



Day 2 Abstracts

MASTERCLASS: 'JUGGLING THE PRIORITIES' BREAKFAST MASTERCLASS

Speakers: Dr Trudy Lin (Special Needs Dental Specialist, Extra Mile Coaching)

Panelists: Dr Erin Mahoney (Paediatric Dentist), Dr Sophia Richardson (Oral & Maxillofacial Surgeon), Dr Terence Alexander (OMS), Dr Sarah Coll (Orthopaedic Surgeon) and Dr Roxanne Wu (Vascular Surgeon)

Abstract:

In today's fast-paced world, dental professionals often find themselves juggling multiple priorities and increased pressures. To successfully navigate these challenges, it is essential for dental professionals to adopt effective strategies that help balance their priorities while maintaining their mental and physical well-being.

Integrating Dr Lin's expertise as a double-certified mindset and leadership coach, as well as her experience balancing the clinical workload as a Specialist in Special Needs Dentistry, various advocacy commitments and roles in the education space, this presentation will delve into principles for juggling priorities as oral healthcare professionals and explore proactive strategies to managing these demands using cognitive behavioural science and psychosomatic techniques.

Through applying the principles of cognitive behavioural science, dental professionals can cultivate mindsets which support them to manage stress, avoid burnout, and improve overall job and life satisfaction. The evidence-based approaches explored in this presentation can empower dental professionals to effectively handle competing priorities, improve decision-making, and maintain a healthy work-life balance. By prioritising their mental and physical health, dental professionals can ultimately deliver higher quality care to their patients while achieving personal and professional fulfillment.

Attendees will also gain insights from esteemed practitioners in a panel discussion on managing stress, juggling family, and enhancing job satisfaction, empowering them to deliver higher quality patient care while achieving personal and professional fulfillment.



TITLE OF PRESENTATION: ORAL COMPLICATIONS IN CANCER PATIENTS

Speaker: A/Prof Nathaniel Treister (DMD, DMSc)

Abstract:

Patients with cancer are at risk for developing a wide range of complications related to oral health. With increasingly complex cancer therapy regimens, oral health can be adversely affected throughout the course of care, including survivorship. Effective prevention and management of oral complications requires a well-coordinated and multidisciplinary team-based approach that includes dentists, oncologists, and nurses. This talk provides an overview of oral health considerations in cancer patients including practical strategies for evaluation and management of the most common and clinically important clinical scenarios.

Learning Objectives:

1. Review the basic principles of how to conduct a comprehensive risk assessment and clinical examination in a medically complex patient.
2. Recognize and be able to describe the clinical features of oral complications in cancer patients.
3. Be familiar with the basic principles of prevention and management of oral complications in cancer patients.



TITLE OF PRESENTATION: WORKING WITH PATIENTS IMPACTED BY FAMILY VIOLENCE AND SEXUAL ASSAULT (TWO-PART LECTURE)

Speaker: Dr Sharonne Zaks AM

Abstract:

As dentists, we are in a unique position to identify and intervene to help patients affected by family violence (FV) and sexual assault (SA). 75% of the injuries from FV involve the head, neck, face, and mouth, and we are often the first and only point of contact. We have an ethical obligation to recognise these patients, and our help could be life-saving.

Dental appointments are a common trigger for memories of SA to resurface as they have many similarities. Hence the widespread dental anxiety and avoidance by survivors, who often have poor oral health. A significant portion of our patients are at risk of or currently experiencing FV or SA, with numbers soaring as a result of the pandemic.

We have a unique opportunity to help in restoring patient's confidence and self-worth, which can profoundly transform their lives. This presentation will guide you through the issues and how we can address them, helping you to feel more confident and competent to sensitively handle the complexities involved in this confronting area.

You will gain an understanding of:

- Why dental visits are challenging for survivors, including the parallels between SA and dental appointments, and the impacts of psychological trauma.
- FV and SA: their prevalence, how they intersect, and the scope of the issues.
- How survivors of FV and SA present to us; the signs to look out for.
- How to manage anxiety and phobia, build trust and safety, collaborate with, and empower patients: The trauma-informed framework in action, including with non-binary and gender diverse patients.
- What to do if we suspect FV or SA: how to ask about safety at home, sensitively handle difficult conversations including managing disclosures, referrals for further support, and documentation.
- Clinical strategies for working with survivors before, during, and after appointments for dentists and our teams.



