

# the DENTAL SURGEON

JUN 2019 ISSUE



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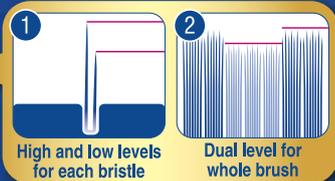
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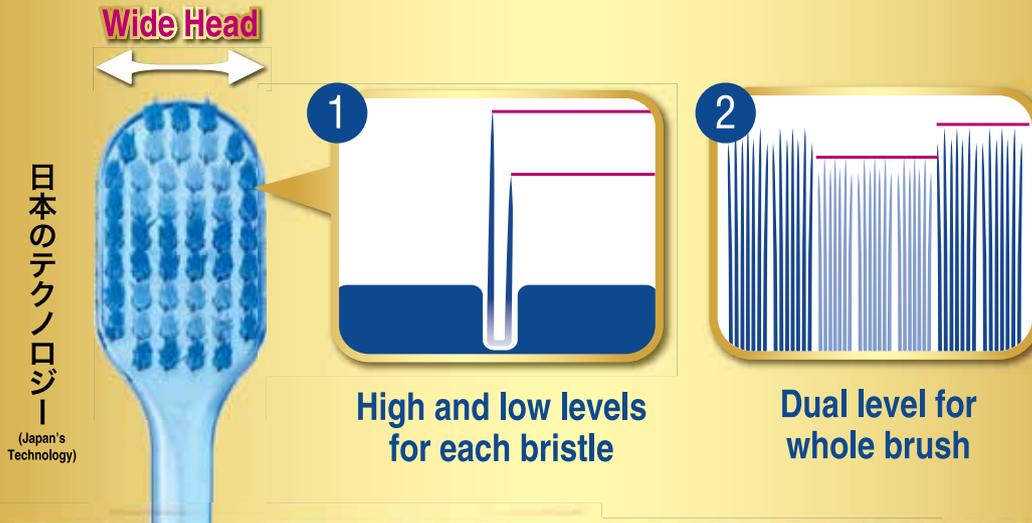
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\*as compared to ordinary toothbrush. \*INTAGE SRI, No.1 Company in Oral Care Category, Value Sales, CY2018.

## EDITOR'S NOTE



Bridges take years, sometimes decades to build; but they burn in an instant.

Let us never forget that, behind every pair of eyes, lies a mind or a soul as complex as yours or mine. Consider one's feelings and perspective; respect that others may share a contrasting set of beliefs that may appear to contradict your own.

Let us have the wisdom to accept the things in life that we cannot change. Let us let go of hubris, acrimony and contempt.

Let us be jubilant for what we have had and not despair over what is lost.

Yes, dear reader; Game Of Thrones ended on a low. But Season 1 to 6 (yes I said 6) was good while it lasted. Valar Dohaeris.

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## CONVENOR



**DR TERENCE JEE** is a board-accredited endodontist in private practice. He is also a council member of the Singapore Dental Association (SDA). He has served in the SDA for more than 10 years. In his free time, he explores various restaurants to satisfy his gluttony. As much as time permits, he travels to his heart's content.

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**DR ROBERT BURGESS** is a general practitioner in private practice after recently finishing his government bond. He has just joined the editorial team of *The Dental Surgeon* and hopes to continue to contribute to its growth as a publication. Robert spends his free time trying to keep his pet corgi alive, and enjoys furthering his learning, especially in the field of endodontics.

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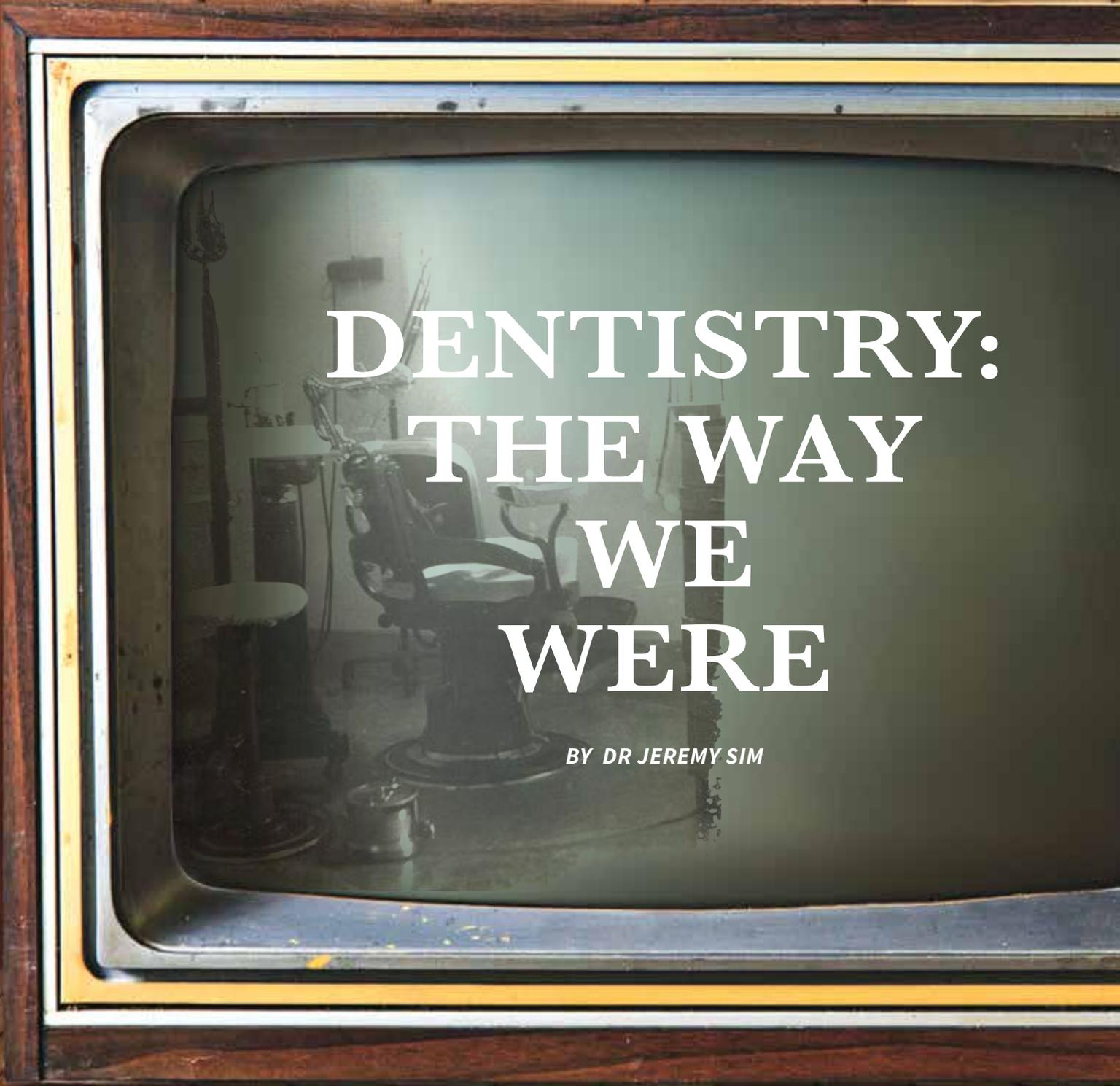
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# DENTISTRY: THE WAY WE WERE

BY DR JEREMY SIM



## Genesis

The very first Bachelor of Dental Surgery was conferred upon her graduands in June 1950 by the then University of Malaya. Then located in Bukit Timah, students travelled to Kuala Lumpur, Malaysia, to have their convocation.

Dr Goh Soon Kiang, 84, shared his journey with me. Since graduating from the University of Malaya in 1961, Dr Goh has not stopped working till this day. He only bid farewell to clinical work 2 years ago and now serves in a supervisory role.



*Dr Goh Soon Kiang*

To put his age in perspective: Dr Goh was about 10 years old when World War 2 engulfed the region. His family hid in the jungles of Johor Bahru and waited for the war to pass, before he came to Singapore where he enrolled in the illustrious Anglo-Chinese School (no bias intended).

He eventually matriculated into the 5 year Bachelor of Dental Surgery program of the University of Malaya in 1956 when he failed to get into medical school.



MEMORANDA  
UNIVERSITY OF MALAYA DENTAL SCHOOL

<b>FIRST YEAR</b>	Michaelmas Term	6. 10. 54	\$ 240.00
1954-1955	Hilary Term	10. 1. 55	\$ 207.35
	Trinity Term	1. 4. 55	\$ 210.30
<b>Second Year</b>			<b>\$ 657.65</b>
1955-1956	Michaelmas Term	10. 10. 55	\$ 205.00
	Hilary Term	10. 1. 56	\$ 205.00
<b>THIRD YEAR</b>			<b>\$ 205.00</b>
1956-1957	Michaelmas Term	8. 10. 56	\$ 206.35
	Hilary Term	12. 1. 57	\$ 190.00
<b>THIRD YEAR</b>			<b>\$ 208.00</b>
1957-1958	Michaelmas Term	12. 9. 57	\$ 203.80
	Hilary Term	6. 1. 58	\$ 189.00
<b>FOURTH YEAR</b>			<b>\$ 202.85</b>
1958-1959	Michaelmas Term	28. 7. 58	\$ 212.30
	Hilary Term	28. 10. 58	\$ 203.00
<b>FIFTH YEAR</b>			<b>\$ 203.00</b>
1959-1960	Michaelmas Term	30. 4. 59	\$ 188.00
	Hilary Term	22. 7. 59	\$ 188.00
<b>1960</b>			<b>\$ 188.00</b>
1960	Michaelmas Term	23. 5. 60	\$ 186.00
	Hilary Term	19. 8. 60	\$ 196.00
<b>Total</b>			<b>\$ 392.00</b>
<b>Grand Total, 6 yrs.</b>			<b>\$ 4,042.15</b>

MDA. Bureau: \$300/ p.a. 1958, 1959.  
Singapore State Bureau: \$240/ p.a. 1959, 1960  
193

School fees from 1954-1960

MEMORANDA  
**DENTAL SURGERY**

**FIRST YEAR: 1954-1956**  
 Chemistry ✓  
 Zoology ✓  
 Botany ✓  
 Physics ✓

**SECOND YEAR: 1956-1956**  
 Anatomy ✓  
 Physiology ✓  
 Biochemistry ✓  
 Dental Anatomy & Histology ✓

**THIRD YEAR: 1956-1957; 1957-1958**  
 Dental Materials ✓  
 Materia Medica & Dental Therapeutics ✓  
 Pathology & Bacteriology ✓

**FOURTH YEAR: 1958-1959**  
 Medicine (General) ✓  
 Surgery (General) ✓

**FIFTH YEAR: 1959-1960**  
 ✓ Conservative Dentistry  
 ✓ Prosthetics  
 ✓ Oral Pathology & Oral Surgery  
 ✓ Preventive Dentistry  
 ✓ Periodontia

1. Orthodontia.
2. Radiology.
3. Anaesthesia.
4. Pedodontia.
5. Dental Health.
6. Dental Hospital Practice.
7. Ethics, Jurisprudence, Practice Management...

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The dental syllabus





(b) (i) Position of Teeth. Jaw deviation.  
 (ii) Bite on one side than the other.  
 Compare strength. Temporals & Masseter.  
 (iii) (Pterygoids) Side to side movements.  
 If UMN lesion: Paresis not marked.  
 (iv) Jaw-jerk.  
 UMN - increased.  
 LMN - decreased or abolished.

(c) Taste:  
 Anterior two-thirds of tongue in  
 5th or 7th. nerve lesions.  
 Sweet, salt, sour, bitter.

THE SEVENTH OR FACIAL NERVE.

(a) Facial muscles.  
 (i) Show the teeth.  
 (ii) Puff out the cheeks  
 (iii) Wrinkle the forehead.

(i) Close the eyes.  
 (ii) Acuity of hearing on affected side.

Facial Paralysis - UMN & LMN lesions.  
UMN Lesion: Muscles of lower part of face.  
 Occipito-Frontalis &  
 Orbicularis Palpebrum.  
LMN Lesion: Complete - smooth face.  
 Lower eyelids droop.  
 Angle of mouth sags.

Facial Paralysis LMN.

UMN.

The lost art of note taking

THE CARDIOVASCULAR SYSTEM.

THE HUMAN HEART.

Peripheral & Central System.

PERIPHERAL.  
 Pulse should be felt in both wrists.

PULSE.  
RATE:

(a) Normal 72 per minute. Children (90-110)  
 Old age (55-65).  
 (b) Compare heart-rate with pulse rate.

RHYTHM:

(a) Irregularities:

(i) "Regular". Sinus arrhythmia  
 (ii) "Irregular". Completely irregular. Coupled  
 (iii) Extrasystoles. Completely irregular. Extrasystolic  
 (iv) Auricular Fibrillation. Auricular Fibrillation.

