBITORS



also enjoyed the event. "It's been a very fruitful event; for my talks on Successful Management of Acute Dental Pain, Issues in Managing the Persistent Endodontic Infection and Regenerative Endodontic, I've met participants from all over the world, such as Cambodia, Korea, Japan, Indonesia, Australia and New Zealand and even from as far as the United Kingdom and Italy."

It was not just the speakers who were impressed with the conference. Prof Tran Van Truong, a Professor of Odontostomatology from Vietnam was also impressed with the organization of the event.

"The exhibition and scientific meeting are very well-organized and there are many people. I hope to be back."

Addressing the Diverse Needs of the Modern Dental Team

The scientific conference also introduced new tracks this year to represent the diversity in today's dental team including dental technicians, dental hygienists and therapists.

Dr Yam Solita, President Elect, Cambodian Dental Association, was impressed with the new tracks.

"It's really nice; there are a lot of programmes that's different from before. They also have scientific programmes targeted for the whole dental team: for dentists, dental hygienists, dental technicians."





Attendees of the new Dental Technician Forum were very positive about the new track. Mohd Khir Bin Abu Yamen, a lab technologist from Singapore, said,

"It's good and I learnt many news things; although I might not use the techniques in my work currently, I definitely think some if not all of what I learnt will be useful in the future."

Elizabeth Wutherington, a Dental Technician from Australia was also pleased, "The Dental Technician Forum has been very informative. I look forward to more programmes for dental technicians in future editions of IDEM Singapore."

Looking Ahead to 2016 and Beyond

Dr Kuan Chee Keong, President of the Singapore Dental Association (SDA) and Chairperson of the IDEM Singapore 2014 Committee, said



"The Singapore Dental Association helps to promote the professionalism of dentistry through our support of continuing education programmes like IDEM Singapore, with a world-class conference, to help the dental team keep up with advances in dentistry. Through our community outreach and friendship with the various dental associations in the region, we hope to continue to spread the importance of continuing education and to increase the participation from the dental teams in Asia coming to IDEM Singapore."

"As dental markets in the region continue to develop and reach out to embrace the globalization of dentistry and the opportunities it presents, IDEM Singapore will continue to play a strategic role for its exhibitors in facilitating that development and outreach. We will continue to strengthen IDEM Singapore's position as the preferred platform for companies looking to launch new dental solutions into Asia, by continuing to bring in the key buyers from the region. We hope that IDEM Singapore will grow to become not only a gateway to Asian markets but also a portal to the rest of the world." Said Mr. Michael Dreyer, Asia Pacific Vice-President, Koelnmesse.



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SDA SOCCER TOURNAMENT

DR DENZIL KIANG

FOR SOME, THE DEBUT OF A LIFETIME.

FOR MOST OF THE REST, A NEW DAWN AND ANOTHER CHANCE TO REPRESENT THE PRESTIGIOUS SDA SOCCER TEAM.

BUT DEFINITELY FOR ALL, A DAY AND A TOURNAMENT TO REMEMBER.

1st MAY 2014



(Back Row)
Norhisham,
Yong Kheng,
Denzil,
Syazwan,
Keng Mun,
Chee Wan,
Kwang Yueh

(Front Row)
Michael,
Kenny,
Titus, Anwar,
Ranjan

(Not in Picture)
Prof Patrick Tseng

The annual SMA-Fullerton Inter-hospital Soccer Tournament attracts the best soccer teams from institutions islandwide. Amongst them were the titans of the SDA soccer team, gunning for glory and for the chance to lift the championship trophy.

It was also a day where dentists from all walks of life ditch their clinical coats and scrubs, and don the famous white and blue SDA jersey.

This year's tournament was held on unfamiliar territory, at the Cage Sports Park Astroturf pitch at Turf City, instead of the grand Jalan Besar Stadium from previous years... The SDA



Team was placed in 'the Group of Death', with the likes of teams from KKH, NUH, GPs and the Medical Alumni team.

The SDA team hit the ground running and were quick off the blocks in the season's curtain raiser. Barely 5 minutes into the game, a perfect corner from Kenny headed the ball down by Anwar to Denzil, who unleashed a

ferocious volley into the roof of the net. The second half began with the same pulsating tempo as the first. Like a combination fresh off the training ground, brilliant team passing resulted in Keng Mun sprinting past enemy lines. He made no mistake, rolling back the years as he swivelled majestically past the last defender and fired home from the edge of the penalty area.

The Medical Alumni team hit one back a minute later though, setting up an edge-of-your-seat in the last 5 minutes. In the final minute of the match, Kwang Yueh capped off

a solid debut with a mesmerizing Cristiano Ronaldo-esque run from the midway line, leaving a trail of defenders behind as he slotted the ball coolly into the bottom corner. 3-1! A fantastic start to the campaign!

The subsequent matches did not prove as promising however, as narrow 1-0 defeats ensured we would not be participating in the knock-out stages.

Nonetheless, we can take pride in a valiant display of determination and great camaraderie forged over a day's worth of soccer! Till next year, may we come back stronger!



“My children are having fun, but at the same time they get to learn about taking care of their teeth. For that matter, so am I.”



The Project Tooth Keeper team extends their sincerest gratitude to Singapore Dental Association for their unwavering support and faith in the team throughout the journey, as well as the Society for Paediatric Dentistry (Singapore) for their expertise and much-valued guidance.

Project Tooth Keeper 2014

With the support of the Singapore Dental Association, four final-year NTU students embarked on a campaign to promote children’s oral health that included a dental event for the family, storytelling visits to preschool centers– and a lot more. Here, they talk to *The Dental Surgeon* about how Project Tooth Keeper came about.