TITLE OF PRESENTATION: UPDATES IN DENTAL TRAUMA - GUIDELINES AND RATIONALE

Speaker: A/Prof William Nguyen Ha

Abstract:

The International Association of Dental Traumatology (IADT) has guidelines for managing traumatic dental injuries (TDIs), with the current iteration translated into 20 languages. The guidelines are open access and comprise three documents: 1) Fractures and luxations, 2) Avulsion of permanent teeth, and 3) Injuries in the primary dentition. These guidelines have changed over the decades with substantial changes from the 2012 and 2020 guidelines. Each iteration of the IADT guidelines is based on the latest evidence on TDIs. Clinicians should conform to these guidelines as it optimizes patient outcomes while protecting the clinician from criticism. The differences between the guidelines may not be immediately apparent, and the rationale for the changes is not always stated within the guidelines. Therefore, clinicians can easily not adhere to the standard practices if they have not identified the differences to the guidelines they were taught. This presentation will summarise core changes in the 2020 guidelines while explaining the rationale for these changes. Attendees will be able to manage TDIs with confidence in the evidence.



TITLE OF PRESENTATION: MEDICATION-RELATED OSTEONECROSIS OF THE JAW – AN UPDATE ON THE GROWING LIST OF DRUGS

Speaker: Dr Leanne Teoh

Abstract:

Medication-related osteonecrosis of the jaw (MRONJ) is a potentially serious condition for patients using antiresorptive and antiangiogenic therapies. While some medicines, such as bisphosphonates and denosumab, are well established to be associated with MRONJ, there is an increasing list of antiangiogenic agents and other drugs associated with immune compromise that are also shown to be associated with this adverse effect. While this is a relatively rare condition for patients using these medicines for osteoporosis, it is more common for some oncology patients.

This presentation will provide an overview of the determination of these adverse effects during clinical trial development, the extensive list and types of drugs associated with MRONJ, and ultimately provide a risk assessment for the general dentist when performing routine, but invasive dental procedures, such as extractions.



TITLE OF PRESENTATION: THE BONDED ZIRCONIA BRIDGE – A SIMPLE AND EFFECTIVE ALTERNATIVE TO AN IMPLANT

Speaker: Dr Michael Mandikos

Abstract:

This presentation will touch on some of the problems associated with dental implants in the aesthetic zone and demonstrate the potential role of the latest generation of bonded bridge as an alternative treatment for replacing missing teeth. The lecture will briefly cover design, preparation and placement of these bonded bridges.



ORAL PRESENTATION: THE FIRST 1000 DAYS - BRIDGING THE SCIENCE AND OTHER DETERMINANTS IN IDENTIFYING RISKS AND ESTABLISHING OPTIMAL ORAL CARE FOR CHILDREN

Author: Kareen MEKERTICHIAN¹

¹Specialist Paediatric Dentist - Kids Chompers Paediatric Dentistry

Abstract:

The first 1000 days of life is the period during which many vital skills and abilities develop for newborns and patterns of wellbeing take shape. There are also multiple social determinates of health (SDH) which play a critical role in establishing not only systemic, but oral health as well. This presentation will highlight societal/parental trends and specific oral, dental and developmental issues which can impact the oral health status of pre-school children – leading to possible complications into adulthood.

The presentation will cover:

- What are the Social Determinants of Health, particularly with respect to general systemic and oral health
- How do societal trends and modern parenting styles influence oral care
- Overview of specific challenges in managing children with special needs and other co-morbidities
- What are some of the common and unusual dental conditions/anomalies we see in pre-school children
- What preventive strategies can we implement to assist in establishing optimal oral care



ORAL PRESENTATION: MINIMALLY INVASIVE DENTISTRY TO MANAGE EARLY CHILDHOOD CARIES

Author: Peter ARROW¹

¹*Dental Health Services Western Australia, Perth, Australia; University of Western Australia, Perth, Australia; University of Adelaide, Adelaide, Australia.*

Abstract:

Background - Management of Early Childhood Caries (ECC) in children is challenging, and traditional management strategies using local analgesia and the dental drill may not be successful, and the child is referred for specialist management, usually under general anesthesia (GA). The challenges are multiplied manifold for children in rural and remote communities. Effective treatment approaches to manage ECC in primary care settings and reduce potentially preventable hospitalisations are required.

