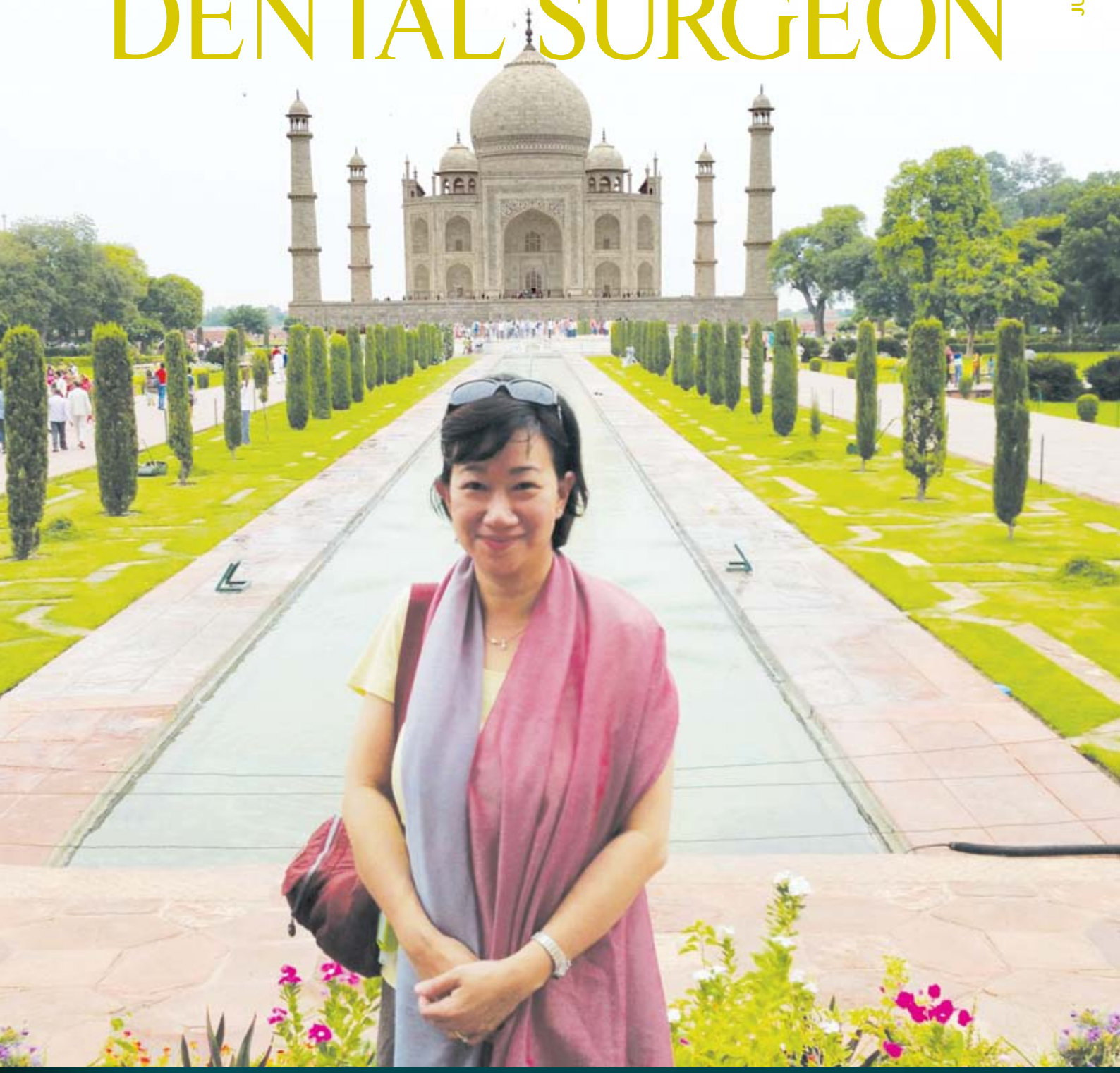
JUNE 2016 ISSUE

THE DENTAL SURGEON



NEW

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Elvin Ng
MediaCorp Artiste

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EDITOR'S NOTE

Transitions

Very quietly, half of 2016 has slipped by. And yet, within the dental community much has happened. The dust has now settled over a successful IDEM 2016, with record attendances. Within this issue we cover some of the highlights of the congress, along with a special Clinical Feature involving advice from distinguished speaker Professor Carl Driscoll.

In other events, two important changes of leadership have taken place: one within the ranks of the Singapore Dental Association, and the other in the Faculty of Dentistry at the National University of Singapore.

All of us who have graduated with our dental degrees from NUS over the past decades know how intimately the institution has shaped our early careers. Memories, shared experience, kinship, hardship. All these arose from a unique perspective where everyone knew everyone within a small professional community, in a small country.

Now this is about to change for future batches of students. Associate Professor Grace Ong, a household name in local dentistry, has passed the baton of Deanship on to Professor Patrick Finbarr Allen, newly-arrived from the UK. Read on to find out who he is, what he stands for, and the subsequent direction he will set for dental education in Singapore.

Within SDA itself, mid-year marks the election of a new Council, helmed by its first ever lady President, Dr. Lim Lii. To many of us Dr. Lim needs no introduction, as her humility, warmth, foresight and dedication will no doubt prove to be a guiding light for the Association's next chapter. Within this issue we find out a little more about what inspires her to continue serving our dental community in one of its highest offices.

Dr. Terry Teo
Editor-in-Chief
The Dental Surgeon

***Terry** is a paediatric dentist in private practice, and a part-time tutor at the Faculty of Dentistry at NUS. When he was young he loved reading and writing, until life and dentistry got in the way. He thus relishes this opportunity to have his cake and to eat it at the same time.*

CONTENTS & CREW

Our Dental Community

Giving a Little Back

The Art of Living

Assistant Editors

Dr. Tan Keng Wee is a general practitioner in private practice and has recently joined the editorial team of ***The Dental Surgeon***. He hopes to be able to contribute to the publication and help maintain its high quality. Keng Wee also volunteers with the SDA Ethics Committee as a mediator, and spends his free time practising yoga and searching for the perfect waffle.

Dr. Ivan Koh is an endodontist at NUH, and a part-time tutor at the Faculty of Dentistry in NUS. Ivan has been with ***The Dental Surgeon*** since 2005, starting off by contributing an article or two per issue. He then took on the role of layout editor for 3 years before taking a hiatus for his MDS studies and he is now back as Assistant Editor. Ivan likes to read in his free time and that has been one of the driving forces for him to rejoin ***The Dental Surgeon*** team. He hopes readers find joy in this publication, not looking at it merely as a "dental newsletter", but perhaps, as a magazine worth its weight to leave on the coffee table at the reception area of their clinics!

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Designed and printed by ColorMagic Pte. Ltd.

MCI (P) 149/03/2016.

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A Voice of Her Own

The Dental Surgeon welcomes Dr. Lim Lii, Singapore Dental Association's first female President. No stranger to the workings of the Association, Dr. Lim has been toiling behind the scenes for over a decade. She now shares her vision for SDA under her stewardship, and what this position of prominence means to her.

BY **DR. TERRY TEO**

Congratulations! Is there an added pressure being the first lady leader to introduce a new direction or perspective in the way things have been running in the dental association?

Thank you. Yes, indeed. There is a tremendous amount of pressure being "first" in anything, and the SDA Presidency is no exception. Many times, I do feel compelled to excel and not to disappoint members who have allowed me to be their representative. But the truth of the matter is, my predecessors have already charted the course and direction of the Association for the next millennium. All I really need to do now is to ensure that we stay on course and have a smooth journey.

You're not one to rest on your laurels. What do you have in store for the dental community the next two years?

Haha, I have been told that I am a slave driver in the SDA office. Yes, I do intend to "work" the Council and Committees during my term, to achieve the best results for our Association. In the next two years, apart from continuing to build on the good international standing of the Association, there are also many exciting events to follow. In 2017, there will be the SDA50 Convention. This is a symbolic year as it was 50 years ago when our Association was renamed Singapore Dental Association. There is also IDEM 2018, for which planning has already started. IDEM 2018 will be the 10th edition, and it is my dream to make it an IDEM that will be more than spectacular. As you can see, there is quite a bit of work in store for the team.

Your new Committee is relatively young. How do you think such a team can help you take SDA into the future?

A young team makes me feel young too! When I was putting the team together, it was my plan to have more representation from the younger dental cohort. Succession planning is a big priority for me, and I hope to be able to guide and nurture these dynamic individuals to be future leaders of the Association. As we now exist within the digital age and the era of the Millenials, only a youthful and current team can connect and stay relevant with SDA's ever-expanding newer members. I am confident that I have selected the best team-mates who will be able to achieve that.

You got your BDS in Australia, and upon your return hardly knew anyone in the dental community. What were those early days of service in SDA like, and how did you build your network until what it is today?

I first volunteered with SDA in 2003. It was a point in my life that I was getting lonely working in Singapore without many dental friends and colleagues. I was very fortunate that the first committee that I volunteered for was the Ethics Committee and who better to inaugurate me into the dental scene than the famous Dr. Raymond Ang. He inspired me to get more involved and was the person who nominated me into Council as a Member in 2006. By then, I had volunteered in various other committees. Serving in SDA gave me a sense of belonging, not to mention excellent interaction opportunities with the local dental fraternity. Everyone I met was so friendly and welcoming. With time, I made more and more friends and here I am today. Like everything in life, this is all a result of the relationships formed and the bonds forged.

What do you do in your free time, and how do you even find the time to juggle your work, family and SDA commitments?

I love watching movies, traveling, cooking and baking. I think I have fattened up some of my fellow Council Members with my cakes and cookies. Alas, time is something I can never have enough of. But I am blessed with understanding bosses and colleagues who allow me to work part-time and take time-off for SDA matters.

My family is truly my pillar of strength and support, with my quietly supportive husband who never once questioned my decision to commit to SDA, and my two sons who are proud that their mother is able to contribute to her profession.

What are the things or who are the people who inspire you?

There are too many people who have inspired me along the way, and to single out everyone would not be possible. But perhaps a mention should go to Dr. Myra Elliott. I went on my first overseas mission trip with Myra and from that day forth, I was inspired to come out of my cocoon and venture into the Singapore dental scene. Her friendliness, caring nature, enthusiasm for teaching others, and her constant giving back to the dental fraternity, all touched me deeply. I wanted to be someone like her, and to contribute to our profession in a similar way, and I hope that I have. The other person of great importance would be my immediate predecessor, Dr. Kuan Chee Keong. Chee Keong truly inspires me with his relentless dedication and passion for SDA. His foresight and steadfast leadership is something I am still learning to emulate.

Can you share what your biggest fear is as our next President of SDA?

My biggest fear is that I will not be able to live up to our members' expectations. Especially with all our female members, I fear that I may let them down in terms of my leadership. But I resolve to persevere, to constantly learn and listen, and lead by example!

Dr. Lim Lii *is a Singaporean who graduated from the University of Western Australia. She came back home in 1997, after a two-year working stint with Australian Dental Services, to be closer to her family. She has been in private practice since and now maintains a part-time position, allowing her to contribute wholly to SDA. She has thus served SDA since 2003 in almost every subcommittee. She is married to Desmond, and they are blessed with two teenage sons, as well as two adopted fur-kids.*


IDEM
SINGAPORE
Welcome to the Opening Ceremony of
IDEM SINGAPORE 2016
APRIL 8, 2016
Guest Of Honor:
HEALTH MINISTER GAN KIM YONG
MINISTRY OF HEALTH, SINGAPORE

IDEM Singapore 2016 Concludes on a Successful Note

This year's IDEM Singapore closed on a high note, bringing together 8,173 visitors and conference delegates to witness sharing by world class speakers and exciting innovations being showcased.

CLOSING PRESS RELEASE BY **KOELNMESSE**

IDEM Singapore 2016 has successfully concluded its three days' exhibition and conference, held from 8th to 10th April 2016 at the Suntec Singapore Convention and Exhibition Centre. For the first time, the event saw a larger exhibition space with 8,173 visitors and conference delegates from 72 countries participating.

Comprising both the trade exhibition and scientific conference, visitors and delegates were updated on cutting-edge dental technology and practical clinical products and techniques based on findings in emerging research. 512 exhibitors from 38 countries were present to showcase their latest innovations in clinical dentistry, digital technology and patient care products.

More sophisticated innovations

The IDEM Singapore 2016 trade show once again proved to be the preferred platform for exhibitors who wished to enter into the Asian markets, with one-third of exhibitors exhibiting for the first time at the event. Laísa França, Trade Promotion Coordinator for **ABIMO**, the Brazilian Medical Devices Manufacturers Association, shared her opinion on the association's IDEM Singapore 2016 experience: "Being geographically further away from the Asia-Pacific region, it is important for us to update our new technologies and the needs of the industry as we see Singapore as a key target for the dental industry. We hope to be able to participate in the next edition of IDEM Singapore in 2018".


HISTORY
Bony Blocks Movement
Heinrich Köle, 1959
APRIL 8 - 10, 2016
STRIVING FOR CLINICAL EXCELLENCE
Apical Osteotomies and Partial Interproximal Osteotomies


INTERNATIONAL DENTAL
EXHIBITION AND MEETING
APRIL 8 - 10, 2016
IDEM
SINGAPORE


EXHIBITION AND MEETING
IDEM
SINGAPORE
APRIL 8 - 10, 2016
Suntec Singapore Convention & Exhibition Centre
BUSINESS OF DENTISTRY


PREVENTIVE DENTISTRY

Numerous new and returning exhibitors who presented their latest innovative products were met with excitement and warm welcome from dental professionals and visitors alike. Amir Cahaner, Vice-President for the Israeli company **Adin Dental Implant Systems**, shared his thoughts on the importance of Asia for the dental market: "The future of the dental market is here in Asia. Other markets are matured or saturated and Asia is the place where things happen fast and on a large scale. IDEM Singapore is the gateway into the Asian market, it is the best place to meet a full range of product manufacturers, and make an informed decision of how you're going to proceed with your treatments."

Knowledge beyond teeth

This year's scientific conference was once again filled with enriching and informative sessions for dental practitioners and professionals. The theme this year was "Striving for Clinical Excellence", with the programme focusing on technical, practical and molecular methods used to improve a patient's oral health. The extensive scientific conference ran for three days, and featured 42 different conference sessions and 37 international speakers.

Against the backdrop of the conference theme, visitors were presented with many thought-provoking discussions. One of the highlights of the event was the full-day symposium, "**Towards the Post-Amalgam Era**" moderated by Dr. Hien Ngo. The symposium brought to light a highly topical issue facing the practice of dentistry and the delivery of dental care. Speakers shed light on the background and implications for the dental industry as a result of the Minamata Convention. The symposium rounded off with an insightful and lively panel discussion session.

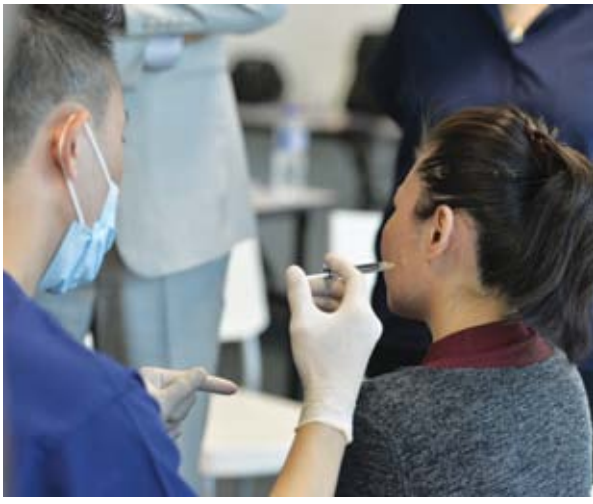
"Dental practitioners must be fully aware that dentistry is not merely about matters pertaining to the teeth, but it goes beyond. For instance, it has an impact on the environment, where biomaterials are concerned. As a result, dental schools need to educate and train dental professionals and students on the proper usage and disposal of dental materials," said Professor Martin Tyas, World Dental Federation (FDI) speaker at the symposium.