By Miss Nina Zainudin (NTU Undergraduate)

The ‘Project Tooth Keeper’ campaign is a student-led initiative to promote good parenting for preschool children’s oral health and is the brainchild of Emily Ho, Grace Chow, Nina Zainudin, and Susmitha Changaroth from the NTU Communications Faculty.

Motivating parents to be Tooth Keepers

Teaming up with SDA, the students launched Project Tooth Keeper as a three-month long campaign at the start of the year. They were moved to embark on this as their final-year project after discovering a worrying rise of Early Childhood Caries among Singaporean preschoolers in recent years.

Targeted at motivating parents of preschoolers to take charge of their children’s dental care; they came up with the term Tooth Keeper to express the important role that parents play in upkeeping their children’s oral health

A series of collaterals, ranged from educational



videos of dentists giving parents advice to online platforms to brochures, were placed in installations – designed to resemble the mouth of a person –that made their way around libraries in Singapore.

Their pre-campaign survey of 202 parents of preschoolers’ parents showed that most parents do not bring their children for dental check-ups regularly and some not at all, mistakenly believing that it is unnecessary at their children’s young age.

Teaching families good dental habits through playtime



On 9th March 2014, families visiting the Woodlands Regional Library were greeted by a joyful carnival and festive atmosphere. Children were smiling spiritedly as they executed yet another successful turn at a game booth before trying other dental- related games; their doting parents gamely helping them complete the challenges.

Over 800 parents and children turned up at the library for the Tooth Keepers’ Day Out event, which featured kid-friendly activities related to oral health, and talks by dental professionals for parents to get advice from.

Jointly-organized by the Singapore Dental Association (SDA) and four final-year students from the Nanyang Technological University (NTU), the event also saw

dentists from the Society for Paediatric Dentistry (Singapore) volunteering their time to conduct free dental forums.

The group wanted to use family playtime as a way to reach out to parents and introduce good dental hygiene habits that young children should already be practising at their age.

Ms Rozita Omar, who was at the library with her two daughters of ages seven and four for their usual weekly visit said: “My children are having fun, but at the same time they get to learn about taking care of their teeth. For that matter, so am I.”

Concerned that parents could be neglecting the oral health of their pre-schoolers, the team sought to change such parental attitudes and misconceptions about dental visits through Project Tooth Keeper.

"The most important message to parents is to start bringing their children to the dentist as early as possible, and not wait for them to enter primary school," said team member Susmitha Changaroth, who was personally inspired to set up a campaign around oral health by her six-year-old cousin who had to be treated for cavities at the age of four.



"The most important message to parents is to start bringing their children to the dentist as early as possible, and not wait for them to enter primary school"

Battling tooth decay – one story at a time

Apart from organizing the campaign's main event, the team had also found time to visit a total of 10 preschool centers where they taught pre-schoolers how to brush well, eat right and when to visit the dentist through songs and interactive participation from the children.

On what prompted the preschool visits to conduct storytelling, group member Grace

Chow, said: "We hope our stories can help teach the children about the importance of healthy teeth and make them more receptive to taking good care of their oral health so they will pose less of a challenge to their parents when it comes to the routine of brushing their

teeth or visiting the dentist."

The group also shared that their stories—which they wrote themselves – were so well received by the students and preschool centers that they were still receiving requests up till the point of writing this article. Their preschool visits began midway through the campaign, in February.

When asked about the challenges they faced throughout this entire campaign, team member Emily Ho cited how the team of four chose to handle much of the campaign work among themselves – from the design work for their collaterals to marketing and organizing their main event to securing coverage in the media – to make the best use of their limited resources.

"Thankfully, each member of our team has her own area of specialization and it helped us manage the work needed to run a campaign effectively. More importantly, SDA's support was of great help to us and the success of our campaign is as much attributed to them," she added.



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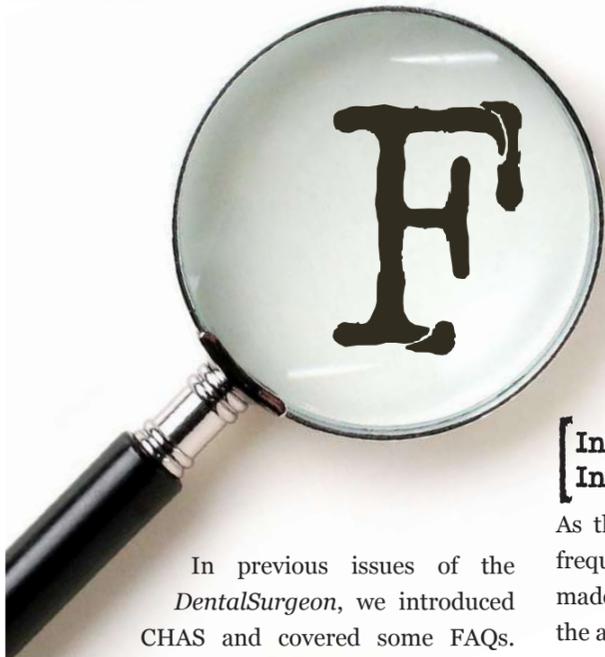
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Findings from the first CHAS Audits

– from the Chief Dental Officer’s office

Inadequate Clinical Documentation and Inappropriate Claims

As the team had to base their audits on proper clinical records, the most frequently encountered problem involved incomplete or vague entries. These made it difficult for the audit team to verify the procedures claimed and assess the authenticity and appropriateness of the procedures rendered.