(a) Rheumatic Heart Disease.  
 (b) Mitral Stenosis.  
 (c) Thyrotoxicosis.

Normal.

MALAYAN D

Dr. ...

## Dr Dentist

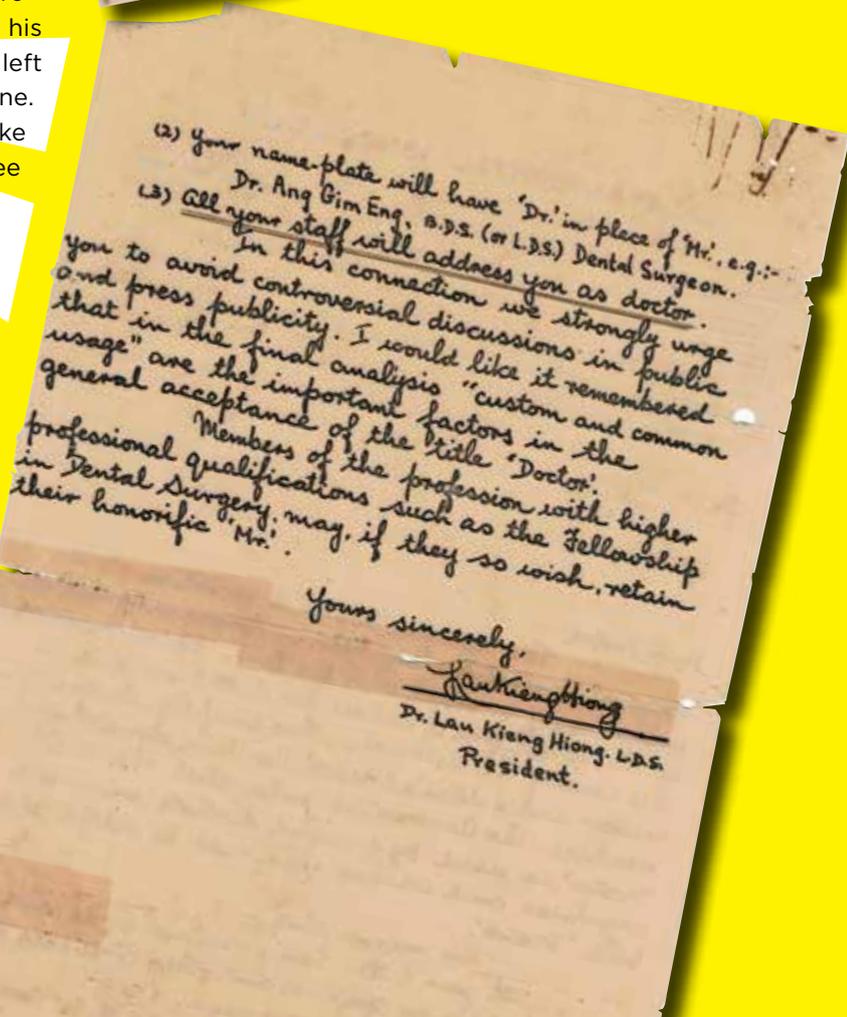
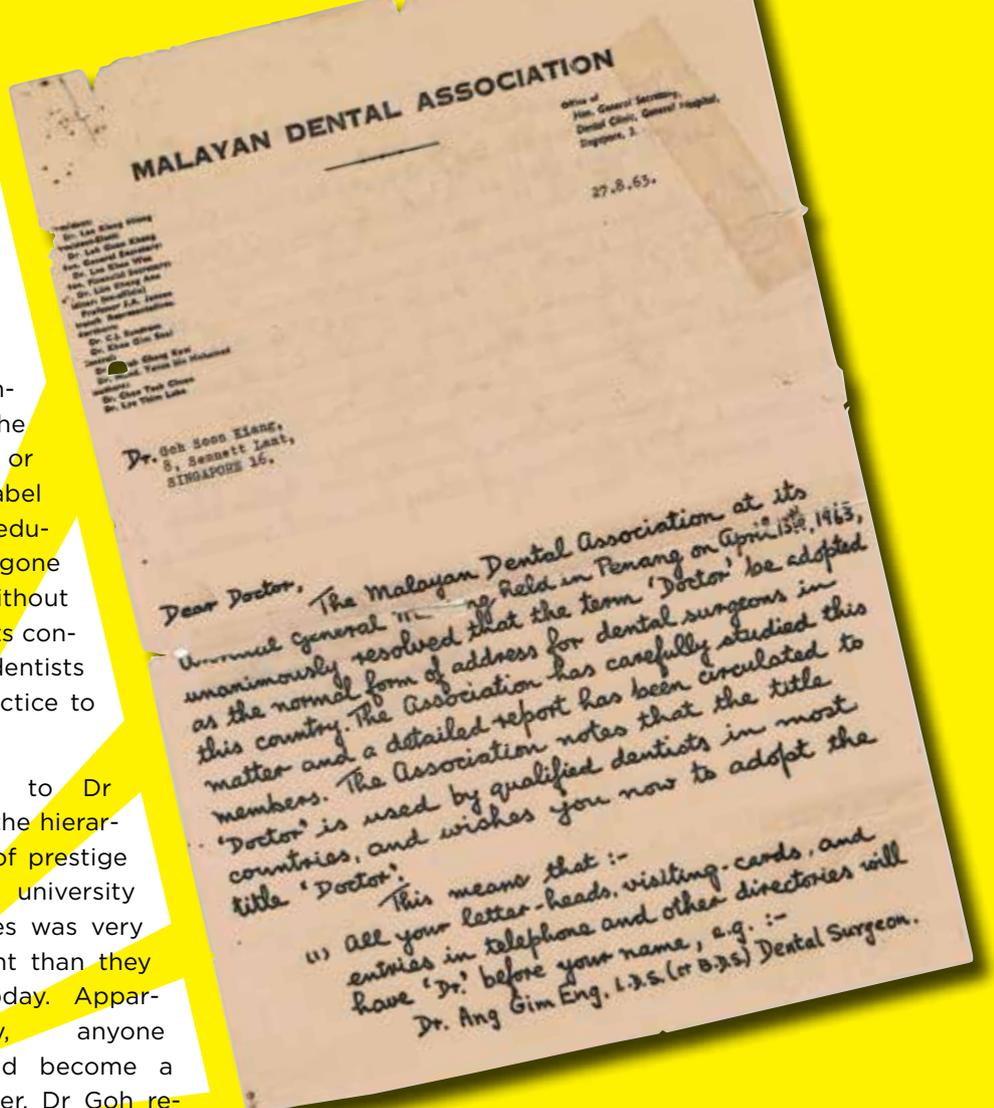
Unlike today, dentistry was an unpopular profession back then. The derogatory term of “*Tukan gigi*”, or “*Carpenter of teeth*” was used label dentists. Dentists were often uneducated individuals who had undergone apprenticeships with dentists without official qualifications. These dentists continued to practice as Division 2 dentists and a handful continue to practice to this day.

According to Dr Goh, the hierarchy of prestige of university courses was very different than they are today. Apparently, anyone could become a lawyer. Dr Goh related that even his dental technician left his job to become one.

All he had to do was to take the bar as no academic degree was required.

It was not until 1963 that the title of “Doctor” was conferred upon dentists. Many were unhappy with that change; especially doctors. They felt that the dentists were undeserving of the title. While working in Singapore General Hospital, Dr Goh related the discrimination by his medical colleagues when he began introducing himself as “doctor”. Even his own family, which comprised of many doctors, felt that he was undeserving of the title.

Unhappy with the backlash, Dr Goh wrote to the Malayan Dental Association





tion and received the following letter in response:

- All your letter-heads, visiting-cards, and entries in telephone and other directories will have 'Dr.' before your name.
- Your name-plate will have 'Dr.' in place of 'Mr.'
- All your staff will address you as doctor.

Dr Goh felt that this mandate played a vital role in elevating the status of dentistry. In which, as we appreciate the status of the profession today, let us also appreciate our humble beginnings and the long way that dentistry has come.

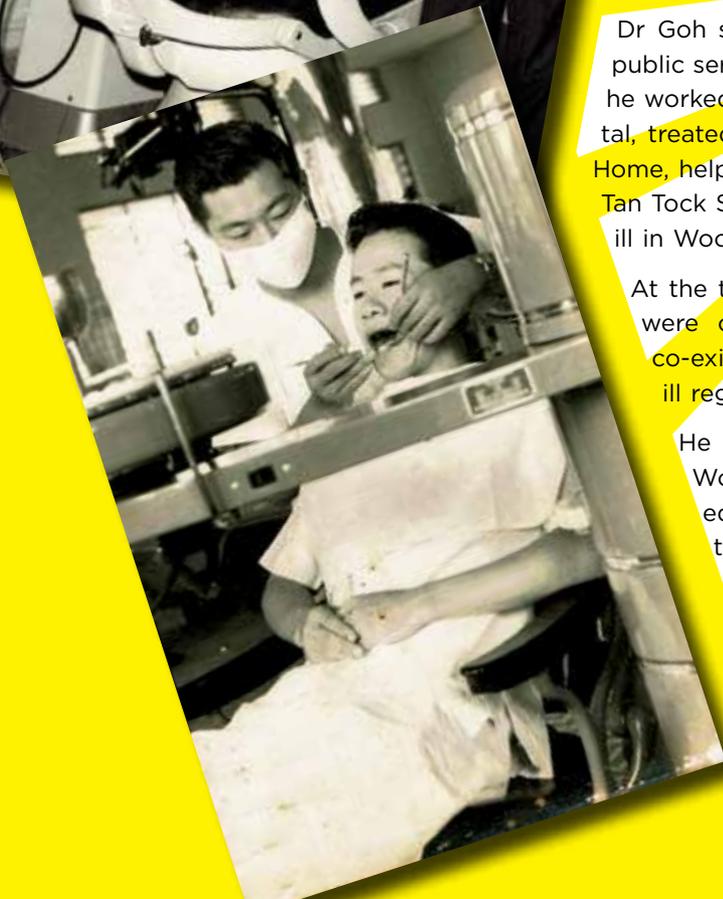
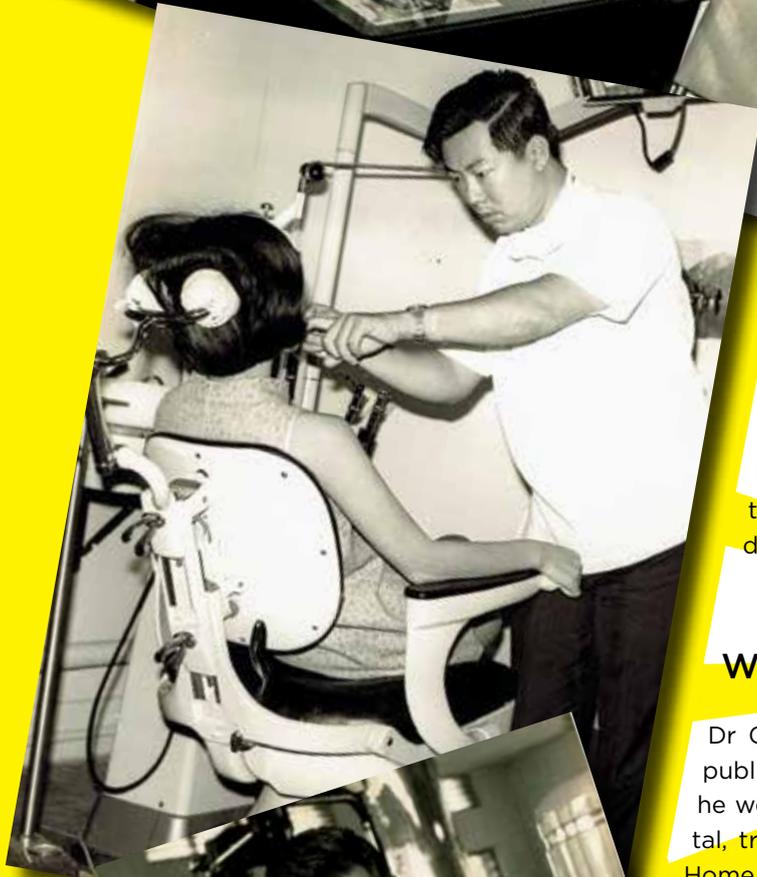


## Work

Dr Goh served as a dentist in the public service for 6 years. Among others, he worked at the Singapore General Hospital, treated patients with leprosy in Trafalgar Home, helped with the inception of the dental clinic in Tan Tock Seng Hospital and even treated the mentally ill in Woodbridge Hospital.

At the time, both Division 1 and Division 2 dentists were commonplace. According to Dr Goh, the co-existence was harmonious and there was little ill regard towards one another.