Methodology - Minimally invasive dentistry approaches (MID) using the Atraumatic Restorative Treatment (ART) and the Hall Technique (HT) were tested. Three separate randomised controlled trials (RCT) were undertaken among children in the general community (RCT1)¹, children scheduled for GA (RCT2)², and children living in remote communities (RCT3)³. Test group children were provided with care by school dental therapists using the ART and HT approaches while the control group children were provided with care using local analgesia and the dental drill (RCT1) or general anesthesia (RCT2) or the prevailing available treatment options in remote communities (RCT3).

Results - With the MID approach, children in the general community had lower odds of referral to a specialist, 90% of children scheduled for GA were able to be provided with care in a primary care setting, and more children in remote communities were provided with care. The MID approach was also cost-effective and improved the child's oral health-related quality of life.

Conclusions - MID approach using ART and HT is an effective and cost-effective option in managing ECC and reducing the burden of potentially preventable hospitalisations.

References

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ORAL PRESENTATION: IMMEDIATE IMPLANT-RETAINED PROSTHETIC OBTURATOR AFTER MAXILLECTOMY BASED ON 3D GUIDED RESECTION SURGERY AND IMPLANT PLACEMENT

Author/s: Emilija D. JENSEN^{1,2}, Andrew CHENG

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²Department of Oral and Maxillofacial Surgery, Royal Adelaide Hospital, Adelaide, Australia

Abstract:

Background - Individuals with maxillary oral cancer may require radical surgical resection of their maxilla, leading to significant morbidities and need for multiple rehabilitative surgeries. This case report aimed to describe a digital workflow from 3D virtual surgical planning for tumour resection, maxillary implant placement and for an implant-retained prosthetic obturator to fit the planned defect for immediate loading.

Methodology - We report a 68-year male who was diagnosed with squamous cell carcinoma of the anterior maxilla. Intraoral scans and computed tomographs (CT) were taken preoperatively to digitally design and print a surgical resection guide, an implant placement guide, and a prosthetic obturator for immediate placement. Accuracy of the implant positioning was obtained using 3D deviation analysis by reviewing the planned and final post-operative CT scan.

Results - The preoperative designed and manufactured obturator prostheses accurately matched the virtual surgical plan resection and implant positioning. The obturator could be placed and fixated for immediate loading. The mean prosthetic point deviation for this individual was 1.05 mm ± 0.3 mm. A 3-year follow-up found no locoregional recurrence and stability of the maxillary implants and prosthesis with a satisfactory aesthetic outcome.

Conclusions - This case documents the importance of careful pre-operative surgical planning and the opportunities for a fully digital workflow for oral cancer rehabilitation. The reduction in total number of rehabilitation surgeries for this individual reduced a future surgical burden.

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ORAL PRESENTATION: BRIDGING SCIENCE AND PATIENT CARE – THE PITFALLS OF IGNORING ORTHOGNATHIC ASSESSMENT IN TREATMENT OF MALOCCLUSION

Author: Dr Sophia RICHARDSON

Abstract:

Malocclusion derives from both dental and skeletal discrepancies, but assessment and treatment is often based purely on orthodontics. While dental issues are usually in plain sight, skeletal discrepancies can be more difficult to diagnosis and if ignored, can lead to poor outcomes in occlusion, facial balance, aesthetics, stability, airway issues, and rightfully disgruntled patients.