These days, a multi- and inter-disciplinary approach must be taken towards addressing the needs of patients. The modern dental team comprises of different experts who also leverage on the usage of dental technologies to provide better service for their patient's oral and the overall health. With this in mind, the scientific conference had three forums catered to the entire dental team.

Prof. Loh Hong Sai, Former Dean, Faculty of Dentistry, National University of Singapore (NUS), who presented at the Dental Hygienist & Therapist Forum on the topic, '**What you do not know about Dentistry**', is well acquainted with the importance of inter-disciplinary management of oral health. "Dentistry is more than just the treatment of the tooth. The oral health being an essential part to a patient's well-being requires a thorough and holistic understanding of medicine from the members of the dental team. With dental technology advancing at a rapid pace, research, treatment and management will require very close collaboration."

Anticipating the Future of Dentistry

As countries in the Asia-Pacific develop economically, consumers will demand better health and dental services. In return, this will boost the dental industry in the respective country and the region. "With an ongoing progressive dental industry in Asia, it will further underscore IDEM Singapore as a strategic event for industry players. The IDEM Singapore 2016 statistically proved once again that we are Asia-Pacific's most anticipated event on the dental calendar, providing all visitors the knowledge and insights in the industry. We will strive to continue to be the preferred platform for the dental industry to grow in this region,' said Mr. Michael Dreyer, Vice President, Asia-Pacific, Koelnmesse Pte Ltd.



Forging close partnerships with local and international organisations can also help to accelerate the development of the dental industry. As the industry grows globally, sharing knowledge and insights across boundaries will increase in importance for the progression of experts and professionals. "IDEM Singapore 2016 was a very successful event for the industry, as well for the Singapore Dental Association (SDA). We encourage professionalism and continuous learning through events such as IDEM Singapore. Through our partnership and efforts, we hope to ensure more participation from industry leaders in Asia and worldwide," said Dr. Kuan Chee Keong, Immediate Past-President of SDA.

While IDEM Singapore 2016 comes to a close, planning for the next special milestone, the 10th edition of IDEM Singapore has already begun. Committed to advancing the dental industry, close cooperation with more specialist associations such as the International Academy of Periodontology (IAP) are in the pipeline. "Establishing a Symposium on Periodontology as part of IDEM Singapore 2018 is an exciting new prospect for us. IDEM Singapore seems like the natural partner for IAP to collaborate with in the Asia-Pacific region, as they already organize such a professional conference and international exhibition. We hope to help raise the clinical credibility of IDEM Singapore by bringing in a speaker of the highest caliber in the field of periodontology," said Professor Ajay Kakar, President of IAP.

The 10th edition of IDEM Singapore 2018 will be held from 13th – 15th April 2018. For more information, visit *www.idem-singapore.com.*

Meeting the Dental Care Needs of the Elderly

BY **DR. ASHA KARUNAKARAN**

At the opening ceremony of IDEM, the Minister of Health, Mr. Gan Kim Yong stated how the population of Singapore is changing. The Minister outlined the three ways his Ministry will be addressing the dental care needs of the growing numbers of elderly patients.

THE GROWING PROPORTION OF THE ELDERLY

2016

1 in 8 are 65 years and above

2030

The proportion will double

STRATEGIES TO MEET DENTAL CARE DEMANDS

- INFRASTRUCTURE DEVELOPMENT
- MANPOWER TRAINING
- MAINTAINING AFFORDABILITY

CHECKLIST FOR CHAS DENTAL ADMINISTRATION

By **Agency for Integrated Care**

In this issue, we share a checklist covering what's required for clinical documentation and the do's and don'ts of CHAS claim submissions.

CLINICAL DOCUMENTATION

Documentation of Procedures
CHAS dental clinics are required to keep records of the following:

- ☑ CHAS Patient Consent Forms with all essential information filled up
- ☑ Dates of all dental visits
- ☑ Tooth number or notation, indicated when applicable
- ☑ Tooth surface, indicated when applicable
- ☑ Documentation of clinical conditions, treatment and follow-up procedures
- ☑ Radiographs records, if any
- ☑ Receipts showing the itemised breakdown of the treatment costs

Please ensure that the information submitted on CHAS Online is consistent with the treatment in the case notes.

CLAIM SUBMISSION

Non-Claimable Dental Procedures
Claims should only be submitted for dental services covered under CHAS.

Examples of non-claimable dental procedures:

- ⊘ Implant/mini-supported crowns, inlays, resin retained bridges (acid etched bridges) and pontics for bridges
- ⊘ Root planing as a curettage procedure

Claims involving multiple visit procedures
For dental procedures that involve multiple visits such as dentures, crowns and root canal treatments, claims should only be submitted upon completion of the procedure.

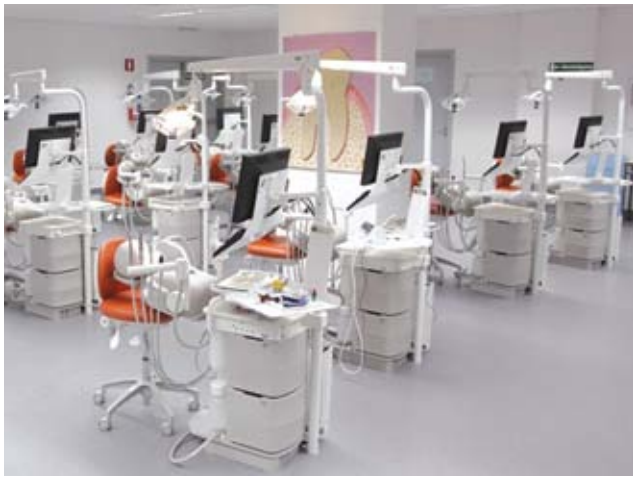
Incorrect Classification of Procedures
For example, Class I, V and VI fillings should be claimed as "simple" and not "complex fillings". Extraction of anterior tooth should be claimed as "simple" and not "complex extraction".

Please note that clinics can only submit one claim per patient per visit date.

Non-compliant Claims

Your Administrator (NHG Polyclinic/Singhealth Polyclinic) will recover any non-compliant claims discovered during audit. They include those made for non-claimable dental procedures.

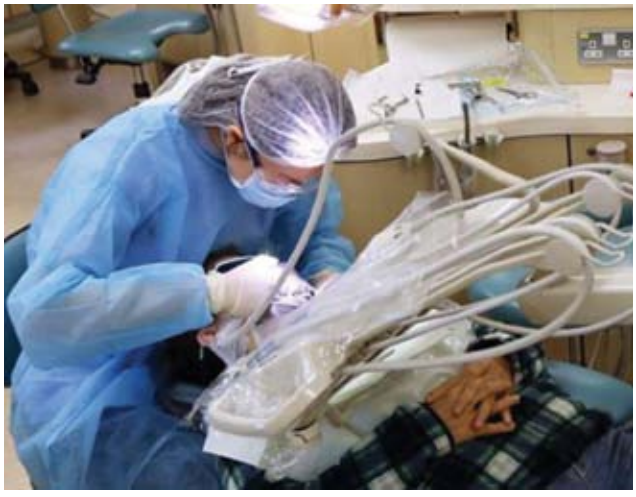
If you have a question on CHAS that has not been addressed here, kindly contact **AIC at dental@chas.sg** or **6632 1199.**



Infrastructure development

Singapore's first Geriatric and Special Needs Dentistry clinic was opened at the National Dental Centre last September. The Centre for Oral Health at NUS, due to open in 2019, will also offer geriatric and preventive care dentistry services to cater to the increasingly complex dental needs of our aging population.

MOH is currently exploring the feasibility of providing further training and empowerment of our pool of oral health therapists and nurses to manage the oral healthcare needs of residents in nursing homes and community hospitals, including the feasibility of providing domiciliary dental services via portable dental units.



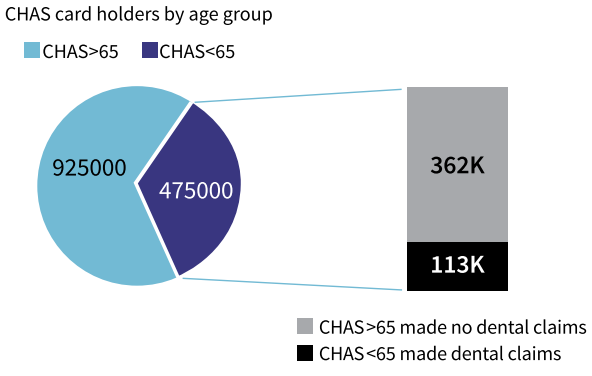
Manpower Training

MOH has sponsored seven candidates for its Geriatric and Special Needs Dentistry scholarships. Four have since returned to serve the community.

The dental school has also reviewed its curriculum to include geriatric dentistry for all our future dentists.

The training of Oral Health Therapists (OHTs) will be shifted from the Health Promotion Board to the Centre for Oral Health when it is ready. OHTs will interact and learn to work with dental undergraduates and postgraduates as a team. This will enable the oral health team to work closely with the medical and the allied health teams, to provide holistic care for our seniors.

Number of CHAS Card Holders: 1.4 million (Dec 2015)



Maintaining Affordability

As of December 2015, about 1.4 million CHAS and Pioneer Generation cardholders were eligible for CHAS subsidy, of which 475,000 are aged 65 years old and above – this includes all Pioneers.

Last year, 113,000 Singaporeans aged 65 years and above used their CHAS or Pioneer Generation card for dental care.

Eligible Singaporeans are able to easily access subsidised dental treatment at CHAS private dental clinics near their homes. Since the scheme's introduction in 2012, the number of participating private dental clinics has grown to about 650 island-wide.

What does this mean for the individual dentist?

It is good that 650 clinics – more than half of the 1,035* private dental clinics in Singapore – are participating in CHAS. It is surprising that despite the subsidies available, only about a quarter of the seniors holding CHAS cards sought dental treatment in 2015. It is possible that a significant proportion of seniors do not access care because of lack of mobility or issues of accessibility. Dentists can participate in programmes that bring dental care to Homes e.g. through the initiatives of the Singapore Dental Health Foundation.

More likely, the majority of seniors may feel that dental care is not important to them. This has to be addressed by greater public education. As the WHO has stated, "*…viewing the mouth separately from the rest of the body must cease because oral health affects general health*". Dentists can do their part in that education through the discussions they have with patients and their families.

The SDA may organise specific CDE programmes on the management of the elderly e.g. What are the issues to be alert to when the elderly patient comes in with multiple medication. How do we recruit the care-giver to include dental care?

As the government sets up new centers of specialty care, it is incumbent on private practitioners to know when, how and where to refer patients that they cannot manage.

As patients live longer, they will be keeping their teeth longer. The emphasis on prevention of disease – the cheapest form of healthcare – is more important than ever. Dentists providing complex restorative procedures must discuss its longevity and the maintenance required to keep those restorations. Can that implant inserted into a 40-year-old last him till he is 90?

The private sector may see a greater participation of oral health therapists in the competition to deliver cost-effective delivery of preventive care. Dentists unused to working with new categories of clinical staff will do well to develop protocols on how to work effectively with them

Population changes, increased expectations and constant innovation in dentistry will continue to make dentistry interesting – and challenging.

**figure received from Licensing, Inspection & Audit Branch of the Ministry of Health*

Dr. Asha Karunakaran *is a long-time volunteer of the SDA currently serving as Chair of the Ethics & Practice Management Committee. She is a general dentist in her own practice in Novena Medical Center.*

Are We Clean Enough?

BY **DR. SURINDER POONIAN** AND **DR. TAN KENG WEE**

'Life is not germ free'.

Dr. John Molinari, microbiologist and Director of Infection Control for 'The Dental Advisor' in Michigan shared some useful tips at IDEM on the topic of infection control. We have combined the information shared in the lecture with current best practices, and outlined the risks and challenges here for you.

There are continual challenges with the emergence of new diseases in the world – microorganisms will find a way to survive; they will adapt and change in order to do so. It is our role as dental professionals to prevent the spread as best as possible. We are exposed to microorganisms routinely and contamination can happen anywhere. Our duty is to break the 'chain' of cross contamination to prevent individuals becoming infected. A suggested way of practising is to treat all patients as though they are carrying an infectious disease.

Infection transmission in the dental surgery can happen by:
1. Direct exposure
2. Indirect exposure
3. Air-borne transmission

We usually think of protecting the patient from disease transmission, and rightly so. However, an overwhelming majority of infection exposures go from the patient to the health care worker - patient to dentist transmission can occur easily.

Hand hygiene

Hand hygiene is the most important measure to prevent the spread of infections among patients and dental healthcare personnel. Many infections trace back to contaminated hands. Washing hands between changing gloves is of paramount importance to reduce transmission of bacteria as it lowers the concentration of resident flora and removes transient organisms on the skin. All personnel should be adequately educated and trained on proper hand hygiene. Hand hygiene posters can be put up in the operatory to remind all personnel as to when hand hygiene should be performed.

The Five Moments of Hand Hygiene, based on WHO Guidelines on Hand Hygiene in Health Care:

Personnel should perform hand hygiene for 20-30 seconds using alcohol hand-rub between patients. However, if hands are visibly soiled, washing hands with soap and water for 40-60 seconds is critical for complete removal of infectious agents. Alcohol does not effectively remove contaminants on soiled hands or on surfaces.

Splatter and Splashes

What would happen if you could see saliva? In 1986, Cottone and Molinari [1] carried out an experiment by placing red dye in the mouth of a mannequin. After using a high-speed hand-piece and ultrasonic scaler in the oral cavity, the coverage of the operator was reviewed. There was an excess of red dye in the areas of the eyes, mouth, face and chest areas.

Areas contaminated by splatter after using high-speed hand-piece and ultrasonic scaler

Anything touched during treatment including drawers, charts, pens, instruments, the light and chair will require thorough cleaning to prevent the spread of contaminants.

Personal Protective Equipment

Eyewear, gloves, masks and even gowns are essential personal protective wear to avoid soiling and contamination of the body. The eyes are the most unprotected area when operating and recommendations state that personal glasses are too small to protect you fully. The spray from air-rotors and scalers can lead to ocular herpes lesions, herpetic keratitis and staphylococcus conjunctivitis if necessary precautions are not taken.

Infectious diseases

Hepatitis B and C viruses (HBV, HCV) and HIV have long been recognized as occupational risks – these diseases are transmissible through blood products, and needle-stick injury or fluid splashes on mucosa can result in an infection being passed on. HBV remains infectious for extended periods on environmental surfaces and is transmissible in the absence of visible blood. Even when we do recognise exposures to potentially infectious blood or body fluids, many often do not seek post-exposure prophylactic management. Appropriate re-sheathing and care with needles is mandatory.

We may not know if our patients are carrying any infection - they may not know and may be asymptomatic. Being vigilant with infection control and taking universal precaution minimizes the risk of transmission to everyone. Regular screening for infectious diseases is highly recommended for dental healthcare personnel.

Reference

[1] *Considerations in developing an infection control program for the dental operatory, Molinari JA, Cottone JA; CDA J. 1986 Aug;14(8):14-9*

Surface cleanliness, sterilization, and disinfection

Investigations in infection prevention procedures showed that there were cases where there was failure in heat sterilizing dental hand-pieces between patients, and failure to monitor autoclaves[2].