He related treating a mentally ill patient in Woodbridge Hospital. The patient was partially edentulous and had fashioned a partial denture out of wires and carved mahjong tiles. There is, after all, method in the madness.





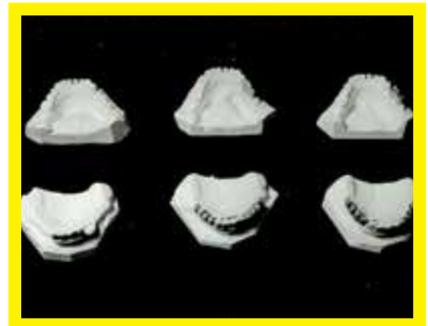
# 西房藥和人

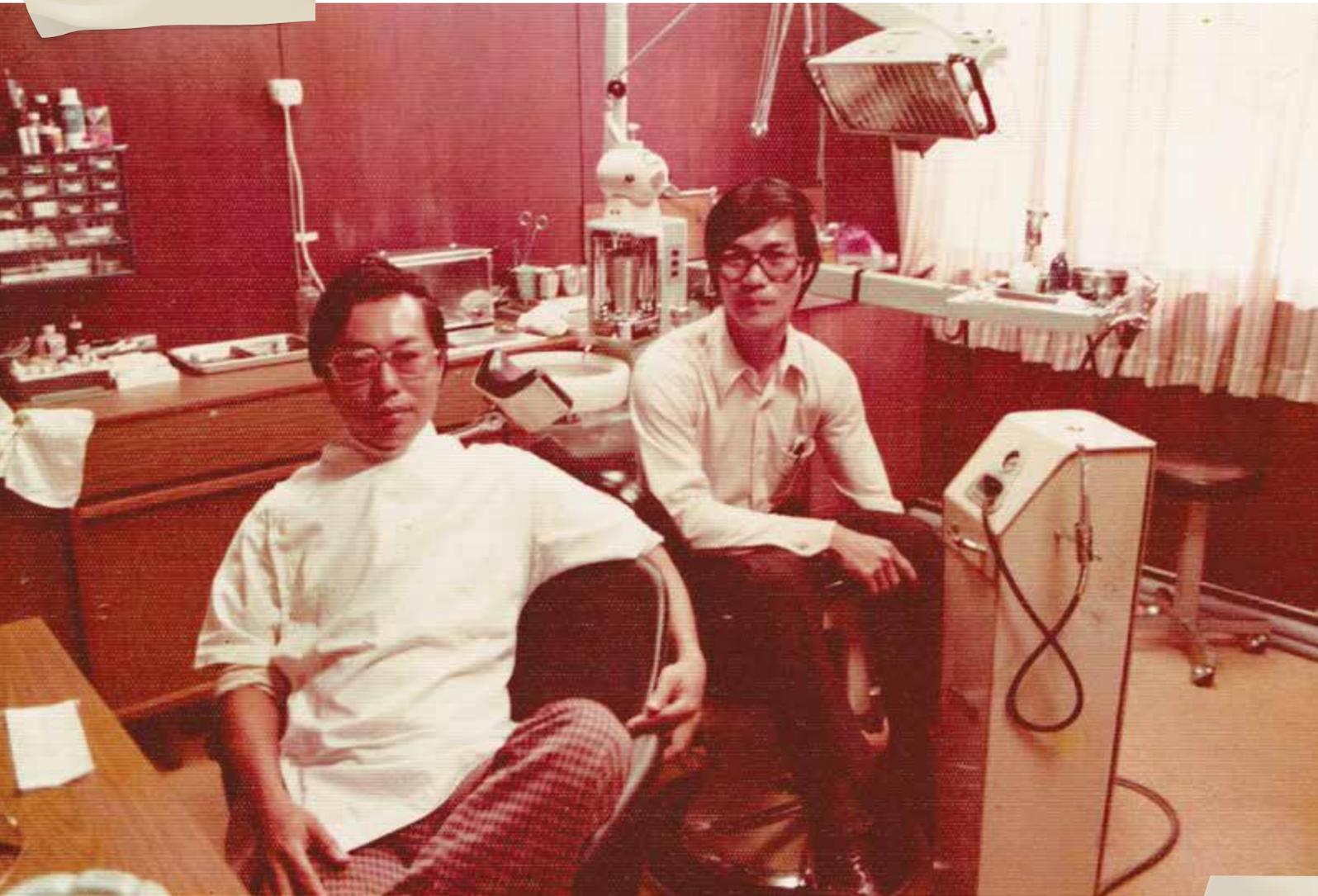
Dr Goh resigned from government service and flew to the UK to work under their National Healthcare System (NHS) for a year. At the time, the NHS provided free treatment for all. All treatment rendered was under scrutiny by supervisors, where diagnoses had to be approved prior to any treatment rendered. He appreciated the professionalism and thoroughness of the NHS, and the exchange rate then of 1 British Pound to 7 Singapore Dollars also made it very financially rewarding. However, he eventually left to return to his fiancé back in Singapore after a year in the UK.

He eventually started a dental and medical clinic with his brother (who was a doctor) called Associate Dispensaries.



# THE MAHJONG TILE DENTURES





*Dr Goh (left) posing with his newly purchased high speed turbine.*

He then opened Goldhill Dental and was one of the first private practitioners to own a high speed turbine unit.

Dr Goh has also witnessed the shift in dental disease over the years. When he first started practising in the early 60s, most of his work consisted of extractions, fabricating dentures and the occasional filling. Endodontic, orthodontic and fixed prosthodontic cases came only once in a blue moon.

In the mid 60s, Singapore introduced fluoridation into her water supply. Dr Goh noticed a drastic shift in caries pattern and it made drastic positive impact on the oral health of Singaporeans. At that time, tooth coloured composites (albeit of poor quality relative to today), high speed handpieces and ultrasonic scalers were also introduced. Yes, all

scaling was done by hand prior to that. He relates the improvement of the quality of tooth coloured fillings since then as one of the most significant developments in dental treatment. To have a tooth coloured filling to be as reliable as an amalgam filling was a simply a pipe dream back in the 60s.

## Yesterday Today

Dr Goh continued to run a successful practice with a focus on a personal touch. He forged genuine and meaningful friendships with his patients, evidenced by his extensive collection of postcards and letters that he has lovingly kept over the years.

“People hardly ask, ‘how’s your family doing?’ anymore, they go straight to work,” Dr Goh lamented. He holds a firm belief in the powers of the personal touch, “it’s part of the healing process”.

However, he empathizes that it may not be a fault of our own, but the fault of our circumstance. With ever increasing fixed costs, globalization and corporatization, the practice of dentistry has had a dimensional shift in approach over the decades.

Though technology, research and materials have evolved, the human aspect of our work may have taken a back seat.

Regardless, Dr Goh remains optimistic. He said, “Now is more important than the past. You can’t predict what’s going to happen in the future. So, everything is now.”

At 84, Dr Goh still works almost everyday as a supervisor. He provides valuable advice to younger dentists and keeps up to date with the latest findings. “I’m always learning; always reading. You have to keep up with the times,” Dr Goh relates, showing me his expansive collection of reading material.

## Revelations

While we, as an industry, have come a long way—the tenets of our practice remain unwavering. The desire to provide the best in patient care will and should remain the cornerstone of our profession. A fleeting glimpse into the window of dentistry past serves as a beacon of light for the constant desire to become a better dentist.



**DR JEREMY SIM** is currently serving his bond as the Dental Officer In-Charge of Woodlands Polyclinic. He indulges in self-deprecating humour and wants to be an astronaut when he grows up. He also feels uneasy when writing about himself in third person.

# CONFESSIONS OF A LAB TECHNICIAN

BY DR ROBERT BURGESS



## The Journey Begins

It's 6:30pm on a weekday evening. The sun reaches the end of its journey across the sprawling sky to take its rest in the far reaches of the horizon. I find myself trudging down a dark and seemingly endless corridor flanked by doors on both sides. After what seems like a journey in and of itself, I pull up to the door I'm looking for. Nothing out of the ordinary except for a small sign that barely registers in my peripheral view. Just as my knuckles peel themselves off the doorframe with their second knock, the door swings open with an almost enthusiastic motion.

"Hi, we've been waiting for you."

No, this isn't End Game or the beginning of a high budget Hollywood blockbuster. This is a dental lab. The only snap you're gonna get here is the sound of acrylic fracturing as a denture hits the floor. The person on the intaglio of the door introduces himself. We exchange brief niceties before he agrees to this interview on the basis of anonymity. For purposes of this article, we'll call him Randy.

The silence between us stretches slightly too long, edging into the uncanny area of awkwardness. My eyes instinctively survey the room in a feeble attempt to dissipate the mounting tension. I count 4 individuals, each hunched over a long workbench. A cacophony of red, green and white line the table, and it takes a moment for my brain to realize that what I'm seeing are loads and loads of dental casts.

## Taxing Working Conditions

Randy catches me glancing at the staff and laments about the mounting difficulty in finding good lab technicians. "The good ones tend to be the ones with lots of experience, but unfortunately, experience only comes with age. By the time they've become master technicians, they usually can't keep up physically and it's not long before they retire." He lets out a short sigh before continuing: "The young

ones have more energy, but they don't stay in this industry long. Many of them don't want to grow old doing lab technician work." He shares with us many parting words from those who have quit - "smelly", "it's a dirty job", "dentist always not happy", "OT everyday". I implore him to elaborate on the working conditions of the lab technicians here - He cites a 5 and a half day work week (Monday - Saturday) with hours from 8-6pm, before further explaining that those are just "guidelines". Most lab technicians end up leaving late because they need to cover overtime to rush out urgent cases. "Dentists do contact us regularly to try their luck in getting us to rush a case for them. Most don't realize that they're not our only customer, and that it's not always physically possible for us to do so without a severe drop in the quality of the work." Randy explains how most lab cases only get delivered by the courier earliest by mid-day, and those cases still need to undergo administrative sorting (to ensure cases don't go missing or get swapped) before they can even be assigned to a lab technician to be started on. This doesn't even take into account the backlog of cases that the technicians have to complete from the day(s) before. "We hope dentists can be more understanding. Just like how dentists value their work and wouldn't like patients to rush them, we hope they can see things from our point of view." Most labs here charge an express fee, which covers the OT costs of the lab technicians for rushing out the case in time.

## Manpower Shortages

Another major local lab I talk to explains how they overcome the manpower drought - "We vet our cases and translate the lab sheet instructions before sending them overseas. The cost is lower and the pool of dental technicians is so much more." This efflux of talent from the local dental technician scene may appear to be of little consequence to most dentists, but it does raise some concerns over potential issues of quality control. Materials and methods from overseas labs are not privy to the same standards of

scrutiny that local labs and lab technicians are. There are no real guarantees that parts are authentic, or that materials are sourced from legitimate manufacturers. Another big issue involves the scheduling of cases - Rushing urgent or express cases becomes a huge problem when cases are sent overseas as courrying the case back and forth wastes precious time. Express services may increase heavily in cost as more labs operate with an increasingly overseas presence.

### **Lack of Industry Recognition & Formal Training**

Randy rummages through a nearby basket of lab cases, clearly trying to multitask to make the most of his time during this interview. He pauses briefly with each cast, surveying it fleetingly before either haphazardly tossing it into a bin without a care or placing them ever-so-carefully back into the basket, almost as gently as you would handle a newborn baby. I watch this hypnotic symphony of movements as he expounds on the lack of interest in the local lab technician scene. Randy explains that lab technicians in Singapore can receive training via a NITEC course. Sadly, that's all there is in terms of formal training. He explains how other countries have more rigorous training programmes like diploma as well as advanced diploma courses that allow for talent to be nurtured, whilst also allowing for greater career progression in the industry. The Prince Philip Dental Hospital in Hong Kong is mentioned as one of the institutions offering such programmes. "(The dental technician industry) may benefit from having a body to protect its rights and to allow for formal training and furthering of skills (here)." He mentions how the industry might be revived by creating awareness and a sense of ownership over the community with better representation. "Technical institutes or even possibly degree programmes (involving niche subsets of engineering) might be considered. These will definitely attract more budding talent from the younger generation." Going back to the issue of representation, Hong Kong is once again mentioned for having a dental society that caters to dental techni-

cians with frequent seminars as well as tie-ups with suppliers to allow for better technological and skills advancement in the sector. Senior dental technicians can adopt teaching roles instead of retiring, which can help to maintain talent within the industry.