Learning outcomes:

- Understand the limitations of camouflage orthodontic treatment plans
- Learn to perform basic orthognathic assessment on facial balance and airway



ORAL PRESENTATION: THERAPEUTIC PROPERTIES OF GLASS-IONOMER CEMENTS: THEIR APPLICATION TO ORTHODONTICS

Author: John FRICKER¹

¹Canberra Health Services, Canberra, Australia

Abstract:

Background - Fluoride has been shown to be an effective agent in the prevention of caries during orthodontic treatment. Resin modified glass ionomer cements possess therapeutic anticariogenic properties acting as a fluoride reservoir and releasing fluoride into the environment, particularly at low pH where there is a threat of enamel demineralisation and white spot lesions (WSL's). Patient compliance to instructions in standard oral hygiene measures limits the success of caries prevention and the routine use of glass-ionomer cements can mitigate the lack of compliance, although RMGIC's are not a panacea against WSL's.

The adhesion of GIC's to the enamel surface is a physico-chemical bond rather than a mechanical bond which reduces the risk of iatrogenic damage to the enamel when bonding and debonding attachments. RMGIC's can be recommended as a bonding adhesive for all attachments but one needs to be selective when bonding molar attachments to avoid occlusal interferences as masticatory forces can be high in these areas.

This presentation offers a rationale for the use of Resin Modified Glass-Ionomer cements in orthodontics to reduce the risk of white spot lesions and mitigate iatrogenic damage to the enamel when bonding and debonding attachments.

Learning Outcomes:

- *Therapeutic property* to release F in acid conditions mitigating acid demineralisation of enamel and the development of white spot lesions.
- Avoid loss of enamel from Phosphoric acid etching required for composite resins and a mechanical bond
- Chemical bond via polyacrylic acid enamel surface conditioning
- minimises the loss of surface enamel when debonding brackets
- Clinical performance is similar to composite bonding for all patients but particularly indicated for high caries risk patients or those with hypoplastic/hypomineralised enamel.
- Clinical technique does NOT require a dry field, instead a moist environment

References

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TITLE OF PRESENTATION: CLINICAL DILEMMAS, CHALLENGES AND CATASTROPHES

Speakers: Dr Desmond Ong and Dr Rhonda Coyne

Abstract:

Clinical orthodontic practice can be fascinating, rewarding and frustrating in equal measure. Although comprehensive diagnosis, and careful biomechanical planning are of paramount importance, Murphy's law inevitably still applies, with successful treatment outcomes far from guaranteed. The orthodontic clinician often witnesses their "train wreck" cases occur in "slow motion", which despite prolonging the regret, also provides opportunities to positively intervene.

Unfortunately, even seemingly pleasing treatment outcomes remain subject to undesirable relapse, which may be associated with ongoing facial growth, periodontal changes and/or inadvertent tooth movement through fixed retainer distortion.

This presentation aims to provide an insight into the clinical dilemmas and challenges that may be encountered in orthodontics and hopefully, how to avoid catastrophes.



ORAL PRESENTATION: BEYOND THE PRESCRIPTION PAD: ANTIMICROBIAL RESISTANCE AND DENTISTRY

Authors: Smitha SUKUMAR¹, Fang WANG¹, Carra SIMPSON², Cali WILLET¹, Tracy CHEW¹, Toby HUGHES³, Michelle BOCKMANN³, Rosemarie SADSAD¹, F. Elizabeth MARTIN¹, Henry LYDECKER¹, Gina BROWNE¹, Kylie DAVIES³, Minh BUI⁴, Elena MARTINEZ⁵, Christina ADLER¹

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Abstracts:

Background - Antimicrobial resistance (AMR) is one of the most significant issues facing healthcare globally. Misuse of antibiotics has led to increased bacterial resistance since the introduction of penicillin in the 1940's. Dentists prescribe 10% of antibiotics globally and up to 80% of these prescriptions are unwarranted [1]. Therefore, as prescribing clinicians, dentists play an important role in curbing AMR. However as this is a complex issue, with social, economic and environmental drivers [2], we need to consider how dentistry contributes to AMR beyond prescribing in terms of caries management and development of bioactive restorative materials.

Methodology - Next Generation Sequencing (short read metagenomics) was used to analyse the supragingival plaque of Australian children, mean age 8.5 + 1.2 years with ($n=66$) and without caries ($n= 145$). We surveyed the bacterial population (microbiome) and the collection of antimicrobial resistance genes (resistome) in terms of who is there (diversity), how many (differential abundance analyses) and what are the bacteria doing (metabolic pathways) in health and caries.