Disinfection processes must be commensurate with the degree of sterility required – use of surface covers and high level disinfection with broad antimicrobial non-toxic disinfectants is sufficient at times, while some items which are strictly single-use should not be reused[3].

Patient-care item	Examples	Process
Critical: penetrate mucous membranes or contact bone/sterile tissues	Surgical instruments, scalers, scalpel blades, burs, matrix bands	Autoclave sterilisation between uses or single-use
Semi-critical: contact only mucous membranes and do not penetrate soft tissues	Mouth mirrors, amalgam condensers, and dental hand-pieces	Autoclave if heat-tolerant; otherwise high level disinfection (liquid immersion in glutaraldehyde)
Non-critical and environmental surfaces: only contact intact (unbroken) skin, which serves as an effective barrier to microorganisms	X-ray heads, face-bows, light-cure device	Intermediate (visible blood) to low-level (no visible blood) disinfection with disinfectant
Treatment auxiliary	Dental impressions, bite registrations, stone casts	Cold water rinse to remove visible blood followed by 10min immersion in 1000ppm chlorine-based solution[4, 5]

References

[2] *Centers for Disease Control and Prevention, Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care, published 28 March 2016*

[3] *Radcliffe et al, 2013; Oklahoma State Department of Health, 2013*

[4] *Al-Jabrah O, Al-Shumailan Y, Al-Rashdan M. Antimicrobial effect of 4 disinfectants on alginate, polyether, and polyvinyl siloxane impression materials. Int J Prosthodont 2007; 20: 299–307.*

[5] *Taylor R L, Wright P S, Maryan C. Disinfection procedures: their effect on the dimensional accuracy and surface quality of irreversible hydrocolloid impression materials and gypsum casts. Dent Mater 2002; 18: 103–110.*

Waterlines

Legionella bacteria can be present in water. There have been two cases of death from Legionella bacteria contamination in dental unit water lines. Water lines should be flushed prior to seeing patients when the dental chair is first switched on, and then in between patients to ensure asepsis.

Duty of care

We have a duty of care to our patients, our colleagues and ourselves. It is important to ensure all members of the dental team are up-to-date and are aware of the risks and preventative measures associated with infection control management within Singapore.

Dr. Surinder Poonian *is a general dental practitioner in Singapore taking a holistic view on healthcare. In her spare time she enjoys travelling, outdoor activities, karate and has a keen interest in general well-being. Surinder has also been involved with various volunteering projects including dental mission trips, teen retreats and public education on oral health.*

Dr. Tan Keng Wee *is a general practitioner in private practice and has recently joined the editorial team of* ***The Dental Surgeon****. He hopes to be able to contribute to the publication and help maintain its high quality. Keng Wee also volunteers with the SDA Ethics Committee as a mediator, and spends his free time practising yoga and searching for the perfect waffle.*

Why Even Great Implants Fail

In this special Clinical Feature, a mentor and his protégé discuss a topic very close to every dentist's heart.

WORDS AND PHOTOS BY **DR. TAN KIAN MENG**

When I was asked to interview Professor Carl F. Driscoll, our SDA Masterclass Speaker for the recently concluded IDEM Singapore, on the complication and maintenance issues of implant restorations, I knew it wouldn't be an easy topic to discuss. As we all can agree, the number and complexity of implant complications have increased over time. Plausible explanations are the fact that more and more implants are being placed and restored each day, and that more dentists with varying clinical experience and training backgrounds are involved in implant dentistry. Furthermore, we are constantly pushing the boundaries of implant dentistry with newer technology and surgical protocols. The good news, however, is the fact that we are now recognising the rising number of implant complications as reflected in the ever-expanding literature, and the increasing number of presentations given on the topic.

In broad, we can categorise implant complications based on their aetiologies or presentations: surgical, biological, mechanical or aesthetic. We can also define complications based on the timing of their presentations. Early complications are usually associated with inadequacy in diagnosis, treatment planning and surgical procedures. Late complications, on the other hand, occur during the prosthodontic treatment and maintenance phases after initial successful osseointegration.

In his talk at IDEM Singapore, Professor Driscoll focused on the mechanical aspects of implant complications; he showed that even once-successful implant restorations can start to fail and create problems. The more common mechanical complications include loosening and fractures of screws as well as fractures of restorative materials (e.g. implant framework, veneering material). Most screw loosening occur as a result of insufficient delivery of torque during screw tightening. Screw loosening and fractures can also be attributed to prosthesis misfit, heavy occlusal forces (i.e. parafunctional activity) and excessive cantilever length within the prosthesis. The latter two factors are also responsible for fractures of the restorative material. Thus, the choice of restorative material should always be based on individual patient needs. Below are the questions posed to Prof. Driscoll.

Thank you for sharing with us your insights on this difficult topic. Do you think there is a lack of emphasis on the understanding and management of implant complications?

There are two types of implant complications, surgical and mechanical. These have been very well documented throughout the literature over time. What I have presented at IDEM is what happens when even the successful treatments start to break down over time. These are typically due to mechanical factors as a result of the limitations of the materials used in the restorative aspect of implant therapy. This is exacerbated by accumulative damage, where the forces over time start to degrade the materials used and require replacement or re-doing of the restoration.

In your observation, what are the common implant complications dentists faced?

From a surgical perspective, malplacement of the implants has been the most common complication. From a restorative perspective, material failure is the most common complication.

Are there any misassumptions or mistakes that dentists often make which may have contributed to some of the complications?

From a surgical perspective, assuming a slight change in position, angulation, or depth of the implants will not make a significant difference in the restorative outcome or costs. From a restorative perspective, assuming that acrylic resin is a good material to keep in the mouth 24/7.

Figure 1. The implant was placed too labially, casting a greyish discolouration against overlying mucosa which resulted in aesthetic impairment.

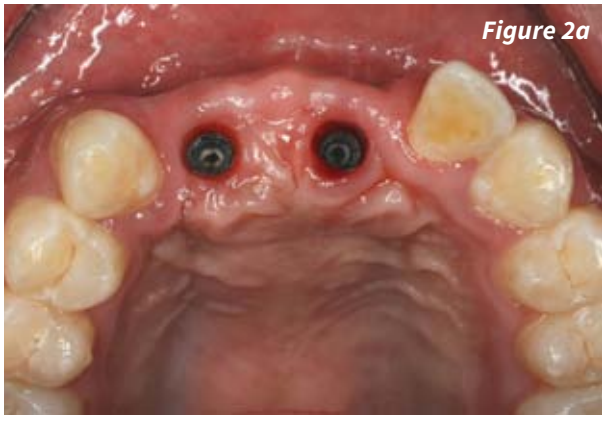


Figure 2a. Implants were placed too palatal relative to planned restoration.

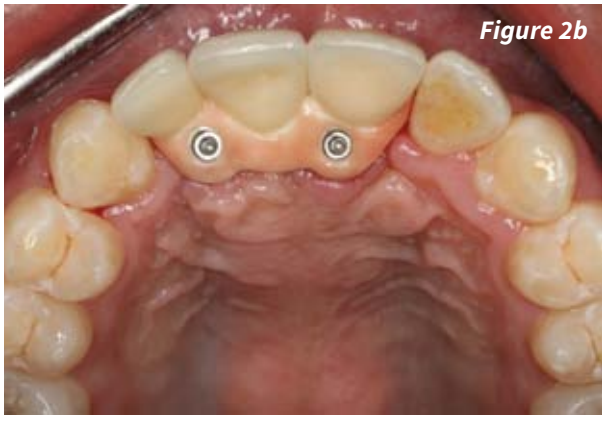


Figure 2b. Despite implants being restored with a screw-retained prosthesis, late complication may occur in the form of abutment screw loosening or biological challenges due to difficult access to oral hygiene maintenance.

Do you think the tendency for implant complications increases as the complexity of implant restoration increases?

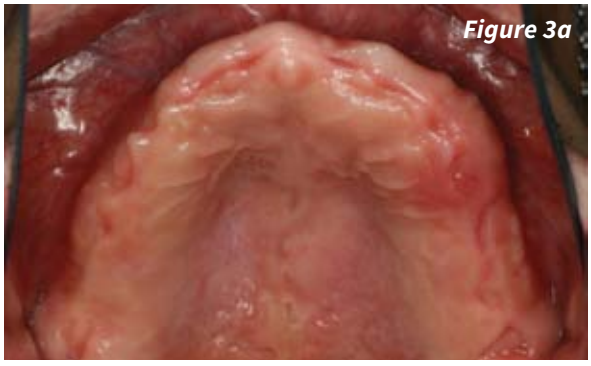
Certainly, the most successful implant restoration is the single crown. The more complex the surgery or the restoration, the more complications you might expect. Both simple and complex treatment requires all the proper diagnostics combined with the precise execution of the treatment. Small miscalculations manifest themselves exponentially in the more complex cases.

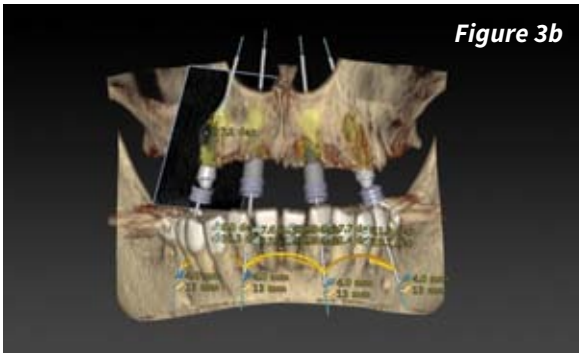
What is your advice for dentists who would like to prescribe more complex treatment so as to avoid major pitfalls? What is your opinion on the All-on-4 concept?

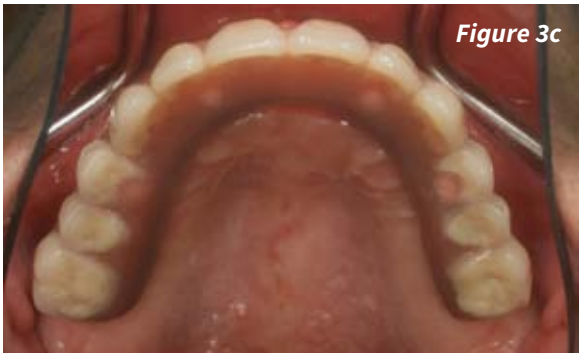
The "All-on-4" concept has proven widely acceptable and allows for many to receive implant treatment whereas in the past, costs may have made it prohibitative. As I mentioned before, both simple and complex treatment requires all the proper diagnostics combined with the precise execution of the treatment. There is an inherent risk in placing four implants to retain a fixed complete denture especially in patients with opposing natural teeth remaining, parafunctional habits and large occlusal forces.

To what extent can digital technology reduce implant complications?

The greatest impact of digital dentistry is that it gives us much greater diagnostic tools to evaluate and plan the implant therapy from surgery through final restoration. This decreases the human error significantly thereby hopefully increasing the success of the treatment. Now, materials may be the limiting factor - as I mentioned previously - hence we can have problems with materials breaking down.







Figures 3a to 3c. The diagnosis, treatment planning and subsequent surgical and prosthetic rehabilitation process of implant dentistry has benefited in recent years from cone beam computed tomography and digital software.

If restorative failure is inevitable due to wear and tear, what should we be telling our patients regarding longevity of implants, even single unit ones? Are they expected now to last as long as they think they do?

As you know there is no material that we can guarantee will last a lifetime in anyone's mouth. As you have seen in my presentation, we must be cognizant of the various materials that we do use and the drawbacks associated with. This is an integral part of our diagnosis and treatment planning. We must know the limitations of what we are doing and what we are putting in our patient's mouths. The same is true of our surgical colleagues knowing what medical and dental conditions exist that can affect the success of our implant treatments.

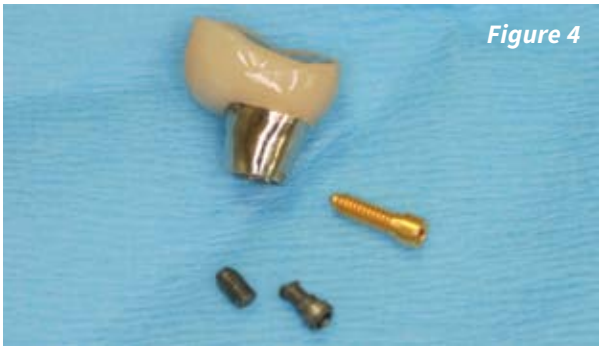
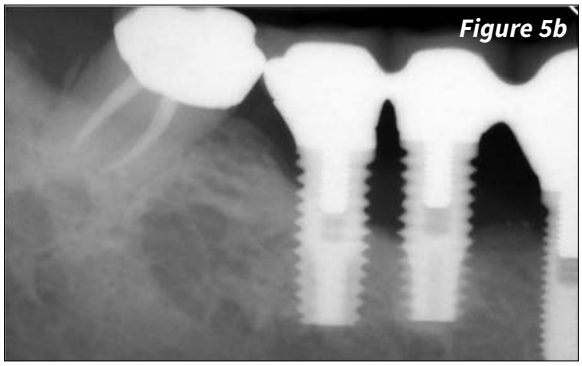


Figure 4. Abutment screw fractured over time due to fatigue and possibly the effect of cantilever within the crown as implant was not placed center to the planned restoration.



Figures 5a and 5b. Splinted implant restorations were seen to experience gradual bone loss over the years, despite being stable and functional. Such situations may occasionally present the dilemma of implant removal versus monitoring.

Dr. Tan Kian Meng *(pictured together with* ***Prof. Carl Driscoll****) received his Bachelor of Dental Surgery degree from the National University of Singapore. Having received numerous medals and book prizes, he graduated from his dental school as the valedictorian. He went on to obtain a Master of Science degree and a Certificate of Prosthodontics at the University of Maryland, Baltimore. He also completed a one year Fellowship in the Maxillofacial Prosthetics and Oncologic Dentistry at the M.D. Anderson Cancer Center, Houston. He is now a Diplomate of the American Board of Prosthodontics and a fellow of the American College of Prosthodontists. Currently, he is working at the Khoo Teck Puat Hospital in the field of fixed, removable and maxillofacial prosthodontics.*

A Vision of Excellence

The Dental Surgeon interviews Professor Finbarr Allen, Dean of the Faculty of Dentistry, National University of Singapore, on his plans for the future Centre for Oral Health and dental education in Singapore.

BY **DR. TONG HUEI JINN**

Tell us a bit about yourself.

I graduated from Dental School at the National University of Ireland, Cork, Ireland in 1988. In those days, it was not possible to start your career in Ireland as the public dental service was very small and not hiring. There were no corporate dental practices, and general dental practices usually could only support the practice owner. Basically, all new graduates left the country, mostly for the United Kingdom.

I worked in general dental practice for five years in Oxfordshire, UK, and I particularly enjoyed oral rehabilitation and prosthodontics. I pursued a Masters degree in Prosthodontics at the University of Manchester, and then residency training at Leeds Dental Institute and Newcastle Dental Hospitals. I got involved in research in Manchester, and as part of my programme, spent some time at Radboud University of Nijmegen, the Netherlands. I have continued this relationship to this day, and greatly admire their teaching philosophy.

It was in Nijmegen, and later, in Newcastle University School of Dental Sciences that I developed my interest in Gerodontology. I completed my PhD and specialist clinical training in Prosthodontics and Restorative Dentistry at Newcastle University in 2000. In 2001, I was fortunate enough to be offered a senior academic position at University College Cork and appointed as Consultant at Cork Dental Hospital. In 2006, I was made Dean of Dentistry and Clinical Director of Cork Dental School and Hospital, a position I held until 2013. I returned to my position as Professor of Oral Rehabilitation and Prosthodontics and Head of Restorative Dentistry in 2013, a position I held until January 2016.