### **Unrealistic Expectations from Dentists**

I then bring up the main topic that I want to touch on today - Dentists, and how the relationship between the lab and dentist can be improved. A heaved sigh and an uncomfortable squirm ensue, followed by a calculated pause (clearly done so as to think of the nicest way to phrase what comes next) before Randy says, "I work with many good dentists, but there are also some who are hard to work with." Call it the unending pursuit for perfection, but requirements from patients, and as a result dentists, have increased to almost unattainable standards in recent years. Ask any dentist and the ideal lab case will inevitably involve a crown or a denture that requires zero or at most minimal adjustments for its issue. This, despite being taught about errors in impression taking, dimensional inaccuracies of impression materials and the unavoidable effect of human error in the fabrication process of lab work. Whenever something fits well, it's not uncommon to hear the dentist say something in passing about their own skill despite how difficult the case was. However, when the converse occurs, it's almost always the fault of the lab. "The heat during transportation in the motorcycle must have distorted the wax", "maybe they got a junior technician to work on the case", "they must have mounted the case wrongly". The reasons are endless but damning. That's not to say the dental technician is never to blame for a case not turning out well, but to say that they're made the scapegoat much too often would be an understatement.

### **Lack of Good Clinical Records**

"We definitely want to do the best job we can. Nobody wants a case to turn out badly." Randy

mentions that it's not uncommon for the lab to receive calls from disgruntled dentists who are just out to vent their frustrations. The lab staff are always caught in a bind because even when it's not their fault, they have to

thinks they will help." Randy also mentions the lab appreciates whatever information that the dentist can provide - Drawings, cameraphone photos, text messages (most labs accept whatsapp texts or SMSes nowadays), etc. However, he does caution against letting the lab choose the shade of prostheses from photos due to the effects of flash as well as image processing of the camera that can distort the visual accuracy of the image. "If it's an important or difficult case, like a front tooth, then we welcome the patient to come to our lab so we can try our best to match the colour as closely as possible." Otherwise, if the dentist feels confident to do the shade taking by themselves, Randy advises that they take the shade under both white light and sunlight to reduce the effects of metamerism on the final perceived colour.



keep the dentist happy to avoid souring the working relationship. It is a business after all and unfortunately, the customer is always right regardless. "We work with all the information we're given. Sometimes that's not enough but we have to make do." Clinical time is precious, and shortcuts are always being discovered in an attempt to save as much chairside time as possible. Use of dual-arch all-in-one impression trays and taking photos of teeth with shade tabs next to them (for the lab to choose the colours themselves) are common examples of this. Unfortunately, Randy mentions that the former does cause a lot of distortion due to the lack of rigidity of the tray, resulting in flexure that distorts the working casts. All these shortcuts result in a lot of the guesswork and decision making getting shifted to the lab, which becomes a huge issue as the lab does not get to see the patient in person, complicating matters further. "We appreciate good records, meaning good impressions, bite records, shade selection and even photos if the dentist

Another huge issue that is brought up involves the handwriting of some dentists. "Most cases we receive can be understood, but some dentists really have handwriting that is very hard to understand." Randy shows me some samples that would not look out of place on the walls of an abstract art museum. He goes

on to mention that clarifying what the dentist wants in such cases is usually done over text message, which delays the case further as the replies can sometimes take almost one whole day to arrive.



Out of curiosity, I ask what are the weirdest cases Randy has had to deal with. “We had a dentist who asked us to design his dentures for him. Unfortunately, we told him it wasn’t professional for us to do so and didn’t hear from him after that.” It is not known if the dentist actually found another lab that acceded to his request. Randy then thinks hard for a moment, before heading into his office to fetch his phone. He brings up an image of an unrecognisable brown blob. “We also received this impression which we couldn’t figure out.” I stare intently at the image on his phone but cannot make out firstly, whether the impression is even of the mouth, and secondly, whether or not it is an edentulous one or a dentate one. Randy mentions the dentist insisted they try to fabricate a denture, but they had no choice but to send it back as they couldn’t even figure out where the patient’s teeth (if any) were.

### Delay in Lab Fee Reimbursement

A loud crack echos in the corner of the lab as my head cranes over just in time to see a denture being deflasked. At the same time, my eyes catch a glimpse at the clock on the wall, making me realise that I’ve overstayed my welcome. I give Randy the chance to bring up one last issue, which ends up being about remuneration of lab fees. “We usually get paid around 1 month after completion of a case,

but there are some practices that are known for paying us very late.” Randy expounds on this by quantifying that the longest wait the lab has ever had to endure was a 6-7 month delay, and that was with frequent reminders from the lab for the clinic to make payment. This delay in payment can become a major issue when the lab is small, as this can directly delay payment of staff wages and procurement of materials or equipment, even potentially resulting in closure of the lab if the issue becomes too rampant. “We’re reasonable if the payment takes slightly longer than normal. We do know that some clinics face issues time to time with cashflow, but we hope that they do not make us wait too long as it is very disruptive for us.”

And with that, I thank Randy for his time, and for giving us an intimate and honest glimpse into the often-underappreciated world of the dental lab and its technicians. A chorus of ‘thank-yous’ and ‘good-byes’ resonate through the lab as I make my way past the expansive workbenches. My feet shuffle through the same door from whence I first entered, into the sprawling corridor now bathed in ironically warm yet unsettling traces of moonlight. As the two sides of the lift door converge, my mind ruminates intently on the conversation that took place over the past hour, bringing with it a newfound appreciation for the humble lab technicians that I work with everyday.

*Note: The above article was written after consultation with several large dental labs in Singapore on the basis of anonymity. Findings are based on responses from interviews but have been paraphrased and rearranged to fit into the above prose.*



**DR ROBERT BURGESS** is a general practitioner in private practice after recently finishing his government bond. He has just joined the editorial team of *The Dental Surgeon* and hopes to continue to contribute to its growth as a publication. Robert spends his free time trying to keep his pet corgi alive, and enjoys furthering his learning, especially in the field of endodontics.

# Help your patients

## **BEAT SENSITIVITY FAST**

### Sensodyne Rapid Relief **ENGINEERED FOR SPEED**

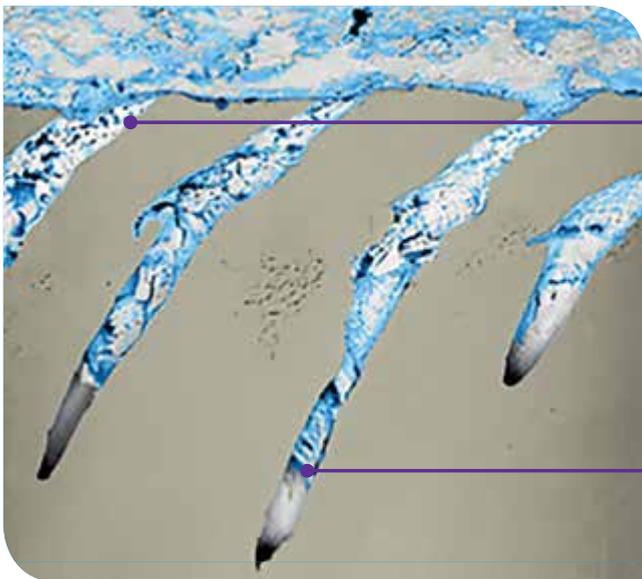
Its unique formulation contains a balance of active stannous fluoride and bio-adhesive polymer that **accelerates occlusion** of dentine tubules<sup>1</sup> by:

- Providing improved bio-adhesion\*<sup>2</sup>
- Forming a gel-like scaffold to hold the stannous in place

**Clinically proven relief in just 60 seconds and long-lasting protection from dentine hypersensitivity †<sup>6-8</sup>**



- Starts working from the first brush<sup>6</sup>
- Brushing sensitive areas delivers clinically proven relief in just **60 seconds**<sup>6-8</sup>
- After 8 weeks, Sensodyne Rapid Relief provided a 64% reduction in dentine hypersensitivity<sup>9</sup>



Stannous fluoride embeds into peritubular dentine on the edge of the tubule wall<sup>3,4</sup>

Stannous fluoride extends up to 80 µm inside the tubule network<sup>5</sup>

Representative FIB-SEM image, combining multiple imaging techniques (STEM-EDS, DSIMS, FIB-SEM/EDS).

**Recommend Sensodyne Rapid Relief for proven fast relief and long-lasting protection.†**



STEM-EDS = Scanning Transmission Electron Microscope-Energy-Dispersive Spectroscopy. DSIMS = Dynamic Secondary Ion Mass Spectrometry. FIB-SEM = Focussed Ion Beam-Scanning Electron Microscope. FIB-SEM/EDS = Focussed Ion Beam-Scanning Electron Microscope/ Energy Dispersive Spectroscopy.

\*vs. toothpaste containing 0.454% stannous fluoride and lower polymer level.

†with twice-daily brushing.

**References:** 1. Khan S et al. J Dent Res 2017;96(Spec Iss A):2122. 2. GSK Data on File Report NPD/EU/049/16. December 2016. 3. Earl J et al. J Dent Res 2017;96(Spec Iss A):1493. 4. GSK Data on File SN20160501. 5. GSK Data on File 161075. 6. GSK Data on File 207211. January 2017. 7. Creeth J et al. J Dent Res 2017;96(Spec Iss A):1543. 8. Seong J et al. J Dent Res 2017;96(Spec Iss A):0215. 9. Parkinson CR et al. Am J Dent. 2015 Aug;28(4):190-196. 10. GSK Data on File 205072. July 2016. 11. GSK Data on File 207212. April 2017. 12. Parkinson CR et al. Am J Dent. 2016;29(1):25-32. 13. Parkinson CR et al. Am J Dent. 2013;26(Spec Issue):25a-31a. 14. GSK Data on File Z7871336. 15. GSK Data on File Z7871337. 16. Goyal C et al. J Dent Res 2017;96(Spec Iss A): 1544.

# A TAXING BUSINESS

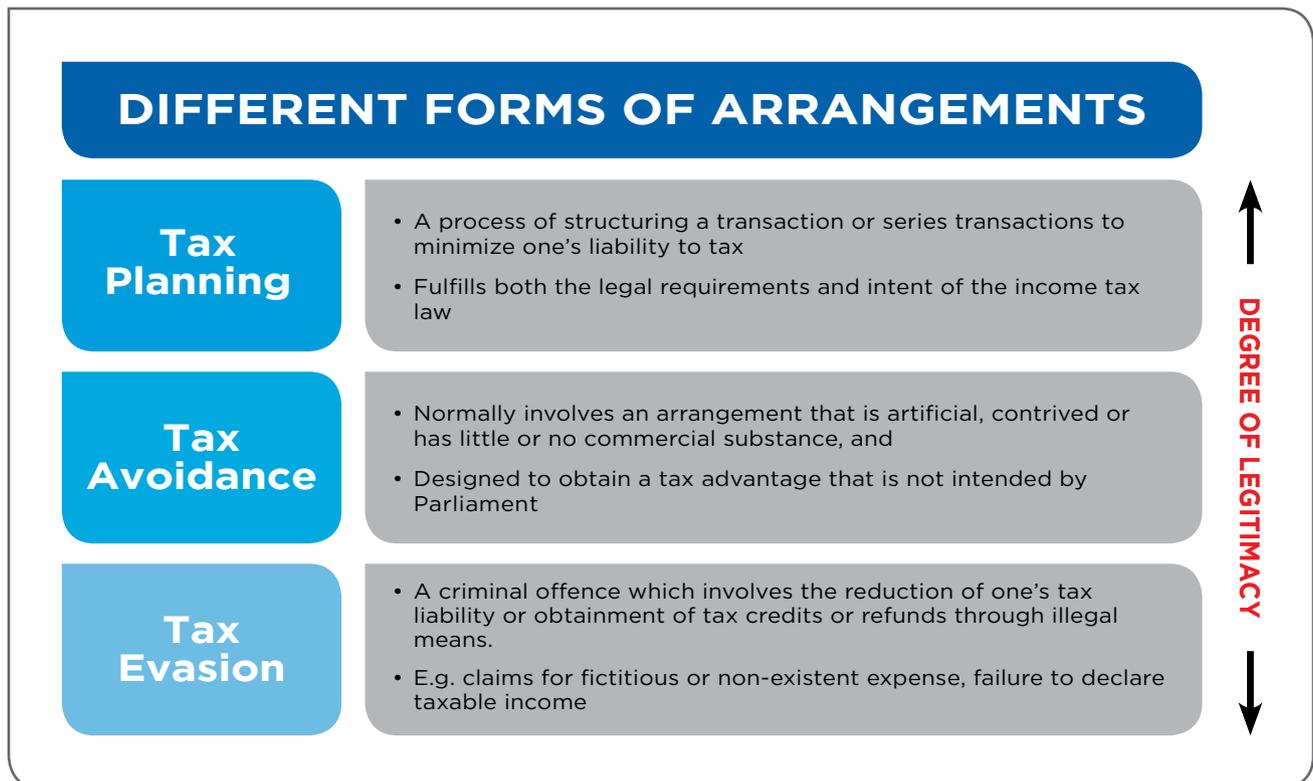
BY DR TERRY TEO

**D**entistry is a healthcare business, and most dentists in Singapore have always had to navigate the intricacies of tax planning. This is especially so for practice-owners who set up Private Limited (Pte Ltd) Companies to mitigate financial risk, and to conduct all day-to-day business transactions from rental to daily takings to staff pay. Such companies are subject to a corporate tax structure distinct from the structure of personal taxation that all individuals in Singapore fall under.