These included the following:

Date of visit was absent in the records

No indication of tooth notation and/or surfaces treated

Missing entries on type of restorative material used

Missing entries to describe complexity of restorations. For example, a single buccal restoration was claimed as a complex restoration.

No additional description nor radiographs taken for claims for complex tooth extractions

In previous issues of the *Dental Surgeon*, we introduced CHAS and covered some FAQs. We will present some common observations from the recent CHAS audits in this article.

The Ministry concluded its inaugural audit for CHAS in April this year. Our audit team was tasked to look into the submissions for CHAS claims and match them with patients’ clinical records.

In general, the majority of our colleagues did well in maintaining proper documentation for billing and claims as required by CHAS. This consists of the CHAS consent forms and itemized billing.

However, the audit on clinical records to assess the appropriateness of claims was quite alarming. The following were some issues encountered.

The most extreme case encountered during this audit was in a clinic where no notes were recorded for all the simple restorative procedures! The dental practitioner when asked, opined that there was no need to document routine dental work.

Whilst we believe that the majority of our profession does reasonable work, the lack of proper documentation for dental procedures is definitely not medico-legally sound and not in accordance with the guidelines set

by the Public Hospitals and Medical Clinics Act (PHMC) and SDC’s Ethical Code and Guidelines.

In addition, the team also encountered issues of poor legibility. Clinical records that cannot be read will not hold well in medico-legal cases.

We would therefore like to remind our colleagues to be always mindful of this and exercise due diligence to ensure that all clinical records are legible and complete.



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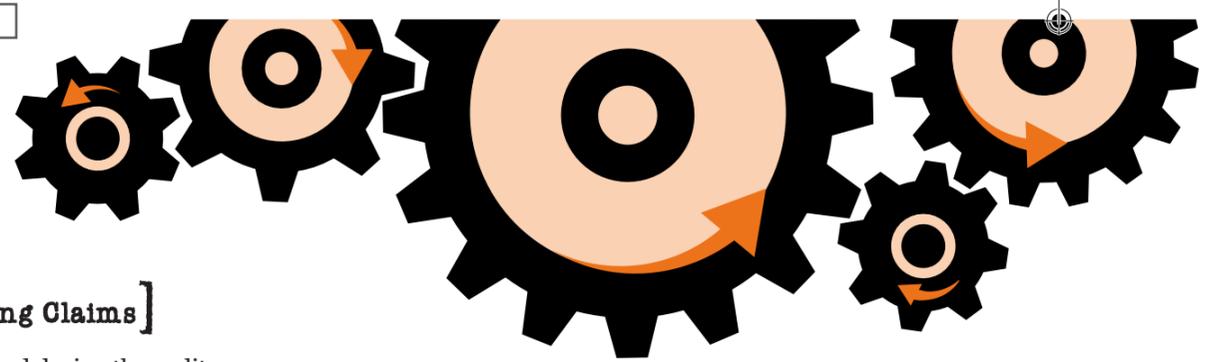
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[Duplicate and Wrong Claims]

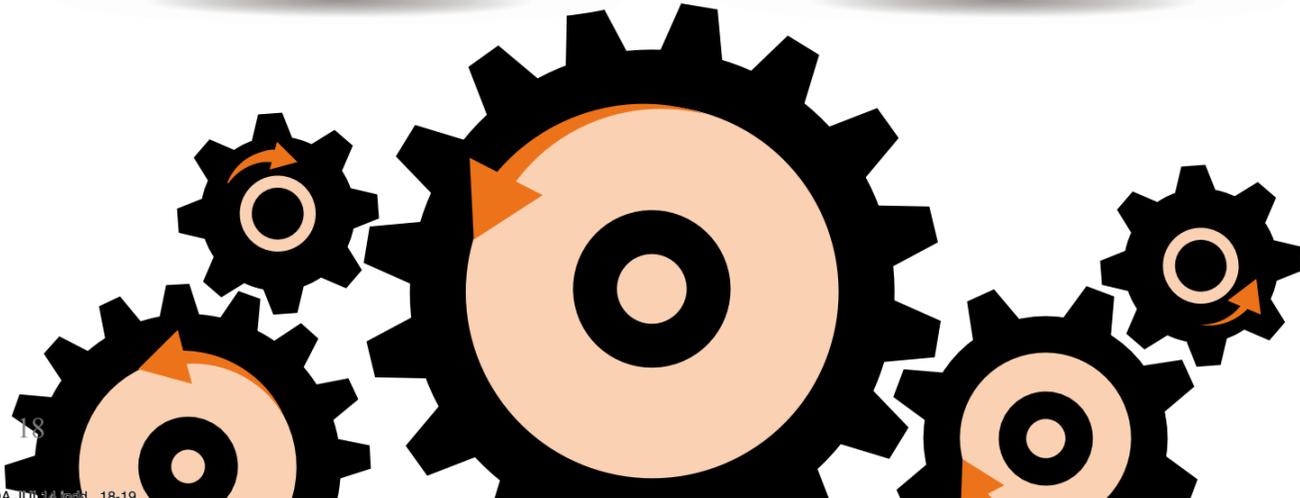
The following were uncovered during the audit:

Case 1
An amalgam restoration was claimed for tooth 24 (occlusal) at one visit and again for a subsequent visit 2 months later for the same tooth on the same surface. Additional notes on justifying why the tooth had to receive a second amalgam restoration on the same surface within 2-months was absent. This made it difficult to justify the repeat claim.