My clinical interest is in restorative care of the older patient, and, management of congenital absence of teeth. My research interest is in the relationship between tooth loss, quality of life and oral function. In addition to undergraduate teaching, I have been training programme director for Prosthodontics at Cork Dental School and Hospital, and supervised six PhD projects to completion. I enjoy the diversity of clinical academia, and the clinical, educational and research components of this career pathway.

Professor Patrick Finbarr Allen

On a personal level, I am married to Edith (another dentist!) and we have two grown up children just finishing University. I enjoy all ball sports, hill walking and good books.

What do you like most about being in Singapore?

Although I think it surprises the locals, I do like the weather! I also love the food, even the spicy stuff! Everyone has been very helpful and welcoming to me, which I greatly appreciate. Its great to be part of a top grade University and Hospital, and I really look forward to a good future here.

What do you think are some of the strengths and potentials of the NUS Faculty of Dentistry and the future Centre for Oral Health?

A key strength is the quality of the students, and there is a healthy demand for undergraduate and postgraduate dental degree programmes. That is really positive, and a great advert for the Faculty within the University. At undergraduate and postgraduate level, the students benefit from dedicated clinical teachers with great expertise and experience. The postgraduate training programmes are as good as any I have seen around the world, and I think can only get stronger as we have access to a greater number of patients with a mix of problems to manage. I think there is great potential to work more closely with other centres, for instance, the Ng Teng Fong General Hospital Oral Surgery services.

The Centre for Oral Health is a fantastic opportunity to develop a stronger research profile, and to ultimately become a leading academic health centre in Asia. This can be achieved by leveraging the expertise in the NUS and NUHS. There is a real desire in both of these entities that the COH is a big success, and it is unusual in my experience to see oral health being given such a strong level of support from outside dentistry.

I think we need to use this opportunity to train students so that they develop lifelong learning skills, as the profile of patient and disease is rapidly changing. We also need to develop better models of care which are evidence-based and offer patients good prospects for healthy oral function. This can be achieved through a strong research programme, and we need to develop programmes which encourage graduates to be involved in clinical research. The ecosystem planned for the COH is aimed at achieving this, and my intention is that we will make solid progress in this direction over the next five years.

What are some of your areas of interests/expertise – both academic and on a personal front? How do you see these fitting into the overall future/aspirations of the Centre for oral health?

I have a clinical and research interest in geriatric oral health. We have a rapidly changing landscape, with an ageing population and a rapidly diverging profile of older adults. I have pursued research to help me answer some of the questions I am asked to address as a Prosthodontist. For instance, why do most edentulous patients cope with dentures, whilst others do not? This was the subject matter for my PhD, and I helped to develop some of the tools currently used to measure oral health related quality of life.

Why do some people accept partial tooth loss, whilst others seek complex treatment to restore molar teeth? I have worked with colleagues in the Netherlands to investigate the role of functionally orientated treatment planning (shortened dental arch), and conducted clinical studies to compare these treatment strategies with conventional treatment. This work is highly cited, and its great to see my research influencing clinical practice elsewhere.

On a personal level, I plan to develop geriatric oral health research at the COH, as there is a need to gain a greater understanding of oral health of older Singaporeans. The research will assess the factors that influence the progress of caries in older mouths, and what preventive regimes can reduce the incidence of caries.

I also aim to investigate the relationship between medical status and oral health, and identify the pathways of interaction between the two. This work will involve a lot of collaborators across a number of agencies. We have a lot of great work going on in our laboratories, and need an outlet to translate some of these findings into a clinical setting. I plan to set up a clinical research centre for this purpose, and this will provide a facility for our clinical scholars and scientists to conduct high quality clinical trials and observation studies. As a former general dental practitioner, I understand that research findings can often not translate to general practice. I am keen to set up a primary care based research network to run clinical studies in general practice in Singapore, i.e. a “real world setting”. I’m hoping that I can persuade some general practitioners to get involved in this initiative in due course! One pressing challenge is to persuade clinicians that they have a future in a clinical academic setting, working with a mixed public and private patient workload. I do not make a clear distinction between “clinical” and “academic” - for me, this is an artificial distinction.

We all want the same thing – high quality care for our patients. Some have skills and interests more aligned to the direct clinical care side, some more on the teaching and research side. However, excellent clinicians have a lot to offer on the academic side, and I’m sure we have all been inspired by dedicated clinicians to improve our own skills. On the flip side, academia-inclined staff need to practise their discipline and use their clinical and public health

The Faculty of Dentistry building through the years

1929: Beginning in a disused ward at the Singapore General Hospital

1949: University of Malaya was established, amalgamating with King Edward VII College of Medicine

1986: New campus set up at the National University Hospital

2010: New Faculty building at NUS CP9

The future: artist's impression of the Centre for Oral Health

experience to enhance their teaching and research programmes. We need both skillsets, and if they can work collaboratively in the right setting, then I think it will create something unique and distinctive in the Centre for Oral Health. This is the challenge and opportunity.

Finally, I want to see our research and education programmes strongly influence oral healthcare policy in Singapore. In addition to what I have just outlined, this will involve the strengthening of our dental public health and population health expertise. We will be working with our colleagues in the SSH School of Public Health to help us achieve this ambition.

How would you describe your management style?

I like to work in a team environment, setting out clear objectives and articulating the overall vision. I see my role as providing the strategic direction, and empowering colleagues to develop the tactics to implement the strategy. I am passionate about developing talent and potential, and my most satisfying achievement has been the progress of people I have mentored over the years. Its really great to see them progress and become mentors in their own right.

I had the good fortune to have good mentors during my career, and I feel a sense of responsibility to pass on guid-

ance and advice to younger colleagues with the hindsight of my own experience. It's not a hardship for me, and I enjoy it. I don't micro-manage, or at least I try not to. Once I delegate tasks and responsibilities, I try to make it clear that I trust the individual to undertake that task without having to look over their shoulder at me. I hope people find me approachable – I think its important to listen and hear. However, I do believe that you should help people solve their problem themselves, not try to solve the problem for them.

What do you hope the NUS Faculty of Dentistry and the Singapore Dental scene be like in 5 and 10 years time?

My hope and ambition is simple: that the National University Centre for Oral Health Singapore will be the best oral health care centre in Asia, renowned for the quality of its patient care, and its training programmes. I want its research profile to grow to a level where its research output will be influential on a global scale, and we will be known as a centre of excellence. I want this centre to be a place where our staff are very happy to come to work in a team-based ethos. I want our patients to know they will get the best possible care here, and they can rely on us for a great service. I would like our graduates to enter a mentored period of practice to help bridge the period between the undergraduate programme and the first two years post-graduation.

I hope that this will lead to a longer relationship between the graduates and the Centre for Oral Health, and that we can develop continuing education programmes to foster this relationship. I would like to see this extended to the region as well as Singapore. Finally, if we can produce future-ready graduates, high quality research and excellent clinical care, I believe we will help transform the oral healthcare landscape for Singapore.

A Timeline of the Heads of the Faculty of Dentistry

1929 **Professor E.K. Tratman appointed Head of the Dental School**

1950 **Professor R.J.S. Tickle assumed post as Head of the Dental Department**

1966 **Professor Edmund Tay elected as the first and longest-running Dean of the Dental Faculty**

1985 **Associate Professor Loh Hong Sai appointed second Dean**

1995 **Professor Chew Chong Lin appointed as third Dean**

2001 **Associate Professor Keson Tan appointed as fourth Dean**

2010 **Associate Professor Grace Ong appointed as fifth Dean**

2016 **Professor Patrick Finbarr Allen appointed as sixth Dean**

Dr. Tong Huei Jinn *is currently teaching at the Faculty of Dentistry in NUS, and works as a Paediatric Dentist in NUH and School Dental Services, HPB. Huei Jinn is delighted to return to* ***The Dental Surgeon*** *after her stint as its Editor before leaving for post-graduate studies in 2007, and hopes to continue to do the magazine and our profession proud. When time permits, Huei Jinn loves travelling.*

An Overseas-Trained Dentist in Singapore

BY **DR. FAISAL BIN ABDUL AZIZ**

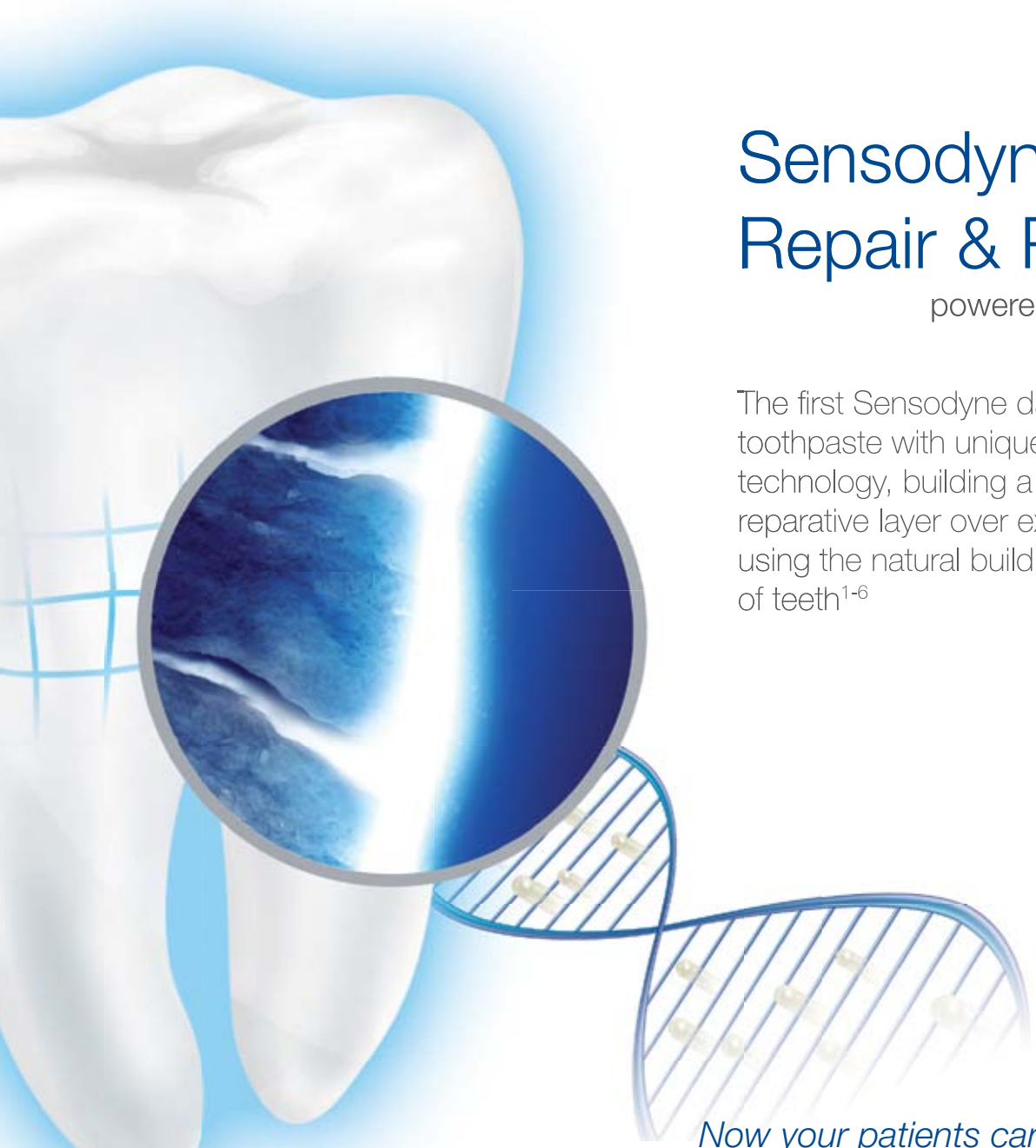
It has been eighteen months since I started working as a dental officer in Singapore, having graduated from King's College London (KCL) in July 2014. Throughout my time in KCL, I always maintained a strong sense of belonging and attachment to Singapore, despite being far away from home. I was the president of the KCL Malaysian and Singaporean Society, and I also had a Singapore flag in my room (yes, I was one of those types!). It just seemed natural then for me to apply for the pre-employment grant offered by MOHH, to encourage overseas-trained dentists and medics to return to Singapore to practice. My application was successful and I am fortunate enough to have the chance of working in Singapore, in a public institution serving the Singaporean population. I have been asked to write an article to share my journey in adapting to the local system and nearly two years on, I feel it is timely for me to reflect on this journey which I have chosen. I hope that through my sharing, I can inspire more people to take the time to reflect and think about what our motivations are and what inspires us to continue doing what we do.

After graduating, I was posted to the National Dental Centre Singapore (NDCS), and I have been there since. Working at NDCS is a privilege for me as I have had the opportunity to work closely with many talented specialists, who allowed me to tap on their experience and expertise in managing complex cases. My first few months at NDCS, however, were not the easiest - mainly because I was a newly-graduated foreign trained dentist, joining colleagues who had all graduated from the National University of Singapore Faculty of Dentistry, having known each other for years. It was tough initially trying to fit in but after some time, I was lucky enough to have met quite a number of friendly colleagues who have now become good friends of mine.

Singapore and London are similar in a way that they are both cosmopolitan cities, with a melting pot of cultures. The majority of patients I see are mainly Chinese, Indians, Malays and Eurasians. Being conversant in only English and Malay, I have had patients walk out the moment they realised that I was unable to speak Mandarin. I was never confronted with such a situation back in the UK, and it certainly came as a surprise to me when I experienced this for the first time. I used to get upset and found these patients rather rude but over time, I have learned to accept it as part of my work here and to focus my efforts on patients who are willing to work together with me to improve their oral health.

My graduation in London

As a student in the UK, we worked under the National Health Service (NHS) healthcare system. The NHS provides subsidised treatment to the British population where charges are divided into three bands depending on the



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treatment required. Children, the elderly and the disabled are exempted from paying and they receive treatment for free. Singapore however, adopts a co-payment scheme. I have come to realise that healthcare policies play a large role in influencing a patient's decision-making process, and working in two vastly different healthcare systems has allowed me to see this quite clearly. This was one of the few reasons which sparked my interest in public health, which I hope to pursue in time to come.

A friend and classmate of mine Dr. Dawn Siow, who also took up the pre-employment grant, shared with me that she struggled with the abbreviations used in local dentistry, which are different as used in the UK. For example, the term "caries free" is used quite regularly all over the world. In the UK it is used to indicate that the tooth itself is void of caries; however in Singapore, it is used as a verb to describe the action of removing caries from the tooth. "Dental clearance" also caused some confusion as back in the UK it meant extracting all remaining dentition, whereas in Singapore it means "to render a patient dentally fit". Dawn also shared with me that she found the patient base in Singapore to be less aware when it comes to their medical and dental condition. Often, she realised that she had to adopt a more patriarchal approach when dealing with her patients, as compared to a consultative process back in the UK.

Dawn and I have been at NDCS since we graduated, unlike one of our other classmate, Dr. Tracie Ooi. Tracie has served in three different institutions covering primary and tertiary care, the School Dental Services being one of them. During her posting at a primary care institution, Tracie shared that she found it challenging to see patients within the 20-minute time slot given to her, as she would have liked to take more time in building rapport with her patients. However, she found the experience rewarding as it honed her skills to communicate with her patients effectively, and also gave her the ability to speed up her treatment. Tracie, who had been in the UK for more than seven years, also had difficulty in communicating with her Mandarin-speaking patients. However, she managed to pick up new words and also learn the dental lingo, with the help of her nurses.