In the past decade, the Government has particularly encouraged the setting up of small businesses

in Singapore to encourage economic growth. In line with this, corporate taxation rates have fallen compared to personal taxation rates in the highest brackets. Currently as of 2018, an individual would pay personal income tax of 22% for the highest income bracket, but a company only needs to pay 17% corporate tax. In addition to this, start-up companies enjoy tax savings in the first few years that significantly add up.

This has thus led to more dentists in private practice corporatizing their finances in a bid to save on tax, by setting up one or more companies to receive their income. Such an arrangement is possible even for



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## Antiseptic Mouth Rinse

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Uniquely formulated with  
**10 Natural Ingredients +  
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Helps Fight Bacteria that  
Cause Tooth Decay

Helps Relieve &  
Soothe Oral Discomfort

Helps Fight Bad Breath



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non-practice owners because like doctors, dentists in private practice are often considered “self-employed”, and join practices as associates who often receive no CPF and other employment benefits.

Most dentists would consider this prudent financial planning. After all, the definition of tax planning is the process of restructuring one’s financial transactions to minimise one’s liability to tax, provided that it is legal and fulfils all grounds of the income tax law. However, on the 24th of January 2018, the Inland Revenue Authority of Singapore (IRAS) met up with members of the SDA to clarify that very often, such arrangements are not a matter of tax planning, but tax avoidance.

Tax avoidance involves an arrangement that while still being legal, is artificial, contrived or has little bona fide (genuine) commercial substance, and is solely designed to obtain a tax advantage. Under

Section 33 of the Income Tax Act, it is within the purview of IRAS to determine the individual dentist’s **motivation** as to whether the setting up of a company were genuine or had tax avoidance as one of its main purposes.

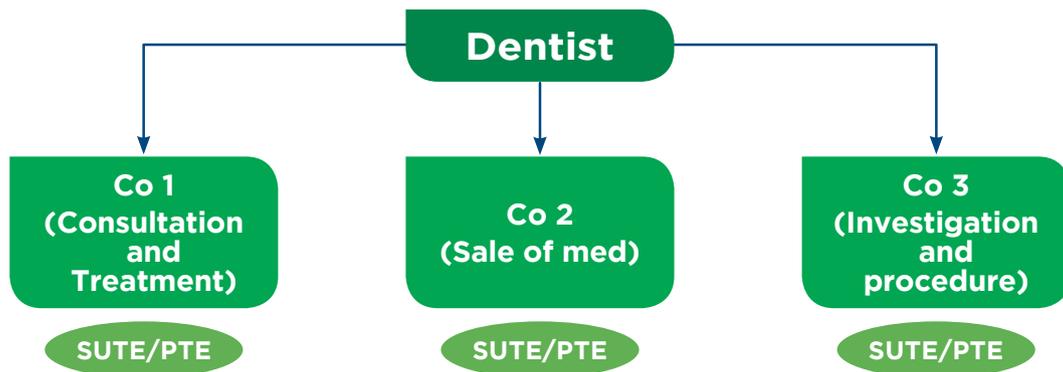
The factors taken into consideration are why the company was set up, what functions are performed by the company and by whom, whether there are assets owned, and if the company has assumed any financial risks. Based on these findings, IRAS may adjust a dentist’s tax assessments in a manner they deem to be fair and reasonable, allowing a retroactive financial “claw-back” of up to 4 years. It is thus imperative to retain all financial records and documents for 5 years.

Some of the common scenarios that are considered as tax avoidance are highlighted in the following illustrations courtesy of IRAS.

## Scenarios that are considered tax avoidance

### Illustration 2A: Multiple Companies for 1 Business

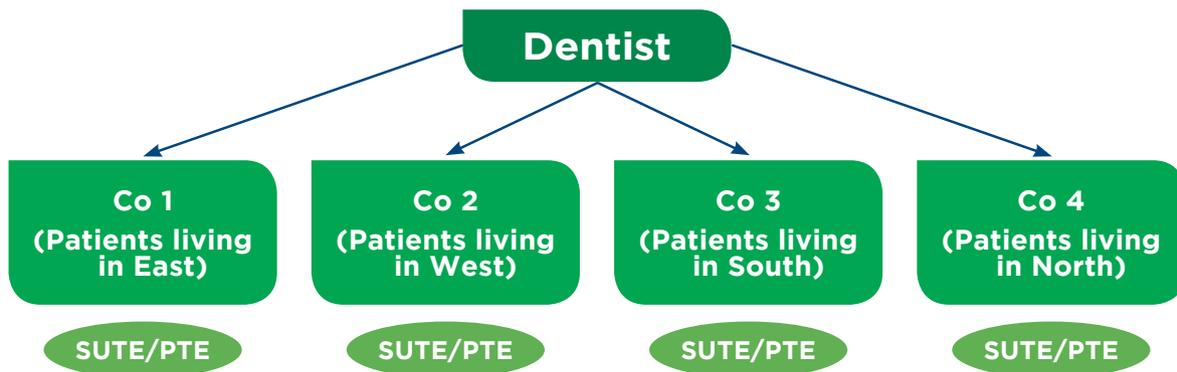
A dentist sets up Company 1 (“Co 1”) to run a dental clinic and Company 2 (“Co 2”) to sell medicine to dental patients from the same clinic. He also sets up Company 3 (“Co 3”) to book income from dental investigations and dental procedures for the same dental clinic. Dentist worked full-time for the three companies (concurrently) but only received nominal salary and director fee. The profit after tax from the three companies were mainly distributed as one-tier exempt dividends to dentist.



## Scenarios that are considered tax avoidance

### Illustration 2B: Multiple Companies for 1 Business

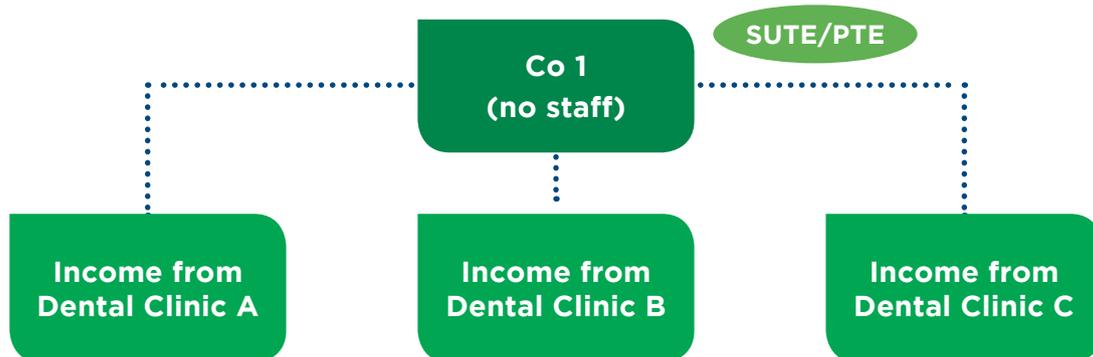
Dentist sets up Company 1 ("Co 1"), Company 2 ("Co 2"), Company 3 ("Co 3") and Company 4 ("Co 4") to separate income by patients from different locations (e.g. East, West, North & South). The four companies operate with 1 dentist, the same pool of staff and assets in the same premises.



## Scenarios that are considered tax avoidance

### Illustration 3: Assignment of Individual Income to Company

A Locum sets up a company to book or account for income earned from provision of personal services that he performs for various dental clinics.



In addition to these scenarios, the following practices are considered unacceptable:

- Incorporating company A to run a dental clinic for 3 years to enjoy the start-up tax incentives, then closing company A after 3 years and opening company B to run the same clinic.
- Paying nominal income to the dentist from his or her own company. The assessment of what is reasonable income for a dentist will be based on an “Arm’s Length Remuneration” principle by assessing what a dentist with comparable training will receive as an associate under similar market conditions.

- Paying family members disproportionate employment income or director’s fee.
- Paying family members who did not do any work or who re-routed income back to the dentist.

IRAS has been embarking on various education outreach programmes for members of various professions in conjunction with their tax audit programmes. This also extends to the accountants who advise dentists and do their numbers. However, they have made it clear that going forward, the onus is on the dentist to be aware of their own tax planning so as to avoid unnecessary audit and adjustments.



**DR TERRY TEO** is a paediatric dentist at Q&M Dental Group, 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.

# New Colgate Total®

The next generation toothpaste for Whole Mouth Health - pathway to everyday prevention

Colgate® announces the launch of its next generation Colgate Total® toothpaste designed to proactively protect hard and soft oral tissues - teeth, tongue, cheeks and gums - against the most prevalent oral diseases: gingivitis and caries.

Periodontal disease and caries are both preventable in their early stages (Gingivitis and White Spot Lesions, respectively). Yet, despite the efforts of the dental profession to improve oral hygiene, these diseases continue to be a public health concern, with up to 50% of the global population estimated to be affected.<sup>1</sup> Moreover, patients are looking for guidance and support from their dentist to make sure they are being as proactive as possible for better oral health.

## Reducing periodontal disease and caries offers societal benefits

Reducing the incidence and prevalence of caries and periodontal disease has the potential not only to improve health and wellbeing in the general population, but also to reduce the growing financial pressure on publicly funded healthcare systems.

The economic burden of these untreated diseases is likely to increase due to population longevity which is an important aspect to policy makers<sup>2,3</sup>. Attention has focused on controlling bacteria in dental plaque, while the value of Whole Mouth Health has been underestimated.

## Whole Mouth Health and the role of dental biofilm

The concept of Whole Mouth Health is based on the importance of achieving more than just healthy teeth - all oral tissues need to be healthy. Teeth, the hard tissue, account for only 20% of oral structures, while the soft tissue, tongue, cheeks and gums represent the 80% majority. To retain a healthy mouth, protection of all surfaces is needed.

## Disrupting the cycle

Bacteria can colonize on the teeth, initiating the formation of dental biofilm, but they also adhere to soft tissues in the mouth. From here they recolonize on the surface of teeth that have been brushed, rebuilding the dental biofilm causing diseases to reoccur. Protecting the soft tissues prevents adherence of bacterial biofilm and so protects the soft tissue and hard surfaces from bacterial colonization.

Regular fluoride toothpaste\* is not enough to achieve Whole Mouth Health - it only protects hard surfaces with fluoride. Regular fluoride toothpaste\* does not protect the hard surfaces from repopulating with bacteria harbored in the soft tissues.

## Whole Mouth Health as the new paradigm for prevention

The route to improving Whole Mouth Health is to prevent the build-up of oral biofilm and achieve good bacterial control on all oral surfaces, both hard and soft tissues.

The best way to achieve this is having an everyday prevention routine with the daily use of a toothpaste with proven protection against bacteria - a toothpaste that can strengthen the mouth's natural defenses.

## The next generation toothpaste, a clinically proven step forward in the quest for Whole Mouth Health

Decades of research have led to the development of a patented formulation for new Colgate Total®. This advanced toothpaste helps achieve Whole Mouth Health with a new technology that works with dual zinc plus arginine to provide proactive protection to the whole mouth, and help prevent the most relevant oral diseases and conditions.