Case 2
A patient had a pulpectomy performed by a general dental practitioner and the endodontic procedure completed by a specialist. Both the general dental practitioner and the endodontist filed claims for the root canal treatment of the same tooth. Please note that CHAS can only be claimed for the completed root canal treatment and all other claims will be rejected.

Case 3
A patient had a partial denture claimed under CHAS and the general dental practitioner subsequently filed claims to relines the denture 4 times within 6 months from the date of issue. There were no additional notes on reasons or factors to justify the relines (and claims). Once again, it was difficult to defend the appropriateness of these claims.

Case 4
A practitioner tried to claim for cementation of provisional crowns. This claim is erroneous as provisional crowns and their cementations are already factored in the CHAS claim for crowns.



[Claims involving staged procedures]

For claims involving multiple visit procedures such as crowns, dentures and root canal treatment, the audit team has advised that claims should only be submitted upon completion or issue of the prosthesis.

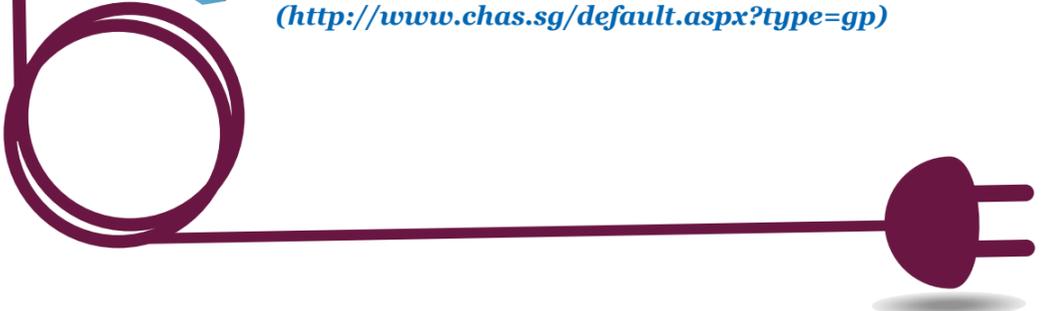
Case 5
A practitioner had filed a claim for a denture when only the master impression was taken. When audited, the practitioner claimed that the patient had decided to have a bridge done instead. As the denture was not issued, there should not have been a claim for the denture.



In conclusion, we would like to emphasize the need for good and proper record keeping and for dental practitioners to assess the appropriateness of their claims.

These are summarized below:

- ✓ **Proper documentation**
 - All dental visits should be dated
 - Tooth number or notation should be indicated when applicable
 - Tooth surface indicated when applicable.
 - Additional details (where applicable) to document complications or consequences of procedures.
 - Properly dated and identified radiographs
- ✓ **Claims are to be filed only upon completion or issue of 'multiple visit' procedures.**
- ✓ **Please refer to the CHAS portal for further details on guidelines regarding claims and documentation.**
(<http://www.chas.sg/default.aspx?type=gp>)



Ethics & Practice Management Committee

A good thing happened in 2013 – the number of complaints mediated by SDA's volunteers actually decreased, after years of what seemed like inexorable increase.

The decrease is due, in large part, to the management of complaints by SDA stalwarts like Drs Raymond Ang, Lim Lii and Seow Yian San. Their astute analyses of letters of complaints have led them to efficiently implement a system whereby staff can quickly respond to written complaints and have the letters assessed for appropriate management. In many cases, the appropriate management was simply to clarify or even dispel mis-perceptions the complainants have about the treatment they received. In a minority of cases, mediators had to be assigned to achieve a mutually acceptable resolution to disputes between dentist and patient.

Such assistance with disputes really is a privilege of a SDA membership, as complaints received from the public involving non-SDA dentists are politely referred to other agencies.

The SDA does not respond to complaints that are purely about the fees charged as (contrary to public expectation) SDA cannot dictate the appropriateness of fees. Also, SDA does not intervene when a complaint is made against an institution. If a member-dentist is mentioned in the complaint, the dentist will be assisted only if the institution, through the public relations or other departments, is not responding to the complaint.

There is more to this committee than responding to complaints from the public.

There are aspects of Practice Management that have become increasingly complicated over the years.

Some matters that the committee would like to study are:

- the intent of informed consent
- laws on fair trade and their application to dental treatment
- regulations on storage of dental records and data protection.

These matters are not as simple as they may seem. For example, there was a recent case where a dentist had assiduously got the patient to sign a detailed consent but when the treatment outcome was unsatisfactory, the legal opinion was that the dentist still had to recompense the patient.

I invite members to form groups to discuss and study these subjects, with the intention of drawing up a helpful and practical statement that practising members can use.

Such advisory statements would be another example of the profession regulating itself.



Dr. Asha Karunakaran
Chair
Ethics & Practice Management Committee 2014

**Dr Asha was the Advisor for Ethics and Practice Management Committee for 8 years and is now the current Chairperson. Dr Raymond Ang is now the Advisor for the Committee.*



COMMUNITY HEALTH ASSIST SCHEME FOR THE PIONEER GENERATION

From 1 September 2014, about 450,000 Pioneers will benefit from special CHAS subsidies as part of the Pioneer Generation Package for common illnesses, selected chronic conditions, and recommended health screening.

The Pioneer Generation Package will be for Singapore Citizens who were born on or before 31 December 1949.

Sign up to be a CHAS Dental clinic to honour and thank our Pioneers for their hard work and dedication!