Drs. Tracie Ooi and Dawn Siow

Despite the challenges we faced, the strong culture of mentorship here is something we are truly appreciative of. The strong ethos of teaching and mentoring at the various institutions is beneficial to many newly-graduated dentists such as us, with many senior clinicians having gone the extra mile to teach, develop and nurture the young dentists.

In every decision we make, be it personal or clinical, it is always a balance between the positives and negatives, and in almost all the decisions we make, there is an element of compromise and sacrifice for the greater good in the long term. I had a challenging first few months back in Singapore; however I can safely say that I am settling in well and have not regretted my decision to return home. I hope this article has given an insight to how it is like for a foreign graduate like myself to catapult into an already closely-knit fraternity. I sincerely hope that we can all reach out to our fellow colleagues, who have travelled from all over the world to serve in Singapore, in order to forge friendships and together become champions of oral health.

Dr. Faisal Bin Abdul Aziz *graduated from King's College London in 2014 and is a dental officer currently under MOH Holdings, practising at the National Dental Centre Singapore. Besides dentistry, Faisal enjoys music and spends his free time volunteering at different organisations. Faisal has a strong interest in public health and hopes to one day be able to reduce dental inequalities in Singapore.*

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The Champions, Team Pink Panther comprising of (from L to R) Dr. Ang Chee Wan, DA Md. Raihan, Dr. Rudy Shahan, Dr. Denzil Kiang, Dr. Jeffrey Ng, Dr. Jeffrey Seow and Dr. Wong Keng Mun

Soccertron 2015

BY **DR. DENZIL KIANG**

The Singapore Dental Association's greatest sporting event this year was held on 7th November 2015 at Kallang Cage, one of the most iconic futsal soccer pitches in Singapore. Seven of the elite soccer teams in the Dental community came head to head in the inaugural SDA Soccertron 2015. The tournament was sponsored by Field Catering and Supplies (Sportade), and Colgate (Goodie Bags).

Each team comprised of five out-field players and were allowed two substitutes. Teams were drawn into two qualifying groups through a ballot, with the top two teams from each group progressing into the knockout phase, known as 'The Champions League'.

The knockout phase was an absolute spectacle, with thrilling and combative action culminating in a narrow victory for the eventual champions, Team Pink Panther, who beat Team Gaylong United in the final. For some, individual glory was attained, with Rudy Shahan and Md. Raihan taking home the accolades for 'Most Valuable Player' and 'Golden Boot' respectively. We look forward to next year's edition of exhilarating futsal action, where lasting bonds and camaraderie will once again be forged.

Participants from the 7 Teams: Team Soccerdontist, Team Huat, Team Dark Knights, Team Benteke Suarez, Team Gaylong United, Team Pink Panther and Team Avengers

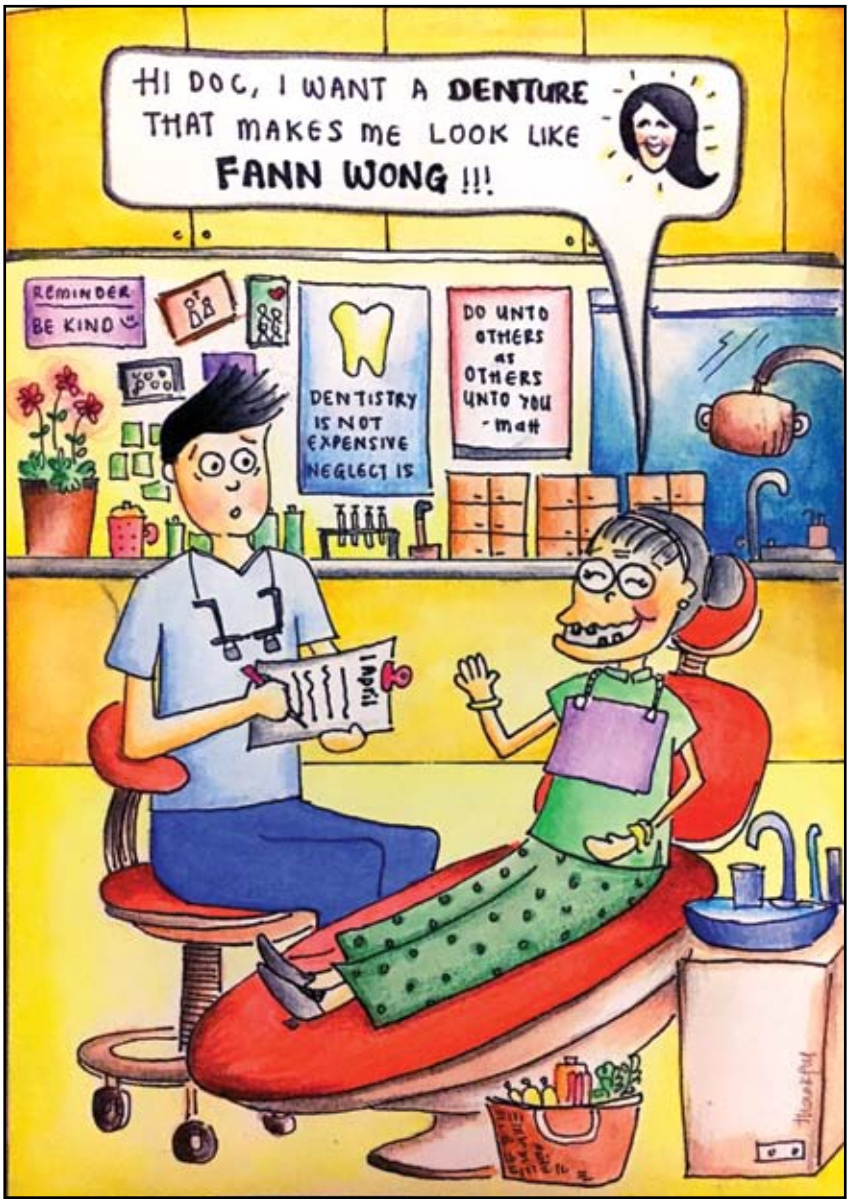
SDA Immediate Past-President, Dr. Kuan giving the closing speech

The coveted SDA Soccertron 2015 Trophy

Dr. Denzil Kiang *is an ardent MUFC Supporter, cat-lover, avid traveller, food enthusiast and friendly dentist in private practice.*

Expectations

ILLUSTRATION BY **DR. SABRINA ONG**



***Dr. Sabrina Ong**, a Queensland graduate, is practising at Dental Werks. She would love to contribute her artistic talents to future issues of **The Dental Surgeon**.*

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Diploma in Implant Dentistry

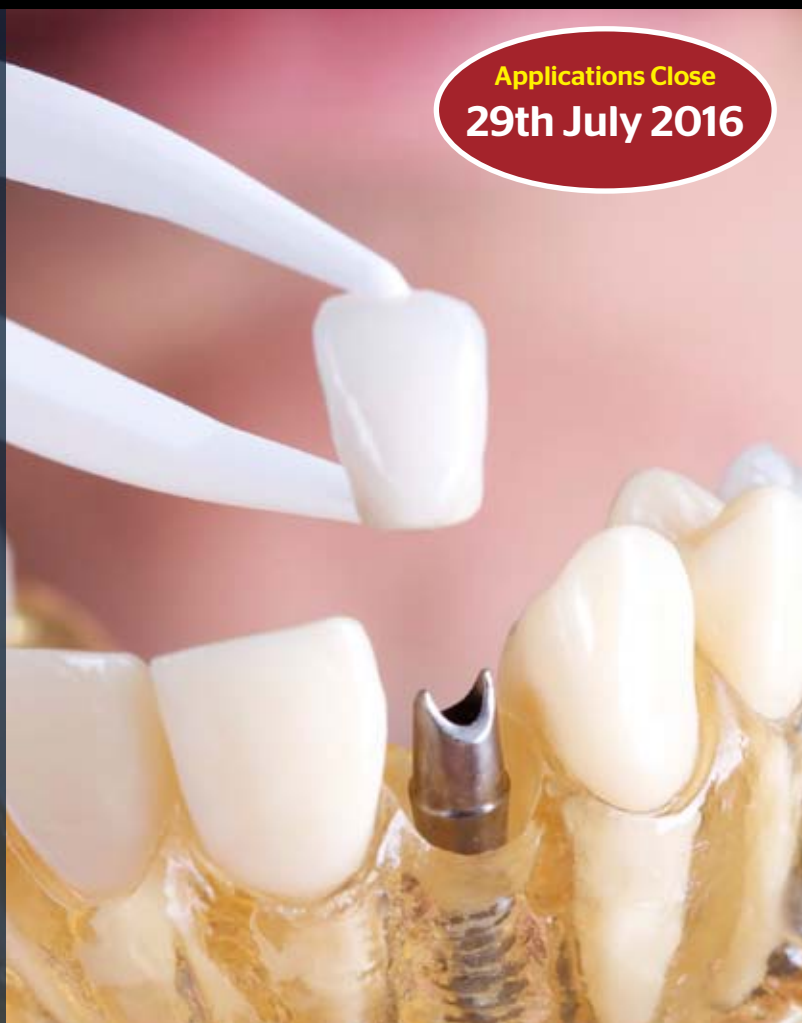
Orientation Course ***SYDNEY***

with Professor Richard Chan

26th - 28th August 2016

Examination ***SYDNEY***

22nd - 23rd October 2016



Breakfast in Bed, Anyone?

BY **DR. EUGENE TANG KOK WENG**

Everyone loves being served breakfast in bed. But have you ever tried serving an old lady in bed – and not with a breakfast tray, but with a tray containing dental examination tools? Such was the service provided to the old folks of Ren Ci Hospital on Saturday 23rd April 2016.

Over twenty members of a dental team (dentists, oral health therapists, and dental assistants), together with over twenty volunteers from the Tzu Chi Foundation (Singapore), gathered at the Bukit Batok branch of Ren Ci Hospital to perform this service.

Established in 1995, Ren Ci Hospital is one of the better known charity healthcare institutions in Singapore providing affordable medical, nursing and rehabilitative care services for the community. Serving all regardless of background, race and religion, the hospital care team delivers quality service based on the principles of loving kindness and compassion.

Most of the long-staying residents come from low income families, while some are destitute and without homes. Suffering from multiple chronic medical conditions, their long-term healthcare needs have drained many of them financially. The majority of the patients are either wheelchair bound or bedridden, requiring continued medical, rehabilitative and nursing support.

While the hospital care team does provide ongoing quality medical care, those with dental needs such as toothache and swollen gums have to wait their turn before they can get a dental appointment in public institutions such as National Dental Centre. In addition, ambulance transport needs to be arranged to ferry them to and from treatment.

NGO's such as Tzu Chi Foundation have recognized the need to bring dentistry to these needy individuals, and its medical arm TIMA (Tzu Chi International Medical Association) regularly mobilizes its dental team together with

Pushing a trolley into the ward filled with the tools of the trade, ready to serve the old folks

A senior dentist demonstrating a dental extraction procedure on a long-term inmate

Regardless of race, language or religion, members of the volunteer dental team cater to the needs of the inmates

Team members presenting floral balloons to brighten up the day for the inmates

Dental examination by torchlight

members of the Singapore Dental Association to bring free dental treatment to these needy and bedridden individuals, in the confines of their hospital beds they call "home".

The Ren Ci Hospital Dental Project alternates between Saturday in one month, and Sunday in the following month. We welcome volunteers from different backgrounds to join us, including all dental surgeons, oral health therapists, dental surgery assistants, and dental students. Interested parties may contact Dr. Eugene Tang Kok Weng at **eugenetangkw@gmail.com** or Ms. Jennifer Ee at **jenniferee@gmail.com**.

Dr. Eugene Tang Kok Weng *is a senior dental practitioner with more than 30 years of clinical experience. He is currently a director of Aesthetic Dental Care, and a past president of the Singapore Dental Association.*

He is the Dental Convenor of TIMA (Tzu Chi International Medical Association) of Tzu Chi Foundation (Singapore), coordinating numerous overseas medical and dental missions.

He also oversees the Free Clinic in Bukit Merah, serving old folks and foreign workers, and volunteers at Healthserve, a free foreign-worker clinic in Geylang.

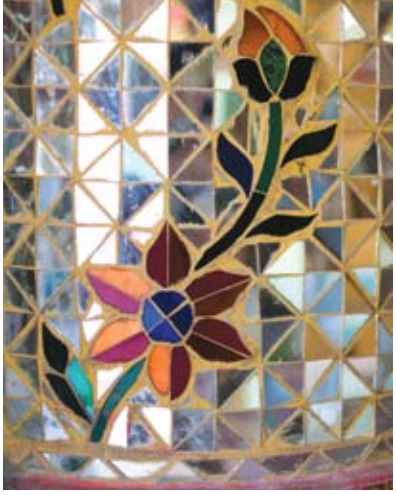
Food for the Soul, Myanmar 2016

By **DR. LEE YUN HUI**

It is application season for the Faculty of Dentistry at the National University of Singapore (NUS) as I am writing this. Faculty members are listening to candidates speak about empathy and wanting to help people as reasons for why they should be admitted into this gruelling course. Many of us came to dentistry with the hope that we would some day be useful to another human being by using the skills we learned in dental school. Perhaps it was because I always held on to this hope that I found myself spending the Christmas holiday season preparing for a humanitarian trip to Myanmar in January 2016.

I had attended such a trip whilst still in dental school, but this was my first trip as a dentist. Thus I was excited at finally being able to perform procedures but I was also worried - worried about the "ROUGH" living conditions we were warned about, about being young and inexperienced, and about whether or not I would actually be doing anybody good. I showed up to Changi airport on the morning of the 9th of January 2016 not quite knowing what to expect.

I looked for familiar faces from packing sessions, but found most to be unfamiliar. Thankfully, after a few introductions were made, there was not much time left for unproductive worry as the team got to work checking in nine hundred kilograms of personal baggage and equipment. In total two doctors, ten dentists and twenty volunteers from all walks of life gathered in the departure hall of Changi Airport.



On board, I found myself seated between two non-clinical volunteers. This gave me a good opportunity to make new friends and find out more about the other volunteers playing diverse roles that make our work possible.

That marked the beginning of a weeklong journey of new friendships and experiences. The entire team bonded over everything from natural toilets to team chef Lily Ko's comforting flavours from home, to hunting for cellular connection in the village (there was a faint one if you made your way to the second tree to the left of the monastery gate and held your hand up high).

In addition to camaraderie between volunteers, there were some unique friendships forged between dentist and patient, visitor and host. Villagers showed their hospitality and gratitude to volunteers by opening their homes at the end of the day. I had a patient who returned complaining of pain after a difficult extraction, and after receiving some painkillers offered to take me on a motorbike to visit her village.

Once I got over having to hang on for dear life (concerned individuals in my life have convinced me of the perils of riding pillion and following strangers home on their vehicles), I let go of my death grip on her shoulder and allowed myself to take in the single dirt road and peanut plantations. I found myself thinking about the "developed world" and our desire for organic freedom, about Jason Mraz going "Back to the Earth", and if this was what they meant by the circle of life. As I glimpsed through my new friend's wedding photos, I could not help but feel connected to this other human being, whose life was nothing, yet everything like mine.

In that moment, it became clear that work like this probably has never been simply "us" helping "them". Work like that is about connecting with another human being. It is ideally what happens every day all over the world: people coming together sharing their lives with one another. Over four days of clinic, the dental team, with immense help from translators and volunteers who assisted and sterilised, managed to treat 494 patients. At the end of a week, there were many heavy hearts. I might have offered a small amount of my time and clinical services, but the experience provided me with much needed food for the soul. This really got me thinking: who then is helping whom? I suppose it does not even matter.