## A toothpaste designed to work with the chemistry and biology of the mouth:

The formulation of dual zinc plus arginine effectively controls biofilm, through:<sup>5</sup>

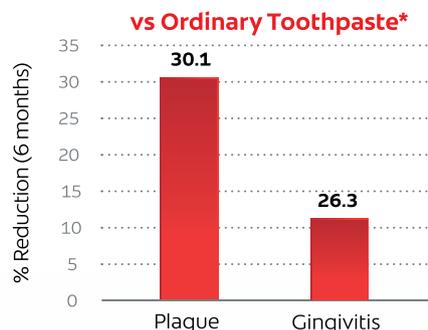
- Weakening to kill bacteria by interfering in bacteria metabolism and reducing their nutrient uptake
- Slowing bacterial growth
- Enhancing soft tissue's natural defense with a protective barrier that adheres to tongue, teeth, cheeks and gums
- Limiting bacterial adherence to hard and soft tissues for 12 hour protection<sup>6,\*\*</sup>

## Clinically proven whole mouth antimicrobial protection

Studies show that new Colgate Total® reduces bacteria on teeth, tongue, cheeks, and gums (TTCG) by up to **38.3%** on Teeth, **39.7%** on Tongue, **35.4%** on Cheeks, and **25.9%** on Gums.<sup>6,\*\*</sup>

## Clinically proven to reduce plaque and gingivitis

New Colgate Total® is clinically proven to reduce plaque (by 30.1%;  $p < 0.001$ ) and gingivitis (by 26.3%;  $p < 0.001$ ) when compared to ordinary non-antibacterial fluoride toothpaste after six months.<sup>7</sup>



## New Colgate Total® - proactive protection for Whole Mouth Health

- Prevents tooth decay/cavities
- Superior reduction in sensitivity†
- Superior plaque reduction†
- Superior reduction in tartar†
- Superior reduction in gingivitis†
- Reduces stains and stain intensity
- Superior reduction in gum bleeding†
- Protects against erosive damage
- Fights bacteria to keep breath fresh
- Helps repair weakened enamel



- Long lasting freshness<sup>8</sup>
- For 12 hours fresh breath<sup>9,#</sup>
- The fluoride level meets with the international standards for toothpaste efficacy in caries prevention

## Additional benefits:

New Colgate Total® is the advanced way to achieve Whole Mouth Health by proactively controlling and protecting against bacteria on 100% of mouth surfaces, Teeth, Tongue, Cheeks and Gums. By recommending new Colgate Total® to your patients, they will have an advanced single solution for better, more complete oral health†

## References:

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8. A clinical investigation of the efficacy of a Dual Zinc plus Arginine dentifrice for controlling oral malodor, Hu, D., et. al., J Clin Dent, Submitted August 2018.

\* defined as non-antibacterial toothpaste  
 \*\* after 4 weeks use, 12 hours after brushing  
 † vs ordinary non-anti-bacterial fluoride toothpaste  
 # with continuous use, after 3 weeks

# Jeremy's Journeys: DOOBIOUS DENTISTRY Chinese Whitening!

BY DR JEREMY SIM

**28** years ago, in the wee hours of a Wednesday morning, I passed from my Mother's birth canal covered in viscous gloop. I was cold, crabby and confused. I was stirred from my restful slumber in the womb and forced into the perils of society without consent.

I was not allowed to crawl back up there and was thus feeling miffed. I missed the snugness of the womb. It was a carefree life—all I did was kick, sleep; rinse and repeat. Now, in this horrible new environment; I was displeased. I was determined to speak to the manager of this hellish place.

I forced my eyes open. What greeted me was an abominable sight. I was being lifted into the air by

an old man in his fifties. He brought me up to his face and bared his teeth in an attempted smile. They were lined up like fallen dominoes that had sustained the impact of a nuclear bomb. They were a shade of mustard that I could, as a newborn infant, only describe as vilely emetic.

It was from that moment that I categorically decided: my life goal was to attain a set of beautiful white teeth.

I trawled AliExpress in an exhaustive search for inexpensive tooth whitening products from the wonderful People's Republic of China.

For a grand total of S\$16, I managed to procure 4 whitening products which I shall be reviewing today:



1

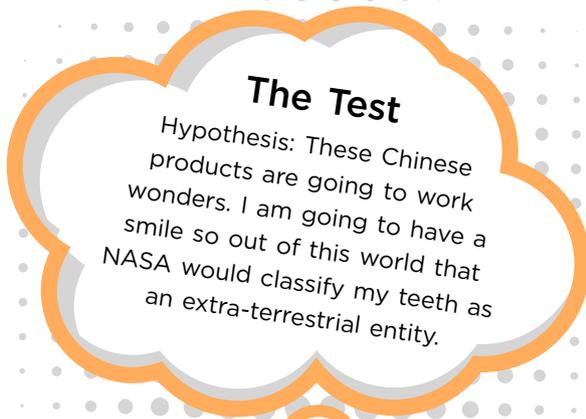


MeiYanQiong  
Teeth Whitening  
Brush Essence  
Oral Hygiene  
Cleaning Serum



2

Teeth Whitening  
Powder Bamboo  
Activated  
Organic Charcoal



### The Test

Hypothesis: These Chinese products are going to work wonders. I am going to have a smile so out of this world that NASA would classify my teeth as an extra-terrestrial entity.



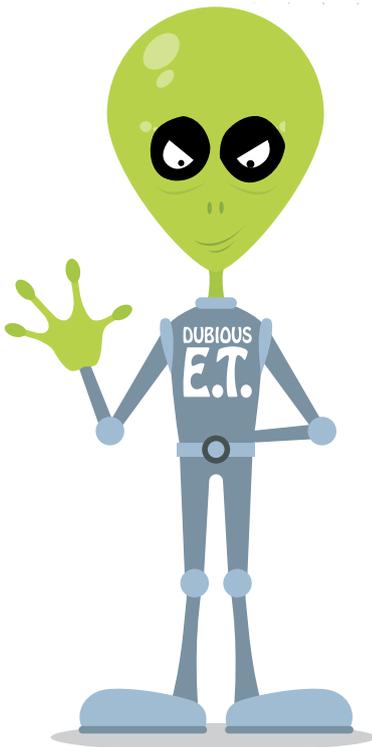
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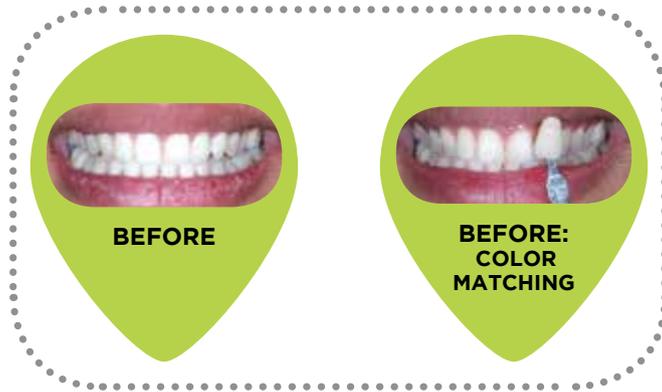
Teeth  
Whitening 44%  
Peroxide Dental  
Bleaching  
System Oral  
Gel Kit



4

LANBENA Teeth  
Whitening  
Essence Oral  
Hygiene Cleaning  
Serum





**TREATMENT**



**RESULTS**



## Methodology:

4 products, 4 quadrants:

- 1) #13 to #11: MeiYanQiong Teeth Whitenin Brush  
Essence Oral Hygiene Cleaning Serum
- 2) #21 to #23: Teeth Whitening Bamboo Activated  
Organic Charcoal
- 3) #33 to #31: Teeth Whitening 44% Peroxide Den-  
tal Bleaching System Oral Gel Kit
- 4) #41 to #43: LANBENA Teeth Whitening Es-  
sence Oral Hygiene Cleaning Serum

## Data collection:

Baseline shade to be taken (after polishing) on Day 1.

Products are to be used for 14 days on their re-  
spective quadrants.

After 14 days, shade is to be taken again for com-  
parison with Day 1.

## My Experience

It was of great inconvenience to spend an hour a day for 14 days whitening my 12 front teeth. However, I persevered; and this was about as religious as I had ever been.

Of all the products, LANBENA was the vilest. It tasted like correction fluid that had gone through the digestive tract of a beaver. It had to applied with a cotton bud, of which I instinctively put into my ear. This evidence is anecdotal, but I am pretty sure that LANBENA causes schizophrenia if applied in your ear. I began hearing voices that repeated, "what are you doing with your life? Haven't you got real sh\*t to do?"

My second least favourite product was the charcoal powder. A word of advice: charcoal is black and gets *everywhere* in powder form. Twisting the screw-on lid open every evening was an experience in itself. The inhalation of plumes of charcoal powder may lead to my premature demise; for which I am thankful. Brushing with charcoal is about as pleasant as rubbing your mouth into the ashy remains of a barbecue pit.

The MeiYanQiong whitening brush was the most pleasant product to use. It only mildly tasted like celery (to each his own) and it came with a self-dispensing gel/brush tip. Usage and application were straightforward.

The Whitening Gel kit came with 4 tubes of gel and thermoplastic trays that I was supposed to mould to my teeth. Due to a lack of user intelligence, the trays failed and my old custom whitening trays were used instead. I expected a gel concentration of 44% percent to melt my gums off my alveolus. However, it stung less than the Opalescence 35% which I had used a year back. Could it perhaps... be a better product? Or did it overstate its actual peroxide concentration? I wondered which was more likely.

## Results

After 2 weeks of usage, the test phase of the experiment was finally complete. Which product would prevail? Had I finally attained pearly white nirvana?

I sat in the dental chair and pulled out the Vita shade tabs.

All my teeth matched the A2 tab. There was no marked improvement in shade on any of my 12 tested teeth.

I slumped in the dental chair as I felt a singular tear trickle down the eminence of my zygoma. I picked up the mirror and wondered to myself,

"Who is that girl I see, staring straight back at me;

Why isn't the reflection of my teeth searing a hole through my retinas?"

Disappointed in the absence of my blindness, and yet also mildly glad that I could still see; a weak smile spread across my face— "Jeremy," I thought to myself, "my dear boy, the journey to pearly whiteness has merely just begun."

## Conclusion

Chinese whitening products are a precursor of grave disappointment.

All 4 products receive Jeremy's Seal of Disapproval.



# PROJECT SABAI DENTAL OVER A DECADE OF HEARTFELT SERVICE

BY DR WONG KUAN YEE



**“ To cure sometimes,  
to relieve often,  
to comfort always.”**

*Edward Livingston Trudeau*



## **Mustard Seeds**

*Project Sabai Dental* started in 2008 when a year 2 undergraduate dental student was invited by the student in-charge of Project Sabai Medical to be part of their mission team to two schools located in Phnom Penh, Cambodia.

Later in the same year, a team of four dental students (comprising one year 2 and three year 1) embarked on their first independent mission trip to Cambodia. Equipped with nothing more than tooth-brushing models and donated toothpaste and toothbrushes, their authentic encounters with children from the two Cambodian schools left a lasting impression on them.

For a start, the team noted that the oral health condition of the children was very poor- skipping school due to infections and fever caused by dental decay was commonplace.

It was even more heartbreaking to learn that toothache was prevalent among these children. The trip left the team feeling helpless. A sense of urgency was palpable in realising a great need for oral care and education for this target group. However, a lack of resources and skills meant that very little could be done to help the children.

These revelations sparked the team to initiate Project Sabai Dental upon their return to Singapore.

The group increased in size the following year, where six other friends and one dentist joined the cause. Together, a small clinic in the schools was started, with generous donations and help from family and friends. The primary objective was to provide dental treatment for pain relief in symptomatic cases. In addition, oral health education was to be provided for every student of the two schools.



## Growing the Mustard Seed

The project gradually grew with an average participation of thirty students and ten dentists per trip. The scope of dental services also expanded to include restorative treatment. Other than providing dental services annually to the students from the two schools, the team also started providing treatment for villagers who lacked dental care at Kampung Speu, a village located about three hours drive away from Phnom Penh.

As the project developed, the team recognised the need to consider the sustainability of the efforts. In particular, there was greater focus in addressing poor oral health from a preventive approach. In 2016, with the expertise and help from New York University representatives, the project adopted a shift in weight from the provision of dental treatment to the prevention of oral diseases, specifically dental caries. There was also larger emphasis on improving the oral health awareness of the school teachers and staff, not





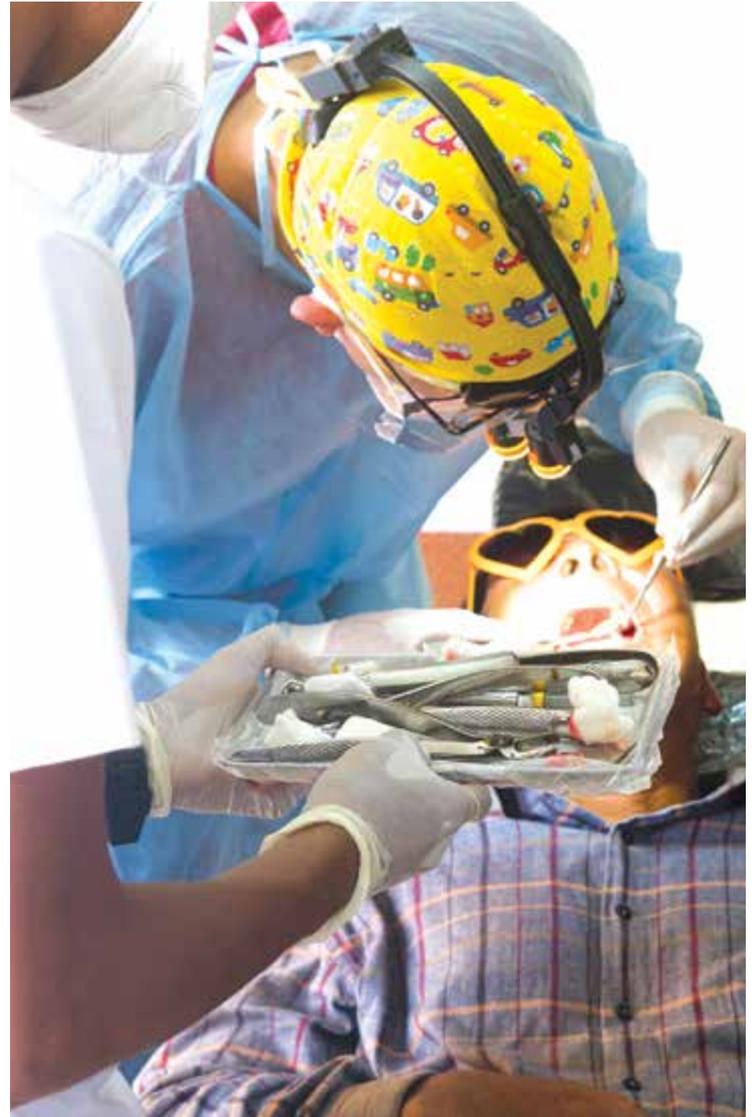
just students. Partnering closely with the school management, a holistic school-wide preventive program consisting of oral health education curriculum, daily tooth brushing drills and biannual application of topical fluoride was also instituted.