	CHAS Blue Tier	CHAS Orange Tier	CHAS for Pioneer Generation
Eligibility Criteria			
Household monthly income per person	\$1,100 and below	\$1,101 to \$1,800	All Pioneers
Annual Value (AV) of residence (only for households with no income)	\$13,000 and below	\$13,001 to \$21,000	
CHAS Subsidies for Selected Dental Services			
Cementation	\$35.00	-	\$45.00
Consultation (w/o treatment)	\$20.50	-	\$30.50
Curettage	\$20.50	-	\$30.50
Crown	\$127.50	\$84.50	\$137.50
Denture, Complete	\$256.50	\$170.50	\$266.50
Denture, Partial, Complex	\$210.00	\$140.00	\$220.00
Denture, Partial, Simple	\$98.00	\$65.50	\$108.00
Denture Reline	\$98.00	\$65.50	\$108.00
Denture, Repair	\$43.00	-	\$53.00
Extraction, Simple	\$28.50	-	\$38.50
Extraction, Complex	\$68.50	-	\$78.50
Filling, Amalgam, Simple	\$20.50	-	\$30.50
Filling, Tooth-coloured, Simple	\$35.00	-	\$45.00
Filling, Amalgam, Complex	\$43.00	-	\$53.00
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by Dr. Anthony Tay

Composite Series: A Systematic Guide towards Mastering Posterior Composites (Part 1)

Introduction

In our daily general dental practice, posterior restorative treatments are commonly provided to patients as part of routine care. For conservative preparations, composite is increasingly advocated as the restorative material of choice over amalgam, due to the conservation of tooth structure, adhesive and aesthetic properties. Unlike amalgam, clinicians traditionally face steeper learning curves towards

the proper use of composite, and issues like post-op sensitivity, overhang formation, open contacts and handling difficulty remain common obstacles for some practitioners. In this article, the author shares his tips on how he manages these issues and provides an insight towards mastering Class 1 and Class 2 posterior composites.

Clinical case 1

A 25-year-old patient presented for routine check-up. Upon detailed intraoral examination, dental carious lesions were diagnosed on the following teeth: #24 and #26 occlusal surfaces (24O and 26O) and #25 disto-occlusal surface (25DO). The patient consented to remove the caries and restore these teeth with composite. As these are adjacent to each other, a quadrant dentistry approach was favoured for clinical efficiency. She was arranged to return for a definitive appointment.



Pre-op clinical condition revealing caries on 24O, 25DO, 26O.

Pre-treatment planning

One of the keys towards clinical success in any dental treatment is pre-treatment planning. This could involve the selection of the restorative materials and instruments, the choice of bonding agents and the replication of existing occlusal morphology. Together with pre-treatment communication with dental auxiliaries, subsequent clinical efficiency can then be maximised.

Posterior composite selection depends on the characteristics desired for posterior use. These include handling ease, sculptability, radiopacity and wear resistance of the composite. As access in the posterior region tends to pose a bigger challenge, it is important to choose a composite that handles well, has a relatively non-sticky characteristic and adapts easily to the shapes of the cavities. For optimum aesthetics, including the ability to blend seamlessly with the natural dentition, an understanding of the relative translucency of the composite is necessary.



Estelite Sigma Quick composite shade A3 (Tokuyama Dental)

In the author's opinion and experience, posterior teeth are mostly either A2 or A3 in shade. In addition, as teeth get darker, there is a tendency for them to get more translucent. If there are regional differences in shades within the same tooth, sometimes, the use of more than one shade may be

preferred to mimic the adjacent natural teeth, and that is the polychromatic approach. Whenever possible, a single-shade approach should be preferred to simplify armamentarium. This usually involves the use of a universal shade (body shade) composite. Examples include Grandio (VOCO), Estelite Sigma Quick (Tokuyama Dental) and Gradia Direct X (GC).

In his daily practice, the author sub-divides these universal shade composites to the "slightly translucent" and "slightly opaque" categories for optimum aesthetic match. In this clinical case, A3 shade was visually determined to match and the teeth also appear to be slightly translucent. Based on these,

Estelite Sigma Quick, a supra-nano filled universal composite, would be the ideal choice. Besides its slight translucency, its great handling allows for easy placement, minimising air bubble and marginal void formation. As the pre-op occlusal surfaces were largely intact, it would be helpful to remember occlusal anatomies and morphologies to minimise subsequent occlusal adjustment. To make restorations more reproducible, one tip is to capture a digital picture of the pre-op anatomies and follow them closely during the restorative phase. This will improve the workflow and greatly reduce chair-time in adjustment.

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Treatment procedure

Following local anaesthesia administration, rubber dam was placed for ideal moisture isolation. Caries from the affected teeth were removed with rotary burs and hand instruments. The cavity preparations were finalised.

While a minimally invasive approach should always be at the back of our minds, we should also consider the practical approach of restoring them. Cavity preparations should always take into account the size of the restoring tools (such as plastic 6 modelling instrument) being used, the practitioner's visibility of the cavity floors and the handling characteristic of composites. Cavity preparations should be widened enough for instruments to restore them predictably. For example, it will be a technical challenge to restore a deep but narrow cavity when the instrument is not able to access the restorative space well.

One of the key principles towards successful integration of restorations is the maintenance of a clean operative field. Following cavity preparations, we should always rinse and thoroughly remove any debris from the teeth and the rubber dam prior to the bonding stage.