Dr. Lee Yun Hui graduated from NUS in 2014 and has since been serving her bond with MOH Holdings. She is currently working at Khoo Teck Puat Hospital, and is currently serving as a new SDA Council Member. She lives to eat and tries to remember not to take herself too seriously.

Cambodia Calling

BY **DR. LEE BINGWEN**

On 14th June 2015 a group of twenty-five volunteers consisting of dentists, oral health therapists (OHTs), dental assistants and dental students set off from Singapore to Siem Reap, Cambodia, for an annual dental mission trip. The mission was held in conjunction with Republic Polytechnic's (RP) Overseas Community Involvement Project (OCIP), which sends its own students to participate in our dental mission as volunteers.

On arrival at Siem Reap, we were warmly received by our host for the duration of the mission, Mr. Bun Kao. Mr. Bun Kao was a survivor of the Khmer Rouge regime, a period of genocide from 1975 to 1979. Educated Cambodians like scientists and doctors were targeted to suppress resistance, resulting in the stagnation of progress in Cambodia even up till this day. The official average monthly wage for a Cambodian is 80 USD a month. A doctor earns 100 USD a month, and the cost of an extraction in a rural village is 10 USD.

As a result of his experience during the Khmer Rouge regime, Mr. Bun Kao has since endeavoured to better the lives of his fellow Cambodians, often participating in local mission projects to villages as well as hosting and helping mission teams from overseas at his family-run guesthouse.

Upon arrival at the village, we immediately got down to setting up our equipment and treatment area. Setting up is usually the most chaotic part of any mission trip, where friction may arise. However, thanks to the presence of many experienced hands in our team, the setting up process was smooth and efficient. Soon, we were welcoming the first patient of the mission.

Supply table neatly laid out

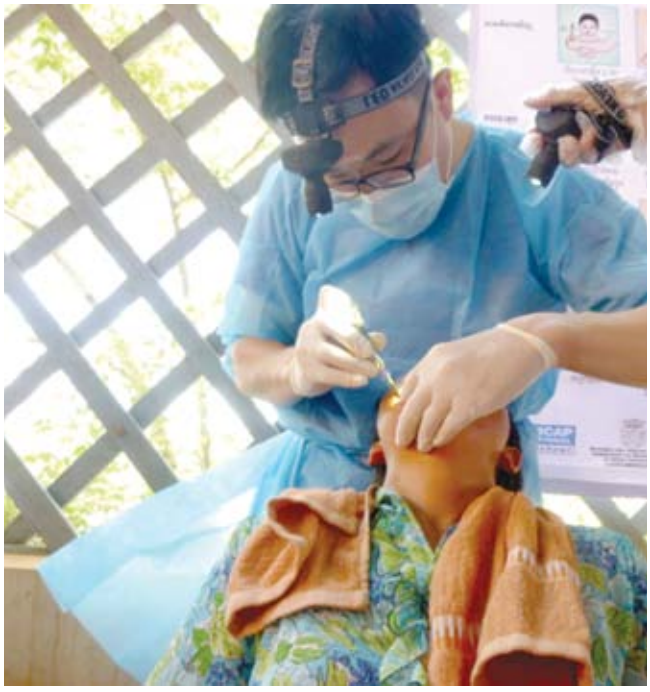
The "polyclinic" where we worked at

For this mission, we were working in the "polyclinic" of the village. It was a standalone building the size of a basketball court, divided into a few rooms. We were informed that baby delivery was carried out there as well, at a cost of 30 cents USD. One of our dentists was delighted upon hearing the price and enthusiastically climbed onto the delivery bed, keen to take advantage of the good exchange rate.

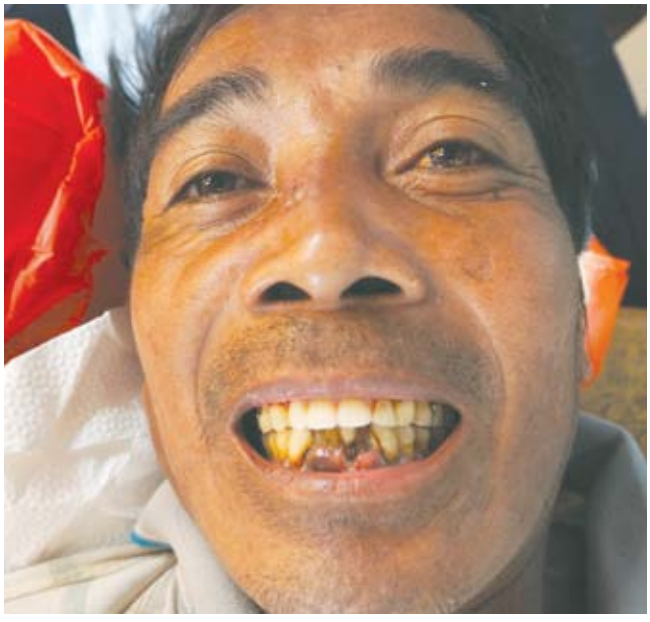
The other benefit of working in the local polyclinic, beside very affordable deliveries, was the participation of the local doctors and nurses. They were crucial to our triaging of patients, highlighting patients with medical conditions, as well as helping to attend to patients who experienced pre and post-treatment anxiety.

At the restorative section, patients lay down on our made-shift "Kavos" and "Sironas". We were fortunate to have portable rotary motors and handpieces as part of our mission equipment and hence, were able to perform restorative treatment as if we were in a proper clinic in Singapore. Focus was mainly on preserving the teeth for function with our guru, Dr. Vijayan, doing a few dentures for selected patients.

One of our restorative units



Difficult extraction in process!



Spot the denture! Hint: #12 to #21

Happy patient, happier dentist!

The extraction section was naturally the busier of the two treatment areas. Chairs were arranged in a row with one attending dentist to each chair. Cambodians are very tough and hardy people, and naturally, their teeth were just as tough to extract. Our dentists were sweating under their gowns in the hot weather trying to extract multi-rooted, badly carious 8s, and even doing surgeries to remove fractured roots.

Our team of OHTs, led by Dr. Noeline Tan, refused to be outdone as well! Due to the language barrier, coaxing and voice control were of limited use and at times, the Cambodian kids proved to be as tough as their parents, fighting tooth and claw against the dentists and OHTs. However, the crying kids usually ended up smiling at the end of their treatment under the very capable and caring hands of our pedo team.

Around 500 patients were seen over three working days. As always, even though we had to tough it out in the hot weather and less-than-ideal working conditions, all of us felt very satisfied and contented with our effort. Personally, this trip has served to remind me to be appreciative of all the simple things in our everyday lives which we often take for granted. As clinicians, we can do more than simply treating diseases. We can literally bring a smile to these impoverished villagers.

The dental team would like to thank the following organisations and personnel for their kind support:

Singapore Dental Council

Singapore Dental Association

Republic Polytechnic

Greenlife Dental Clinic

Q&M Dental Group

Dr. Jason Chua

Dr. Tan Wee Cheow

Dr. Mervyn Phng

Dr. Au Eong Kah Chuan

Mdm. Tan Sok Lan

Dr. Lee BingWen is a young dentist who believes that he is very fortunate to be a dentist and even more fortunate to have met two inspiring mentors who gave him a chance to contribute to the society in a meaningful way. He has since been trying to pay it forward and thinks that a little kindness will go a long way. His favourite past time is to go on food hunts with his partner and is now actively trying to do some damage control to the weight gained post graduation.

HL Bank

Reaching out to you

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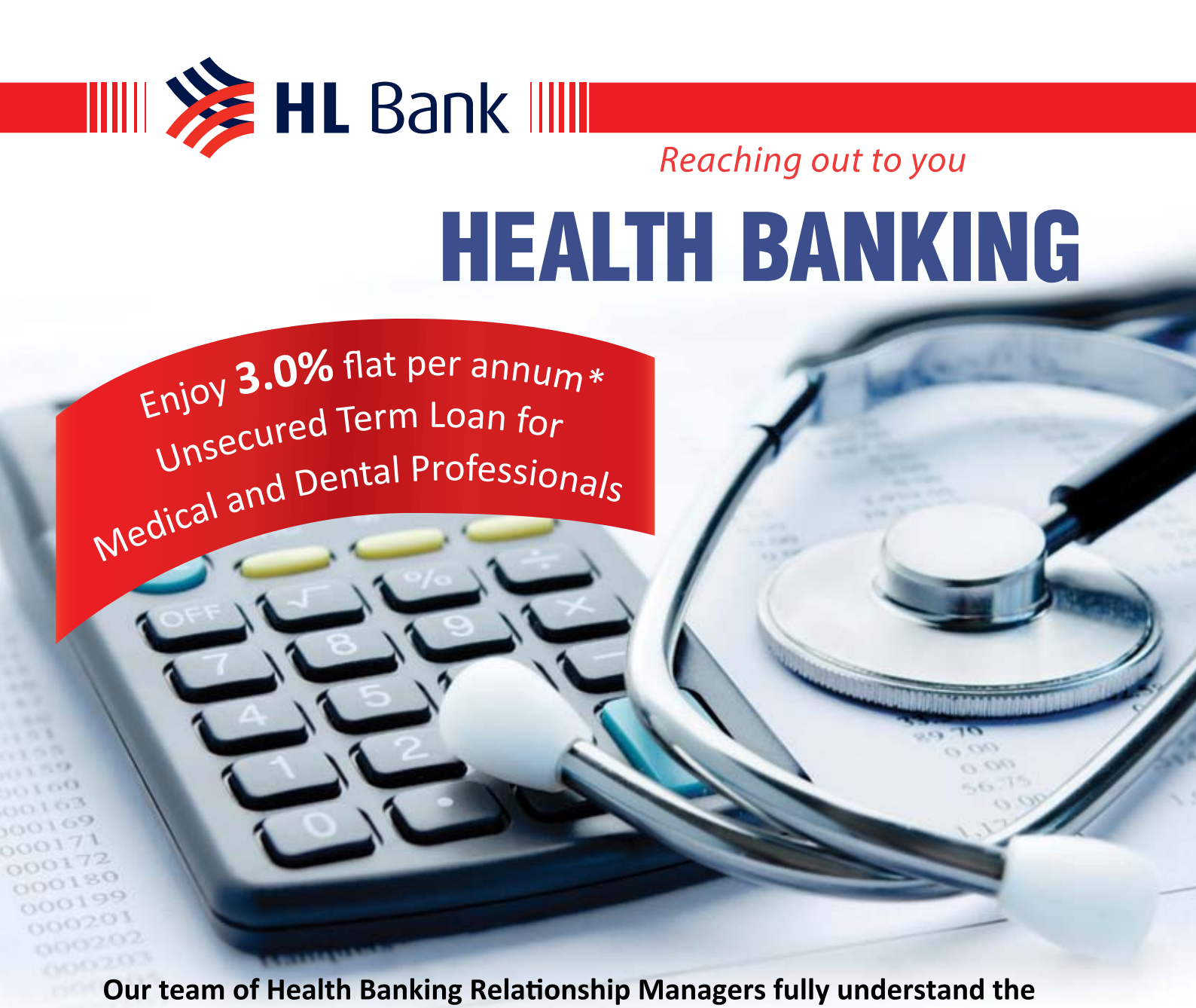

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Sa'Bai 2015 – What has Changed?

BY **JULIAN TAN**

Back in early 2015 when the main planning committee of Project Sa'Bai 2015 was formed, we reflected on how we could improve from previous years, and subsequently settled on two main goals for Project Sa'Bai 2015 – one targeted at the locals in Cambodia and one for our own dental students embarking on the trip.

We had wished for the locals to benefit from something sustainable. And for our dental students? Apart from giving them an enriching undergraduate experience, we wanted them to have some time of self-development and reflection.

No doubt the local community on the ground would benefit from the provision of basic dental procedures such as extractions and fillings. But I would imagine that we would return again the following year and continue to see new cases, again and again. Simply put, we would be fighting fires as we see them.

With this in mind, the team decided to take a more preventive approach to Project Sa'Bai 2015. Following up on initiatives started the previous year, our students gave basic dental and health education to local primary school students in a classroom setting. Armed with posters, flashcards, large dental models and toothbrushes, our students taught local students and villagers alike tooth-brushing techniques and diet control.

We also made it a point that every patient due to receive dental treatment would undergo an individualised oral health education with our students while waiting for their turn to see the dentist. This involved staining the dentition with a plaque-disclosing agent followed by a demonstration of toothbrushing techniques. Finally, we had the patient brush all the stains off by themselves. We hoped that through educating, demonstrating and then asking the patient to practise it on the spot, it would help them to better apply their newly acquired knowledge (much like what we have learnt in perio clinics).

On top of that, this year, we decided to implement a new initiative of topical fluoride application for the local students. After researching fluoridation guidelines, we aimed to provide mass fluoridation for the children in the schools that

we were going to visit. Apart from our annual trips in December, we also made plans to send a smaller team sixth months after to follow-up with the fluoride application.

The whole 'mass fluoridation' session was rather chaotic initially, having an entire class of students coming to see us all at one go. After some organization, the entire process became quite an adorable sight - the students would walk up to our dental officers one by one and automatically open their mouths, eagerly awaiting a glob of fluoride to be applied. They had seen their classmates get some before them, and they wanted it for themselves too. In the background, we had our translators (lovely dental students from the University of Puthisastra) giving repeated reminders of post-application instructions.

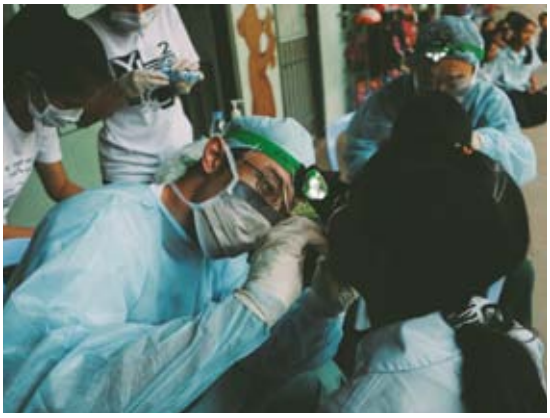
One by one, the students lined up, opened wide, received fluoride and left – we jokingly termed this the 'fluoride factory line'. I was personally quite excited about this new initiative, and am looking forward to see some fruitful results in the following years.

In the midst of juggling studies, clinical sessions and labwork, many of us begin to lose sight of why we wanted to become dentists - to help people. Perhaps going on this trip, seeing the living conditions and poor oral health of developing countries such as Cambodia, our students would be reminded why they chose this profession in the first place.

And for those that didn't have that intent prior, we had hoped that this experience would allow them to realise that there are many people out there with needs unmet. Perhaps after graduation they would look back on their undergraduate Sa'Bai experience and realise that now, fully equipped with a specific set of skills, they are put in a position to truly help people in need.

For the planning committee and myself, the knowledge and experience acquired of running a dental mission – from administration to logistics – was invaluable. We hope that in the future our students would do some good work and join similar projects be it locally or overseas. Or even better yet - start one on their own.

The Project Sa'Bai 2015 team would like to express its utmost gratitude to the Faculty of Dentistry for their continued support as well as all our sponsors and donors in helping fund the project. It has truly helped to make a difference to the lives of the locals in Cambodia.



Julian Tan *is Chairperson of Project Sa'Bai 2015, and a third-year dental undergraduate student. He enjoys eating fried chicken and curry rice. He loves travelling and immersing himself in different cultures, and looks forward to the end of each school term so he can embark on his next adventure.*

He decided to lead this Project to better appreciate the background work involved in planning a dental mission - something he wishes to continue doing in the future.