The team appreciated the importance of consulting and sharing with local partners that have been working the ground for years, as the latter know the place best. The Sabai team has been privileged to learn from our Cambodian counterparts, which allows us to tailor the volunteer trip to better benefit the locals and contributes to the long-term development of the place.

### Transforming Lives of The Volunteers

The past ten over years of outreach has seen many batches of dental volunteers take up the clarion call to serve. For some dental students- who later became dentists themselves- participating in Project Sabai has provided an opportunity to learn about empathy. As some have shared, the stints reminded them of their original reason of studying dentistry in the first place- to help people who do not have the ability to help themselves and to treat all patients with love.

Clinical skills and workflows aside, the sense of trust and faith placed by the patients in our dental operators is something not to be taken for granted. It





highlights the heavy responsibility dental professionals have with regards to the patients' well-being.

Treating the patients has also served as a timely reminder to see each one of them as a person and not a condition. This was beautifully illustrated by how one student witnessed a dental officer serving cups of water to villagers who were queuing up for treatment in the sweltering heat. The team has learnt to not just treat teeth, but to manage each patient holistically as well.

### **Full Bloom and the Decade Beyond**

2018 was a milestone when a group of Project Sabai Dental alumni decided to form an independent society. The society aims to promote oral health awareness and reduce the burden of oral diseases especially in poor and marginalized communities. It adopted a new approach from a predominantly treatment-based model to one that aims to reduce oral diseases through education and prevention. We firmly





believe that prevention is better than cure, where good oral hygiene habits are essential to reduce the risk of oral diseases.

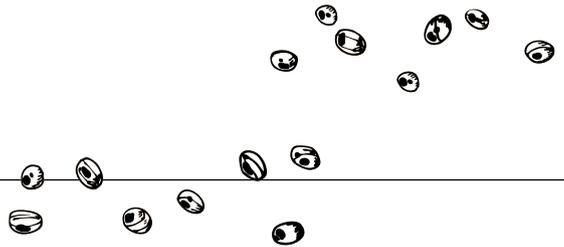
Empowering local communities to promote good oral health habits is another focus. The society works closely with the teachers and administrators of the schools that are partnered with to operate a sustainable program. It truly takes a village to raise a child!

Twelve years since its inception, Project Sabai Dental presently conducts school preventive programs for a total of six schools — four in Cambodia and two in Timor Leste. The society is thankful for every-

one who has come alongside us on this journey- for their encouragement, support and most of all for believing in us. Moving forward, all members in Project Sabai hope to continue to be good stewards of our skills and gifts, using them to serve others in kindness and love.

*All photos in this article are courtesy of Project Sabai Dental.*

*Those interested to find out more about Project Sabai Dental may do so at <https://www.facebook.com/projectsabaidental/>*



**DR WONG KUAN YEE** is currently a Prosthodontics Registrar at Khoo Teck Puat Hospital. She is the founder of Project Sabai Dental. In her free time, she enjoys reading and playing with her cat that does not respond to his name.



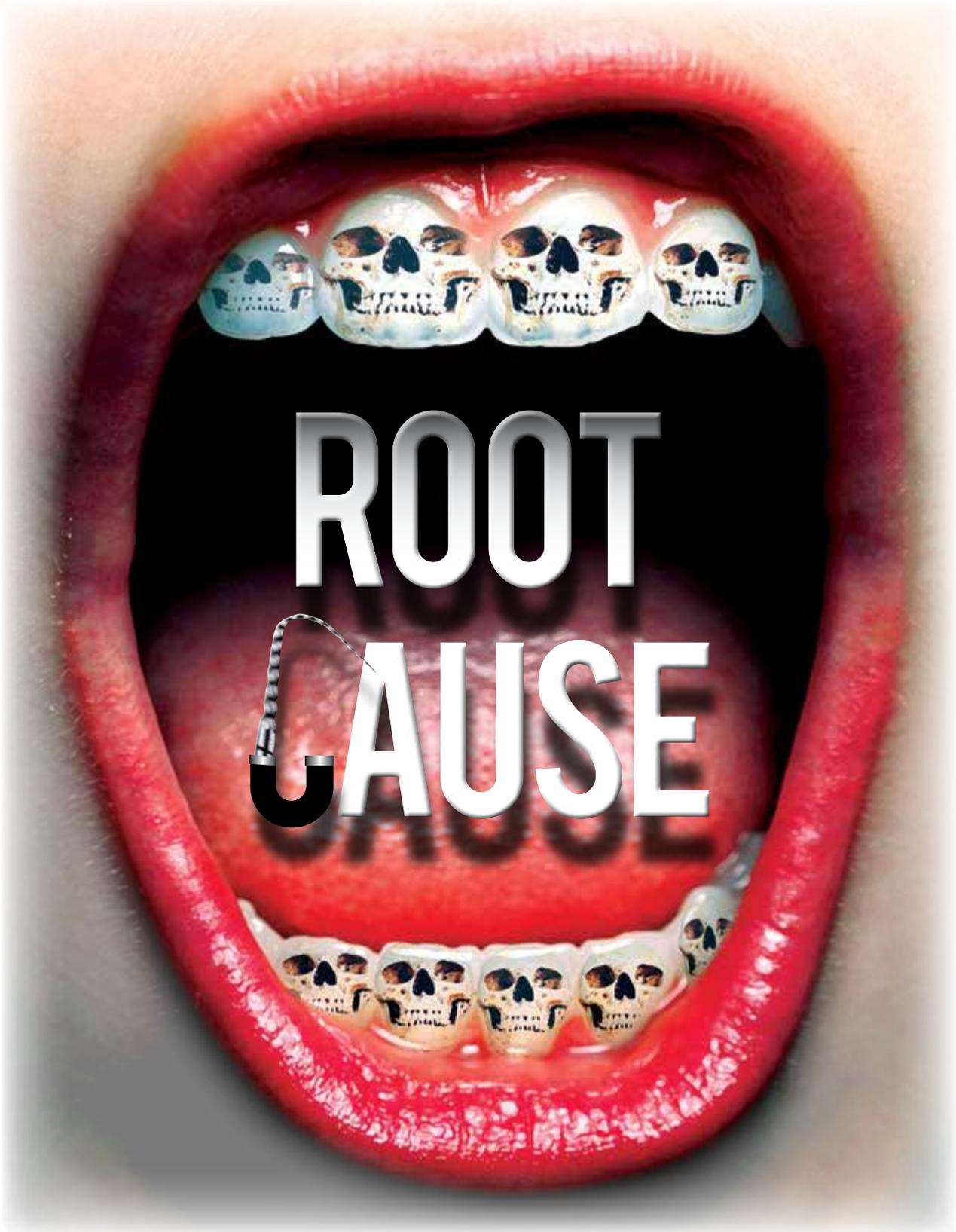
# "ROOT CAUSE" - A NETFLIX DOCUMENTARY THAT ALL DENTISTS SHOULD KNOW ABOUT

BY DR MEHEK KALRA

**A** “documentary” called Root Cause on Netflix has been causing a stirring in the dental community. Consider yourself lucky if your patients have not come across this potentially harmful film on this very popular entertainment portal. Luckily for us, after just a few months of being online, Netflix quietly pulled this controversial documentary from its streaming platform early this year, and scrubbed all trace of it from their website, assumedly due to pressure from oral care professionals that say Root Cause contains significant misinformation that is not supported by scientific evidence.

The documentary, in essence, follows the Australian film-maker Frazer Bailey’s years-long quest to identify the cause of his fatigue, anxiety and depression. He tries therapy, antidepressant medication, juice cleanses, chakra balancing, cupping, spiritual healing, hypnosis and even walks on fire and drinks his own urine! Without much evidence,

he eventually concludes that the source of his problems is a root canal he got many years ago. Bailey’s 72-minute film made claims about how cancer, heart conditions and other serious illnesses are caused by asymptomatic infections inside root canals. One of the most jarring claims has been that “97% of patients with breast cancer had a root canal on the same side as the cancer” by Dr Dawn Ewing. There is NO evidence to support this claim. This is the equivalent of saying “100% of patients with cancer drink water.” Correlation does not equate causation. This statement exploits the public’s fear of cancer and is not supported by medical evidence. Another claim made is that “The #1 cause of heart attack is root canal treated teeth.” There are very recent studies that indicate untreated teeth with periapical lesions do contribute to increased risk of cardiovascular disease (Messing et al 2019, Garrido et al 2019). However, there is no strong evidence to suggest that root canal treated teeth themselves are contributing factors,



as suggested in this movie. Instead of getting a root canal done, the film claims that pulling out the infected tooth is the safest approach.

The film has 'specialists' on panel and some of them have questionable credibility. Dr Weston Price, a Canadian dentist (1870-1948) and one of the three doctors cited in this documentary, spent 25 years of his career researching the relationship between root canal therapy and systemic disease. He formed a theory called "focal infection theory." This theory was widely accepted in medicine by the 1920s. The theory resulted in many extracted teeth and removal of tonsils. Focal infection theory is now a historical concept that drew severe criticism in the 1930s and was discredited in the 1940s by research attacks that drew overwhelming consensus on this sweeping theory's falsehood. Decades of research contradict the beliefs of "focal infection" proponents; there is no valid, scientific evidence linking endodontically treated teeth and systemic disease. Yet, some patients still hear about this long-dispelled theory. The second doctor cited was Dr Hal Huggins who played a major role in generating controversy over the use of amalgam fillings. In 1996, Dr Huggins' dental license was revoked for gross negligence and the use of unnecessary and unproven procedures. The third was Dr Boyd Haley who claimed that mercury exposure from amalgam fillings and vaccinations may cause autism and Alzheimer's disease. He is set to appear in court for marketing supplements to children without FDA approval or any research to support his claims that the supplement helps autism.

Dentists are rightfully worried that the film is in-

fluencing patients to unnecessarily have infected teeth removed. Tooth extraction can result in serious health consequences over time. The American Association of Endodontists, the American Dental Association, and the American Association for Dental Research wrote a letter to executives at Netflix, Amazon, Apple and Vimeo stating that the Root Cause, which alleges root canals are linked to numerous medical issues — a baseless claim that has been disproven by decades' worth of peer-reviewed, scientific evidence, should be removed from their portal. Watching this, they said, may cause unwarranted alarm among their viewers to the point where they might avoid a necessary dental procedure. It's the first time the AAE and AADR have ever issued a member-wide alert or written to a media platform in response to a film or TV program. Dental health experts praised Netflix's "wise and responsible decision" to remove the film, citing its large audience.

As dentists, we should be aware of this film for the sole purpose of preparing oneself for the many questions we can anticipate from our patients. A key responsibility of any dentist is to reassure patients who are concerned about the safety of endodontic treatment that their overall well-being is a top priority. While plenty of good information is available online from the AAE (American Association of Endodontists) and other reliable resources, patients sometimes arrive in the dental office with misinformation. Endodontics plays a critical role in maintaining good oral health by eliminating infection and pain, and preserving our national dentition. If needed, the AAE website ([www.aae.org](http://www.aae.org)) is the best place for anxious patients to obtain comprehensive information.



**DR MEHEK KALRA** is a Committee Member of the Society of Endodontists Singapore (SES).

# HIGH ON POT(TERY):

AN INTERVIEW WITH  
DR CONSTANCE TEOH





**Think:** Pottery, and many will visualise that iconic scene in the 1990 movie ‘Ghost’, where the lovebirds played by Demi Moore and Patrick Swayze share a romantic moment over a pottery wheel, serenaded by “Unchained Melody” by the Righteous Brothers.