As the clinical situation involves a Class 2 cavity on #25, a

V4 ClearMetal Matrix sectional system from Triodent was used. The V4 system is similar to the popular V3 system with several changes being made. The biggest feature is the use of sectional clear-metal matrix with micro-windows, allowing more light for light-curing from the interproximal directions. Besides catering to clinicians who prefer deeper cures for their bulk-fill composites, the author believes there are two other advantages with the clear-metal matrix:

1. Allows for more illumination from the interproximal region; thus, improving visibility during composite placement; and
2. Allowing light-curing in areas that are difficult to access (interproximal regions).

Regardless of which matrix system a clinician employs, it is crucial to be meticulous in setting up the matrix system properly so that there is adequate proximal contact, minimal overhang formation and little finishing required.

A total etch adhesive system was employed with Ultra-Etch (Ultradent), followed by the application of 5th generation adhesive, XP Bond (Dentsply). As there will be a slight time lag in restoring the cavities one by one, it is vital to seal all these cavities immediately with the adhesive after etching

to reduce post-op sensitivity.

The restoration process

We began by restoring the distal of #25 so that we can convert it from a Class 2 to Class 1 cavity. The first increment



Rubber dam placement for ideal moisture control.



Completed cavity preparations. A clean operative field minimises the chance of subsequent contamination from debris.



Triodent V4 ClearMetal Matrix System



The sectional matrix system placed on 25D. The tines of the V4 ring approximate the tooth closely at the interproximal region to reduce subsequent finishing.



The sectional matrix system adapting closely to the gingival floor of the cavity. To prevent composite overhang formation, it is paramount to fit the matrix snugly against the distal margin. The matrix is also burnished against 26 for ideal contact.



Side profile of the sectional matrix system in place. Unlike the traditional approach of using a wooden wedge to cause temporary teeth separation, V4 wedge is used mainly to adapt the matrix against the tooth for a smooth cervical contour.



Ultra-Etch is placed – 30 seconds on enamel, 15 seconds on dentin, followed by copious rinsing with water and gentle air drying to prevent desiccation of dentin.



XP Bond was placed with a microbrush, air dried gently and light-cured for 10 seconds on each cavity.

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Conversion of Class 2 into Class 1 cavity for 25DO. Notice the minimal flash at the distal proximal area of 25 upon removal of the V4 ring.

Completion of the anatomical layering with A3 Estelite Sigma Quick and Brown and Ochre colour modifiers (Kerr Kolor Plus).

Immediate post-op palatal profile of 25 showing minimal finishing needed from V4 Sectional Matrix System.

Immediate post-op with occlusion adjusted.



Sof-Lex Spiral finishing and polishing wheels



The beige wheel was used to remove any irregularities on the composite surfaces.



The white wheel was used to provide highly smooth surfaces.

the anatomical clear-metal matrix also has an occlusal convergence feature to divert the composite build-up away from the marginal ridge slightly so that subsequent flossing will be smooth and not be impeded by composite flash.

Upon converting into a Class 1 cavity, the V4 ring and clear-metal matrix may

be removed for better access and visualisation. We now have the equivalent of three Class 1 cavities to restore with the same composite shade. Anatomical composite layering was done, and Ochre and Brown colour modifiers (Kerr Kolor Plus) were placed to mimic natural pits and fissures. The use of the artist brush in the anatomical layering greatly improves the seamless integration of the composite to the tooth surface while minimising any subsequent finishing work on the anatomies created.

of composite (A3 Estelite Sigma Quick) should be layered carefully and preferably modelled with a size 1 artist brush to remove any potential trapped air spaces. Magnification loupes are highly recommended to improve visualisation and general quality control. When layering close to the marginal ridge, it is important to take reference from the height of the adjacent marginal ridge (i.e., mesial of #26) and not to overbuild it occlusally. This will minimise further occlusal adjustment. In the V4 sectional system used here,

The biggest question that many practitioners always ask: how do you ensure there is minimal occlusal adjustment after the layering is done, so that the created anatomies are not removed? The solution is to layer it anatomically, respect the existing morphology and follow accordingly. Magnification loupes also help greatly with the details to smaller build-ups. Anatomies must be accurately placed before light-curing. Any subsequent adjustment with rotary burs will always generate bur marks that affect the final aesthetics of the anatomical layering.

The rubber dam was removed, occlusion was checked and minor adjustments were made. Finishing and polishing were done with Sof-Lex Spiral finishing and polishing wheels (3M ESPE). Sof-Lex Spiral wheels are made of an elastomer impregnated with aluminum oxide particles. Its universal shape allows access to all surfaces of the teeth, thereby reducing the need for other polishing tools of different shapes. The "pasteless" approach also made cleaning up much easier. As all finishing and polishing sequences will invariably generate heat, especially done without water spray, it is important to wet and cool the teeth intermittently to reduce potential thermal insult to the pulp.

Post-op review

The patient returned after 12 days for review. No post-operative sensitivity was noted, oral hygiene was good and she was able to floss well. Patient was satisfied.



12 days post-op showing immaculate aesthetic and functional integration of the restorations with the tooth structures.

Clinical case 2

Following the principles and approach of clinical case 1, the disto-occlusal surface of tooth #35 on another patient can be similarly restored with good form, occlusal morphology and aesthetics.



Pre-op: Defective amalgam to be removed from 35DO.



Post-op: Final restoration with GrandioSo universal composite (Voco), Brown and Ochre colour modifiers (Kerr Kolor Plus).