HFMD: My Extra-Epithelial Experience

Warning: pictures are graphic in nature, and mildly unsettling

BY **DR. WONG LI BENG**

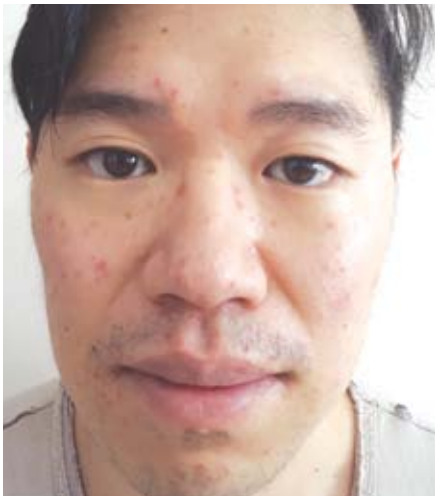


Figure 1: HFMD left its mark on my face

Figure 2: Vesicles appearing on my palms

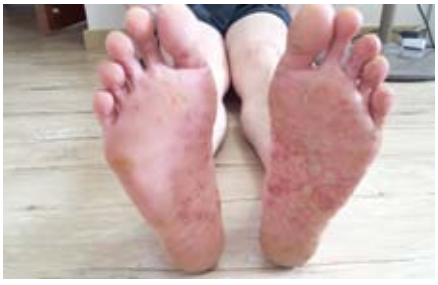


Figure 3: It was painful even when I tried to put on my shoes on day 5

"I was a battleground of fear and curiosity"

- H.G. Wells, The War of the Worlds

To quote from the famous novel, I was totally oblivious in March 2016 to how my body would become the battleground between the soldiers of my immunity and an alien virus, resulting in the mass casualties of countless epithelial civilians.

The virus slipped silently beneath my immunological radar, incubating for up to six days. It started off with fever, which I had assumed to be just another flu. When the fever rose persistently over 38 degrees for three days despite my six-hourly paracetamol intake, I realized that I was dealing with an unknown enemy. My worst fear was confirmed when ulcers started appearing in my oral mucosa and throat, and vesicular exanthem was found on my face, palms and especially the soles of my feet (Figure 1 and Figure 2).

Diagnosis was confirmed when I visited my neighborhood medical GP who immediately issued a quarantine order of seven days. It was a mixed feeling of relief and guilt - relief that this unknown enemy was finally unmasked, and guilt that I may have unknowingly put my colleagues at risk of infection before the diagnosis (It was fortunate that no one was infected).

Dealing with the pain and discomfort that came with HFMD was the worst part of the package. It was not an exaggeration to describe every swallow of solid or liquid to be like ingesting broken glass. On the positive side, it was a free weight loss program.

Every step was a slow and painful procedure as any contact of my sole to the ground would potentially burst all the vesicles (Figure 3). To make the situation more exciting, all my three children took turns to fall prey to HFMD. It was total mayhem.

There is no antidote against HFMD except to let the virus run its full course. Getting enough rest and drinking enough water will help to fuel the immunity to do its job. Due to my background in Traditional Chinese Medicine training, drinking plenty of barley water and consuming a small amount of pearl powder provided some tonic reinforcement as well (I have to state my disclaimer that this is purely anecdotal).

It took almost two months for the body to tidy up the epithelial damage and to repair and reconstruct the skin fortress against future invasions. Onychomadesis, or nail shedding, occurred in my 4th and 5th toenails of my left foot about 1 month later (Figure 4 and Figure 5).

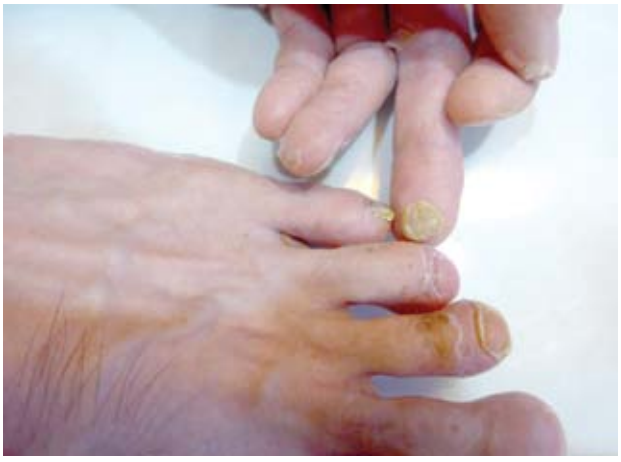


Figure 4: 4th toenail out

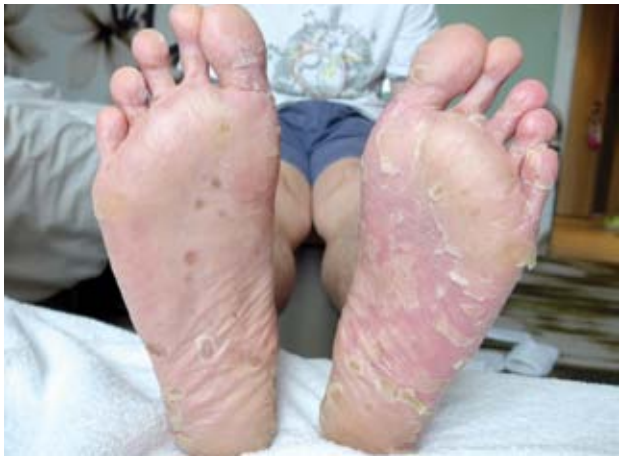


Figure 5: One month after onset

Finally, let us debunk some myths about HFMD:

1. **It is a disease created by God to punish naughty children with poor hygiene practices, adults are totally spared.**

   No. I am a living proof that adults can get HFMD as well.

2. **You only have to suffer HFMD once and you will have obtained full lifetime immunity.**

   No. HFMD has been linked to enterovirus 71 and coxsackie virus types A16, A6, A5, A7, A9, A10, B2 and B5. Immunity developed against 1 viral strain does not cover for all the other strains.

3. **HFMD is usually very mild.**

   Do my pictures look mild to you?

4. **HFMD only affects the hand, foot and mouth.**

   No. my face was temporarily disfigured as shown in the picture and on the 5th day of onset, there were signs and symptoms of orchitis (it has been reported in literature). Fortunately, both my looks and manhood have been restored. In rare instances, there may be direct infection to the central nervous system and cardiovascular system leading to aseptic meningitis, acute focal paralysis and even cardiac arrests.

5. **Vaccination against HFMD is available.**

   Unfortunately, there is no approved vaccination at the moment.

Prevention is currently the only defense we have against HFMD. This involves effective washing of hands, disinfecting common areas and shared toys, as well as isolating ill children in their own homes to limit viral spread. In view of my personal disturbing encounter with HFMD, I hope that this article will heighten awareness of this condition so that none of you, as well as your loved ones, will ever need to go through the same ordeal as me.

Stay healthy everyone, for in the words of Wells, “by the toll of a billion deaths, man had earned his immunity, his right to survive among this planet’s infinite organisms. And that right is ours against all challenges.”

Dr. Wong Li Beng *graduated from NUS in 2005 and went on to obtain his MDS in Periodontics in 2010. In 2012, he received the certificate of Specialist Registration with Singapore Dental Council as a Periodontist. Besides Dentistry, he also obtained his Graduate Diploma in Acupuncture in 2011 from the Singapore College of Traditional Chinese Medicine. He is currently working in Ng Teng Fong General Hospital and Jurong Medical Centre, serving as a Consultant and Director of Service for Preventive Dentistry.*

Stressed Out? Tune In

BY **DR. SURINDER POONIAN**

"If you really knew what was happening to you when you are stressed, you would freak out. It's not pretty," said Dr. Mark Hyman during the 2013 Third Metric women's conference in America.

In 2013, the Health Promotion Board revealed that 25% of Singaporean workers felt 'highly stressed' at work.[1] In the same year, a survey by Jobstreet.com found that '60% of Singapore workers feel mental fatigue at work'. Singaporeans work the longest hours without minimum wages according to International Labour Organization.[2]

Friend or foe?

The stress response can be life saving. In prehistoric times the stress response strategically prepared the body to face a threat or run. A cascade of chemical and hormonal reactions resulting in the release of adrenaline and cortisol via the sympathetic nervous system primes the body for 'fight or flight'.

Today, a certain amount of stress motivates us and helps to drive us in life. However, with chronic stress those same chemicals that are geared towards survival in short bursts can be seriously detrimental to health. Stress can be routine (work, family, daily responsibility pressures), due to a negative change (losing a job, divorce or illness), or traumatic in nature (a major accident, assault or natural disaster).[3]

Stressors can be real or perceived. Try this. Close your eyes and imagine a situation in which your body would usually start to give a stress response. Stay in that place for a few moments. How did you feel? If you managed to get into the scenario, your stress levels probably began to creep up. Real or imagined, when you perceive something as stressful, it creates the same response in the body.

References

[1] *Health Promotion Board 2012 Understanding Stress www.hpb.gov.sg/HOPPortal/health-article/266 Accessed 3rd March 2016*

[2] *International Labour Organization 2005 Working time laws: A global perspective www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_travail_pub_23.pdf Accessed 3rd March 2016*

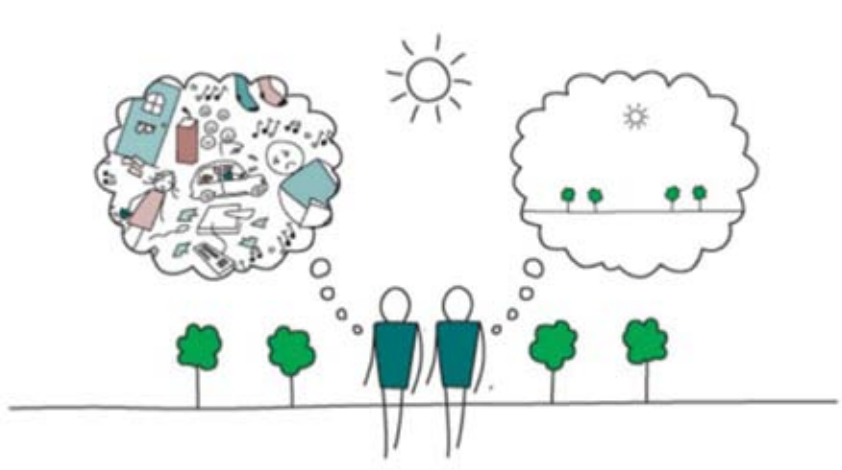
[3] *National Institute of Mental Health 2014 Fact Sheet on Stress www.nimh.nih.gov/health/publications/stress/index.shtml Accessed 3rd March 2016*

What does stress do to my body?

The stress response affects most systems in the body. Some of these are indicated below [4]:

System	Effect
Musculoskeletal system	Muscle tension leading to chronic painful conditions such as headaches.
Gastrointestinal system	• Increased or decreased appetite. • Nausea, stomach pain, stomach ulcers, diarrhoea or constipation.
Respiratory system	Rapid breathing that can irritate asthmatics or lead to panic attacks.
Cardiovascular	• Increased blood pressure. • Increased risk of heart attack or stroke. • Inflammation of arteries leading to high cholesterol levels.
Endocrine	• The adrenal glands produce cortisol and the liver releases more glucose. • Increased risk of diabetes and weight gain.
Nervous system	Constant or continuous state of stimulation of the sympathetic nervous system.
Reproductive system	• Male: Elevated cortisol levels can have a detrimental affect on testosterone production, sperm production and can also lead to impotence. • Female: absent or irregular menstrual cycles, more painful periods and changes in the length of cycles. PMS can be heightened.

Mind Full or Mindful?



Reference

[4] *American Psychological Association 2015 Stress Effects on the Body www.apa.org/helpcenter/stress-body.aspx Accessed 3rd March 2016*

How do I know if I am feeling stressed?

The HPB suggests that these may be some indicators of stress.[1]

Signs and Symptoms of Stress			
Physical	**Emotional**	**Cognitive**	**Behavioural**
• Increased or irregular heartbeats • Tense muscles • Headaches and migraines • Aches and pains • Stomach discomfort or upsets • Feeling tired • Gastrointestinal problems • Skin problems	• Often feeling anxious and fearful • Irritability and being easily angered • Moodiness • Feeling alone	• Having trouble concentrating • Forgetfulness • Difficulties making decisions • Increased worrying or negative thoughts	• Eating more or less • Sleeping more or less • Withdrawing or isolating yourself • Personality or behaviour changes • Social withdrawal or lack of confidence • Being easily distracted • Drinking or smoking excessively

I am in control

There are some easy things we can do to curb those cortisol levels and regain an overall sense of well-being. When we feel ourselves slipping into a stress zone the easiest thing to do is stop and breathe.

Breathing in for 4 seconds, holding the breath for 4 seconds and then breathing out for 4 seconds a few times can bring you back to a calm state instantaneously. You know what de-stresses you: a coffee with a friend, exercise, a walk in nature or maybe some alone time. The list is endless and it is important to engage in whatever it is that works for you. Your coping mechanisms today are likely to have huge future benefits.

Reference

[1] *Health Promotion Board 2012 Understanding Stress www.hpb.gov.sg/HOPPortal/health-article/266 Accessed 3rd March 2016*

Advice from an expert

Mr. Manny Arora, a certified NLP Master practitioner and life coach currently working at an investment bank in Singapore, has coached many clients into taking control of their lives across the UK, Hong Kong and Singapore. We grabbed him for some wise words on managing stress.

With a wealth of experience in coaching, what have you found are the main stressors in people's lives?

Many of my clients come to me complaining of feeling 'tired and overworked'. They generally feel pretty 'run down' and tend to have a huge lack of work life balance in their lives. It seems that stress is triggered by working long hours, lack of sleep, adverse situations, running late, feeling hungry and poor nutrition. A lot of the time people tend to overanalyze and overthink past and possible future situations. This also leads to anxiety and stress.

In a fast paced world, stress comes up in many situations. What is one thing people can do to help to alleviate it when it surfaces?

Focus on your breathing. Take some long deep breaths and notice how your body feels. Inhale and on the exhale, 'breathe out' the stress. Repeat this a few times. Really slow it down and notice how your mental state and physiology changes as you start to feel calmer.

The stress response is very temporary; remember you are in control of how you feel.

Are there any long-term measures that can be taken to combat stress?

This is a great question and it is different for everyone. The key is looking at what your personal stressors are and then managing or creating ways to handle each one. Talking to a friend, family member, counsellor or coach has really helped me to better understand and manage my own stress.

Do you ever get stressed and how do you cope?

Yes! I try to remember how detrimental stress is to my general health on a day-to-day basis. For me, eating, sleeping and exercising allow my mind to be clear so that I can handle things more effectively. I also regularly practice 'mindfulness' which helps to control traffic flowing through my head. It's not always easy but spending time on myself and understanding what my personal triggers are has been paramount in knowing what works for me.

Manny Arora *provides a free 30-minute coaching session to all those interested in learning to cope with stress. To find out more, you can e-mail thecorporatecoacher@gmail.com.*

Dr. Surinder Poonian *is a general dental practitioner in Singapore taking a holistic view on healthcare. In her spare time she enjoys travelling, outdoor activities, karate and has a keen interest in general well-being. Surinder has also been involved with various volunteering projects including dental mission trips, teen retreats and public education on oral health.*

Between Declarations and Dreams

A Tour of the National Galleries Singapore

BY **DR. LOO SUNDIN**

Facing the Padang with all eighteen of its distinguished three-storey-high fluted Corinthian columns stands the former Municipal Building (and later City Hall), a piece of neoclassical British architecture built in 1929. Walking past the colonnade and up the short flight of stairs into the expansive yet modestly proportioned foyer, one has a sense that historical and momentous events occurred here, forming the backbone of Singapore's identity and timeline.