With a quiet resurgence in the local hobby scene in recent times, *The Dental Surgeon* team was eager to find out more about pottery. Dr Constance Teoh, who currently practices in public institutions, shares more about her pottery journey.

Cue “Unchained Melody”.



*Constance at  
the wheel*



## How did you get started on pottery?

I first got my fingers muddy at age ten when my mother sent me for a school holiday pottery program at the Nanyang Academy of Fine Arts (NAFA). Growing up, I have always enjoyed visual arts and have tried my hand at different mediums - from watercolour, acrylic, charcoal to batik dyeing. I guess pottery can be seen as part of my lifelong journey in the visual arts.

Amidst all that experimentation, I did not really get the chance to return to pottery again even though it was at the back of my mind for the longest time. Yet, I never forgot how at ease I felt with clay between my fingers, waiting to be developed into forms. The first thing I did when we were nearing graduation from dental school was to search for pottery classes. By the second month of work, I was happily back to rolling and pinching clay on a weekly basis!



*Kiln-Loading*

## What are the general steps to complete a piece of pottery?

At the risk of over-generalisation, here is a rundown of the process:

- **Clay selection:** There are different clays with varying properties, so a seasoned ceramicist would first select an appropriate one that best complements the form he or she wishes to create. Some properties to consider are the grit size, colour, texture and plasticity.
- **Formation:** Potters can use methods ranging from freehand sculpting, slab-joining, coiling on a hand-operated wheel, to throwing on an electric wheel. Regardless of technique, a good grasp of the clay's working properties is crucial in fidelity of expression. Drawing a parallel to dentistry, a dentist needs to understand working and setting times and potential weaknesses of their chosen restorative materials in order to precisely translate their mental idea of an intended restoration into reality. With clay, it is a lot more forgiving and sometimes unintentional mistakes birth new possibilities. We cannot take such liberties on the dental chair so the freedom to run away with my imagination is one aspect I really appreciate about my ceramics practice.
- **Drying:** Again, depending on the properties of the clay and thickness of the work, it could take varying amounts of time to dry evenly, which is crucial to avoid catastrophic cracks in subsequent steps.
- **Firing:** The dried item is then loaded into a firing kiln. Dependent on the clay's properties and requirements, firing temperatures could be anywhere between 600-1400 degrees Celsius. There are different processing methods across the world and I cannot do them all justice with a simple summary.

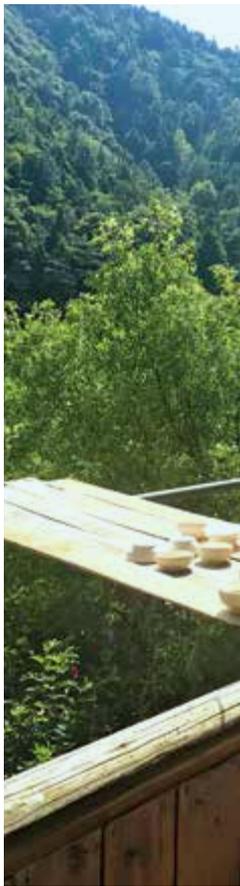


*Components of a teapot, before being assembled*

*Spray-glazing of a piece of work, pre-firing*



*Bisque-fired works with underglaze details applied, awaiting final fire*



*Candid moments under the shingled roofs of Sanbao Studio*



*Everyday scenes in Sanbao village*

- **Further modifications:** Glazing or painting of underglaze for finer details (similar to the detail one can achieve with other traditional painting mediums like watercolour) can still be done after the first firing. Sort of similar to bisque-firing in dental ceramics!
- **Final firing:** Subject to each clay's properties, it may then require firing again after the modifications to allow glazes and pigments to develop their intended hues, facilitated by the high temperatures in the kilns.

### **What was your pottery training experience like?**

One of my main concerns when returning to pottery after all those years was sustainability of the practice. A lot of private studios can be pricey. As a fresh-graduate, my goal was to find an affordable place with approachable teachers, where I could grow my pottery practice at my own pace without feeling the financial pinch or stress to rush out works in a fixed amount of time. With that in mind, I did my research and started taking lessons at the

Tanjong Pagar Community Centre Pottery Club, a humble studio nestled in the community centre right at the foot of the iconic Pinnacle at Duxton.

Best decision ever! I received a lot of attention and guidance from my pottery *shifus* (masters), as we were lucky to have had a very small class size during my intake. Every class, spanning 3 hours, only cost just over S\$20 too, which is pretty insane considering similar offerings would cost three to four times more in private studios. This gave me a lot of freedom to attend more classes, experimenting and growing my ceramics practice.

Subsequently, the club gained popularity and their classes are now fully packed, with vacancies being secured way before each term begins. A lot of fellow dentists have also tried their hand at pottery classes here since and I think they all enjoyed it. After close to two years of regular lessons at the club, I joined the members program where one gets to drop in on weekends to work on your own projects independently. There are potters of all ages- the oldest member being a granny in her 70s. I have gotten to know many interesting



*Works laid out to dry in Sanbao Studio on a hot summer afternoon*



*Picturesque countryside in north-eastern Jiangxi surrounding Sanbao Ceramic Art Institute*



**Ceramic artist taking a midday snooze in the studio**



characters I otherwise would not have met. What is lovely about the pottery community here is the curiosity and camaraderie regardless of background or life stage.

### **You even attended an overseas pottery residency. Tell us more?**

Last year, I decided to take a month-long residency in the ceramics capital of China, Jingdezhen. Jingdezhen is truly the place to be for a ceramics lover- the thought of interacting directly with the rich heritage accumulated across 1700 years simply excited me. Once the idea sprouted, it made all the sense in the world to me. However, I recall many raised eyebrows when having to justify my plans to friends! I had to reassure them that this was not some existential crisis-fueled split-second decision, that I was still sane and I had been pursuing pot-

tery for a while prior to this decision, so this was a natural next step in my journey.

After a few months of research and planning, I resided in Sanbao Ceramics Studio during the hot summer months of June to July 2018. The studio and artists' living quarters were housed within wooden houses, next to a sluggish stream in the countryside of northeastern Jiangxi. Here, I had the freedom to focus on further developing my ceramics practice, whilst meeting other ceramics lovers from all walks of life. We had ceramic artists, studio owners, interior designers and architecture students seeking inspiration for their creative processes. Perhaps not too surprisingly, I was the only dentist there (free consultation, anyone?)

Although I had not originally sought to chase answers to existential questions in China, the abrupt change in environment, pace of life and social



*Within the rustic wooden houses of Sanbao Ceramic Art Institute, Jingdezhen*



***Bowls with hand-painted cobalt underglaze pigment details***

attitudes also prompted unexpected reflection and growth. I spent my 25th birthday in the unlikeliest of places, leaving the porcelain capital of China even more deeply enthralled. Besides furthering my ceramics practice, Jingdezhen also gifted me many priceless moments of human connection. I became fast friends with another hobbyist potter (currently pursuing her masters in architecture in the USA) whom I later visited at her Beijing home. I continue to chat with other Jingdezhen artists and studio owners over WeChat.

Ironically after my sabbatical, ceramics practice in Singapore now feels somewhat constrained, compared to the endless possibilities Jingdezhen offered. Reminiscing the entire streets dedicated to all those materials and instruments not so easily accessible elsewhere in the world— I know I have to go back someday.

**What is your pottery style? Which potter inspires you?**

I do not stick to any particular style as I am definitely still exploring different techniques. That said, I currently lean towards clean lines and fine details. My guilty pleasure is creating functional wares- objects that can be used in an everyday setting, as opposed to purely decorative ones. I feel this is the most straightforward means of bringing a sense of aesthetics to the quotidian.

In that vein, I strongly believe that beauty alongside utility might be the only way beauty initially becomes accessible, at least to the masses. In a space-constrained densely-populated city like Singapore, whose inhabitants are largely consumed by the rat race of pragmatism, a well-designed and thoughtfully produced mug one uses for their daily cup of joe could well provide glimmers of inspiration towards beauty and aesthetics for the ordinary man.

**Which is your favourite piece of work?**

I feel very hard-pressed to answer this because I am rather fickle by nature! I have been captivated by countless pieces from across the centuries. Often, it is intricate pieces from earlier in the previous millennia that fascinate me the most. I often wonder how artists and artisans from those times managed to chase and achieve relative perfection with comparatively primitive technologies. For example, Linglong ware, a type of porcelain first produced in the Ming Dynasty which features areas so paper-thin that light shines through. Chemical reactions are also a huge part of ceramics, as glazing and firing techniques involve rather precise titrations and temperature calibration. I sometimes feel almost undeserving whilst enjoying the convenience of access to such a wide variety of clays and glazes that took so much effort and time to develop!

## Any tips for aspiring potters?

First, start with clays that have forgiving handling properties e.g. stoneware and earthenware are easier to pick up, whereas porcelain has a steeper learning curve. Do not be afraid to get clay stuck under your fingernails and just spend more time understanding your medium! Always be patient with yourself and try not to be so obsessed with churning out a high quantity of pieces at the start.

When it comes to electric wheel usage especially, one of the best lessons from my ceramics master in Jingdezhen is to dedicate at least the first few pieces for any new form you are attempting as purely practice pieces. This means to intentionally not carry through the entire process of bringing the clay all the way to the fired ceramic stage. Instead,

acquire the discipline to perform sagittal cross-sectional cuts of these practice pieces, with the aim of checking if the cross section of the work is uniform and up to standard. This equates to destroying your work whilst inspecting it, in an attempt to have immediate feedback on technique.

It can be tough for beginners, who are understandably quite excited to see the fruits of their labour! I have learnt to treat this as an exercise in non-attachment from the material and ego, and it can be quite refreshing to relieve yourself of worldly expectations to be materially productive too.

*Lastly, interest will grow organically and every potter's journey or focus can be quite different, once they have had their first taste of clay.*





*Various functional wares by Constance, in use*



**DR CONSTANCE TEOH** graduated from NUS Faculty of Dentistry in 2016 and currently practises in public institutions. She is always keen for a discussion on ceramics and visual arts in general. She can be reached at @clay.cray on Instagram.



*AN  EVENING  
WITH  
ASTON  
MARTIN*

BY DR KEVIN CO

# ASTON MARTIN

**A**ston Martin together with our SDA welfare team invited our members on the 1st of March 2019 for an evening of fast cars and fabulous wine dinner.

The SDA members were introduced to the New Aston Martin Vantage, the iconic DB11 and the ultimate collectors dream - DBS Superleggera.

The Aston Martin brand has gone through an amazing rejuvenation with new robust engines and gear boxes. The contemporary designs and sweeping lines give the car serious road presence.

Aston Martin's ever helpful team is at hand showcasing the new changes to the cars.

I am sure all participants had a great time with the drives judging by the smiles after stepping out of the car. But who wouldn't after driving a supercar!

The evening concluded with a sumptuous wine dinner and networking session among the participants.

We will like to thank Aston Martin for making this event possible.

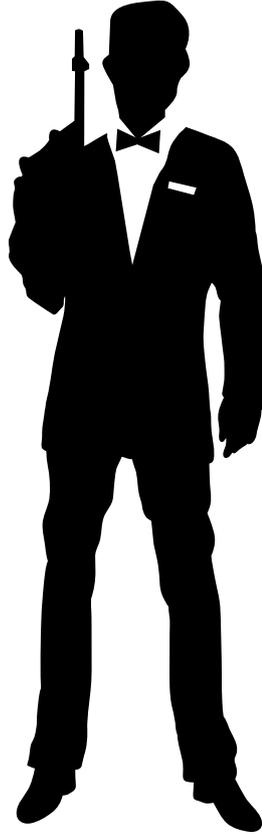




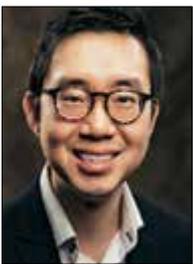


## Quick facts about the DBS Superleggera

- DBS Superleggera replaces the Vanquish S
- 85% of the panels on the car are made from carbon fibre
- Make no mistake this car is still a grand tourer, which equals to comfortable
- HorsePower - 725
- Torque - 900nm
- Top speed - 339km/h
- 0-100km/h - 3.4seconds
- Engine - twin-turbo 5.2-litre V12
- Generates 180kg of downforce
- And yes you will feel like James bond







**DR. KEVIN CO** is a full-time private practitioner at his clinic TLC Dental Centre. Cars remain his lifelong passion.



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<sup>†</sup>Significant reductions in plaque and gingivitis at 6 months vs non-antibacterial fluoride toothpaste;  $p < 0.001$ ?

References: 1. Prasad K, *J Clin Dent*, submitted August 2018. 2. Garcia-Godoy F, et al. *J Clin Dent*, submitted August 2018.