Conclusion

The increasing demand for conservative and aesthetic dental treatment means that posterior composite restorations will remain a fundamental part of daily general practice. By understanding clinical situations, utilising modern materials and mastering techniques, clinicians can consistently provide predictable aesthetic restorations with the full confidence of his patients. **DA**

About the author



Dr. Anthony Tay received his Bachelor of Dental Science from the University of Melbourne, Australia in 2005. He returned to Singapore in 2006, where he has been involved in full-time metropolitan private practice. He is the clinical director of his clinic, The Dental Gallery Pte Ltd. As a general practitioner, he delivers a comprehensive range of dental services, with special interest

in composite rehabilitation, restorative dentistry and minimal intervention dentistry. He is the past vice-president of the Academy of Cosmetic Dentistry (Singapore) and is actively involved in continuing dental education for his peers. Dr. Tay has published in the September 2012 edition of *DentalTown*, a professional dental magazine in the United States, and also had his clinical case featured by Triodent Corporation on Youtube.com. He conducts workshops and gives lectures on composites in Singapore and overseas.

Our Heartiest Congratulations to

*our SDA President,
Dr Kuan Chee Keong
- as the President-Elect*

*our SDA Vice-President,
Dr Kelvin Chye Chuan Hee
- as the Vice-President*

*our SDA member,
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A Tale of 2 Cities

Go back in time to 1901 in Adorable ANDAZ! The inimitable Travelling Gourmet visits a mysterious Masonic Temple in London in... the MULTI-FACETED ANDAZ Hotel.



Next to bustling Liverpool Street station, this luxury boutique hotel used to be the Great Eastern Hotel years ago and was designed by Architect Sir Charles Barry and his son Charles Edward Barry. Its magnificent red brick facade from 1884 and proportions on all three external elevations made it pre-eminent among London's elegant railway hotels with ornate marble staircases and floors. The location is ideal - just a two minute walk to Liverpool Street station, from where you can go anywhere in London by



the "Tube" trains. Each morning my Breitling woke me at 07:00 and it was off to the 24-hour Gym that is huge and well-equipped with treadmills, ski machines, exercise balls, chin-up bars and weights. The full-sized leather punching bag is ideal for Krav Maga training. It is invigorating to jog nearby to Spitalfields Market and the building known fondly as "The Gherkin". For sightseeing, the Tower of London and iconic St. Paul's Cathedral are close by. On an early morning run, I paused to admire the celebrated shocking-red and blue LOVE sculpture by Robert Indiana at the corner of 99 Bishopsgate, site of the 1993 IRA bomb. A sculpture celebrating Love at the site of a hateful terrorist bombing... Truly, one of life's little ironies.

The Andaz boasts barrier free check-in with pretty young ladies called 'Hosts' doing all the necessary for you with their laptops. The opulent suites and rooms are extremely comfortable and most tastefully decorated. All the drinks, juices and snacks in the mini-bar are complimentary, except for the alcoholic beverages like beer. I really liked the bittersweet Meantime London Lager and brewed in London with Kentish hops (4.5 % alcohol), and the Munchy Seeds Chilli Bites comprising crunchy roasted slightly sweet apricot kernels, sunflower and pumpkin seeds.

Beautiful British Breakfast!

Breakfast buffet in "1901" Restaurant is simply divine. Cereal, muesli, granola, fresh fruits like pineapple and melon; freshly squeezed fruit juices like mango, grapefruit and healthy carrot; Proscuitto di Parma, Honey Baked Ham, Italian Salami, Cumberland Sausages, Baked Beans, grilled tomato, sautéed mushrooms, REAL Bacon rashers plus lots more! The yoghurt is simply 'superbe'! From Northiam Dairy in Rye, East Sussex, I adore the Fruits of the Forest yoghurt, or as they say in Italy "Fruitti di Bosco", ultra-creamy with a sleek velvety texture and 'alive' with all the good bacteria for your digestion.

Mysterious MASONIC Temple... and 1901 Restaurant

I felt like I was in the movie "The Da Vinci Code" when I experienced the mystique of a lovingly restored secret and mysterious Masonic Temple. The Temple was only discovered during extensive refurbishment of the former prestigious Great Eastern Railway Hotel. It was cunningly sealed off and hidden by a false wall before its discovery. On a VIP tour with my friend, Head Chef Hameed Farook, its eerie splendour hinting at the Occult rituals that took place here sent a chill up my spine. If walls could speak, what tantalising tales they would tell. Dynamic and talented Chef Hameed helms the fine dining 1901 Restaurant, which serves creative Contemporary British cuisine with French influences. Tasty seasonal dishes have their intrinsic flavours intact but enhanced.

Afficionados of haute cuisine love "1901". You travel back in time to a more gracious age to savour its most unique ambience like the unbelievably high ceiling with an exquisite stained glass cupola. A pre-dinner aperitif from the unique



Island Bar is 'de rigeur'. The Bar is an oasis of charismatic Cocktail delights in the restaurant's centre. Rx Jack's Martini, named after bloodthirsty Jack The Ripper, the notorious murderer who terrorised this area in days of yore (circa 1888). Eccentric Hendrick's Gin, subtly fragrant Elderflower Cordial, Cucumber plus zesty Lemon combine effortlessly for a stimulating cocktail that packs a wallop!

Signature mains include Scrumptious Sea bass, pan-fried fillet with velvety parsnip purée and fragrant roasted shallots. OMG! Delicious slow-cooked venison caressed in a redolent red wine and port reduction with chestnuts, bacon and cute baby onions...

SWEETS to rob the Bank of England for...

include traditional Bread and Butter Pudding with ravishing raisins, Salted Toffee Popcorn Ice Cream foamed with Butterscotch. Try the unusual



Apple Fritters and Deconstructed Banoffee Pie...Banoffee is an acronym for Banana and Toffee, you'll savour all the different ingredients presented separately.