On 12th September 1945, Admiral Lord Louis Mountbatten bore witness to the capitulation of Japanese forces in what is now called "Surrender Chamber" in City Hall. Fourteen years later in this very same spot, Mr. Lee Kuan Yew declared self-governance, and in 1965, Singapore's independence. It is thus befitting that this particular room has been artfully preserved and left untouched through the flux and transformation of the former Supreme Court into the National Gallery Singapore.

The creation of National Gallery Singapore merges two colonial buildings physically into one. Borrowing from the region's villages, Studio Milou employed golden cut-aluminum panels suggestive of *rattan*-thatched roofs to veil both structures. The shallow water pool above the transparent glass roof in turn diffuses and provides a screen against the harsh tropical sun without dampening its brightness. Inside, bridges connect and root the atrium, in turn supported by tree-like steel columns conveying elegance yet simplicity.

With two empty holding cells as a stark reminder of the Supreme Court's ominous past, this wing now houses the permanent exhibitions. The first one "Between Declarations and Dreams" follows chronologically the colonial 19th through the revolutionary 20th century's artistic experimentations.

Photo Credit: Courtesy of The National Gallery Singapore

Special Thanks to: Lum Xin Mun, National Gallery Singapore

Chua Mia Tee, Epic Poem of Malaya, 1955

Oil on canvas

Collection of National Gallery Singapore

Image courtesy of National Heritage Board

Heinrich Leutemann, Unterbrochene Straßenmessung auf Singapore (Interrupted Road Surveying in Singapore), 1865

Wood engraving

Collection of National Museum of Singapore

Image courtesy of National Heritage Board

"All our interior world is reality, and that, perhaps, more so than our apparent world"

- Marc Chagall

Raden Saleh, Boschbrand (Forest Fire), 1849

Oil on canvas

Adopted by the Yong Hon Kong Foundation.

Collection of National Gallery Singapore.

Raden Saleh, Wounded Lion, 1839

Oil on canvas

Collection of National Gallery Singapore

Image courtesy of National Heritage Board

The first piece to welcome the visitor in the gallery is Heinrich Leutemann's wood engraving 'Interrupted Road (Surveying in Singapore) (1835)'. Here a Malayan tiger leaps from the jungle disrupting the surveying of a road by the architect. The German artist possibly alluded to the "civilizing" efforts of the colonial masters and its interfering locals (as depicted by the tiger). Central to the Southeast Asia Gallery are the two works by Indonesian artist Raden Saleh, *Wounded Lion (1839)* and *Forest Fire (1849)*. Both show hyper-dramatic representations of wild animals and battle scenes. The larger piece relates the tussle of two pairs of bulls and tigers while fleeing the marching fire. And through the hunted lion's eyes and tears, an expression of pain and anguish is evident.

The DBS Singapore Gallery's 'Siapa Nama Kamu?' (What is your name?) showcases the darker tone developed in the 1950s during the region's tumultuous social and political turmoil. Here, two vital works by social-realist Singaporean artist Chua Mia Tee 'National Language Class' (1959) and 'Epic Poem of Malaya' (1955) reflects his rejection of colonialism. In *Epic Poem of Malaya*, a central speaker is shown with a group of youths sitting on open ground with dark clouds forming in the sky. Their faces show the mixed emotions of the aspiration of an emerging nation, amidst the anxiety of the unknown (dark clouds brewing) prior to self-governance in 1959. *National Language* in turn depicts an almost joyous mood where students now sit around a classroom table learning *Bahasa Melayu* under the watchful eyes of the teacher. The phrase "Siapa nama kamu?" is visible in scribbles on the blackboard, alluding to a newfound identity from a self-governing city-state.

Chua Mia Tee, National Language Class , 1959

Oil on canvas

Collection of National Gallery Singapore

National Gallery Singapore is born out of the 2005 renaissance city plan to establish Singapore as a global art city conducive to creative industries, and to readjust her reputation as not just a dull business destination. This new home for Southeast Asian art came at a right time for Singapore during her 50th year of independence, where the relationship between identity, nation and art is enjoying a serious re-examination.

The Gallery's first international collaboration 'Reframing Mordenism' is exhibiting now. The exhibition invites us to examine how artists working in different global contexts approach modern art and modernism in the 20th century.

***Dr. Loo SunDin** is an Oral Maxillofacial Surgeon in private practice, and Visiting Consultant in Tan Tock Seng Hospital.*

He completed his specialty training in Maxillofacial Surgery at University of Hong Kong under an overseas scholarship after graduating from dental school in Singapore.

SunDin gets a kick out of complex orthognathic surgeries yet wanderlust and nature's beauty remains his Achilles' heel.

A Swiss State of Mind

The resourceful and audacious Travelling Gourmet™ goes to the land of watches, chocolates and mountains.

BY **DR. MICHAEL LIM,** The Travelling Gourmet™

The majestic Lake Lucerne

Lovely living room of the Mark Twain Suite Park Weggis

The marvelous Relais & Chateaux's Park Weggis is a stone's throw from the majestic Lake Lucerne, blending modern touches with picturesque old world charm. Known as the "Sparkling Resort", something told me I was going to be very happy to stay here.

The helpful and mild mannered vice general manager, Rolf Tinner brought me to my suite on the second floor of a building called the Schlossli. The suffix "-li" in Swiss-German usually refers to something small and cute, like Luxembergerli, which the French call macarons, but my Mark Twain II Suite was impressive, opulent and huge! Two spotlessly clean bedrooms, a comfortable living room with a chaise-lounge and big bathroom with an equally large bathtub designed by the celebrated Philippe Starck. You can shower under the Hansgrohe rain shower before soaking in the lovely tub with a glass of Champagne. In the pantry there is your own Nespresso machine for a great cup of Voluto. The plush chaise-lounge in the living room is perfect for watching TV and relaxing. A high-tech remote control operates the lighting.

Undoubtedly, the most seductive aspects of this lovely suite are its three balconies overlooking a private beach of the stunning Lake Lucerne. The balconies face south and are ideal for an early morning cappuccino while watching the sunrise ever so slowly over the large lake like a glowing orange-red sphere.

I discovered later that the famous author who wrote "The Adventures of Tom Sawyer", visited this region in 1878 & 1897. Reliable sources indicate that Mark Twain was one of the VIP guests to have stayed at the hotel, hence the name of the suite.

Good news for fitness buffs. There is a dedicated gymnasium and a spa with an outdoor heated pool. The gym is some distance from the main entrance but when you walk there for your workout you will be delighted to see a beautiful bonsai garden. You encounter Zen-like peace and harmony with nature just by strolling around the large, immaculately manicured garden. Exclusive spa villas with their own steam sauna, Jacuzzi and cold plunge pools are available too.

Truly spiffing outdoor pool

Sparks Restaurant

A wonderful place for a delectable breakfast. The grand ambience and old school charm sets the stage for fine dining. Breakfast comes in the form of cereal, fruit juice, salmon and salami and freshly baked breads. The salmon omelet à la minute is garnished with star fruit, an impressive and well-matched combination. I topped breakfast with a Champagne Rossini Cocktail.

A nice pairing

Lalique Caviar Bar and Park Grill

After a day in Lucerne and just before dinner, I had a Mai Tai at the cozy Lalique Caviar Bar, named after the celebrated perfume, crystal and jeweler maker.

Simple yet elegant salad

For a bit of California in Switzerland, try the dinner in the hotel's Park Grill, famous for its juicy steaks. The wine list impresses with a wide selection of winsome wines from California. Wooden floors, a "Mercury Chandelier", Robbe & Berking steel ware and a marvelous view of Lake Lucerne set the stage for a memorable meal. My hors d'oeuvre was a refreshing salad of mixed boutique greens with lemon dressing; spinach leaves, crisp radish, tomato and green frisée made for a healthy start. A Sauvignon Blanc in the New Zealand style was served, the Keever Napa 2013 with its prominent gooseberry notes and aromatic nose. For a most satisfying main, I sank my teeth into tenderloin of succulent beef. Matched with a Syrah bursting with ripe black cherries and sweet spice from the Donelan Family Wines Cuvée Christine 2012 and corn cake, I was in heaven.

As celebrated author and satirist, Mark Twain, said: "I believe this place (Weggis) is the loveliest in the world, and the scenery is beyond comparison beautiful…" Need I say more?

Park Weggis

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Hertensteinstrasse 34
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Dr. Michael Lim *is* ***The Travelling Gourmet™*** *Travel, Food & Wine Writer/Editor/Educator extraordinaire.*

Bubbly Secrets of Champagne and Franciacorta

The audacious and inspiring Travelling Gourmet™ reveals the secrets of sparkling wine.

WORDS AND PHOTOS BY **DR. MICHAEL LIM,** The Travelling Gourmet™

Magical, mesmerizing bubbles of light shimmering like stars that you can drink, pleasuring all your senses. Champagne brings to mind glamour, sophistication, gourmet food and all the good things in life. And Reims is one of the places to visit for this most prestigious of drinks. Not so long ago, I was privileged to be part of the harvest in the region of France called Champagne.

Moët and Chandon's extraordinary harvest is in honour of the tradition and history of Champagne, so all the harvesters (bar me) donned authentically replicated period costumes circa the 1800s. Under a hot sun in blue, cloudless skies the harvest began with much merrymaking, featuring a 3-piece Gypsy combo, and a cute donkey. Two sturdy stallions accompanied this pulling an old wagon bringing the harvest of chardonnay grapes to make Dom Perignon.

I must say, it is hard work harvesting grapes, but popping a few fresh ones in your mouth every now and then is very rejuvenating. To top it off, after a good morning's work, it was off to the winery for pressing and freshly squeezed, refreshing grape juice to revive the weary man.

Lunch was no Michelin star affair but still very satisfying with Potage Champenoise, an assortment of cheeses and a tart of chardonnay grapes on a bed of English cream for dessert. All the good food I washed down with lashings of Moët and Chandon non-vintage champagne, the best of many years' hard work, crafted with love and passion.

Now to clear up the confusion about sparkling wines and champagne. Only sparkling wine crafted in the *Apellation d'Origine Controlee* (AOC) Champagne of France can be called champagne. While there are other very good sparkling wines from other parts of Europe like Cava (Spain), Cremant de Bourgogne (France), Prosecco (Italy) and Franciacorta (Italy), they are named differently and hold their own apart from champagne.

Not too long back, I was in Italy in the province of Lombardia to taste the Franciacorta wines of Bellavista Winery. Bellavista wines are Italy's answer to the champagne of France. In the famous Franciacorta region of Italy, the wines are lovingly crafted in exactly the same way as in Champagne. The technique used is the time-honoured *metodo classico* or *méthode champenoise*. This involves double fermentation in the bottle, plus extended aging on the lees (deposits of particles that precipitate and settle to the bottom of a vat of wine after fermentation and aging).

Méthode Champenoise or Metodo Classico

What distinguishes premium sparkling wines from those of other grades is how the secondary fermentation takes place in the bottle. This is opposed to *metodo charmat*, where that happens in a large tank. The technique requires a secondary fermentation in the bottle which is accomplished by adding a mixture of sugar and yeast to still wine. This wine is then bottled and crown capped,

like beer. The yeast feeds on the sugar and the resulting carbon dioxide remains imprisoned in the bottle. Quality sparkling wines are usually left on the yeast for several months, even up to six years. At the end of this *sur lie* process the cap is removed and replaced with the traditional cork and wire *muselet*.

Most champagnes are crafted from Pinot Noir, Pinot Meunier and Chardonnay. Blanc de blanc champagnes like Gonet use 100% Chardonnay while blanc de noirs champagnes use 100% Pinot Noir. Chardonnay gives fresh acidity, Pinot Noir provides structure and Pinot Meunier adds finesse and elegance. But how do two red grape varietals make a white sparkling wine? The answer is that the juice of red grapes is practically colourless, and the skins are not left in the barrels during fermentation to stain the resultant beverage red.

Dr. Michael Lim *is* ***The Travelling Gourmet™*** *Travel, Food & Wine Writer/Editor/Educator extraordinaire.*

The BMW 740Li

BY **DR. KEVIN CO**

Performance and Drive

The BMW 740Li entered its sixth generation in 2016 with changes that have taken a top sedan to even greater heights. Powered by a refined 3.0-liter, turbocharged inline six engine, the top-of-the-line 740Li is essentially an all-new vehicle. The design team has taken an already solid vehicle and improved it, not the least with an adaptive air suspension boasting a camera-based predictive programming. It is a five-seat performance sedan that deserves to be the top of the BMW line.

The 740Li has had its performance profile changed for 2016. The 3.0-litre turbocharged inline six engine is ready for action with up to 326-horsepower available. Slipping the six into gear, you find the eight-speed automatic is well suited to the output of the six. The power team should easily be able to do 0 to 100 runs in the 5.5 to 6.0-seconds range.

The combination of the active air suspension system when combined with the predictive camera control not only keeps the body incredibly stable, but also enhances performance. There are fully 12 inches of ride adjustment available so that the handling not only remains positive but it also feels incredibly nimble for an 1800kg sedan.

Appearance

The team combined a first-in-the-industry application of Carbon Fiber Reinforced Plastic (CFRP) with a wider use of aluminum and other lightweight materials to flesh out the 740Li.

Round the front, headlamps fit snugly into the iconic, recognizable BMW grille. The hood is more sculpted and flows from the front fenders to the windshield and up through the panoramic roof, onto the sloping rear window and sculpted rear, ending with LED taillights. Overall, the effect is pleasing and is an excellent, stable update.

An interesting note about the grille though, is that it is active. As the under-hood temperature increases, the grille opens to admit more air into the engine bay, preventing over-heating. Yet before the engine or brakes peak the temperature thresholds, the grille remains closed, allowing the 740Li to retain an aerodynamic profile, thus achieving an average of 9.1 litres/100km for city driving.

Even the BMW 7-series key is a statement of innovative design: it has a touch screen that can control certain functions and also provide basic status information.

Interior and Comfort

BMW has long been known for its comfortable, supportive seats. The automaker's reputation for ergonomic interior design goes back more than 40 years to the venerable 2002i of the early to mid-1970s. By combining a tilt/telescoping steering wheel with a multi-position power adjustable driver's seat, anyone is able to find a comfortable, supportive position behind its wheel. The extra room over the older models provides for generous rear seating without compromising on a spacious front. Without a doubt, five people will seat comfortably. Additionally, the massage function built into the seats is bound to please many.

The dashboard is nicely designed and features chromed buttons, and with the large touch-screen display allowing ease of access to a multitude of functions. The iDrive system furthermore comes with gesture control - making certain hand movements in the vicinity of the centre console can direct commonly used infotainment system functions. Indeed a testament of German functionality complemented with chic European class.

And thanks to a built-in SIM card, the all-new BMW 7 Series comes fully equipped with the full suite of BMW Connected Drive Services & Apps, much like having a personal butler on the move.

Final Say

The restyled 740Li is right on target. BMW has taken an already competent vehicle and truly turned it into a sports sedan. There's a bounty of automatic safety features that will keep you safe in all conditions and the electronics package, including the 1400-watt, 16-channel stereo system is worthy of a top-of-the-line vehicle. BMW's design team deserves kudos for the improvements that it has brought to the 740Li. The model will stand in good stead for many years to come.

Dr. Kevin Co *is a full-time private practitioner at his clinic TLC Dental Centre. Cars remain his lifelong passion.*

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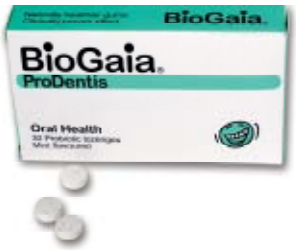

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