Results - Resistance genes were found in all children and its composition was altered by the severity of caries and in response to restoration placement.

Conclusions - The resistome may play a potential role in health and caries given the widespread presence of ARGs in the oral microbiome. We characterised the resistome in restored and unrestored dentitions to gain a better understanding of the resistome/restoration interface to provide context to the emerging research on bioactive restorative materials which aim transform the biofilm away from dysbiosis but may inadvertently create resistance.

References

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TITLE OF PRESENTATION: RED FLAGS FOR IMPLANT THERAPY: THE PERIODONTAL PATIENT AND BEYOND

Speaker: Dr Rachel Garraway

Abstract:

What are the risks associated with implant dentistry and how do we identify these? Risk management uses clinical criteria to develop an effective assessment protocol to help identify potential complications. This presentation aims to help identify those factors that might hinder successful outcomes, particularly from a biological perspective. Most importantly, how do we discuss the concept of risk management with our patients so that expectations can be managed and met.



ORAL PRESENTATION: COLLABORATIVELY DEVELOPING INNOVATIVE DOMESTIC VIOLENCE TRAINING RESOURCES TO BUILD DENTAL WORKFORCE CAPABILITY AND FACILITATE BEST PRACTICE

Authors: Felicity CROKER¹, Ann CARRINGTON¹, Alex DANCYGER, Simone DEWAR

¹James Cook University, Cairns, Australia

Abstract:

Background - domestic violence (DV) is widely recognised as a pervasive, and preventable problem with significant health impacts¹. Dentists are uniquely positioned to identify patients who experience DV during routine assessments²⁻⁵. They also encounter patient's whose trauma is triggered by dental procedures^{6,7}. Recognising dentists' key role, the Australian Dental Council (2023) requires graduates to "competently recognise, assess, and respond to domestic and family violence risk, prioritise safety, provide information, and refer as required."⁸ However, Australian dentistry-specific educational resources that build capability in recognising and responding to DV are lacking.^{4,5} This presentation aims to address that gap by presenting a suite of educational resources designed to guide DV clinical skills development and enable best practice.

Methodology - A multidisciplinary team employed a Participatory Action Research Model to ensure authenticity and best practice for dentists responding to DV.^{9,10} Participants included victim-survivors, dental students, practitioners, educators and community stakeholders. Mixed methods were utilised for the design and evaluation phases. Interviews and focus groups were analysed thematically. Dental specialists and DV experts peer reviewed preliminary findings. Formative and summative evaluation of the training resources is being conducted using online surveys and focus groups.

Results - Formative findings guided the development of educational videos and resources. Summative evaluation, currently being undertaken, will ensure the resources demonstrate best practice for delivering coordinated, person-centred care to vulnerable patients with diverse backgrounds and experiences.

Conclusion - These DV resources will enable dentists to build their competency in recognising and responding to DV, resulting in more positive experiences and improved outcomes for patients, clinicians, and health services. Resources are available via a JCU online portal.



TITLE OF PRESENTATION: CAN'T MISS ORAL LESIONS

Speaker: A/Prof Nathaniel Treister (DMD, DMSc)

Abstract:

Several potentially serious medical conditions, ranging from infection to autoimmune disease to cancer, can present with oral lesions that are readily detected by clinical examination. Dentists are therefore in an important position to be able to recognize concerning oral lesions and make timely and appropriate referrals. Delays in diagnosis and management can impact outcomes and contribute to unnecessary and inappropriate discomfort or disability. Dentists, therefore, must be sufficiently familiar with a wide range of conditions that can manifest in the oral cavity, even those that are uncommon and rarely encountered in the general population. Some conditions may be amenable to treatment by the general dentist, while others will require referral to a dental or medical specialist. This talk provides an in-depth overview of the most important non-odontogenic conditions that a dentist simply can't miss.

Learning objectives

1. Be able to obtain a basic medical history and work-up for a patient who presents with nonodontogenic oral disease.
1. Recognize the clinical spectrum of potentially serious non-odontogenic diseases that can manifest in the oral cavity.
2. manifest in the oral cavity.
3. Understand the basic principles of management and know how and where to refer a patient for specialist evaluation and care.