After the sweet treats, in true British style, try the cheeses. The stunning selection is a cheese connoisseur's dream come true. Captivating cheeses include:

Innes Log from Staffordshire, an unpasteurised, tangy, yet nutty goat cheese, and Dorstone from Herefordshire...a savoury, unpasteurised goat cheese with vegetable nuances. You will really be spoilt for choice in more ways than one!

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The Brisbane Convention and Exhibition Centre is adjacent to the Southbank Precinct on the banks of the Brisbane River. Nearby is the Queensland Performing Arts Complex, the Queensland Museum and the Queensland Art Gallery and Gallery of Modern Art. A comprehensive industry exhibition will be held alongside the Congress enabling delegates access between scientific sessions to view the latest in equipment and materials.

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Text & Photos by Dr Kevin Co

WITH THE LAUNCH OF MCLAREN'S NEW 650S, THE 12C CAN BE EASILY FORGOTTEN IN THE BACKGROUND.

McLaren wants to stress that 650S is not a replacement for 12C but a brand new model which slots itself between the 12C and the P1.

Including the rumored baby McLaren codenamed "P13" coming up next year, I am absolutely loving McLaren's new line up.

All the hype about the 650S is justified as it looks like a P1 and it is astoundingly gorgeous.

So what happens to our beloved 12C then? Just to reassure everyone that it is still very good, I took it out for an overnight drive.

The last time I drove the 12C was with the touch sensor doors. It was unfortunately the most ridiculous system ever. So they changed it to a real button instead, thank you McLaren engineers!

The car still looks stunning; the

silver paintwork makes the car less eyecatching. This is why I adore British sports cars, unassuming to the masses but respected by the few.

When both the dihedral doors are opened, it is one of the most marvelous spectacle ever. I still appreciate the distinctive exhaust location, which is just utterly special.

It's one of those cars that appears fast even if it is stationary.

With Deepest Sympathy and Heartfelt Condolences to the Family of the late



Dr Edmund Tay Mai Hiong
Dean (1966 to 1985)
and Past President of the
Singapore Dental Association (1969-1970)

From The SDA Council and all Members of SDA





The twin-turbocharged 3.8-liter V8 produces 616bhp, which is brilliant for the relatively small engine size of a supercar. This brings the car from 0-100km/hr in 3.1 seconds... yup that's a lot faster than any car on the road. The amazing thing is that when I floor the gas pedal it doesn't scare me to bits, so it enables an average driver to push the car with confidence.

My advice is to go for the optional carbon ceramic brakes, it is definitely worth it.

The 12C legendary carbon fibre monocell chassis is still what really makes the car stand out.

The upgraded transmission setting is much better as the throttle response is improved with faster and smoother clutch control. This translate to better driving dynamics and to me lots more fun!!

When driven hard the sound that you get from the 12C is unquestionably spine tingling, the other sensory experience that you get at 8000rpm on track mode is something that I cannot explain fully... but it's awesome.

I tried putting on my son's child seat which was effortless; just make sure the passenger airbags are off. Multi-storey and underground car parks are simple to maneuver. Always get the vehicle lifter option, trust me, it's really not worth saving on that.

The boot up front is spacious enough for most shopping and day trips up north.

Not surprisingly the fuel consumption is comparable to most supercars which is basically abysmal, but I really think that's the last thing on your mind if the 12C is sitting in the drive way.



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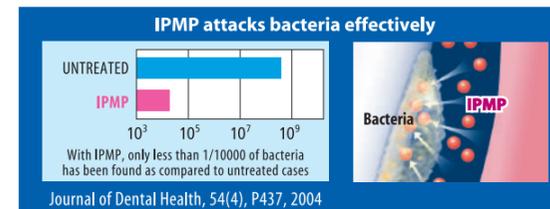
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* Systema Super-Tapered Soft & Slim Toothbrushes help to improve gum health in 7 days with proper brushing twice daily. Results may vary.
^ Clinically proven to help provide 4 times gum care as compared to ordinary toothpaste.
* Source: Journal of the Japanese Society of Periodontology, 78:258 (1975). When used together with toothbrushing.
* Sources:
(1) Periodontology 2000, Vol. 44, 2007, David W. P, Nadine. B & Timothy C. N, 113-126; Bryan S. M & Robert. D, 103-112; Brian L. M & Gloria L. O, 127-153.
(2) <http://www.ridental.com/perioinc/gumdisese.pdf>.

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1. Wolff M, Corby P, Klaczany G, et al. J Clin Dent. 2013;24(Spec Iss A):A45-A54. 2. Data on file. Colgate-Palmolive Company. 3. Results from a remineralisation study vs a regular fluoride toothpaste, both 1450 ppm fluoride. 4. Cantore R, Petrou I, Lavender S, et al. J Clin Dent. 2013;24(Spec Iss A):A32-A44. 5. Results from a 6-month study to assess improvement in enamel caries using the QLF™ (Quantitative Light-induced Fluorescence) method vs a regular fluoride toothpaste, both with 1450 ppm fluoride. 6. Yin W, Hu DY, Fan X, et al. J Clin Dent. 2013;24(Spec Iss A):A15-A22. 7. Results from a 2-year clinical study vs a regular fluoride toothpaste, both with 1450 ppm fluoride. QLF is a trademark owned by Inspektor Research Systems BV. 8. Data on file. Colgate-Palmolive Company. *Cumulative number of all clinicals conducted.